
STUDER 990

Digitally controlled audio console Service Instructions

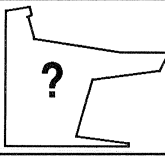
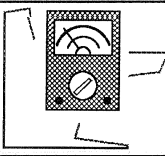
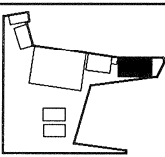
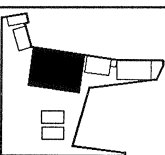
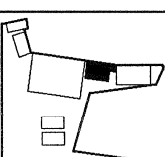
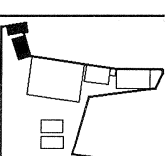
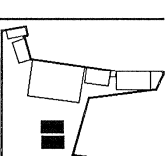
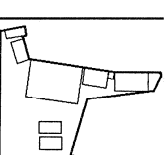
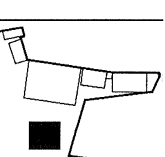
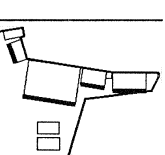


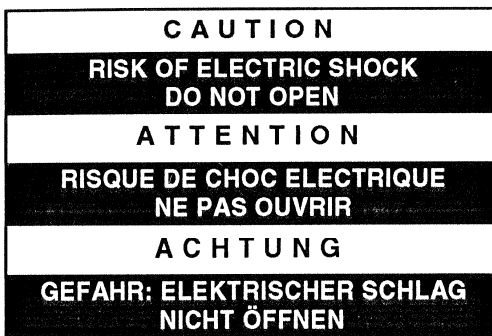
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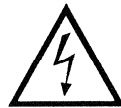
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To reduce the risk of electric shock, do not remove covers (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

Afin de prévenir un choc électrique, ne pas enlever les couvercles (où l'arrière) de l'appareil. Il ne se trouve à l'intérieur aucune pièce pouvant être réparée par l'utilisateur.

Um die Gefahr eines elektrischen Schlages zu vermeiden, entfernen Sie keine Abdeckungen (oder Rückwand). Überlassen Sie die Wartung und Reparatur dem qualifizierten Fachpersonal.



This symbol is intended to alert the user to presence of uninsulated "**dangerous voltage**" within the apparatus that may be of sufficient magnitude to constitute a risk of electric shock to a person.

Ce symbole indique à l'utilisateur qu'il existe à l'intérieur de l'appareil des "**tensions dangereuses**". Ces tensions élevées entraînent un risque de choc électrique en cas de contact.

Dieses Symbol deutet dem Anwender an, dass im Geräteinnern die Gefahr der Berührung von "**gefährlicher Spannung**" besteht. Die Größe der Spannung kann zu einem elektrischen Schlag führen.



This symbol is intended to alert the user to the presence of **important instructions** for operating and maintenance in the enclosed documentation.

Ce symbole indique à l'utilisateur que la documentation jointe contient d'**importantes instructions** concernant le fonctionnement et la maintenance.

Dieses Symbol deutet dem Anwender an, dass die beigelegte Dokumentation **wichtige Hinweise** für Betrieb und Wartung beinhaltet.

CAUTION:	Lithium Battery. Danger of explosion by incorrect handling. Replace by battery of the same make and type only.
ATTENTION:	Pile au lithium. Danger d'explosion en cas de manipulation incorrecte. Ne remplacer que par un modèle de même type.
ACHTUNG:	Explosionsgefahr bei unsachgemäßem Auswechseln der Lithiumbatterie. Nur durch den selben Typ ersetzen.
ADVARSEL:	Lithiumbatteri. Eksplosionsfare. Udskiftning må kun foretages af en sagkyndig af som beskrevet i servicemanualen (DK).

FIRST AID

(in case of electric shock)

1. Separate the person as quickly as possible from the electric power source:
 - by switching off the equipment
 - or by unplugging or disconnecting the mains cable
 - pushing the person away from the power source by using dry insulating material (such as wood or plastic).
 - After having sustained an electric shock, always consult a doctor.

WARNING!

DO NOT TOUCH THE PERSON OR HIS CLOTHING BEFORE THE POWER IS TURNED OFF, OTHERWISE YOU STAND THE RISK OF SUSTAINING AN ELECTRIC SHOCK AS WELL!

2. If the person is unconscious
 - check the pulse,
 - reanimate the person if respiration is poor,
 - lay the body down and turn it to one side, call for a doctor immediately.

PREMIERS SECOURS

(en cas d'électrocution)

1. Si la personne est dans l'impossibilité de se libérer:
 - Couper l'interrupteur principal
 - Couper le courant
 - Repousser la personne de l'appareil à l'aide d'un objet en matière non conductrice (matière plastique ou bois)
 - Après une électrocution, consulter un médecin.

ATTENTION!

NE JAMAIS TOUCHER UNE PERSONNE QUI EST SOUS TENSION, SOUS PEINE DE SUBIR EGALEMENT UNE ELECTROCUTION.

2. En cas de perte de connaissance de la personne électrocutée:
 - Contrôler le pouls
 - Si nécessaire, pratiquer la respiration artificielle
 - Placer l'accidenté sur le flanc et consulter un médecin.

ERSTE HILFE

(bei Stromunfällen)

1. Bei einem Stromunfall die betroffene Person so rasch wie möglich vom Strom trennen:
 - Durch Ausschalten des Gerätes
 - Ziehen oder Unterbrechen der Netzzuleitung
 - Betroffene Person mit isoliertem Material (Holz, Kunststoff) von der Gefahrenquelle wegstoßen
 - Nach einem Stromunfall sollte immer ein Arzt aufgesucht werden.

ACHTUNG!

EINE UNTER SPANNUNG STEHENDE PERSON DARF NICHT BERÜHRT WERDEN. SIE KÖNNEN DABEI SELBST ELEKTRISIERT WERDEN!

2. Bei Bewusstlosigkeit des Verunfallten:
 - Puls kontrollieren,
 - bei ausgesetzter Atmung künstlich beatmen,
 - Seitenlagerung des Verunfallten vornehmen und Arzt verständigen.

Installation, Betrieb und Entsorgung

Vor der Installation des Gerätes müssen die hier aufgeführten und auch die weiter in dieser Anleitung mit \triangle bezeichneten Hinweise gelesen und während der Installation und des Betriebes beachtet werden.

Das Gerät und sein Zubehör ist auf allfällige Transportschäden zu untersuchen.

Ein Gerät, das mechanische Beschädigung aufweist oder in welches Flüssigkeit oder Gegenstände eingedrungen sind, darf nicht ans Netz angeschlossen oder muss sofort durch Ziehen des Netzsteckers vom Netz getrennt werden. Das Öffnen und Instandsetzen des Gerätes darf nur vom Fachpersonal unter Einhaltung der geltenden Vorschriften durchgeführt werden.

Falls dem Gerät kein konfektioniertes Netzkabel beiliegt, muss dieses durch eine Fachperson unter Verwendung der mitgelieferten Kabel-Gerätesteckdose IEC320/C13 oder IEC320/C19 und unter Berücksichtigung der einschlägigen, im jeweiligen Lande geltenden Bestimmungen angefertigt werden; siehe Bild unten.

Vor Anschluss des Netzkabels an die Netzsteckdose muss überprüft werden, ob die Stromversorgungs- und Anschlusswerte des Gerätes (Netzspannung, Netzfrequenz) innerhalb der erlaubten Toleranzen liegen. Die im Gerät eingesetzten Sicherungen müssen den am Gerät angebrachten Angaben entsprechen.

Ein Gerät mit einem dreipoligen Gerätestecker (Gerät der Schutzklasse I) muss an eine dreipolige Netzsteckdose angeschlossen und somit das Gerätegehäuse mit dem Schutzleiter der Netzinstallation verbunden werden (Für Dänemark gelten Starkstrombestimmungen, Abschnitt 107).

Installation, Operation, and Waste Disposal

Before you install the equipment, please read and adhere to the following recommendations and all sections of these instructions marked with \triangle .

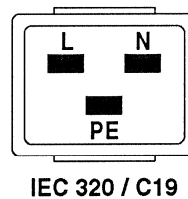
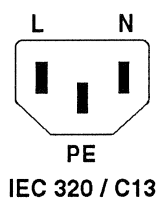
Check the equipment for any transport damage.

A unit that is mechanically damaged or which has been penetrated by liquids or foreign objects must not be connected to the AC power outlet or must be immediately disconnected by unplugging the power cable. Repairs must only be performed by trained personnel in accordance with the applicable regulations.

Should the equipment be delivered without a matching mains cable, the latter has to be prepared by a trained person using the attached female plug (IEC320/C13 or IEC320/C19) with respect to the applicable regulations in your country - see diagram below.

Before connecting the equipment to the AC power outlet, check that the local line voltage matches the equipment rating (voltage, frequency) within the admissible tolerance. The equipment fuses must be rated in accordance with the specifications on the equipment.

Equipment supplied with a 3-pole appliance inlet (equipment conforming to protection class I) must be connected to a 3-pole AC power outlet so that the equipment cabinet is connected to the protective earth conductor of the AC supply (for Denmark the Heavy Current Regulations, Section 107, are applicable).



Female plug (IEC320), view from contact side:

L	live; brown	National American Standard: black
N	neutral; blue	white
PE ...	protective earth; green and yellow	green

Connecteur femelle (IEC320), vue de la face aux contacts:

L.....	phase, brun	Standard National Américain: noir
N.....	neutre, bleu	blanc
PE.....	terre protective; vert et jaune	vert

Ansicht auf Steckkontakte der Kabel-Gerätesteckdose (IEC320):

L.....	Polleiter, braun	USA-Standard: schwarz
N.....	Neutralleiter, hellblau	weiss
PE.....	Schutzleiter, gelb/grün	grün

Bei der Installation des Gerätes muss **vermieden** werden, dass:

- das Gerät Regen, Feuchtigkeit, direkter Sonneneinstrahlung oder übermässiger Wärmestrahlung von Wärmequellen (Heizgeräte, Heizungen, Spotlampen) ausgesetzt wird
- die für den Betrieb des Gerätes benötigte Luftzirkulation beeinträchtigt und dadurch die zulässige maximale Lufttemperatur der Geräteumgebung überschritten wird (Wärmestau)
- die Belüftungsöffnungen des Gerätes blockiert oder abgedeckt werden.

Das Gerät und seine Verpackung darf nur sachgerecht entsorgt werden. Alle Teile des Gerätes, die gefährliche Stoffe (Quecksilber, Cadmium) enthalten, müssen als Sondermüll behandelt werden.

Verbrauchte Batterien und Akkus müssen dem Hersteller zur Entsorgung zurückgegeben oder entsprechend den spezifischen Bestimmungen Ihres Landes fachgerecht entsorgt werden.

Wartung und Reparatur

Durch Entfernen von Gehäuseteilen, Abschirmungen etc. werden stromführende Teile freigelegt. Aus diesem Grund müssen u.a. die folgenden Grundsätze beachtet werden:

Eingriffe in das Gerät dürfen nur von Fachpersonal unter Einhaltung der geltenden Vorschriften vorgenommen werden.

Vor Entfernen von Gehäuseteilen muss das Gerät ausgeschaltet und vom Netz getrennt werden.

Bei geöffnetem, vom Netz getrenntem Gerät dürfen Teile mit gefährlichen Ladungen (z. B. Kondensatoren, Bildröhren) erst nach kontrollierter Entladung, heiße Bauteile (Leistungshalbleiter, Kühlkörper etc.) erst nach deren Abkühlen berührt werden.

Bei Wartungsarbeiten am geöffneten, unter Netzspannung stehenden Gerät dürfen blanke Schaltungsteile und metallene Halbleitergehäuse weder direkt noch mit einem nichtisolierten Werkzeug berührt werden.

Zusätzliche Gefahren bestehen bei unsachgemässer Handhabung besonderer Komponenten:

- **Explosionsgefahr** bei Lithiumzellen, Elektrolyt-Kondensatoren und Leistungshalbleitern
- **Implosionsgefahr** bei evakuierten Anzeigeeinheiten
- **Strahlungsgefahr** bei Lasereinheiten (nichtionisierend), Bildröhren (ionisierend)
- **Verätzungsgefahr** bei Anzeigeeinheiten (LCD) und Komponenten mit flüssigem Elektrolyt.

Solche Komponenten dürfen nur von dafür ausgebildetem Fachpersonal unter Verwendung von vorgeschriebenen Schutzmitteln (u.a. Schutzbrille, Handschuhe) gehandhabt werden.

The equipment installation **must satisfy** the following requirements:

- Protection against rain, humidity, direct solar irradiation or strong thermal radiation from heat sources (heaters, radiators, spotlights).
- Unobstructed air circulation so that the maximum air temperature in the equipment environment will not be exceeded (no heat accumulation).
- Ventilation louvers of the equipment must not be blocked or covered.

The equipment and its packing materials should ultimately be disposed off in accordance with the applicable regulations only. All parts of the equipment that contain hazardous substances (mercury, cadmium) must be treated as toxic waste.

Weak batteries or exhausted rechargeable batteries must be returned to the manufacturer for competent disposal or must be disposed of in accordance with the environmental protection regulations applicable for your country.

Maintenance and Repair

The removal of housing parts, shields, etc. exposes energized parts. For this reason the following precautions should be observed:

Maintenance should only be performed by trained personnel in accordance with the applicable regulations. The equipment should be switched off and disconnected from the AC power outlet before any housing parts are removed.

Even after the equipment has been disconnected from the power, parts with hazardous charges (e.g. capacitors, picture tubes) should only be touched after they have been properly discharged. Hot components (power semiconductors, heat sinks, etc.) should only be touched after they have cooled off.

If maintenance is performed on a unit that is opened and switched on, no uninsulated circuit components and metallic semiconductor housings should be touched neither with your bare hands nor with uninsulated tools.

Certain components pose additional hazards:

- **Explosion hazard** from lithium batteries, electrolytic capacitors and power semiconductors
- **Implosion hazard** from evacuated display units
- **Radiation hazard** from laser units (non-ionizing), picture tubes (ionizing)
- **Caustic effect** of display units (LCD) and such components containing liquid electrolyte.

Such components should only be handled by trained personnel who are properly protected (e.g. by goggles, gloves).

Für Wartung und Reparatur der sicherheitsrelevanten Teile des Gerätes darf nur Ersatzmaterial nach Herstellerspezifikation verwendet werden.

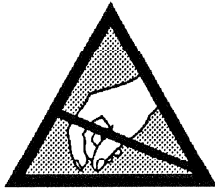
Das Gerät muss ordnungsgemäss und regelmässig gewartet und somit in sicherem Zustand erhalten werden. Bei ungenügender Wartung oder bei Änderungen der sicherheitsrelevanten Teile des Gerätes erlischt die entsprechende Produkthaftung des Herstellers.

For maintenance work and repair on components that influence the equipment safety, only replacement material conforming to the manufacturer's specifications may be used.

The equipment should be properly serviced in regular intervals and be maintained in safe operating condition. If the equipment is not properly maintained or if any modifications are made to components that influence safety, the manufacturer's product liability gets void.

Elektrostatische Entladung (ESD) bei Wartung und Reparatur

Electrostatic Discharge (ESD) during Maintenance and Repair


ATTENTION:

Observe precautions for handling devices sensitive to electrostatic discharge!

ATTENTION:

Respecter les précautions d'usage concernant la manipulation de composants sensibles à l'électricité statique!

ACHTUNG:

Vorsichtsmassnahmen bei Handhabung elektrostatisch entladungsgefährdeter Bauelemente beachten!

Viele ICs und andere Halbleiter sind empfindlich gegen elektrostatische Entladung (ESD). Unfachgerechte Behandlung von Baugruppen mit solchen Komponenten bei Wartung und Reparatur kann deren Lebensdauer drastisch vermindern.

Bei der Handhabung der ESD-empfindlichen Komponenten sind u.a. folgende Regeln zu beachten:

- ESD-empfindliche Komponenten dürfen ausschliesslich in dafür bestimmten und bezeichneten Verpackungen gelagert und transportiert werden.
- Unverpackte, ESD-empfindliche Komponenten dürfen nur in den dafür eingerichteten Schutzzonen (EPA, z.B. Gebiet für Feldservice, Reparatur- oder Serviceplatz) gehandhabt und nur von Personen berührt werden, die durch ein Handgelenkband mit Serienwiderstand mit dem Massepotential des Reparatur- oder Serviceplatzes verbunden sind. Das gewartete oder reparierte Gerät wie auch Werkzeuge, Hilfsmittel, EPA-taugliche (elektrisch leitende) Arbeits-, Ablage- und Bodenmatten müssen ebenfalls mit diesem Potential verbunden sein.
- Die Anschlüsse der ESD-empfindlichen Komponenten dürfen unkontrolliert weder mit elektrostatisch aufladbaren (Gefahr von Spannungsdurchschlag), noch mit metallischen Oberflächen (Schockentladungsfahr) in Berührung kommen.
- Um undefinierte transiente Beanspruchung der Komponenten und deren eventuelle Beschädigung durch unerlaubte Spannung oder Ausgleichsströme zu vermeiden, dürfen elektrische Verbindungen nur am abgeschalteten Gerät und nach dem Abbau allfälliger Kondensatorladungen hergestellt oder getrennt werden.

Many ICs and semiconductors are sensitive to electrostatic discharge (ESD). The life of components containing such elements can be drastically reduced by improper handling during maintenance and repair work.

Please observe the following rules when handling ESD sensitive components:

- ESD sensitive components should only be stored and transported in the packing material specifically provided for this purpose.
- Unpacked ESD sensitive components should only be handled in ESD protected areas (EPA, e.g. area for field service, repair or service bench) and only be touched by persons who wear a wristlet that is connected to the ground potential of the repair or service bench by a series resistor. The equipment to be repaired or serviced and all tools, aids, as well as electrically semiconducting work, storage and floor mats should also be connected to this ground potential.
- The terminals of ESD sensitive components must not come in uncontrolled contact with electrostatically chargeable (voltage puncture) or metallic surfaces (discharge shock hazard).
- To prevent undefined transient stress of the components and possible damage due to inadmissible voltages or compensation currents, electrical connections should only be established or separated when the equipment is switched off and after any capacitor charges have decayed.

SMD-Bauelemente

Der Austausch von SMD-Bauelementen ist ausschliesslich geübten Fachleuten vorbehalten. Für verwüstete Platinen können keine Ersatzansprüche geltend gemacht werden. Beispiele für korrekte und falsche SMD-Lötverbindungen in der Abbildung weiter unten.

Bei Studer werden keine handelsüblichen SMD-Teile bewirtschaftet. Für Reparaturen sind die notwendigen Bauteile lokal zu beschaffen. Die Spezifikationen aller Komponenten finden Sie in den Positionslisten im Schemateil.

Spezialkomponenten sind in der Positionsliste mit einer Artikelnummer versehen und können bei Studer unter dieser Nummer bezogen werden.

SMD Components

SMDs should only be replaced by skilled specialists. No warranty claims will be accepted for circuit boards that have been ruined. Proper and improper SMD soldering joints are depicted below.

Studer does not keep any commercially available SMDs in stock. For repairs the corresponding devices should be purchased locally. The specifications of all components can be found in the parts lists in the diagram section.

Special components having a part number in the parts list can be ordered from Studer by specifying this number.

<p>Demontage/Dismounting</p>	
<p>Montage/Mounting</p>	<p>Beispiele/Examples</p>

Störstrahlung und Störfestigkeit

Das Gerät entspricht den Schutzanforderungen auf dem Gebiet der elektromagnetischen Phänomene, die u.a. in den Richtlinien 89/336/EWG und FCC, Part 15, aufgeführt sind :

1. Die vom Gerät erzeugten elektromagnetischen Ausstrahlungen sind soweit begrenzt, dass ein bestimmungsgemässer Betrieb anderer Geräte und Systeme möglich ist.
2. Das Gerät weist eine angemessene Festigkeit gegen elektromagnetische Störungen auf, so dass sein bestimmungsgemässer Betrieb möglich ist.

Das Gerät wurde getestet und erfüllt die Bedingungen der im Kapitel "Technische Daten" aufgeführten EMV-Standards. Die Limiten dieser Standards gewährleisten mit einer angemessenen Wahrscheinlichkeit sowohl einen Schutz der Umgebung wie auch entsprechende Störfestigkeit des Gerätes. Eine absolute Garantie, dass keine unerlaubte elektromagnetische Beeinträchtigung während des Gerätebetriebes entsteht, ist jedoch nicht gegeben.

Um die Wahrscheinlichkeit solcher Beeinträchtigung weitgehend auszuschliessen, sind u.a. folgende Massnahmen zu beachten:

- Installieren Sie das Gerät gemäss den Angaben in der Bedienungsanleitung, und verwenden Sie das mitgelieferte Zubehör.
- Verwenden Sie im System und in der Umgebung, in denen das Gerät eingesetzt ist, nur Komponenten (Anlagen, Geräte), die ihrerseits die Anforderungen der obenerwähnten Standards erfüllen.
- Sehen Sie ein Erdungskonzept des Systems vor, das sowohl die Sicherheitsanforderungen (die Erdung der Geräte gemäss Schutzklasse I mit einem Schutzleiter muss gewährleistet sein), wie auch die EMV-Belange berücksichtigt. Bei der Entscheidung zwischen stern- oder flächenförmiger bzw. kombinierter Erdung sind Vor- und Nachteile gegeneinander abzuwägen.
- Benutzen Sie abgeschirmte Kabel für die Verbindungen, für welche eine Abschirmung vorgesehen ist. Achten Sie auf einwandfreie, grossflächige, korrosionsbeständige Verbindung der Abschirmung zum entsprechenden Steckeranschluss bzw. zum Steckergehäuse. Beachten Sie, dass eine nur an einem Ende angeschlossene Kabelabschirmung als Sende- bzw. Empfangsantenne wirken kann (z.B. bei wirksamer Kabellänge von 5 m oberhalb von 10 MHz), und dass die Flanken der digitalen Kommunikationssignale hochfrequente Aussendungen verursachen (z.B. LS- oder HC-Logik bis 30 MHz).
- Vermeiden Sie Bildung von Stromschleifen oder vermindern Sie deren unerwünschte Auswirkung, indem Sie deren Fläche möglichst klein halten und den darin fliessenden Strom durch Einfügen einer Impedanz (z.B. Gleichtaktdrossel) reduzieren.

Electromagnetic Compatibility

The equipment conforms to the protection requirements relevant to electromagnetic phenomena that are listed in the guidelines 89/336/EC and FCC, part 15.

1. The electromagnetic interference generated by the equipment is limited in such a way that other equipment and systems can be operated normally.
2. The equipment is adequately protected against electromagnetic interference so that it can operate correctly.

The equipment has been tested and conforms to the EMC standards applicable to residential, commercial and light industry, as listed in the section "Technical Data". The limits of these standards reasonably ensure protection of the environment and corresponding noise immunity of the equipment. However, it is not absolutely warranted that the equipment will not be adversely affected by electromagnetic interference during operation.

To minimize the probability of electromagnetic interference as far as possible, the following recommendations should be followed:

- Install the equipment in accordance with the operating instructions. Use the supplied accessories.
- In the system and in the vicinity where the equipment is installed, use only components (systems, equipment) that also fulfill the above EMC standards.
- Use a system grounding concept that satisfies the safety requirements (protection class I equipment must be connected with a protective ground conductor) that also takes into consideration the EMC requirements. When deciding between radial, surface or combined grounding, the advantages and disadvantages should be carefully evaluated in each case.
- Use shielded cables where shielding is specified. The connection of the shield to the corresponding connector terminal or housing should have a large surface and be corrosion-proof. Please note that a cable shield connected only single-ended can act as a transmitting or receiving antenna (e.g. with an effective cable length of 5 m, the frequency is above 10 MHz) and that the edges of the digital communication signals cause high-frequency radiation (e.g. LS or HC logic up to 30 MHz).
- Avoid current loops or reduce their adverse effects by keeping the loop surface as small as possible, and reduce the noise current flowing through the loop by inserting an additional impedance (e.g. common-mode rejection choke).

Class A Equipment - FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution:

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment. Also refer to relevant information in this manual.

CE-Konformitätserklärung

Wir,

Studer Professional Audio AG,
CH-8105 Regensdorf,

erklären in eigener Verantwortung, dass das in dieser Anleitung beschriebene Produkt

- 990, Mischpult,

auf das sich diese Erklärung bezieht, entsprechend den Bestimmungen der EU-Richtlinien und deren Ergänzungen

- Elektromagnetische Verträglichkeit (EMV):
89/336/EWG + 92/31/EWG + 93/68/EWG
- Niederspannung:
73/23/EWG, 93/68/EWG

mit den Normen und normativen Dokumenten übereinstimmt, die in den Kapiteln "Technische Daten" (Sicherheits- und EMV-Standards) dieser Anleitung aufgeführt sind.

Regensdorf, 16. Juni 1995



B. Hochstrasser, Geschäftsleiter



P. Fiala, Leiter QS

CE Declaration of Conformity

We,

Studer Professional Audio AG,
CH-8105 Regensdorf,

declare under our sole responsibility that the product described in this manual

- 990, Mixing Console,

to which this declaration relates, according to following regulations of EU directives and amendments

- Electromagnetic Compatibility (EMC):
89/336/EEC + 92/31/EEC + 93/68/EEC
- Low Voltage (LVD):
73/23/EEC + 93/68/EEC

is in conformity with the standards or other normative documents which are listed in the sections "Technical Data" (security and EMC standards) in this manual.

Regensdorf, June 16, 1995



B. Hochstrasser, Managing Director



P. Fiala, Manager QA

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1 General

1.1 Important information

- The mixing console should only be aligned after the machine has attained normal operating temperature.
- For measuring the levels on the line outputs the later must be loaded with $\geq 10k\Omega$.
- Perform the steps in the specified sequence. Many steps are prerequisite for the subsequent alignments.
- When you install the modules, firmly tighten all the fixing screws. Solid ground connection and the specified EMC values are only achievable if the modules are correctly fastened.

1.2 Level definition

Level specifications:

The nominal levels specified in dBu are based on a fixed voltage value as the reference variable:

0 dBu \cong 0,775 V_{eff}

Nominal level in dBu:

Nominal level = Level at full amplitude
--

The nominal level corresponds to the level at full amplitude. The terms nominal level, studio level and line level are used as synonyms. The nominal level is used as the 0dB value for all relative level specifications.

Output level:

0 dB PPM	=	Nominal level
0 VU	=	Nominal level minus 6 dB*

* 6dB correspond to an expanded value for the VU instrument lead.

PPM consoles

As quasi peak value instruments the peak program meters indicate the sine voltage as an RMS value. A signal with nominal value results in an indication of 0dB.

VU consoles

For a continuous tone VU instruments indicate a value that is too high by the magnitude of the lead. For a 0VU reading the level of the test signal must be reduced by the amount of the lead. VU consoles are frequently set to a nominal value of +10dBu, that is, with a 6dB lead of the VU meter a level of +4dBu is indicated at 0VU.

1.3 Measuring instruments

The voltmeter and the function generator must be equipped with balanced signal connections.

Note: If no measuring instrument with balanced connections is available, unbalanced inputs should be connected via a signal transformer.

Voltage level ↔ Decibel

$\frac{U1}{U2}$	μV	dBu			$\frac{U1}{U2}$	μV	dBu		
	mV					mV			
	V	-dBu	dBu	dBu		V	-dBu	dBu	dBu
1	0,775	±0	-60	-120	31,6	24,5	+30	-30	-90
1,12	0,87	+1	-59	-119	35,5	27,5	+31	-29	-89
1,26	0,98	+2	-58	-118	39,8	30,8	+32	-28	-88
1,41	1,09	+3	-57	-117	44,7	34,6	+33	-27	-87
1,59	1,23	+4	-56	-116	50,1	38,8	+34	-26	-86
1,78	1,38	+5	-55	-115	56,2	43,6	+35	-25	-85
2,00	1,55	+6	-54	-114	63,1	48,9	+36	-24	-84
2,24	1,73	+7	-53	-113	70,8	54,8	+37	-23	-83
2,51	1,95	+8	-52	-112	79,4	61,5	+38	-22	-82
2,82	2,18	+9	-51	-111	89,1	69,0	+39	-21	-81
3,16	2,45	+10	-50	-110	100	77,5	+40	-20	-80
3,55	2,75	+11	-49	-109	112	86,9	+41	-19	-79
3,98	3,08	+12	-48	-108	126	97,5	+42	-18	-78
4,47	3,46	+13	-47	-107	141	109,4	+43	-17	-77
5,01	3,88	+14	-46	-106	159	122,8	+44	-16	-76
5,62	4,36	+15	-45	-105	178	137,7	+45	-15	-75
6,31	4,89	+16	-44	-104	200	154,5	+46	-14	-74
7,08	5,48	+17	-43	-103	224	173,4	+47	-13	-73
7,94	6,15	+18	-42	-102	251	194,6	+48	-12	-72
8,91	6,90	+19	-41	-101	282	218,3	+49	-11	-71
10,0	7,75	+20	-40	-100	316	244,9	+50	-10	-70
11,2	8,69	+21	-39	-99	355	274,8	+51	-9	-69
12,6	9,75	+22	-38	-98	398	308,4	+52	-8	-68
14,1	10,9	+23	-37	-97	447	346,0	+53	-7	-67
15,8	12,3	+24	-36	-96	501	388,2	+54	-6	-66
17,8	13,8	+25	-35	-95	562	435,6	+55	-5	-65
20,0	15,5	+26	-34	-94	631	488,7	+56	-4	-64
22,4	17,3	+27	-33	-93	708	548,4	+57	-3	-63
25,1	19,5	+28	-32	-92	794	615,3	+58	-2	-62
28,2	21,8	+29	-31	-91	891	690,4	+59	-1	-61
31,6	24,5	+30	-30	-90	1000	774,6	+60	±0	-60

2 Alignment of the 990 power supply system

This alignment instruction applies to all power supply types:

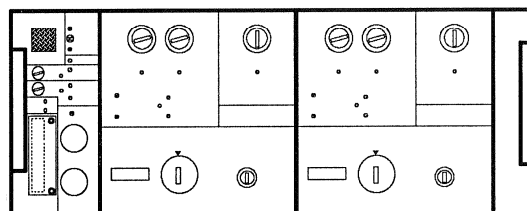
■ Dual power	Supply/master	1.918.420
■ Single power	Supply/master	1.918.421
■ Dual power	Supply/slave	1.918.422
■ Single power	Supply/slave	1.918.423

IMPORTANT: The settings for the main and standby power supply (change-over) are identical, except that the voltages of the standby power supply must be set lower by 0.2V.

- Required measuring instruments:**
- Digital multimeter Ri ≥ 1MΩ
 - Diagnostic board 1.918.080

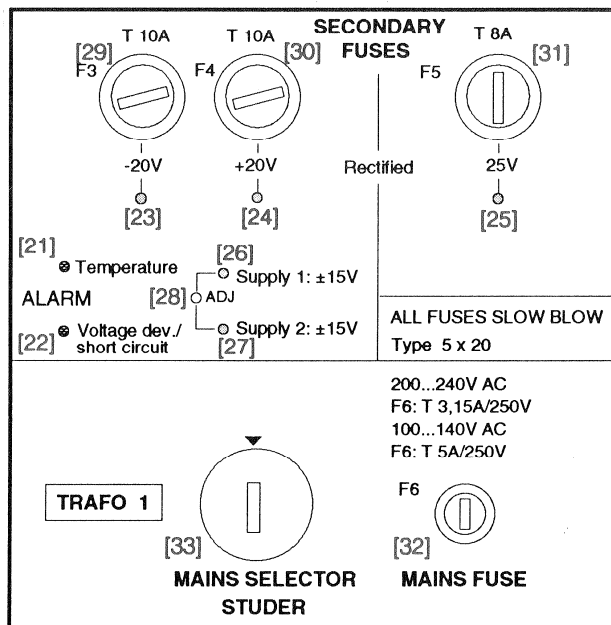
2.1 Dual power supply / MASTER

1.918.420



2.1.1 ±15V I/II transformer block 1 (left)

- Switch on the power supply
- Connect the diagnostic board to the large connector labeled 'Diagnostics'
- Measure the +15V (L1) on the diagnostic board
0V: pin 20 / +15V: pin 28
- With trimmer **ADJ** [28] adjust the left-hand transformer block to **+15.6V**.



The corresponding voltages -15V of L1 or ±15V of L2 are automatically set by the tracking, that is, for each transformer block the adjustment of only one voltage is required.

Check: Check the remaining voltages (-15V I; ±15V II):

-15V L1 0V: pin 20 / -15V: pin 26
 +15V L2 0V: pin 20 / +15V: pin 24
 -15V L2 0V: pin 20 / -15V: pin 22

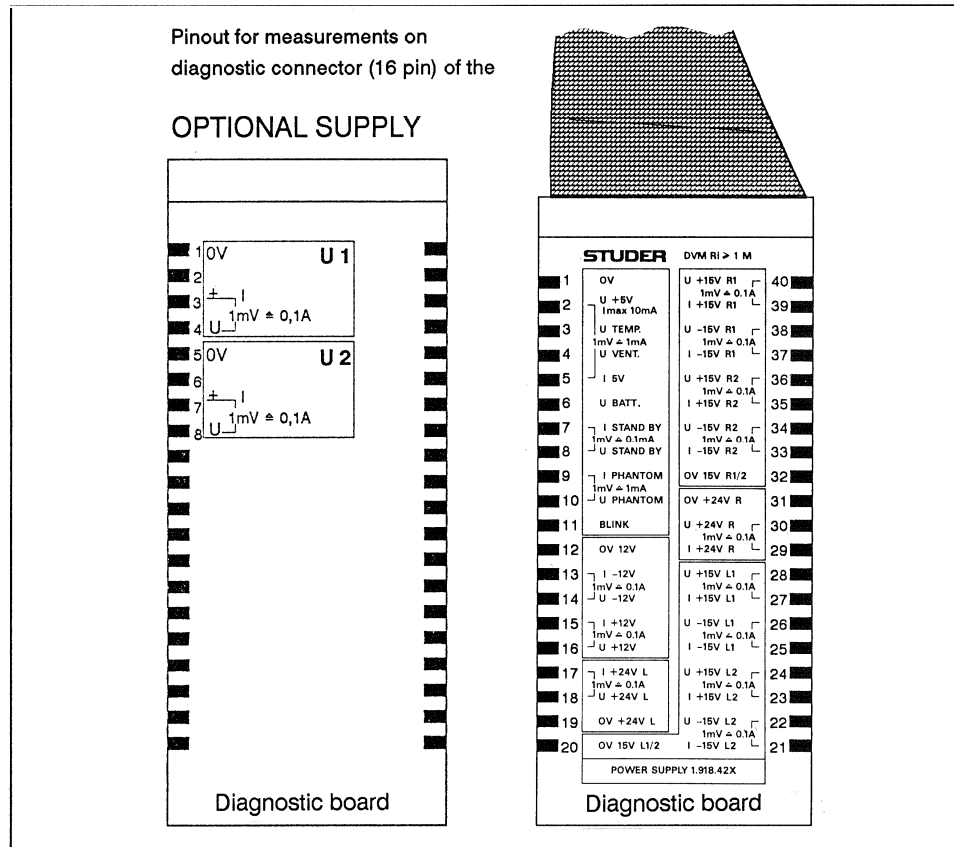


Fig. 1 Diagnostic board 1.918.080.00

2.1.2 ±15V I/II transformer block 2 (right)

Both transformer blocks are identical. All voltages of both units can be measured on the diagnostic board.

- Measure the +15V (R1) on the diagnostic board.
0V: pin 32 / +15V: pin 40
- With trimmer ADJ [28] adjust the right-hand transformer block to +15.6V.

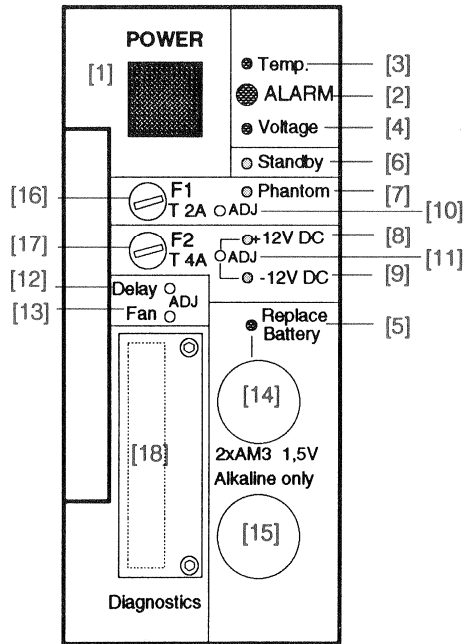
Check: Check the remaining voltages (-15V I; ±15V II):

-15V R1 0V: pin 32 / -15V: pin 38
 +15V R2 0V: pin 32 / +15V: pin 36
 -15V R2 0V: pin 32 / -15V: pin 34

2.1.3 ±12V supply

- Measure the +12V on the diagnostic board.
0V: pin 12 / +12V: pin 16
- With trimmer **ADJ** [11] adjust the standby/phantom unit to +12.2V.

Standby / Phantom



Check: Check the -12V on pin 14.

2.1.4 Phantom supply

The phantom supply is specified by the customer and is either +12V, +24V or +48V. For this purpose the soldering straps on the transformer 1.910.503 can be changed as shown in Fig. 2. In addition the setting of jumper J7 must be changed on the Phantom/S.B./±12V board 1.918.088 (see Fig. 3).

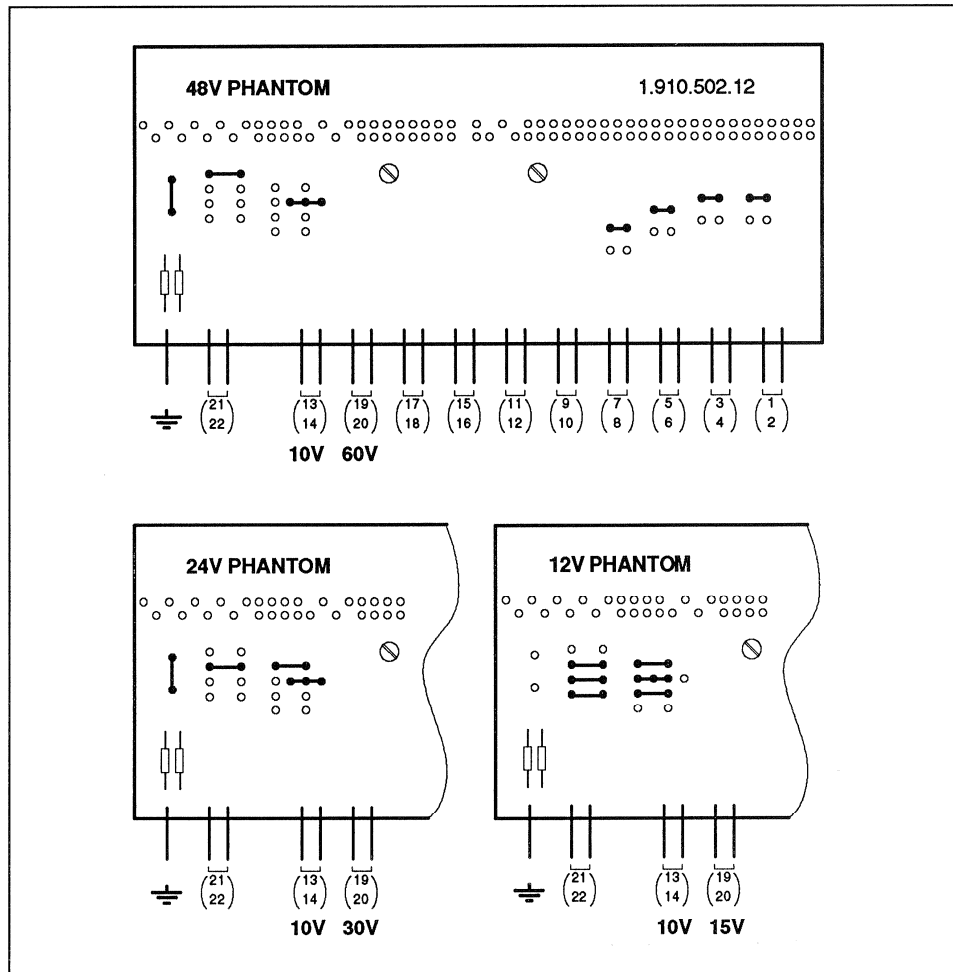


Fig. 2 The phantom supply can be set with soldering straps on the transformer board.

Note: If you change the phantom voltage also the phantom resistors on the **Connection board 1.992.160** of the input units must be adapted. The resistors are located somewhat concealed next to connectors P9 (top connector for input units). On mono units two resistors must be changed per channel. For stereo universal units four resistors must be changed.

Phantom supply	R1...R8 R11...R18	Tolerance
48V	6,8kΩ	0,1%
24V	4,3kΩ	0,1%
12V	680Ω	0,1%

- Alignment**
- Measure the phantom voltage on the diagnostic board.
0V: pin 1 / UPHANTOM: Pin 10
 - With trimmer ADJ [10] on the standby/phantom unit align the supply voltage to +12.2V or +24.2V or +48.2V.

2.1.5 Fan adjustment

The fan operates at two speeds. If the temperature threshold is exceeded it switches automatically to the maximum speed. Below this temperature it is possible to define with a jumper whether the fan should turn at maximum speed, reduced speed, or not at all.

Jumper setting

On the circuit board 1.918.088 (Phantom standby / ±12V board) and 1.918.089 (Feed Through board) jumpers **J6** define the behavior of the fan below the switching threshold T_{vent} .

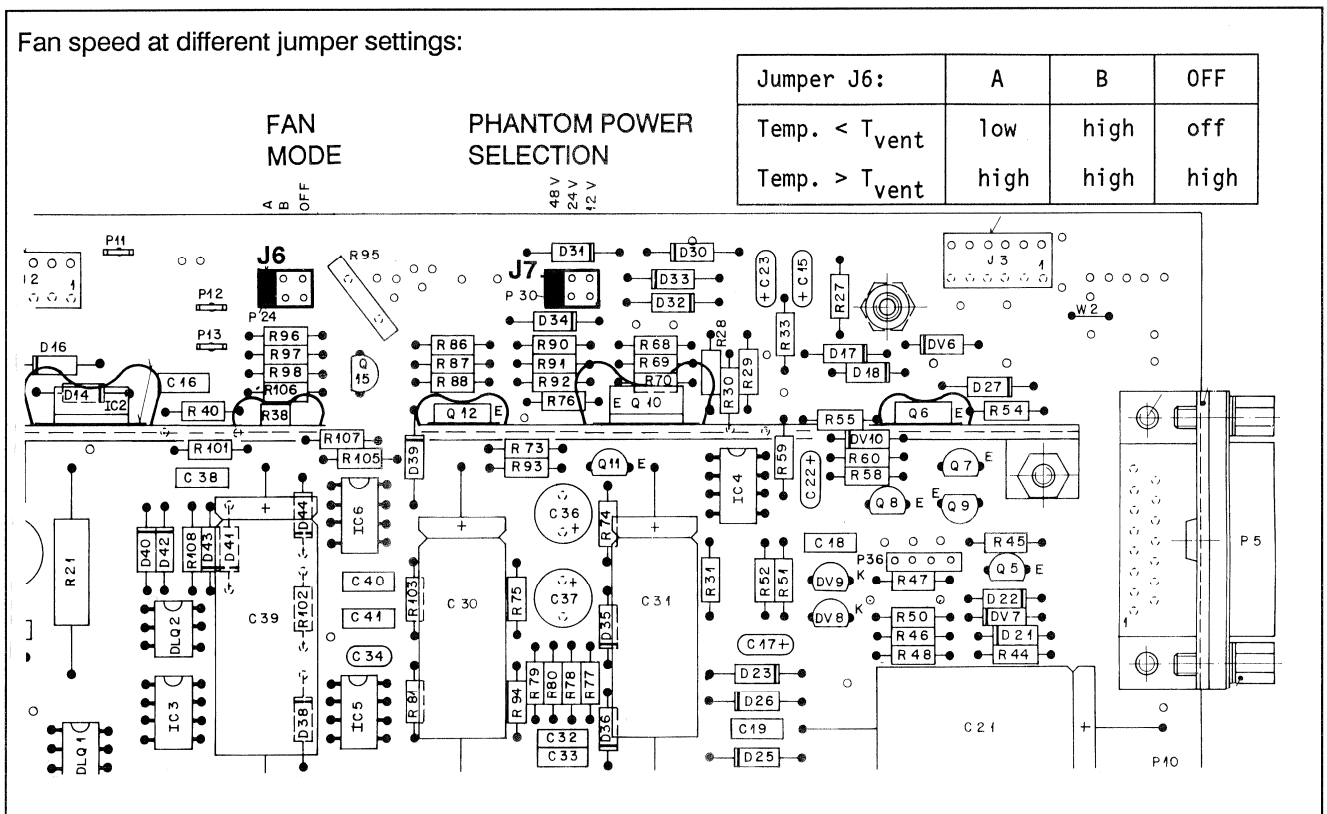


Fig. 3 Phantom/Standby/±12V Board 1.918.088 and Feed Through Board 1.918.089: Jumper settings for ventilator and phantom supply.

Factory setting

J6 (fan mode) in position A
J7 (phantom power) as specified by customer

Switching temperature T_{vent}

The temperature above which the fan runs at full speed can be set with trimmer FAN [13]:

- Connect the diagnostic board (1.918.080) to the DIAGNOSTICS [18] connector. U_{temp} and U_{vent} correlate with the temperature as follows:

The voltage U_{vent} represents the highest value of the different temperature sensors: Transformer 1; transformer 2; heat sink 1; heat sink 2; heat sink standby/phantom.

- Measure U_{vent} and set the switching temperature with trimmer FAN [13]. The fan is switched to full speed as soon as U_{temp} exceeds U_{vent} .
- Repeat this adjustment for all power supplies (slave and optional units).

Factory setting: $3.5V \cong 120^{\circ}C$.

2.1.6 Delayed switch-on

In a system with more than one power supply the power-on delay prevents an overload when the mixing console is switched on. Between two transformers within the same housing the switch-on is delayed by approx. 100ms. For transmitting the power-on pulse to the equipment input a variable delay element (DELAY [12]) is available. The exact conditions are illustrated in Fig. 4.

As secondary protection the inrush current is limited by NTC elements.

- The delay times can be set by ear. The power-on clicks of the individual transformers should be heard as a regular salvo.
- Perform this adjustment on all power supplies.

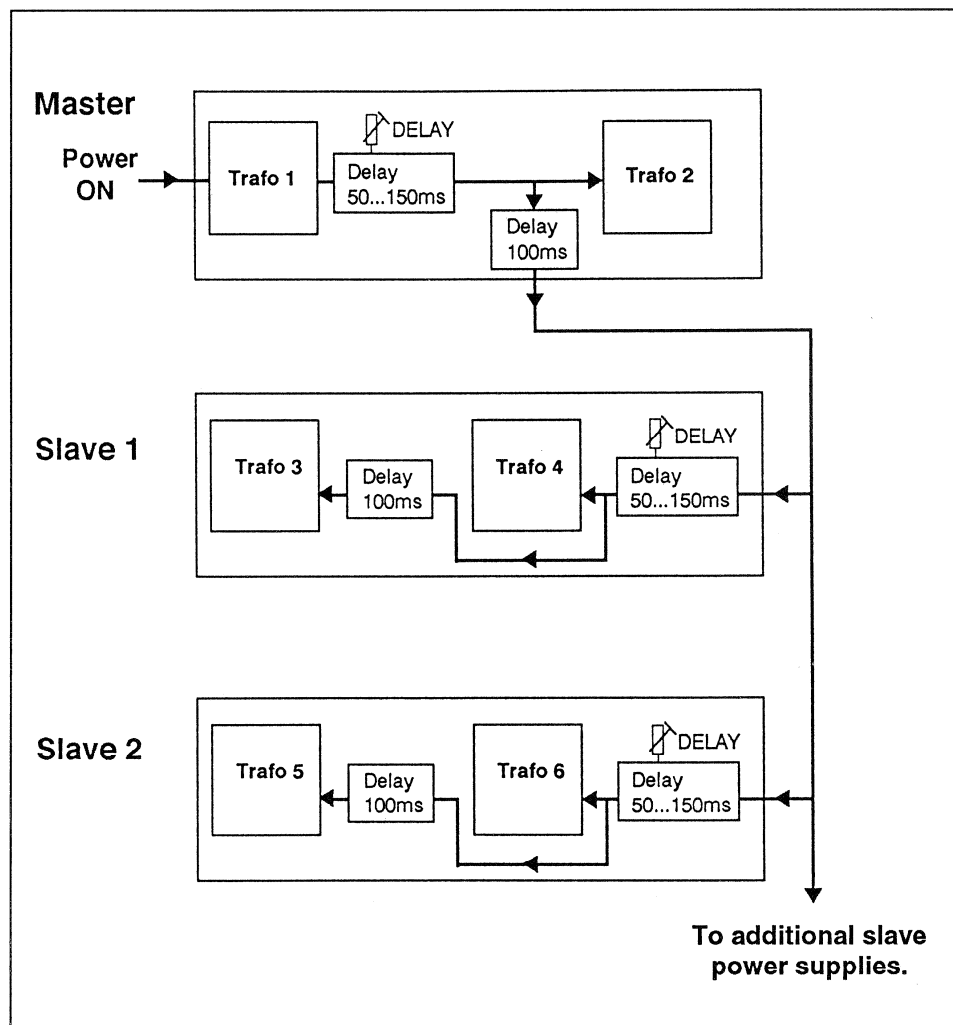


Fig. 4 Power-on delay sequence: The variable DELAY time can be adjusted with trimmer [12] in the equipment front. On slave power supplies the left-hand front plate is blank, but the FAN and DELAY trimmers are arranged in the same position as on master power supplies.

2.1.7 Optional supply AUX

As an option an additional unit that supplies two voltages can be installed in each power supply.

OPTION 1 In this version 2 x ±42V are additionally supplied which are needed, for example, for the Studer power amplifier Euroboard 1.915.440/441.

These voltages are not stabilized. Trimmers [43] and [44] do not exist.

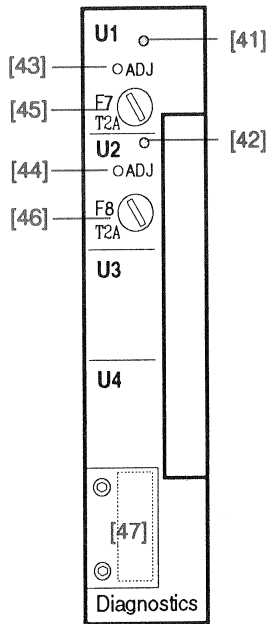
OPTION 2 This option can supply U1 and U2 voltages in any combination of ±5V, ±6V, ±12V or ±24V. If this option is installed the generated voltages are defined in the documentation hat belongs to the specific console.

For measuring the Option 2 voltages connect the diagnostic board to the 16-pin 'Diagnostics' connector [47]:

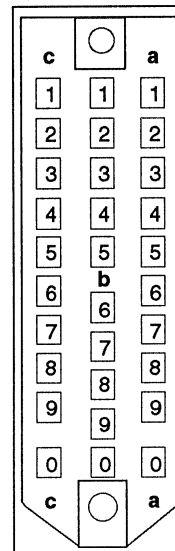
U_{out 1} 0V: pin 1 / U1: pin 4 adjustable with trimmer [43]

U_{out 2} 0V: pin 5 / U2: pin 8 adjustable with trimmer [41]

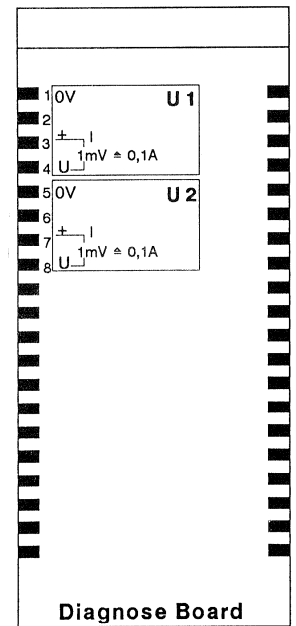
Supply cable 'Slave/Aux' 1.925.12x



Ader Nr.	Signal	Kontakt
1	+Usw	0 c
2	-Usw	0 a
3	+15V I	9 c
4	-15V I	8 c
5	-15V II	7 c
6	+15V II	6 c
7	0V Audio	5 c
8	-Ures 1/ 0V	4 c
9	+Ures 1	3 c
10	-Ures 2/ 0V	2 c
11	+Ures 2	1 c
12	0V Erde	8 b
13	+15V I	9 a
14	-15V I	8 a



OPTIONAL SUPPLY



2.2 Standby power supply Dual power supply / MASTER**1.918.420**

This alignment is only required if a dual supply with a standby power supply unit exists.

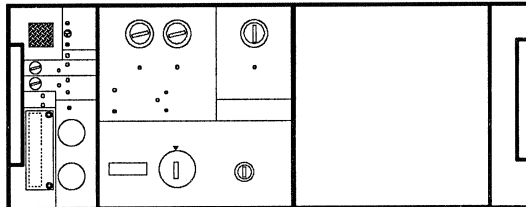
Perform the same adjustments as described in **Sections 2.1 to 2.7**. Of course, the diagnostic board must be connected to the optional power supply. The **basic difference** applicable to standby units is:

All voltages of the standby power supply must be set lower by **0.2V**.

This setting assures that only one system is loaded. The standby power supply operates in no-load mode and can assume the supply function without interruption when this is required.

2.3 Single power supply / MASTER**1.918.421**

This power supply is used in smaller mixing consoles that have low power requirements.



The adjustments are the same as for the Dual power supply / MASTER as described in Sections 2.1, 2.3, 2.4, 2.5, 2.6, and 2.7.

2.4 Optional power supply Single power supply / MASTER**1.918.421**

This alignment is only required if a dual supply with a standby power supply unit exists.

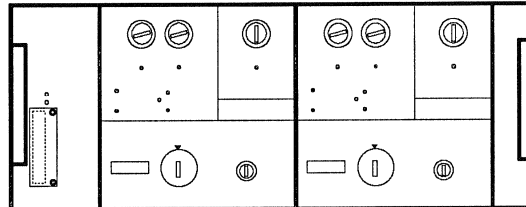
The same adjustments as described in **Section 3** must be performed. Of course, the diagnostic board must be connected to the optional power supply unit. The basic difference applicable to standby units is:

All voltages of the standby power supply must be set lower by **0.2V**.

2.5 Dual power supply / SLAVE

1.918.422

SLAVE power supplies increase the capacity of the power supply. In contrast to the master there is no standby/phantom unit.



The alignment procedure follows the instructions in **Sections 2.1** and **2.2**. The fan and the switch-on delay are adjusted as described in **2.5** and **2.6**. The corresponding bores through which the trimmers are accessible are located in the blank lower cover plate. If there is an optional supply it is aligned according to **2.7**.

2.6 Standby power supply Dual power supply / SLAVE

1.918.422

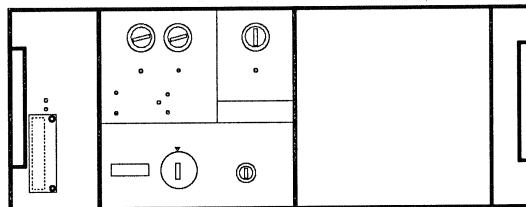
Perform the same adjustments as described in **Section 5**. Of course, the diagnostic board must be connected to the standby power supply unit. The basic difference applicable to standby units is:

All voltages of the standby power supply must be set lower by 0.2V.

2.7 Single power supply / SLAVE

1.918.423

This unit is aligned according to the instructions in **Sections 2.1, 2.5, 2.6** and possibly **2.7** (if the optional power supply is installed).



2.8 Standby power supply Single power supply / SLAVE

1.918.423

Perform the same adjustments as described in **Section 7**, with the usual limitation:

All voltages of the standby power supply must be set lower by **0.2V**.

2.9 Dual supply with standby system / change-over

General

If maximum reliability is required, possible defects in the power supplies should be taken into consideration. By installing standby units it is possible to bridge a power supply failure without interference with normal operation. Two versions are feasible:

- Redundant cards are installed for all power converters in the Eurocard format.
- The entire power supply system as well as the power converter cards are redundant.

Power supply change-over

Two complete power supply complexes comprising master and slave units exists. The output voltage of each pair consisting of a main unit and standby unit are connected to the mixing console via change-over units. In the event of a supply voltage failure this change-over unit switches to the standby transformer without any interference. The change-over unit can be conveniently plugged into the 30-pin socket of the transformer block.

Required material:

- For each power supply unit one standby unit of the same type
- For each existing supply cable 1 Change-over unit 1.918.075

Example

In this simple example a dual master main power supply and a dual master standby power supply are connected via two change-over units. A control line (not shown) interconnects the two units into a system with networked alarm and function monitoring.

(For additional information refer to Section 5 of the operating instructions)

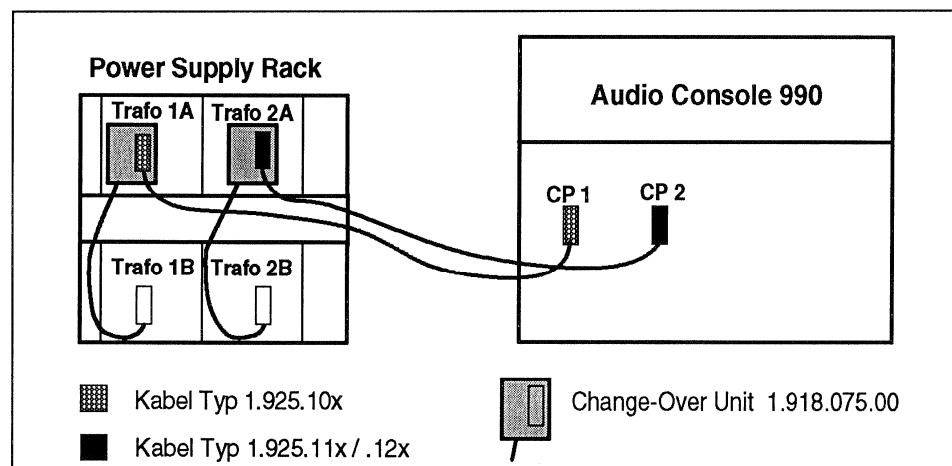


Fig. 5 The entire power supply system is redundant. The CHANGE-OVER unit connects each transformer to its standby transformer and connects the higher of the two voltages to the mixing console. In this example the host processor rack is installed in the mixing console.

3 Alignment of the DC/DC converters

1.915.111

The DC/DC converter boards (power supply 3–6V 1.915.111.81) convert the unstabilized 25V to:

- +5V (supply of the processor board as well as logical circuits)
- U_{LED} (controllable supply of the LEDs)

As in the case of the power supplies a standby power converter with change-over can be installed for each converter.

Special cases

- On request the central control rack can be installed outside the mixing console. In this case the +5V host converter (plus optional standby board) is located in the external rack. The adjustments (Section 3) are made on the VME connection board on the rear of the external rack.
- For a redundant power supply with at least one redundant power converter a 'Diodes/Power Alarm 2 Board' is also installed.

3.1 Block diagram: Redundant power supply with "change-over"

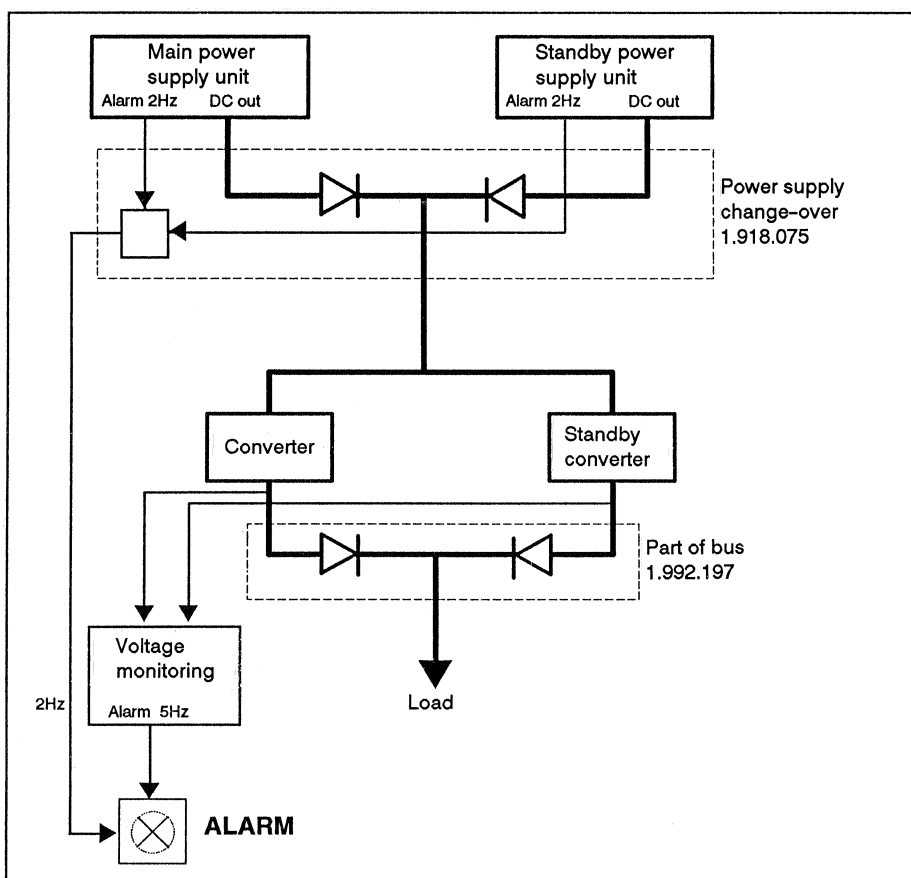


Fig. 1 Dual supply with standby units for power supply and converter boards. The alarm system monitors also the correct functioning of the standby unit.

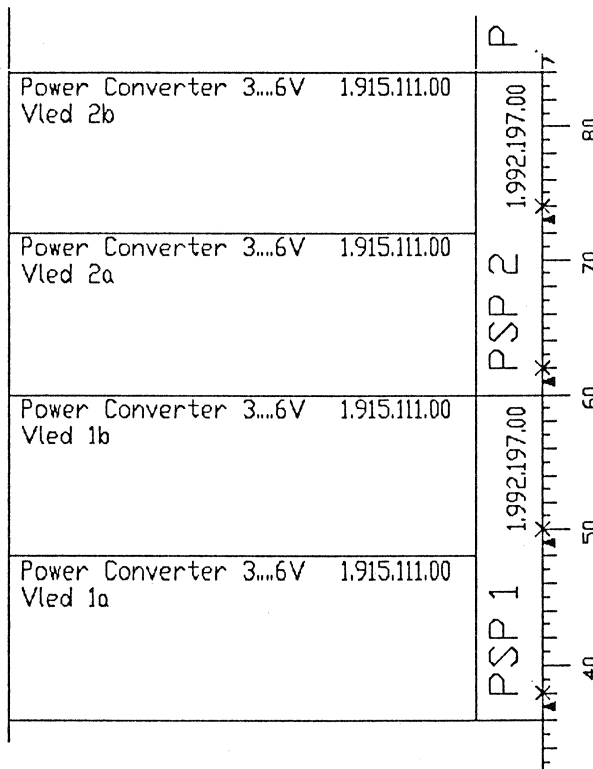
For implementing the comprehensive alarm indications to stabilized voltages from up to 8 converters are connected to a 'Diodes/Power Alarm 2 Board' 1.915.109.

This board is only configured for consoles with standby converters (Eurorack)! The assignment of the converters to the loads is documented in the manual of the specific console. The main board is labeled as 'a' or '.1', the standby board with 'b' or '.2'.

Example from a specific console manual:

Power Converter 3...6V 1.915.111.00 5V Host b	PSP	1.992.197.00	120
Power Converter 3...6V 1.915.111.00 5V Host a			
Power Converter 3...6V 1.915.111.00 5V 2b	PSP 6	1.992.197.00	110
Power Converter 3...6V 1.915.111.00 5V2a			
Power Converter 3...6V 1.915.111.00 5V 1b	PSP 5	1.992.197.00	100
Power Converter 3...6V 1.915.111.00 5V 1a			
	PAB 2	1.910.209.00/1.910.209.00	90
Power Alarm Board 1.915.109.00 A: Vled3 B: Vled4 C: 5Vh D: --			
	PAB 1	1.910.209.00/1.910.209.00	80
Power Alarm Board 1.915.109.00 A: Vled1 B: Vled2 C: 5V 1 D: 5V 2			
			70
			60
			50
			40

Example of a console with standby converters



On consoles without standby supply the alignment is the same as for 'main boards' and the adjustments to the 'standby boards' are not applicable.

3.2 Alignment of +5V Logic

Main boards

- Connect a digital multimeter to the corresponding converter TP1(±) and TP2(+U).
- Align to +5.6V with R45 ("FINE ADJ").
- Repeat the procedure for all 5V converters.

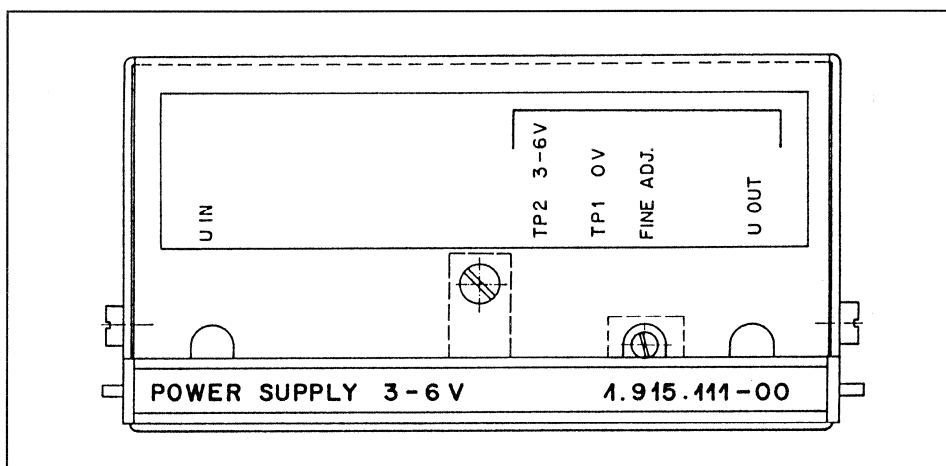


Fig. 2 DC/DC converter 3...6V (1.915.111)

Standby boards

- Align the standby converters to a voltage that is lower by 0.2V (+5.4V).
- Repeat the procedure for all +5V logic standby converters.

3.3 Alignment of +5V Host

Main boards

- Connect a digital multimeter to the corresponding converter TP1(⊖) and TP2(+U).
- Align to +5.6V with R45 ("FINE ADJ").

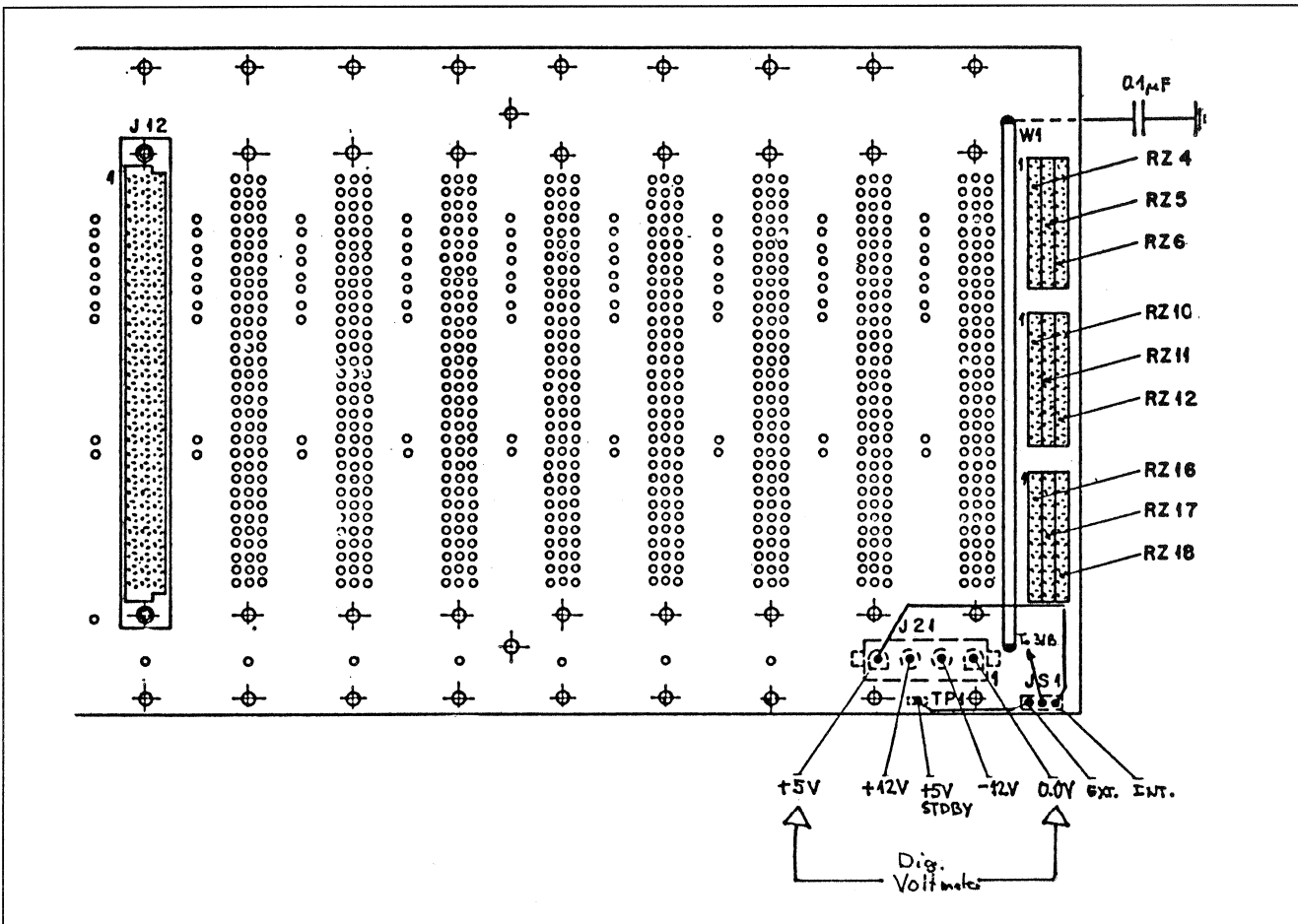


Fig. 3 Connection board on the back of the central control rack.

Check the +5V Host voltage on the VME motherboard. It must be between +5V and +5.4V.

Standby boards

- Perform the same alignment as for the main boards, but set the voltage to +5.4V.

3.4 Alignment of the VLED for consoles without standby supply

- Measuring instruments:**
- Digital multimeter $R_i \geq 1 \text{ M}\Omega$
 - Diagnostic board 1.918.080

- Alignment:**
- Turn the BRIGHTNESS potentiometer (TB/Display control unit) to the **minimum**.
 - Connect the voltmeter to the 1st converter ($V_{\text{Led 1}}$) between test point TP1 (0V) and TP2 (V_{Led}).
 - Adjust V_{Led} with the **FINE ADJ** (R45) trimmer to **+2.8V**.
 - Repeat this procedure for all existing converters that supply the LEDs.

The number of existing converters depends on the size of the mixing console and can consequently vary.

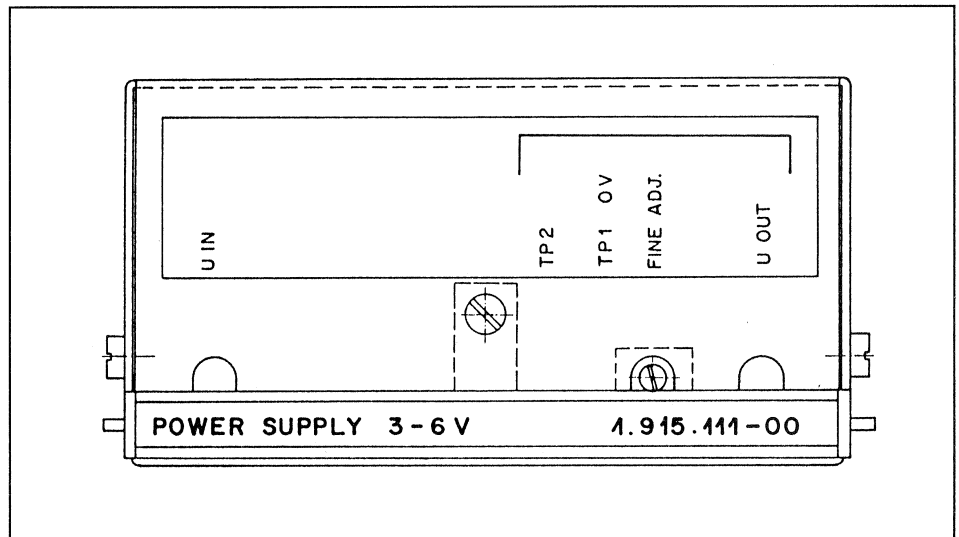


Fig. 4 DC/DC converter 1.915.111

3.5 Diodes / Power alarm 2 board

1.915.109.00

This board exists only in mixing consoles with dual supply and standby converters. Familiarity with this board is required for the subsequent alignments.

This Euroboard monitors the stabilized voltages of the DC/DC converters. If a converter fails (main or standby board) this alarm board causes the alarm LED on the TB/Display control unit to flash ($\approx 5\text{Hz}$).

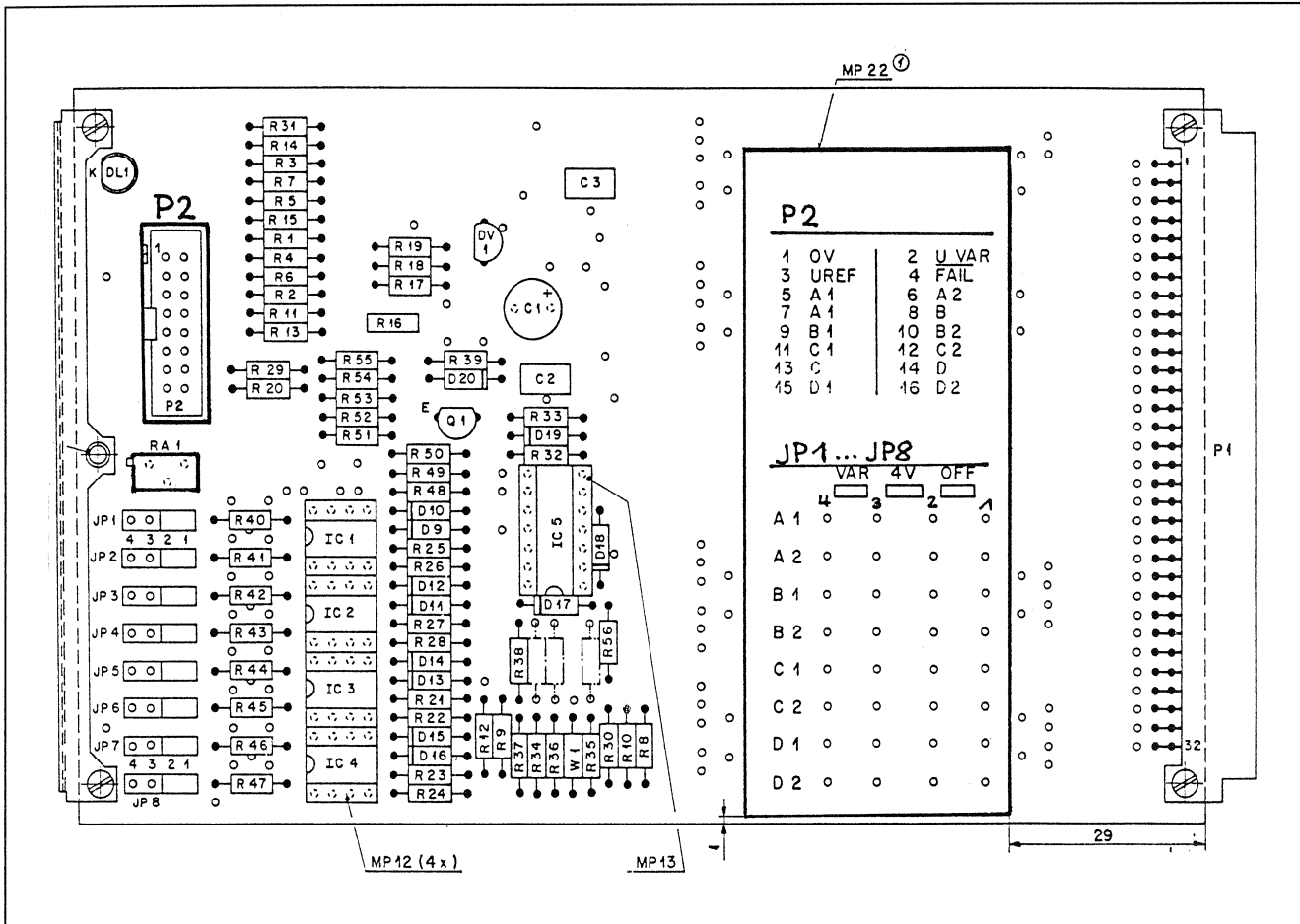


Fig. 5 Diodes/Power alarm 2 board (1.915.109) with specifications for jumper settings JP1...JP8 and pin assignment of connector P2 with the monitored voltages.

8 Converters can be monitored with this board.

The jumpers JP1...JP8 determine the voltage to which the converters are stabilized.

- Position VAR = Jumper position 4/3 for V_{Led}
- Position 4V = Jumper position 3/2 for +5V LOG/HOST
- Position OFF = Jumper position 2/1 for unused input

The pin assignment of P2 to the voltages A1...D2 is specified in Fig. 5.

3.6 Alignment of the VLED s for consoles with standby supply

- Set the BRIGHTNESS /(TB/Display control unit) potentiometer to the MINIMUM.
- Turn trimmer R45 on the V_{Led} converters to the MAXIMUM (clockwise limit position).
- Connect the diagnostic board 1.918.090 to P2 (16-pin flat cable connector) of the power alarm board. Before you remove this board switch the mixing console off and do not turn it on again until the board has been removed.
- Connect the digital voltmeter to pin 1 (0V) and pin 5 (A1) of the diagnostic board.

- Align V_{Led} 1.1 with R45 on the corresponding **main converter** ('a') to +2.9V.
- Align V_{Led} 1.2 between **pin 1** (0V) and **pin 6** (A2) with R45 on the corresponding **standby converter** to +2.7V.
- Align V_{Led} 2.1 between **pin 1** (0V) and **pin 9** (B1) with R45 on the corresponding **main converter** to +2.9V.
- Align V_{Led} 2.2 between **pin 1** (0V) and **pin 10** (B2) with R45 on the corresponding **standby converter** to +2.7V (standby).
- Repeat the procedure for all other converter pairs. Main boards (*.1) are to be aligned to +2.9V, standby boards (*.2) to +2.7V. The pin assignment of P2 is shown in Fig. 5.

The assignment of the converters to positions A1...D2 on the alarm board is shown in the drawing of the Eurorack and the wiring list of the power supply.

CABLE KABEL	WIRE DRAHT	---FROM/VON--- CONNECTOR STECKER	PIN KONT	---TO/NACH--- CONNECTOR STECKER	PIN KONT	Q mm2	VOLTAGE	SIGNAL NAME SIGNAL NAME	FROM VON	TO NACH
< 11 >	: GRN	PSP 1	1 : VLED	PAB 1	0 : UA1	0.1	VLED	VLED1.1 TO PWR ALARM	: EUROBOARD	EUROBOARD
	:		:		:				:	
< 12 >	: GRN	PSP 1	2 : VLED	PAB 1	0 : UA2	0.1	VLED	VLED1.2 TO PWR ALARM	: EUROBOARD	EUROBOARD
	:		:		:				:	
< 13 >	: GRN	PSP 2	1 : VLED	PAB 1	0 : UB1	0.1	VLED	VLED2.1 TO PWR ALARM	: EUROBOARD	EUROBOARD
	:		:		:				:	
< 14 >	: GRN	PSP 2	2 : VLED	PAB 1	0 : UB2	0.1	VLED	VLED2.2 TO PWR ALARM	: EUROBOARD	EUROBOARD
	:		:		:				:	
< 15 >	: GRN	PSP 3	1 : VLED	PAB 2	0 : UA1	0.1	VLED	VLED3.1 TO PWR ALARM	: EUROBOARD	EUROBOARD
	:		:		:				:	

FROM column	TO column
PSP 1.1 Connection board of converter 1.1	PAB1 Connection board of alarm board 1
PSP 1.2 Connection board of converter 1.2	PAB2 Connection board of alarm board 2
etc.	U A1 Voltage A1 of an alarm board
	U A2 Voltage A2 of an alarm board
	etc.

Fig. 6 Extract from the wiring list of a console with 2 alarm boards.

Example: V_{Led} 3.1 → UA1: On the alarm board the V_{Led} voltage is monitored in position A1. Jumper JP1 must consequently be set to VAR.
 V_{Led} 3.2 → UA2: On the alarm board the V_{Led} voltage is monitored in position A2. Jumper JP2 must consequently be set to VAR.

Jumpers JP1...JP8 on the alarm board are factory set according to these specifications.

3.7 Alignment of the alarm threshold

After all converters have been aligned the alarm threshold must be set.

- Turn the BRIGHTNESS potentiometer on the TB/Display control unit to the MINIMUM.
- Connect the diagnostic board to P2 on the Power alarm board.
- Connect the digital voltmeter to **pin 1** (0V) and **pin 2** (U VAR).
- Turn the multiturn potentiometer **RA1** until the LED DL1 is continuously on.
- Write down the voltage reading of the voltmeter. (Example: +2.0V)
- With RA1 adjust to **100mV below the measured voltage**
(Example: +2.0 - 0.1V = +1.9V)

3.8 Checking the alarm threshold

- a Turn BRIGHTNESS to **MAX.** → LED DL1 on the alarm board should **not flash**.
- b Pull out each converter individually:
 - LED DL1 should flash ($\approx 5\text{Hz}$)
 - ALARM on the console (TB/display control unit)
- c Switch the console off, reinsert the converter, switch the console on again. (no alarm)
- d Repeat the test with the other converters until all of them are checked.

4 Technical data power supply system

1.918.42X

4.1 Primary side

Standby supply	Voltage range		100...240V AC
	Voltage tolerance		±10%
	Line frequency		50/60Hz
	Power consumption	Standby	< 3W
		Operation ON	< 5W
	Safety transformer		short-circuit-proof
	Insulation primary/secondary		4kV
	Secondary fuse with thermistor		0.3A PTC
Main supply	Voltage range		100...240V AC
	Voltage tolerance		+10% / -5%
	Line frequency		50/60Hz
	Voltage selection Philberth system		100, 120, 140V AC 200, 220, 240V AC
	Power consumption:	Single supply	< 500VA
		Dual supply	< 1000VA
	Primary fuse: according to labeling on front plate		
		100...140V AC F6 =	T 5A (slow blow)
		200...240V AC F6 =	T 3.15A (slow blow)
	Inrush current limiter		2.2Ω NTC
I_{max} (ON)		< 100A	
Transformer insulation		4kV	
Transformer cut-off temperature		approx. 393K (120°C)	
Indirect power-on with relay			

4.2 Safety features

The power supply unit conforms to the requirements for equipment class I according to EN 60065 (IEC 65).

The primary side is designed with double insulation and withstands an AC test voltage of 4kV_{eff}.

The outputs of the power supply are not connected to the power supply housing. This means that it is not hazardous to separate the connection between the housing and the studio ground for measurement purposes while the mixing console is connected to the AC power source.

Detailed Inspections on the power supply:	High voltage test (2.5kV _{eff} ; 50Hz)
	Discharge current test
	Insulation test (500V)
	Protective ground resistance test

4.3 Secondary side

4.3.1 General data

Some of the generated reference voltages are used for several applications. The reference systems of the stabilizer circuit and monitoring circuit are completely separated.

Standby supply

Without standby voltage, operation of the equipment is not possible. The supply is implemented with discrete elements.

Output voltage	U_{sb}	5V ±5%
Maximum current	I_{max}	80mA
Short-circuit current	I_k	approx. 110mA
Overvoltage protection, Z-Diode	U_{max}	5.6V
Min. indication voltage of LEDs	U_{min}	> 4V
Measuring resistor 1Ω	U_{meas}	1mV ≅ 1mA

Auxiliary voltage on diagnostic connector Pin 2

U_{out}	5V ±5%
R_i (R fuse PTC)	50Ω
I_{max}	10mA

Batteries/standby

Type: AM3 alkaline, 2 pcs.	1.5V
Standby voltage with failed power supply (pin 8, diagnostic connector)	> 2.6V
Measurement resistor 10Ω	U_{meas} 1mV ≅ 0.1mA
Autonomy with disconnected power supply and new batteries	T > 2 months
The LEDs flash when the battery is low.	
The operating voltage is integrated in the alarm system.	

4.3.2 ±12V supply

The ±12V supply is used for the RS 232 interface with low power consumption. It suffices for supplying a hard disk drive. The high start-up current of the hard disk is required for only approx. 10 seconds. The power supply can provide this high current for only a few minutes. The fuse or the temperature sensor trips if a high current is drawn for too long. The total output power of the ±12V supply should not exceed 15W continuous load. The ±12V supply is fed by a voltage doubler circuit from the same transformer winding.

The ±12V supply has a floating potential relative to the general 0V (no digital interference).

The fuse protection is implemented with fuse F2 (labeled on the front shield as T 4A (slow blow)).

The ±12V can be adjusted with a trimmer on the front.

+12V supply	Output voltage	U_{out}	+12V
	Output current, continuous load	I	< 1A
	Output current (T < 1 min)	I_{max}	< 2A
	Short circuit current	I_k	approx. 2.5A
	Fold back	I_{fb}	approx. 1.7A
	Oversvoltage/cut-off point	U_{max}	approx. +13.5V
	Overtemperature/cut-off point	T	approx. 393K (120°C)
	No indication of undervoltage	U_{min}	< 8V
	Ripple/residual V BW 20kHz	U_r	< 15mV at I
	Measurement resistor 10mΩ	U_{meas}	1mV \cong 0.1A
	The +12V is integrated in the alarm system.		
-12V supply	Output voltage	U_{out}	-12V
	Output current, continuous load	I	< 0.5A
	Output current (T < 1 min)	I_{max}	< 1A
	Short circuit current	I_k	approx. 1.5A
	Oversvoltage/cut-off point	U_{max}	approx. -13.5V
	Overtemperature/cut-off point	T	approx. 393K (120°C)
	No indication of undervoltage	U_{min}	< -8V
	Ripple/resid. voltage BW 20kHz	U_r	< 10mV at I
	Internal resistance	R_i	approx. 10mΩ
	Measurement resistor 10mΩ	U_{meas}	1mV \cong 0.1A
	The -12V is integrated in the alarm system.		

4.3.3 Phantom supply

Basic specification IEC 268-15A

The factory setting for the phantom supply is 48V

As a special version a conversion to 12V or 24V is feasible. Such a conversion involves:

Transformer	→	Resolder jumper (see power supply)
Electronics	→	Replug jumper (see power supply)
Mixing console	→	Change phantom resistors (24V→R=4.3kΩ; 12V→R=680Ω)

F1: Fuse (labeling on front plate)

T 2A (slow blow)

The phantom supply is adjustable with a trimmer that can be operated from the front.

+48V phantom supply	Measurement resistor 1Ω	U_{mess}	1mV \cong 1mA	
	Output voltage	U_{out}	+48V	
	Output current; continuous load	I	< 0.5A	
	Short-circuit current	I_k	approx. 0.9A	
	Fold back	I_{fb}	approx. 0.45A	
	Oversvoltage/cut-off point	U_{max}	approx. +56V	
	Overtemperature/cut-off point	T	approx. 393K (120°C)	
	Flashing indicator for undervoltage	U_{min}	< approx. 44V	
	Ripple/resid. voltage BW 20kHz	U_r	< 1mV at I	
	The +48V is integrated in the alarm system.			

+24V phantom supply	Output voltage	U_{out}	+24V	
	Output current; continuous load	I	< 0.5A	
	Short-circuit current	I_k	approx. 1.0A	
	Fold back	I_{fb}	approx. 0.8A	
	Overvoltage/cut-off point	U_{max}	approx. +27V	
	Overtemperature/cut-off point	T	approx. 393K (120°C)	
	Flashing indicator for undervoltage	U_{min}	< approx. 20V	
	Ripple/resid. voltage BW 20kHz	U_r	< 1mV at I	
	The +24V is integrated in the alarm system.			
	+12V phantom supply	Output voltage	U_{out}	+12V
Output current; continuous load		I	< 0.5A	
Short-circuit current		I_k	approx. 1.1A	
Fold back		I_{fb}	approx. 1A	
Overvoltage/cut-off point		U_{max}	approx. +13.5V	
Overtemperature/cut-off point		T	approx. 393K (120°C)	
Flashing indicator for undervoltage		U_{min}	< approx. 9V	
Ripple/resid. voltage BW 20kHz		U_r	< 1mV at I	
The +12V is integrated in the alarm system.				

4.3.4 ±15V supply: Supply 1 and Supply 2

These supplies exist once in a single power supply (master or slave version), or twice in a dual power supply.

The two outputs supply 1 and supply 2 have a common input feeder.

Fuse: -20V on the charging capacitor F3: **T 10A (slow blow)**
 +20V on the charging capacitor F4: **T 10A (slow blow)**

The availability of ±20V is signaled with 2 LEDs.

The ±20V input voltages are split into 2* ±15V stabilizer systems with common 0V.

**Alarm:
VOLTAGE DEVIATION
SHORT CIRCUIT**

A short circuit or an overvoltage on the output disconnects the corresponding transformer unit. This is signaled by a local flashing LED. This status information is transmitted also to the central ALARM LED. The local ALARM LED flashes also in case of undervoltage, but no ALARM is triggered.

**Alarm:
TEMPERATURE**

If the heat sink temperature rises above 393K (120°C) the corresponding transformer unit is switched off. This status is signaled by a local flashing LED. The status information is also transmitted to the central ALARM LED.

For resetting the alarm systems the power supply must be switched OFF and ON again.

SUPPLY 1; SUPPLY 2

The 4 voltages behave in the same way and are described only once.

Controlled linear ramping up of the
4 output voltages; t_{ein} approx. **4s**

The max. total output power may not exceed **180W**.

The 4 voltages are adjusted in common with a trimmer that is accessible from the front.

±15V supply

Output voltage	U_{out}	15V
Output current, continuous load	I	< 6A (SUPPLY 2 $I = 0A$)
Short circuit current	I_k	approx. 9A
Fold back	I_{fb}	approx. 5A
Overvoltage/cut-off point	U_{max}	approx. 17V
Overtemperature/cut-off point	T	approx. 393K (120°C)
Overvoltage extinguishes SUPPLY LED	U_{min}	< 24V +U to -U
Ripple/resid. voltage BW 20kHz	U_r	< 0.25mV at I
Measurement resistor 10mΩ	U_{meas}	1mV \cong 0.1A

Normally the output currents Supply 1/2 are allocated approx. to 3A to 3A.

4.3.5 +25V supply unstabilized

Voltage for supplying the switching regulators in the mixing console.
Charging capacitor 20'000μF

Output voltage	U_{out}	approx. 25V
Max. output current	I_{max}	< 5A
In case of undervoltage the LED goes out	U_{min}	< 20V
Measurement resistor 10mΩ	U_{meas}	1mV \cong 0.1A

Fuse: F5 (labeling on front plate) **T 8A** (slow blow)

4.4 Auxiliary circuits

4.4.1 Ventilator

Ventilator (low noise)
 AC voltage 25V...35V AC
 Changeover "Off/slow" to "fast": temperature dependent

		$T < T_{vent}$	$T > T_{vent}$
Operating modes	1.)	OFF	fast
	2.)	slow	fast
	3.)	fast	fast

Changeover point adjustment with FAN trimmer on the front.
 If any point in the power supply exceeds 393K (120°C) "fast" speed is always activated.

4.4.2 Power-on delay

Adjustable with DELAY trimmer from the front
 Range t: 50...150ms

4.4.3 Control electronics

Technology	C-MOS
Supply voltage	+5V
ON/OFF state of master switch	stored
ON/OFF	remotable

4.5 Options

4.5.1 Option 1; supply for 2 power amplifiers

2 Separate floating supplies		
Output voltage	U_{out}	approx. 42V
Output current; ED 50%	I	1.5A
Undervoltage extinguishes LED	U_{min}	< 24V
Charging capacitors	2*	2200µF
Inrush current limitation		2.2Ω NTC
Measurement resistor 10mΩ	U_{meas}	1mV \cong 0.1A
Fuses: F7, F8 (labeling on front plate)		T 2A (slow blow)

4.5.2 Option 2; stabilized voltages 1.918.077.00

System 1: Higher voltages, low current	Output voltage	U_{out}	5 - 24V
	Voltage on charging capacitor,	U_{max}	45V DC
	Useful current		
	dependent on power dissipation	I	0.4A
	Short-circuit current	I_k	0.5A
	Overvoltage/cut-off point/crow bar:	U_{min}	Jumper 6.5V; 12.5V; 24.5V
	Output voltage ind. by a LED		
	Ripple/resid. voltage BW 20kHz	U_r	< 30mV at I
Measurement resistor 10mΩ	U_{meas}	1 mV \cong 0.1A	
System 2: Lower voltages, high current	Output voltage	U_{out}	5 - 6V
	Voltage on charging capacitor,	U_{max}	35V DC
	Useful current		
	dependent on power dissipation	I	2A
	Short-circuit current	I_k	2.5A
	Fold back		
	Overvoltage/cut-off point/crow bar:	U_{min}	6.5V
	Output voltage ind. by a LED		
Ripple/resid. voltage BW 20kHz	U_r	< 30mV at I 1A	
Measurement resistor 10mΩ	U_{meas}	1 mV \cong 0.1A	

4.5.3 Option 2; stabilized voltages 1.918.087.81

System 1:	Output voltage	U_{out}	5 - 24V
	Voltage on charging capacitor,	U_{max}	45V DC
	Useful current		
	dependent on power dissipation	I	1A
	Short-circuit current	I_k	1.3A
	Thermal fold back		
	Overvoltage/cut-off point/crow bar:	U_{min}	Jumper 6.5V; 12.5V; 24.5V
	Output voltage ind. by a LED		
Ripple/resid. voltage BW 20kHz	U_r	< 30mV at I	
Measurement resistor 10mΩ	U_{meas}	1 mV \cong 0.1A	
System 2:	Output voltage	U_{out}	5 - 24V
	Voltage on charging capacitor,	U_{max}	45V DC
	Useful current		
	dependent on power dissipation	I	1A
	Short-circuit current	I_k	1.3A
	Thermal fold back		
	Overvoltage/cut-off point/crow bar:	U_{min}	Jumper 6.5V; 12.5V; 24.5V
	Output voltage ind. by a LED		
Ripple/resid. voltage BW 20kHz	U_r	< 30mV at I	
Measurement resistor 10mΩ	U_{meas}	1 mV \cong 0.1A	

Fuses: F7, F8 (labeling on front plate) T 2A (slow blow)

These fuse ratings limit the output current to approx. 1.5A. If the rating is for higher current the front plate is correspondingly engraved.

4.6 General specifications

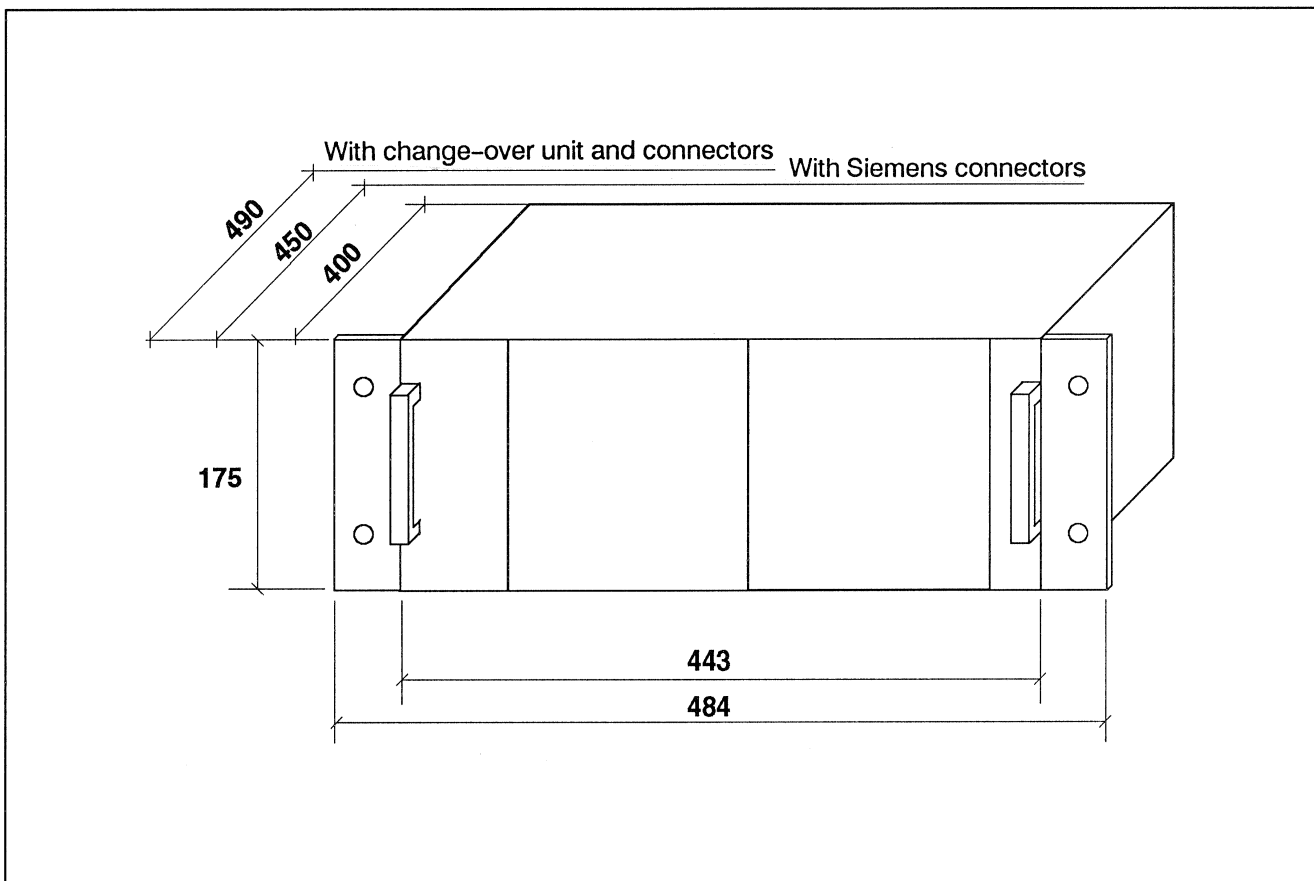
Storage temperature		253K...343K / -20°C...+70°C
Ambient temperature	Guaranteed	283K...313K / +10°...+40°C
	Function	263K...318K / -10°C...+45°C

Electrostatic discharge without adverse effect on the function according to IEC 801-2 **8kV** air discharge,

Radio interference voltage on mains according to CISPR 11, class B and DIN VDE 0871, class B and FCC PART 15 B, class B.

4.7 Mechanical data

4.7.1 Dimensions



To ensure adequate ventilation the power supply must remain open on all sides. Operation on a closed surface does not give optimum results.

Two aids are available:

Feed: 4 pcs. retrofittable
Stand-off from floor approx. 12mm

Part No. 31.02.0209

Air baffle
Can be placed on the floor

Part No. 1.918.207.00

4.7.2 Weight

1.918.420	Dual master power supply	27.0kg
1.918.421	Single master power supply	18.8kg
1.918.422	Dual slave power supply	26.2kg
1.918.423	Single slave power supply	18.0kg

Alignment Instructions for Audio Console 990

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5 Module Processors of the Fader Units

1.990.190

This instruction relates to module processor boards located in the following assemblies:

- Input Fader with motor
- Group Fader with motor
- Master Fader with motor

Kindly note the difference concerning the logical adress of each unit.

Adjustments

- +5V reference
- Gain of main fader
- Gain of small fader
- Offset (same for small and main faders)

Adapter

Use the fader adapter 1.990.091.00 to operate the fader during the adjustment.

5.1 Basic settings

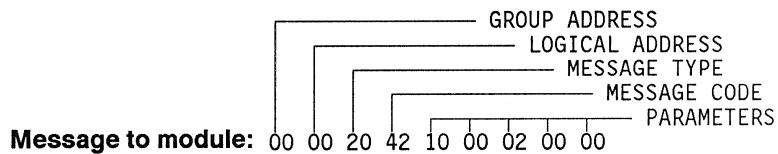
- Switch off all filters, EQ, limiters, compressors and gates.
- Set the faders to the 0dB position. (main and small faders)
- Switch on the channels (press the ON key of the main and small fader units).
- Connect a computer terminal to the RS232 interface of the HDLC controller.
- Press the RESET button of the host processor unit.

5.2 VCA setting via computer terminal

The Fader unit must be in the 'ENABLE' status. (press STAT button).

- Press [ENTER] and [CTRL] + [F] to start the dialog. A message can now be sent to a module.

To set the VCA of a single channel or of all channels to 0dB or to +10dB the "message to module" has to be entered as follows:



The message shown above sets the main fader VCA of channel 1 to 0dB.

Group address
Logical address

00
Enter the address of the fader module as a hexadecimal value.
Channel 1 → 00 (HEX)
Channel 2 → 01 (HEX)
All channels → FF (HEX)

Message type
Message code

20
42

Parameters: Main fader

10 00 02 00 00 → sets VCA to 0dB
10 00 02 64 00 → sets VCA to +10dB

Small fader

0F 00 02 00 00 → sets VCA to 0dB
0F 00 02 00 64 → sets VCA to +10dB

- Press [ENTER] to send the message to the console.
- For next command press [CTRL] + [F] again.

5.3 Adjustment of U_{REF}

- Switch OFF the console.
- Replace the fader unit by the fader adapter 1.990.091 and install the fader on top of it.
- Switch ON the console

- Connect the voltmeter to **A ground** and **UREF** contacts of the fader adapter.
- Adjust UREF with the Trimmer **RA 4** to **+5V (±5mV)** .

The reference voltage of +5V is valid both for main and small faders.

5.4 Adjustment of main fader gain and offset (≅ stereo left channel)

In stereo input units these adjustments relate to the left channel VCA.

- Test point**
- Connect voltmeter to **OUT 0** of the fader adapter (CV of main fader) and to **0VA** (audio ground) at the **rearside** of the console.
 - ! The **master fader** as well as all **motor faders** have to be measured between **OUT 0** and the **audio ground** of the fader adapter!

Set VCA by terminal Set the VCA to +10dB gain by a terminal command. (see 5.2)

Offset Adjust the fader offset with **RA 3** to **0V (±5mV)**. This value is used for the small fader too.

- Gain**
- Mute the channel (press ON key).
 - Adjust the fader gain with **RA 1** to **-11V (±10mV)**.
 - Turn the channel on again.

5.5 Adjustment of small fader gain and offset (≅ stereo right channel)

In stereo input units these adjustments relate to the right channel VCA.

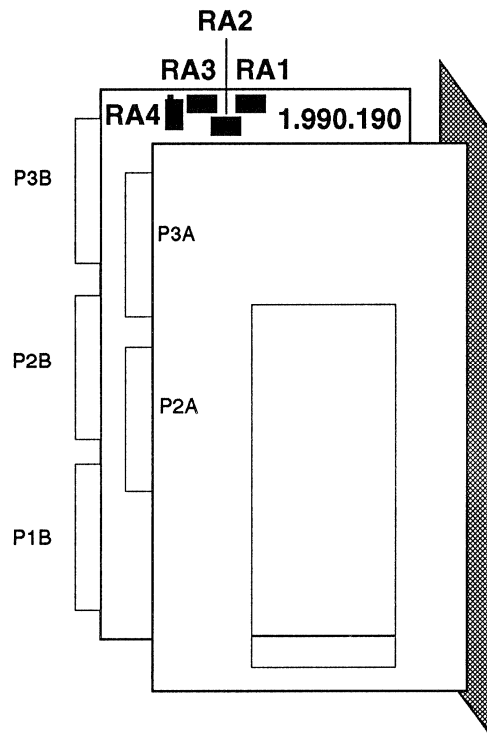
- Test point**
- Connect voltmeter to **OUT 1** of the fader adapter (CV of small fader) and to **0VA** (audio ground) at the **rearside** of the console.

Set VCA by terminal Set the VCA to +10dB gain by a terminal command (see 5.2) and check the aligned offset (0V ±5mV).

- Gain**
- Mute the channel (press ON key).
 - Adjust the fader gain with **RA 2** to **-11V (±10mV)**.
 - Turn the channel on again.

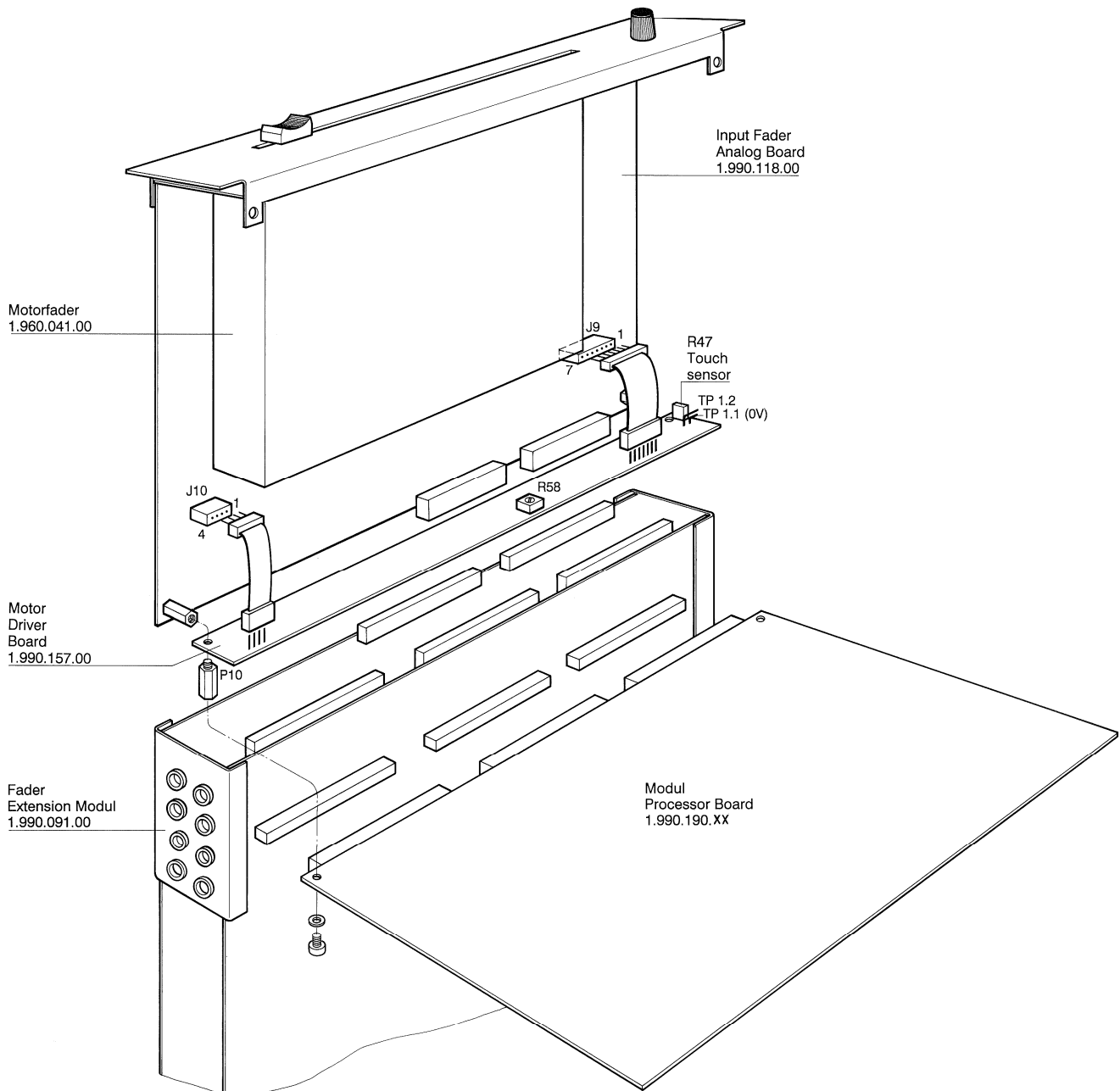
5.6 Position of trimmers

1.990.190



5.7 Adjustment of the motor fader offset

Remove and disassembly the motor fader as depicted below.



5.8 Adjustment of the touch sensor

The alignment of the Module Processor Board is a precondition for this adjustment.

Install the fader adapter as shown in the drawing.

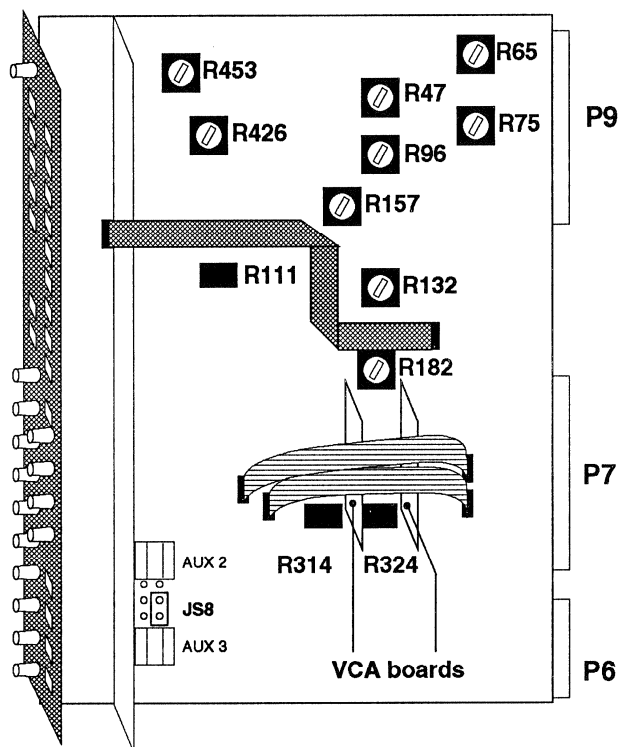
- Connect DC voltmeter to test points **TP1.1** (ground) and **TP1.2 (+)**.
- Check basic settings (fader position 0dB, channel on etc.)
- Do not touch the fader knob now.
- Adjust with **R47** to **1,0V** ($\pm 0,1V$)

6 Mono Input Unit 'MCH'

1.990.210

- All module processors must be adjusted before aligning any signal level of the input channel. (see above)
- The adjustments can be applied to the versions .00 and .81 except for those steps that are separately described for both versions.

6.1 Position of trimmers and jumpers



Jumpers		Trimmers	
JS8		R47	CM Rejection Line A
	AF Main to Direct Out (Default setting)	R65	CM Rejection Tape RET
JS7		R75	CM Rejection Bus RET
	PFL Main to Direct Out	R96	Monitor path PF (only .81)
JS2		R111	Main path PF (only .81)
	* AUX 5 to Direct Out	R132	Insert 1
JS1		R157	Insert 2
	* AUX 4 to Direct Out	R182	EQ
		R314	Main Fader
		R324	Small Fader
		R426	BUS Out
		R453	DIRECT Out
	* phase reverse		

6.2 Basic settings of the controls

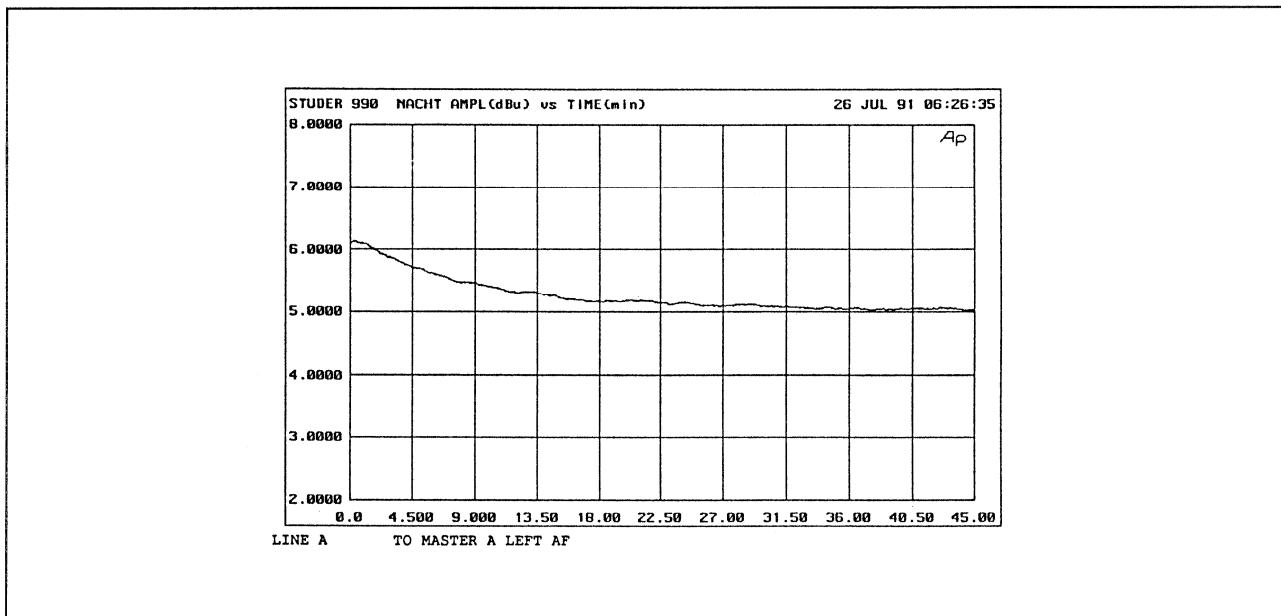
A basic precondition for correct alignment is the precise positioning of the controls according to the following table:

Mono Input Unit	Source..... LINE A
	Phase Ø..... OFF \cong 0°
	Input Gain 0 dB
	Filter..... OFF
	EQ..... OFF
	Inserts..... OFF
	(Note: If inserts are not wired to a patch link SEND → RETURN)

Input Fader, Small Fader	Channel on/off..... ON
	Faderposition..... 0dB
	PAN OFF
	MIX bus Σ A ON
	(The VCA can be set to exactly 0.0dB by use of a data terminal, as described below.)

6.3 VCA alignments of main fader and small fader

Though the VCA is temperature compensated its level may change after removing the unit from the console. The VCA adjustments should therefore be performed as fast as possible to keep temperature changes small. It is recommended to work in a warm room (windows and door closed).



VCA amplification after switching on the console.

6.3.1 VCA alignment for version .00

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point **INSERT Send ΣA left**

Main Fader VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command: "10 00 02 00 00": Main fader VCA to 0dB.

Small Fader VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command: "0F 00 02 00 00": Small fader VCA to 0dB.

Measurement

Measure the Σ insert send now and note the difference between nominal level and measured value on a sheet of paper. For this measurement it is essential to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).

To send the signal from input LINE A to the small fader press the FLIP INPUT button on the inline unit and repeat the procedure.

Example:	Main Path	Small Path
Nominal level:	+ 6dBu	+ 6dBu
Measured value:	+ 5.2dBu	+ 6.5dBu
Difference:	<u>+ 0.8dB</u>	<u>- 0.5dB</u>

Adjustment

- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assembly with a piece of cloth to minimize VCA temperature drift.
- Switch on the console.
- Now read the level again and add the noted difference.
- Adjust quickly with **R314** to this calculated value.

Example:	Measured value:	+ 5.5dBu (value rises while VCA cools down)
	Calculate:	5.5dBu + 0.8 dB = <u>+6.3dBu</u>

- Adjust quickly with **R324** to the calculated value (Small Fader VCA)

Example:	Measured value:	+ 6.9dBu (value rises while VCA cools down)
	Calculate:	+6.9dBu + -0.5dB = <u>+6.4dBu</u>

6.3.2 VCA alignment for version .81

Test signal 1kHz sine wave at nominal level into Input Insert 1 Return
Switch Input Insert 1 ON

Test point **Insert Send ΣA left**

Main Fader VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command: "10 00 02 00 00": Main fader VCA to 0dB.

- Small Fader VCA gain: 0dB**
- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position (*nulled* fader).
 - For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command: "0F 00 02 00 00": Small fader VCA to 0dB.

Measurement

Measure the Σ insert send now and note the difference between nominal level and measured value on a sheet of paper. For this measurement it is essential to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).
 To send the signal from Input Insert 1 Return to the small fader push the INS 1 button on the Inline Unit and note the difference as above.

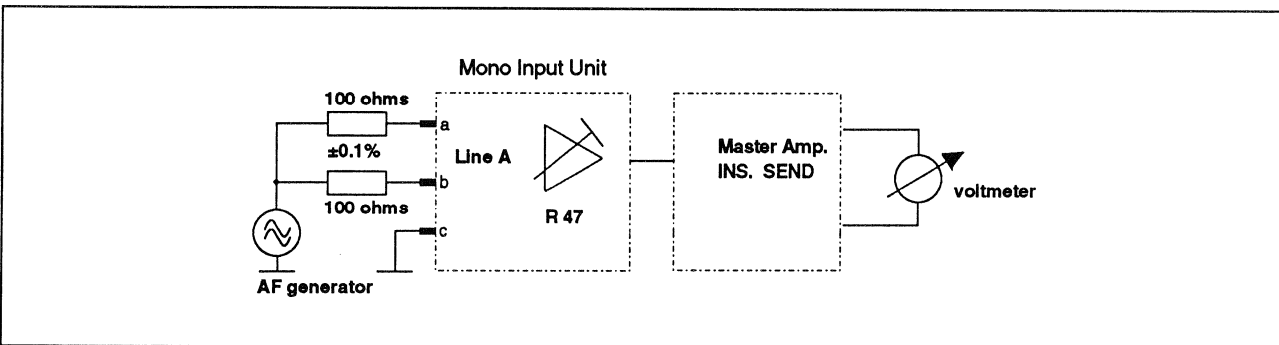
Example:	Main Path	Small Path
Nominal level:	+ 6dBu	+ 6dBu
Measured value:	+ 5.2dBu	+ 6.5dBu
Difference:	<u>+ 0.8dB</u>	<u>- 0.5dB</u>

- Adjustment**
- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assembly with a piece of cloth to minimize VCA temperature drift.
 - Switch on the console.
 - Now read the level again and add the noted difference.
 - Adjust quickly with **R314** to this calculated value (Main fader VCA).
 Example: Measured value: + 5.5dBu (value rises while VCA cools down)
 Calculate: 5.5dBu + 0.8 dB = +6.3dBu
 - Adjust quickly with **R324** to the calculated value (Small Fader VCA).
 Example: Measured value: + 6.9dBu (value rises while VCA cools down)
 Calculate: +6.9dBu + -0.5dB = +6.4dBu

6.4 Common Mode Rejection

Test signal 16kHz sine wave at nominal level into input **LINE A**
 Connect the AF generator to the balanced input as shown below.

Test point Insert Send ΣA left



Measuring setup for adjusting the common mode rejection.

Adjustment Minimize measured value with **R47**. Insert Send $\Sigma A \leq -60\text{dBu}$ (775 μV)

Tape Return, Bus Return Adjust these inputs of Inline consoles according to this procedure as follows:
 Tape Return **R65**; Bus Return **R75**;

6.5 Level of input insert 1

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point **Insert Send Σ A left**

If the input inserts are not wired to a patch you have to link SEND to RETURN for all measurements.

Adjustment

- Switch input 1 insert OFF.
- Measure the Insert Send Σ A L level as a **momentary reference** under the actual operating conditions.
- Switch input insert 1 ON and measure again.
- Adjust level with **R132** to the reference level measured above.
- Switch input insert 1 OFF. The level should not change for more than $\pm 0.2\text{dBu}$.

6.6 Level of input insert 2

Same procedure as 6.5: adjust the level of insert 2 with **R157**.

6.7 Equalizer

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point **Insert Send Σ A left**

Adjustment

- Turn all EQ gain potentiometers to the 0dB position.
- Switch EQ OFF.
- Measure the Insert Send Σ A as a momentary reference level.
- Switch EQ ON. The value measured now should match the momentary reference level.
- Adjust with **R182**.
- Switch EQ OFF again. The level should not change for more than $\pm 0.2\text{dBu}$.

6.8 Main path PF level (version .81 only)

Test signal **LINE A**

Test Point **Input Insert 1 Send**

Adjustment

Adjust level with **R111** to nominal level

6.9 Small path PF level (version .81 only)

Test signal Bus Return

Test Point Input Insert 1 Send

Adjustment

- Push "BUS RET" and FLIP INP" on Inline unit
- Adjust level with **R96** to nominal level

6.10 Direct output

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point Direct OUT2
Reference Insert Send Σ A left

Adjustment

- Turn the potentiometer DIRECT to the CAL position.
- Measure the Insert Send Σ A as a momentary reference level.
- Measure the Direct Out level.
- Adjust the DIRECT OUT with **R453** to the momentary reference level.

6.11 Bus output

Test signal LINE A

Test Point BUS output
Reference Insert Send Σ A left

Adjustment

- Measure insert Σ A left as a reference
- Send signal to the BUS OUTPUT by pressing "DIR BUS"
- Measure Bus Output
- Adjust Bus Output to reference with **R426**

6.12 Checking

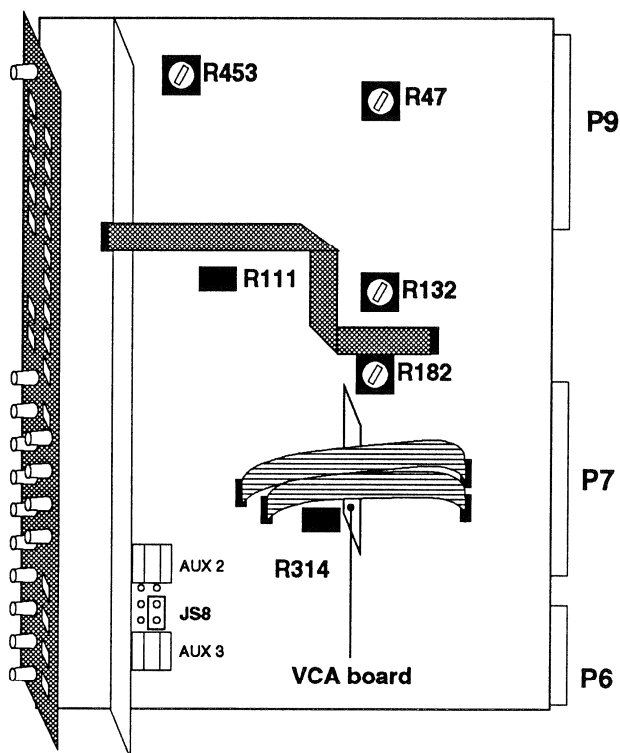
Finally you put the unit back into the console and let it reach steady conditions. The measurements should now give the desired level as a result. Otherwise the procedure has to be repeated.

7 Mono Input Unit 'B'





1.990.220

All module processors must be adjusted before aligning any signal level of the input channel. (see above)

7.1 Position of trimpots and jumpers



Jumpers

- JS8  AF Main to Direct Out (Default setting)
- JS7  PFL Main to Direct Out
- JS2  * AUX 5 to Direct Out
- JS1  * AUX 4 to Direct Out
- * phase reverse

Trimmers

- R47 CM Rejection Line A
- R111 Main path PF (only .81)
- R132 Insert 1
- R182 EQ
- R314 Main Fader
- R453 DIRECT Out

7.2 Basic settings of the controls

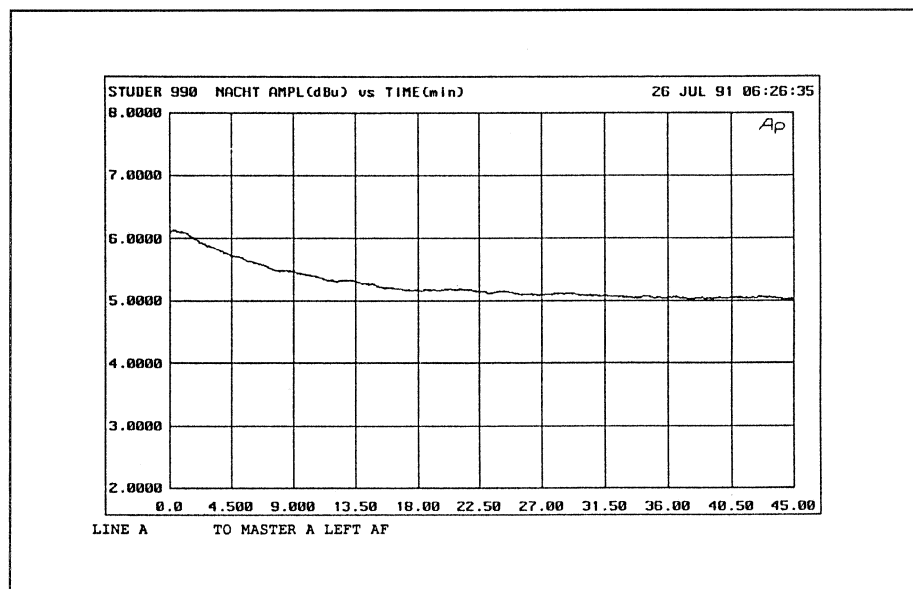
A basic precondition for correct alignment is the precise positioning of the controls according to the following table:

Mono Input Unit	Source..... LINE A
	Phase Ø..... OFF \cong 0°
	Input Gain 0 dB
	Filter..... OFF
	EQ..... OFF
	Inserts..... OFF
	(Note: If inserts are not wired to a patch link SEND → RETURN)

Input Fader	Channel on/off..... ON
	Faderposition..... 0dB
	PAN OFF
	MIX bus Σ A ON
	(The VCA can be set to exactly 0.0dB by use of a data terminal, as described below.)

7.3 VCA alignment

Though the VCA is temperature compensated its level may change after removing the unit from the console. The VCA adjustments should therefore be performed as fast as possible to keep temperature changes small. It is recommended to work in a warm room (windows and door closed).



VCA amplification after switching on the console.

7.3.1 VCA alignment for version .00

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point **Insert Send ΣA left**

VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command:
10 00 02 00 00: Main fader VCA to 0dB.

Measurement

Measure the Σ insert send now and note the difference between nominal level and measured value on a sheet of paper. For this measurement it is essential to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).

Example: Nominal level: + 6dBu
 Measured value: + 5.2dBu
 Difference: + 0.8dB

Adjustment

- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assembly with a piece of cloth to minimize VCA temperature drift.
- Switch on the console.
- Now read the level again and add the noted difference.
- Adjust quickly with **R314** to this calculated value.

Example: Measured value: + 5.5dBu (value rises while VCA cools down)
 Calculate: 5.5dBu + 0.8dB = +6.3dBu

7.3.2 VCA alignment for version .81

Test signal 1kHz sine wave at nominal level into **Input Insert 1 Return**
Switch **Input Insert 1 ON**

Test point **Insert Send ΣA left**

VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command:
10 00 02 00 00: Main fader VCA to 0dB.

Measurement

Measure the Σ insert send now and note the difference between nominal level and measured value on a sheet of paper. For this measurement it is essential to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).

Example: Nominal level: + 6dBu
 Measured value: + 5.2dBu
 Difference: + 0.8dB

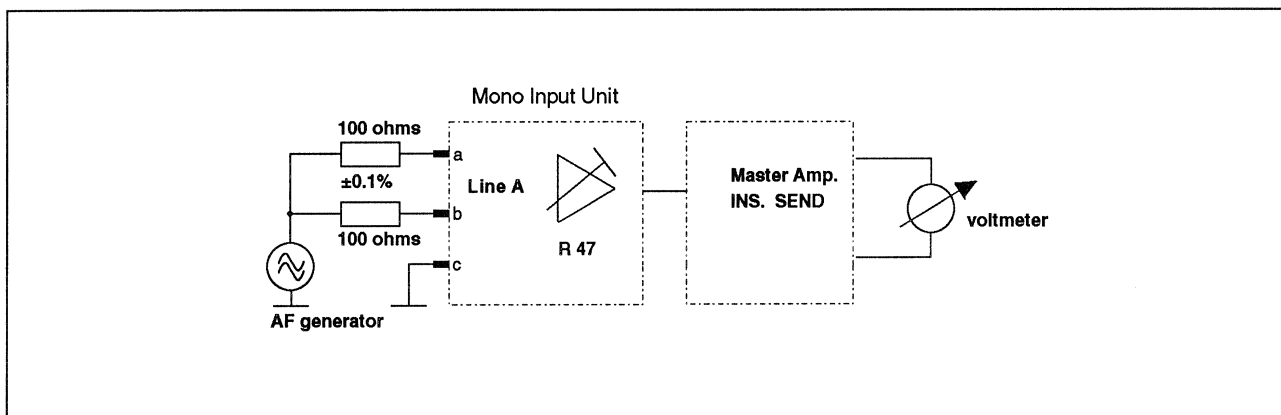
Adjustment

- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assembly with a piece of cloth to minimize VCA temperature drift.
 - Switch on the console.
 - Now read the level again and add the noted difference.
 - Adjust quickly with **R314** to this calculated value.
- Example: Measured value: + 5.5dBu (value rises while VCA cools down)
 Calculate: 5.5dBu + 0.8dB = +6.3dBu

7.4 Common mode rejection

Test signal 16kHz sine wave at nominal level into input **LINE A**
 Connect the AF generator to the balanced input as shown below.

Test point Insert Send Σ A left



Measuring setup for adjusting the common mode rejection.

Adjustment Minimize measured value with **R47**. Insert Send Σ A ≤ -60 dBu (775 μ V)

7.5 Input insert level

Test signal 1kHz sine wave at nominal level into input **LINE A**

Test point Insert Send Σ A left

If the input inserts are not wired to a patch you have to link SEND to RETURN for all measurements.

- Adjustment**
- Switch input insert OFF.
 - Measure the Insert Send Σ A L level as a **momentary reference** under the actual operating conditions.
 - Switch input insert ON and measure again.
 - Adjust level with **R132** to the reference level measured above.
 - Switch input insert OFF. The level should not change for more than ± 0.2 dBu.

7.6 Equalizer

- Test signal** 1kHz sine wave at nominal level into input **LINE A**
- Test point** **Insert Send Σ A left**
- Adjustment**
- Turn all EQ gain potentiometers to the 0dB position.
 - Switch EQ OFF.
 - Measure the Insert Send Σ A as a momentary reference level.
 - Switch EQ ON. The value measured now should match the momentary reference level.
 - Adjust with **R182**.
 - Switch EQ OFF again. The level should not change for more than ± 0.2 dBu.

7.7 Main path PF level

- Test signal** **LINE A**
- Test Point** **Input Insert Send**
- Adjustment** Adjust level with **R111** to nominal level

7.8 Direct output

- Test signal** 1kHz sine wave at nominal level into input **LINE A**
- Test point** **Direct OUT**
- Reference** **Insert Send Σ A left**
- Adjustment**
- Turn the potentiometer **DIRECT** to the **CAL** position.
 - Measure the Insert Send Σ A as a momentary reference level.
 - Measure the Direct Out level.
 - Adjust the **DIRECT OUT** with **R453** to the momentary reference level.

7.9 Checking

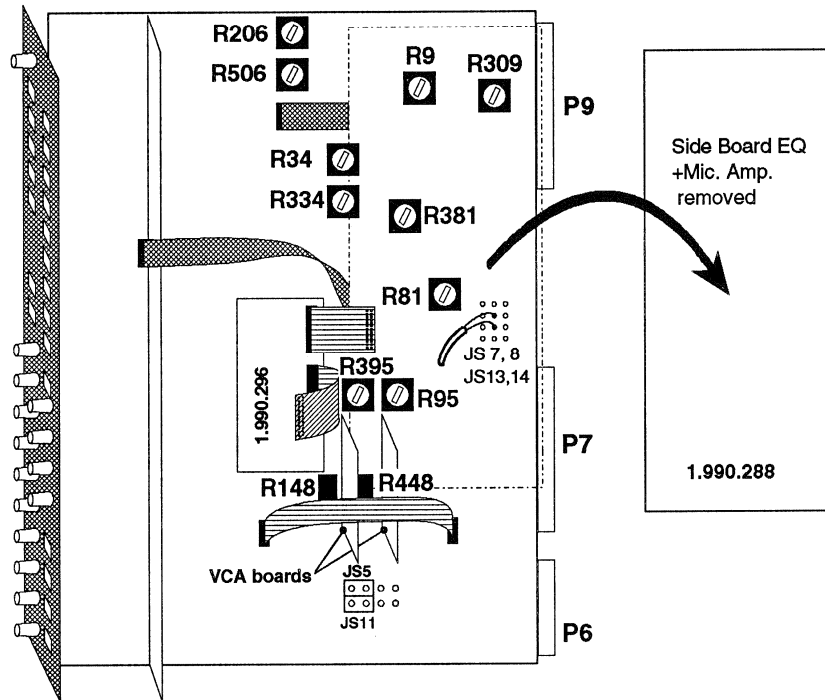
Finally put the unit back into the console and let it reach steady conditions. The measurements should now give the desired level as a result. Otherwise the procedure has to be repeated.

8 Input Units Stereo

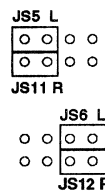
1.990.230...245

All module processors must be adjusted before aligning any signal level of the input channel. (see above)

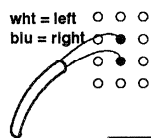
8.1 Position of trimmers and jumpers



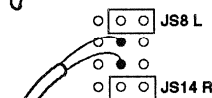
Jumpers



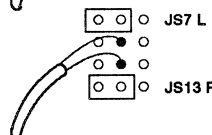
JS5 L AF to Direct Out (Default setting)
 JS11 R AUX 5/6 to Direct Out
 JS6 L
 JS12 R



After PAN to Direct Out used for MPX function (Default setting)



After Pan to Direct Out



PF to Direct Out

Trimmers

- R 9 Common Mode Rejection
- R 309 CMR Line A left
- R 34 Input gain adjust left
- R 334 Input gain adjust right
- R 81 Insert send level left
- R 381 Insert send level right
- R 95 EQ gain adjust left
- R 395 EQ gain adjust right
- R 148 VCA gain adjust left
- R 448 VCA gain adjust right
- R 206 Direct Out level left
- R 506 Direct Out level right

8.2 Basic settings of the controls

A basic precondition for correct alignment is the precise positioning of the controls according to the following table:

Stereo Input Unit	Source	LINE A
	Phase Ø	OFF \cong 0°
	Input Gain.....	0 dB
	Filter	OFF
	EQ	OFF
	Insert.....	OFF
(Note: If inserts are not wired to a patch, link SEND → RETURN)		
Input Fader (Small and Main Fader)	Channel on/off.....	ON
	Faderposition	0dB
	PAN / Balance	OFF
	MIX bus.....	Σ A ON
	(The VCA can be set to exactly 0.0dB by use of a data terminal, as described below.)	

8.3 VCA alignment

Test signal 1kHz sine wave at nominal level into **input Insert RETURN left / right**. Press the input INSERT IN key to switch on the insert.

Test point **Insert Send ΣA left / right**

VCA gain: 0dB

- Position the fader to 0dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
- For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0dB level with the following command: "10 00 02 00 00": Main fader VCA to 0dB.

Measurement

Measure the Σ insert send left and right and note the difference between nominal level and measured value for both channels on a sheet of paper. It is essential for this measurement to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).

Example:

Nominal level:	+ 6dBu
Measured value:	+ 6.4dBu (left channel)
Difference:	- 0.4dB (left channel)
Measured value:	+ 5.7dBu (right channel)
Difference:	+ 0.3dB (right channel)

Adjustment

- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assemblies with a piece of cloth to minimize VCA temperature drift.
- Switch on the console.
- Now read the level of the **left channel** again and add the noted difference.
- Adjust VCA quickly with **R148 (left)** to this calculated value.

Example:	Measured value:	+ 6.6dBu (value rises while VCA cools down)
	Calculate:	6.6dBu - 0.4dB = <u>+6.2dBu</u> (left channel)
- Measure the **right channel** the same way and adjust it with **R448 (right)**.

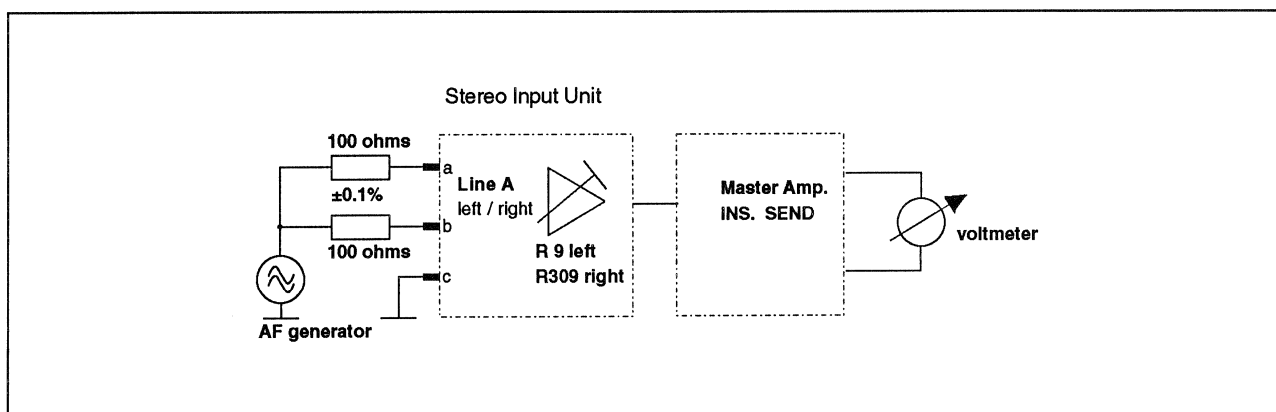
Example:	Measured value:	+ 6.0dBu
	Calculate:	6.0dBu + 0.3dB = <u>+6.3dBu</u> (right channel)

8.4 Common mode rejection

only 1.990.232 / 235 / 242 / 245

Test signal 16kHz sine wave at nominal level into input **LINE A left / right**.
Connect the AF generator to the balanced input as shown below.

Test point Insert Send Σ A left / right



Measuring setup for adjusting the common mode rejection.

Adjustment

Minimize measured value for both channels with the following trimmers:

LINE A left: **R9**

LINE A right: **R309**

Insert Send Σ A left / right $\leq -60\text{dBu}$ ($775\mu\text{V}$)

8.5 Input insert level

Test signal 1kHz sine wave at nominal level into input **LINE A left / right**

Test point Insert Send Σ A left / right

If the input inserts are not wired to a patch you have to link SEND to RETURN.

Adjustment

- Switch input insert **OFF**.
- Measure the left insert Send Σ A level as a **momentary reference** under the present operating conditions.
- Switch input insert **ON** and measure again.
- Adjust level with **R81 (left)** to the reference level measured above.
- Switch input insert **OFF**. The level should not change for more than $\pm 0.2\text{dBu}$.
- Measure the **right channel** the same way and adjust it with **R381 (right)**.

8.6 Equalizer**only 1.990.230 / 232 / 240 / 242****Test signal** 1kHz sine wave at nominal level into input **LINE A left / right****Test point** **Insert Send Σ A left / right****Adjustment**

- Turn all EQ gain potentiometers to the 0dB position.
- Switch EQ OFF.
- Measure the Insert Send Σ A for both channels as a momentary reference level.
- Switch EQ ON. The value measured now for the **left channel** should match its momentary reference level.
- Adjust with **R95 (left)**.
- Switch EQ OFF again. The level should not change for more than ± 0.2 dBu.
- Repeat the procedure for the **right channel**. Adjust with **R395 (right)**.

8.7 Input amplifier**Test signal** 1kHz sine wave at nominal level into input **LINE A left / right**
(Switch off the input insert)**Test point** **Insert Send Σ A left / right****Note:** You can use the values calculated for the VCA adjustment if you align the input path immediately afterwards.**Adjustment**Measure the Insert Send Σ A and adjust the level of each channel to the value, calculated for the VCA adjustment (± 0.2 dB).Input path **left: R34**Input path **right: R334****8.8 Direct output****Test signal** 1kHz sine wave at nominal level into input **LINE A left / right****Test point** **Direct OUT left / right**
Reference **Insert Send Σ A left / right****Adjustment**

- Turn the potentiometer DIRECT to the CAL position.
- Measure the Insert Send Σ A for both channels as a momentary reference level.
- Measure the Direct Out level of the left channel.
- Adjust the DIRECT OUT with **R203 (left)** to the momentary reference level.
- Repeat the procedure for the **right channel**. Adjust with **R503 (right)**.

8.9 Checking

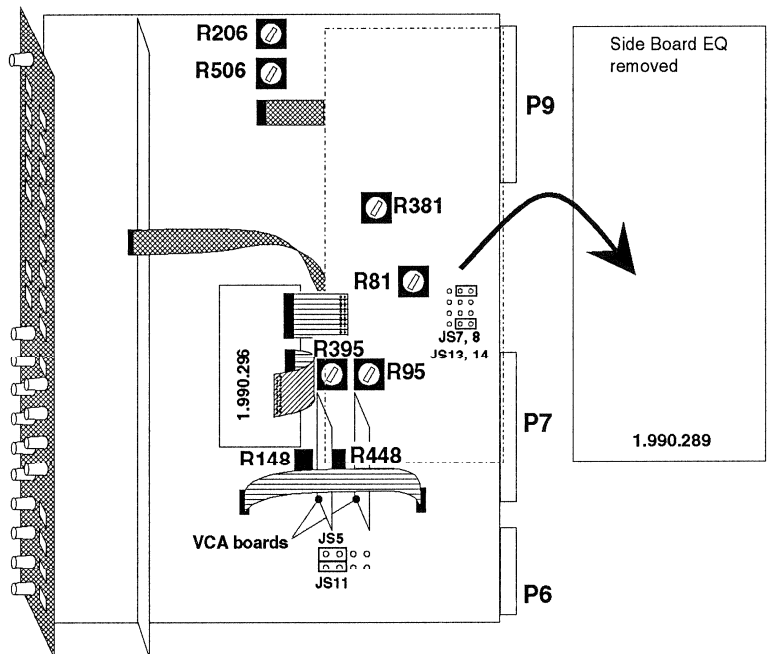
Finally you put the unit back into the console and let it reach steady conditions. The measurements should now give the desired level as a result. Otherwise the procedure has to be repeated.

9 Group Units, Mono and Stereo

1.990.250...285

All module processors must be adjusted before aligning any signal level of the input channel (see above).

9.1 Position of Trimmers and Jumpers



Jumpers

<p>JS5 L JS11 R</p>	<p>AF to Direct Out (Default setting)</p>
<p>JS6 L JS12 R</p>	<p>AUX 5/6 to Direct Out</p>
<p>JS8 L JS14 R</p>	<p>After Pan to Direct Out</p>
<p>JS7 L JS13 R</p>	<p>PF to Direct Out</p>

Trimmers

R 81	Insert left
R 381	Insert right (for stereo unit only)
R 95	EQ left
R 395	EQ left (for stereo unit only)
R 148	VCA left
R 448	VCA right (for stereo unit only)
R 206	Direct Out left
R 506	Direct Out right (for stereo unit only)

9.2 Basic Settings of the Controls

A basic precondition for correct alignment is the precise positioning of the controls according to the following table:

Mono Input Unit:	Source LINE A
	Phase Ø OFF \pm 0°
	Input Gain 0 dB
	Filter OFF
	EQ OFF
	Insert OFF
	Group Bus 1...8 ON
Input Fader:	Channel on/off ON
	Fader position 0 dB
	PAN / Balance OFF
	(Note: The VCA can be set to exactly 0.0 dB by using a data terminal, as described below.)
Group Unit:	MIX Bus Σ A left/right ON
	EQ OFF
	Insert OFF
	(Note: If inserts are not wired to a patch, link SEND → RETURN.)
Group Fader:	Channel on/off ON
	Fader position 0 dB
	PAN / Balance OFF
	(Note: The VCA can be set to exactly 0.0 dB by using a data terminal, as described below.)

9.3 VCA Alignment

Test signal 1 kHz sine wave at nominal level into LINE A of Mono Input Unit.

Test point *Insert Send Σ A left/right*

- VCA gain: 0 dB**
- Position the fader to 0 dB. Make sure that there is no offset between fader and VCA position ("nulled" fader).
 - For a precise setting use a computer terminal with the servicing software. Set the VCA of the input channel to a 0 dB level with the following command: "10 00 02 00 00": Main fader VCA to 0 dB.

Measurement Measure the Σ insert sen left and right and note the difference between nominal level and measured value for both channels on a sheet of paper. It is essential for this measurement to operate the unit under normal conditions (i.e. unit installed in the console, normal operating temperature).

Example:	Nominal level	+6.0 dBu	
	Measured value	+6.4 dBu	(left channel)
	Difference	-0.4 dB	(left channel)
	Measured value	+5.7 dBu	(right channel)
	Difference	+0.3 dB	(right channel)

- Adjustment**
- Switch off the console, remove the Input Unit and connect it to the suitable extension boards. Cover the VCA assemblies with a piece of cloth to minimize VCA temperature drift.
 - Switch the console on.
 - Now read the level of the left channel again and add the noted difference.

- Adjust VCA quickly with R148 (left) to this calculated value.
Example: Measured value +6.6 dBu (value rises while VCA cools down)
Calculate: 6.6 dBu - 0.4 dB = **+6.2 dBu** (left channel)
- Measure the right channel the same way and adjust it with R448 (right).
Example: Measured value +6.0 dBu (value rises while VCA cools down)
Calculate: 6.0 dBu + 0.3 dB = **+6.3 dBu** (right channel)

9.4 Group Insert Level

Test signal 1 kHz sine wave at nominal level into input LINE A left/right.

Test point *Insert Send ΣA left/right*

Adjustment

- Switch input insert off.
- Measure the left Insert Send ΣA level as a momentary reference under the present operating conditions.
- Switch input insert on and measure again.
- Adjust level with R81 (left) to the reference level measured above.
- Switch input insert off. The level should not change more than ±0.2 dB.

- Measure the right channel the same way and adjust with R381 (right).

9.5 Equalizer

only 1.990.250 / 260 / 270 / 280

Test signal 1 kHz sine wave at nominal level into input LINE A left/right.

Test point *Insert Send ΣA left/right*

Adjustment

- Turn all EQ gain potentiometers to the 0 dB position.
- Switch EQ off.
- Measure the Send ΣA level for both channels as a momentary reference level.
- Switch EQ on. The value measured now for the left channel should match its momentary reference level.
- Adjust with R95 (left).
- Switch EQ off again. The level should not change more than ±0.2 dB.

- Repeat the procedure for the right channel, adjust with R395 (right).

9.6 Direct Output (Group Output)

Test signal 1 kHz sine wave at nominal level into input LINE A left/right.

Test point *Direct OUT left/right (Group OUT left/right)*

Reference *Insert Send ΣA left/right*

Adjustment

- Measure the Send ΣA level for both channels as a momentary reference level.
- Measure the Direct OUT level of the left channel.
- Adjust the Direct OUT with R203 (left) to the momentary reference level.

- Repeat the procedure for the right channel, adjust with R503 (right).

9.7 Checking

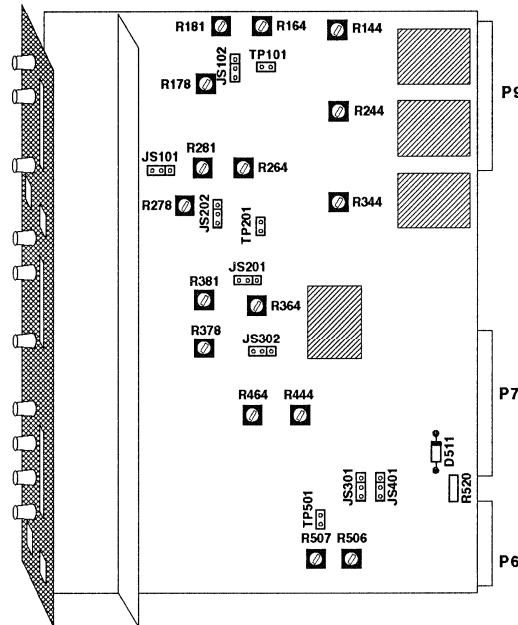
Finally you put the unit back into the console and let it reach steady conditions. The measurements should now give the desired level as a result. Otherwise repeat the procedures.

10 Aux Master Unit

1.990.310

All module processors must be adjusted before aligning any signal level of the input channel (see above).
Also the Mono Input Unit must be aligned before.

10.1 Position of Trimmers and Jumpers



Jumpers	Level adjustment
JS101: <input type="checkbox"/> <input type="checkbox"/> AUX1: PFL <input type="checkbox"/> <input type="checkbox"/> AUX1: SOLO	R144 AUX1 R244 AUX2 R344 AUX5 R444 AUX6
JS102: <input type="checkbox"/> AUX1: PPM <input type="checkbox"/> AUX1: VU	Meter adjustment
JS201: <input type="checkbox"/> <input type="checkbox"/> AUX2: PFL <input type="checkbox"/> <input type="checkbox"/> AUX2: SOLO	R164 AUX1 R264 AUX2 R364 AUX5 R464 AUX6
JS202: <input type="checkbox"/> AUX2: PPM <input type="checkbox"/> AUX2: VU	Meter scale adjustment
JS301: <input type="checkbox"/> <input type="checkbox"/> AUX5: PFL <input type="checkbox"/> <input type="checkbox"/> AUX5: SOLO	R178 / R181 AUX1 R278 / R281 AUX2 R378 / R381 AUX5
JS302: <input type="checkbox"/> <input type="checkbox"/> AUX5/6: VU <input type="checkbox"/> <input type="checkbox"/> AUX5/6: PPM	LED bargraph brightness adjustment
JS401: <input type="checkbox"/> <input type="checkbox"/> AUX6: PFL <input type="checkbox"/> <input type="checkbox"/> AUX6: SOLO	R507 R506

10.2 Basic Settings of the Controls

A basic precondition for correct alignment is the precise positioning of the controls according to the following table:

Mono Input Unit:	Source LINE A
	Input Gain 0 dB
	Routing OFF
	All Aux ON
	Aux source Pre fader
	All Aux pots max. position
	Aux Pan center position
Aux Master Unit:	All Aux ON
	Aux level pots max. position
	EQ OFF
	Aux balance calibrated

10.3 Alignment of Mono AUX 1 and 2 (\cong 3 and 4)

Test signal 1 kHz sine wave at nominal level into LINE A of Mono Input Unit.

Test point *AUX Master out 1 and 2*

Adjustment

- Adjust the AUX1 output level with R144 to 10 dB above nominal level.
- Turn potentiometer AUX MASTER 1 on the AUX Unit down to nominal level.
- Adjust the AUX1 meter with R164 to 0 dB indication; turn R164 until the first red LED comes on. Then slowly turn backwards until the first red LED becomes dark again.
- Repeat for AUX2; trimmers are R244 for level adjustment, R264 for meter adjustment.

10.4 Alignment of Stereo AUX 5/6 (\cong 7/8)

Test signal 1 kHz sine wave at nominal level into LINE A of Mono Input Unit.

Test point *AUX Master Out 5.*

Adjustment

- Set the BALANCE pot on the AUX Unit to the center position.
- Turn the PAN pot 5/6 on the Mono Input Unit fully counterclockwise (AUX 5).
- Adjust the AUX5 output level with R344 to 10 dB above nominal level.
- Turn potentiometer AUX MASTER 5 on the AUX Unit down to nominal level.
- Adjust the AUX5 meter with R364 to 0 dB indication; turn R364 until the first red LED comes on. Then slowly turn backwards until the first red LED becomes dark again.

Test point *AUX Master Out 6.*

- Turn the PAN pot 5/6 on the Mono Input Unit fully clockwise (AUX 6).
- Adjust the AUX6 output level with R444 to *nominal level*.
- Adjust the AUX6 meter with R464 to 0 dB indication; turn R464 until the first red LED comes on. Then slowly turn backwards until the first red LED becomes dark again.

10.5 Alignment of LED Bargraph Meter Scale

Test signal 1 kHz sine wave at nominal level into input LINE A left/right.

Test point *AUX Master Out 1, 2, 5.*

Adjustment

- ❶ Set the AUX Master Output to 25 dB *below* nominal level.
- ❷ Turn R181 until the 5th green LED comes on. Then turn R181 back slowly until the 5th green LED turns off again.
- ❸ Set the AUX Master Output to 5 dB *above* nominal level.
- ❹ Turn R178 until the 3rd red LED comes on. Then turn R178 back slowly until the 3rd red LED turns off again.
- Repeat steps ❶ to ❹, until the indications are correct.
- Proceed as above for AUX2 and AUX5;
AUX2 controls are R281, R278
AUX5 controls are R381, R378 (also valid for AUX6).

10.6 Alignment of LED Bargraph Meter Brightness

Set output to 15 dB above nominal level so that all LEDs are on.

Two possibilities:

- A:** Either adjust a fixed brightness - independent of the central brightness control, or
- B:** Adjust the factory setting; the brightness is depending on the central brightness control.

Alignment A

- Connect DC voltmeter to test point TP501.
- Turn R506 fully counterclockwise.
- Align with R507 for a 2 V DC reading on the voltmeter.

Alignment B

- Connect DC voltmeter between any terminal of R520 (PTC V_{LED}) and the cathode of D511 ($0 V_A$). Adjust with the the central brightness control to 3.5 V DC.
- Connect DC voltmeter to test point TP501.
- Turn R507 fully counterclockwise.
- Align with R506 for a 2 V DC reading on the voltmeter.

Section 3 Fader Panel Units

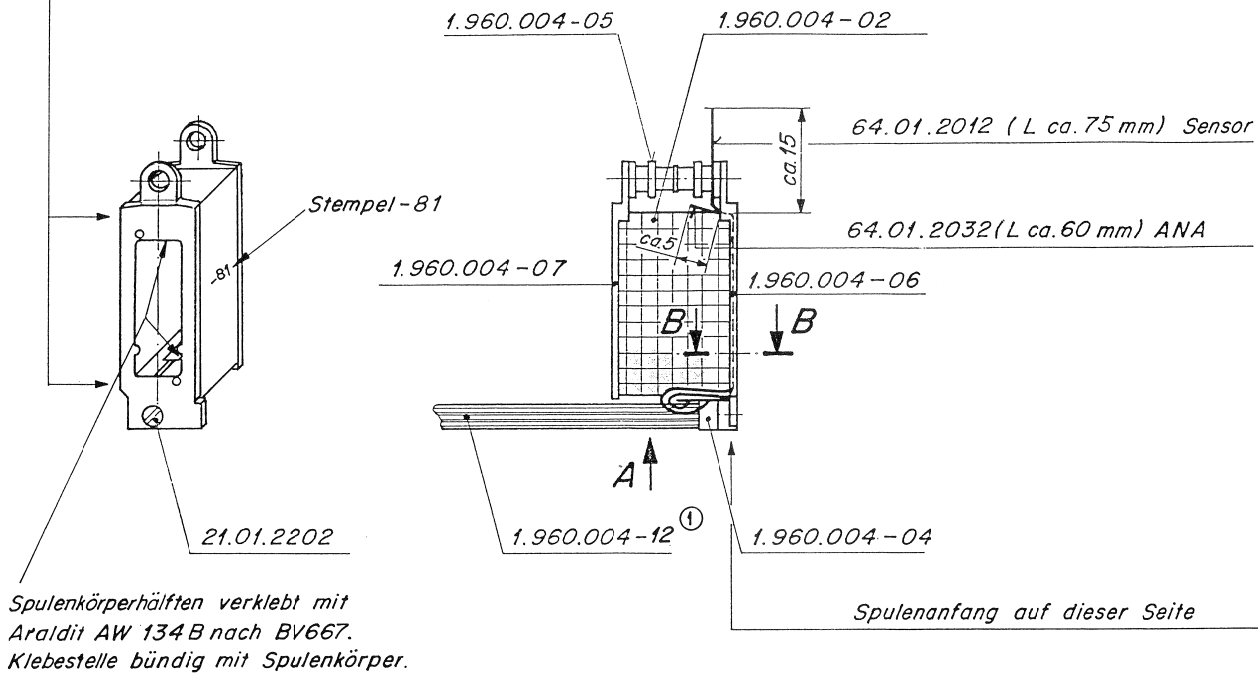
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Motor Fader 1xLin. 104mm.....	1.960.042.82
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Pin location list.....	1.990.110
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Input Fader Analog Board	1.990.118.00
Input Fader Switch Board.....	1.990.119.00
Group Fader Unit.....	1.990.131.00
Group Fader Unit.....	1.990.130/131.00
Group Fader Switch Board.....	1.990.139.00
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Master Fader Unit.....	1.990.140/141.00
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Master Fader Switch Board	1.990.149.00
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Group Fader Unit w. Motor.....	1.990.171.00
Group Fader Unit w. Motor.....	1.990.171.81
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Single Processor Unit	1.990.195.00
Dual Processor Unit	1.990.196.00

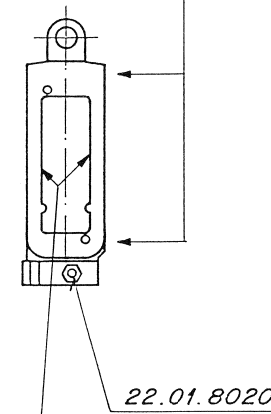
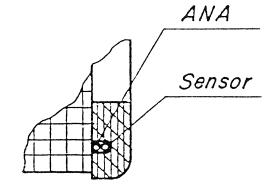
SPULE COMPLETT

1.960.004.81

Unter Temperatur und Druck verstemmt
(mit spez. LötKolben 160°C)

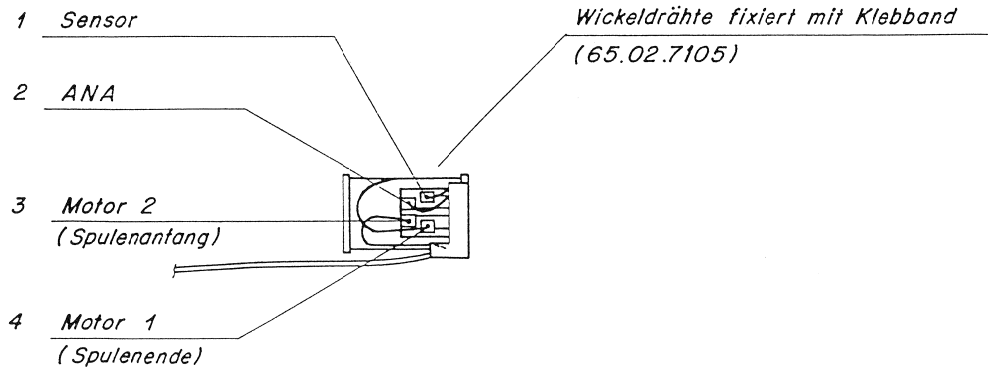


Schnitt B-B
M 5:1



Vor dem Zusammenbau prüfen,
ob Spule sauber verbacken ist.
Keine losen Windungen zulässig.

Ansicht A

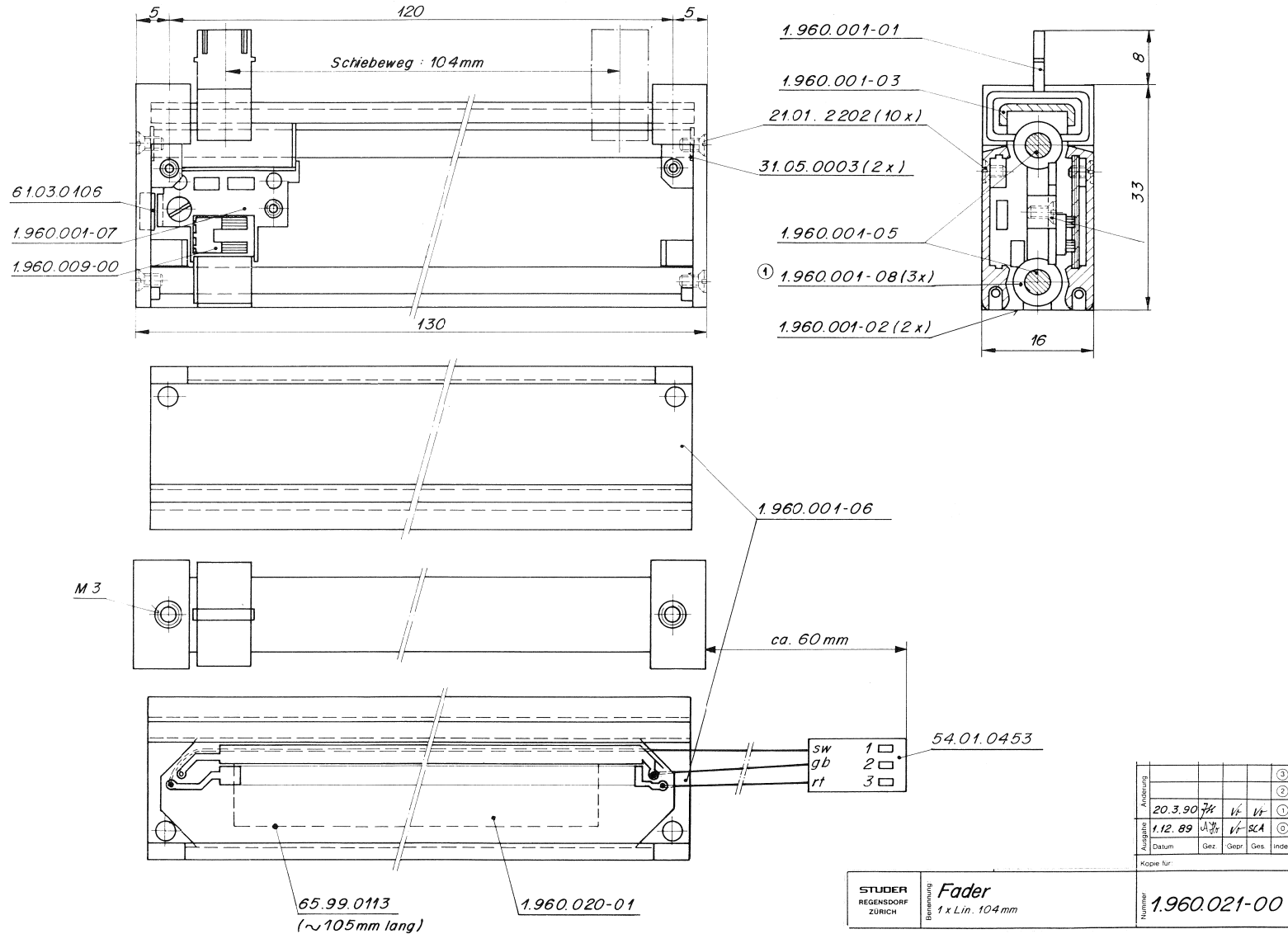


Abgefragt	10.6.94	DH	16	16	①
Datum	15.5.94	JK	JK	JK	②
		Gez.	Gez.	Gez.	③
		Gez.	Gez.	Gez.	④

STUDER REGENSDORF ZÜRICH	Spule komplett MK II	1.960.004-81
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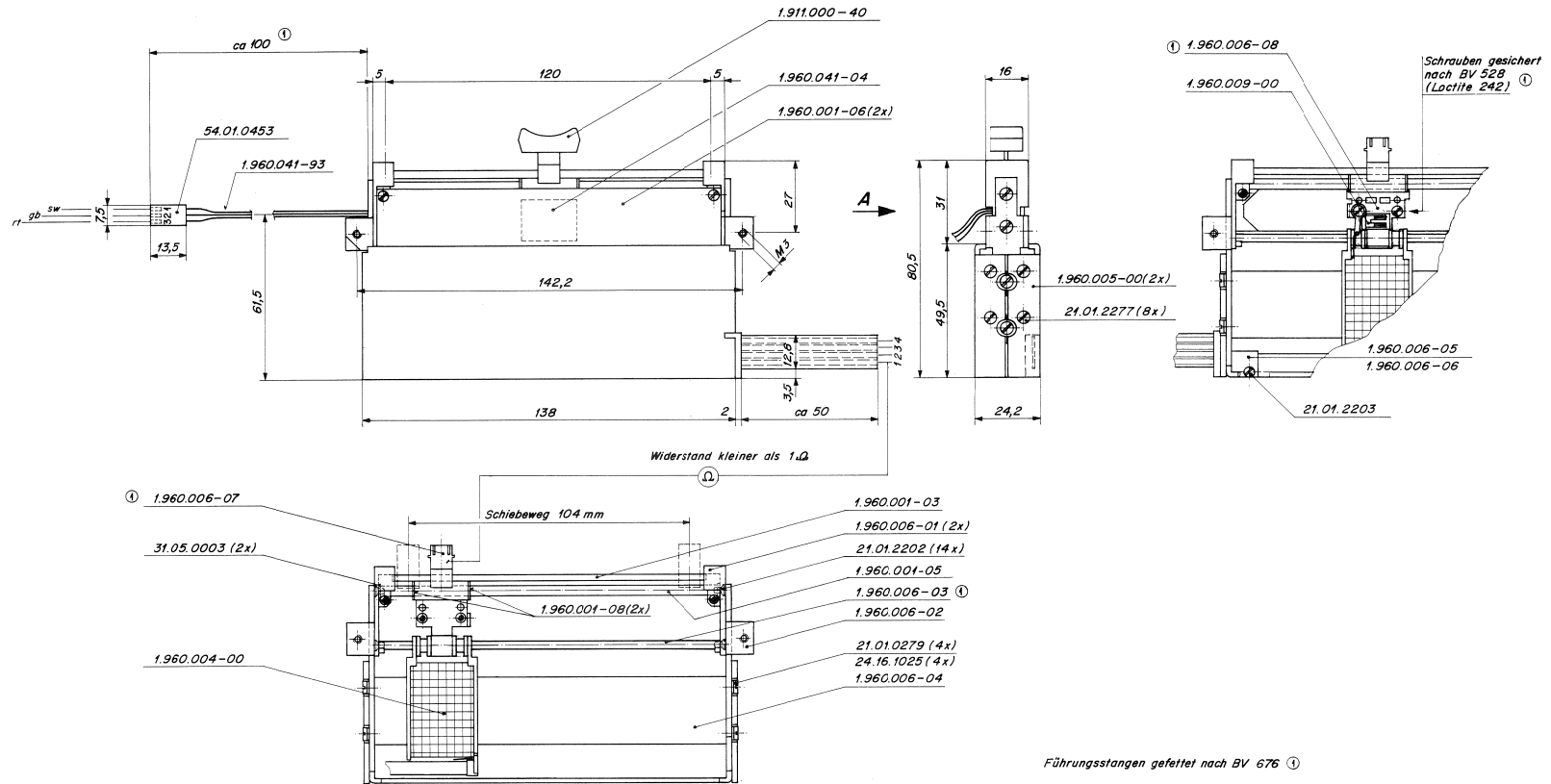
FADER 1 x LIN. 104mm

1.960.021.00

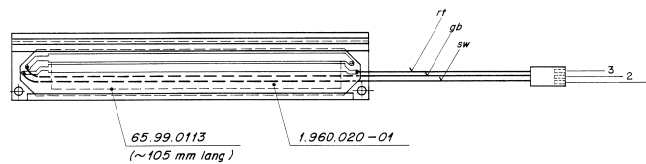


MOTOR FADER 1 x LIN. 104mm

1.960.041.00



Ansicht von A (heruntergeklappt)



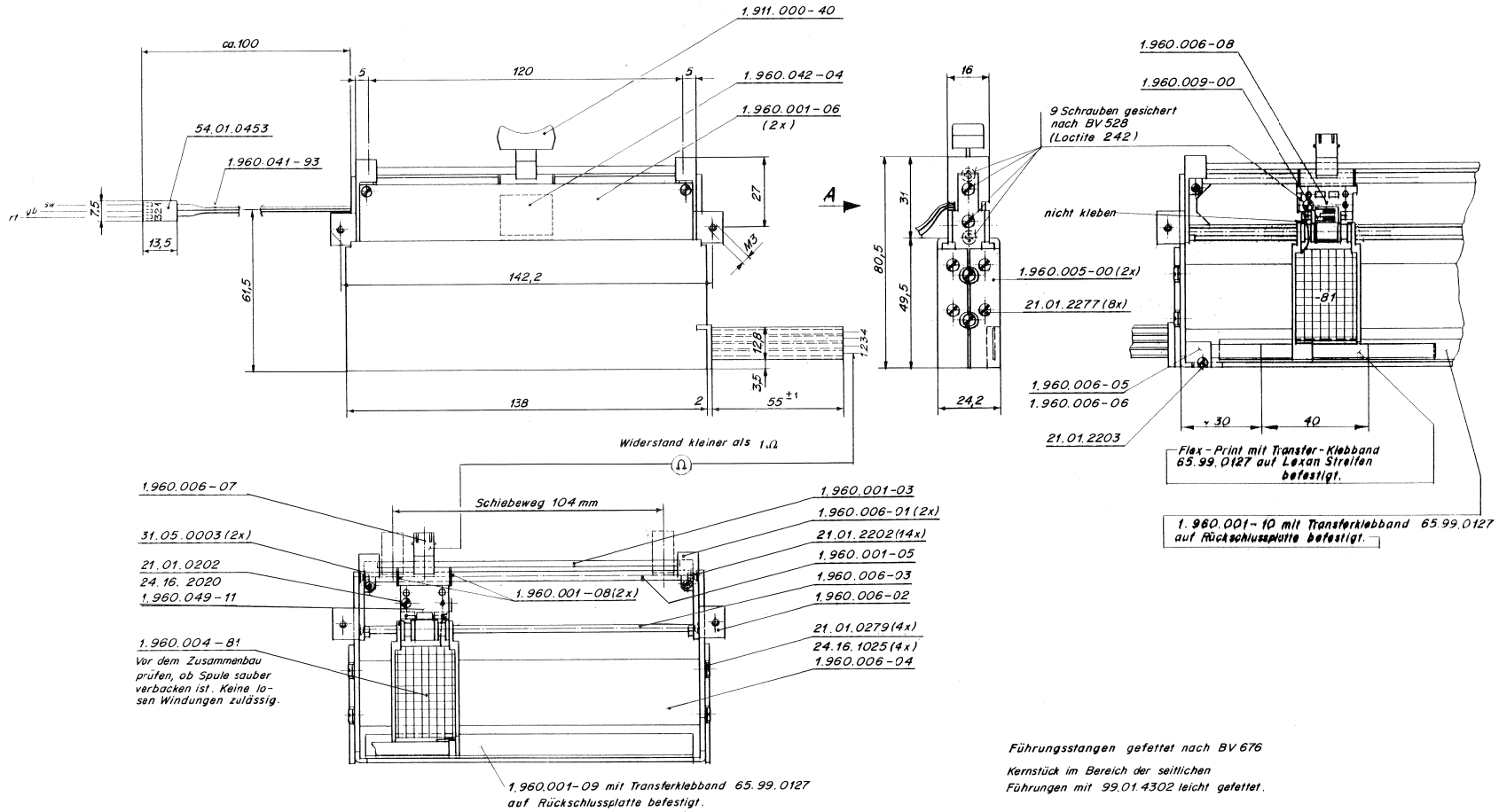
Führungsstangen gefettet nach BV 676
 Kernstück im Bereich der seitlichen Führungen mit 99.01.4302 leicht gefettet

Änderung					③
					②
6.11.89	dk	vt	vt		①
11.8.88	2	OK	OK		①
Datum	Gez.	Gepr.	Ges.	Index	

STUDER REGENSDORF ZÜRICH	Bezeichnung: Motorfader 1 x Lin. 104 mm	Kopie für:
		Nr.: 1.960.041-00

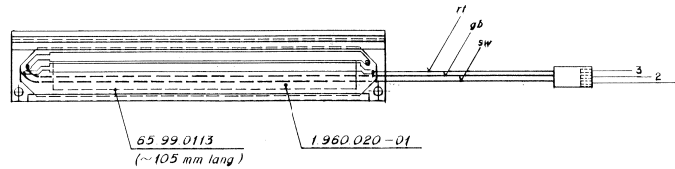
MOTOR FADER 1 x LIN. 104mm

1.960.042.82



1.960.004-81
Vor dem Zusammenbau prüfen, ob Spule sauber verbacken ist. Keine losen Windungen zulässig.

Ansicht von A (heruntergeklappt)

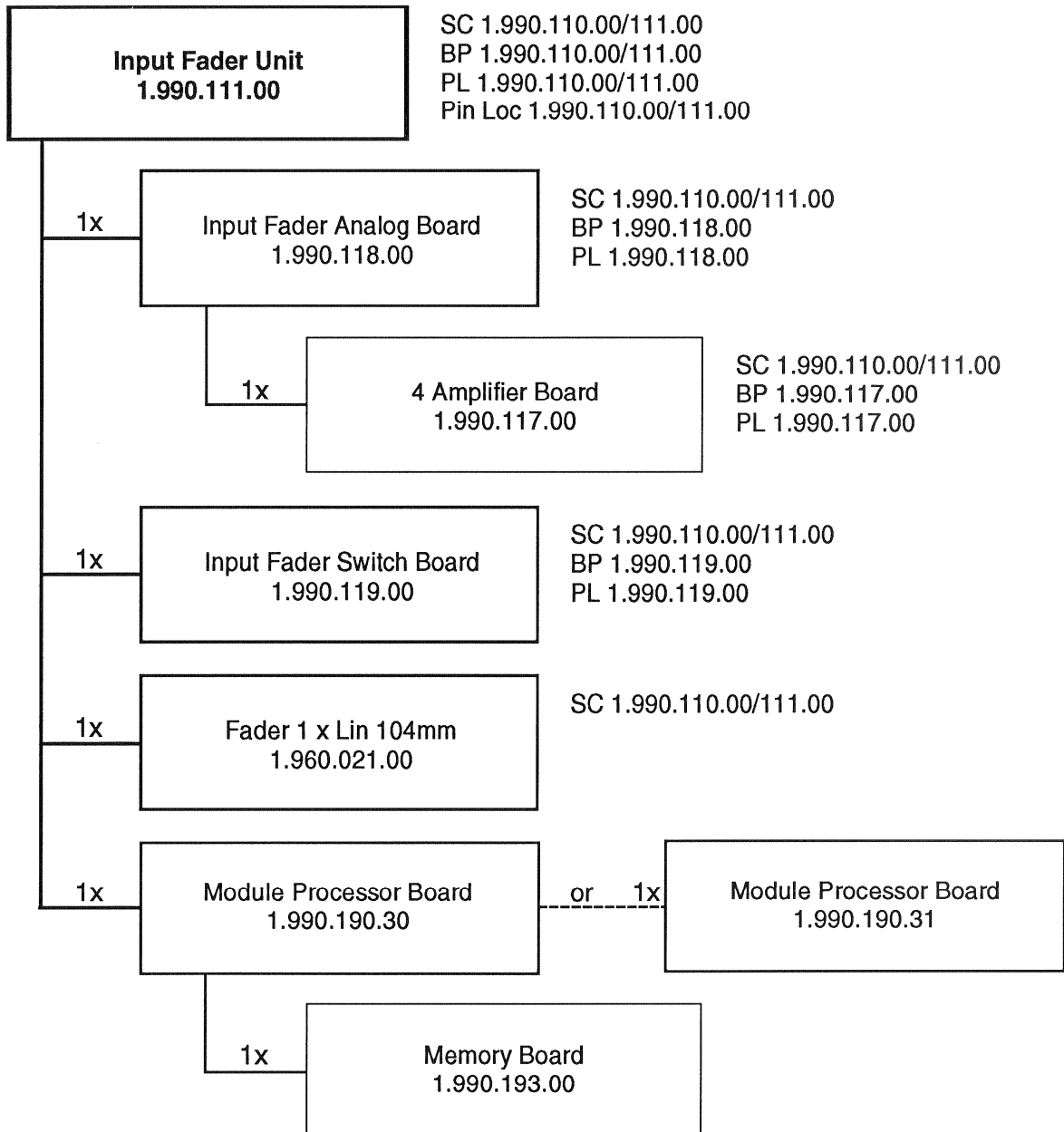


STUDER REIHERDRUCK ZEICHNUNG	Motorfader 1*Lin 104mm EMV MK 2	1.960.042-82
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16.5.94	94	10	10
2	Delim	Gez	Gez

Input Fader Unit

1.990.111.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

Pin location list

1.990.110

ALSO USED FOR -GROUP FADER UNIT 1.990.130
 -MASTER FADER UNIT 1.990.140
 -INP.FADER W.MOTOR 1.990.150
 -GROUP FADER W.MOTOR 1.990.170
 -MASTER FADER W.MOTOR 1.990.180

P	NO	NAME	REMARK	B=BUS
-----			-----	O=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P1A NOT EXIST

P1B 01A	0V-L	GROUND SIGN (LOGIC)	B	
P1B 01B	RESET-B	MASTER RESET INVERS	I	
P1B 02A	ID 0	MODUL IDENTIFICATION 0	O	
P1B 02B	ID 1	MODUL IDENTIFICATION 1	O	
P1B 03A	ID 2	MODUL IDENTIFICATION 2	O	
P1B 03B	ID 3	MODUL IDENTIFICATION 3	O	
P1B 04A	ID 4	MODUL IDENTIFICATION 4	B	
P1B 04B	ID 5	MODUL IDENTIFICATION 5	B	
P1B 05A	ID 6	MODUL IDENTIFICATION 6	B	
P1B 05B	ID 7	MODUL IDENTIFICATION 7	B	
P1B 06A	5V SBY	+ 5V STANDBY	B	
P1B 06B	BLCK	BLINK BLOCK	B	
P1B 07	- 15.5V	- SUPPLY	B	X X
P1B 08A	HDRC-a	HDLC RECEIVE CLOCK a	B,S	
P1B 08B	HDRC-b	HDLC RECEIVE CLOCK b	B,S	
P1B 09	0V-A	GROUND AUDIO	B	X X
P1B 10A	HDTX-a	HDLC TRANSMIT CLOCK a	B,S	
P1B 10B	HDTX-b	HDLC TRANSMIT CLOCK b	B,S	
P1B 11	+ 15.5V	+ SUPPLY	B	X X
P1B 12A	HDTX-a	HDLC TRANSMIT DATA a	B,S	
P1B 12B	HDTX-b	HDLC TRANSMIT DATA b	B,S	
P1B 13	+ 5.5V	+ SUPPLY	B	X X
P1B 14A	HDRX-a	HDLC RECEIVE DATA a	B,S	
P1B 14B	HDRX-b	HDLC RECEIVE DATA b	B,S	
P1B 15	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B	X X
P1B 16	0V-L	GROUND SIGN (LOGIC)	B	X X
P2A 01	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B	
P2A 02	+ 15.5V	+ SUPPLY	B	
P2A 03	- 15.5V	- SUPPLY	B	
P2A 04	DISDAT	DISPLAY DATA	O	
P2A 05	RCL	RECEIVE CLOCK	O	
P2A 06	TCL	TRANSMIT CLOCK	O	
P2A 07	RSTB	RECEIVE STROBE	O	
P2A 08	TXD	TRANSMIT DATA	O	
P2A 09	RXD 0	RECEIVE DATA 0	O	
P2A 10	TSTB 0	TRANSMIT STROBE 0	O	
P2A 11	INT 1	INTERUPT 1	O	
P2A 12	INT 0	INTERUPT 0	O	
P2A 13	DO 0	DATA OUT 0 (ENABLE)	O	
P2A 14	-	NC		
P2A 15	+ 5.5V	+ SUPPLY	B	
P2A 16	0V-L	GROUND SIGN (LOGIC)	B	

Pin location list

1.990.110

P2B 01A	0V-L	GROUND SIGN (LOGIC)	B
P2B 01B	+ 5.5V	+ SUPPLY	B
P2B 02A	DO 0	DATA OUT 0 (ENABLE)	0
P2B 02B	5V SBY	+ 5V STANDBY	B
P2B 03A	INT 0	INTERRUPT 0	0
P2B 03B	INT 1	INTERRUPT 1	0
P2B 04A	INT 2	INTERRUPT 2	0
P2B 04B	INT 3	INTERRUPT 3	0
P2B 05A	INT 4	INTERRUPT 4	0
P2B 05B	INT 5	INTERRUPT 5	0
P2B 06A	INT 6	INTERRUPT 6	0
P2B 06B	INT 7	INTERRUPT 7	0
P2B 07A	TSTB 0	TRANSMIT STROBE 0	0
P2B 07B	TSTB 1	TRANSMIT STROBE 1	0
P2B 08A	TSTB 2	TRANSMIT STROBE 2	0
P2B 08B	TSTB 3	TRANSMIT STROBE 3	0
P2B 09A	TSTB 4	TRANSMIT STROBE 4	0
P2B 09B	TSTB 5	TRANSMIT STROBE 5	0
P2B 10A	TSTB 6	TRANSMIT STROBE 6	0
P2B 10B	TSTB 7	TRANSMIT STROBE 7	0
P2B 11A	RXD 0	RECEIVE DATA 0	0
P2B 11B	RXD 1	RECEIVE DATA 1	0
P2B 12A	RXD 2	RECEIVE DATA 2	0
P2B 12B	RXD 3	RECEIVE DATA 3	0
P2B 13A	RXD 4	RECEIVE DATA 4	0
P2B 13B	RXD 5	RECEIVE DATA 5	0
P2B 14A	RXD 6	RECEIVE DATA 6	0
P2B 14B	RXD 7	RECEIVE DATA 7	0
P2B 15A	TXD	TRANSMIT DATA	0
P2B 15B	RSTB	RECEIVE STROBE	0
P2B 16A	TCL	TRANSMIT CLOCK	0
P2B 16B	RCL	RECEIVE CLOCK	0
P3A 01	- 15V	- SUPPLY FROM INPUT UNIT	0
P3A 02	+ 15V	+ SUPPLY FROM INPUT UNIT	0
P3A 03	C OUT	BAL COMMON OUT	0
P3A 04	B/PAN1-OUT-R	BAL/PAN 1 OUT RIGHT	0
P3A 05	B/PAN1-OUT-L	BAL/PAN 1 OUT LEFT	0
P3A 06	B-L/PAN1-IN	BAL LEFT/PAN 1 IN	0
P3A 07	B-Rb/PAN1-IN	BAL RIGHT INV./PAN 1 IN	I
P3A 08	B-R/PAN1-IN	BAL RIGHT/PAN 1 IN	0
P3A 09	OVA BAL/PAN1	GROUND SIGN BAL/PAN 1	0
P3A 10	UREF	+ 5V REFERENZ	0
P3A 11	AN GND	ANALOG GROUND	0
P3A 12	A OUT 4	INPUT ; FROM MCU ANALOG OUT 4	0
P3A 13	A IN 2	OUTPUT ; TO MCU ANALOG IN 2	0
P3A 14	A IN 0	OUTPUT ; TO MCU ANALOG IN 0	0
P3A 15	DO 2	DATA OUT 20	0
P3A 16	0V-A	GROUND AUDIO	B

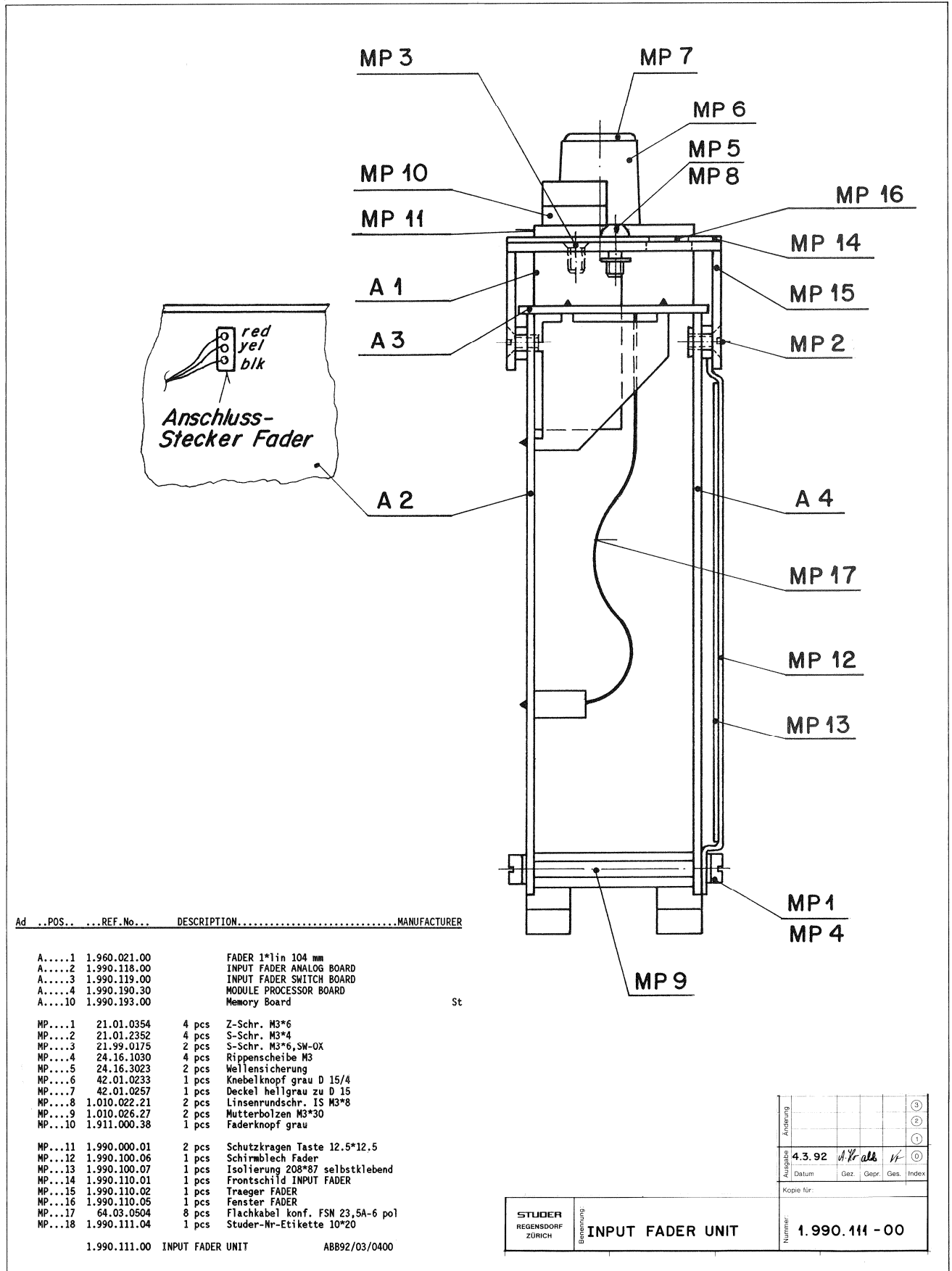
Pin location list

1.990.110

P3B 01A	0V-A	GROUND AUDIO	B	
P3B 01B	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B	
P3B 02A	+ 15.5V	+ SUPPLY	B	
P3B 02B	- 15.5V	- SUPPLY	B	
P3B 03A	-	RES	0	
P3B 03B	-	RES	0	
P3B 04A	-	RES	0	
P3B 04B	-	RES	0	
P3B 05A	DYN 0	DYNAMIC CONTR.VOLTAGE 0	0	
P3B 05B	-	RES	0	
P3B 06A	-	RES	0	
P3B 06B	DYN 1	DYNAMIC CONTR.VOLTAGE 1	0	
P3B 07A	A IN 0	INPUT ; TO MCU ANALOG IN 0	0	
P3B 07B	A IN 1	INPUT ; TO MCU ANALOG IN 1	0	
P3B 08A	A IN 2	INPUT ; TO MCU ANALOG IN 2	0	
P3B 08B	A IN 3	INPUT ; TO MCU ANALOG IN 3	0	
P3B 09A	A IN 4	INPUT ; TO MCU ANALOG IN 4	0	
P3B 09B	A IN 5	INPUT ; TO MCU ANALOG IN 5	0	
P3B 10	AN GND	ANALOG GROUND	0	X X
P3B 11	UREF	+ 5V REFERENZ	0	X X
P3B 12A	DO 2	DATA OUT 2	0	
P3B 12B	DO 1	DATA OUT 1 (TRANSMIT STROBE 8)	0	
P3B 13A	A OUT 0	OUTPUT ; FROM MCU ANALOG OUT 0	0	
P3B 13B	A OUT 1	OUTPUT ; FROM MCU ANALOG OUT 1	0	
P3B 14A	A OUT 2	OUTPUT ; FROM MCU ANALOG OUT 2	0	
P3B 14B	A OUT 3	OUTPUT ; FROM MCU ANALOG OUT 3	0	
P3B 15A	A OUT 4	OUTPUT ; FROM MCU ANALOG OUT 4	0	
P3B 15B	A OUT 5	OUTPUT ; FROM MCU ANALOG OUT 5	0	
P3B 16	0V-L	GROUND SIGN (LOGIC)	B	X X

INPUT FADER UNIT

1.990.111.00



Ad ..POS... ..REF.No... ..DESCRIPTION.....MANUFACTURER

A....1	1.960.021.00		FADER 1*1in 104 mm	
A....2	1.990.118.00		INPUT FADER ANALOG BOARD	
A....3	1.990.119.00		INPUT FADER SWITCH BOARD	
A....4	1.990.190.30		MODULE PROCESSOR BOARD	
A....10	1.990.193.00		Memory Board	
MP....1	21.01.0354	4 pcs	Z-Schr. M3*6	
MP....2	21.01.2352	4 pcs	S-Schr. M3*4	
MP....3	21.99.0175	2 pcs	S-Schr. M3*6, SW-0X	
MP....4	24.16.1030	4 pcs	Rippenscheibe M3	
MP....5	24.16.3023	2 pcs	Wellensicherung	
MP....6	42.01.0233	1 pcs	Knebelknopf grau D 15/4	
MP....7	42.01.0257	1 pcs	Deckel hellgrau zu D 15	
MP....8	1.010.022.21	2 pcs	Linienrundschr. IS M3*8	
MP....9	1.010.026.27	2 pcs	Mutterbolzen M3*30	
MP....10	1.911.000.38	1 pcs	Faderknopf grau	
MP...11	1.990.000.01	2 pcs	Schutzkragen Taste 12.5*12,5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.110.01	1 pcs	Frontschild INPUT FADER	
MP...15	1.990.110.02	1 pcs	Traeger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.990.111.04	1 pcs	Studer-Nr-Etikette 10*20	

St

1.990.111.00 INPUT FADER UNIT

ABB92/03/0400

STUDER
REGENSDORF
ZÜRICH

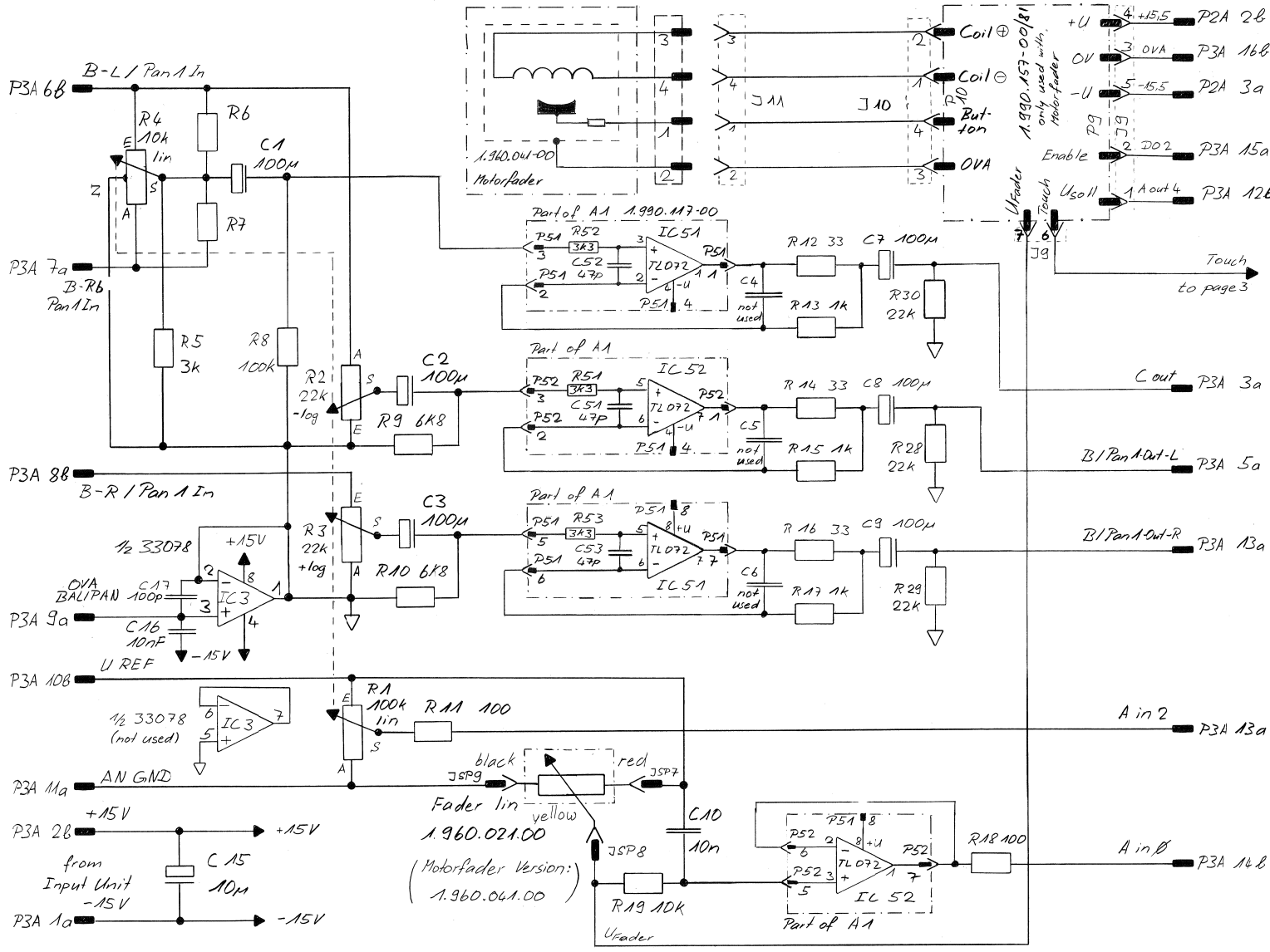
Benennung:

INPUT FADER UNIT

Änderung					
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Datum		Gez.	Gepr.	Ges.	Index
Kopie für:					
Nummer:	1.990.111-00				

INPUT FADER UNIT

1.990.110/111.00



1.990.110.00 INCL 1.990.190-21 1.990.111.00 INCL 1.990.190.30 / 1.990.193.00 INCL 1.990.193.00 INCL 1.990.193.00 INCL 1.990.193.00

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INCL 1.990.117.00 / 1.990.118.00 / 1.990.119.00

PAGE 1 OF 3

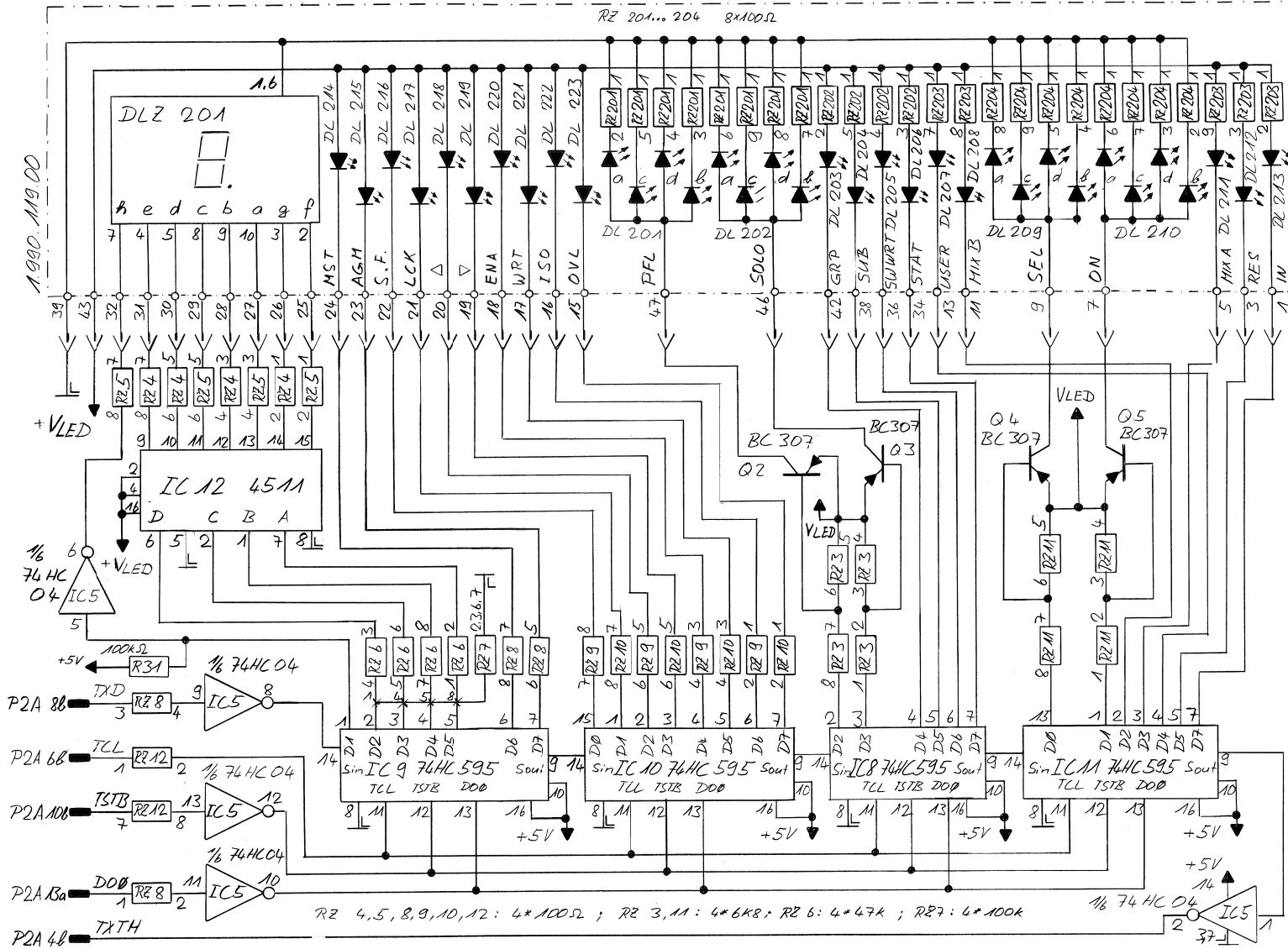
SC 1.990.110/111.00

INPUT FADER UNIT

STUDER

INPUT FADER UNIT

1.990.110/111.00



1.990.119.00

1/6 74HC 04 IC5

+5V 100KΩ R31

P2A 88 TXD RZ 8 IC5

P2A 68 TCL RZ 12 IC5

P2A 108 TSTB RZ 12 IC5

P2A 13a DOB RZ 8 IC5

P2A 48 TXTH

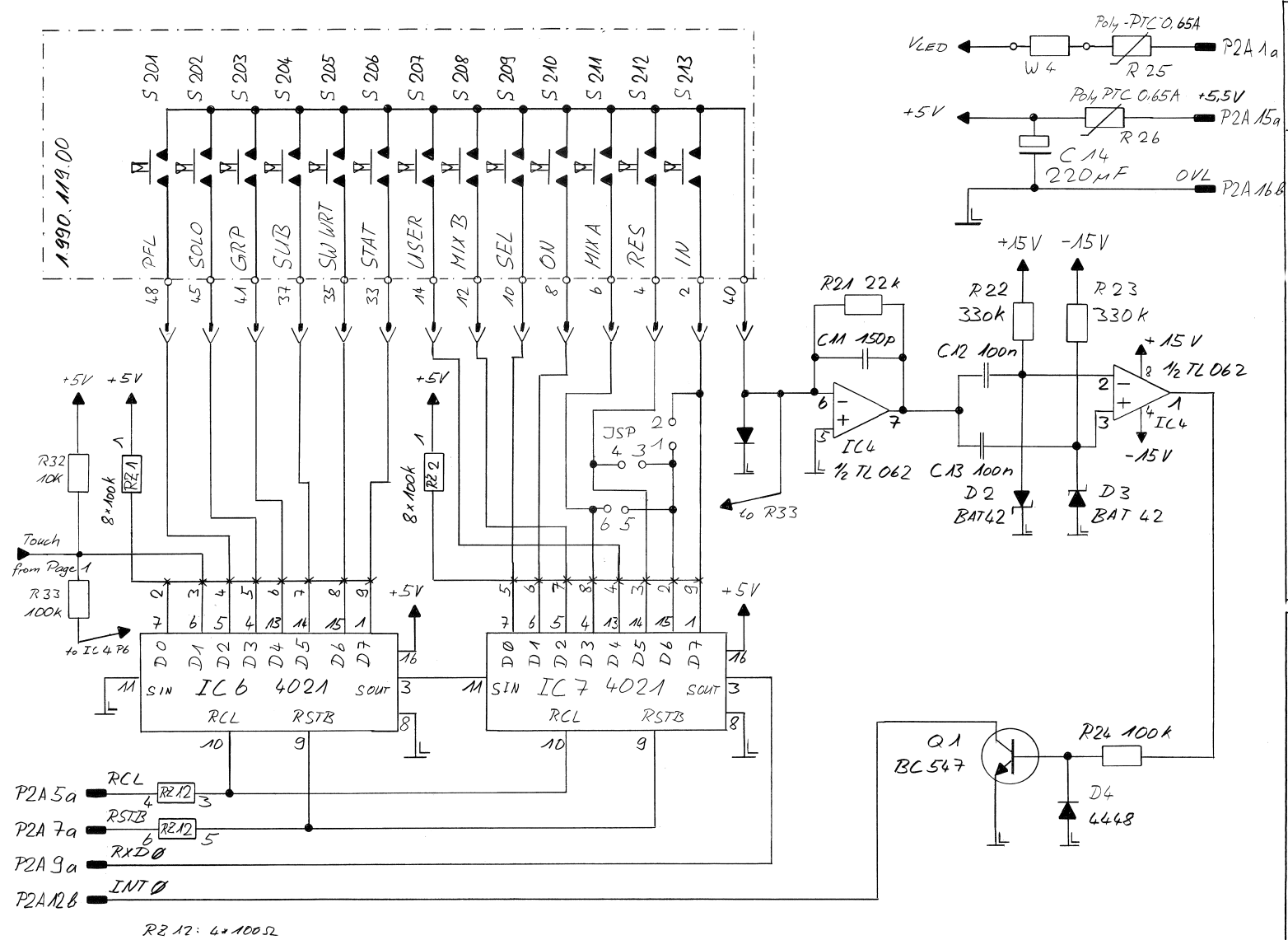
RZ 4,5,8,9,10,12: 4*100Ω ; RZ 3,11: 4*6K8 ; RZ 6: 4*47K ; RZ 7: 4*100K

1/6 74HC 04 IC5

1.990.110.00 INCL. 1.990.190-21	1.990.111.00 INCL. 1.990.190-30/1.990.193.00	10.3.92
07.04.90 A. Schmid	06.04.90 A. Schmid	
INCL. 1.990.117.00/1.990.118.00/1.990.119.00		
PAGE 2 OF 3		
STUDER		SC 1.990.110/111.00

INPUT FADER UNIT

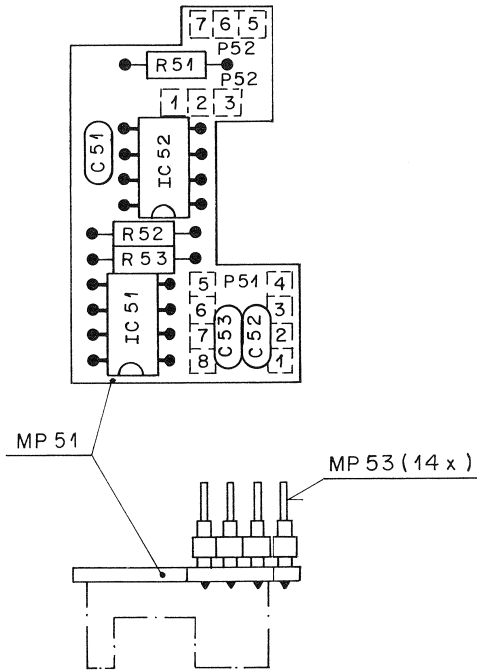
1.990.110/111.00



1.990.110.00	INCL. 1.990.190.21	1.990.111.00	INCL. 1.990.190.30/1.990.192.00	10.3.92	for
0	Pr. 4.90 A.Schmid	04.09.90 A.Schmid	04.04.91 A.Schmid	...	PAGE 3 OF 3
INCL. 1.990.117.00/1.990.118.00/1.990.119.00			SC 1.990.110/111.00		
STUDER INPUT FADER UNIT					

4 AMPLIFIER BOARD

1.990.117.00



Ad ...POS... REF.No... DESCRIPTION.....MANUFACTURER

C...51	59.34.2470	47 pF	CE	
C...52	59.34.2470	47 pF	CE	
C...53	59.34.2470	47 pF	CE	
IC...51	50.09.0101	TLO72	DUAL OP. AMP.	FET TI
IC...52	50.09.0101	TLO72	DUAL OP. AMP.	FET TI
MP...51	1.990.117.11		4 Amplifier PCB	St
MP...52	43.01.0108	1 pcs	ESL-Markenschild	
MP...53	53.03.0251	14 pcs	Steckerstifte fuer IC-Sockel	
P...51	.	.	see MP 53	
P...52	.	.	see MP 53	
R...51	57.11.3332	3.3 kOhm	5% 0.25W	
R...52	57.11.3332	3.3 kOhm	5% 0.25W	
R...53	57.11.3332	3.3 kOhm	5% 0.25W	

CER=Ceramic

MANUFACTURER: TI=Texas Instrument, St=Studer

1.990.117.00 4 AMPLIFIER BOARD

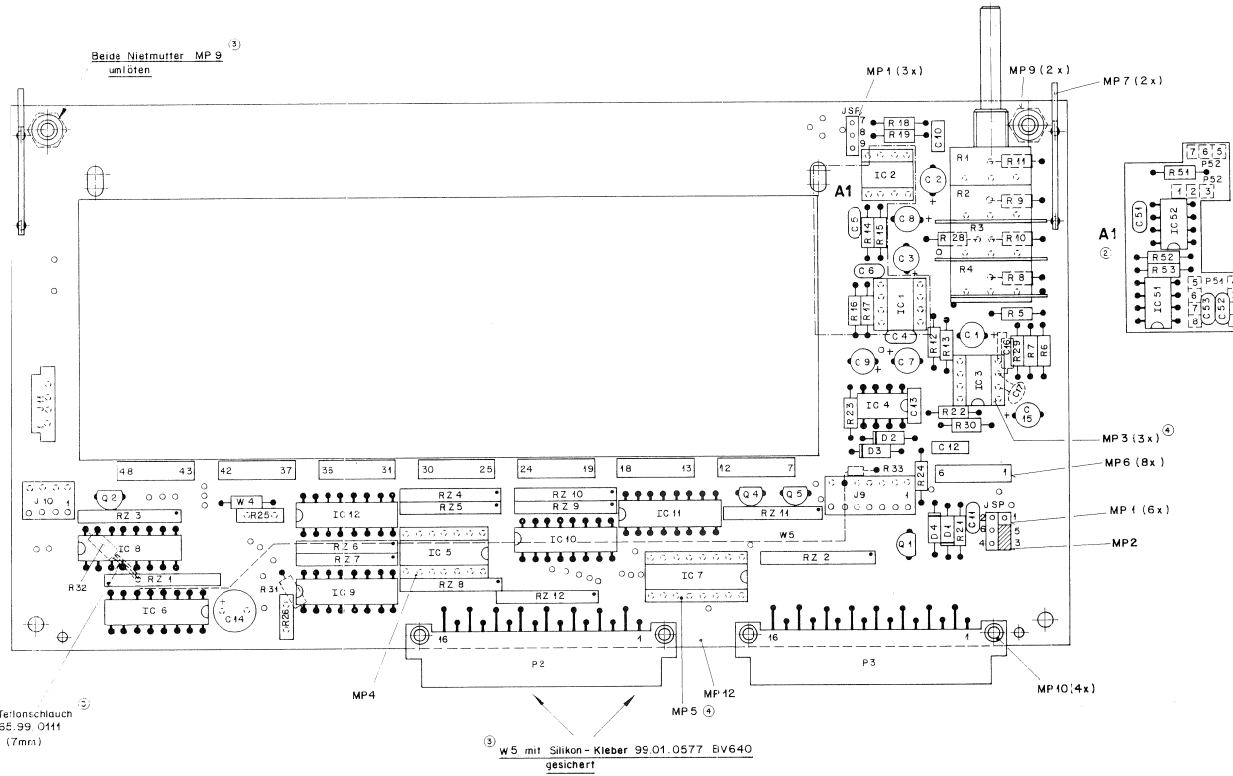
AB 9/06/1800

14.6.91	1	1	1	1	1
3	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

STUJDER INGENIEURBÜRO ZÜRICH	4 AMPLIFIER BOARD ESE	1.990.117-00
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INPUT FADER ANALOG BOARD

1.990.118.00



Ad . . . POS. . . REF.No. . . DESCRIPTION . . . MANUFACTURER

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
MP	1	54.01.0020	9 pcs Jumper plug	
MP	2	54.01.0021	1 pcs Jumper bridge	
MP	3	53.03.0166	4 pcs IC-Socket, 8 pin	
MP	4	53.03.0166	3 pcs IC-Socket, 8 pin	
MP	5	53.03.0167	1 pcs IC-Socket, 16 pin	
MP	6	53.03.0168	7 pcs IC-Socket, 16 pin	
MP	7	53.03.0168	1 pcs IC-Socket, 16 pin	
MP	8	54.10.3506	8 pcs Buchsenleiste 744-6	
MP	9	1.990.100.01	2 pcs Querprintstuetze	
MP	10	1.990.118.04	1 pcs Nr-Etikette 5*20	
MP	11	1.010.012.22	2 pcs Nietmutter 5x6, M3*2	
MP	12	28.99.0119	4 pcs Rohrniete D2.5*0.15*10	
MP	11	43.01.0108	1 pcs ESE-Schild	
MP	12	1.990.118.11	1 pcs FADER ANALOG PCB	
F	2	54.11.2007	1*16 pin Eurocard connector, 16 pin	
F	3	54.11.2007	1*16 pin Eurocard connector, 16 pin	
F	4	54.01.0241	4 pin CIS-connector, 4 pin Mot.PCB	
F	5	54.01.0218	7 pin CIS-connector, 7 pin Mot.PCB	
C	1	50.03.0436	BC 547 B key detection	ITT, Mot
C	2	50.03.0515	BC 307 B p1 -LED	ITT, Mo
C	3	50.03.0515	BC 307 B solo-LED	ITT, Mo
C	4	50.03.0515	BC 307 B sel-LED	ITT, Mot
C	5	50.03.0515	BC 307 B on/mute-LED	ITT, Mot
R	1	1.010.033.58	100 kOhm 20% 1in., comb. with R2, R3, R4	St
R	2	0	not used	
R	3	0	not used	
R	4	0	not used	
R	5	57.11.3302	3 kOhm 1%	
R	6	0	not used	
R	7	0	not used	
R	8	57.11.3104	100 kOhm 1%	
R	9	57.11.3362	6.8 kOhm 1%	
R	10	57.11.3682	6.8 kOhm 1%	
R	11	57.11.3101	100 Ohm 1%	
R	12	57.11.3330	33 Ohm 1%	
R	13	57.11.3102	1 kOhm 1%	
R	14	57.11.3330	33 Ohm 1%	
R	15	57.11.3102	1 kOhm 1%	
R	16	57.11.3330	33 Ohm 1%	
R	17	57.11.3102	1 kOhm 1%	
R	18	57.11.3101	100 Ohm 1%	
R	19	57.11.3103	10 kOhm 1%	
R	21	57.11.3223	22 kOhm 1%	
R	22	57.11.3334	330 kOhm 1%	
R	23	57.11.3334	330 kOhm 1%	
R	24	57.11.3104	100 kOhm 1%	
R	25	57.92.7014	650 mA Poly-PTC, I-hold=650mA, R=0.46 Ohm	MCI
R	26	57.92.7014	650 mA Poly-PTC, I-hold=650mA, R=0.46 Ohm	MCI
R	28	57.11.3223	22 kOhm 1%	
R	29	57.11.3223	22 kOhm 1%	
R	30	57.11.3223	22 kOhm 1%	
R	31	57.11.3104	100 kOhm 1%	
R	32	57.11.3103	10 kOhm 1%	
R	33	57.11.3104	100 kOhm 1%	
RZ	1	57.88.4104	100 kOhm 2% 4*	
RZ	2	57.88.4104	100 kOhm 2% 4*	
RZ	3	57.88.2682	6.8 kOhm 2% 4*	
RZ	4	57.88.2101	100 Ohm 2% 4*	
RZ	5	57.88.2101	100 Ohm 2% 4*	
RZ	6	57.88.2473	47 kOhm 2% 4*	
RZ	7	57.88.2104	100 kOhm 2% 4*	
RZ	8	57.88.2101	100 Ohm 2% 4*	
RZ	9	57.88.2101	100 Ohm 2% 4*	
RZ	10	57.88.2101	100 Ohm 2% 4*	
RZ	11	57.88.2682	6.8 kOhm 2% 4*	
RZ	12	57.88.2101	100 Ohm 2% 4*	
W	4	57.11.3000	0 Ohm Bridge	
O4	W	1.010.122.64	Wire-Wrap Draht	

Ad . . . POS. . . REF.No. . . DESCRIPTION . . . MANUFACTURER

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
O3	A	1.990.117.00	4 AMPLIFIER BOARD	St
C	1	59.22.3101	100 uF 10V EL	
C	2	59.22.3101	100 uF 10V EL	
C	3	59.22.3101	100 uF 10V EL	
C	4	59.34.2101	100 pF 5% CER	
O1	C	5	not used	
O1	C	6	59.34.2101	100 pF 5% CER
O1	C	7	not used	
C	7	59.22.3101	100 uF 10V EL	
C	8	59.22.3101	100 uF 10V EL	
C	9	59.22.3101	100 uF 10V EL	
C	10	59.06.0103	10 nF 10% PE	
C	11	59.34.2151	150 pF 5% CER	
C	12	59.06.0104	10 nF 10% PE	
C	13	59.06.0104	10 nF 10% PE	
C	14	59.22.2221	220 uF 6V EL	
C	15	59.22.6100	10 uF 35V EL	
C	16	59.06.0103	10 nF 10% PE	
O1	C	17	59.34.4101	100 pF CER
D	1	50.04.0125	1N4448	any
D	2	50.04.0127	BAT42	Tho, Ph
D	3	50.04.0127	BAT42	Tho, Ph
D	4	50.04.0125	1N4448	any

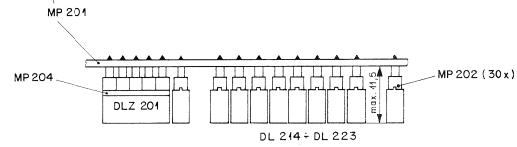
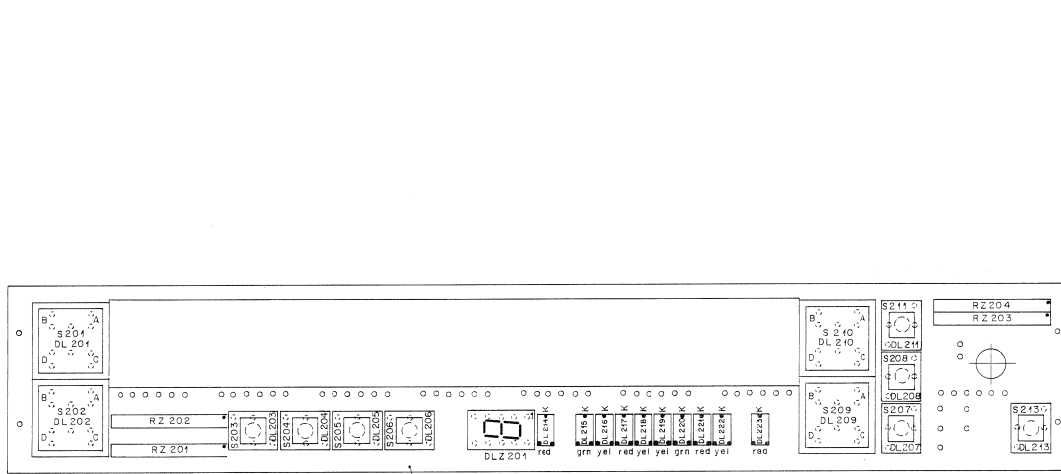
Ad . . . POS. . . REF.No. . . DESCRIPTION . . . MANUFACTURER

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
IC	1	50.09.0118	RC 4562 N Dual OP	Ra, JRC	
O1	IC	1	50.09.0107	RC 4559 N Dual OP	NEC, Ra, TI
O2	IC	1	50.09.0121	TL 0728CP Dual OP J-FET low offset	NEC, Ra, TI
O3	IC	1	0	not used	
O1	IC	2	50.09.0118	RC 4562 N Dual OP	Ra, JRC
O1	IC	3	50.09.0119	TL 0728CP Dual OP J-FET Dual OP	NEC, Ra, TI
O2	IC	2	50.09.0121	TL 0728CP Dual OP J-FET low offset	NEC, Ra, TI
O3	IC	2	0	not used	
O1	IC	3	50.09.0118	RC 4562 N Dual OP	Ra, JRC
O1	IC	3	50.09.0107	RC 4559 N Dual OP	NEC, Ra, TI
O2	IC	4	50.09.0119	TL 0728CP Dual OP J-FET Dual OP	NEC, Ra, TI
IC	5	50.17.1004	74 HC 04 Hex-Inverter	any	
IC	6	50.07.1021	CD 4021 8-bit static shift register	any	
IC	7	50.09.1021	CD 4559 N 8-bit static shift register	any	
IC	8	50.17.1595	74 HC 595 8-bit shift/output register	NS, SGS, TI	
IC	9	50.17.1595	74 HC 595 8-bit shift/output register	NS, SGS, TI	
IC	10	50.17.1595	74 HC 595 8-bit shift/output register	NS, SGS, TI	
IC	11	50.17.1595	74 HC 595 8-bit shift/output register	NS, SGS, TI	
IC	12	50.07.0511	CD 4511 BCD/7-seg. latch/dec/driver	Mot, SGS, To	
J	9	54.01.0241	4 pin CIS-connector, 4 pin Mot.PCB		
J	10	54.01.0218	7 pin CIS-connector, 7 pin Mot.PCB		
J	11	54.10.3004	4-pol Federleiste fuer flexiblen Print		

STUDER REGENSDORF ZURICH	INPUT FADER ANALOG BOARD	1.990.118-00
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INPUT FADER SWITCH BOARD

1.990.119.00



DL 214 - DL 223

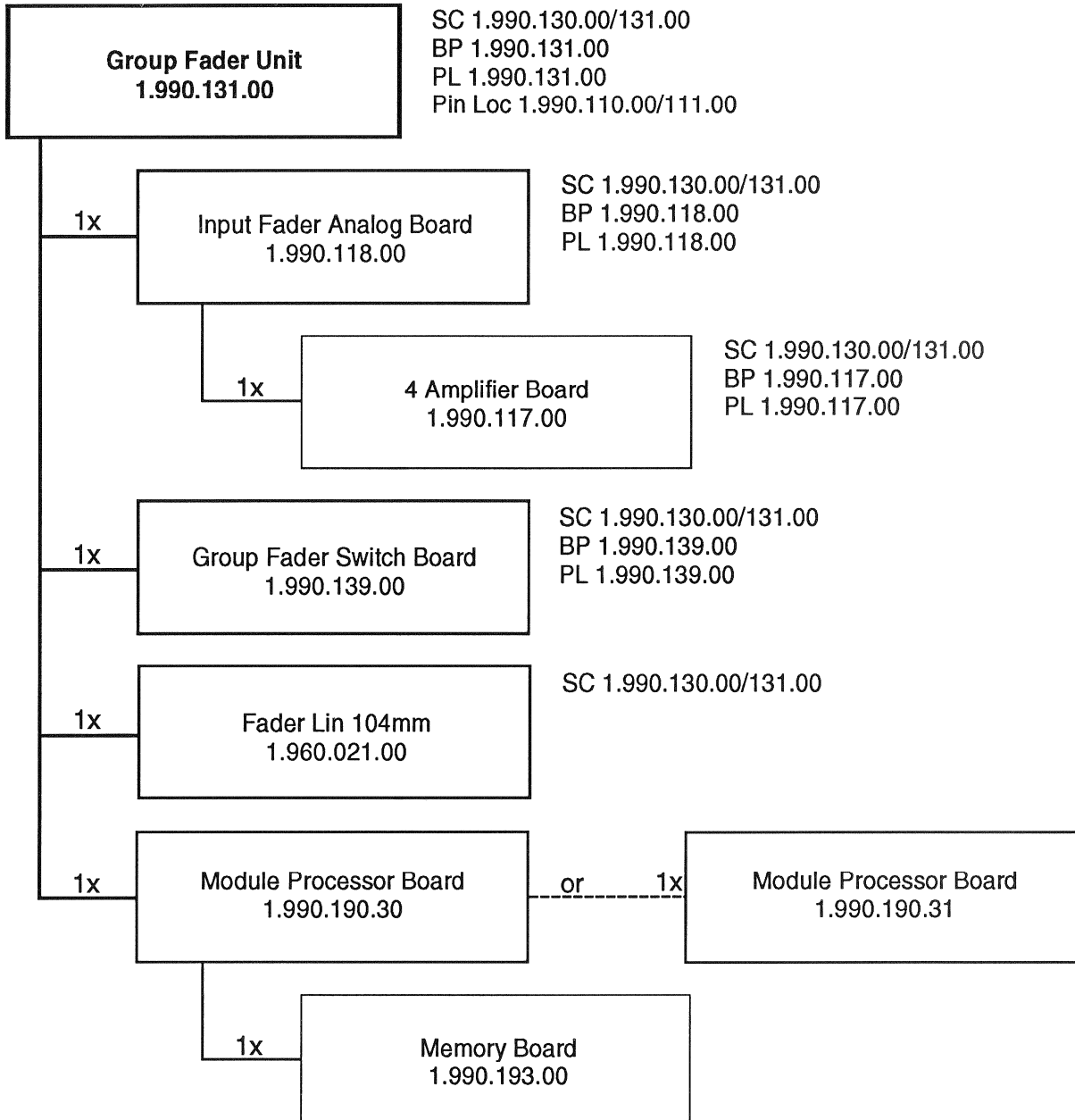
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STUDER REGENSDORF ZURICH	INPUT FADER SWITCH BOARD	1.990.119-00
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Ad . . . POS.	. . . REF.No.	DESCRIPTION	MANUFACTURER
DL..201	. . . 0	not used see S201	
DL..202	. . . 0	not used see S202	
DL..203	. . . 0	not used see S203	
DL..204	. . . 0	not used see S204	
DL..205	. . . 0	not used see S205	
DL..206	. . . 0	not used see S206	
DL..207	. . . 0	not used see S207	
DL..208	. . . 0	not used see S208	
DL..209	. . . 0	not used see S209	
DL..210	. . . 0	not used see S210	
DL..211	. . . 0	not used see S211	
DL..212	. . . 0	not used see S212	
DL..213	. . . 0	not used see S213	
DL..214	50.04.2119	MV 57124 LED, red	GI
DL..215	50.04.2146	MV 54124 LED, green	GI
DL..216	50.04.2118	MV 53124 LED, yellow	GI
DL..217	50.04.2119	MV 57124 LED, red	GI
DL..218	50.04.2118	MV 53124 LED, yellow	GI
DL..219	50.04.2118	MV 53124 LED, yellow	GI
DL..220	50.04.2146	MV 54124 LED, green	GI
DL..221	50.04.2119	MV 57124 LED, red	GI
DL..222	50.04.2118	MV 53124 LED, yellow	GI
DL..223	50.04.2119	MV 57124 LED, red	GI
DLZ.201	73.01.0128	HDSP 7303 7-Segment display, common cathode	HP
MP..201	1.990.119.11	1 pcs Input Fader Switch Board	
MP..202	53.03.0213	30 pcs In Line IC-Socket	
MP..203	1.990.119.04	1 pcs Nr-Etikette 5*20	
MP..204	1.990.119.01	1 pcs Display Unterlage	
S...201	55.15.0705	Taste,1*A,12mm GN/Trans (PFL)	
S...202	55.15.0704	Taste,1*A,12mm GB/Trans (SOLO)	
S...203	55.15.0602	Taste,1*A, 5mm RT/Trans (GRP)	
S...204	55.15.0604	Taste,1*A, 5mm GB/Trans (SUB)	
S...205	55.15.0602	Taste,1*A, 5mm RT/Trans (SW WRT)	
S...206	55.15.0605	Taste,1*A, 5mm GN/Trans (STAT)	
S...207	55.15.0602	Taste,1*A, 5mm RT/Trans (USER)	
S...208	55.15.0604	Taste,1*A, 5mm GB/Trans (B mix)	
S...209	55.15.0705	Taste,1*A,12mm GN/Trans (SEL)	
S...210	55.15.0704	Taste,1*A,12mm GB/Trans (ON)	
S...211	55.15.0604	Taste,1*A, 5mm GB/Trans (A mix)	
S...212	0	not used Taste,1*A, 5mm RT/Trans (res)	
S...213	55.15.0622	Taste,1*A, 5mm RT/RT (IN pan)	
RZ..201	57.88.4101	100 Ohm 2% ,8"	
RZ..202	57.88.4101	100 Ohm 2% ,8"	
RZ..203	57.88.4101	100 Ohm 2% ,8"	
RZ..204	57.88.4101	100 Ohm 2% ,8"	
MANUFACTURER	GI=General Instruments, HP=Hewlett Packard		
1.990.119.00	INPUT FADER SWITCH BOARD	SCA90/07/1100	

Group Fader Unit

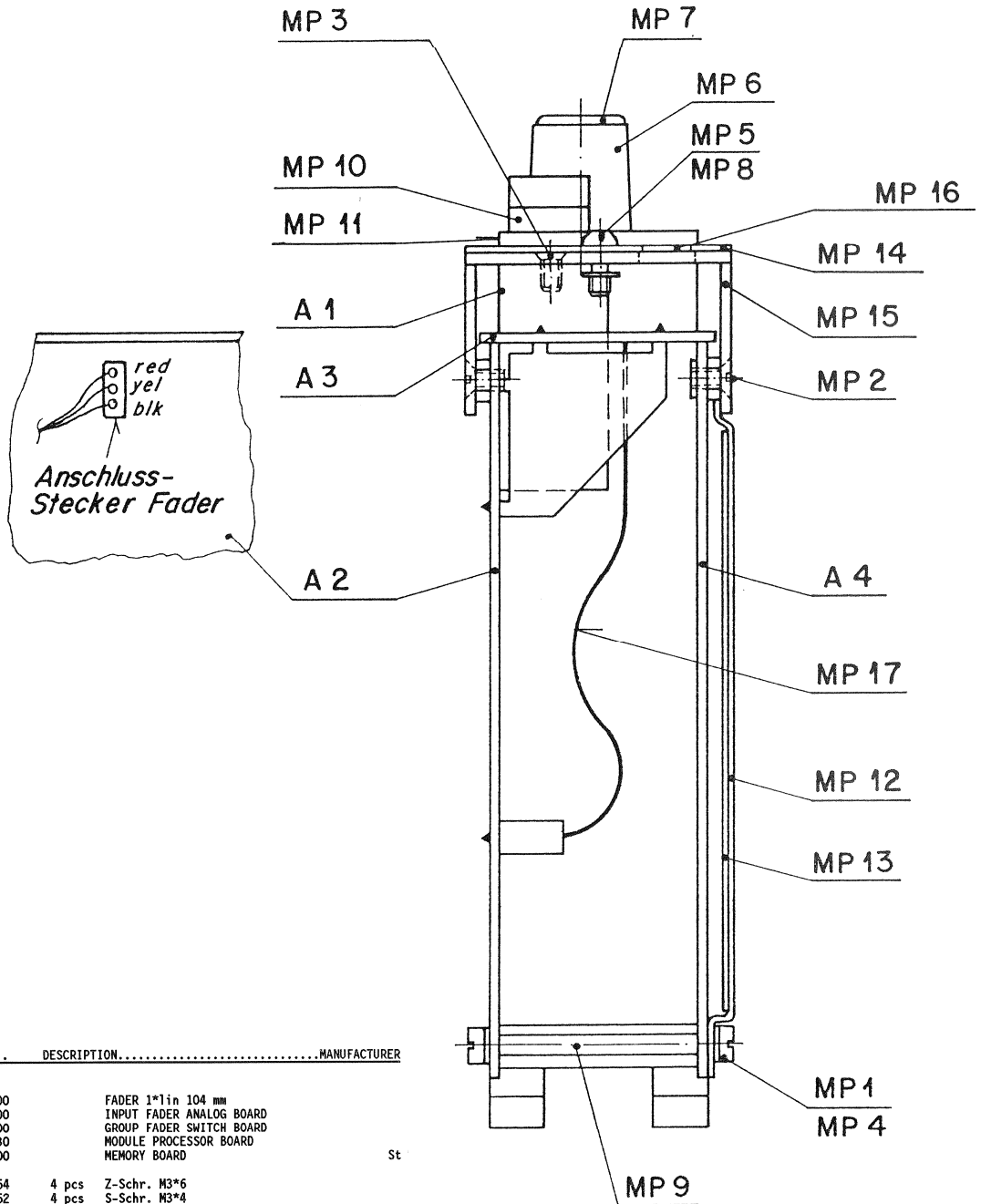
1.990.131.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

GROUP FADER UNIT

1.990.131.00



Ad ..POS... ..REF.No... DESCRIPTION.....MANUFACTURER

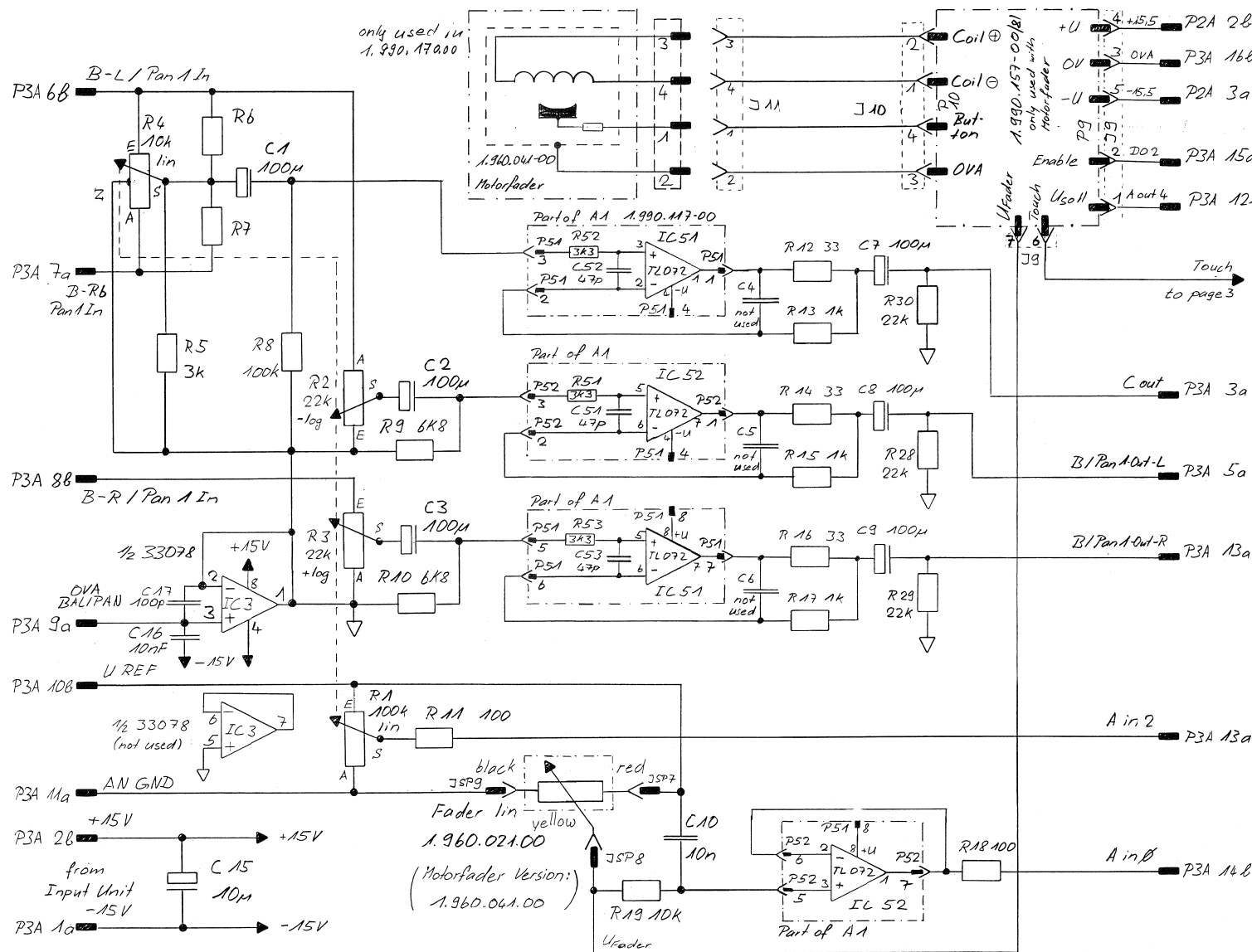
A....1	1.960.021.00		FADER 1*lin 104 mm	
A....2	1.990.118.00		INPUT FADER ANALOG BOARD	
A....3	1.990.139.00		GROUP FADER SWITCH BOARD	
A....4	1.990.190.30		MODULE PROCESSOR BOARD	
A....10	1.990.193.00		MEMORY BOARD	
MP...1	21.01.0354	4 pcs	Z-Schr. M3*6	
MP...2	21.01.2352	4 pcs	S-Schr. M3*4	
MP...3	21.99.0175	2 pcs	S-Schr. M3*6, SW-OX	
MP...4	24.16.1030	4 pcs	Rippenscheibe M3	
MP...5	24.16.3023	2 pcs	Wellensicherung	
MP...6	42.01.0233	1 pcs	Knebelknopf grau D 15/4	
MP...7	42.01.0257	1 pcs	Deckel hellgrau zu D 15	
MP...8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP...9	1.010.026.27	2 pcs	Mutterbolzen M3*30	
MP...10	1.911.000.32	1 pcs	Faderknopf rot	
MP...11	1.990.000.01	2 pcs	Schutzkragen Taste 12.5*12.5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.130.01	1 pcs	Frontschild GROUP FADER	
MP...15	1.990.110.02	1 pcs	Traeger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.990.131.04	1 pcs	Studer-Nr-Etikette 10*20	

1.990.131.00 GROUP FADER UNIT ABB92/03/0400

STUDER RESENSOREN ZÜRICH	Benennung: GROUP FADER UNIT	St Studer-Nr-Etikette 10*20	Ausgabe			
			Datum	Gez.	Gepr.	Ges. Index
Kopie für:			4.3.92	abb	abb	abb
Studer-Nr.: 1.990.131-00			Anmerkung:			

GROUP FADER UNIT

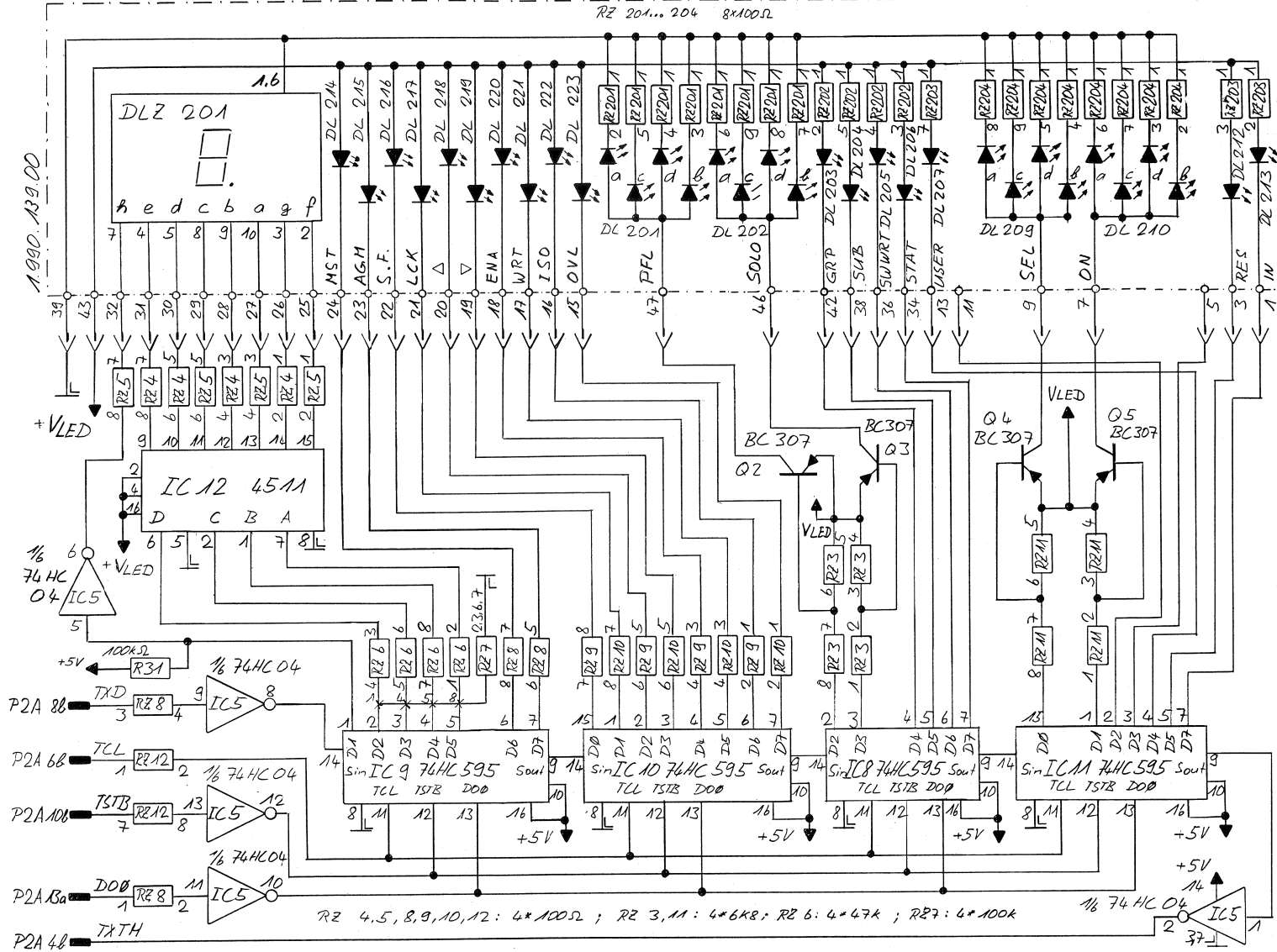
1.990.130/131.00



1.990.130.00 INCL.1.990.131.00 1.990.131 INCL.1.990.130.00/1.990.131.00 10.3.92
 28.07.89 A.Schmid 4.9.80 A.Schmid 24.04.91 A.Schmid
 INCL.1.990.117.00/1.990.118.00/1.990.139.00 PAGE 1 OF 3
 SC 1.990.130/131.00
 STUDER GROUP FADER UNIT

GROUP FADER UNIT

1.990.130/131.00



1.990.130.00

1/8 74HC 04

P2A 88 TXD

P2A 68 TCL

P2A 106 TSTB

P2A 13a DOB

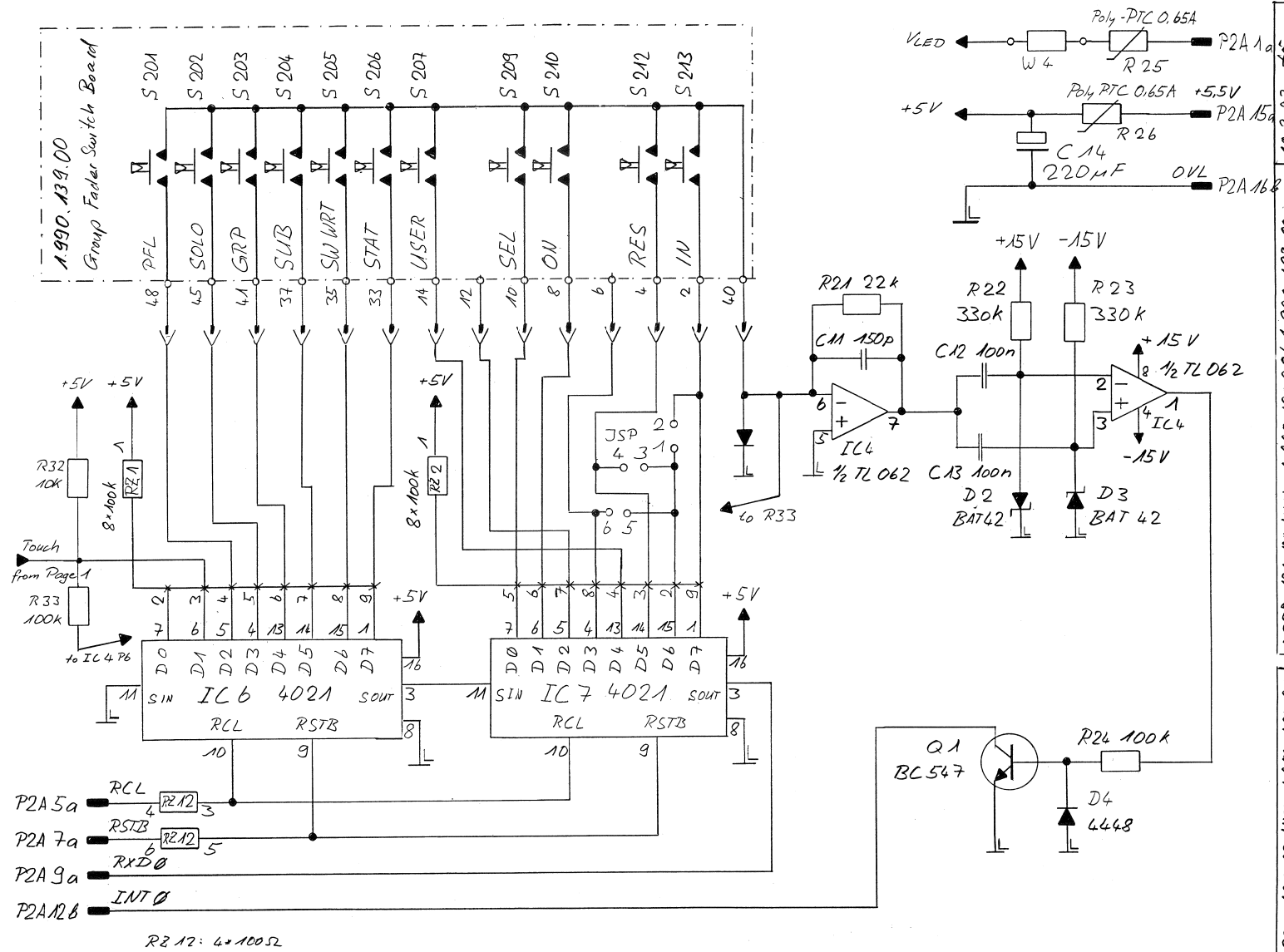
P2A 48 TXTH

RZ 4,5,8,9,10,12: 4*100Ω; RZ 3,11: 4*6k8; RZ 6: 4*47k; RZ 7: 4*100k

1.990.130.00 INCL.1.990.190.21	1.990.131.00 INCL.1.990.190.30/1.990.192.00	10.3.92 7x
© 28.7.89 A.Schmid	© 4.9.90 A.Schmid	28.4.91 A.Schmid
INCL.1.990.117.00/1.990.118.00/1.990.139.00		PAGE 2 OF 3
STUDER GROUP FADER UNIT		SC 1.990.130/131.00

GROUP FADER UNIT

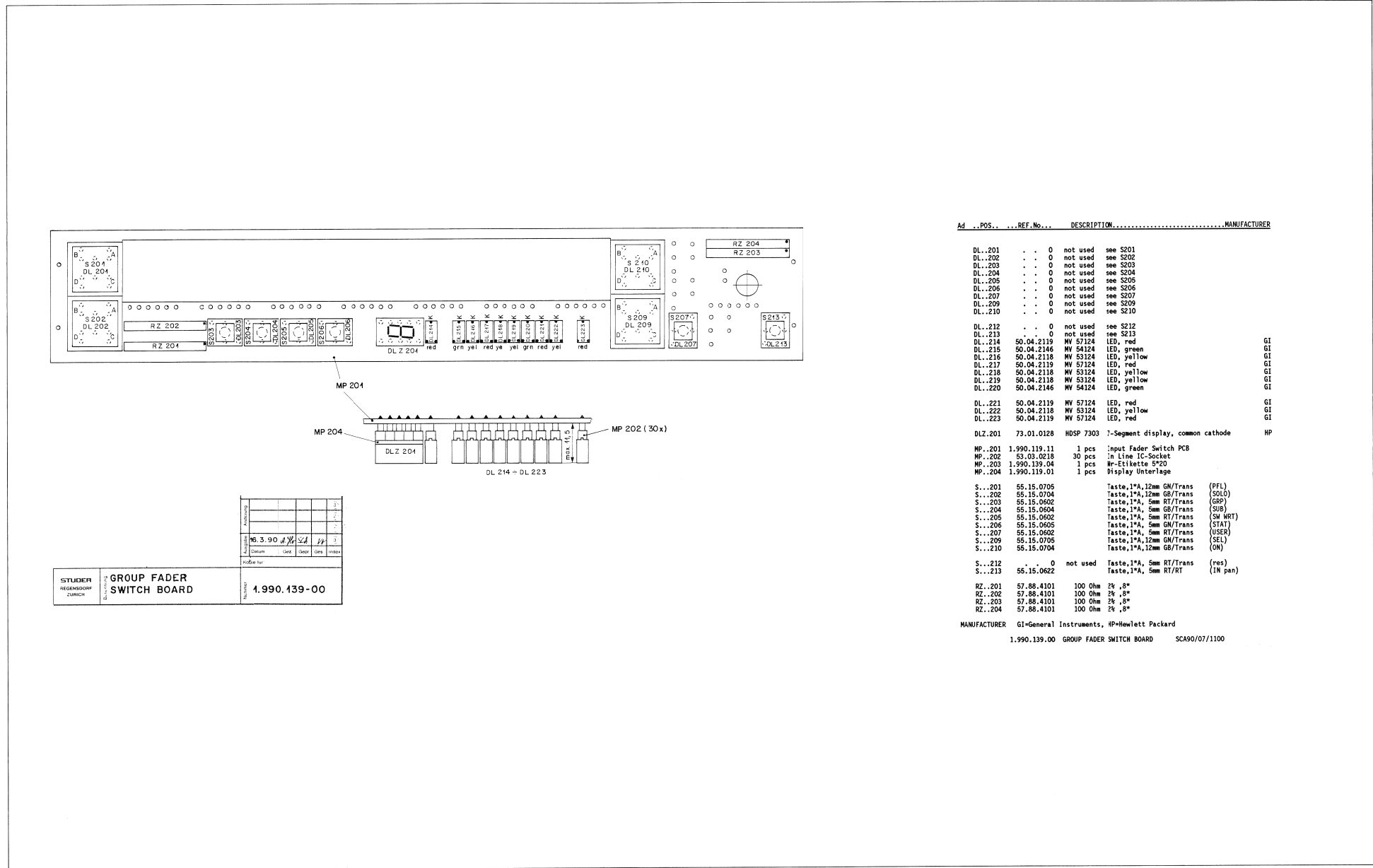
1.990.130/131.00



1.990.130.00	INCL. 1.990.130.00	1.990.121.00 INCL. 1.990.150.00/1.990.193.00	10.3.92
28.7.89 A. S. (mm. 1)	4.9.90 A. Schmidt	24.4.91 A. Schmidt	
INCL. 1.990.117.00/1.990.118.00/1.990.129.00			PAGE 3 OF 3
GROUP FADER UNIT			SC 1.990.130/131.00
STUDER			

GROUP FADER SWITCH BOARD

1.990.139.00



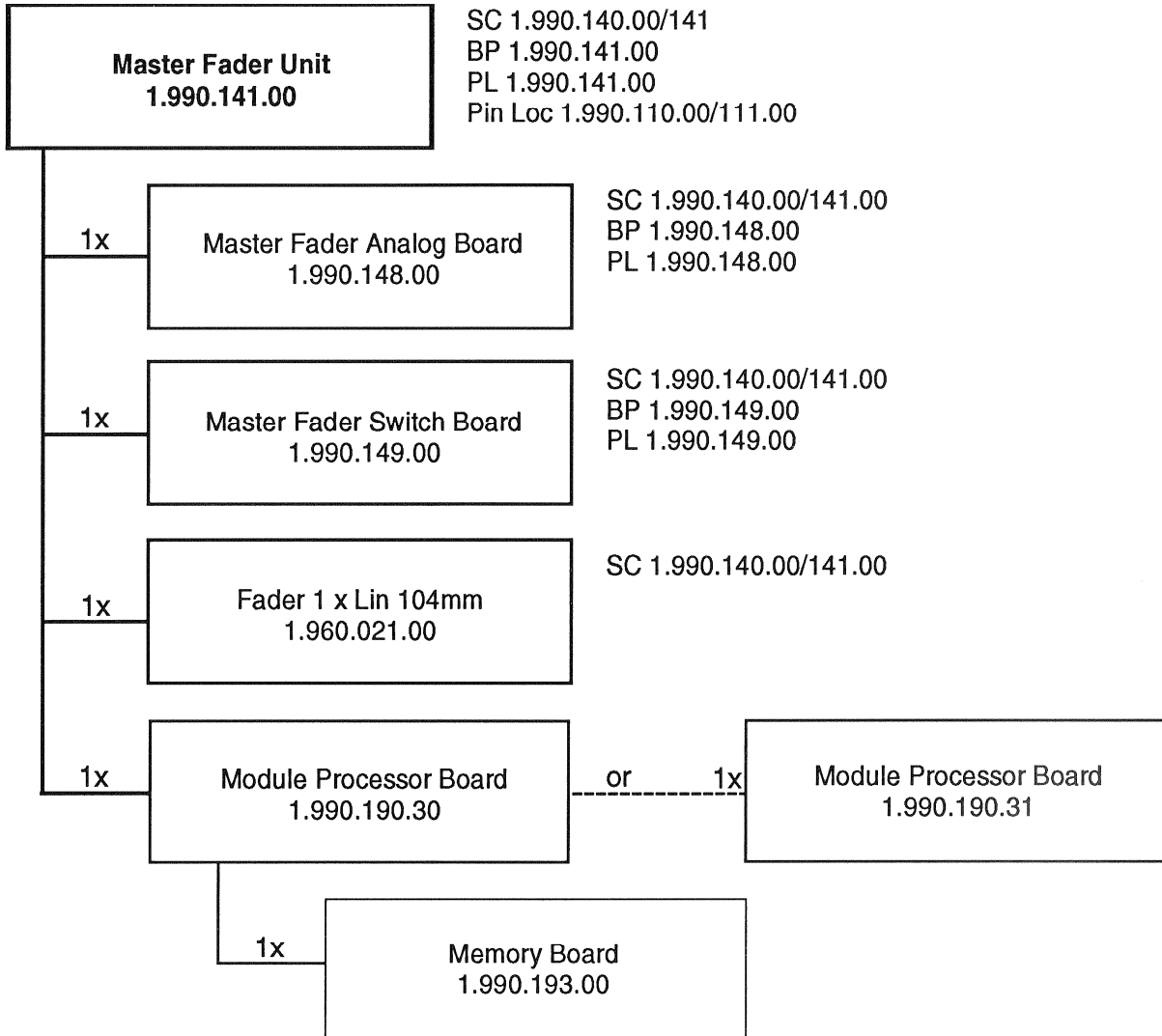
Ad ..POS... REF.No... DESCRIPTION..... MANUFACTURER

DL..201	..	0	not used	see S201	
DL..202	..	0	not used	see S202	
DL..203	..	0	not used	see S203	
DL..204	..	0	not used	see S204	
DL..205	..	0	not used	see S205	
DL..206	..	0	not used	see S206	
DL..207	..	0	not used	see S207	
DL..209	..	0	not used	see S209	
DL..210	..	0	not used	see S210	
DL..212	..	0	not used	see S212	
DL..213	..	0	not used	see S213	
DL..214	50.04.2119	MV	57124	LED, red	GI
DL..215	50.04.2146	MV	54124	LED, green	GI
DL..216	50.04.2118	MV	53124	LED, yellow	GI
DL..217	50.04.2119	MV	57124	LED, red	GI
DL..218	50.04.2118	MV	53124	LED, yellow	GI
DL..219	50.04.2118	MV	53124	LED, yellow	GI
DL..220	50.04.2146	MV	54124	LED, green	GI
DL..221	50.04.2119	MV	57124	LED, red	GI
DL..222	50.04.2118	MV	53124	LED, yellow	GI
DL..223	50.04.2119	MV	57124	LED, red	GI
DLZ.201	73.01.0128	HDSP 7303	7-Segment display, common cathode		HP
MP..201	1.990.119.11	1 pcs	Input Fader Switch PCB		
MP..202	53.03.0218	30 pcs	in line IC-socket		
MP..203	1.990.139.04	1 pcs	Wt-Etikette 5*20		
MP..204	1.990.119.01	1 pcs	Display Unterlage		
S...201	55.15.0705		Taste,1"A, 12mm GN/Trans	(PFL)	
S...202	55.15.0704		Taste,1"A, 12mm GB/Trans	(SOLO)	
S...203	55.15.0602		Taste,1"A, 5mm RT/Trans	(GRP)	
S...204	55.15.0604		Taste,1"A, 5mm GB/Trans	(SUB)	
S...205	55.15.0602		Taste,1"A, 5mm RT/Trans	(SW WRT)	
S...206	55.15.0605		Taste,1"A, 5mm GN/Trans	(STAT)	
S...207	55.15.0602		Taste,1"A, 5mm RT/Trans	(USER)	
S...209	55.15.0705		Taste,1"A, 12mm GN/Trans	(SEL)	
S...210	55.15.0704		Taste,1"A, 12mm GB/Trans	(ON)	
S...212	..	0	not used	Taste,1"A, 5mm RT/Trans	(res)
S...213	55.15.0622		Taste,1"A, 5mm RT/RT	(IN pan)	
RZ..201	57.88.4101	100 Ohm	2%, 8*		
RZ..202	57.88.4101	100 Ohm	2%, 8*		
RZ..203	57.88.4101	100 Ohm	2%, 8*		
RZ..204	57.88.4101	100 Ohm	2%, 8*		
MANUFACTURER GI=General Instruments, HP=Hewlett Packard					
1.990.139.00 GROUP FADER SWITCH BOARD SCA90/07/1100					

STUOEER REGENSDORF ZURICH	GROUP FADER SWITCH BOARD	Number 1.990.139-00
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Master Fader Unit

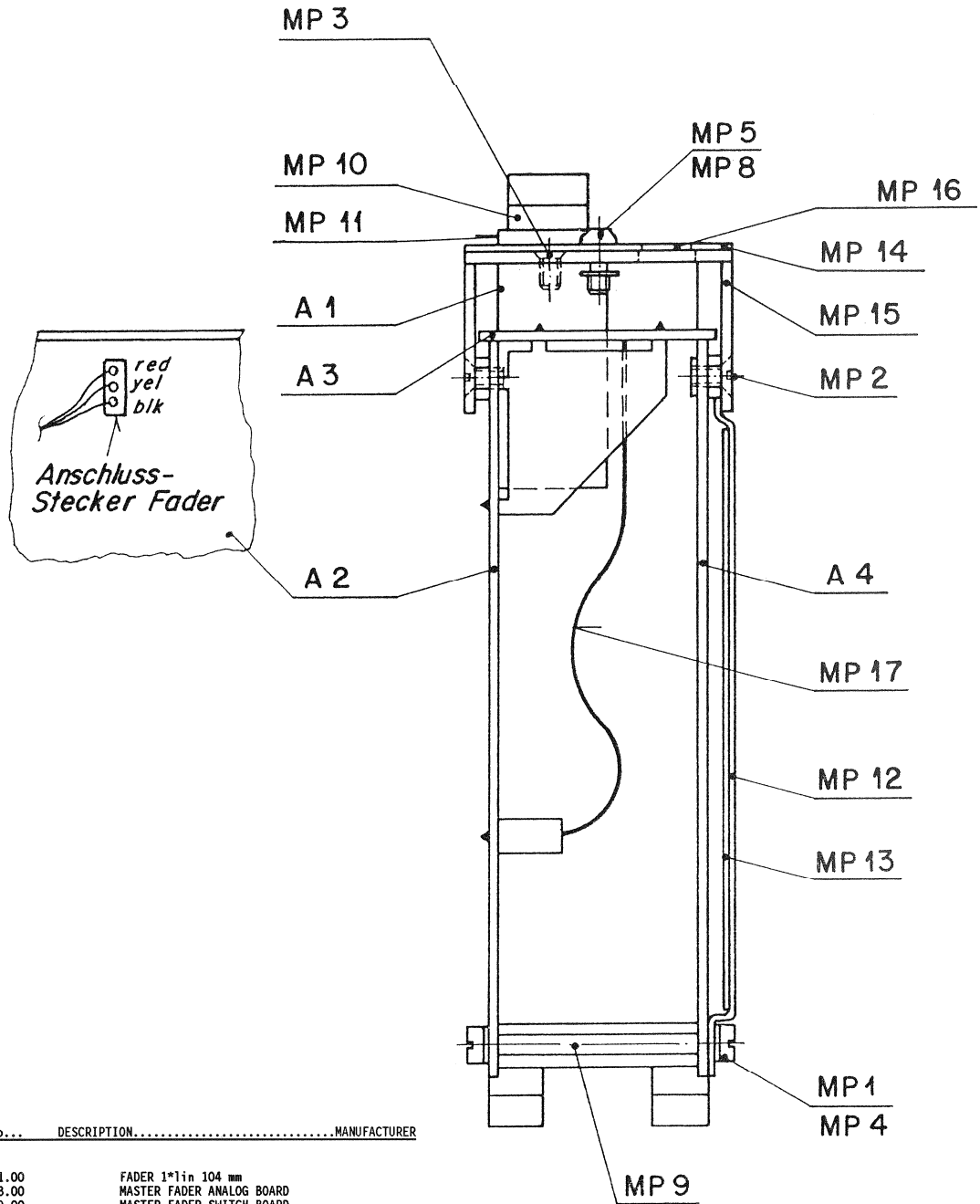
1.990.141.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

MASTER FADER UNIT

1.990.141.00



Ad . . . POS . . . REF.No . . . DESCRIPTION . . . MANUFACTURER

A 1	1.960.021.00		FADER 1*1in 104 mm	
A 2	1.990.148.00		MASTER FADER ANALOG BOARD	
A 3	1.990.149.00		MASTER FADER SWITCH BOARD	
A 4	1.990.190.30		MODULE PROCESSOR BOARD	
A 10	1.990.193.00		MEMORY MODULE	
MP 1	21.01.0354	4 pcs	Z-Schr. M3*6	
MP 2	21.01.2352	4 pcs	S-Schr. M3*4	
MP 3	21.99.0175	2 pcs	S-Schr. M3*6, SW-0X	
MP 4	24.16.1030	4 pcs	Rippenscheibe M3	
MP 5	24.16.3023	2 pcs	Wellensicherung	
MP 8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP 9	1.010.026.27	2 pcs	Mutterbolzen M3*30	
MP 10	1.911.000.32	1 pcs	Faderknopf rot	
MP 11	1.990.000.01	1 pcs	Schutzkragen Taste 12.5*12.5	
MP 12	1.990.100.06	1 pcs	Schirmblech Fader	
MP 13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP 14	1.990.140.01	1 pcs	Frontschild MASTER FADER	
MP 15	1.990.110.02	1 pcs	Traeger FADER	
MP 16	1.990.110.05	1 pcs	Fenster FADER	
MP 17	64.03.0504	8 pcs	Flachkabel konf. FSM 23,5A-6 poi	
MP 18	1.990.141.00	1 pcs	Studer-Nr-Etikette 10*20	

St

1.990.141.00 MASTER FADER UNIT ABB92/03/0400

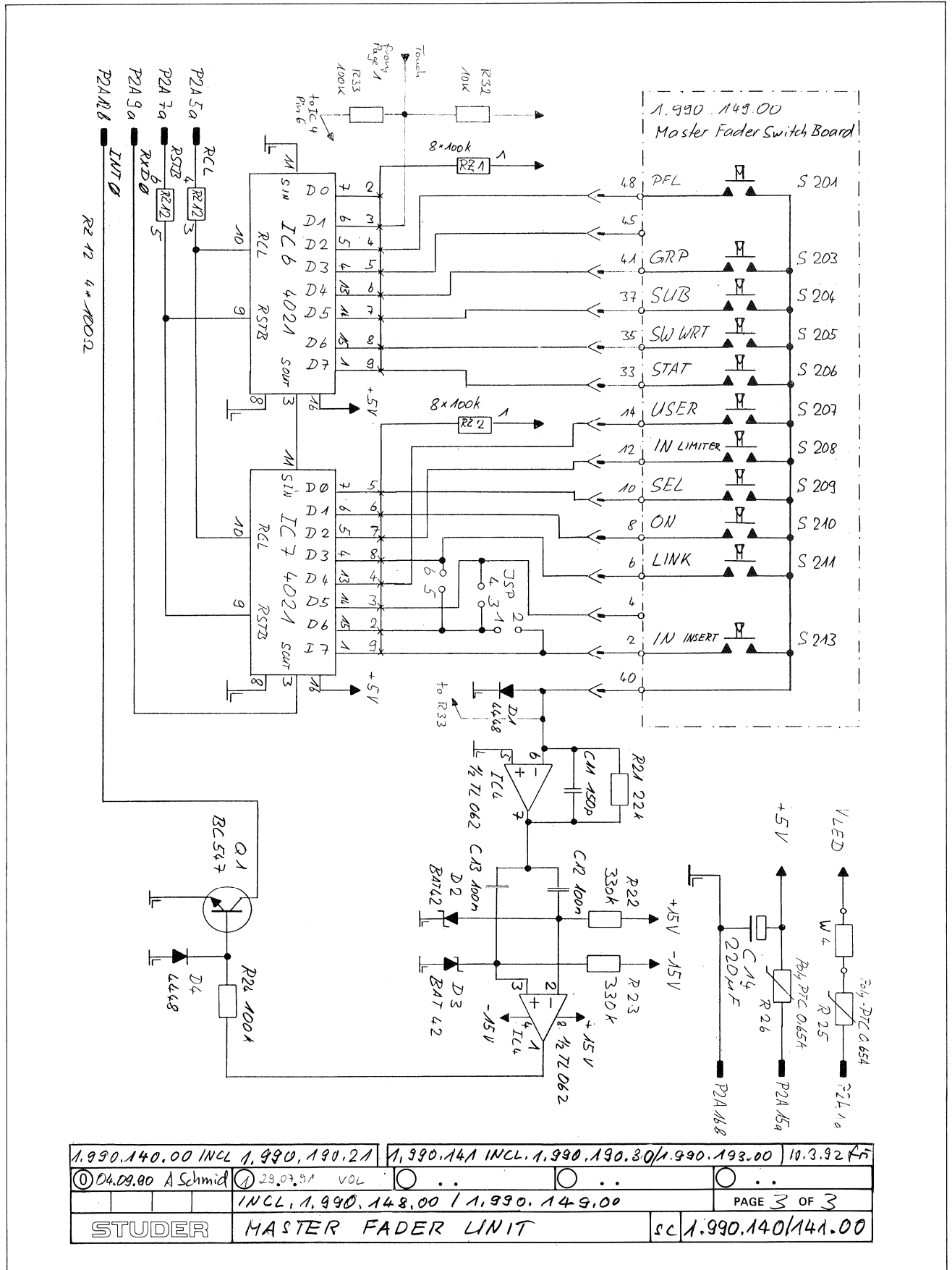
STUDER REGENSDORF ZÜRICH	Bestimmung MASTER FADER UNIT	Nummer: 1.990.141-00
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Änderung										③
Änderung										②
Änderung										①
Ausgabe	4.3.92	all	all							④
Datum	Gez.	Gepr.	Ges.	Index						

Kopie für:

MASTER FADER UNIT

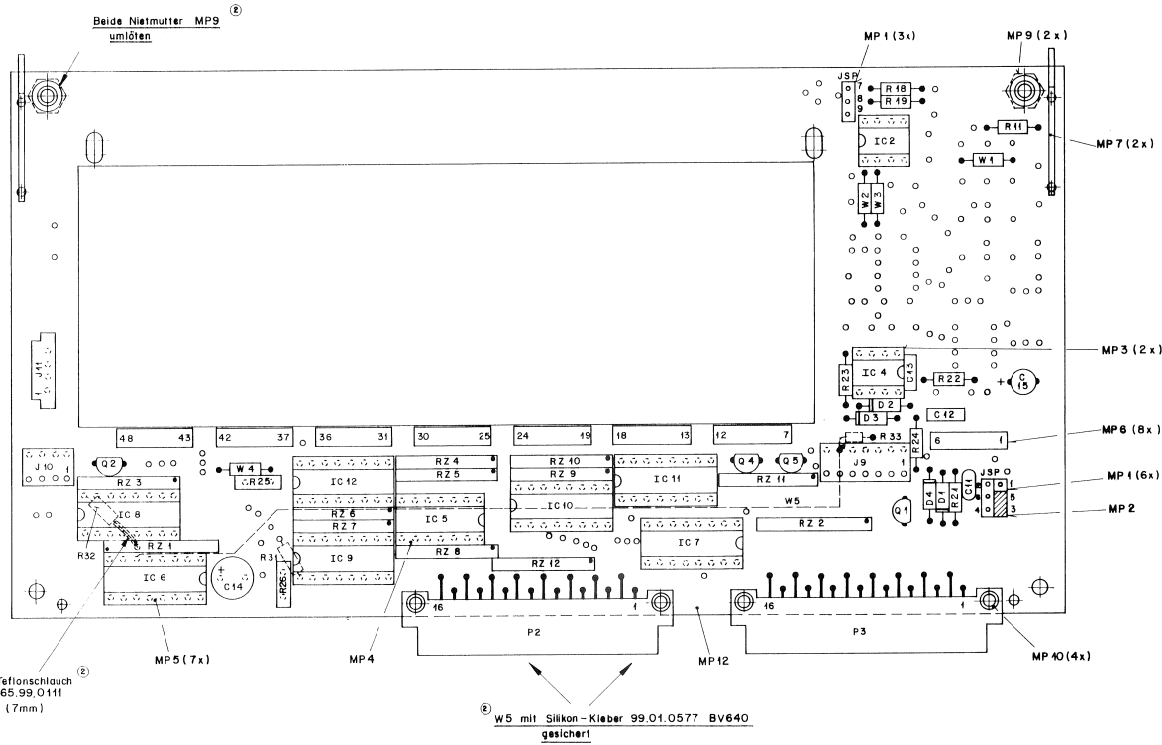
1.990.140/141.00



1.990.140.00 INCL 1.990.190.21	1.990.141 INCL 1.990.190.30/1.990.193.00	10.3.92 Fr
04.09.00 A Schmid	28.07.91 VOL	
INCL 1.990.148.00 / 1.990.149.00		PAGE 3 OF 3
STUDER	MASTER FADER UNIT	sc 1.990.140/141.00

MASTER FADER ANALOG BOARD

1.990.148.00



Tafelanschlauch
65.99.0111
(7mm)

W5 mit Silikon-Kleber 99.01.0577 BV640
gesichert

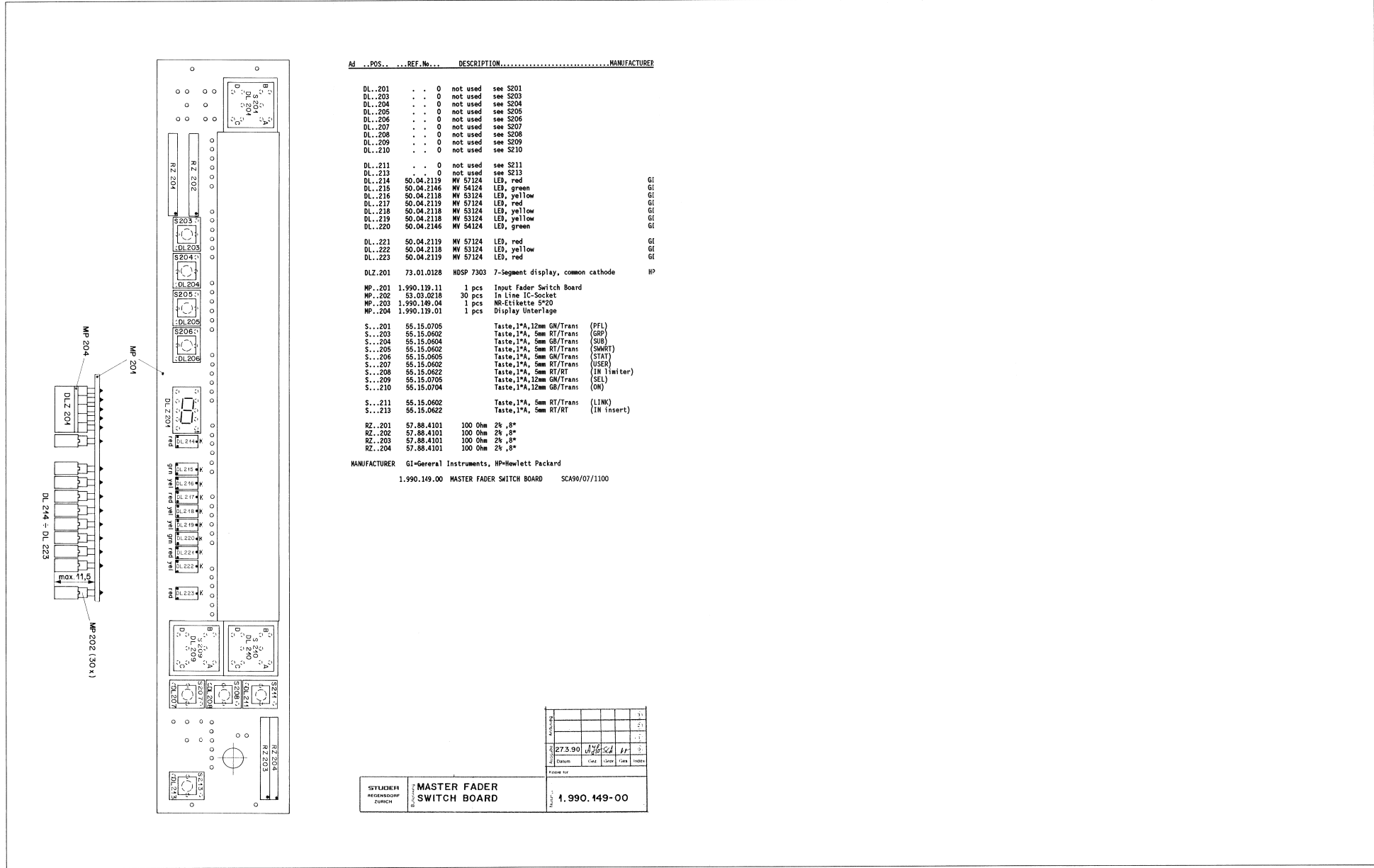
Nr. Etikette / ESE-Warnschild
aufgeklebt nach Fabrikationsmuster.

Erstellt: Nr.	Erstellt durch:	Kopie Nr.:
STUDER REGENSDORF ZÜRICH	MASTER FADER ANALOG BOARD ESE	1.990.148-00

Ad	POS	REF. No.	DESCRIPTION	MANUFACTURER
C....10	59.06.0103	10 nF	10%	PE
C....11	59.34.2151	150 pF	5%	CER
C....12	59.06.0104	100 nF	10%	PE
C....13	59.06.0104	100 nF	10%	PE
C....14	59.22.2221	220 uF		6V EL
C....15	59.22.6100	10 uF	35V	EL
B.....1	50.04.0125	1M448		any
B.....2	50.04.0127	BAT42		Tho, Ph
B.....3	50.04.0127	BAT42		Tho, Ph
B.....4	50.04.0125	1M448		any
IC.....2	50.09.0118	RC 4562 N	Dual OP	Ra, JRC
IC.....2	50.09.0107	RC 4559 N	Dual OP	NEC, Ra, TI
IC.....4	50.09.0119	TL 062 CP	J-FET Dual OP	TI, Tho
IC.....5	50.17.1004	74 HC 04	Hex-Inverter	any
IC.....6	50.07.1021	CD 4021	8-bit static shift register	any
IC.....7	50.07.1021	CD 4021	8-bit static shift register	any
IC.....8	50.17.1995	74 HC 595	8-bit shift/output register	NS, SGS, TI
IC.....9	50.17.1995	74 HC 595	8-bit shift/output register	NS, SGS, TI
IC.....10	50.17.1995	74 HC 595	8-bit shift/output register	NS, SGS, TI
IC.....11	50.17.1995	74 HC 595	8-bit shift/output register	NS, SGS, TI
IC.....12	50.07.0511	CD 4511	BCD/7-seg. latch/dec/ driver	Not, SGS, To
J.....9	54.01.0241	4 pin	CIS-connector, 4 pin	Mot. PCB
J.....10	54.01.0218	7 pin	CIS-connector, 7 pin	Mot. PCB
J.....11	54.10.3004	4-pol	Federleiste fuer flexiblen Print	
MP....1	54.01.0020	9 pcs	Jumper plug	
MP....2	54.01.0021	1 pcs	Jumper bridge	
MP....3	53.03.0166	2 pcs	IC-Socket, 8 pin	
MP....4	53.03.0167	1 pcs	IC-Socket, 14 pin	
MP....5	53.03.0168	7 pcs	IC-Socket, 16 pin	
MP....6	54.10.3506	8 pcs	Buchsenleiste 744-6	
MP....7	1.990.100.01	2 pcs	Querprintstuetze	
MP....8	1.990.148.04	1 pcs	Nr.-Etikette 5*20	
MP....9	1.010.012.22	2 pcs	Nietmutter SW 6 R0*2	
MP....10	68.99.0119	4 pcs	Rohrniete D2.5*0.15*10	
MP....11	43.01.0108	1 pcs	ESE-Schild	
MP....12	1.990.118.11	1 pcs	FADER ANALOG PCB	
P.....2	54.11.2007	1*16 pin	Eurocard connector, 16 pin	
P.....3	54.11.2007	1*16 pin	Eurocard connector, 16 pin	
P.....4	54.01.0241	4 pin	CIS-connector, 4 pin	Mot. PCB
P.....5	54.01.0218	7 pin	CIS-connector, 7 pin	Mot. PCB
Q.....1	50.03.0436	BC 547 B	key detection	Not
Q.....2	50.03.0515	BC 307 B	pfl-LED	ITT, Mot
Q.....4	50.03.0515	BC 307 B	sel-LED	ITT, Mot
Q.....5	50.03.0515	BC 307 B	on/mute-LED	ITT, Mot
R.....11	57.11.3101	100 Ohm	1%	
R.....11	.	.	not used	
R.....18	57.11.3101	100 Ohm	1%	
R.....19	57.11.3103	10 kOhm	1%	
R.....21	57.11.3223	22 kOhm	1%	
R.....22	57.11.3334	330 kOhm	1%	
R.....23	57.11.3334	330 kOhm	1%	
R.....24	57.11.3104	100 kOhm	1%	
R.....25	57.92.7014	650 mA	Poly-PTC, I-hold=500mA, R=0.46 Ohm	MCI
R.....26	57.92.7014	650 mA	Poly-PTC, I-hold=500mA, R=0.46 Ohm	MCI
R.....31	57.11.3104	100 kOhm	1%	
R.....32	57.11.3103	10 kOhm	1%	
R.....33	57.11.3104	100 kOhm	1%	
RZ....1	57.88.4104	100 kOhm	2%, 8°	
RZ....2	57.88.4104	100 kOhm	2%, 8°	
RZ....3	57.88.2682	6.8 kOhm	2%, 4°	
RZ....4	57.88.2101	100 Ohm	2%, 4°	
RZ....5	57.88.2101	100 Ohm	2%, 4°	
RZ....6	57.88.2473	47 kOhm	2%, 4°	
RZ....7	57.88.2104	100 kOhm	2%, 4°	
RZ....8	57.88.2101	100 Ohm	2%, 4°	
RZ....9	57.88.2101	100 Ohm	2%, 4°	
RZ....10	57.88.2101	100 Ohm	2%, 4°	
RZ....11	57.88.2682	6.8 kOhm	2%, 4°	
RZ....12	57.88.2101	100 Ohm	2%, 4°	
W.....1	57.11.3000	0 Ohm	wire bridge	
W.....2	57.11.3000	0 Ohm	wire bridge	
W.....3	57.11.3000	0 Ohm	wire bridge	
W.....4	57.11.3000	0 Ohm	wire bridge	
W.....5	1.010.122.64		wire-wrap Draht	
03	W.....5		EL = electrolytic, PE = polyester	
MANUFACTURER ITI=Intermetall, JRC=Japan Radio Corporation, NEC=National Semiconductor, Ph=Philips, Ra=Raytheon, SGS=SGS/Ates, St=Studer, TI=Texas Instruments, Tho=Thomson, To=Toshiba				
1.990.148.00	MASTER FADER ANALOG BOARD	SCA89/05/1200		
1.990.148.00	MASTER FADER ANALOG BOARD	SCA90/06/1801		
1.990.148.00	MASTER FADER ANALOG BOARD	SCA90/09/0402		
1.990.148.00	MASTER FADER ANALOG BOARD	VOL91/07/2903		

MASTER FADER SWITCH BOARD

1.990.149.00



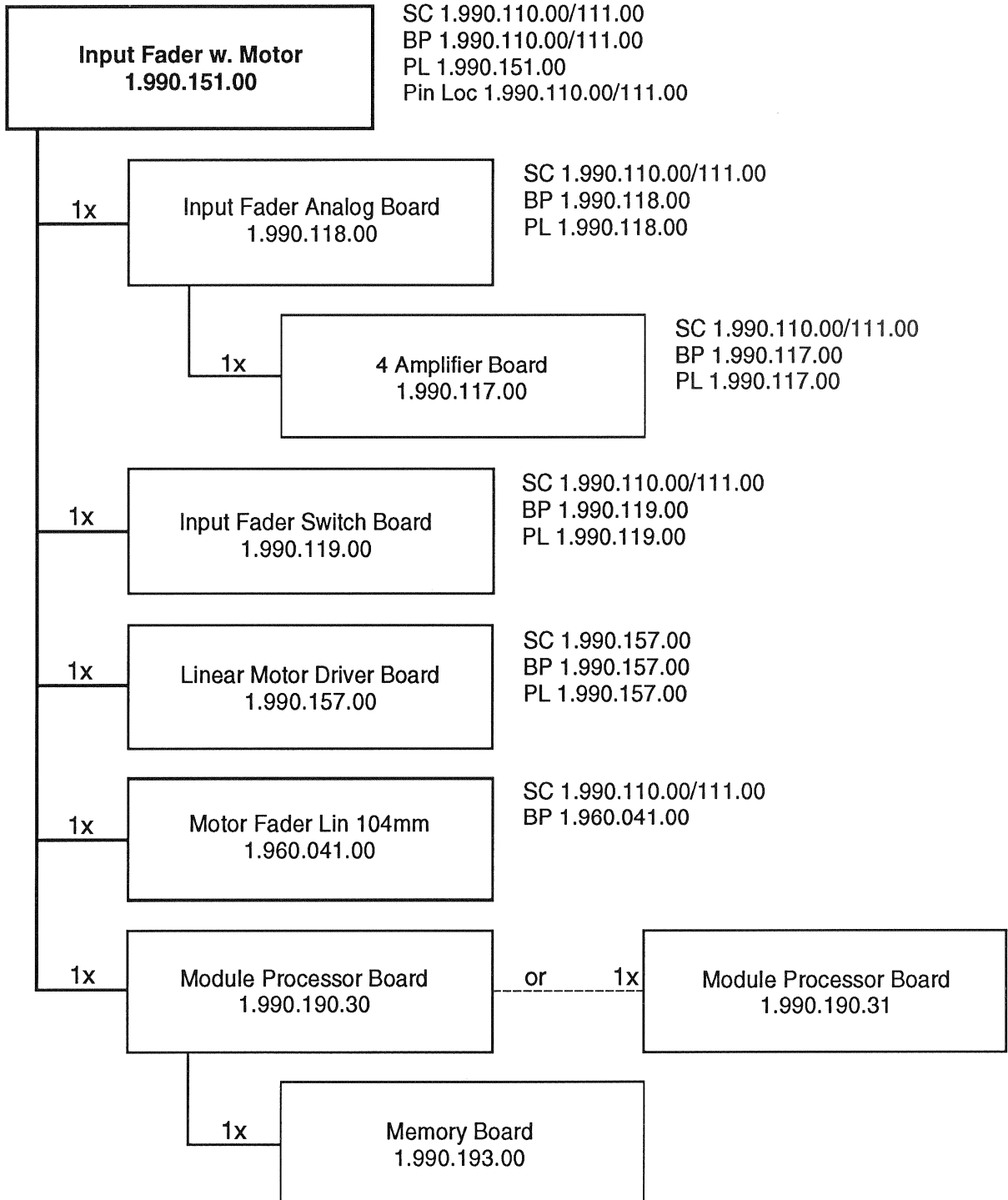
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
DL..201	.	0	not used	see S201
DL..203	.	0	not used	see S203
DL..204	.	0	not used	see S204
DL..205	.	0	not used	see S205
DL..206	.	0	not used	see S206
DL..207	.	0	not used	see S207
DL..208	.	0	not used	see S208
DL..209	.	0	not used	see S209
DL..210	.	0	not used	see S210
DL..211	.	0	not used	see S211
DL..213	.	0	not used	see S213
DL..214	50.04.2119	MV 57124	LED, red	GI
DL..215	50.04.2146	MV 54124	LED, green	GI
DL..216	50.04.2118	MV 53124	LED, yellow	GI
DL..217	50.04.2119	MV 57124	LED, red	GI
DL..218	50.04.2118	MV 53124	LED, yellow	GI
DL..219	50.04.2118	MV 53124	LED, yellow	GI
DL..220	50.04.2146	MV 54124	LED, green	GI
DL..221	50.04.2119	MV 57124	LED, red	GI
DL..222	50.04.2118	MV 53124	LED, yellow	GI
DL..223	50.04.2119	MV 57124	LED, red	GI
DLZ.201	73.01.0128	HDSP 7303	7-segment display, common cathode	HP
MP..201	1.990.119.11	1 pcs	Input Fader Switch Board	
MP..202	53.03.0218	30 pcs	In Line IC-Socket	
MP..203	1.990.149.04	1 pcs	NR-Etikette 5*20	
MP..204	1.990.119.01	1 pcs	Display Unterlage	
S...201	55.15.0705		Taste,1*A,12mm GN/Trans (PFL)	
S...203	55.15.0602		Taste,1*A, 5mm RT/Trans (GRP)	
S...204	55.15.0604		Taste,1*A, 5mm GB/Trans (SUS)	
S...205	55.15.0602		Taste,1*A, 5mm RT/Trans (SMWRT)	
S...206	55.15.0605		Taste,1*A, 5mm GN/Trans (STAT)	
S...207	55.15.0602		Taste,1*A, 5mm RT/Trans (USEP)	
S...208	55.15.0622		Taste,1*A, 5mm RT/RT (IN limiter)	
S...209	55.15.0705		Taste,1*A,12mm GN/Trans (SEL)	
S...210	55.15.0704		Taste,1*A,12mm GB/Trans (ON)	
S...211	55.15.0602		Taste,1*A, 5mm RT/Trans (LINK)	
S...213	55.15.0622		Taste,1*A, 5mm RT/RT (IN insert)	
RZ..201	57.88.4101	100 Ohm	2k,8"	
RZ..202	57.88.4101	100 Ohm	2k,8"	
RZ..203	57.88.4101	100 Ohm	2k,8"	
RZ..204	57.88.4101	100 Ohm	2k,8"	

MANUFACTURER GI=General Instruments, HP=Hewlett Packard
 1.990.149.00 MASTER FADER SWITCH BOARD SCA99/07/1100

STUDER REGENERATION ZÜRICH	MASTER FADER SWITCH BOARD	1.990.149-00
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Input Fader Unit w. Motor

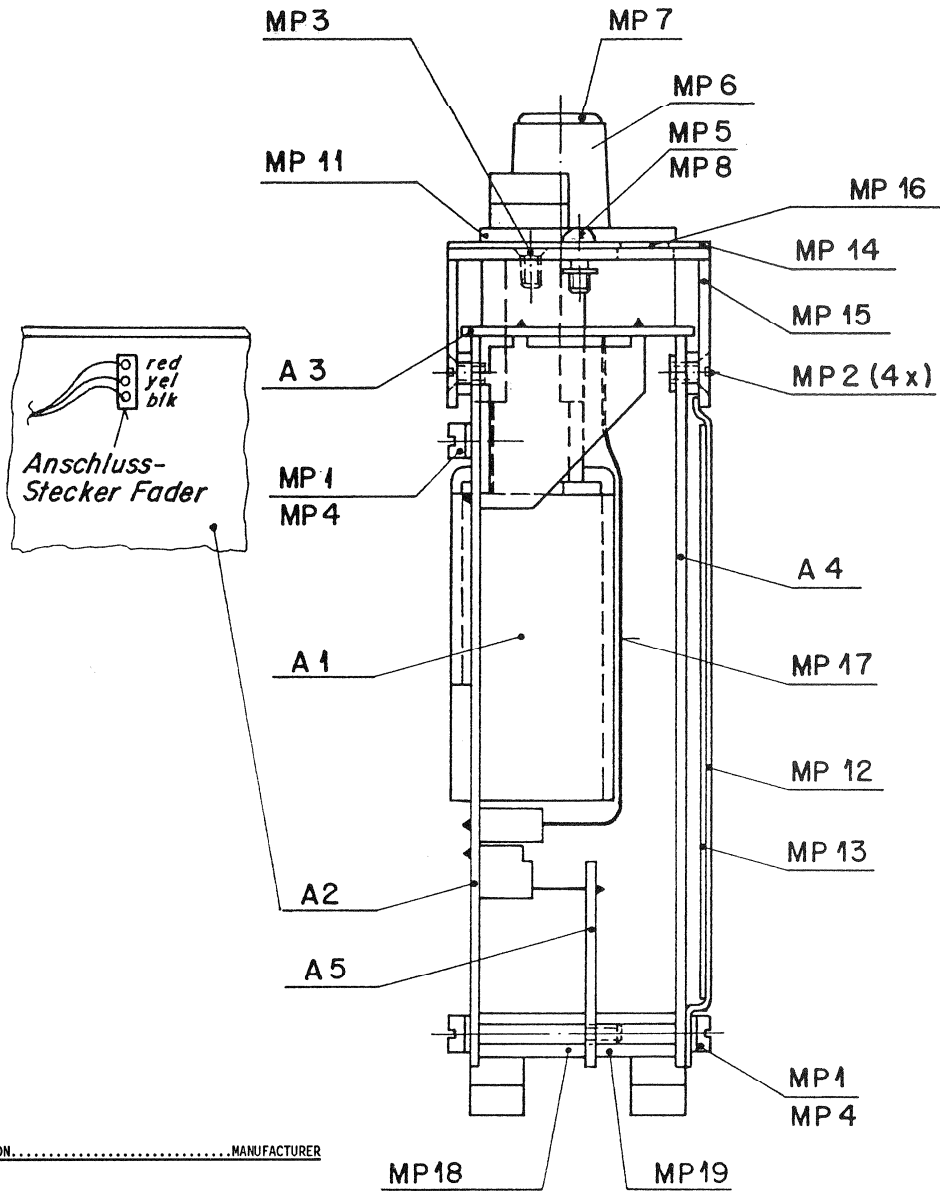
1.990.151.00



SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

INPUT FADER UNIT W. MOTOR

1.990.151.00



Ad . . . POS . . . REF. No . . . DESCRIPTION . . . MANUFACTURER

A 1	1.960.042.00	MOTOR FADER 1*1in 104 mm
01 A 1	1.960.042.81	MOTOR FADER 1*1in 104 mm
A 2	1.990.118.00	INPUT FADER ANALOG BOARD
A 3	1.990.119.00	INPUT FADER SWITCH BOARD
A 4	1.990.190.31	MODULE PROCESSOR BOARD
A 5	1.990.157.81	LINEAR MOTOR DRIVER BOARD
A 10	1.990.193.00	MEMORY BOARD
MP 1	21.01.0354	6 pcs Z-Schr. M3*6
MP 2	21.01.2352	4 pcs S-Schr. M3*4
MP 3	21.99.0175	2 pcs S-Schr. M3*6, SW-0X
MP 4	24.16.1030	6 pcs Rippenscheibe M3
MP 5	24.16.3023	2 pcs Wellensicherung
MP 6	42.01.0233	1 pcs Knebelknopf grau D 15/4
MP 7	42.01.0257	1 pcs Deckel hellgrau zu D 15
MP 8	1.010.022.21	2 pcs Linsenrundschr. IS M3*8
MP 11	1.990.000.01	2 pcs Schutzkragen Taste 12.5*12.5
MP 12	1.990.100.06	1 pcs Schirmblech Fader
MP 13	1.990.100.07	1 pcs Isolierung 208*87 selbstklebend
MP 14	1.990.110.01	1 pcs Frontschild INPUT FADER
MP 15	1.990.110.02	1 pcs Traeger FADER
MP 16	1.990.110.05	1 pcs Fenster FADER
MP 17	64.03.0504	8 pcs Flachkabel konf. FSN 23,5A-6 pol
MP 18	1.010.049.27	2 pcs Mutterbolzen M3x17
MP 19	1.010.152.27	2 pcs Distanzbolzen M3x11,5
MP 20	1.990.151.04	1 pcs Studer-Nr-Etikette 10*20

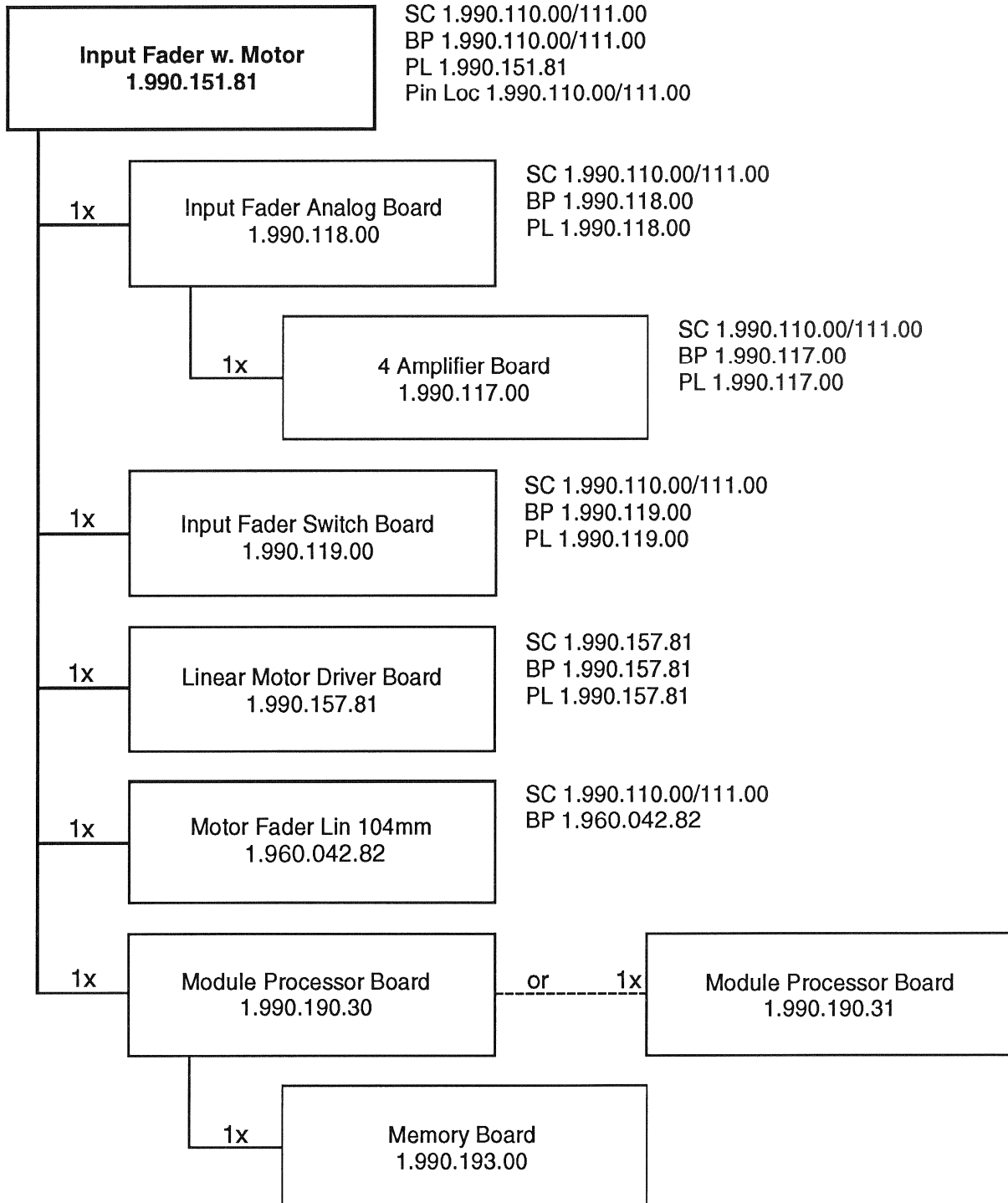
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01 MOTOR FADER 1.960.042.81		
1.990.151.81	INPUT FADER UNIT W. MOTOR	FRI92/12/1600
1.990.151.81	INPUT FADER UNIT W. MOTOR	FRI94/01/0401

Änderung									
Angabe	4.3.92	1/10	1/1	1/1	1/1	1/1	1/1	1/1	(3)
Datum									(*)
									(1)
									(0)
Kreuz für									
STUDER	INPUT FADER UNIT								
REGENSDORF	W. MOTOR								
ZÜRICH				1.990.151-00					

Input Fader Unit w. Motor

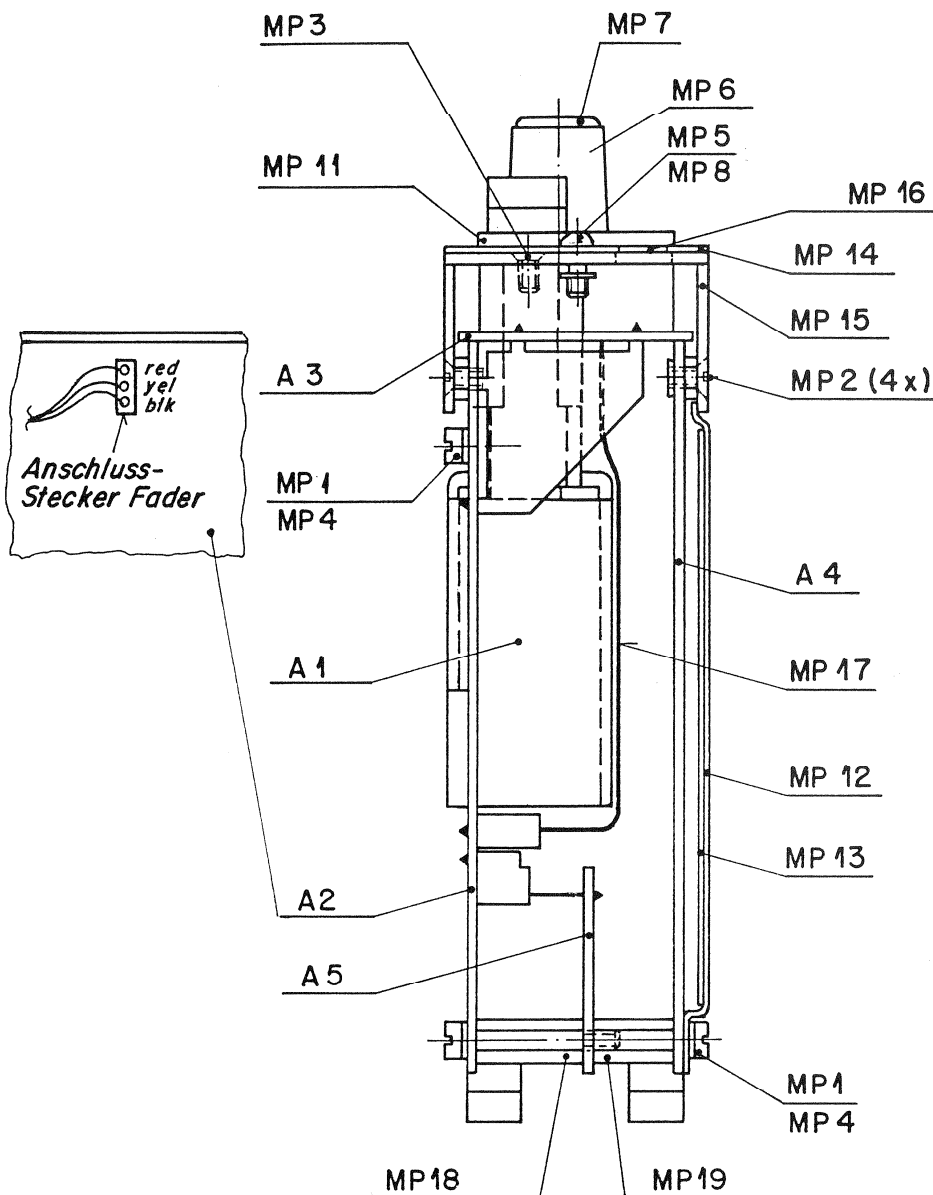
1.990.151.81



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

INPUT FADER UNIT W. MOTOR

1.990.151.81



Ad ..POS... REF.No... DESCRIPTION.....MANUFACTURER

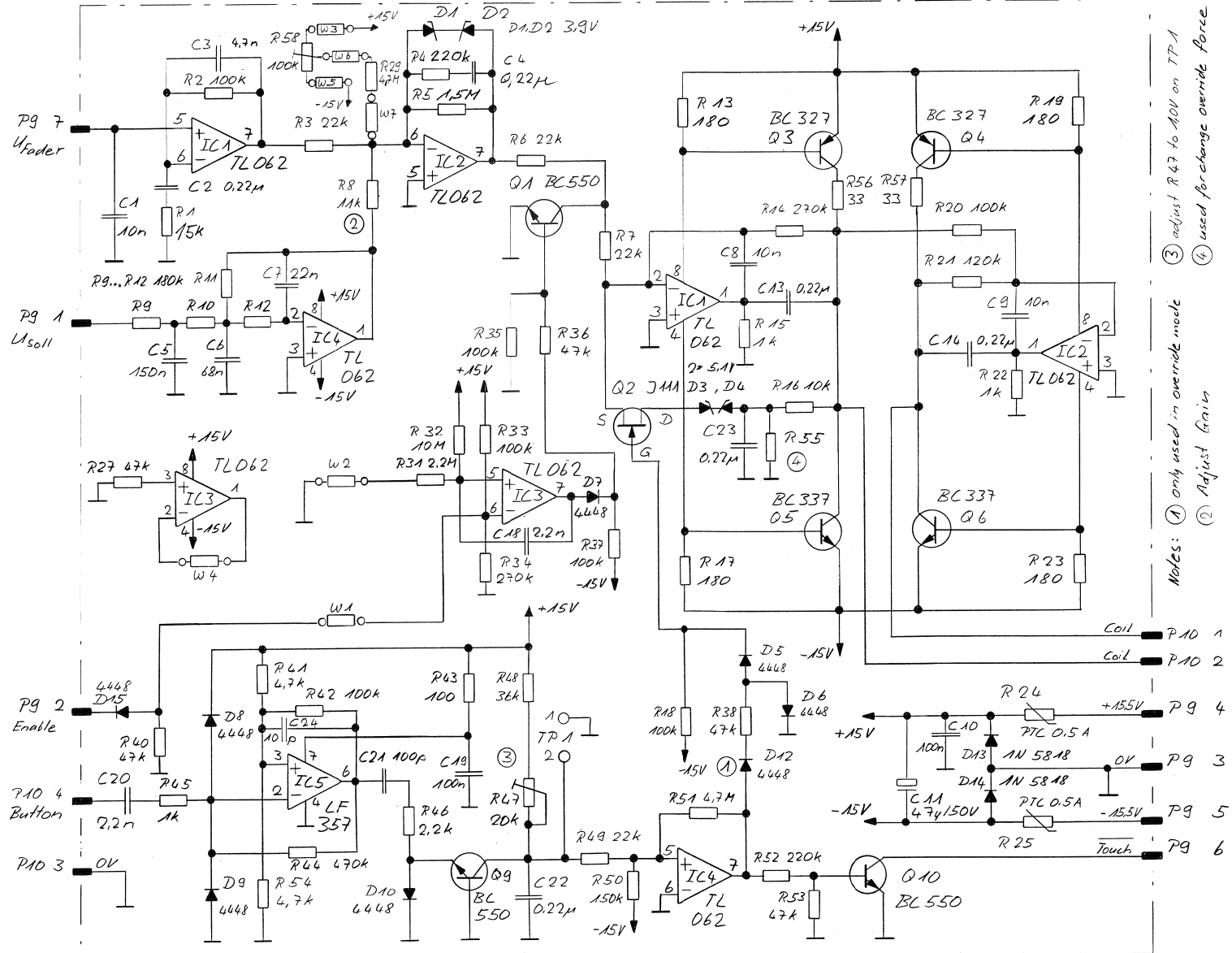
A.....1	1.960.042.00		MOTOR FADER 1*1in 104 mm	
A.....2	1.990.118.00		INPUT FADER ANALOG BOARD	
A.....3	1.990.119.00		INPUT FADER SWITCH BOARD	
A.....4	1.990.190.31		MODULE PROCESSOR BOARD	
A.....5	1.990.157.81		LINEAR MOTOR DRIVER BOARD	
A.....10	1.990.193.00		MEMORY BOARD	St
MP...1	21.01.0354	6 pcs	Z-Schr. M3*6	
MP...2	21.01.2352	4 pcs	S-Schr. M3*4	
MP...3	21.99.0175	2 pcs	S-Schr. M3*6, SW-0X	
MP...4	24.16.1030	6 pcs	Rippenscheibe M3	
MP...5	24.16.3023	2 pcs	Wellensicherung	
MP...6	42.01.0233	1 pcs	Knebelknopf grau D 15/4	
MP...7	42.01.0257	1 pcs	Deckel hellgrau zu D 15	
MP...8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP...11	1.990.000.01	2 pcs	Schutzkragen Taste 12.5*12.5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.110.01	1 pcs	Frontschild INPUT FADER	
MP...15	1.990.110.02	1 pcs	Traeger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.010.049.27	2 pcs	Mutterbolzen M3x17	
MP...19	1.010.152.27	2 pcs	Distanzbolzen M3x11.5	
MP...20	1.990.151.04	1 pcs	Studer-Nr-Etikette 10*20	

1.990.151.81 INPUT FADER UNIT W. MOTOR FR192/12/1600

STUDER REGENSDORF ZÜRICH	INPUT FADER UNIT W. MOTOR	Ausgabe				
		16.12.92	SP	LS	W	
Kopie Nr.:		Datum	Gez.	Gepr.	Ges.	Index
STUDER-NR.		1.990.151-81				

LINEAR MOTOR DRIVER BOARD

1.990.157.00

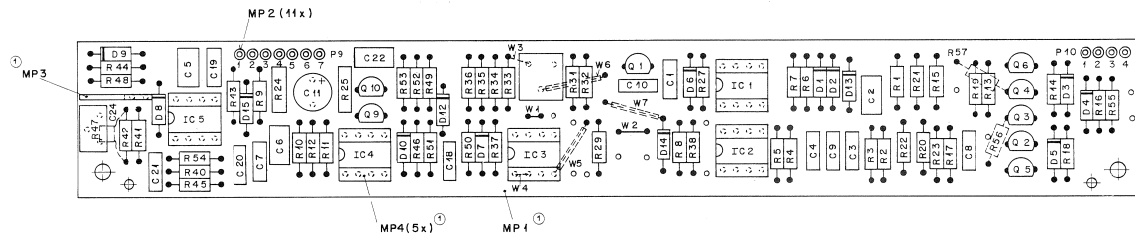


Notes: ① only used in override mode
 ② Adjust Gain
 ③ adjust R 47 to 10V on TP-1
 ④ used for change override force

① 070590 A Schindl	② 120691 A Schindl	③ 10.9.92 fr	④
PAGE 1 OF 1			
5C 1.990.157-00			
STUDER LINEAR MOTOR DRIVER BOARD			

LINEAR MOTOR DRIVER BOARD

1.990.157.00



② Leiterbahnen auftrennen und Drahtbrücken auf _Ötseite nach Fabrikationsmuster.

③ C 24, R 56, R 57, W 3, W 4, W 5, W 6, W 7 auf Lötseite

Änderung	12.6.91	1/2	1/2	ab	③
Änderung	4.5.90	1/2	1/2	1/2	②
Änderung	17.1.90	1/2	1/2	1/2	①
Datum	Gez.	Uster	class.	Index	

STUDER RESENSDORF ZÜRICH	Bezeichnung LINEAR MOTOR DRIVER BOARD	Nummer 1.990.157-00
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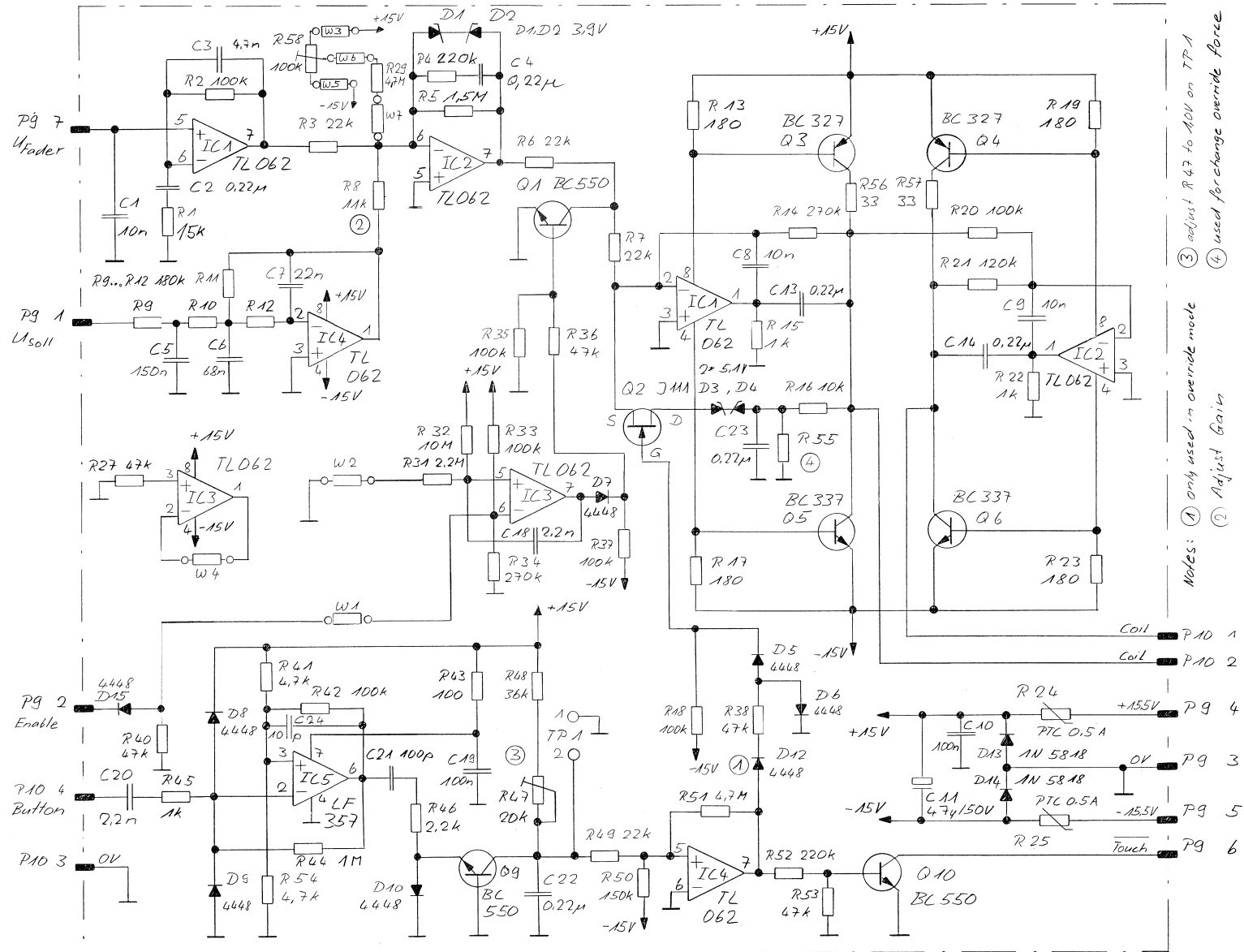
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C.....1	59.06.0103	10 nF	PE	
C.....2	59.06.0224	220 nF	PE	
C.....3	59.06.0222	2.2 nF	PE	
C.....4	59.06.0472	4.7 nF	PE	
02 C.....5	59.06.0475	47 nF	PE	
C.....6	59.06.0224	220 nF	PE	
C.....7	59.06.0474	470 nF	PE	
C.....8	59.06.5154	150 nF	PE	
C.....9	59.06.0224	220 nF	PE	
C.....10	59.06.0683	68 nF	PE	
C.....11	59.06.0683	68 nF	PE	
02 C.....12	59.06.0223	22 nF	PE	
C.....13	59.06.0103	10 nF	PE	
C.....14	59.06.0103	10 nF	PE	
C.....15	59.06.0104	100 nF	PE	
C.....16	59.22.6470	47 nF	EL	
C.....17	59.06.0104	100 nF	PE	
01 C.....18	0	not exist	PE	
C.....19	59.06.0224	220 nF	PE	
C.....20	59.06.0224	220 nF	PE	
C.....21	59.32.1101	100 pF	CE	
C.....22	59.06.0224	220 nF	PE	
C.....23	0	not used	PE	
01 C.....24	59.06.0224	220 nF	PE	
02 C.....25	59.34.1100	10 pF	CE	on solder side of PCB

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
D.....1	50.04.1101	Z 3.9V	500mW	
D.....2	50.04.1101	Z 3.9V	500mW	
D.....3	50.04.1112	Z 5.1V	500mW	
D.....4	50.04.1112	Z 5.1V	500mW	
D.....5	50.04.0125	IN4448		
D.....6	50.04.0125	IN4448		
D.....7	50.04.0125	IN4448		
D.....8	50.04.0125	IN4448		
D.....9	50.04.0125	IN4448		
D.....10	50.04.0125	IN4448		
D.....11	50.04.0125	IN4448		
02 D.....12	0	not used		
D.....13	50.04.0512	IN5818		
D.....14	50.04.0512	IN5818		
02 D.....15	50.04.0125	IN4448		
IC.....1	50.09.0119	TL 062 CP	dual J-FET	
IC.....2	50.09.0119	TL 062 CP	dual J-FET	
IC.....3	50.09.0119	TL 062 CP	dual J-FET	
IC.....4	50.09.0119	TL 062 CP	dual J-FET	
IC.....5	50.09.0102	LF 357 N	single Bi-FET	
Q.....1	50.03.0407	BC 550	nnp uni	
Q.....2	50.03.0216	J 111	n-FET	
Q.....3	50.03.0351	BC 327-25	pnp 300 mA	
Q.....4	50.03.0351	BC 327-25	pnp 300 mA	
Q.....5	50.03.0340	BC 337-25	pnp 300 mA	
Q.....6	50.03.0340	BC 337-25	pnp 300 mA	
Q.....7	50.03.0407	BC 550	nnp uni	
02 Q.....8	50.03.0407	BC 550	nnp uni	
02 Q.....9	50.03.0407	BC 550	nnp uni	
Q.....10	50.03.0407	BC 550	nnp uni	
Q.....11	50.03.0407	BC 550	nnp uni	
02 Q.....12	0	not exist		

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R.....1	57.11.3472	4.7 kOhm	1%	
01 R.....1	57.11.3471	470 Ohm	1%	
02 R.....1	57.11.3472	4.7 kOhm	1%	
03 R.....1	57.11.3153	15 kOhm	1%	
R.....2	57.11.3104	100 kOhm	1%	
R.....3	57.11.3223	22 kOhm	1%	
R.....4	57.11.3474	470 kOhm	1%	
R.....5	57.11.3224	220 kOhm	1%	
R.....6	57.11.6475	4.7 MOhm	5%	
03 R.....5	57.11.5155	1.5 MOhm	5%	
R.....6	57.11.3223	22 kOhm	1%	
R.....7	57.11.3223	22 kOhm	1%	
R.....8	57.11.3113	11 kOhm	1%	
R.....9	57.11.3184	180 kOhm	1%	
R.....10	57.11.3104	100 kOhm	1%	
R.....11	57.11.3184	180 kOhm	1%	
R.....12	57.11.3184	180 kOhm	1%	
R.....13	57.11.3181	180 Ohm	1%	
R.....14	57.11.3274	270 kOhm	1%	
R.....15	57.11.3102	1.0 kOhm	1%	
R.....16	57.11.3103	10 kOhm	1%	
R.....17	57.11.3181	180 Ohm	1%	
R.....18	57.11.3104	100 kOhm	1%	
R.....19	57.11.3181	180 Ohm	1%	
R.....20	57.11.3104	100 kOhm	1%	
R.....21	57.11.3124	120 kOhm	1%	
R.....22	57.11.3102	1.0 kOhm	1%	
R.....23	57.11.3181	180 Ohm	1%	
R.....24	59.92.7013	0.5 A	Poly-PTC	
R.....25	59.92.7013	0.5 A	Poly-PTC	
R.....26	57.11.3473	47 kOhm	1%	
02 R.....26	0	not exist		
R.....27	57.11.3473	47 kOhm	1%	
R.....28	57.11.3104	100 kOhm	1%	
02 R.....28	0	not exist		
R.....29	57.11.3274	270 kOhm	1%	
02 R.....29	57.11.5475	4.7 MOhm	5%	
R.....30	57.11.3102	1.0 kOhm	1%	
02 R.....30	0	not exist		
R.....31	57.11.5225	2.2 MOhm	5%	
R.....32	57.11.5106	10 MOhm	10%	
R.....33	57.11.3104	100 kOhm	1%	
R.....34	57.11.3274	270 kOhm	1%	
R.....35	57.11.3104	100 kOhm	1%	
R.....36	57.11.3473	47 kOhm	1%	
R.....37	57.11.3104	100 kOhm	1%	
R.....38	57.11.3473	47 kOhm	1%	
R.....39	57.11.3104	100 kOhm	1%	
02 R.....39	0	not exist		
R.....40	57.11.3473	47 kOhm	1%	
R.....41	57.11.3472	4.7 kOhm	1%	
R.....42	57.11.3104	100 kOhm	1%	
R.....43	57.11.3101	100 Ohm	1%	
R.....44	57.11.3474	470 kOhm	1%	
R.....45	57.11.3102	1.0 kOhm	1%	
R.....46	57.11.3222	2.2 kOhm	1%	
R.....47	58.01.9203	20 kOhm	10% variable resistor	
R.....48	57.11.3363	36 kOhm	1%	
R.....49	57.11.3223	22 kOhm	1%	
R.....50	57.11.3154	150 kOhm	1%	
R.....51	57.11.5475	4.7 MOhm	5%	
R.....52	57.11.3224	220 kOhm	1%	
R.....53	57.11.3473	47 kOhm	1%	
R.....54	57.11.3472	4.7 kOhm	1%	
02 R.....55	0	not used		
02 R.....56	57.11.3330	33 Ohm	1% on solder side of PCB	
02 R.....57	57.11.3330	33 Ohm	1% on solder side of PCB	
02 R.....58	58.01.8104	100 kOhm	10% variable resistor	
02 W.....1	1.010.329.64	2.5 mm	wirebridge	
02 W.....2	1.010.321.64	5.0 mm	wirebridge	
02 W.....3	0	not used	see MP 5 (bridge)	
02 W.....4	0	not used	see MP 5 (bridge)	
02 W.....5	0	not used	see MP 5, MP 6 (bridge,insulation)	
02 W.....6	0	not used	see MP 5, MP 6 (bridge,insulation)	
02 W.....7	0	not used	see MP 5, MP 6 (bridge,insulation)	
MP.....1	1.990.157.11	1 pcs	Linear Motor Driver PCB	
MP.....2	1.228.105.01	11 pcs	Loetstift	
MP.....3	84.11.0130	1 pcs	Stiftleiste (2 pin = 1 Steck)	
MP.....4	53.03.0166	5 pcs	D11 IC-Socket 8-pin	
02 MP.....5	64.01.0106	100 mm	Schaltdraht CU 0.6 mm	
02 MP.....6	65.99.0111	60 mm	Isolierschlauch 0.89 * 0.152	
(01) 90/05/04			improve filter and override mode	
(02) 91/06/12			improve circuit design	
(03) 92/09/10			improve motor control circuit	
CER = ceramic, EL = electrolytic, PE = polyester				
MANUFACTURER	JIT=Intermetall, Phi=Philips, Sia=Siemens, St=Studer, TI=Texas Instruments, Tho=Thomson			
1.990.157.00	LINEAR MOTOR DRIVER BOARD	SCA89/12/1200		
1.990.157.00	LINEAR MOTOR DRIVER BOARD	SCA90/05/0401		
1.990.157.00	LINEAR MOTOR DRIVER BOARD	SCA91/06/1202		
1.990.157.00	LINEAR MOTOR DRIVER BOARD	FR192/09/1003		

LINEAR MOTOR DRIVER BOARD

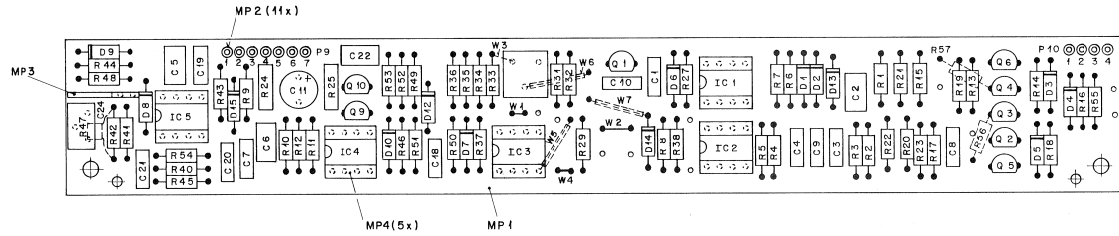
1.990.157.81



Notes: (1) only used in override mode (2) adjust R47 to 10V on TP1 (3) Adjust Gain (4) used for change override force

LINEAR MOTOR DRIVER BOARD

1.990.157.81



STUDER FEHENDORF ZÜRICH		LINEAR MOTOR DRIVER BOARD	
Stempelnummer		1612.92	
Kopie für:		1612.92	
Stempelnummer		1.990.157-81	
Stempelnummer		1.990.157-81	

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1	59.06.0103	10 nF	PE	
C....2	59.06.0224	220 nF	PE	
C....3	59.06.0472	4,7 nF	PE	
C....4	59.06.0224	220 nF	PE	
C....5	59.06.5154	150 nF	PE	
C....6	59.06.0683	68 nF	PE	
C....7	59.06.0223	22 nF	PE	
C....8	59.06.0103	10 nF	PE	
C....9	59.06.0103	10 nF	PE	
C....10	59.06.0104	100 nF	PE	
C....11	59.22.6470	47 uF	EL	
C....12	0	not exist		
C....13	0	not exist		
C....14	0	not exist		
C....15	0	not exist		
C....16	0	not exist		
C....17	0	not exist		
C....18	0	not exist		
C....19	59.06.0104	100 nF	PE	
C....20	59.06.0222	2.2 nF	PE	
C....21	59.32.1101	100 pF	CE	
C....22	59.06.0224	220 nF	PE	
C....23	0	not exist		
C....24	59.34.1100	10 pF	CE on solderside of PCB	
D....1	50.04.1101	Z 3.9V	500mW	
D....2	50.04.1101	Z 3.9V	500mW	
D....3	50.04.1112	Z 5.1V	500mW	
D....4	50.04.1112	Z 5.1V	500mW	
D....5	50.04.0125	1M4448		
D....6	50.04.0125	1M4448		
D....7	50.04.0125	1M4448		
D....8	50.04.0125	1M4448		
D....9	50.04.0125	1M4448		
D....10	50.04.0125	1M4448		

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
D....11	0	not exist		
D....12	50.04.0125	1M4448		
D....13	50.04.0512	1M5818		
D....14	50.04.0512	1M5818		
D....15	50.04.0125	1M4448		
IC....1	50.09.0119	TL 062 CP	dual J-FET	
IC....2	50.09.0119	TL 062 CP	dual J-FET	
IC....3	50.09.0119	TL 062 CP	dual J-FET	
IC....4	50.09.0119	TL 062 CP	dual J-FET	
IC....5	50.09.0102	LF 357 M	single Bi-FET	
MP....1	1.990.157.11	1 pcs	Linear Motor Driver PCB	
MP....2	1.228.105.01	11 pcs	Loetstift	
MP....3	54.11.0130	1 pcs	Stiftleiste (2 pin = 1 Stueck)	
MP....4	53.03.0166	6 pcs	DIL IC-Socket 8-pin	
MP....5	64.01.0106	100 mm	Schaltendraht CU 0.6 mm	
MP....6	66.99.0111	60 mm	Isolierschlauch 0.89 * 0.152	
Q....1	50.03.0407	BC 550	npn uni	
Q....2	50.03.0216	J 111	n-FET	
Q....3	50.03.0351	BC 327-25	ppn 800 mA	
Q....4	50.03.0351	BC 327-25	ppn 800 mA	
Q....5	50.03.0340	BC 337-25	npn 800 mA	
Q....6	50.03.0340	BC 337-25	npn 800 mA	
Q....7	0	not exist		
Q....8	0	not exist		
Q....9	50.03.0407	BC 550	npn uni	
Q....10	50.03.0407	BC 550	npn uni	
Q....11	0	not exist		
R....1	57.11.3153	15 kOhm	1%	
R....2	57.11.3104	100 kOhm	1%	
R....3	57.11.3223	22 kOhm	1%	
R....4	57.11.3224	220 kOhm	1%	
R....5	57.11.5155	1.5 Mohm	5%	

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R....6	57.11.3223	22 kOhm	1%	
R....7	57.11.3223	22 kOhm	1%	
R....8	57.11.3113	11 kOhm	1%	
R....9	57.11.3184	180 kOhm	1%	
R....10	57.11.3184	180 kOhm	1%	
R....11	57.11.3184	180 kOhm	1%	
R....12	57.11.3184	180 kOhm	1%	
R....13	57.11.3181	180 Ohm	1%	
R....14	57.11.3274	270 kOhm	1%	
R....15	57.11.3102	1.0 kOhm	1%	
R....16	57.11.3103	10 kOhm	1%	
R....17	57.11.3181	180 Ohm	1%	
R....18	57.11.3104	100 kOhm	1%	
R....19	57.11.3181	180 Ohm	1%	
R....20	57.11.3104	100 kOhm	1%	
R....21	57.11.3124	120 kOhm	1%	
R....22	57.11.3102	1.0 kOhm	1%	
R....23	57.11.3181	180 Ohm	1%	
R....24	57.92.7013	0.5 A	Poly-PTC	
R....25	57.92.7013	0.5 A	Poly-PTC	
R....26	0	not exist		
R....27	57.11.3473	47 kOhm	1%	
R....28	0	not exist		
R....29	57.11.5475	4.7 Mohm	5%	
R....30	0	not exist		
R....31	57.11.6225	2.2 kOhm	5%	
R....32	57.11.5106	10 Mohm	10%	
R....33	57.11.3104	100 kOhm	1%	
R....34	57.11.3274	270 kOhm	1%	
R....35	57.11.3104	100 kOhm	1%	
R....36	57.11.3473	47 kOhm	1%	
R....37	57.11.3104	100 kOhm	1%	
R....38	57.11.3473	47 kOhm	1%	
R....39	0	not exist		
R....40	57.11.3473	47 kOhm	1%	
R....41	57.11.3472	4.7 kOhm	1%	
R....42	57.11.3104	100 kOhm	1%	
R....43	57.11.3101	100 Ohm	1%	
R....44	57.11.3105	1 Mohm	1%	
R....45	57.11.3102	1.0 kOhm	1%	
R....46	57.11.3222	2.2 kOhm	1%	
R....47	58.01.9203	20 kOhm	10% variable resistor	
R....48	57.11.3363	36 kOhm	1%	
R....49	57.11.3223	22 kOhm	1%	
R....50	57.11.3154	150 kOhm	1%	
R....51	57.11.5475	4.7 Mohm	5%	
R....52	57.11.3224	220 kOhm	1%	
R....53	57.11.3473	47 kOhm	1%	
R....54	57.11.3472	4.7 kOhm	1%	
R....55	0	not used		
R....56	57.11.3330	33 Ohm	1% on solderside of PCB	
R....57	57.11.3330	33 Ohm	1% on solderside of PCB	
R....58	58.01.8104	100 kOhm	10% variable resistor	
W....1	1.010.329.64	2.5 mm	wirebridge	
W....2	1.010.321.64	5.0 mm	wirebridge	
W....3	0	used	see MP 5 (bridge)	
W....4	1.010.329.64	2.5 mm	wirebridge	
W....5	0	used	see MP 5, MP 6 (bridge,insulation)	
W....6	0	used	see MP 5, MP 6 (bridge,insulation)	
W....7	0	used	see MP 5, MP 6 (bridge,insulation)	

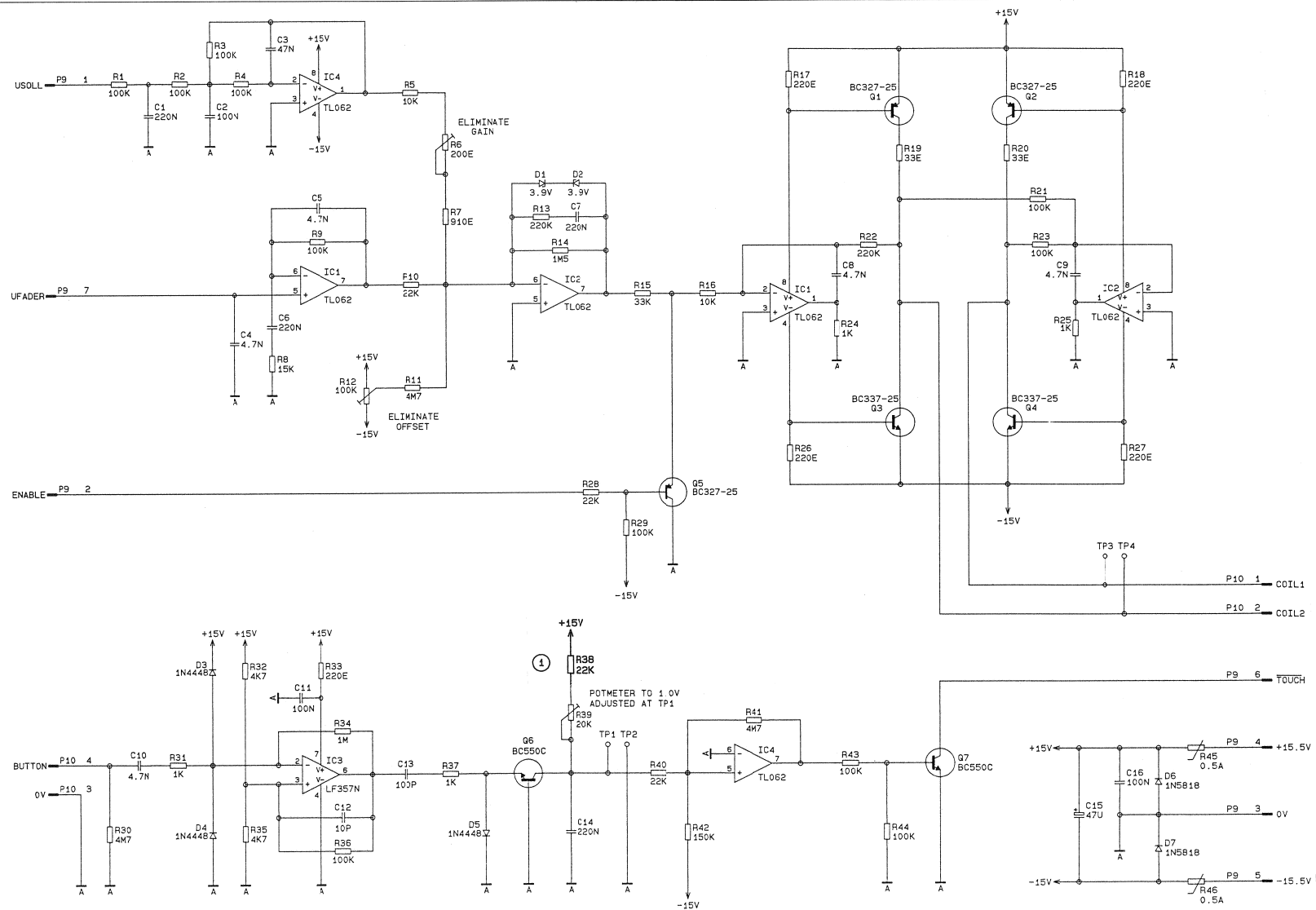
7.1.93 ZT
 = Diese Baugruppe 1.990.157.81 wird von 1.990.157.82 abgelöst
 = nachdem Lagerbestand von ca 1000 Stk.aufgebraucht ist.
 = Baugruppe 1.990.157.82 ist zur Zeit noch nicht freigegeben.
 = Schemagrappprint 1.990.157-12 ist bereits freigegeben.
 = Schema 1.990.157.82 wurde auf dem IBM-System gezeichnet
 = und archiviert.
 = Postliste 1.990.157.82 (#990157E, #990157F) sind bereits
 = erstellt.
 = fuer weitere Info siehe Hangeregister 990 1.990.157.81

CER = ceramic, EL = electrolytic, PE = polyester
 MANUFACTURER ITI=Intermetall, Ph=Philips, Siw=Siemens,
 St=Studer, TI=Texas Instruments, Tho=Thoson

1.990.157.81 LINEAR MOTOR DRIVER BOARD FR192/12/1600

LINEAR MOTOR DRIVER BOARD

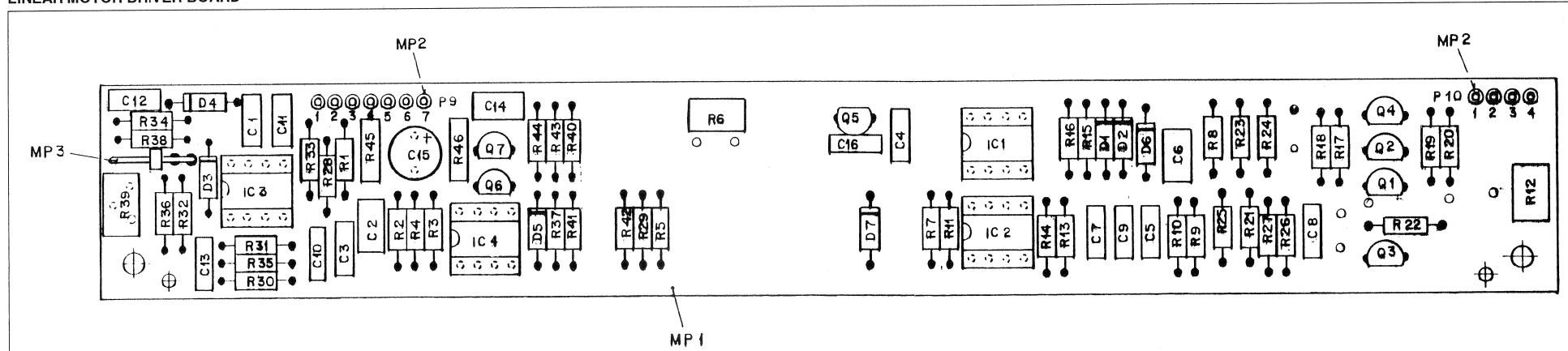
1.990.157.82



① 17.06.96 BN	① 30.10.97 PG	○	○	○
A 990				
PAGE 1 OF 1				
STUDER		LINEAR MOTOR DRIVER BOARD		SC1.990.157.82

LINEAR MOTOR DRIVER BOARD

1.990.157.82



Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Mx. Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59 06 0224	220n	PETP, 63V, 10%, RM5	0	R 4	57 11 3104	100k	MF, 1%, 0207
0	C 2	59 06 0104	100n	PETP, 63V, 10%, RM5	0	R 5	57 11 3103	10k	MF, 1%, 0207
0	C 3	59 06 0473	47n	PETP, 63V, 10%, RM5	0	R 6	58 01 9201	200R	Cermet, 10%, 0.5W, vertical
0	C 4	59 06 0472	4n7	PETP, 63V, 10%, RM5	0	R 7	57 11 3911	910R	MF, 1%, 0207
0	C 5	59 06 0472	4n7	PETP, 63V, 10%, RM5	0	R 8	57 11 3153	15k	MF, 1%, 0207
0	C 6	59 06 0224	220n	PETP, 63V, 10%, RM5	0	R 9	57 11 3104	100k	MF, 1%, 0207
0	C 7	59 06 0224	220n	PETP, 63V, 10%, RM5	0	R 10	57 11 3223	22k	MF, 1%, 0207
0	C 8	59 06 0472	4n7	PETP, 63V, 10%, RM5	0	R 11	57 11 5475	4M7	MF, 5%, 0207
0	C 9	59 06 0472	4n7	PETP, 63V, 10%, RM5	0	R 12	58 01 9104	100k	Cermet, 10%, 0.5W, vertical
0	C 10	59 06 0472	4n7	PETP, 63V, 10%, RM5	0	R 13	57 11 3224	220k	MF, 1%, 0207
0	C 11	59 06 0104	100n	PETP, 63V, 10%, RM5	0	R 14	57 11 5155	1M5	MF, 5%, 0207
0	C 12	59 34 1100	10p	CER 63V, 5%, NP 0	0	R 15	57 11 3333	33k	MF, 1%, 0207
0	C 13	59 32 1101	100p	C 100 P, 10%, 400V, CER	0	R 16	57 11 3103	10k	MF, 1%, 0207
0	C 14	59 06 0224	220n	PETP, 63V, 10%, RM5	0	R 17	57 11 3221	220R	MF, 1%, 0207
0	C 15	59 22 6470	47u	EL 40V, 20%, RM5	0	R 18	57 11 3221	220R	MF, 1%, 0207
0	C 16	59 06 0104	100n	PETP, 63V, 10%, RM5	0	R 19	57 11 3330	33R	MF, 1%, 0207
0	D 1	50 04 1101	3V9	Zener, 5%, 0.5W, DO-35	0	R 20	57 11 3330	33R	MF, 1%, 0207
0	D 2	50 04 1101	3V9	Zener, 5%, 0.5W, DO-35	0	R 21	57 11 3104	100k	MF, 1%, 0207
0	D 3	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35	0	R 22	57 11 3224	220k	MF, 1%, 0207
0	D 4	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35	0	R 23	57 11 3104	100k	MF, 1%, 0207
0	D 5	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35	0	R 24	57 11 3102	110	MF, 1%, 0207
0	D 6	50 04 0312	1N5818	D 1N 5818, 1N 58-9	0	R 25	57 11 3102	110	MF, 1%, 0207
0	D 7	50 04 0312	1N5818	D 1N 5818, 1N 58-9	0	R 26	57 11 3221	220R	MF, 1%, 0207
0	IC 1	50 09 0119	TL062	IC TL 062 ACP ,A	0	R 27	57 11 3221	220R	MF, 1%, 0207
0	IC 2	50 09 0119	TL062	IC TL 062 ACP ,A	0	R 28	57 11 3223	22k	MF, 1%, 0207
0	IC 3	50 09 0102	LF357N	IC LF 357 N, ,A	0	R 29	57 11 3104	100k	MF, 1%, 0207
0	IC 4	50 09 0119	TL062	IC TL 062 ACP ,A	0	R 30	57 11 5475	4M7	MF, 5%, 0207
0	MP 1	1.990.157.12		LINEAR MOTOR DRIVER PCB	0	R 31	57 11 3102	110	MF, 1%, 0207
0	MP 2	1.228.105.01 11 pcs		LOESTIFT L1 = 11.2	0	R 32	57 11 3472	4k7	MF, 1%, 3207
0	MP 3	54.11.0130	2p	P STIFT,2R WVKL 2 PIN=1 STK.	0	R 33	57 11 3221	220R	MF, 1%, 0207
0	MP 4	1.990.157.04		NR-ETIKETTE 5 *20	0	R 34	57 11 3105	110	MF, 1%, 3207
0	MP 5	43.01.0108	Label	ESE-WARNSHILD	0	R 35	57 11 3472	4k7	MF, 1%, 3207
0	Q 1	50 03 0351	BC327-25	PNP, 800mA	0	R 36	57 11 3104	100k	MF, 1%, 3207
0	Q 2	50 03 0351	BC327-25	PNP, 800mA	0	R 37	57 11 3102	110	MF, 1%, 3207
0	Q 3	50 03 0340	BC337-25	800mA, 45V, NPN	1	R 38	57 11 3333	22k	MF, 1%, 3207
0	Q 4	50 03 0340	BC337-25	800mA, 45V, NPN	0	R 39	58 01 9203	22k	Cermet, 10%, 0.5W, vertical
0	Q 5	50 03 0351	BC327-25	PNP, 800mA	0	R 40	57 11 3223	22k	MF, 1%, 3207
0	Q 6	50 03 0407	BC550C	BC 550 C	0	R 41	57 11 5475	4M7	MF, 5%, 0207
0	Q 7	50 03 0407	BC550C	BC 550 C	0	R 42	57 11 3154	150k	MF, 1%, 0207
0	R 1	57 11 3104	100k	MF, 1%, 0207	0	R 43	57 11 3104	100k	MF, 1%, 0207
0	R 2	57 11 3104	100k	MF, 1%, 0207	0	R 44	57 11 3104	100k	MF, 1%, 0207
0	R 3	57 11 3104	100k	MF, 1%, 0207	0	R 45	57 92 7013	0.5A	POLY-PTC, 60V
					0	R 46	57 92 7013	0.5A	POLY-PTC, 60V
					0	XIC 1	53.03.0166	8p	DIL 0.3", lot, gerade
					0	XIC 2	53.03.0166	8p	DIL 0.3", lot, gerade
					0	XIC 3	53.03.0166	8p	DIL 0.3", lot, gerade
					0	XIC 4	53.03.0166	8p	DIL 0.3", lot, gerade

End of List

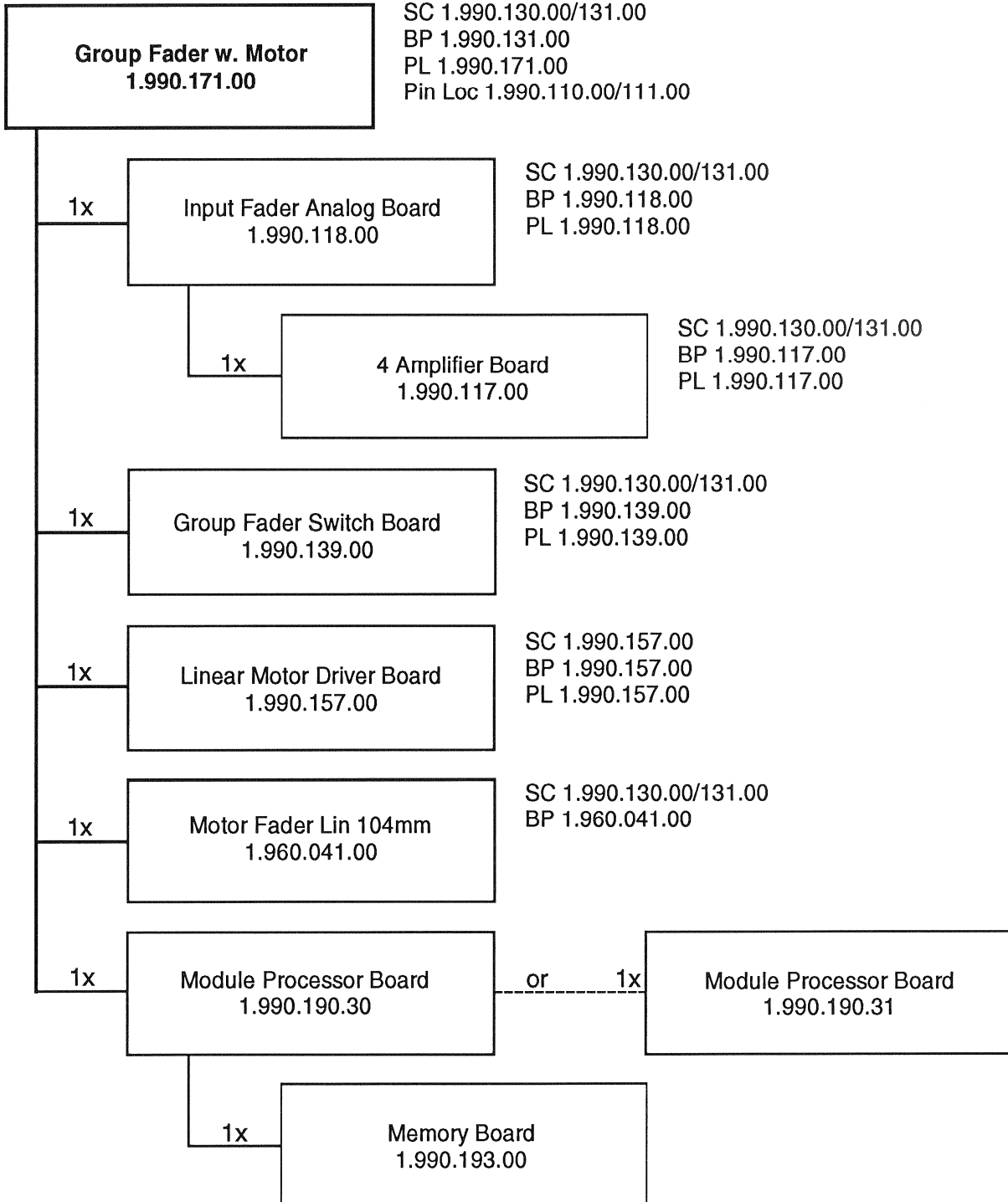
Comments: Index 01: Adjustmentrange of R38 changed

Approved:					
Checked:					
Date:	26.7.96		87		
Project No.:					

STUDER HEGENSBERG ZÜRICH	LINEAR MOTOR DRIVER BOARD	1.990.157-82
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Group Fader Unit w. Motor

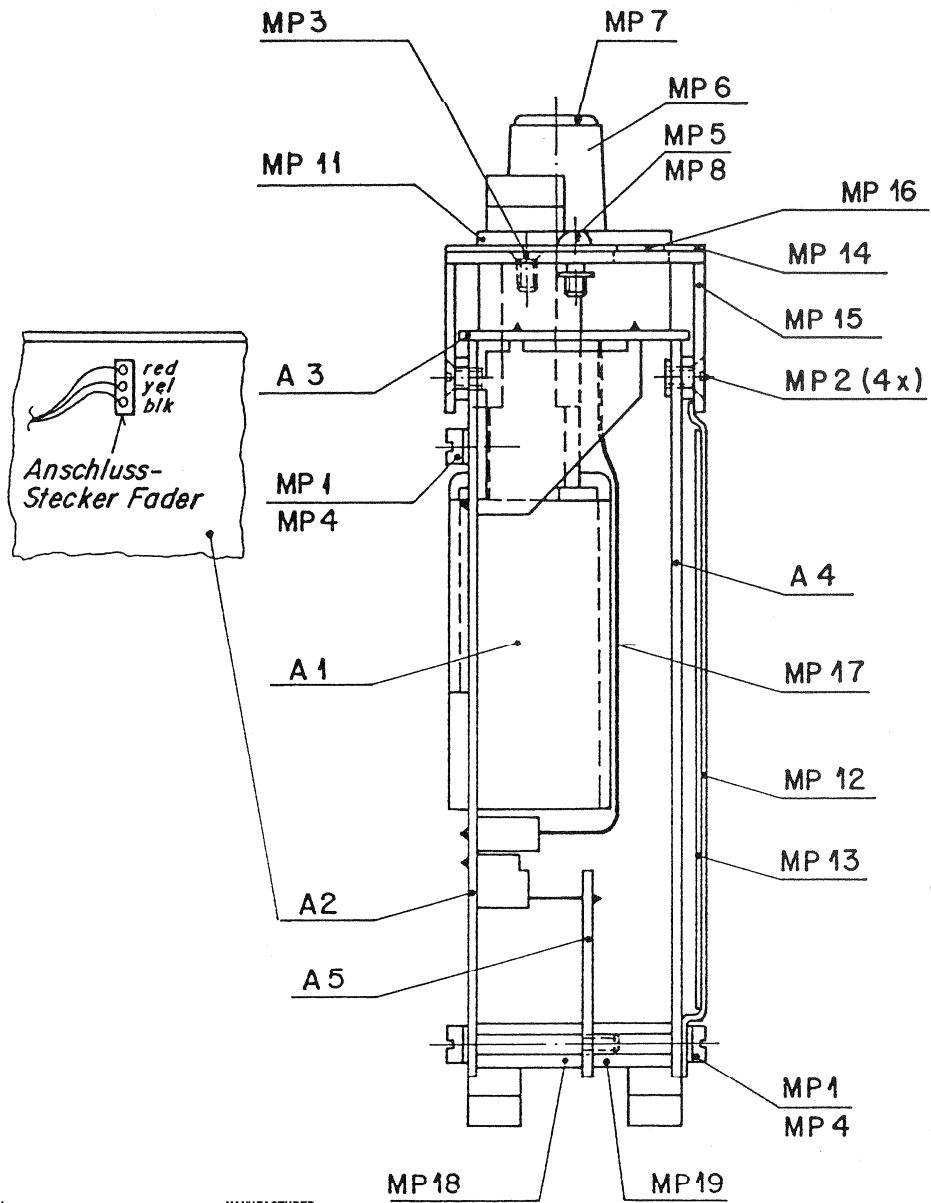
1.990.171.00



SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

GROUP FADER UNIT W. MOTOR

1.990.171.00



Ad ..POS. ...REF.No... DESCRIPTION.....MANUFACTURER

A.....1	1.960.041.00		MOTOR FADER 1*lin 104 mm	
A.....2	1.990.118.00		INPUT FADER ANALOG BOARD	
A.....3	1.990.139.00		GROUP FADER SWITCH BOARD	
A.....4	1.990.190.30		MODULE PROCESSOR BOARD	
A.....5	1.990.157.00		LINEAR MOTOR DRIVER BOARD	
A.....10	1.990.193.00		MEMORY BOARD	St
MP...1	21.01.0354	6 pcs	Z-Schr. M3*6	
MP...2	21.01.2352	4 pcs	S-Schr. M3*4	
MP...3	21.99.0175	2 pcs	S-Schr. M3*6, SW-0X	
MP...4	24.16.1030	6 pcs	Rippenscheibe M3	
MP...5	24.16.3023	2 pcs	Wellensicherung	
MP...6	42.01.0233	1 pcs	Knebelknopf grau D 1!	
MP...7	42.01.0257	1 pcs	Deckel hellgrau zu D ...	
MP...8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP...11	1.990.000.01	2 pcs	Schutzkragen Taste 12.5*12.5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.130.01	1 pcs	Frontschild GROUP FADER	
MP...15	1.990.110.02	1 pcs	Traeger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.010.049.27	2 pcs	Mutterbolzen M3x17	
MP...19	1.010.152.27	2 pcs	Distanzbolzen M3x11.5	
MP...20	1.990.171.04	1 pcs	Studer-Nr-Etikette	

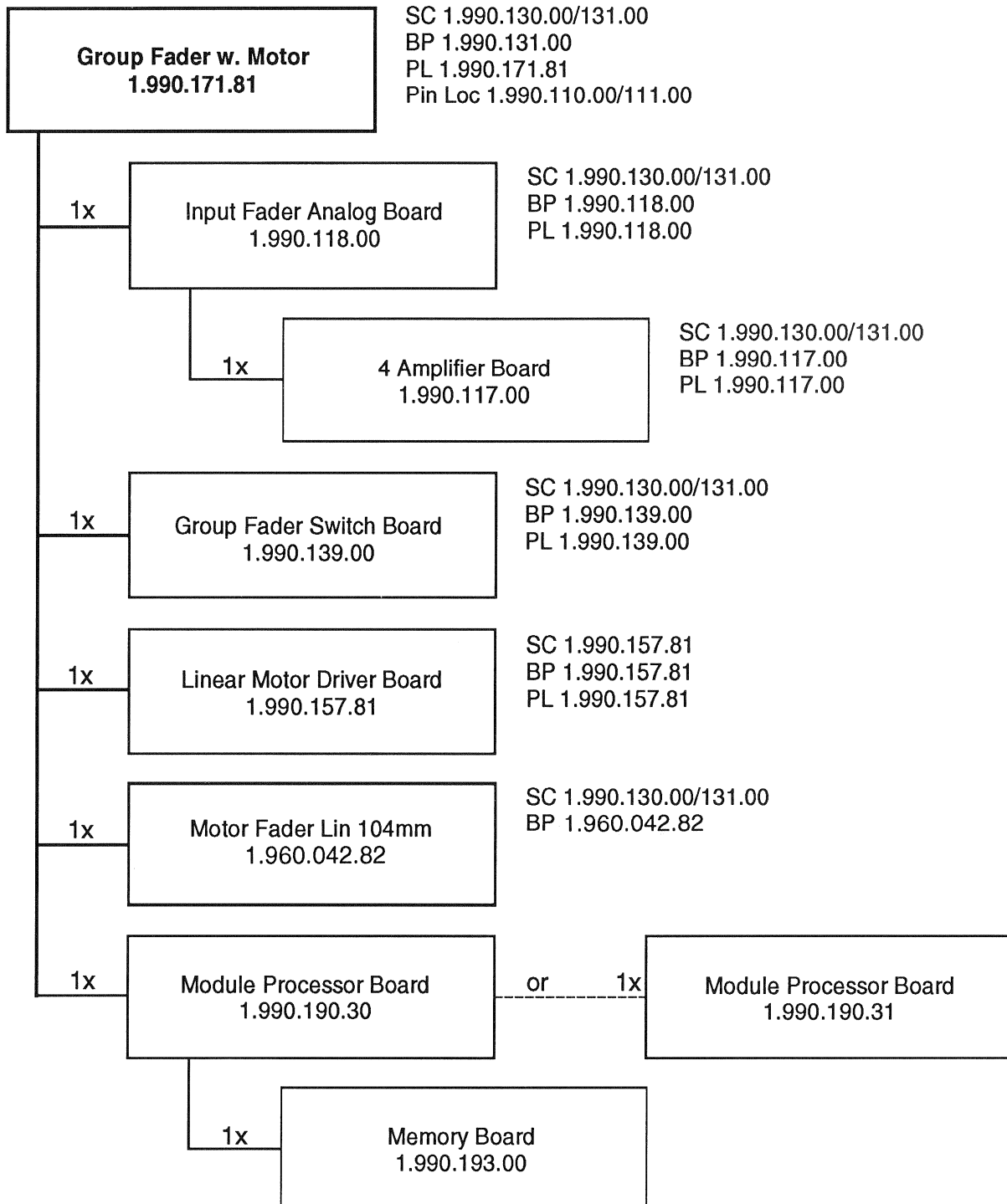
1.990.171.00 GROUP FADER UNIT W. MOTOR ABB92/03/0400

STUDER REGENSDORF ZÜRICH	Benennung: GROUP FADER UNIT W. MOTOR	Nummer: 1.990.171-00
		Kopie für:

Änderung:					
Ansicht:	4.3.92	<i>M. Koll</i>			
Datum:					
	Gez.	Gepr.	Ges.	Index	

Group Fader Unit w. Motor

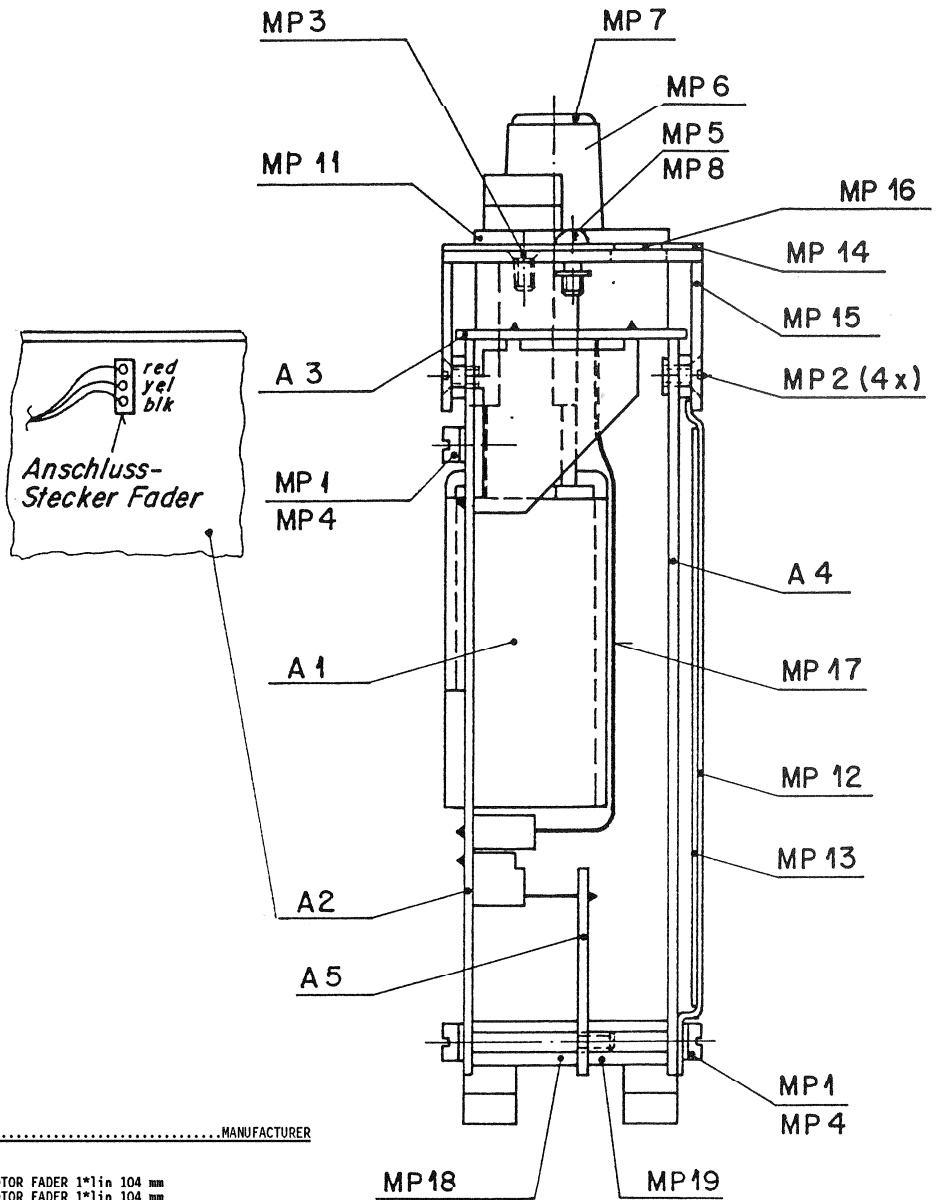
1.990.171.81



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

GROUP FADER UNIT W. MOTOR

1.990.171.81



Ad .POS. . . . REF.No. . . . DESCRIPTION MANUFACTURER

A.....1	1.960.042.00		MOTOR FADER 1*1in 104 mm	
01 A.....1	1.960.042.81		MOTOR FADER 1*1in 104 mm	
A.....2	1.990.118.00		INPUT FADER ANALOG BOARD	
A.....3	1.990.139.00		GROUP FADER SWITCH BOARD	
A.....4	1.990.190.31		MODULE PROCESSOR BOARD	
A.....5	1.990.157.81		LINEAR MOTOR DRIVER BOARD	
A.....10	1.990.193.00		MEMORY BOARD	St
MP...1	21.01.0354	6 pcs	Z-Schr. M3*6	
MP...2	21.01.2352	4 pcs	S-Schr. M3*4	
MP...3	21.99.0175	2 pcs	S-Schr. M3*6, SW-OX	
MP...4	24.16.1030	6 pcs	Rippenscheibe M3	
MP...5	24.16.3023	2 pcs	Wellensicherung	
MP...6	42.01.0233	1 pcs	Knebelknopf grau D 15/4	
MP...7	42.01.0237	1 pcs	Deckel hellgrau zu D 15	
MP...8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP...11	1.990.000.01	2 pcs	Schutzkragen Taste 12.5*12.5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.130.01	1 pcs	Frontschild GROUP FADER	
MP...15	1.990.110.02	1 pcs	Träger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.010.049.27	2 pcs	Mutterbolzen M3x17	
MP...19	1.010.152.27	2 pcs	Distanzbolzen M3x11.5	
MP...20	1.990.171.04	1 pcs	Studer-Nr.-Etikette	

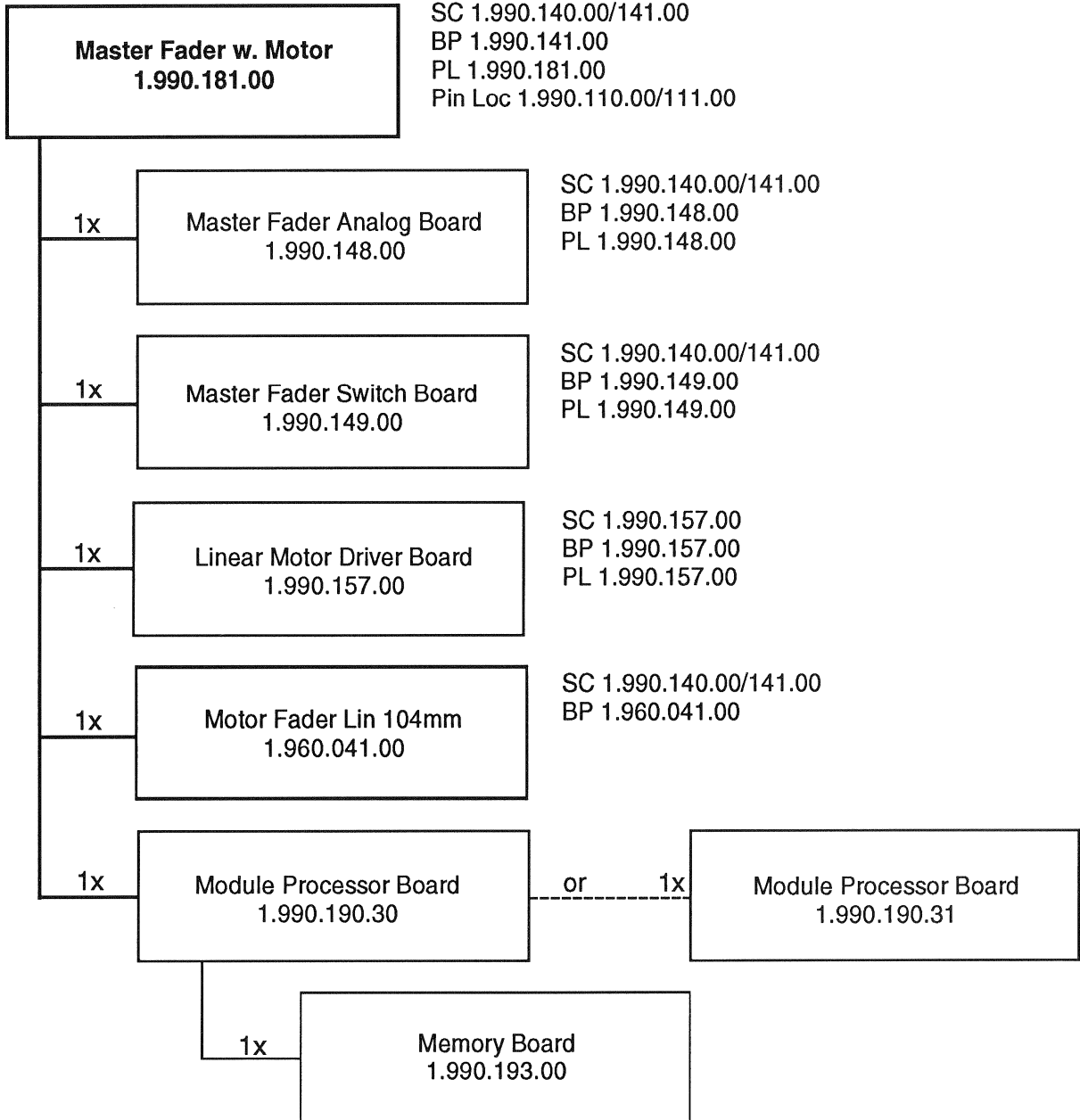
01	MOTOR FADER 1.960.042.81			
	1.990.171.81	GROUP FADER UNIT W. MOTOR	FRI92/12/1600	
	1.990.171.81	GROUP FADER UNIT W. MOTOR	FRI94/01/0401	

Änderung					③
					②
					①
Ausgabe	16.12.92	FK	fn	if	④
Datum	Gez.	Geor.	Gez.	Index	

STUDER REGENSDORF ZÜRICH	Benennung:	GROUP FADER UNIT W. MOTOR	Kopie für:
		1.990.171 - 81	

Master Fader Unit w. Motor

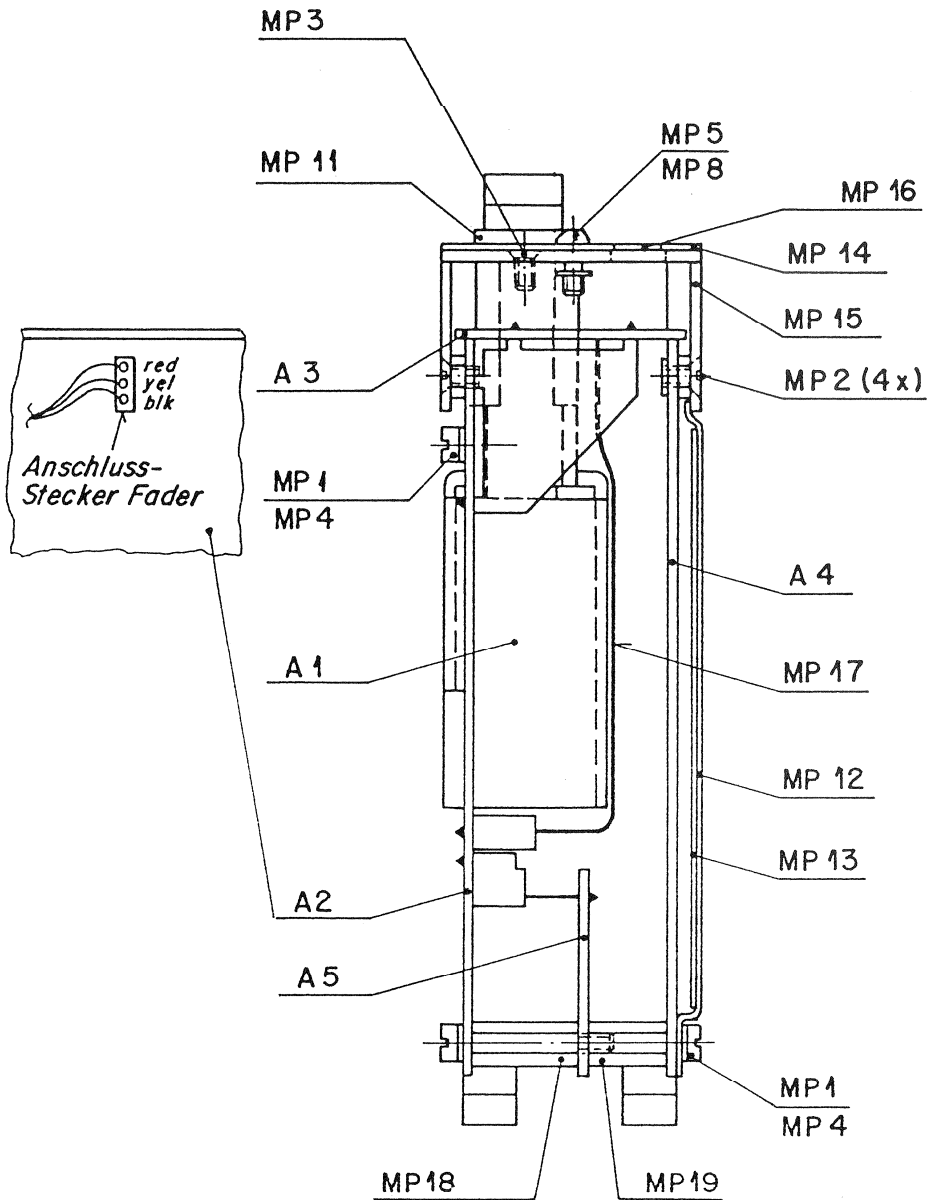
1.990.181.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

MASTER FADER UNIT W. MOTOR

1.990.181.00



Ad ..POS... ..REF.No... DESCRIPTION.....MANUFACTURER

A.....1	1.960.041.00		MOTOR FADER 1*1in 104 mm	
A.....2	1.990.148.00		MASTER FADER ANALOG BOARD	
A.....3	1.990.149.00		MASTER FADER SWITCH BOARD	
A.....4	1.990.190.30		MODULE PROCESSOR BOARD	
A.....5	1.990.157.00		LINEAR MOTOR DRIVER BOARD	
A.....10	1.990.193.00		MEMORY BOARD	
MP...1	21.01.0354	6 pcs	Z-Schr. M3*6	
MP...2	21.01.2352	4 pcs	S-Schr. M3*4	
MP...3	21.99.0175	2 pcs	S-Schr. M3*6, SW-0X	
MP...4	24.16.1030	6 pcs	Rippenscheibe M3	
MP...5	24.16.3023	2 pcs	Wellensicherung	
MP...8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP...11	1.990.000.01	1 pcs	Schutzkragen Taste 12.5*12.5	
MP...12	1.990.100.06	1 pcs	Schirmblech Fader	
MP...13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP...14	1.990.140.01	1 pcs	Frontschild MASTER FADER	
MP...15	1.990.110.02	1 pcs	Traeger FADER	
MP...16	1.990.110.05	1 pcs	Fenster FADER	
MP...17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP...18	1.010.049.27	2 pcs	Mutterbolzen M3x17	
MP...19	1.010.152.27	2 pcs	Distanzbolzen M3x11.5	
MP...20	1.990.181.04	1 pcs	Studer-Nr-Etikette	

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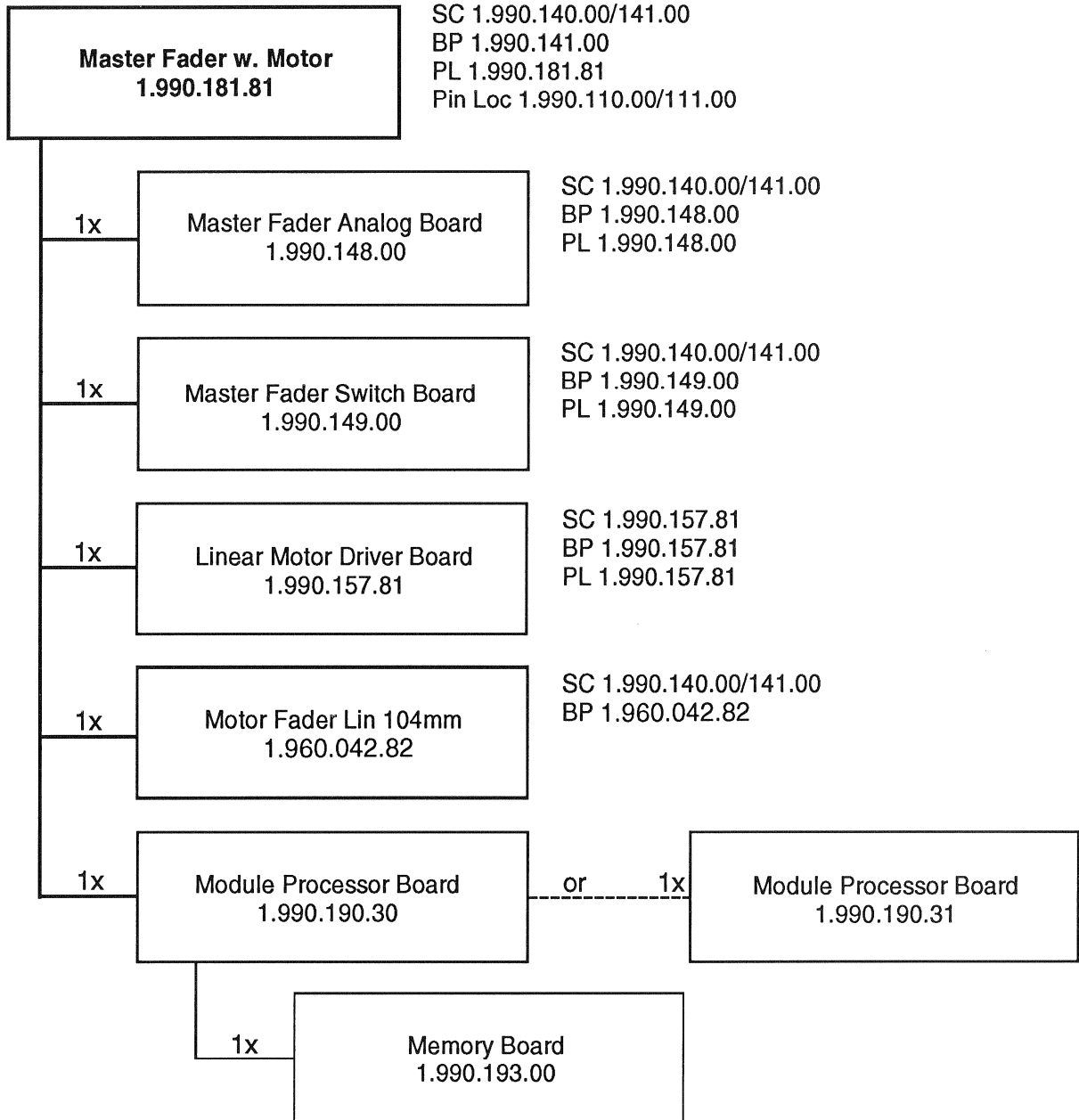
Zeichn.									
Änderung									
Datum	4.3.92	Gez.	A. K. K. K.	Gepr.	V.	Gez.			
Kopie für:									

STUDER REGENSDORF ZÜRICH	Benennung: MASTER FADER UNIT W. MOTOR	Nummer: 1.990.181-00
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1.990.181.00 MASTER FADER UNIT W.MOTOR ABB92/03/0400

Master Fader Unit w. Motor

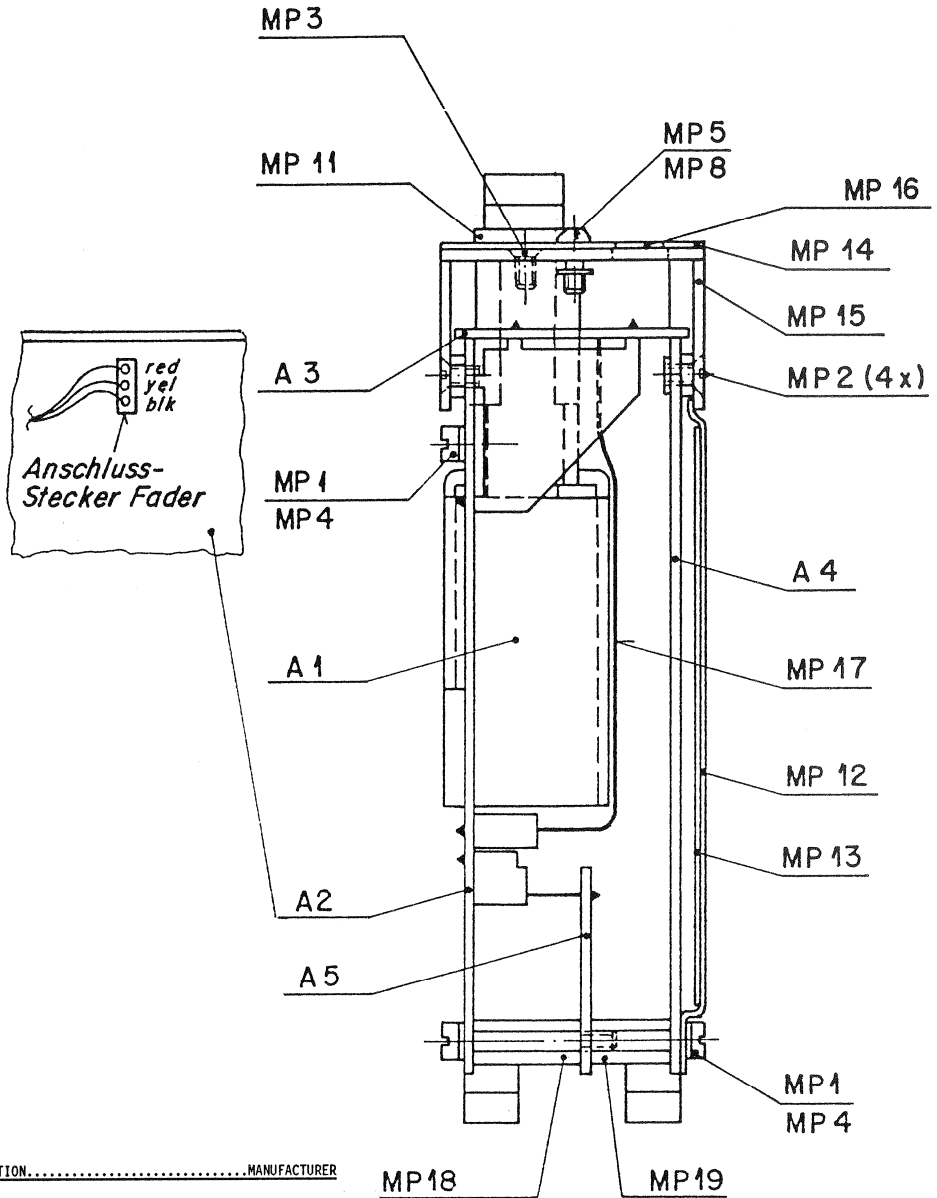
1.990.181.81



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

MASTER FADER UNIT W. MOTOR

1.990.181.81



Ad .POS. . .REF.No. . .DESCRIPTION. . .MANUFACTURER

A....1	1.960.042.00		MOTOR FADER 1*1in 104 mm	
A....1	1.960.042.81		MOTOR FADER 1*1in 104 mm	
A....2	1.990.148.00		MASTER FADER ANALOG BOARD	
A....3	1.990.149.00		MASTER FADER SWITCH BOARD	
A....4	1.990.190.31		MODULE PROCESSOR BOARD	
A....5	1.990.167.81		LINEAR MOTOR DRIVER BOARD	
A....10	1.990.193.00		MEMORY BOARD	
MP....1	21.01.0354	6 pcs	Z-Schr. M3*6	
MP....2	21.01.2352	4 pcs	S-Schr. M3*4	
MP....3	21.99.0175	2 pcs	S-Schr. M3*6, SM-OX	
MP....4	24.16.1030	6 pcs	Rippenscheibe M3	
MP....5	24.16.3023	2 pcs	Wellensicherung	
MP....8	1.010.022.21	2 pcs	Linse rundschr. IS M3*8	
MP....11	1.990.000.01	1 pcs	Schutzkragen Taste 12.5*12.5	
MP....12	1.990.100.06	1 pcs	Schirmblech Fader	
MP....13	1.990.100.07	1 pcs	Isolierung 208*87 selbstklebend	
MP....14	1.990.140.01	1 pcs	Frontschild MASTER FADER	
MP....15	1.990.110.02	1 pcs	Traeger FADER	
MP....16	1.990.110.05	1 pcs	Fenster FADER	
MP....17	64.03.0504	8 pcs	Flachkabel konf. FSN 23,5A-6 pol	
MP....18	1.010.049.27	2 pcs	Mutterbolzen M3x17	
MP....19	1.010.152.27	2 pcs	Distanzbolzen M3x11.5	
MP....20	1.990.181.04	1 pcs	Studer-Nr-Etikette	

St

01 MOTOR FADER 1.960.042.81

1.990.181.81	MASTER FADER UNIT W.MOTOR	FRI92/12/1600
1.990.181.81	MASTER FADER UNIT W.MOTOR	FRI94/01/0401

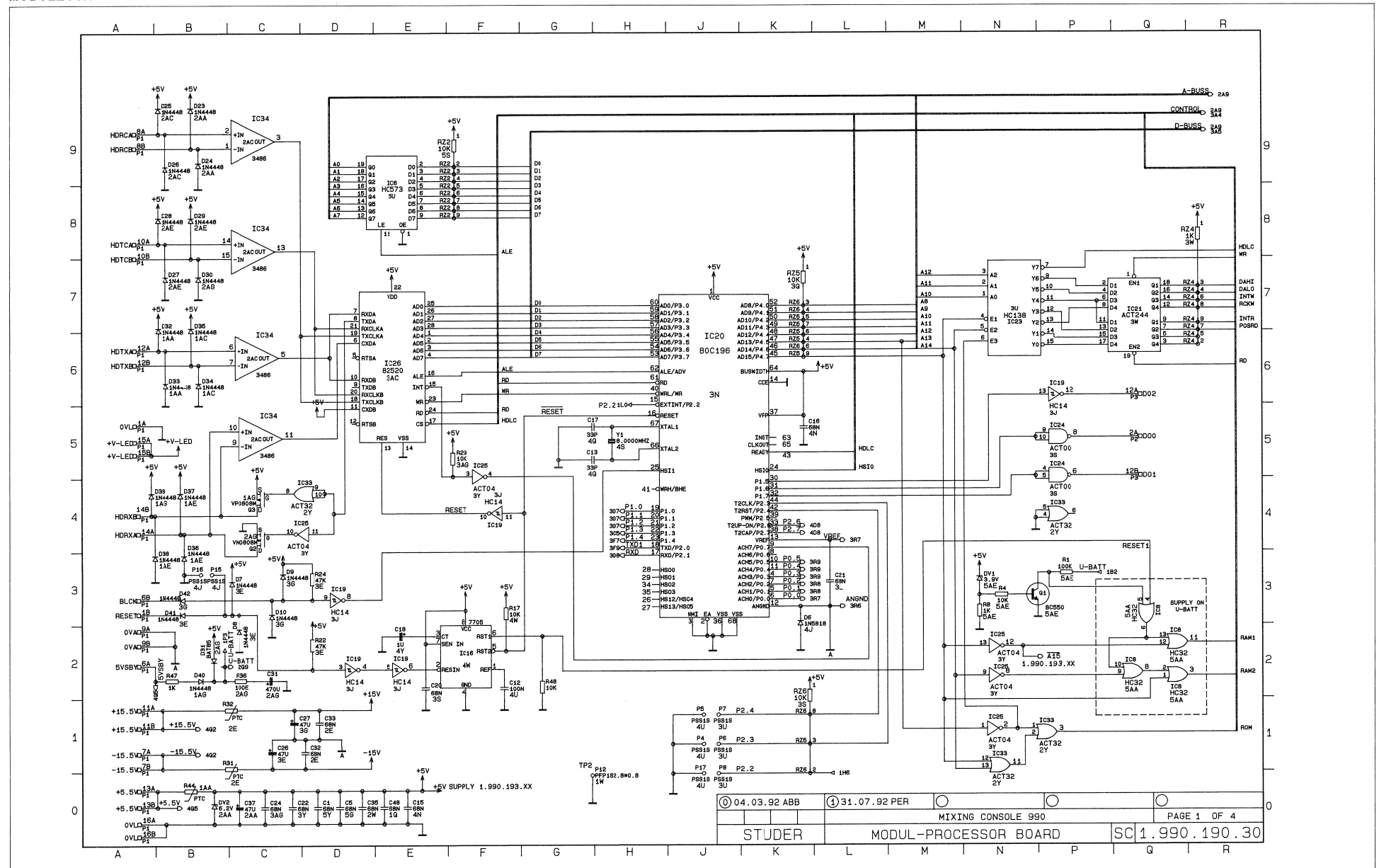
MP18 MP19

Ausgabe		Datum		Gez	Geor	Gez	Index
		16.12.92					①
							②
							③

STUDER REGENSDORF ZÜRICH	Benennung MASTER FADER UNIT W. MOTOR	Nummer: 1.990.181-81
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MODULE PROCESSOR BOARD

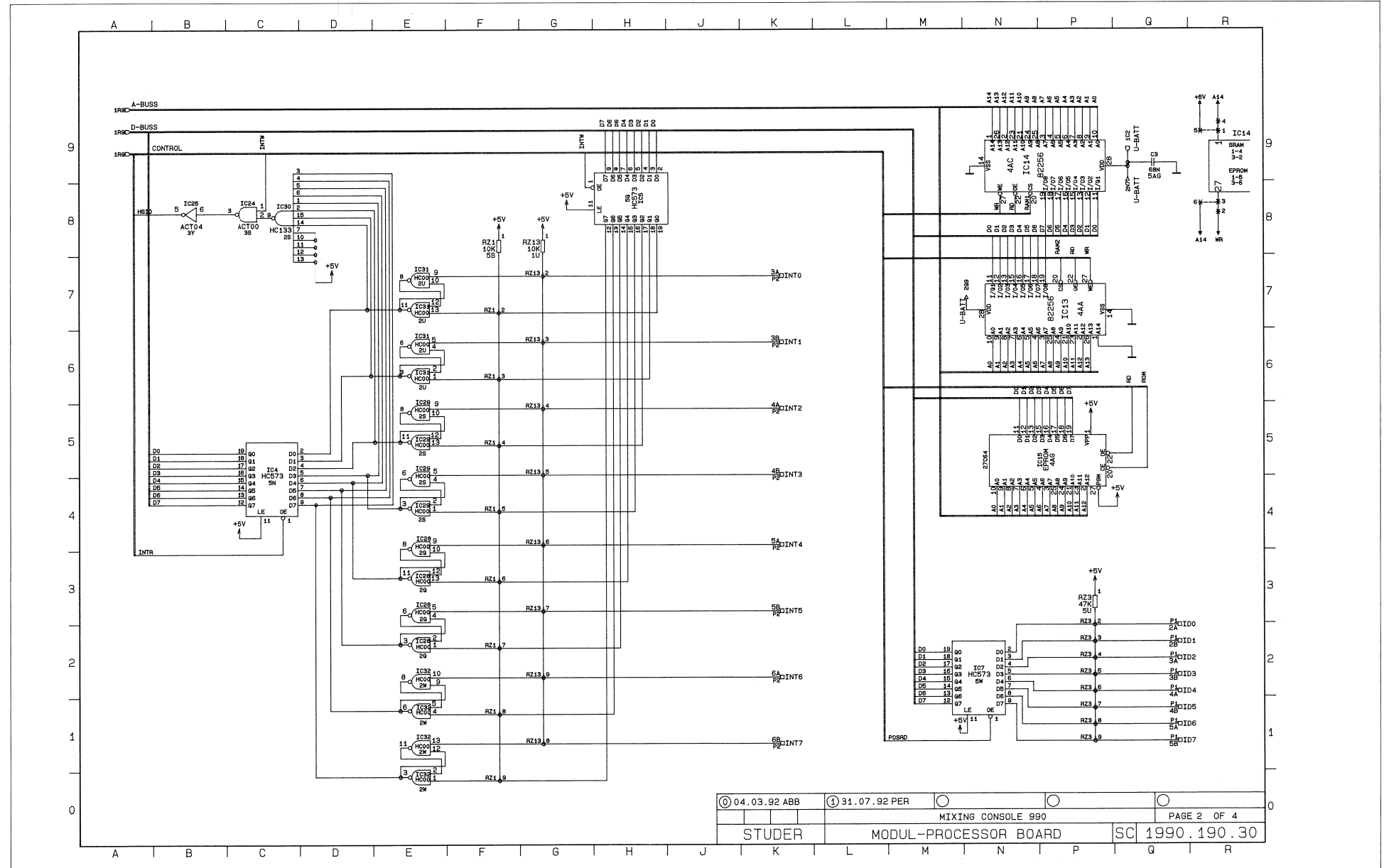
1.990.190.30



04.03.92 ABB	31.07.92 PER	MIXING CONSOLE 990	PAGE 1 OF 4
STUDER		MODUL-PROCESSOR BOARD	
		SC 1.990.190.30	

MODULE PROCESSOR BOARD

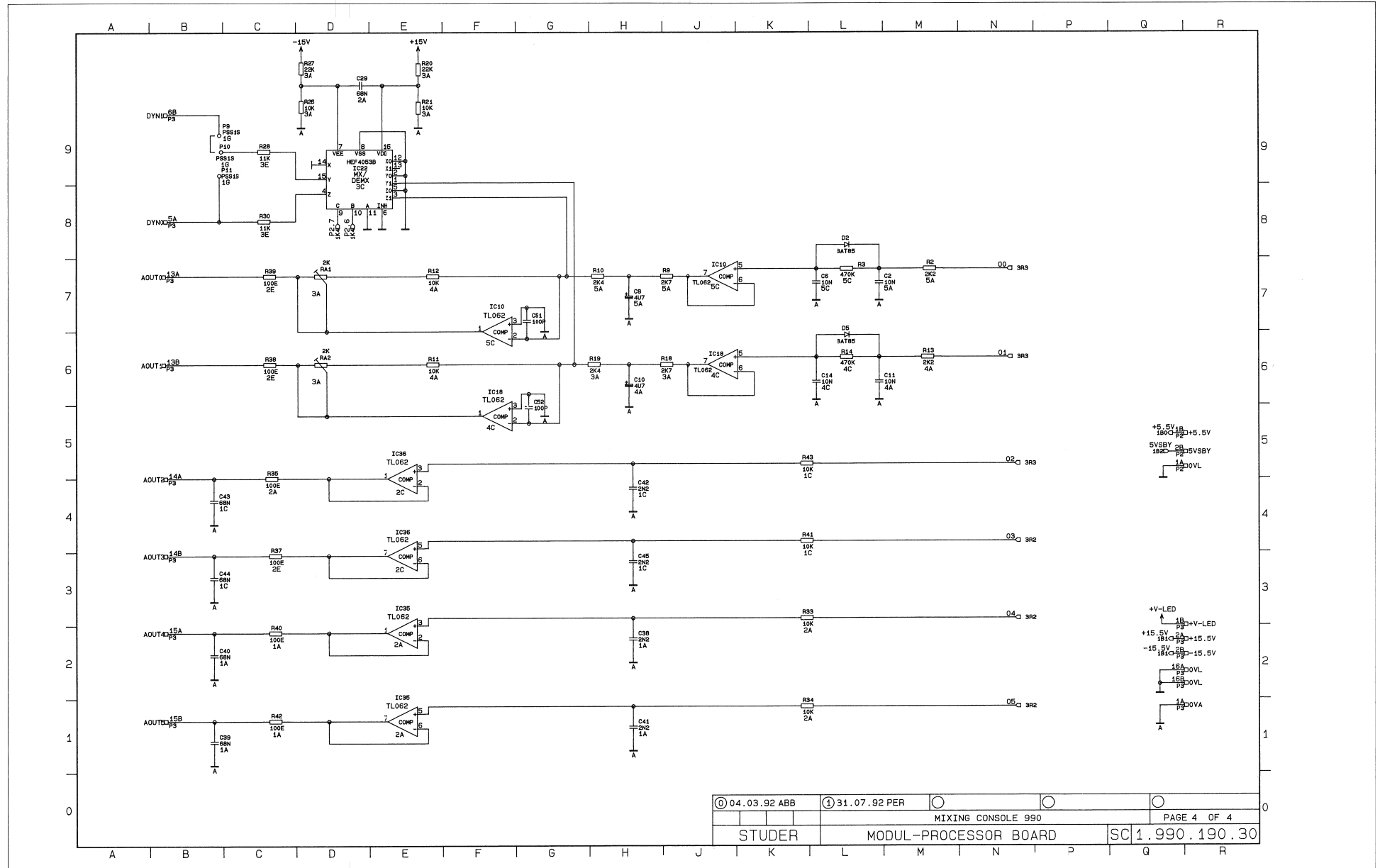
1.990.190.30



① 04.03.92 ABB	① 31.07.92 PER	MIXING CONSOLE 990	PAGE 2 OF 4
STUDER	MODUL-PROCESSOR BOARD	SC 1990.190.30	

MODULE PROCESSOR BOARD

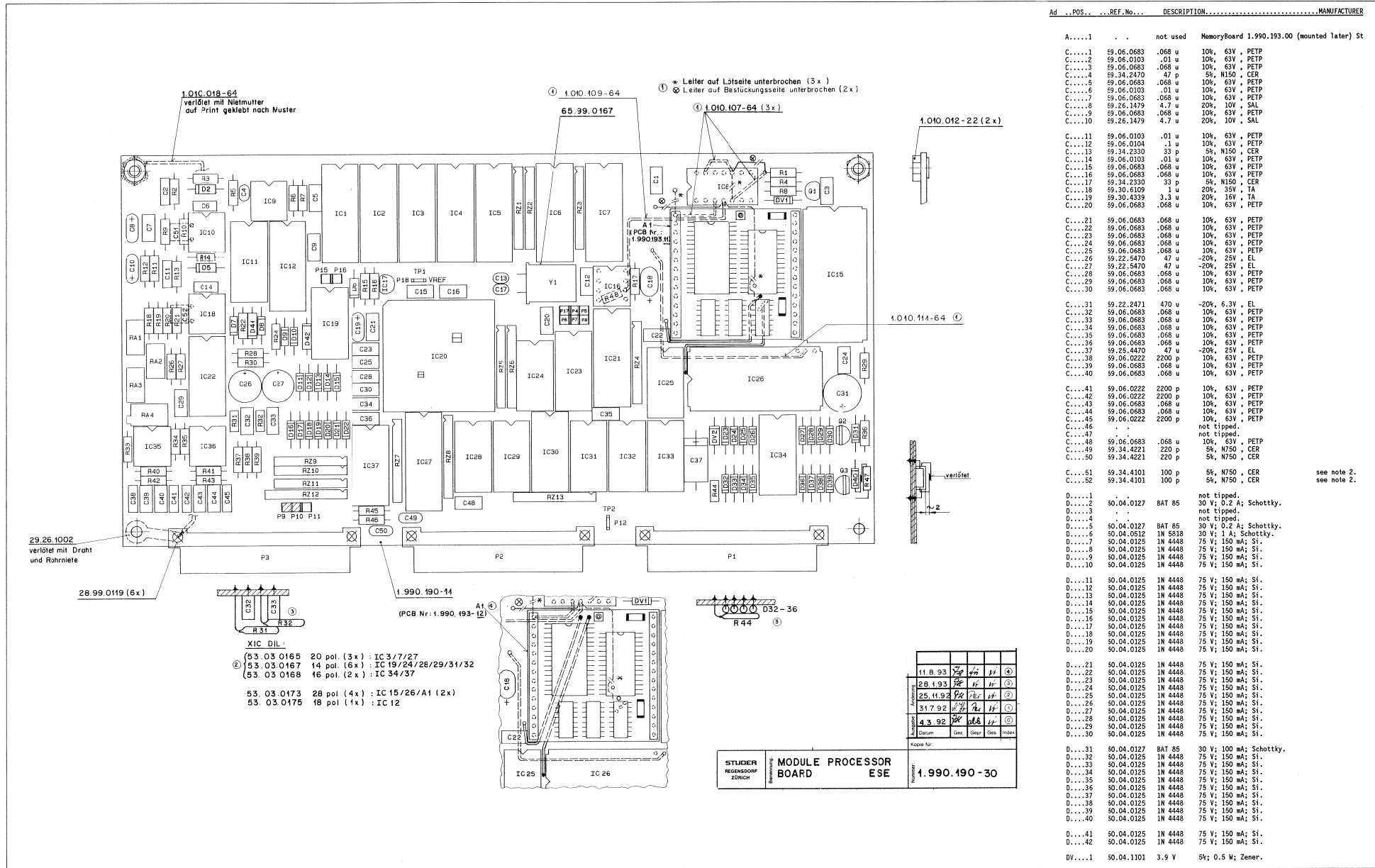
1.990.190.30



① 04.03.92 ABB	① 31.07.92 PER		
STUDER		MIXING CONSOLE 990	
MODUL-PROCESSOR BOARD		PAGE 4 OF 4	
SC 1.990.190.30			

MODULE PROCESSOR BOARD

1.990.190.30



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A.....1			not used	MemoryBoard 1.990.193.00 (mounted later) St
C.....1	59.06.0683	.068 u	10%, 63V	PETP
C.....2	59.06.0103	.01 u	10%, 63V	PETP
C.....3	59.06.0683	.068 u	10%, 63V	PETP
C.....4	59.34.2470	47 p	5%, N150	CER
C.....5	59.06.0683	.068 u	10%, 63V	PETP
C.....6	59.06.0103	.01 u	10%, 63V	PETP
C.....7	59.06.0683	.068 u	10%, 63V	PETP
C.....8	59.26.1479	4.7 u	20%, 10V	SAL
C.....9	59.06.0683	.068 u	10%, 63V	PETP
C.....10	59.26.1479	4.7 u	20%, 10V	SAL
C.....11	59.06.0103	.01 u	10%, 63V	PETP
C.....12	59.06.0104	.1 u	10%, 63V	PETP
C.....13	59.34.2330	33 p	5%, N150	CER
C.....14	59.06.0103	.01 u	10%, 63V	PETP
C.....15	59.06.0683	.068 u	10%, 63V	PETP
C.....16	59.06.0683	.068 u	10%, 63V	PETP
C.....17	59.34.2330	33 p	5%, N150	CER
C.....18	59.30.6109	1 u	20%, 35V	TA
C.....19	59.30.4339	3.3 u	20%, 16V	TA
C.....20	59.06.0683	.068 u	10%, 63V	PETP
C.....21	59.06.0683	.068 u	10%, 63V	PETP
C.....22	59.06.0683	.068 u	10%, 63V	PETP
C.....23	59.06.0683	.068 u	10%, 63V	PETP
C.....24	59.06.0683	.068 u	10%, 63V	PETP
C.....25	59.06.0683	.068 u	10%, 63V	PETP
C.....26	59.22.5470	47 u	-20%, 25V	EL
C.....27	59.22.5470	47 u	-20%, 25V	EL
C.....28	59.06.0683	.068 u	10%, 63V	PETP
C.....29	59.06.0683	.068 u	10%, 63V	PETP
C.....30	59.06.0683	.068 u	10%, 63V	PETP
C.....31	59.22.2471	470 u	-20%, 6.3V	EL
C.....32	59.06.0683	.068 u	10%, 63V	PETP
C.....33	59.06.0683	.068 u	10%, 63V	PETP
C.....34	59.06.0683	.068 u	10%, 63V	PETP
C.....35	59.06.0683	.068 u	10%, 63V	PETP
C.....36	59.06.0683	.068 u	10%, 63V	PETP
C.....37	59.25.4470	47 u	-20%, 25V	EL
C.....38	59.06.0222	2200 p	10%, 63V	PETP
C.....39	59.06.0683	.068 u	10%, 63V	PETP
C.....40	59.06.0683	.068 u	10%, 63V	PETP
C.....41	59.06.0222	2200 p	10%, 63V	PETP
C.....42	59.06.0222	2200 p	10%, 63V	PETP
C.....43	59.06.0683	.068 u	10%, 63V	PETP
C.....44	59.06.0683	.068 u	10%, 63V	PETP
C.....45	59.06.0222	2200 p	10%, 63V	PETP
C.....46			not tipped.	
C.....47			not tipped.	
C.....48	59.06.0683	.068 u	10%, 63V	PETP
C.....49	59.34.4221	220 p	5%, N750	CER
C.....50	59.34.4221	220 p	5%, N750	CER
C.....51	59.34.4101	100 p	5%, N750	CER
C.....52	59.34.4101	100 p	5%, N750	CER
D.....1			not tipped.	
D.....2	50.04.0127	BAT 85	30 V; 0.2 A;	Schottky.
D.....3			not tipped.	
D.....4			not tipped.	
D.....5	50.04.0127	BAT 85	30 V; 0.2 A;	Schottky.
D.....6	50.04.0512	1N 5819	30 V; 1 A;	Schottky.
D.....7	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....8	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....9	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....10	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....11	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....12	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....13	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....14	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....15	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....16	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....17	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....18	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....19	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....20	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....21	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....22	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....23	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....24	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....25	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....26	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....27	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....28	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....29	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....30	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....31	50.04.0127	BAT 85	30 V; 100 mA;	Schottky.
D.....32	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....33	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....34	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....35	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....36	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....37	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....38	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....39	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....40	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....41	50.04.0125	1N 4448	75 V; 150 mA;	Si.
D.....42	50.04.0125	1N 4448	75 V; 150 mA;	Si.
DV.....1	50.04.1101	3.9 V	5%; 0.5 A;	Zenar.

MODULE PROCESSOR BOARD



1.990.190.30

Ad	..POS.	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS.	...REF.No...	DESCRIPTION.....	MANUFACTURER
DV...	2	50.04.1511	6.2 V	5%, 1.3 W; Zener.					
IC....	1	50.17.1574	74 HC 574	Octal 3-st. Noninv. D-Type Flip-Flop.	R....	42	57.11.3101	100	1%, 0207, MF
IC....	2	50.17.1574	74 HC 574	Octal 3-st. Noninv. D-Type Flip-Flop.	R....	43	57.11.3103	10 k	1%, 0207, MF
IC....	3	50.17.1574	74 HC 574	Octal 3-st. Noninv. D-Type Flip-Flop.	R....	44	57.92.7014	0.460 ohm	650 mA; PTC for Circuit Protection.
IC....	4	50.17.1573	74 HC 573	Octal 3-st. Noninv. D-Type Transparent Latch	R....	45	57.11.3150	15	1%, 0207, MF
IC....	5	50.17.1573	74 HC 573	Octal 3-st. Noninv. D-Type Transparent Latch	R....	46	57.11.3150	15	1%, 0207, MF
IC....	6	50.17.1573	74 HC 573	Octal 3-st. Noninv. D-Type Transparent Latch	R....	47	57.11.3102	1 k	1%, 0207, MF
IC....	7	50.17.1573	74 HC 573	Octal 3-st. Noninv. D-Type Transparent Latch	R....	48	57.11.3103	10 k	5%, 0207, MF
IC....	8	50.17.1032	74 HC 32	Quad 2-Input OR Gate.	RA....	1	58.01.9202	2 k 1	0%, .5 W, PMG (Cermet) Trimm-Potentiometer.
IC....	9	50.09.0101	TL 072 CP	Dual Low Offset JFET-Input Op. Amp.	RA....	2	58.01.9202	2 k 1	0%, .5 W, PMG (Cermet) Trimm-Potentiometer.
IC....	10	50.09.0119	TL 062 ACP	Dual Low Power JFET-Input Op. Amp.	RA....	3	58.01.9104	100 k 1	0%, .5 W, PMG (Cermet) Trimm-Potentiometer.
					RA....	4	58.05.0103	10 k 1	0%, .5 W, PMG (Cermet) Trimm-Potentiometer.
IC....	11	50.07.0051	CD 4051 BE	8-Channel Analog Multiplexer/Demultiplexer.	RZ....	1	57.88.4103	8 * 10 k	2%, SIP 9,
IC....	12	50.19.0102	MP 7623 JN	12-Bit Monolithic Multiplying D/A Conv. MPS	RZ....	2	57.88.4103	8 * 10 k	2%, SIP 9,
IC....	13	.	not used	replaced by A1	RZ....	3	57.88.4473	8 * 47 k	2%, SIP 9,
IC....	14	.	not used	replaced by A1	RZ....	4	57.88.4102	8 * 1 k	2%, SIP 9,
IC....	15	1.990.993.30		SW MODULE MONITOR	RZ....	5	57.88.4103	8 * 10 k	2%, SIP 9,
IC....	16	50.11.0122	TL 7705 AC	Reset Generator.	RZ....	6	57.88.4103	8 * 10 k	2%, SIP 9,
IC....	17	50.10.0108	LM 317 LZ	3-Terminal Positive Voltage Regulator.	RZ....	7	57.88.4473	8 * 47 k	2%, SIP 9,
IC....	18	50.09.0119	TL 062 ACP	Dual Low Power JFET-Input Op. Amp.	RZ....	8	57.88.4103	8 * 10 k	2%, SIP 9,
IC....	19	50.17.1014	74 HC 14	Hex Schmitt-Trigger Inverter.	RZ....	9	57.88.2101	4 * 100	2%, SIP 8,
IC....	20	50.63.0003	N 80C196KB	16-Bit MPU, 12 MHz, 10 Bit A/D Convert. It	RZ....	10	57.88.2101	4 * 100	2%, SIP 8,
IC....	21	50.17.7244	74 ACT 244	Octal 3-st. Noninv. Buf./Line Drv./Line Rec.	RZ...11		57.88.2101	4 * 100	2%, SIP 8,
IC....	22	50.07.0015	CD 4053 BC	Triple 2-Chan. Analog Multipl./Demultiplexer	RZ...12		57.88.4104	8 * 100 k	2%, SIP 9,
IC....	23	50.17.1138	74 HC 138	1-of-8 Decoder/Demultiplexer.	RZ...13		57.88.4103	8 * 10 k	2%, SIP 9,
IC....	24	50.17.7000	74 ACT 00	Quad 2-Input NAND Gate.					
IC....	25	50.17.7004	74 ACT 04	Hex Inverter.	Y....1		89.01.1008	8.000 MHz	Xtal; HC-18/U; Parallel;
IC....	26	50.16.0153	SAB82520-P	High-Level Serial Communic. Controller. Sie					
IC....	27	50.17.7244	74 ACT 244	Octal 3-st. Noninv. Buf./Line Drv./Line Rcv.					
IC....	28	50.17.1000	74 HC 00	Quad 2-Input NAND Gate.					
IC....	29	50.17.1000	74 HC 00	Quad 2-Input NAND Gate.					
IC....	30	50.17.1133	74 HC 133	13-Input NAND Gate.					
IC....	31	50.17.1000	74 HC 00	Quad 2-Input NAND Gate.					
IC....	32	50.17.1000	74 HC 00	Quad 2-Input NAND Gate.					
IC....	33	50.17.7032	74 ACT 32	Quad 2-Input OR Gate.					
IC....	34	50.15.0104	MC 3486 P	Quad Line Receiver RS 422/423.					
IC....	35	50.09.0119	TL 062 ACP	Dual Low Power JFET-Input Op. Amp.					
IC....	36	50.09.0119	TL 062 ACP	Dual Low Power JFET-Input Op. Amp.					
IC....	37	50.17.1151	74 HC 151	8-Input Data Selector/Multiplexer.					
P....1		54.11.2013	2*16 pins	BK Angled Print Male Eurocard Connector.					
P....2		54.11.2013	2*16 pins	BK Angled Print Male Eurocard Connector.					
P....3		54.11.2013	2*16 pins	BK Angled Print Male Eurocard Connector.					
P....4		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....5		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....6		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....7		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....8		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....9		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....10		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....11		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....12		54.02.0320	2.8 * 0.8	Straight Faston Connector.					
P....15		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....16		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....17		54.01.0020	0.63*0.63	Straight Pin-Header.					
P....18		54.02.0320	2.8 * 0.8	Straight Faston Connector.					
Q....1		50.03.0407	BC 550 C	45 V; 100 mA; NPN Si.					
Q....2		50.03.1505	VN 0808 M	80 V; 350 mA; N-Channel V-MOS-FET.					
Q....3		50.03.1554	VP 0808 M	80 V; 330 mA; P-Channel V-MOS-FET.					
R....1		57.11.3104	100 k	1%, 0207, MF					
R....2		57.11.3222	2.2 k	1%, 0207, MF					
R....3		57.11.3474	470 k	1%, 0207, MF					
R....4		57.11.3103	10 k	1%, 0207, MF					
R....5		57.11.3103	10 k	1%, 0207, MF					
R....6		57.11.3103	10 k	1%, 0207, MF					
R....7		57.11.5225	2.2 M	5%, 0207, MF					
R....8		57.11.3102	1 k	1%, 0207, MF					
R....9		57.11.3272	2.7 k	1%, 0207, MF					
R....10		57.11.3242	2.4 k	1%, 0207, MF					
R....11		57.11.3103	10 k	1%, 0207, MF					
R....12		57.11.3103	10 k	1%, 0207, MF					
R....13		57.11.3222	2.2 k	1%, 0207, MF					
R....14		57.11.3474	470 k	1%, 0207, MF					
R....15		57.11.3751	750	1%, 0207, MF					
R....16		57.11.3221	220	1%, 0207, MF					
R....17		57.11.3103	10 k	1%, 0207, MF					
R....18		57.11.3272	2.7 k	1%, 0207, MF					
R....19		57.11.3242	2.4 k	1%, 0207, MF					
R....20		57.11.3223	22 k	1%, 0207, MF					
R....21		57.11.3103	10 k	1%, 0207, MF					
R....22		57.11.3473	47 k	1%, 0207, MF					
R....24		57.11.3473	47 k	1%, 0207, MF					
R....26		57.11.3103	10 k	1%, 0207, MF					
R....27		57.11.3223	22 k	1%, 0207, MF					
R....28		57.11.3113	11 k	1%, 0207, MF					
R....29		57.11.3103	10 k	1%, 0207, MF					
R....30		57.11.3113	11 k	1%, 0207, MF					
R....31		57.92.7014	0.460 ohm	650 mA; PTC for Circuit Protection.					
R....32		57.92.7014	0.460 ohm	650 mA; PTC for Circuit Protection.					
R....33		57.11.3103	10 k	1%, 0207, MF					
R....34		57.11.3103	10 k	1%, 0207, MF					
R....35		57.11.3101	100	1%, 0207, MF					
R....36		57.11.3101	100	1%, 0207, MF					
R....37		57.11.3101	100	1%, 0207, MF					
R....38		57.11.3101	100	1%, 0207, MF					
R....39		57.11.3101	100	1%, 0207, MF					
R....40		57.11.3101	100	1%, 0207, MF					
R....41		57.11.3103	10 k	1%, 0207, MF					

(01) Data Lost appearances caused by critical reset performance.
R 48 added, redesign made by cuts and wire wrap connections.

Note 1: in standard version there is a jumper connector, # 54.01.0021, plugged into pin 9 and pin 10.
Note 2: C51 is directly soldered on pin 2 and pin 3 of IC10 on the back-side of the board.
C52 is directly soldered on pin 2 and pin 3 of IC18 on the back-side of the board.

Suffix -21 : There were some changes concerning the layout of the board (18.04.91) and the components plugged on. The new No. of the print is 1.990.190-11 index 1.

Suffix -30 : IC13 and IC14 replaced by Memory Board 1.990.193.00 (04.03.92) Cut 1 trace on PCB, solder 1 connection to PCB (see drawings)

CER=Ceramic, EL=Electrolytic, PETP=Polyester, SAL=Solid Aluminium, Cermet=Ceramic Metal, MF=Metal Film, TA=Tantal.

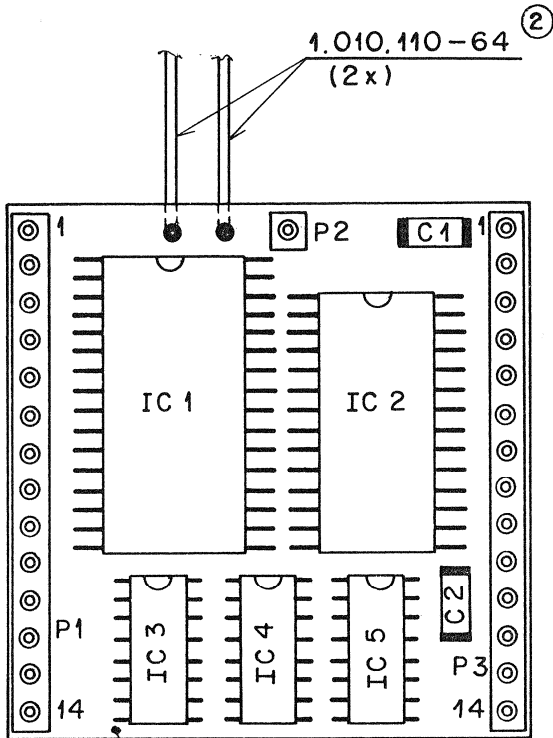
MANUFACTURERS :
Hi = Hitachi
It = Intel
MPS = Micro Power Systems
NEC = Nippon Electric Corporation
Sie = Siemens
St = Studer
To = Toshiba

1.990.190-30 MODULE PROCESSOR BOARD ABB92/03/0400
1.990.190-30 MODULE PROCESSOR BOARD PER92/07/3101



MEMORY BOARD

1.990.193.00



Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

C.....1	59.60.1104	100 N	10%, X7R , CER	
C.....2	59.60.1104	100 N	10%, X7R , CER	
IC....1	50.63.1504	TC551001FL	131.072 Word*8 Bit CMOS SRAM, 100 nS. NEC,To	
IC....2	50.63.1503	HM62256LFP	32.768 Word*8 Bit CMOS SRAM, 100 nS.	
IC....3	50.62.5174	74 AC 174	Hex D-Type FLIP-FLOP with Master Reset.	
IC....4	50.62.5139	74 AC 139	Dual 1-of-4 Decoder/Demultiplexer.	
IC....5	50.62.5139	74 AC 139	Dual 1-of-4 Decoder/Demultiplexer.	
P.....1	53.03.0218	14 * 1	Multi-Terminal Strip.	
P.....2	53.03.0218	1 * 1	Multi-Terminal Pin.	
P.....3	53.03.0218	14 * 1	Multi-Terminal Strip.	

All components are SMD devices.

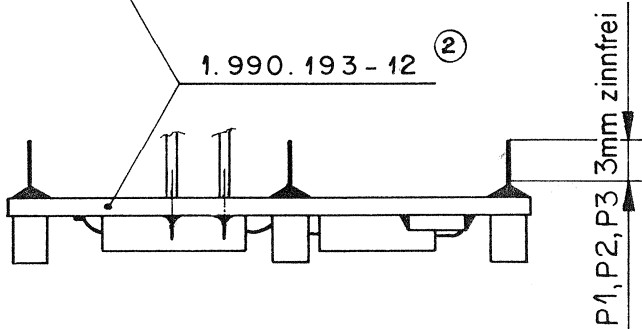
CER=Ceramic.

MANUFACTURERS :

NEC = Nippon Electric Corporation
To = Toshiba

1.990.193-00 MEMORY BOARD

CM91/02/2800

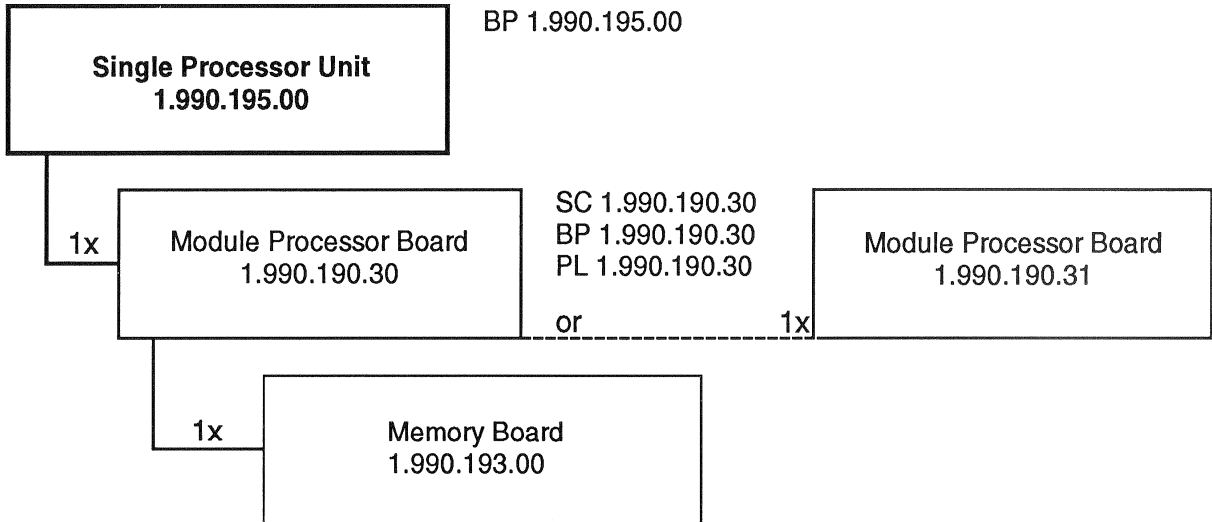


Ausgabe					③
Änderung	11.8.93	<i>Per</i>	<i>Utri</i>	<i>Vp</i>	②
	31.7.92	<i>Per</i>	<i>Vp</i>	<i>Vp</i>	①
Datum	11.10.91	<i>Per</i>	<i>Vp</i>	<i>Vp</i>	①
Kopie für:	Gez.	Gepr.	Ges.	Index	

STUDER REGENSDORF ZÜRICH	MEMORY BOARD	Benennung:
		Nummer: 1.990.193-00

Single Processor Unit

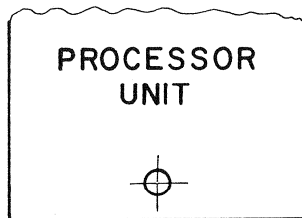
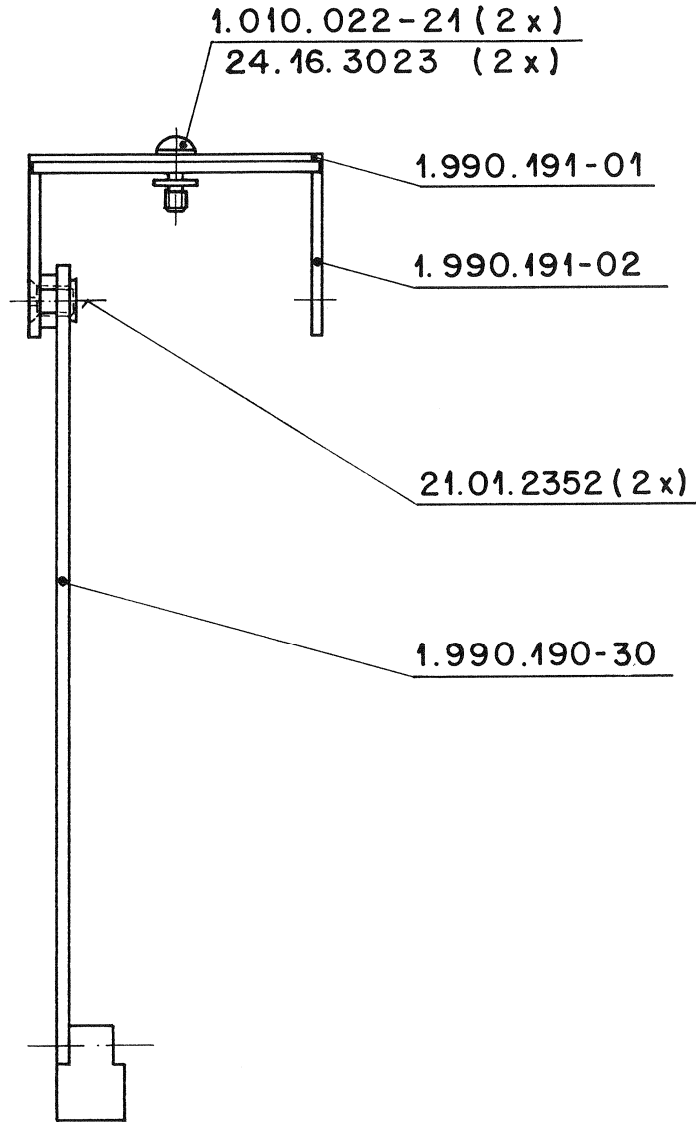
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SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

SINGLE PROCESSOR UNIT

1.990.195.00

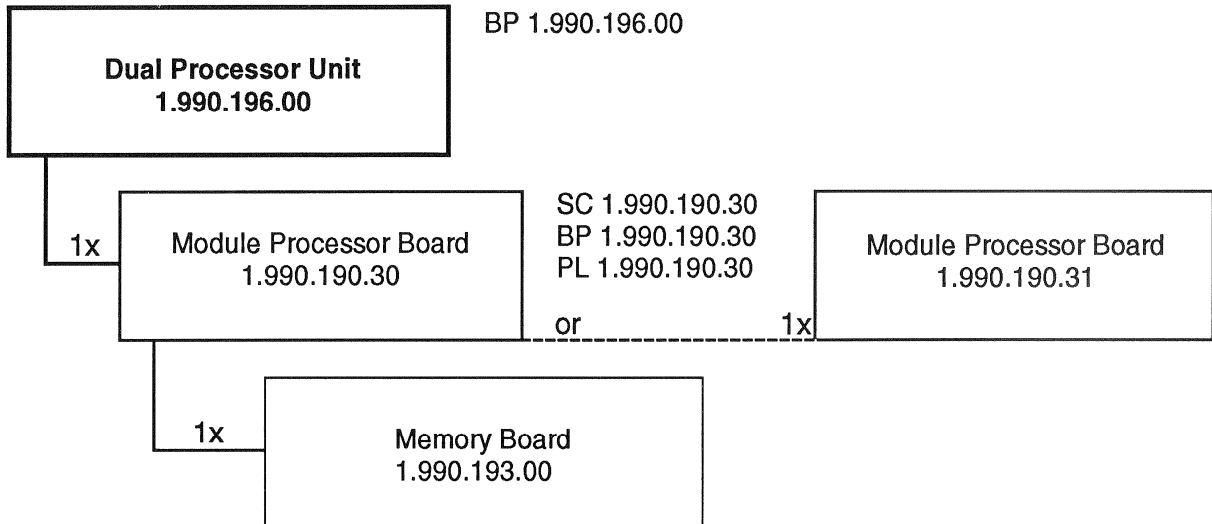


Änderung						3
						2
						1
Ausgabe	4.3.92	Abfall				0
Datum		Gez	Gepr	Ges	Index	
Kopie für:						
STUDER REGENSDORF ZÜRICH						1.990.195-00

Single Processor Unit

Dual Processor Unit

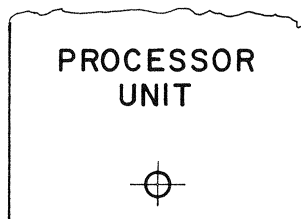
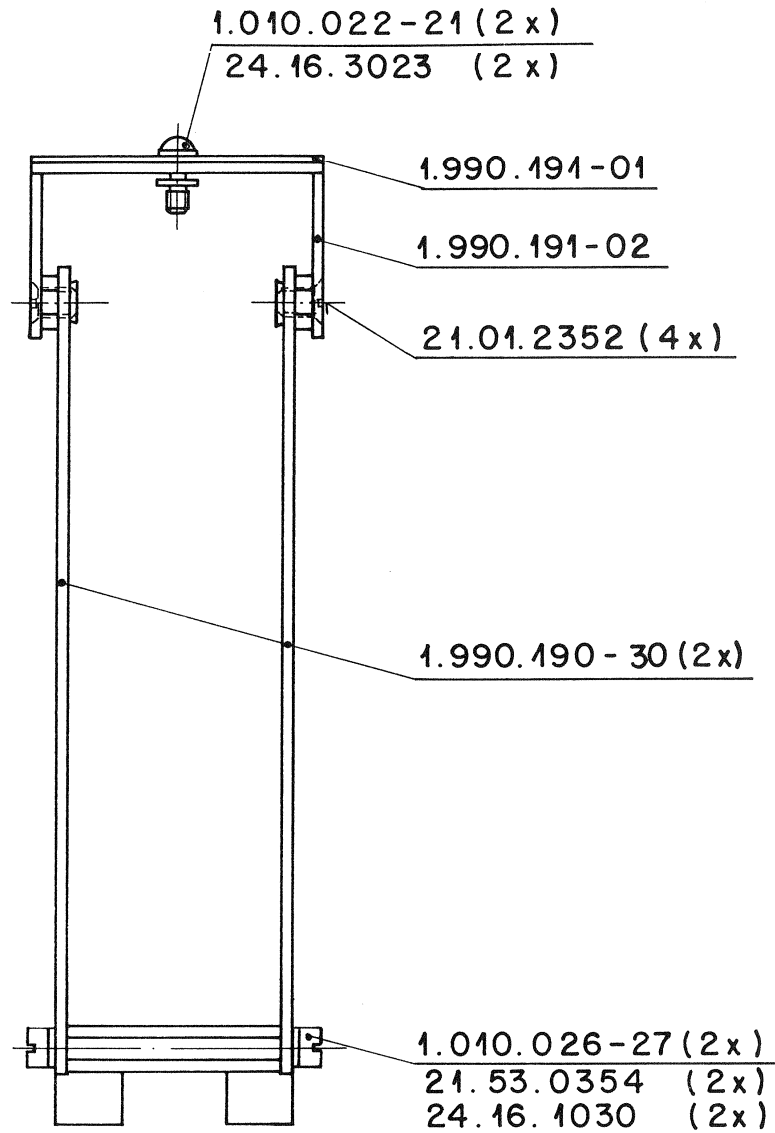
1.990.196.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

DUAL PROCESSOR UNIT

1.990.196.00



Änderung					③
					②
					①
Ausgabe	4.3.92	H. J.	DB	H	④
Datum		Gez.	Gedr.	Ges.	Index

Kopie für:

Nummer:	1.990.196-00
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STUDER REGENSDORF ZÜRICH	Benennung	Dual Processor Unit	Nummer:	1.990.196-00
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Section 4 Input Panel Units

Table of Contents

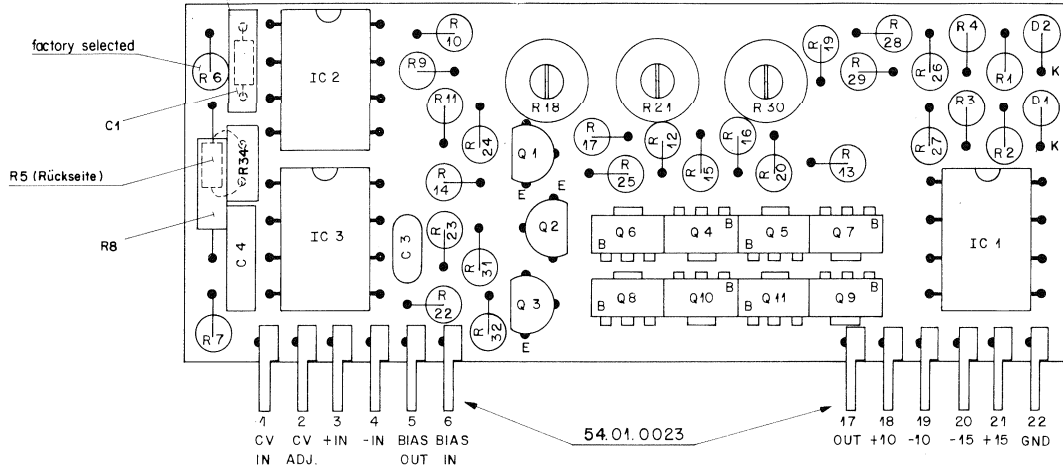
VCA Board Type 2F	1.911.292.00
Mono Input Unit MCH	1.990.210.81
Input Mono Switch Board	1.990.219.00
Input Mono B Switch Board.....	1.990.229.00
Mono Input Unit 'B'	1.990.220.81
Stereo Input Unit Universal MCH	1.990.230.00
Stereo Input Unit HL + EQ MCH	1.990.232.00
Stereo Input Unit MCH	1.990.235.00
Switch Board Stereo	1.990.238.00
Switch Board Stereo	1.990.239.00
Stereo Input Unit Universal 'B'	1.990.240.00
Stereo Input Unit HL + EQ 'B'	1.990.242.00
Stereo Input Unit 'B'	1.990.245.00
Group Unit Mono + EQ MCH	1.990.250.00
Group Unit Mono MCH	1.990.255.00
Switch Board Group.....	1.990.258.00
Switch Board Group.....	1.990.259.00
Group Unit Mono + EQ 'B'	1.990.260.00
Group Unit Mono 'B'	1.990.265.00
Group Unit Stereo + EQ MCH.....	1.990.270.00
Group Unit Stereo MCH	1.990.275.00
Group Unit Stereo + EQ 'B'.....	1.990.280.00
Group Unit Stereo 'B'	1.990.285.00
Side Board EQ + Mic. Amp.....	1.990.288.00
Side Board EQ.....	1.990.289.00
3 POT. 24,6mm Board.....	1.990.291.00
5 POT. 10mm Board.....	1.990.292.00
3 POT. 10mm Board.....	1.990.293.00

STUDER AUDIO CONSOLE 990

2 POT. 24,6mm Board.....	1.990.294.00
5 POT. 10mm Board.....	1.990.295.00
3*5 POT. 24,6mm Board.....	1.990.296.00
6 POT. 10mm Board.....	1.990.297.00
AUX Master Unit.....	1.990.310.00
Filter Board LI.....	1.990.317.00
Filter Board PIN.....	1.990.318.00
AUX Master Switch Board.....	1.990.319.00

VCA-BOARD TYPE 2F

1.911.292.00



Ad .POS. . . . REF.No. . . . DESCRIPTION MANUFACTURER

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C.....1		59.34.4271	270 pF 5% CER	
C.....3		59.99.0236	470 pF 20% CER	
C.....4		59.06.0103	10 nF 20% PE	
D.....1		50.04.1114	10 V zener diode 400mW	any
D.....2		50.04.1112	5.1 V zener diode 400mW	any
IC....1		50.09.0107	RC4559 dual op. amp.	Ra, TI
IC....2		50.09.0101	TL072 dual op. amp. J-FET	Mot, TI
IC....3		50.09.0101	TL072 dual op. amp. J-FET	Mot, TI
Q.....1		1.010.037.50	BC 337 NPN selected	St
Q.....2		1.010.036.50	BC 327 NPN selected	St
Q.....3		1.010.037.50	BC 337 NPN selected	St
Q.....4		50.60.0100	BCX 68 NPN selected	St
Q.....5		50.60.0100	BCX 68 NPN selected	St
Q.....6		50.60.1100	BCX 69 PNP selected	St
Q.....7		50.60.1100	BCX 69 PNP selected	St
Q.....8		50.60.0100	BCX 68 NPN selected	St
Q.....9		50.60.0100	BCX 68 NPN selected	St
Q.....10		50.60.1100	BCX 69 PNP selected	St
Q.....11		50.60.1100	BCX 69 PNP selected	St
R.....1		57.11.3103	10 kOhm 1%	
R.....2		57.11.3103	10 kOhm 1%	
R.....3		57.11.3203	20 kOhm 1%	
R.....4		57.11.3103	10 kOhm	
R.....5		57.11.3304	300 kOhm 1%	
R.....6		57.11.9999	factory selected	
R.....7		57.11.3103	10 kOhm	
R.....8		57.11.3105	1 MOhm	
R.....9		57.11.3203	20 kOhm 1%	
R.....10		57.11.3203	20 kOhm 1%	
R.....11		57.11.3222	2.2 kOhm 1%	
R.....12		57.11.3330	33 Ohm 1%	
R.....13		57.11.3100	10 Ohm 1%	
R.....14		57.11.3222	2.2 kOhm 1%	
R.....15		57.11.3330	33 Ohm 1%	
R.....16		57.11.3100	10 Ohm 1%	
R.....17		57.11.9999	105 Ohm 1%	
R.....18		58.11.6102	1 kOhm variable resistor	
R.....19		57.11.3203	20 kOhm 1%	
R.....20		57.11.3203	20 kOhm 1%	
R.....21		58.11.6503	50 kOhm variable resistor	
R.....22		57.11.3105	1 MOhm	
R.....23		57.11.5106	10 MOhm	
R.....24		57.11.3472	4.7 kOhm 1%	
R.....25		57.11.3622	6.2 kOhm 1%	
R.....26		57.11.3152	1.5 kOhm 1%	
R.....27		57.11.3152	1.5 kOhm 1%	
R.....28		57.11.3102	1 kOhm	
R.....29		57.11.3102	1 kOhm	
R.....30		58.11.6501	500 Ohm variable resistor	
R.....31		57.11.3332	3.3 kOhm 1%	
R.....32		57.11.3332	3.3 kOhm 1%	
R.....33		57.11.3824	820 kOhm 1%	
R.....34		57.99.0220	NTC	St
MP....1		1.911.290.11	1 pcs PCB	St
MP....2		54.01.0023	1 pcs STIFTENLEISTE	

CER=ceramic, PE=polyester,

MANUFACTURER: Mot=Motorola, TI=Texas Instruments, St=Studer

1.911.292.00 VCA BOARD TYPE 2F WY 90.02.1000

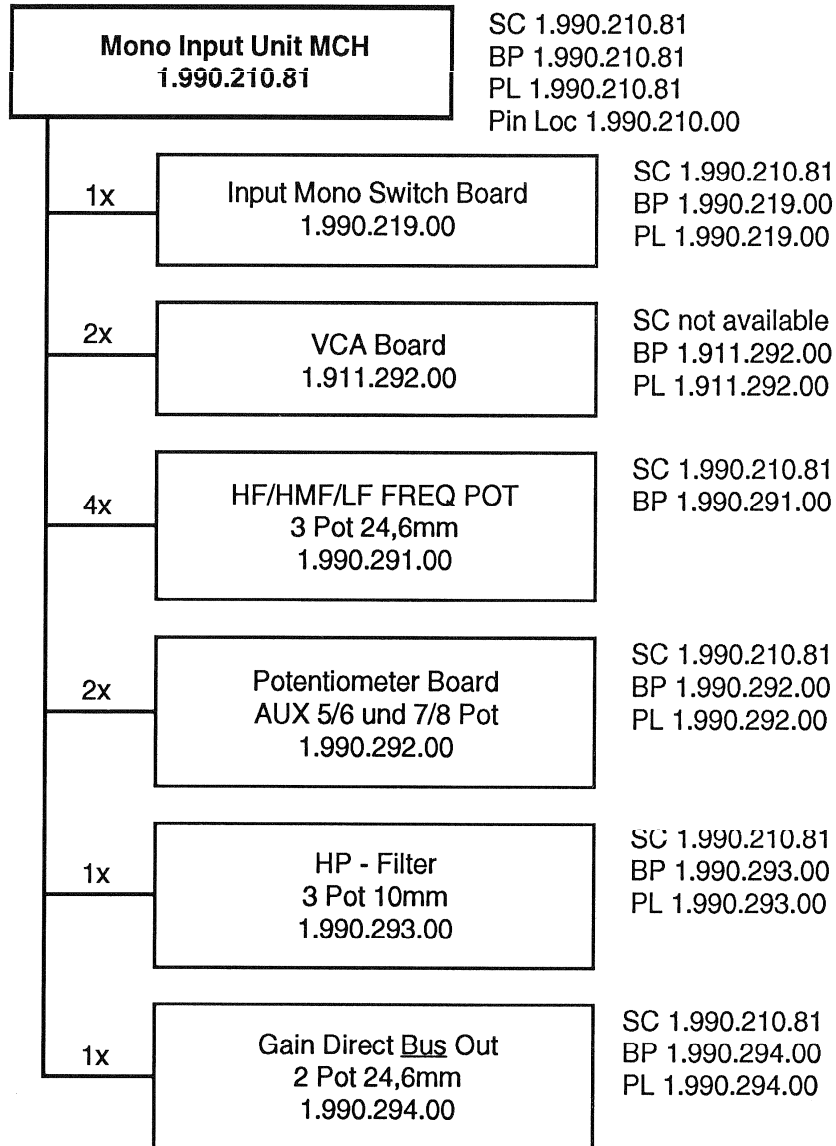
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②				
③				
④	9.2.90	34	11	44
⑤	Datum	Gez.	Gepr.	Ges.
Kopie für				
⑥	Nummer	1.911.292-00		

STUDER
REGENSDORF
ZÜRICH

VCA-Board Type 2F
ESE

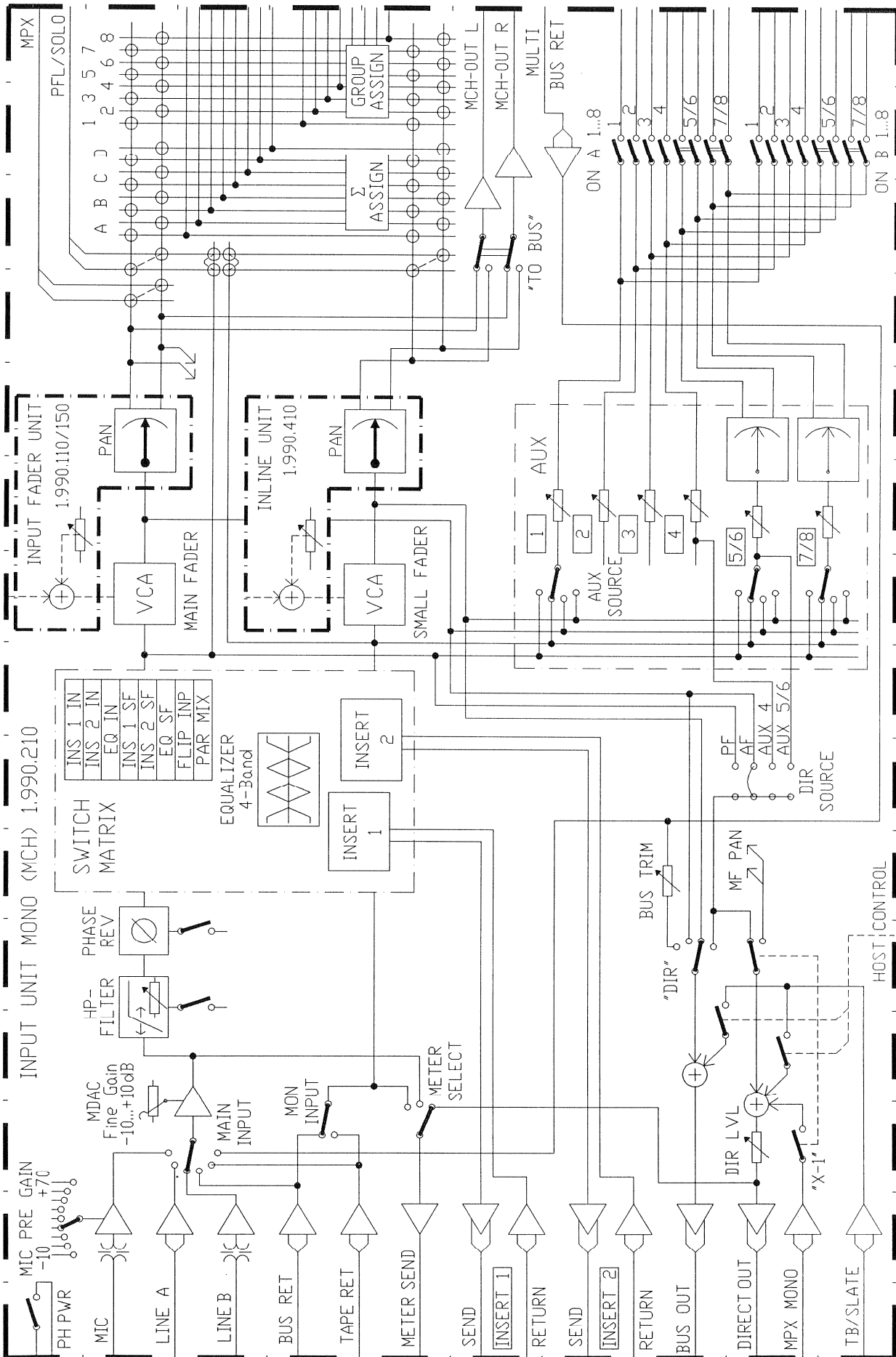
Mono Input Unit MCH

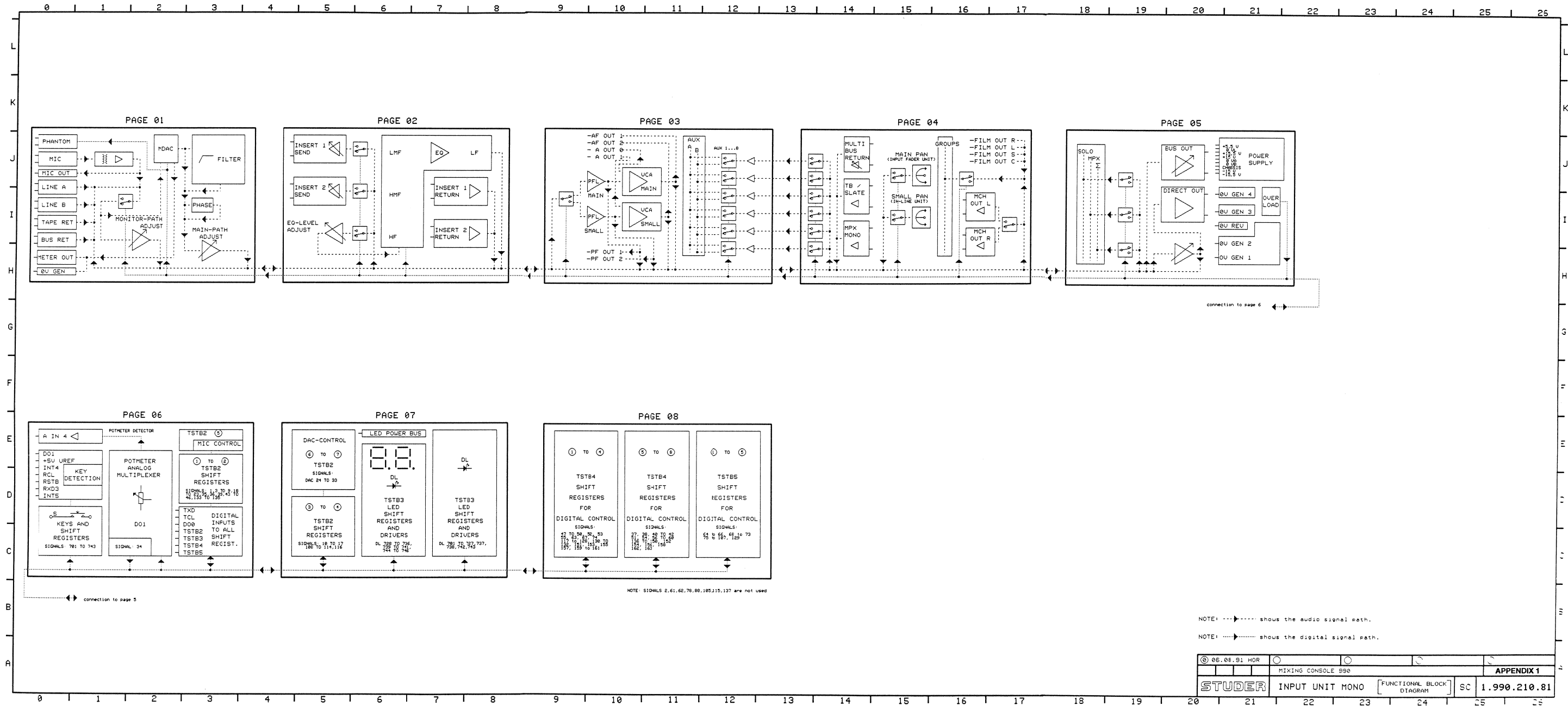
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SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

MONO INPUT UNIT MCH 1.990.210.81

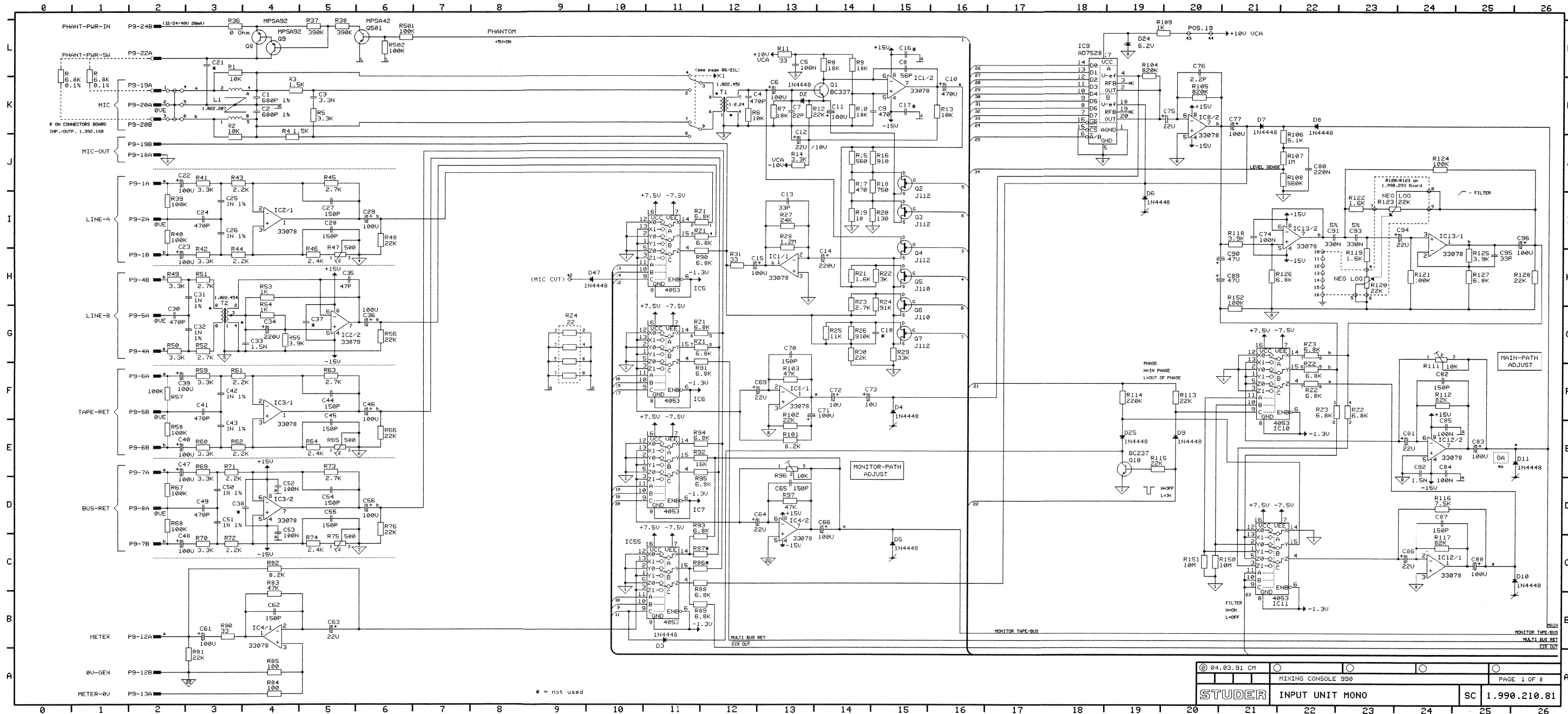




© 06.08.91 HOR	MIXING CONSOLE 990	APPENDIX 1
STUDER	INPUT UNIT MONO	SC 1.990.210.81

INPUT UNIT MONO

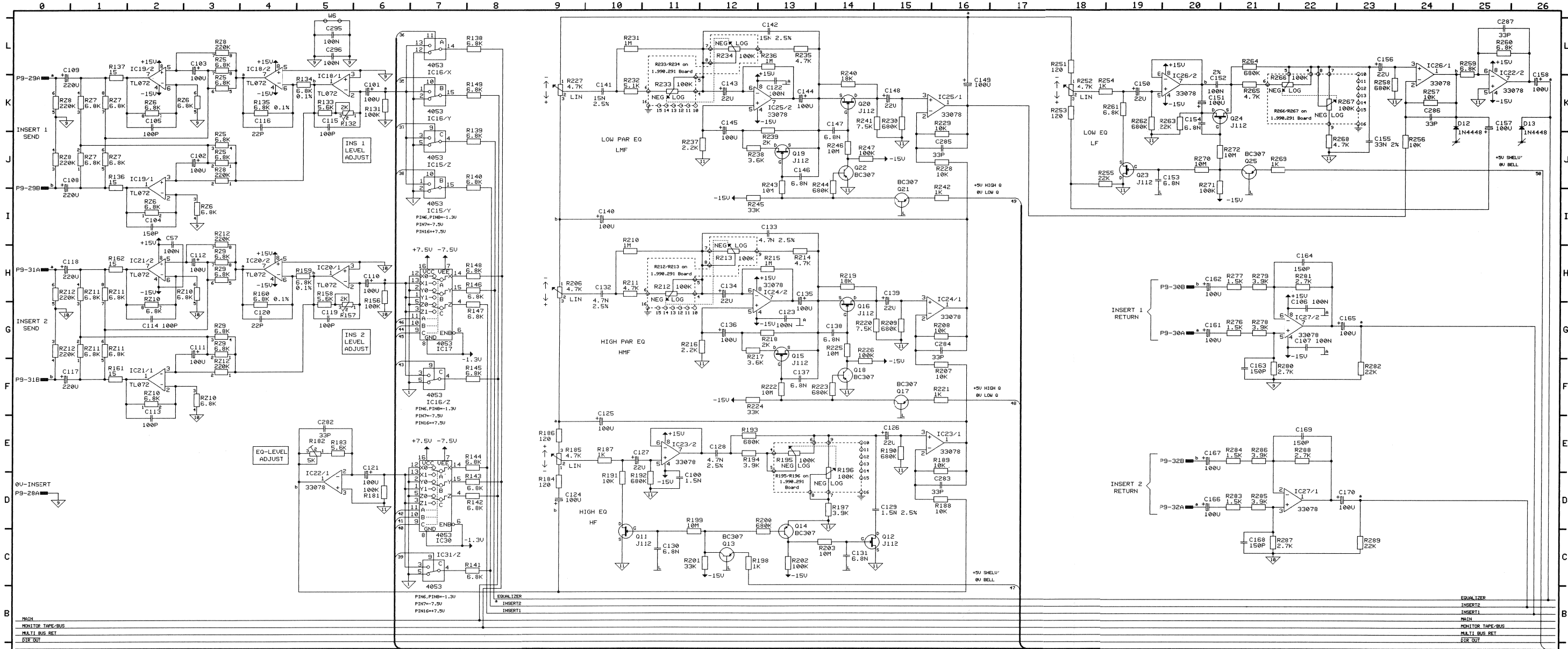
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04.03.91 CM	MIXING CONSOLE 990	PAGE 1 OF 8
STUDER	INPUT UNIT MONO	SC 1.990.210.81

INPUT UNIT MONO

1.990.210.81

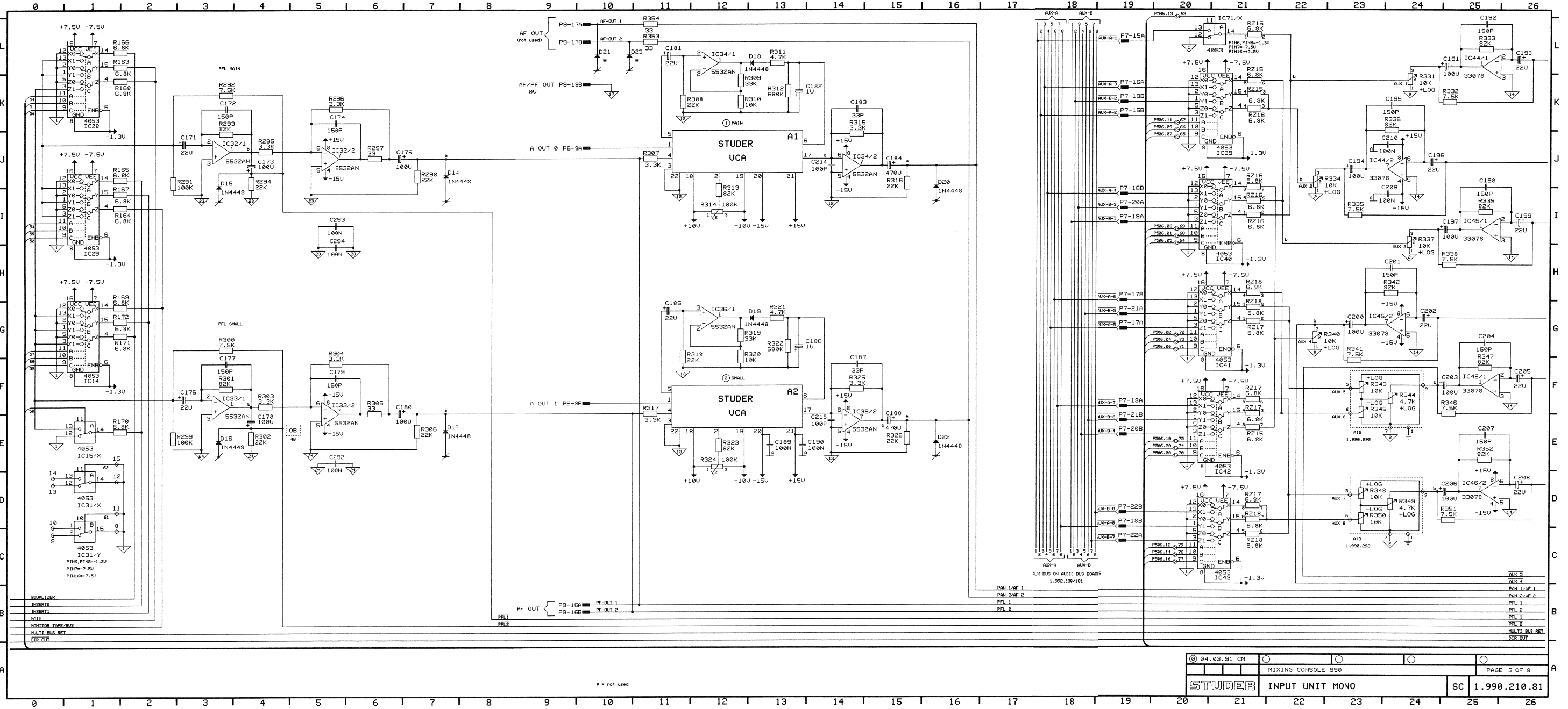


© 04.03.91 CM		MIXING CONSOLE 990		PAGE 2 OF 8	
STUDER		INPUT UNIT MONO		SC 1.990.210.81	

* not used

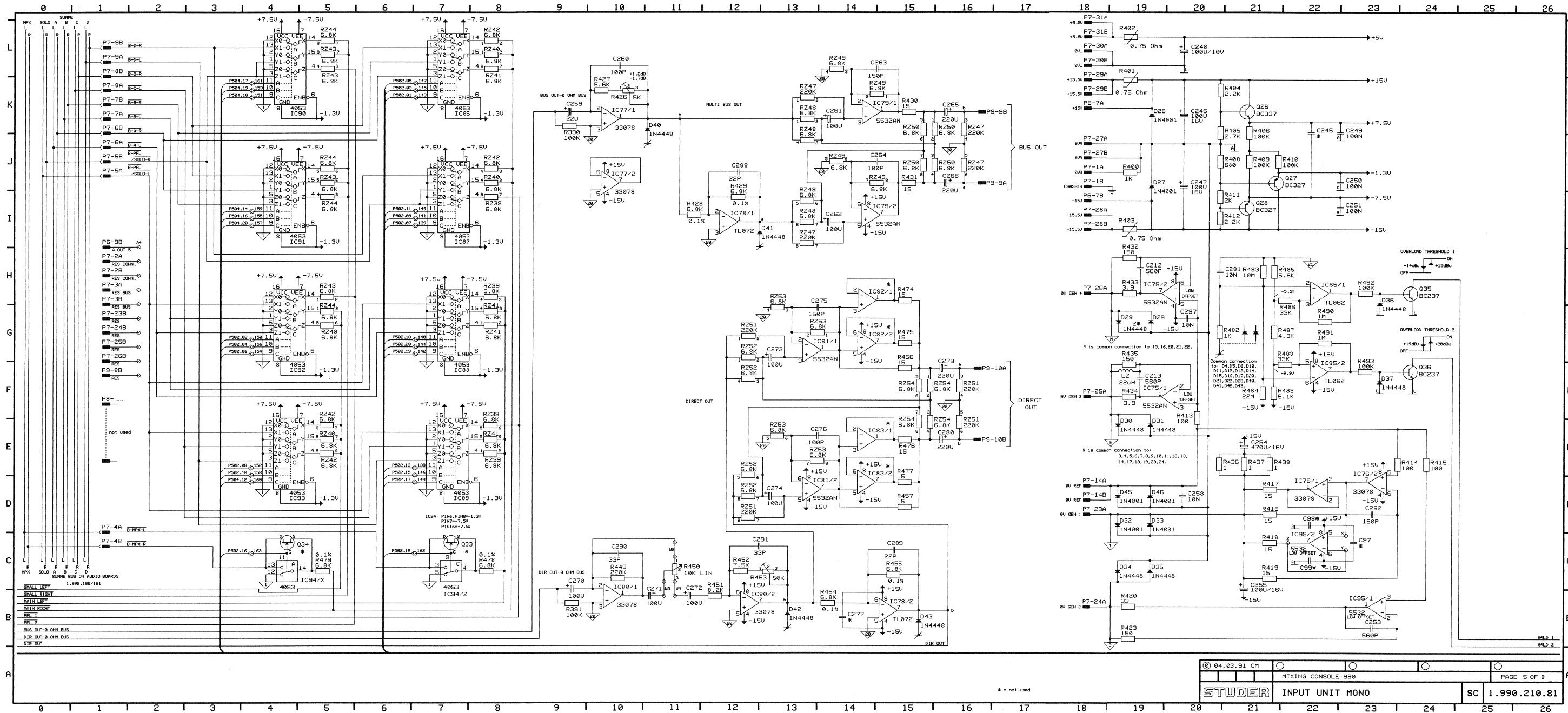
INPUT UNIT MONO

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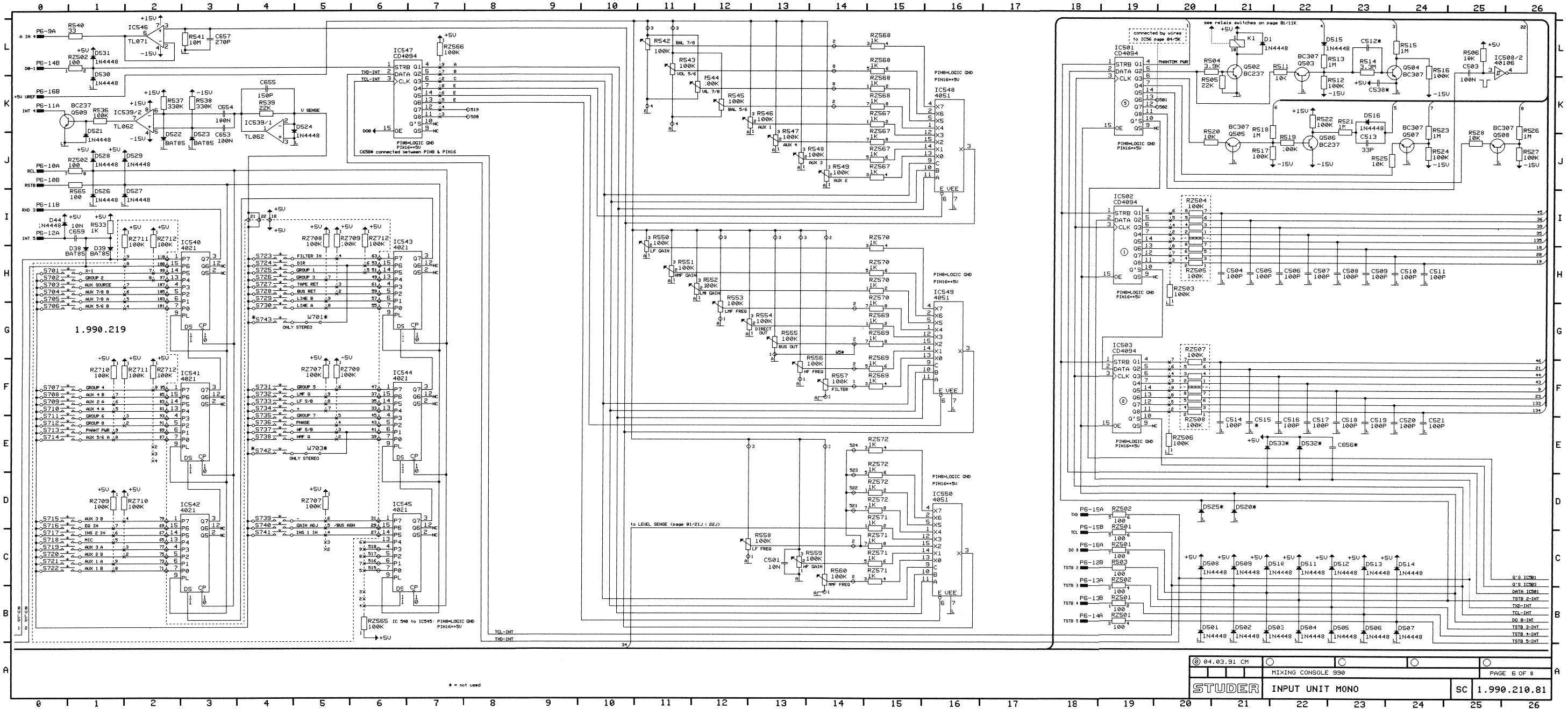
© 04.03.91 CM	MIXING CONSOLE 990	PAGE 3 OF 9
STUDER	INPUT UNIT MONO	SC 1.990.210.81

INPUT UNIT MONO



INPUT UNIT MONO

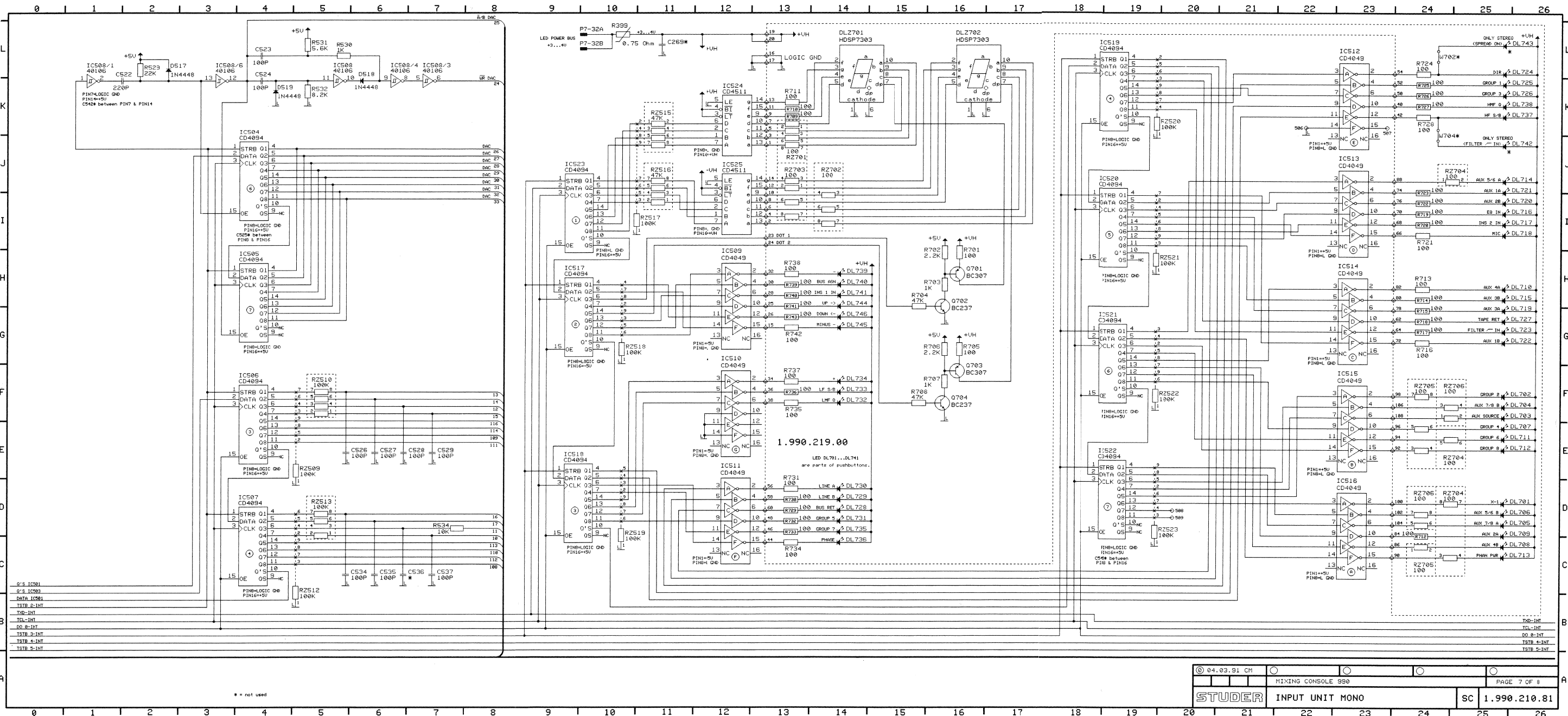
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INPUT UNIT MONO

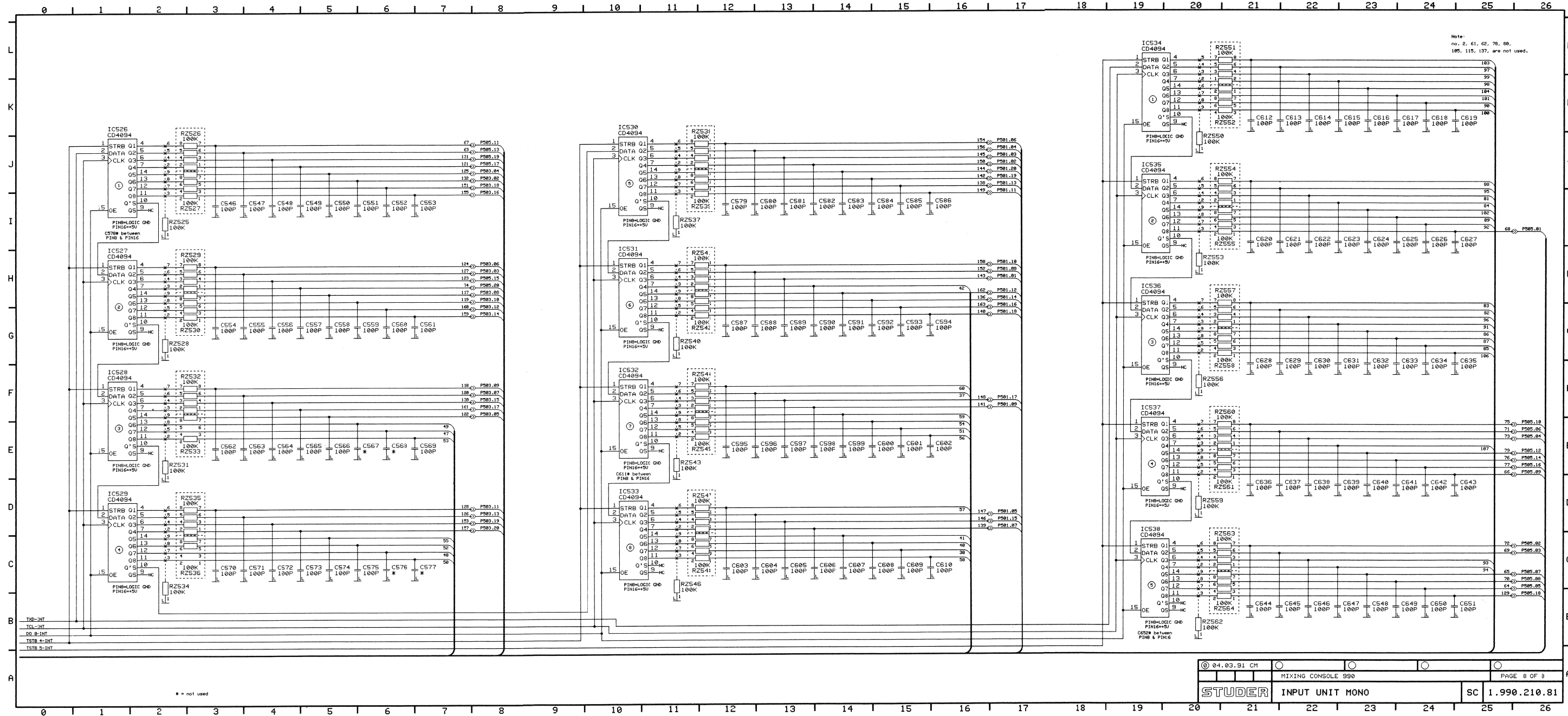
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INPUT UNIT MONO



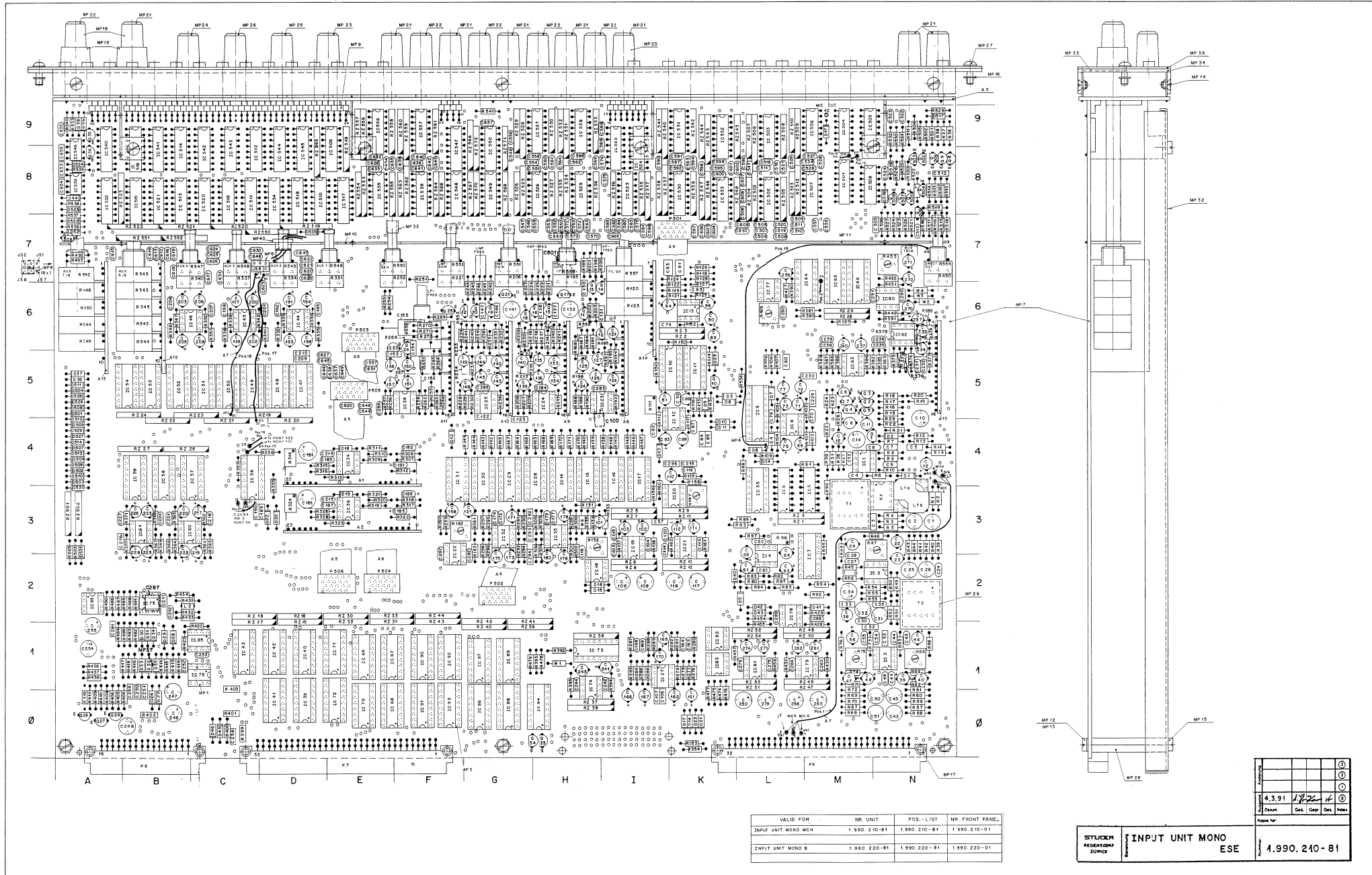
1.990.210.81



INPUT UNIT MONO



1.990.210.81



VALID FOR	NR UNIT	POS.-LIST	NR FRONT PANEL
INPUT UNIT MONO MCH	1.990.210-81	1.990.210-81	1.990.210-01
INPUT UNIT MONO B	1.990.220-81	1.990.220-81	1.990.220-01

STUDER
REPRODUCTION
DIVISION

INPUT UNIT MONO
ESE

1.990.210-81

4.3.91	1/72	1	0
Drawn	Calc	Comp	Check



INPUT UNIT MONO

1.990.210.81

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER								
A.....1	1.911.292.00		VCA-BOARD TYPE 2F	St E4	C.....83	59.22.3101	100 uF	-20%	10V EL	14	C.....181	59.26.1220	22 uF	-20%	10V SAL	F4	C.....278	0	not exist		C.....578	0	not exist	G8	D.....16	50.04.0125	1N4448	any H2				
A.....2	1.911.292.00		VCA-BOARD TYPE 2F	St E3	C.....84	59.06.0104	100 nF		PE	K4	C.....182	59.26.5109	1 uF	-20%	10V SAL	F4	C.....279	59.22.2221	220 uF	-20%	6V EL	L0	C.....579	59.34.1101	100 pF	CE	I7	D.....17	50.04.0125	1N4448	any K0	
A.....3	1.990.219.00		SWITCH BOARD INPUT UNIT	St	C.....85	59.06.0104	100 nF		PE	K4	C.....183	59.34.2330	33 pF	CE	F4	C.....280	59.22.2221	220 uF	-20%	6V EL	L0	C.....580	59.34.1101	100 pF	CE	I7	D.....18	50.04.0125	1N4448	any E4		
A.....4	1.023.402.03		1/40" FLATCABLE CONNECT. 26MM 20POL	St	C.....86	59.22.6220	22 uF	-20%	10V EL	K5	C.....184	59.34.2330	33 pF	CE	F4	C.....281	59.06.5103	10 nF		PE	A1	C.....581	59.34.1101	100 pF	CE	I7	D.....19	50.04.0125	1N4448	any D4		
A.....5	1.023.402.01		1/40" FLATCABLE CONNECT. 12MM 20POL	St	C.....87	59.34.7151	150 pF	2%	CE	K4	C.....184	59.22.3471	470 uF	-20%	10V EL	F3	C.....282	59.34.2330	33 pF	CE	G2	C.....582	59.34.1101	100 pF	CE	I7	D.....20	50.04.0125	1N4448	any E4		
A.....6	1.023.402.04		1/40" FLATCABLE CONNECT. 12MM 20POL	St	C.....88	59.22.3101	100 uF	-20%	10V EL	F3	C.....185	59.26.1220	22 uF	-20%	10V SAL	F3	C.....283	59.34.2330	33 pF	CE	G2	C.....583	59.34.1101	100 pF	CE	I7	D.....21	0	not used	any K0		
A.....7	1.990.210.94	Index 2	CABLE LIST INPUT UNIT MONO	St	C.....89	59.22.3470	47 uF	-20%	10V EL	K6	C.....186	59.26.5109	1 uF	-20%	10V SAL	F3	C.....284	59.34.2330	33 pF	CE	H5	C.....584	59.34.1101	100 pF	CE	I7	D.....22	50.04.0125	1N4448	any D4		
A.....8	1.990.291.00		3 POT. 24.6MM BOARD	St	C.....90	59.22.3101	100 uF	-20%	10V EL	K6	C.....187	59.34.2330	33 pF	CE	D3	C.....285	59.34.2330	33 pF	CE	G5	C.....585	59.34.1101	100 pF	CE	I7	D.....23	0	not used	any K0			
A.....9	1.990.291.00		3 POT. 24.6MM BOARD	St	C.....91	59.06.5334	330 nF	1%	PE	K7	C.....188	59.22.3471	470 uF	-20%	10V EL	D3	C.....286	59.34.2330	33 pF	CE	E5	C.....586	59.34.1101	100 pF	CE	I7	D.....24	50.04.1118	6VZ	Z-DIODE		
A.....10	1.990.291.00		3 POT. 24.6MM BOARD	St	C.....92	59.32.4152	1.5 nF		CE	K5	C.....189	59.06.0104	100 nF		PE	D3	C.....287	59.34.2330	33 pF	CE	F2	C.....587	59.34.1101	100 pF	CE	I7	D.....25	50.04.0125	1N4448	any K5		
A.....11	1.990.291.00		3 POT. 24.6MM BOARD	St	C.....93	59.06.5334	330 nF	1%	PE	L7	C.....190	59.06.0104	100 nF		PE	D3	C.....288	59.34.2330	33 pF	CE	G5	C.....588	59.34.1101	100 pF	CE	I7	D.....26	50.04.0122	1N4001	1A / 50V		
A.....12	1.990.292.00		5 POT. 10MM BOARD	St B6	C.....94	59.22.6220	22 uF	-20%	16V EL	L6	C.....191	59.22.3101	100 uF	-20%	10V EL	D6	C.....289	59.34.2220	22 pF	CE	M2	C.....589	59.34.1101	100 pF	CE	I9	D.....27	50.04.0122	1N4001	1A / 50V		
A.....13	1.990.292.00		5 POT. 10MM BOARD	St A6	C.....95	59.34.2330	53 pF		CE	K6	C.....192	59.34.7151	150 pF	2%	CE	D6	C.....290	59.34.2330	33 pF	CE	N6	C.....590	59.34.1101	100 pF	CE	I8	D.....28	50.04.0125	1N4448	any B1		
A.....14	1.990.293.00		3 POT. 10MM BOARD	St I6	C.....96	59.22.3101	100 uF	-20%	10V EL	K6	C.....193	59.22.6220	22 uF	-20%	16V EL	D6	C.....291	59.34.2330	33 pF	CE	N6	C.....591	59.34.1101	100 pF	CE	I8	D.....29	50.04.0125	1N4448	any B1		
A.....15	1.990.294.00		2 POT. 24.6MM BOARD	St N6	C.....97	0	not used			A7	C.....194	59.22.3101	100 uF	-20%	10V EL	D6	C.....292	59.06.0104	100 nF	PE	G3	C.....592	59.34.1101	100 pF	CE	I8	D.....30	50.04.0125	1N4448	any B1		
C.....1	59.05.1681	680 pF	1% 500V PP	N3	C.....98	0	not used			A7	C.....195	59.34.7151	150 pF	2%	CE	D6	C.....293	59.06.0104	100 nF	PE	G3	C.....593	59.34.1101	100 pF	CE	I8	D.....31	50.04.0122	1N4448	any B1		
C.....2	59.05.1681	680 pF	1% 500V PP	N3	C.....99	59.32.4152	1.5 nF		CE (LS)	H5	C.....197	59.22.3101	100 uF	-20%	10V EL	C6	C.....294	59.06.0104	100 nF	PE	G3	C.....594	59.34.1101	100 pF	CE	I8	D.....32	50.04.0122	1N4001	1A / 50V		
C.....3	59.06.0332	3.3 nF	10% PE	N3	C.....100	0	not used			H5	C.....198	59.34.7151	150 pF	2%	CE	C6	C.....295	59.06.0104	100 nF	PE	K4	C.....595	59.34.1101	100 pF	CE	I8	D.....33	50.04.0122	1N4001	1A / 50V		
C.....4	59.32.2471	470 pF	CE	M4	C.....101	59.22.3101	100 uF	-20%	10V EL	H3	C.....199	59.22.6220	22 uF	-20%	16V EL	C6	C.....296	59.06.0104	100 nF	PE	K4	C.....596	59.34.1101	100 pF	CE	I8	D.....34	50.04.0125	1N4448	any B1		
C.....5	59.06.0104	100 nF	CE	M4	C.....102	59.06.0104	100 nF		PE	H3	C.....200	59.22.3101	100 uF	-20%	10V EL	C6	C.....297	59.06.5103	10 nF	PE (LS)	K8	C.....597	59.34.1101	100 pF	CE	I8	D.....35	50.04.0127	BAT 85	any B1		
C.....6	59.22.3101	100 uF	-20%	10V EL	M4	C.....103	59.22.3101	100 uF	-20%	10V EL	I3	C.....201	59.34.7151	150 pF	2%	CE	D6	C.....301	59.06.5103	10 nF	PE (LS)	N7	C.....598	59.34.1101	100 pF	CE	I8	D.....36	50.04.0125	1N4448	any A5	
C.....7	59.34.2220	22 pF	CE	M4	C.....104	59.34.7151	150 pF	2%	CE	I3	C.....202	59.22.6220	22 uF	-20%	16V EL	D6	C.....302	59.34.1101	100 pF	CE	N7	C.....600	59.34.1101	100 pF	CE	I8	D.....37	50.04.0125	1N4448	any A5		
C.....8	59.34.4550	50 pF	CE	M4	C.....105	59.34.4101	100 pF	CE		I3	C.....203	59.22.3101	100 uF	-20%	10V EL	D6	C.....303	59.06.0104	100 nF	PE	N7	C.....601	59.34.1101	100 pF	CE	I8	D.....38	50.04.0127	BAT 85	any A9		
C.....9	59.34.5471	470 pF	CE	M4	C.....106	59.06.0104	100 nF		PE	I0	C.....204	59.34.7151	150 pF	2%	CE	D6	C.....304	59.34.4101	100 pF	CE	N7	C.....602	59.34.1101	100 pF	CE	I8	D.....39	50.04.0125	1N4448	any A9		
C.....10	59.22.3471	470 pF	-20%	6V EL	M4	C.....107	59.06.0104	100 nF	PE	I0	C.....205	59.22.6220	22 uF	-20%	16V EL	D6	C.....305	59.34.4101	100 pF	CE	L7	C.....603	59.34.1101	100 pF	CE	I8	D.....40	50.04.0125	1N4448	any A2		
C.....11	59.22.3101	100 uF	-20%	10V EL	M4	C.....108	59.22.2221	220 uF	-20%	6V EL	I2	C.....206	59.22.6220	22 uF	-20%	16V EL	D6	C.....306	59.22.3101	100 uF	-20%	10V EL	L7	C.....604	59.34.1101	100 pF	CE	I8	D.....41	50.04.0125	1N4448	any M2
C.....12	59.22.6220	22 uF	-20%	16V EL	M4	C.....109	59.22.3101	100 uF	-20%	10V EL	I2	C.....207	59.34.7151	150 pF	2%	CE	D6	C.....307	59.34.4101	100 pF	CE	L7	C.....605	59.34.1101	100 pF	CE	I8	D.....42	50.04.0125	1N4448	any L2	
C.....13	59.34.2330	33 pF	CE	M4	C.....110	59.22.3101	100 uF	-20%	10V EL	I2	C.....208	59.22.6220	22 uF	-20%	16V EL	D6	C.....308	59.34.4101	100 pF	CE	L7	C.....606	59.34.1101	100 pF	CE	I8	D.....43	50.04.0125	1N4448	any L2		
C.....14	59.22.2221	220 uF	-20%	6V EL	M4	C.....111	59.22.3101	100 uF	-20%	10V EL	K3	C.....209	59.06.0104	100 nF		PE	D5	C.....309	59.34.4101	100 pF	CE	L7	C.....607	59.34.1101	100 pF	CE	I8	D.....44	50.04.0125	1N4448	any A8	
C.....15	59.22.3101	100 uF	-20%	10V EL	M4	C.....112	59.22.3101	100 uF	-20%	10V EL	K3	C.....210	59.06.0104	100 nF		PE	D5	C.....310	59.34.4101	100 pF	CE	L7	C.....608	59.34.1101	100 pF	CE	I8	D.....45	50.04.0122	1N4001	1A / 50V	
C.....16	0	not used		M4	C.....113	59.34.7151	150 pF	2%	CE	I3	C.....211	0	not used			D5	C.....311	59.34.4101	100 pF	CE	L7	C.....609	59.34.1101	100 pF	CE	I8	D.....46	50.04.0122	1N4001	1A / 50V		
C.....17	0	not used		M4	C.....114	59.34.4101	100 pF	CE		I3	C.....212	59.34.5561	560 pF		CE	D5	C.....312	0	not exist		L7	C.....610	59.34.1101	100 pF	CE	I8	D.....47	50.04.0125	1N4448	any M9		
C.....18	0	not used		M4	C.....115	59.34.4101	100 pF	CE		I3	C.....213	59.34.5561	560 pF		CE	D5	C.....313	59.34.2330	33 pF	CE	L8	C.....611	0	not used		I8	D.....501	50.04.0125	1N4448	any A5		
C.....19	0	not exist		M4	C.....116	59.34.2220	22 pF	CE		I3	C.....214	59.34.4101	100 pF	CE	E4	C.....314	59.34.4101	100 pF	CE	N8	C.....612	59.34.4101	100 pF	CE	I8	D.....502	50.04.0125	1N4448	any A4			
C.....20	0	not exist		M4	C.....117	59.22.2221	220 uF	-20%	6V EL	K2	C.....215	59.34.4101	100 pF	CE	E3	C.....315	0	not used		L8	C.....613	59.34.4101	100 pF	CE	I8	D.....503	50.04.0125	1N4448	any A4			
C.....21	0	not used		M4	C.....118	59.22.2221	220 uF	-20%	6V EL	K2	C.....216	59.06.0104	100 nF		PE	E3	C.....316	59.34.4101	100 pF	CE	L8	C.....614	59.34.4101	100 pF	CE	I8	D.....504	50.04.0125	1N4448	any A4		
C.....22	59.22.3101	100 uF	-20%	10V EL	M4	C.....119	59.22.2221	220 uF	-20%	6V EL	K2	C.....217	59.22.6220	22 uF	-20%	16V EL	D6	C.....317	59.34.4101	100 pF	CE	L8	C.....615	59.34.4101	100 pF	CE	I8	D.....505	50.04.0125	1N4448	any A4	
C.....23	59.22.3101	100 uF	-20%	10V EL																												



1.990.210.81

INPUT UNIT MONO

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
R...	355	57.11.3330	33 Ohm	5% 0.25W	R...	451	57.11.3822	8.2 kOhm	1% 0.25W	R...	555	..	100 kOhm	20% lin.	RZ...	532	57.88.2104	100 kOhm	SIP 8 (4*)
R...	356	57.11.3682	6.8 kOhm	1% 0.25W	R...	452	57.11.3752	7.5 kOhm	1% 0.25W	R...	556	..	100 kOhm	20% lin.	RZ...	533	57.88.2104	100 kOhm	SIP 8 (4*)
R...	357	57.11.3682	6.8 kOhm	1% 0.25W	R...	453	58.01.8502	5.0 Ohm	10% 0.25W	R...	557	..	100 kOhm	20% lin.	RZ...	534	57.88.2104	100 kOhm	SIP 9 (8*)
R...	358	..	0	not used	R...	454	57.99.0250	6.8 kOhm	0.1% 0.25W	R...	558	..	100 kOhm	20% lin.	RZ...	535	57.88.2104	100 kOhm	SIP 8 (4*)
R...	359	..	0	not exist	R...	455	57.99.0250	6.8 kOhm	0.1% 0.25W	R...	559	..	100 kOhm	20% lin.	RZ...	536	57.88.2104	100 kOhm	SIP 8 (4*)
R...	360	57.11.3104	100 kOhm	1% 0.25W	R...	456	57.11.3150	15 Ohm	1% 0.25W	R...	560	..	100 kOhm	20% lin.	RZ...	537	57.88.2104	100 kOhm	SIP 9 (8*)
R...	361	57.11.3752	7.5 kOhm	1% 0.25W	R...	457	57.11.3150	15 Ohm	1% 0.25W	R...	561	..	0	not exist	RZ...	538	57.88.2104	100 kOhm	SIP 8 (4*)
R...	362	57.11.3822	8.2 kOhm	1% 0.25W	R...	458	..	0	not exist	R...	562	..	0	not exist	RZ...	539	57.88.2104	100 kOhm	SIP 8 (4*)
R...	363	57.11.3682	6.8 kOhm	1% 0.25W	R...	459	..	0	not exist	R...	563	..	0	not exist	RZ...	540	57.88.2104	100 kOhm	SIP 9 (8*)
R...	364	57.11.3752	7.5 kOhm	1% 0.25W	R...	460	..	0	not exist	R...	564	..	0	not exist	RZ...	541	57.88.2104	100 kOhm	SIP 8 (4*)
R...	365	57.11.3822	8.2 kOhm	1% 0.25W	R...	461	..	0	not exist	R...	565	57.11.3101	100 Ohm	5% 0.25W	RZ...	542	57.88.2104	100 kOhm	SIP 8 (4*)
R...	366	57.11.3222	22 kOhm	5% 0.25W	R...	462	..	0	not exist	RZ...	511	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	543	57.88.2104	100 kOhm	SIP 9 (8*)
R...	367	57.11.3752	7.5 kOhm	1% 0.25W	R...	463	..	0	not exist	RZ...	512	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	544	57.88.2104	100 kOhm	SIP 8 (4*)
R...	368	57.11.3822	8.2 kOhm	1% 0.25W	R...	464	..	0	not exist	RZ...	513	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	545	57.88.2104	100 kOhm	SIP 8 (4*)
R...	369	57.11.3222	22 kOhm	5% 0.25W	R...	465	..	0	not exist	RZ...	514	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	546	57.88.2104	100 kOhm	SIP 9 (8*)
R...	370	57.11.3752	7.5 kOhm	1% 0.25W	R...	466	..	0	not exist	RZ...	515	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	547	57.88.2104	100 kOhm	SIP 8 (4*)
R...	371	57.11.3822	8.2 kOhm	1% 0.25W	R...	467	..	0	not exist	RZ...	516	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	548	57.88.2104	100 kOhm	SIP 8 (4*)
R...	372	..	0	not exist	R...	468	..	0	not exist	RZ...	517	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	549	..	0	not exist
R...	373	57.11.3332	3.3 kOhm	1% 0.25W	R...	469	..	0	not exist	RZ...	518	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	550	57.88.2104	100 kOhm	SIP 9 (8*)
R...	374	57.11.3332	3.3 kOhm	1% 0.25W	R...	470	..	0	not exist	RZ...	519	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	551	57.88.2104	100 kOhm	SIP 8 (4*)
R...	375	57.11.3332	3.3 kOhm	1% 0.25W	R...	471	..	0	not exist	RZ...	520	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	552	57.88.2104	100 kOhm	SIP 8 (4*)
R...	376	57.11.3332	3.3 kOhm	1% 0.25W	R...	472	..	0	not exist	RZ...	521	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	553	57.88.2104	100 kOhm	SIP 9 (8*)
R...	377	57.11.3392	3.9 kOhm	1% 0.25W	R...	473	..	0	not exist	RZ...	522	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	554	57.88.2104	100 kOhm	SIP 8 (4*)
R...	378	57.11.3103	10 kOhm	1% 0.25W	R...	474	57.11.3150	15 Ohm	1% 0.25W	RZ...	523	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	555	57.88.2104	100 kOhm	SIP 9 (8*)
R...	379	10 kOhm	10% 1 in.	R555 1.010.026.58 ON A15 St	R...	475	57.11.3150	15 Ohm	1% 0.25W	RZ...	524	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	556	57.88.2104	100 kOhm	SIP 9 (8*)
R...	380	57.11.3682	6.8 kOhm	1% 0.25W	R...	476	57.11.3150	15 Ohm	1% 0.25W	RZ...	525	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	557	57.88.2104	100 kOhm	SIP 8 (4*)
R...	381	57.11.3682	6.8 kOhm	1% 0.25W	R...	477	57.99.0250	6.8 kOhm	0.1% 0.25W	RZ...	526	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	558	57.88.2104	100 kOhm	SIP 8 (4*)
R...	382	57.11.3513	51 kOhm	1% 0.25W	R...	478	57.99.0250	6.8 kOhm	0.1% 0.25W	RZ...	527	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	559	57.88.2104	100 kOhm	SIP 8 (4*)
R...	383	57.11.3513	51 kOhm	1% 0.25W	R...	479	57.99.0250	6.8 kOhm	0.1% 0.25W	RZ...	528	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	560	57.88.2104	100 kOhm	SIP 8 (4*)
R...	384	57.11.3513	51 kOhm	1% 0.25W	R...	480	..	0	not exist	RZ...	529	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	561	57.88.2104	100 kOhm	SIP 8 (4*)
R...	385	57.11.3513	51 kOhm	1% 0.25W	R...	481	..	0	not exist	RZ...	530	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	562	57.88.2104	100 kOhm	SIP 9 (8*)
R...	386	57.11.3513	51 kOhm	1% 0.25W	R...	482	57.11.3102	1 kOhm	5% 0.25W	RZ...	531	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	563	57.88.2104	100 kOhm	SIP 8 (4*)
R...	387	57.11.3513	51 kOhm	1% 0.25W	R...	483	57.11.3103	10 kOhm	5% 0.25W	RZ...	532	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	564	57.88.2104	100 kOhm	SIP 8 (4*)
R...	388	57.11.3513	51 kOhm	1% 0.25W	R...	484	57.11.6226	22 MOhm	10% 0.25W	RZ...	533	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	565	57.88.2104	100 kOhm	SIP 9 (8*)
R...	389	57.11.3513	51 kOhm	1% 0.25W	R...	485	57.11.3682	6.8 kOhm	1% 0.25W	RZ...	534	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	566	57.88.2104	100 kOhm	SIP 9 (8*)
R...	390	57.11.3104	100 kOhm	5% 0.25W	R...	486	57.11.3682	6.8 kOhm	1% 0.25W	RZ...	535	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	567	57.88.2104	100 kOhm	SIP 8 (4*)
R...	391	57.11.3104	100 kOhm	5% 0.25W	R...	487	57.11.3332	3.3 kOhm	1% 0.25W	RZ...	536	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	568	57.88.2102	1 kOhm	SIP 8 (4*)
R...	392	57.11.3682	6.8 kOhm	1% 0.25W	R...	488	57.11.3333	3.3 kOhm	5% 0.25W	RZ...	537	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	569	57.88.2102	1 kOhm	SIP 8 (4*)
R...	393	57.11.3682	6.8 kOhm	1% 0.25W	R...	489	57.11.3512	5.1 kOhm	1% 0.25W	RZ...	538	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	570	57.88.2102	1 kOhm	SIP 8 (4*)
R...	394	57.11.3330	33 Ohm	5% 0.25W	R...	490	57.11.3105	1 kOhm	5% 0.25W	RZ...	539	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	571	57.88.2102	1 kOhm	SIP 8 (4*)
R...	395	57.11.3330	33 Ohm	5% 0.25W	R...	491	57.11.3105	1 kOhm	5% 0.25W	RZ...	540	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	572	57.88.2102	1 kOhm	SIP 8 (4*)
R...	396	..	0	not exist	R...	492	57.11.3104	100 kOhm	5% 0.25W	RZ...	541	..	0	not exist	RZ...	573	57.88.2102	1 kOhm	SIP 8 (4*)
R...	397	57.11.3682	6.8 kOhm	1% 0.25W	R...	493	57.11.3104	100 kOhm	5% 0.25W	RZ...	542	..	0	not exist	RZ...	574	57.88.2102	1 kOhm	SIP 8 (4*)
R...	398	..	0	not exist	R...	501	57.11.3104	100 kOhm	5% 0.25W	RZ...	543	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	575	57.88.2102	1 kOhm	SIP 8 (4*)
R...	399	57.92.7013	0.75 Ohm	1 WOLD = 0.5A	R...	502	57.11.3104	100 kOhm	5% 0.25W	RZ...	544	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	576	57.88.2102	1 kOhm	SIP 8 (4*)
R...	400	57.11.3102	1 kOhm	5% 0.25W	R...	503	57.11.3101	100 Ohm	5% 0.25W	RZ...	545	..	0	not exist	RZ...	577	57.88.2102	1 kOhm	SIP 8 (4*)
R...	401	57.92.7013	0.75 Ohm	1 WOLD = 0.5A	R...	504	57.11.3392	3.9 kOhm	5% 0.25W	RZ...	546	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	578	57.88.2102	1 kOhm	SIP 8 (4*)
R...	402	57.92.7013	0.75 Ohm	1 WOLD = 0.5A	R...	505	57.11.3223	22 kOhm	5% 0.25W	RZ...	547	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	579	57.88.2102	1 kOhm	SIP 8 (4*)
R...	403	57.92.7013	0.75 Ohm	1 WOLD = 0.5A	R...	506	57.11.3103	10 kOhm	5% 0.25W	RZ...	548	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	580	57.88.2102	1 kOhm	SIP 8 (4*)
R...	404	57.11.3222	2.2 kOhm	5% 0.25W	R...	507	..	0	not exist	RZ...	549	..	0	not exist	RZ...	581	57.88.2102	1 kOhm	SIP 8 (4*)
R...	405	57.11.3272	2.7 kOhm	5% 0.25W	R...	508	..	0	not exist	RZ...	550	..	0	not exist	RZ...	582	57.88.2102	1 kOhm	SIP 8 (4*)
R...	406	57.11.3104	100 kOhm	5% 0.25W	R...	509	..	0	not exist	RZ...	551	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	583	57.88.2102	1 kOhm	SIP 8 (4*)
R...	407	..	0	not exist	R...	510	..	0	not exist	RZ...	552	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	584	57.88.2102	1 kOhm	SIP 8 (4*)
R...	408	57.11.3681	680 Ohm	5% 0.25W	R...	511	57.11.3103	10 kOhm	5% 0.25W	RZ...	553	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...	585	57.88.2102	1 kOhm	SIP 8 (4*)
R...	409	57.11.3104	100 kOhm	5% 0.25W	R...	512	57.11.3104	100 kOhm	5% 0.25W	RZ...	554	57.88.2682	6.8 kOhm	2% SIP 8 (4*)	RZ...				

Pin location list

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ALSO USED FOR		-INPUT UNIT MONO B		1.990.220
P	NO	NAME	REMARK	
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				B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC -----
P6	01A	OVA BAL/PAN1	GROUND SIGN PAN 1 (BAL)	0
P6	01B	B-L/PAN1-IN	PAN 1 IN (MAIN) (BAL LEFT IN)	0
P6	02A	B/PAN1-OUT-L	PAN 1 OUT LEFT (BAL OUT LEFT)	0
P6	02B	B/PAN1-OUT-R	PAN 1 OUT RIGHT (BAL OUT RIGHT)	0
P6	03A	OVA PAN2	GROUND SIGN PAN 2	0
P6	03B	B-R/PAN2-IN	PAN 2 IN (SMALL) (BAL RIGHT IN)	0
P6	04A	PAN2-OUT-L	PAN 2 OUT LEFT (BAL RIGHT IN-B)	0
P6	04B	PAN2-OUT-R	PAN 2 OUT RIGHT (C OUT)	0
P6	05A	FILM-OUT-L	OPTIONAL OUTPUT LEFT	0
P6	05B	FILM-OUT-R	OPTIONAL OUTPUT RIGHT	0
P6	06A	FILM-OUT-C	OPTIONAL OUTPUT	0
P6	06B	FILM-OUT-S	OPTIONAL OUTPUT	0
P6	07A	+ 15V	+ SUPPLY TO FADER UNIT	0
P6	07B	- 15V	- SUPPLY TO FADER UNIT	0
P6	08A	A OUT 0	INPUT ; FROM MCU ANALOG OUT 0	0
P6	08B	A OUT 1	INPUT ; FROM MCU ANALOG OUT 1	0
P6	09A	A IN 4	OUTPUT ; TO MCU ANALOG IN 4	0
P6	09B	A OUT 5	INPUT ; FROM MCU ANALOG OUT 5	0
P6	10A	RCL	RECEIVE CLOCK	0
P6	10B	RSTB	RECEIVE STROBE	0
P6	11A	INT 4	INTERUPT 4	0
P6	11B	RXD 3	RECEIVE DATA 3	0
P6	12A	INT 5	INTERUPT 5	0
P6	12B	TSTB 2	TRANSMIT STROBE 2	0
P6	13A	TSTB 3	TRANSMIT STROBE 3	0
P6	13B	TSTB 4	TRANSMIT STROBE 4	0
P6	14A	TSTB 5	TRANSMIT STROBE 5	0
P6	14B	DO 1	DATA OUT 1 (TRANSMIT STROBE 8)	0
P6	15A	TXD	TRANSMIT DATA	0
P6	15B	TCL	TRANSMIT CLOCK	0
P6	16A	DO 0	DATA OUT 0 (ENABLE)	0
P6	16B	UREF	+ 5V REFERENCE	0
P7	01A	0V-B	GROUND AUDIO (PIN)	0
P7	01B	CHASSIS	METAL FRAME	B
P7	02A	-	RES	0
P7	02B	-	RES	0
P7	03A	-	RES LEFT	B
P7	03B	-	RES RIGHT	B
P7	04A	B-MPX-L	MPX LEFT ; 0-OHM BUS	B,I
P7	04B	B-MPX-R	MPX RIGHT ; 0-OHM BUS	B,I
P7	05A	B-PFL/SOLO-L	PFL/SOLO LEFT ; 0-OHM BUS	B,I
P7	05B	B-PFL/SOLO-R	PFL/SOLO RIGHT ; 0-OHM BUS	B,I
P7	06A	B-A-L	MASTER A LEFT ; 0-OHM BUS	B,I
P7	06B	B-A-R	MASTER A RIGHT ; 0-OHM BUS	B,I
P7	07A	B-B-L	MASTER B LEFT ; 0-OHM BUS	B,I
P7	07B	B-B-R	MASTER B RIGHT ; 0-OHM BUS	B,I
P7	08A	B-C-L	MASTER C LEFT ; 0-OHM BUS	B,I
P7	08B	B-C-R	MASTER C RIGHT ; 0-OHM BUS	B,I
P7	09A	B-D-L	MASTER D LEFT ; 0-OHM BUS	B,I
P7	09B	B-D-R	MASTER D RIGHT ; 0-OHM BUS	B,I
P7	10A	B-GR-1	GROUP 1 ; 0-OHM BUS	B,I

Pin location list

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P7	10B	B-GR-2	GROUP 2	; 0-OHM BUS	B,I	
P7	11A	B-GR-3	GROUP 3	; 0-OHM BUS	B,I	
P7	11B	B-GR-4	GROUP 4	; 0-OHM BUS	B,I	
P7	12A	B-GR-5	GROUP 5	; 0-OHM BUS	B,I	
P7	12B	B-GR-6	GROUP 6	; 0-OHM BUS	B,I	
P7	13A	B-GR-7	GROUP 7	; 0-OHM BUS	B,I	
P7	13B	B-GR-8	GROUP 8	; 0-OHM BUS	B,I	
P7	14	OV-REF	OV REFERENCE		B	X X
P7	15A	B-AUX-A-1	AUX A-1	; 0-OHM BUS	B,I	
P7	15B	B-AUX-A-2	AUX A-2	; 0-OHM BUS	B,I	
P7	16A	B-AUX-A-3	AUX A-3	; 0-OHM BUS	B,I	
P7	16B	B-AUX-A-4	AUX A-4	; 0-OHM BUS	B,I	
P7	17A	B-AUX-A-5	AUX A-5	; 0-OHM BUS	B,I	
P7	17B	B-AUX-A-6	AUX A-6	; 0-OHM BUS	B,I	
P7	18A	B-AUX-A-7	AUX A-7	; 0-OHM BUS	B,I	
P7	18B	B-AUX-A-8	AUX A-8	; 0-OHM BUS	B,I	
P7	19A	B-AUX-B-1	AUX B-1	; 0-OHM BUS	B,I	
P7	19B	B-AUX-B-2	AUX B-2	; 0-OHM BUS	B,I	
P7	20A	B-AUX-B-3	AUX B-3	; 0-OHM BUS	B,I	
P7	20B	B-AUX-B-4	AUX B-4	; 0-OHM BUS	B,I	
P7	21A	B-AUX-B-5	AUX B-5	; 0-OHM BUS	B,I	
P7	21B	B-AUX-B-6	AUX B-6	; 0-OHM BUS	B,I	
P7	22A	B-AUX-B-7	AUX B-7	; 0-OHM BUS	B,I	
P7	22B	B-AUX-B-8	AUX B-8	; 0-OHM BUS	B,I	
P7	23A	OV GEN 1	GROUND AUDIO GENERIERT 1		0	
P7	23B	-	N.C. (STEREO)		0	
P7	24A	OV GEN 2	GROUND AUDIO GENERIERT 2		0	
P7	24B	-	N.C. (STEREO)		0	
P7	25A	OV GEN 3	GROUND AUDIO GENERIERT 3		0	
P7	25B	-	N.C. (STEREO)		0	
P7	26A	OV GEN 4	GROUND AUDIO GENERIERT 4		0	
P7	26B	-	N.C. (STEREO)		0	
P7	27	OV-A	GROUND AUDIO		B	
P7	28	- 15.5V	- SUPPLY		B	X X
P7	29	+ 15.5V	+ SUPPLY		B	X X
P7	30	OV-L	GROUND SIGN (LOGIC)		B	X X
P7	31	+ 5.5V	+ SUPPLY		B	X X
P7	32	+3...4V LED	LED SUPPLY VARIABLE +3...4V		B	X X
P9	01A	LINE-A-a	LINE INPUT A (LEFT) a		S,0	
P9	01B	LINE-A-b	LINE INPUT A (LEFT) b		S,0	
P9	02A	LINE-A-OVE	LINE INPUT A GROUND EXTERN		0	
P9	02B	-	N.C. (STEREO)		0	
P9	03A	-	N.C. (STEREO)		0	
P9	03B	-	N.C. (STEREO)		0	
P9	04A	LINE-B-a	LINE INPUT B (LEFT) a		S,0	
P9	04B	LINE-B-b	LINE INPUT B (LEFT) b		S,0	
P9	05A	LINE-B-OVE	LINE INPUT B GROUND EXTERN		0	
P9	05B	TAPE-RET-OVE	TAPE RETURN INPUT GROUND EXTERN		0	
P9	06A	TAPE-RET-a	TAPE RETURN INPUT a		S,0	
P9	06B	TAPE-RET-b	TAPE RETURN INPUT b		S,0	
P9	07A	BUS-RET-a	BUS RETURN INPUT a		S,0	
P9	07B	BUS-RET-b	BUS RETURN INPUT b		S,0	
P9	08A	BUS-RET-OVE	BUS RETURN INPUT GROUND EXTERN		0	
P9	08B	-	RES		0	
P9	09A	BUS-OUT-a	BUS OUTPUT a		S,0	
P9	09B	BUS-OUT-b	BUS OUTPUT b		S,0	
P9	10A	DIR-OUT-a	DIRECT OUT (LEFT) a		S,0	
P9	10B	DIR-OUT-b	DIRECT OUT (LEFT) b		S,0	
P9	11A	-	N.C. (STEREO)		0	
P9	11B	-	N.C. (STEREO)		0	

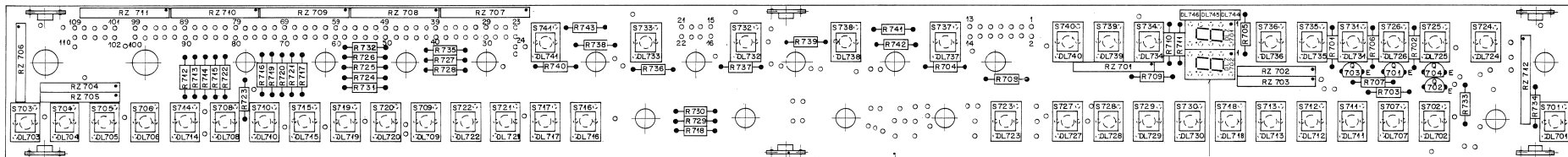
Pin location list

1.990.210

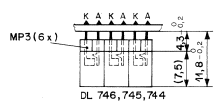
P9	12A	METER	METER (LEFT)	AS,0
P9	12B	OV-GEN	GROUND AUDIO GENERIERT (22)	0
P9	13A	METER-OV	METER GROUND	0
P9	13B	-	N.C. (STEREO)	0
P9	14A	MCH-OUT-L-a	TO EURO 32CH BUS SELECTOR LEFT a	S,0
P9	14B	MCH-OUT-L-b	TO EURO 32CH BUS S. LEFT b (GND)	S,0
P9	15A	MCH-OUT-R-a	TO EURO 32CH BUS SELECTOR RIGHT a	S,0
P9	15B	MCH-OUT-R-b	TO EURO 32CH BUS S. RIGHT b (GND)	S,0
P9	16A	PF-OUT-1	PRE FADER OUT MAIN	AS,0
P9	16B	PF-OUT-2	PRE FADER OUT SMALL	AS,0
P9	17A	AF-OUT-1	AFTER FADER OUT MAIN	AS,0
P9	17B	AF-OUT-2	AFTER FADER OUT SMALL	AS,0
P9	18A	MIC-OUT-OV	MIC OUTPUT (LEFT) GROUND GENERIERT	0
P9	18B	AF/PF-OUT-OV	AF/PF OUT GROUND GENERIERT	0
P9	19A	MIC-a	MIC INPUT (LEFT) a	S,0
P9	19B	MIC-OUT	MIC OUTPUT (LEFT)	AS
P9	20A	MIC-OVE	MIC (LEFT) GROUND EXTERN	0
P9	20B	MIC-b	MIC INPUT (LEFT) b	S,0
P9	21A	-	N.C. (STEREO)	0
P9	21B	-	N.C. (STEREO)	0
P9	22A	PHANT-PWR-SW	PHANTOM SUPPLY SWITCHED	0
P9	22B	-	N.C. (STEREO)	0
P9	23A	MLT-BUS-RET-a	MULTI BUS RETURN a	S,0
P9	23B	MLT-BUS-RET-b	MULTI BUS RETURN b	S,0
P9	24A	TB/SLATE-a	TALK BACK / SLATE INPUT a	S,B
P9	24B	PHANT-PWR-IN	PHANTOM SUPPLY BUS IN	B
P9	25A	MPX-MONO-a	MPX INPUT MONO a	S,B
P9	25B	TB/SLATE-b	TALK BACK / SLATE INPUT b	S,B
P9	26A	-	N.C. (STEREO)	B
P9	26B	MPX-MONO-b	MPX INPUT MONO b	S,B
P9	27A	-	N.C. (STEREO)	B
P9	27B	-	N.C. (STEREO)	B
P9	28A	INS-OV	INSERT GROUND	0
P9	28B	-	N.C. (STEREO)	B
P9	29A	INS-SEND-1-a	SYM INSERT MAIN OUTPUT a	S,0
P9	29B	INS-SEND-1-b	SYM INSERT MAIN OUTPUT b	S,0
P9	30A	INS-RET -1-a	SYM INSERT MAIN INPUT a	S,0
P9	30B	INS-RET -1-b	SYM INSERT MAIN INPUT b	S,0
P9	31A	INS-SEND-2-a	SYM INSERT SMALL OUTPUT a	S,0
P9	31B	INS-SEND-2-b	SYM INSERT SMALL OUTPUT b	S,0
P9	32A	INS-RET -2-a	SYM INSERT SMALL INPUT a	S,0
P9	32B	INS-RET -2-b	SYM INSERT SMALL INPUT b	S,0

INPUT MONO SWITCH BOARD

1.990.219.00 / 1.990.229.00



VALID FOR	NR. UNIT	NR. POS. LIST
INPUT MONO MCH SWITCH BOARD	1.990.219-00	1.990.219-00
INPUT MONO B SWITCH BOARD	1.990.229-00	1.990.229-00



STUDER REGENSDORF ZÜRICH	INPUT MONO SWITCH BOARD	1.990.219-00
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Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
DL..701	-	red	see S701		Q...701	50.03.0515	BC 307	PNP	IC-100mA, B-100	any	R...741	57.11.3101	100 Ohm	5% 0.25W	S...731	55.15.0604	1 * A	yel/trans.	(GROUP 5)	
DL..702	-	yel	see S702		Q...702	50.03.0436	BC 237	MPN	IC-100mA, B-100	any	R...742	57.11.3101	100 Ohm	5% 0.25W	S...732	55.15.0605	1 * A	grn/trans.	(LMF ; 0)	
DL..703	-	yel	see S703		Q...703	50.03.0515	BC 307	PNP	IC-100mA, B-100	any	R...743	57.11.3101	100 Ohm	5% 0.25W	S...733	55.15.0605	1 * A	grn/trans.	(LF ; S/B)	
DL..704	-	grn	see S704		Q...704	50.03.0436	BC 237	MPN	IC-100mA, B-100	any	RZ..701	57.88.2101	100 Ohm	SIP 8 (4*)	S...734	55.15.0655	1 * A	grn/grn	(+)	
DL..705	-	grn	see S705		R...701	57.11.3101	100 Ohm	5% 0.25W			RZ..702	57.88.2101	100 Ohm	SIP 8 (4*)	S...735	55.15.0604	1 * A	yel/trans.	(GROUP 5)	
DL..706	-	grn	see S706		R...702	57.11.3222	2.2 kOhm	5% 0.25W			RZ..703	57.88.2101	100 Ohm	SIP 8 (4*)	S...736	55.15.0605	1 * A	grn/trans.	(PHASE)	
DL..707	-	yel	see S707		R...703	57.11.3102	1 kOhm	5% 0.25W			RZ..704	57.88.2101	100 Ohm	SIP 8 (4*)	S...737	55.15.0605	1 * A	grn/trans.	(HF ; S/B)	
DL..708	-	grn	see S708		R...704	57.11.3473	47 kOhm	5% 0.25W			RZ..705	57.88.2101	100 Ohm	SIP 8 (4*)	S...738	55.15.0605	1 * A	grn/trans.	(HME ; 0)	
DL..709	-	yel	see S709		R...705	57.11.3101	100 Ohm	5% 0.25W			RZ..706	57.88.2101	100 Ohm	SIP 8 (4*)	S...739	55.15.0655	1 * A	grn/grn	(-)	
DL..710	-	yel	see S710		R...706	57.11.3222	2.2 kOhm	5% 0.25W			RZ..707	57.88.4104	100 Ohm	SIP 9 (8*)	S...740	55.15.0644	1 * A	yel/yel	(SHIFT)	
DL..711	-	yel	see S711		R...707	57.11.3102	1 kOhm	5% 0.25W			RZ..708	57.88.4104	100 Ohm	SIP 9 (8*)	S...741	55.15.0622	1 * A	red/red	(INS 1 IN)	
DL..712	-	yel	see S712		R...708	57.11.3473	47 kOhm	5% 0.25W			RZ..709	57.88.4104	100 Ohm	SIP 9 (8*)	S...742	-	-	not used		
DL..713	-	grn	see S713		R...709	57.11.3101	100 Ohm	5% 0.25W			RZ..710	57.88.4104	100 Ohm	SIP 9 (8*)	S...743	-	-	not used		
DL..714	-	yel	see S714		R...710	57.11.3101	100 Ohm	5% 0.25W			RZ..711	57.88.4104	100 Ohm	SIP 9 (8*)	S...744	-	-	not used		
DL..715	-	yel	see S715		R...711	57.11.3101	100 Ohm	5% 0.25W			RZ..712	57.88.4104	100 Ohm	SIP 9 (8*)	K...701	-	-	not used		
DL..716	-	red	see S716		R...712	57.11.3101	100 Ohm	5% 0.25W			S...701	55.15.0602	1 * A	red/trans.	(X-1)	K...702	-	-	not used	
DL..717	-	red	see S717		R...713	57.11.3101	100 Ohm	5% 0.25W			S...702	55.15.0604	1 * A	yel/trans.	(GROUP 1)	K...703	-	-	not used	
DL..718	-	red	see S718		R...714	57.11.3101	100 Ohm	5% 0.25W			S...703	55.15.0644	1 * A	yel/yel	SHIFT AUX	K...704	-	-	not used	
DL..719	-	yel	see S719		R...715	57.11.3101	100 Ohm	5% 0.25W			S...704	55.15.0605	1 * A	grn/trans.	AUX7/8 ON B					
DL..720	-	grn	see S720		R...716	57.11.3101	100 Ohm	5% 0.25W			S...705	55.15.0604	1 * A	yel/trans.	AUX7/8 ON A					
DL..721	-	yel	see S721		R...717	57.11.3101	100 Ohm	5% 0.25W			S...706	55.15.0605	1 * A	grn/trans.	AUX5/6 ON B					
DL..722	-	grn	see S722		R...718	57.11.3101	100 Ohm	5% 0.25W			S...707	55.15.0604	1 * A	yel/trans.	AUX4 ON B					
DL..723	-	red	see S723		R...719	57.11.3101	100 Ohm	5% 0.25W			S...708	55.15.0605	1 * A	grn/trans.	AUX4 ON A					
DL..724	-	red	see S724		R...720	57.11.3101	100 Ohm	5% 0.25W			S...709	55.15.0604	1 * A	yel/trans.	AUX2 ON A					
DL..725	-	yel	see S725		R...721	57.11.3101	100 Ohm	5% 0.25W			S...710	55.15.0604	1 * A	yel/trans.	AUX4 ON A					
DL..726	-	red	see S726		R...722	57.11.3101	100 Ohm	5% 0.25W			S...711	55.15.0604	1 * A	yel/trans.	(GROUP 6)					
DL..727	-	red	see S727		R...723	57.11.3101	100 Ohm	5% 0.25W			S...712	55.15.0604	1 * A	yel/trans.	(GROUP 8)					
DL..728	-	red	see S728		R...724	57.11.3101	100 Ohm	5% 0.25W			S...713	55.15.0605	1 * A	grn/trans.	PHANT PWR					
DL..729	-	red	see S729		R...725	57.11.3101	100 Ohm	5% 0.25W			S...714	55.15.0604	1 * A	yel/trans.	(AUX5/6 ON A)					
DL..730	-	red	see S730		R...726	57.11.3101	100 Ohm	5% 0.25W			S...715	55.15.0605	1 * A	grn/trans.	AUX3 ON B					
DL..731	-	yel	see S731		R...727	57.11.3101	100 Ohm	5% 0.25W			S...716	55.15.0622	1 * A	red/red	EQ 1M					
DL..732	-	grn	see S732		R...728	57.11.3101	100 Ohm	5% 0.25W			S...717	55.15.0622	1 * A	red/red	(INS 2 IN)					
DL..733	-	grn	see S733		R...729	57.11.3101	100 Ohm	5% 0.25W			S...718	55.15.0602	1 * A	red/trans.	MIC					
DL..734	-	grn	see S734		R...730	57.11.3101	100 Ohm	5% 0.25W			S...719	55.15.0604	1 * A	yel/trans.	AUX3 ON A					
DL..735	-	yel	see S735		R...731	57.11.3101	100 Ohm	5% 0.25W			S...720	55.15.0605	1 * A	grn/trans.	AUX2 ON B					
DL..736	-	grn	see S736		R...732	57.11.3101	100 Ohm	5% 0.25W			S...721	55.15.0604	1 * A	yel/trans.	(AUX1 ON A)					
DL..737	-	grn	see S737		R...733	57.11.3101	100 Ohm	5% 0.25W			S...722	55.15.0605	1 * A	yel/trans.	(AUX1 ON B)					
DL..738	-	grn	see S738		R...734	57.11.3101	100 Ohm	5% 0.25W			S...723	55.15.0622	1 * A	red/red	FILTER IN					
DL..739	-	grn	see S739		R...735	57.11.3101	100 Ohm	5% 0.25W			S...724	55.15.0602	1 * A	red/trans.	BUS DIR					
DL..740	-	yel	see S740		R...736	57.11.3101	100 Ohm	5% 0.25W			S...725	55.15.0604	1 * A	red/trans.	(BUS RET)					
DL..741	-	red	see S741		R...737	57.11.3101	100 Ohm	5% 0.25W			S...726	55.15.0604	1 * A	yel/trans.	(GROUP 3)					
DL..742	-	not used			R...738	57.11.3101	100 Ohm	5% 0.25W			S...727	55.15.0602	1 * A	red/trans.	(TAPE RET)					
DL..743	-	not used			R...739	57.11.3101	100 Ohm	5% 0.25W			S...728	55.15.0602	1 * A	red/trans.	(BUS RET)					
DL..744	50.04.2701	MW 57123	red		R...740	57.11.3101	100 Ohm	5% 0.25W			S...729	55.15.0602	1 * A	red/trans.	(LINE B)					
DL..745	50.04.2701	MW 57123	red								S...730	55.15.0602	1 * A	red/trans.	(LINE A)					
DL..746	50.04.2701	MW 57123	red																	
DLZ.701	73.01.0128	H05P7303	7-segment display common cathode	HP																
DLZ.702	73.01.0128	H05P7303	7-segment display common cathode	HP																
MP..701	1.990.219.11	1 pcs	Input Mono PCB																	
MP..702	1.990.100.05	6 pcs	Querschnittlar																	
MP..703	53.03.0218	26 pcs	single line socket																	
MP..704	1.990.219.04	1 pcs	Nr. Etiketle 5*20																	

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol
 MANUFACTURER: Bu=Burdury, Ex=Exar, Fc=Fairchild, GI=General Instrument, HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=National (Metzschette), NS=National Semiconductor, Ph=Philips, Ra=Raytheon, Sig=Signetics, Six=Siliconix, St=Studer, TI=Texas Instrument

1.990.219.00 INPUT MONO SWITCH BOARD TA 90/03/2600

SECTION 4

STUDER AUDIO CONSOLE 990

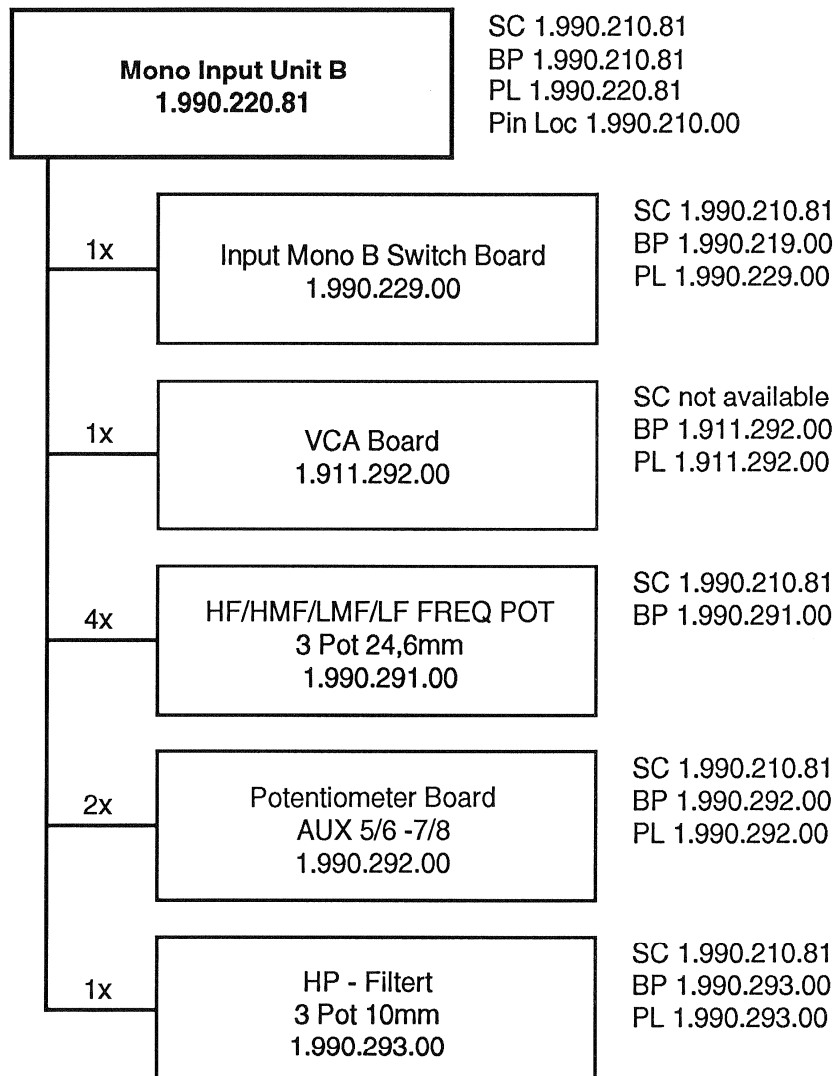
INPUT MONO B SWITCH BOARD

1.990.229.00

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
DL..701	.	.	red	see S701	R...741	57.11.3101	100 Ohm	5% 0.25W	
DL..702	.	.	yel	see S702	R...742	57.11.3101	100 Ohm	5% 0.25W	
DL..703	.	.	yel	see S703	R...743	57.11.3101	100 Ohm	5% 0.25W	
DL..704	.	.	grn	see S704	RZ..701	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..705	.	.	yel	see S705	RZ..702	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..706	.	.	grn	see S706	RZ..703	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..707	.	.	yel	see S707	RZ..704	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..708	.	.	grn	see S708	RZ..705	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..709	.	.	yel	see S709	RZ..706	57.88.2101	100 Ohm	SIP 8 (4*)	
DL..710	.	.	yel	see S710	RZ..707	57.88.4104	100 kOhm	SIP 9 (8*)	
					RZ..708	57.88.4104	100 kOhm	SIP 9 (8*)	
DL..711	.	.	yel	see S711	RZ..709	57.88.4104	100 kOhm	SIP 9 (8*)	
DL..712	.	.	yel	see S712	RZ..710	57.88.4104	100 kOhm	SIP 9 (8*)	
DL..713	.	.	grn	see S713	RZ..711	57.88.4104	100 kOhm	SIP 9 (8*)	
DL..714	.	.	yel	see S714	RZ..712	57.88.4104	100 kOhm	SIP 9 (8*)	
DL..715	.	.	grn	see S715	S...701	55.15.0602	1 * A	red/trans. (X-1)	
DL..716	.	.	red	see S716	S...702	55.15.0604	1 * A	yel/trans. (GROUP 1)	
DL..717	.	.	red	see S717	S...703	55.15.0644	1 * A	yel/yel RES	
DL..718	.	.	red	see S718	S...704	55.15.0605	1 * A	grn/trans. AUX7/8 PRE	
DL..719	.	.	yel	see S719	S...705	55.15.0604	1 * A	yel/trans. AUX7/8 OM	
DL..720	.	.	grn	see S720	S...706	55.15.0605	1 * A	grn/trans. AUX5/6 PRE	
					S...707	55.15.0604	1 * A	yel/trans. (GROUP 6)	
DL..721	.	.	yel	see S721	S...708	55.15.0605	1 * A	grn/trans. AUX4 PRE	
DL..722	.	.	grn	see S722	S...709	55.15.0604	1 * A	yel/trans. AUX2 OM	
DL..723	.	.	red	see S723	S...710	55.15.0604	1 * A	yel/trans. AUX4 OM	
DL..724	.	.	not used		S...711	55.15.0604	1 * A	yel/trans. (GROUP 6)	
DL..725	.	.	yel	see S725	S...712	55.15.0604	1 * A	yel/trans. (GROUP 6)	
DL..726	.	.	yel	see S726	S...713	55.15.0605	1 * A	grn/trans. (PHANT PWK)	
DL..727	.	.	not used		S...714	55.15.0604	1 * A	yel/trans. AUX5/6 OM	
DL..728	.	.	not used		S...715	55.15.0605	1 * A	grn/trans. AUX5 PRE	
DL..729	.	.	red	see S729	S...716	55.15.0622	1 * A	red/red (EQ IN)	
DL..730	.	.	red	see S730	S...717	55.15.0622	1 * A	red/red (INS IN)	
					S...718	55.15.0602	1 * A	red/trans. (MIC)	
DL..731	.	.	yel	see S731	S...719	55.15.0604	1 * A	yel/trans. (AUX3 OM)	
DL..732	.	.	grn	see S732	S...720	55.15.0605	1 * A	grn/trans. (AUX2 PRE)	
DL..733	.	.	grn	see S733	S...721	55.15.0604	1 * A	yel/trans. (AUX1 OM)	
DL..734	.	.	grn	see S734	S...722	55.15.0605	1 * A	grn/trans. AUX1 PRE	
DL..735	.	.	yel	see S735	S...723	55.15.0622	1 * A	red/red (FILTER IN)	
DL..736	.	.	grn	see S736	S...724	55.15.0604	1 * A	yel/trans. (GROUP 1)	
DL..737	.	.	grn	see S737	S...725	55.15.0604	1 * A	yel/trans. (GROUP 1)	
DL..738	.	.	grn	see S738	S...726	55.15.0604	1 * A	yel/trans. (GROUP 3)	
DL..739	.	.	grn	see S739	S...727	.	.	not used	
DL..740	.	.	yel	see S740	S...728	.	.	not used	
					S...729	55.15.0602	1 * A	red/trans. (LINE B)	
DL..741	.	.	grn	see S741	S...730	55.15.0602	1 * A	red/trans. (LINE A)	
DL..742	.	.	not used		S...731	55.15.0604	1 * A	yel/trans. (GROUP 6)	
DL..743	.	.	not used		S...732	55.15.0605	1 * A	grn/trans. (LNF ; Q)	
DL..744	50.04.2701	NW 57123	red		S...733	55.15.0605	1 * A	grn/trans. (LF ; S/B)	
DL..745	50.04.2701	NW 57123	red		S...734	55.15.0655	1 * A	grn/grn (+)	
DL..746	50.04.2701	NW 57123	red		S...735	55.15.0604	1 * A	yel/trans. (GROUP 6)	
					S...736	55.15.0605	1 * A	grn/trans. (PHASE)	
DIZ.701	73.01.0128	HDSPT303	7-segment display common cathode	HP	S...737	55.15.0605	1 * A	grn/trans. (HF ; S/B)	
DIZ.702	73.01.0128	HDSPT303	7-segment display common cathode	HP	S...738	55.15.0605	1 * A	grn/trans. (HF ; Q)	
MP..701	1.990.219.11	1 pcs	Input Mono PCB		S...739	55.15.0655	1 * A	grn/grn (-)	
MP..702	1.990.100.05	6 pcs	Querrinthalter		S...740	55.15.0644	1 * A	yel/yel (SWIFT)	
MP..703	53.03.0218	26 pcs	single line socket		S...741	55.15.0605	1 * A	grn/trans. (PRE EQ)	
MP..704	1.990.229.04	1 pcs	W-Litkarte S702		S...742	.	.	not used	
Q...701	50.03.0515	BC 307	PMP	IC=100mA, B=100	S...743	.	.	not used	
Q...702	50.03.0436	BC 237	MPM	IC=100mA, B=100	W...701	.	.	not used	
Q...703	50.03.0515	BC 307	PMP	IC=100mA, B=100	W...702	.	.	not used	
Q...704	50.03.0436	BC 237	MPM	IC=100mA, B=100	W...703	.	.	not used	
					W...704	.	.	not used	
R...701	57.11.3101	100 Ohm	5% 0.25W		CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,				
R...702	57.11.3222	2.2 kOhm	5% 0.25W		PE=Polyester, PP=Polypropylen, PS=Polystyrol				
R...703	57.11.3102	1 kOhm	5% 0.25W		MANUFACTURER: Bu=Bundy, Ev=Exar, Fc=Fairchild, G1=General Instrument,				
R...704	57.11.3473	47 kOhm	5% 0.25W		HP=Hewlett Packard, IIT=Intermetallic, Mot=Motorola, Nat=National				
R...705	57.11.3101	100 Ohm	5% 0.25W		(Matsushita), NS=National Semiconductors, Ph=Philips,				
R...706	57.11.3222	2.2 kOhm	5% 0.25W		Ra=Raytheon, Sig=Signetics, Six=Siliconix, St=Studer,				
R...707	57.11.3102	1 kOhm	5% 0.25W		TI=Texas Instrument				
R...708	57.11.3473	47 kOhm	5% 0.25W		1.990.229.00 INPUT MONO B SWITCH BOARD TA 90/03/3000				
R...709	57.11.3101	100 Ohm	5% 0.25W		END				
R...710	57.11.3101	100 Ohm	5% 0.25W		*				
R...711	57.11.3101	100 Ohm	5% 0.25W						
R...712	57.11.3101	100 Ohm	5% 0.25W						
R...713	57.11.3101	100 Ohm	5% 0.25W						
R...714	57.11.3101	100 Ohm	5% 0.25W						
R...715	57.11.3101	100 Ohm	5% 0.25W						
R...716	57.11.3101	100 Ohm	5% 0.25W						
R...717	57.11.3101	100 Ohm	5% 0.25W						
R...718	.	.	not used						
R...719	57.11.3101	100 Ohm	5% 0.25W						
R...720	57.11.3101	100 Ohm	5% 0.25W						
R...721	57.11.3101	100 Ohm	5% 0.25W						
R...722	57.11.3101	100 Ohm	5% 0.25W						
R...723	57.11.3101	100 Ohm	5% 0.25W						
R...724	.	.	not used						
R...725	57.11.3101	100 Ohm	5% 0.25W						
R...726	57.11.3101	100 Ohm	5% 0.25W						
R...727	57.11.3101	100 Ohm	5% 0.25W						
R...728	57.11.3101	100 Ohm	5% 0.25W						
R...729	.	.	not used						
R...730	57.11.3101	100 Ohm	5% 0.25W						
R...731	57.11.3101	100 Ohm	5% 0.25W						
R...732	57.11.3101	100 Ohm	5% 0.25W						
R...733	57.11.3101	100 Ohm	5% 0.25W						
R...734	57.11.3101	100 Ohm	5% 0.25W						
R...735	57.11.3101	100 Ohm	5% 0.25W						
R...736	57.11.3101	100 Ohm	5% 0.25W						
R...737	57.11.3101	100 Ohm	5% 0.25W						
R...738	57.11.3101	100 Ohm	5% 0.25W						
R...739	57.11.3101	100 Ohm	5% 0.25W						
R...740	57.11.3101	100 Ohm	5% 0.25W						

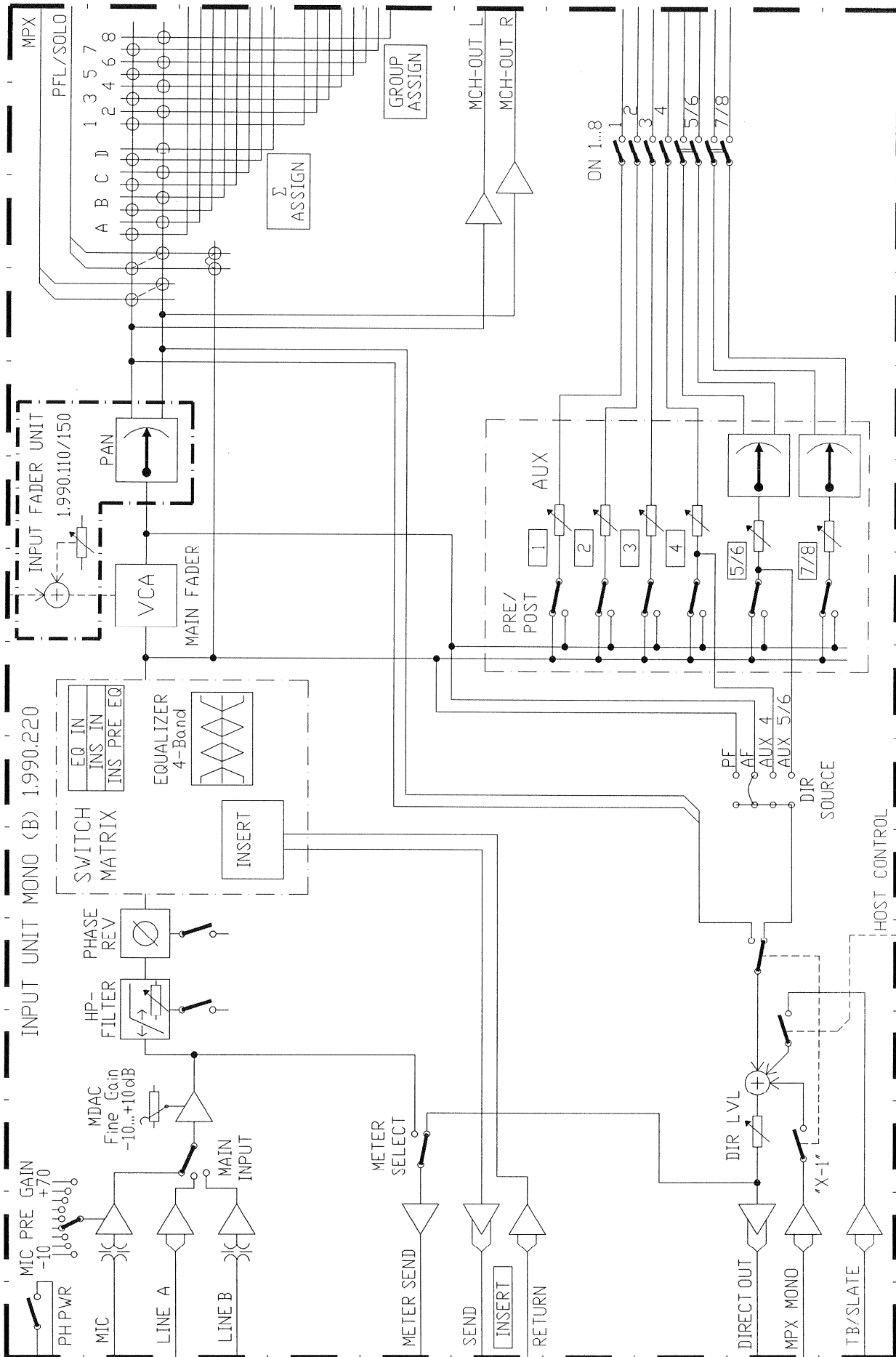
Mono Input Unit B

1.990.220.81



SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

MONO INPUT UNIT B 1.990.220.81





INPUT UNIT MONO B

1.990.220.81

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A.....1		1.911.292.00	VCA	St E4	C.....82		59.34.7151	150 pF 2%	CE
A.....2		0	not used	E3	C.....83		59.22.3101	100 uF -20%	10V EL
A.....3		1.990.229.00	input mono B switch board	St	C.....84		59.06.0104	100 nF	PE
A.....4		1.023.402.03	1/40" flatcable connect. 260mm 20pol	St	C.....85		59.06.0104	100 nF	PE
A.....5		1.023.402.01	1/40" flatcable connect. 120mm 20pol	St	C.....86		59.22.6220	22 uF -20%	16V EL
A.....6		1.023.402.01	1/40" flatcable connect. 120mm 20pol	St	C.....87		59.34.7151	150 pF 2%	CE
A.....7		1.990.220.94	Index 2 cable list input unit mono B	St	C.....88		59.22.3101	100 uF -20%	10V EL
A.....8		1.990.291.00	3 pot. 24.6mm board	St	C.....89		59.22.3470	47 uF -20%	10V EL
A.....9		1.990.291.00	3 pot. 24.6mm board	St	C.....90		59.22.3470	47 uF -20%	10V EL
A.....10		1.990.291.00	3 pot. 24.6mm board	St	C.....91		59.06.5334	330 nF 1%	PE
A.....11		1.990.291.00	3 pot. 24.6mm board	St	C.....92		59.32.4152	1.5 nF	CE
A.....12		1.990.292.00	5 pot. 10mm board	St B6	C.....93		59.06.5334	330 nF 1%	PE
A.....13		1.990.292.00	5 pot. 10mm board	St A6	C.....94		59.22.6220	22 uF -20%	16V EL
A.....14		1.990.293.00	3 pot. 10mm board	St T6	C.....95		59.34.2330	33 pF	CE
A.....15		0	not used	N6	C.....96		59.22.3101	100 uF -20%	10V EL
C.....1		59.05.1681	680 pF 1%	N3	C.....97		0	not used	A7
C.....2		59.05.1681	680 pF 1%	N3	C.....98		0	not used	A7
C.....3		59.06.0332	3.3 nF 10%	N3	C.....99		0	not used	A7
C.....4		59.32.2471	470 pF	M4	C...100		59.32.4152	1.5 nF	CE (LS) H5
C.....5		59.06.0104	100 nF	N4	C...101		59.22.3101	100 uF -20%	10V EL
C.....6		59.22.3101	100 uF -20%	M4	C...102		59.22.3101	100 uF -20%	10V EL
C.....7		59.34.2220	22 pF	N4	C...103		59.22.3101	100 uF -20%	10V EL
C.....8		59.34.4560	56 pF	N4	C...104		59.34.7151	150 pF 2%	CE
C.....9		59.34.5471	470 pF	N4	C...105		59.34.4101	100 pF	CE
C.....10		59.22.3471	470 pF -20%	N5	C...106		59.06.0104	100 nF	PE
C.....11		59.22.3101	100 uF -20%	M4	C...107		59.06.0104	100 nF	PE
C.....12		59.22.6220	22 uF -20%	N4	C...108		59.22.2221	220 uF -20%	6V EL
C.....13		59.34.2330	33 pF	N4	C...109		59.22.2221	220 uF -20%	6V EL
C.....14		59.22.2221	220 uF -20%	M4	C...110		0	not used	A
C.....15		59.22.3101	100 uF -20%	M4	C...111		0	not used	A
C.....16		0	not used	N4	C...112		0	not used	A
C.....17		0	not used	N4	C...113		0	not used	A
C.....18		0	not used	M4	C...114		0	not used	A
C.....19		0	not exist		C...115		59.34.4101	100 pF	CE
C.....20		0	not exist		C...116		59.34.2220	22 pF	CE
C.....21		0	not used	N4	C...117		0	not used	A
C.....22		59.22.3101	100 uF -20%	C3	C...118		0	not used	A
C.....23		59.22.3101	100 uF -20%	C2	C...119		0	not used	A
C.....24		59.34.5471	470 pF	C2	C...120		0	not used	A
C.....25		59.05.1102	1 nF 1%	C2	C...121		59.22.3101	100 uF -20%	10V EL
C.....26		59.05.1102	1 nF 1%	C2	C...122		59.06.0104	100 nF	PE
C.....27		59.34.7151	150 pF 2%	M2	C...123		59.06.0104	100 nF	PE
C.....28		59.34.7151	150 pF 2%	M2	C...124		59.22.3101	100 uF -20%	10V EL
C.....29		59.22.3101	100 uF -20%	M3	C...125		59.22.3101	100 uF -20%	10V EL
C.....30		59.34.5471	470 pF	M2	C...126		59.22.6220	22 uF -20%	16V EL
C.....31		59.05.1102	1 nF 1%	N2	C...127		59.22.6220	22 uF -20%	16V EL
C.....32		59.05.1102	1 nF 1%	M2	C...128		59.05.2472	4700 pF 2.5%	PP
C.....33		59.06.5152	1.5 nF 10%	M2	C...129		59.05.2152	1500 pF 2.5%	PP
C.....34		59.22.2221	220 uF -20%	M2	C...130		59.06.0682	6.8 nF	PE
C.....35		59.34.2470	47 pF	N2	C...131		59.06.0682	6.8 nF	PE
C.....36		59.22.3101	100 uF -20%	N2	C...132		59.05.2472	4700 pF 2.5%	PP
C.....37		0	not used	M2	C...133		59.05.2472	4700 pF 2.5%	PP
C.....38		0	not used	N1	C...134		59.22.6220	22 uF -20%	16V EL
C.....39		0	not used	N1	C...135		59.22.3101	100 uF -20%	10V EL
C.....40		0	not used	N1	C...136		59.22.3101	100 uF -20%	10V EL
C.....41		0	not used	N1	C...137		59.06.0682	6.8 nF	PE
C.....42		0	not used	N0	C...138		59.06.0682	6.8 nF	PE
C.....43		0	not used	N0	C...139		59.22.6220	22 uF -20%	16V EL
C.....44		0	not used	N1	C...140		59.22.3101	100 uF -20%	10V EL
C.....45		0	not used	N1	C...141		59.99.1400	15 nF 2.5%	PP
C.....46		0	not used	N1	C...142		59.99.1400	15 nF 2.5%	PP
C.....47		0	not used	M1	C...143		59.22.6220	22 uF -20%	16V EL
C.....48		0	not used	M1	C...144		59.22.3101	100 uF -20%	10V EL
C.....49		0	not used	N1	C...145		59.22.3101	100 uF -20%	10V EL
C.....50		0	not used	N0	C...146		59.06.0682	6.8 nF	PE
C.....51		0	not used	N0	C...147		59.06.0682	6.8 nF	PE
C.....52		59.06.0104	100 nF	M1	C...148		59.22.6220	22 uF -20%	16V EL
C.....53		59.06.0104	100 nF	N1	C...149		59.22.3101	100 uF -20%	10V EL
C.....54		0	not used	N1	C...150		59.22.6220	22 uF -20%	16V EL
C.....55		0	not used	M1	C...151		59.22.3101	100 uF -20%	10V EL
C.....56		0	not used	M1	C...152		59.12.7104	100 nF 1%	PS
C.....57		59.06.0104	100 nF	I3	C...153		59.06.0682	6.8 nF	PE
C.....58		0	not exist		C...154		59.06.0682	6.8 nF	PE
C.....59		0	not exist		C...155		59.12.7333	33 nF 1%	PS
C.....60		0	not exist		C...156		59.22.6220	22 uF -20%	16V EL
C.....61		59.22.3101	100 uF -20%	L2	C...157		59.22.3101	100 uF -20%	10V EL
C.....62		59.34.7151	150 pF 2%	L2	C...158		59.22.3101	100 uF -20%	10V EL
C.....63		59.22.6220	22 uF -20%	L2	C...159		0	not exist	F3
C.....64		0	not used	L2	C...160		0	not exist	
C.....65		0	not used	L3	C...161		59.22.3101	100 uF -20%	10V EL
C.....66		59.34.7151	150 pF 2%	L3	C...162		59.22.3101	100 uF -20%	10V EL
C.....67		0	not exist	L2	C...163		59.34.7151	150 pF 2%	CE
C.....68		0	not exist		C...164		59.34.7151	150 pF 2%	CE
C.....69		59.22.6220	22 uF -20%	L4	C...165		59.22.3101	100 uF -20%	10V EL
C.....70		59.34.7151	150 pF 2%	M5	C...166		0	not used	A
C.....71		59.22.3101	100 uF -20%	L5	C...167		0	not used	A
C.....72		59.22.6100	10 uF -20%	L5	C...168		0	not used	A
C.....73		59.22.6100	10 uF -20%	L5	C...169		0	not used	A
C.....74		59.06.0104	100 nF	L5	C...170		0	not used	A
C.....75		59.22.6220	22 uF -20%	L6	C...171		59.22.6220	22 uF -20%	16V EL
C.....76		59.34.0229	2.2 pF	L4	C...172		59.34.7151	150 pF 2%	CE
C.....77		59.22.3101	100 uF -20%	L5	C...173		59.22.3101	100 uF -20%	10V EL
C.....78		0	not exist		C...174		59.34.7151	150 pF 2%	CE
C.....79		0	not exist		C...175		59.22.3101	100 uF -20%	10V EL
C.....80		59.06.0224	220 nF	L5	C...176		0	not used	A
C.....81		59.22.6220	22 uF -20%	L5	C...177		0	not used	A
					C...178		0	not used	A
					C...179		0	not used	A



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Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
C...180	.	0	not used	A	H2	C...277	.	0	not used	L1
C...181	59.26.1220	22 uF	-20%	10V SAL	F4	C...278	.	0	not exist	L0
C...182	59.26.5109	1 uF	-20%	10V SAL	F4	C...279	59.22.2221	220 uF	-20%	6V EL
C...183	59.34.2330	33 pF	2%	CF	na	C...280	59.22.2221	220 uF	-20%	6V EL
C...184	59.22.3471	470 uF	-20%	10V EL	D4	C...281	59.06.5103	10 nF		PE
C...185	.	0	not used	A	F3	C...282	59.34.2330	33 pF		CE
C...186	.	0	not used	A	F3	C...283	59.34.2330	33 pF		CE
C...187	.	0	not used	A	D3	C...284	59.34.2330	33 pF		CE
C...188	.	0	not used	A	D3	C...285	59.34.2330	33 pF		CE
C...189	59.06.0104	100 nF		PE	D3	C...286	59.34.2330	33 pF		CE
C...190	59.06.0104	100 nF		PE	D3	C...287	59.34.2330	33 pF		CE
C...191	59.22.3101	100 uF	-20%	10V EL	D6	C...288	.	0	not used	A
C...192	59.34.7151	150 pF	2%	CE	D6	C...289	59.34.2220	22 pF		CE
C...193	59.22.6220	22 uF	-20%	16V EL	D6	C...290	59.34.2330	33 pF		CE
C...194	59.22.3101	100 uF	-20%	10V EL	D6	C...291	59.34.2330	33 pF		CE
C...195	59.34.7151	150 pF	2%	CE	D6	C...292	.	0	not used	A
C...196	59.22.6220	22 uF	-20%	16V EL	D6	C...293	.	0	not used	A
C...197	59.22.3101	100 uF	-20%	10V EL	C6	C...294	.	0	not used	A
C...198	59.34.7151	150 pF	2%	CE	C6	C...295	59.06.0104	100 nF		PE
C...199	59.22.6220	22 uF	-20%	16V EL	C6	C...296	59.06.0104	100 nF		PE
C...200	59.22.3101	100 uF	-20%	10V EL	C6	C...297	59.06.5103	10 nF		PE (LS)
C...201	59.34.7151	150 pF	2%	CE	D6	C...501	59.06.5103	10 nF		PE (LS)
C...202	59.22.6220	22 uF	-20%	16V EL	C6	C...502	.	0	not exist	
C...203	59.22.3101	100 uF	-20%	10V EL	B6	C...503	59.06.0104	100 nF		PE
C...204	59.34.7151	150 pF	2%	CE	B6	C...504	.	0	not used	A
C...205	59.22.6220	22 uF	-20%	16V EL	B6	C...505	.	0	not used	A
C...206	59.22.3101	100 uF	-20%	10V EL	C6	C...506	.	0	not used	A
C...207	59.34.7151	150 pF	2%	CE	C6	C...507	59.34.4101	100 pF		CE
C...208	59.22.6220	22 uF	-20%	16V EL	C6	C...508	.	0	not used	A
C...209	59.06.0104	100 nF		PE	D5	C...508	59.34.4101	100 pF		CE
C...210	59.06.0104	100 nF		PE	D5	C...509	.	0	not used	A
C...211	.	0	not used		D5	C...510	.	0	not used	A
C...212	59.34.5561	560 pF		CE	B2	C...511	.	0	not used	A
C...213	59.34.5561	560 pF		CE	B2	C...512	.	0	not used	A
C...214	59.34.4101	100 pF		CE	E4	C...513	59.34.2330	33 pF		CE
C...215	.	0	not used	A	E3	C...514	.	0	not used	A
C...216	59.06.0104	100 nF		PE	B3	C...515	.	0	not used	A
C...217	59.22.6220	22 uF	-20%	16V EL	C3	C...516	.	0	not used	A
C...218	59.34.7151	150 pF	2%	CE	C3	C...517	.	0	not used	A
C...219	59.22.3101	100 uF	-20%	10V EL	C3	C...518	59.34.4101	100 pF		CE
C...220	59.22.6220	22 uF	-20%	16V EL	B3	C...519	59.34.4101	100 pF		CE
C...221	59.34.7151	150 pF	2%	CE	B3	C...520	.	0	not used	A
C...222	59.22.3101	100 uF	-20%	10V EL	B3	C...521	.	0	not used	A
C...223	.	0	not used	A	B3	C...522	59.34.4221	220 pF		CE
C...224	.	0	not used	A	B3	C...523	59.34.4101	100 pF		CE
C...225	.	0	not used	A	B3	C...524	59.34.4101	100 pF		CE
C...226	.	0	not used	A	B3	C...525	.	0	not used	A
C...227	.	0	not used	A	A3	C...526	59.34.4101	100 pF		CE
C...228	.	0	not used	A	B3	C...527	59.34.4101	100 pF		CE
C...229	59.06.0104	100 nF		PE	M5	C...528	59.34.4101	100 pF		CE
C...230	59.06.0104	100 nF		PE	M5	C...529	.	0	not used	A
C...231	.	0	not used	A	N5	C...530	.	0	not exist	
C...232	.	0	not used	A	N5	C...531	.	0	not exist	
C...233	.	0	not used	A	N6	C...532	.	0	not exist	
C...234	.	0	not used	A	N6	C...533	.	0	not exist	
C...235	59.34.2220	22 pF	2%	CE	N6	C...534	.	0	not used	A
C...236	59.34.2220	22 pF	2%	CE	N6	C...535	.	0	not used	A
C...237	59.22.3101	100 uF	-20%	10V EL	M6	C...536	.	0	not used	A
C...238	59.34.2220	22 pF	2%	CE	M6	C...537	.	0	not used	A
C...239	59.34.2220	22 pF	2%	CE	M6	C...537	59.34.4101	100 pF		CE
C...240	59.22.3101	100 uF	-20%	10V EL	M6	C...538	.	0	not used	
C...241	59.22.6220	22 uF	-20%	16V EL	I1	C...539	.	0	not exist	
C...242	59.34.7151	150 pF	2%	CE	I1	C...540	.	0	not exist	
C...243	59.22.6220	22 uF	-20%	16V EL	H1	C...541	.	0	not exist	
C...244	59.34.7151	150 pF	2%	CE	H1	C...542	.	0	not exist	
C...245	.	0	not used		CO	C...543	.	0	not exist	
C...246	59.22.4101	100 uF	-20%	16V EL	B0	C...544	.	0	not exist	
C...247	59.22.4101	100 uF	-20%	16V EL	B0	C...545	.	0	not used	
C...248	59.22.4101	100 uF	-20%	16V EL	B0	C...546	59.34.4101	100 pF		CE
C...249	59.06.0104	100 nF		PE	B0	C...547	59.34.4101	100 pF		CE
C...250	59.06.0104	100 nF		PE	B0	C...548	.	0	not used	A
C...251	59.06.0104	100 nF		PE	B0	C...549	59.34.4101	100 pF		CE
C...252	59.34.7151	150 pF		CE	B1	C...550	.	0	not used	A
C...253	59.34.5561	560 pF		CE	C1	C...551	.	0	not used	A
C...254	59.22.4471	470 uF	-20%	16V EL	A1	C...552	.	0	not used	A
C...255	59.22.4101	100 uF	-20%	16V EL	A1	C...553	.	0	not used	A
C...256	.	0	not exist		B3	C...554	59.34.4101	100 pF		CE
C...257	59.22.3101	100 uF	-20%	10V EL	N6	C...555	.	0	not used	A
C...258	59.06.5103	10 nF		PE	CO	C...556	59.99.1101	100 pF		CE
C...259	.	0	not used	A	L7	C...557	.	0	not used	A
C...260	.	0	not used	A	L6	C...558	59.34.4101	100 pF		CE
C...261	.	0	not used	A	M1	C...559	59.34.4101	100 pF		CE
C...262	.	0	not used	A	L1	C...560	.	0	not used	A
C...263	.	0	not used	A	M1	C...561	.	0	not used	A
C...264	.	0	not used	A	L1	C...562	59.99.1101	100 pF		CE
C...265	.	0	not used	A	MO	C...563	59.34.4101	100 pF		CE
C...266	.	0	not used	A	LO	C...564	.	0	not used	A
C...267	.	0	not exist			C...565	.	0	not used	A
C...268	.	0	not exist			C...566	59.99.1101	100 pF		CE
C...269	.	0	not used		G9	C...567	.	0	not used	A
C...270	59.22.3101	100 uF	-20%	10V EL	N6	C...568	.	0	not used	A
C...271	59.22.3101	100 uF	-20%	10V EL	N7	C...569	.	0	not used	A
C...272	59.22.3101	100 uF	-20%	10V EL	N7	C...570	.	0	not used	A
C...273	59.22.3101	100 uF	-20%	10V EL	L1	C...571	.	0	not used	A
C...274	59.22.3101	100 uF	-20%	10V EL	L1	C...572	.	0	not used	A
C...275	59.34.7151	150 pF	2%	CE	L1	C...573	.	0	not used	A
C...276	59.34.4101	100 pF		CE	L1	C...574	59.34.4101	100 pF		CE



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Ad	POS	REF.No	DESCRIPTION	MANUFACTURER	Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
C...575	.	0	not used	A	D...13	50.04.0125	1N4448		any I4
C...576	.	0	not used	A	D...14	50.04.0125	1N4448		any K0
C...577	.	0	not used	A	D...15	50.04.0125	1N4448		any H2
C...578	.	0	not exist		D...16	.	0	not used	A
C...579	.	0	not used	A	D...17	.	0	not used	A
C...580	.	0	not used	A	D...18	50.04.0125	1N4448		any E4
					D...19	.	0	not used	A
					D...20	50.04.0125	1N4448		any E3
C...581	59.34.4101	100 pF		CE					any D4
C...582	.	0	not used	A					
C...583	59.99.1101	100 pF		CE	D...21	.	0	not used	
C...584	59.99.1101	100 pF		CE	D...22	.	0	not used	A
C...585	59.34.4101	100 pF		CE	D...23	.	0	not used	
C...586	59.34.4101	100 pF		CE	D...24	50.04.1118	6V2	z-diode	any L4
C...587	.	0	not used	A	D...25	50.04.0125	1N4448		any K5
C...588	.	0	not used	A	D...26	50.04.0122	1N4001	1A / 50V	any B0
C...589	59.34.4101	100 pF		CE	D...27	50.04.0122	1N4001	1A / 50V	any B0
C...590	59.34.4101	100 pF		CE	D...28	50.04.0125	1N4448		any B1
					D...29	50.04.0125	1N4448		any B1
					D...30	50.04.0125	1N4448		any B1
C...591	59.34.4101	100 pF		CE					
C...592	.	0	not used	A					
C...593	59.34.4101	100 pF		CE	D...31	50.04.0125	1N4448		any B1
C...594	59.34.4101	100 pF		CE	D...32	50.04.0122	1N4001	1A / 50V	any B1
C...595	.	0	not used	A	D...33	50.04.0122	1N4001	1A / 50V	any B1
C...596	59.34.4101	100 pF		CE	D...34	50.04.0125	1N4448		any B1
C...597	59.34.4101	100 pF		CE	D...35	50.04.0125	1N4448		any B1
C...598	59.34.4101	100 pF		CE	D...36	50.04.0125	1N4448		any A5
C...599	.	0	not used	A	D...37	50.04.0125	1N4448		any A5
C...600	59.34.4101	100 pF		CE	D...38	50.04.0127	BAT 85	schottky	any A9
					D...39	50.04.0127	BAT 85	schottky	any A9
					D...40	.	0	not used	A
C...601	59.34.4101	100 pF		CE					
C...602	.	0	not used	A					
C...603	.	0	not used	A					
C...604	59.34.4101	100 pF		CE	D...41	.	0	not used	A
C...605	59.99.1101	100 pF		CE	D...42	50.04.0125	1N4448		any L2
C...606	59.34.4101	100 pF		CE	D...43	50.04.0125	1N4448		any L2
C...607	.	0	not used	A	D...44	50.04.0125	1N4448		any A8
C...608	59.34.4101	100 pF		CE	D...45	50.04.0122	1N4001	1A / 50V	any C0
C...609	.	0	not used	A	D...46	50.04.0122	1N4001	1A / 50V	any C0
C...610	.	0	not used	A	D...47	50.04.0125	1N4448		any M9
C...611	.	0	not used		D...501	50.04.0125	1N4448		any A5
C...612	.	0	not used	A	D...502	50.04.0125	1N4448		any A4
C...613	59.34.4101	100 pF		CE	D...503	50.04.0125	1N4448		any A4
C...614	.	0	not used	A	D...504	50.04.0125	1N4448		any A5
C...615	.	0	not used	A	D...505	50.04.0125	1N4448		any A4
C...616	59.34.4101	100 pF		CE	D...506	50.04.0125	1N4448		any A4
C...617	59.34.4101	100 pF		CE	D...507	50.04.0125	1N4448		any A4
C...618	.	0	not used	A	D...508	50.04.0125	1N4448		any A5
C...619	59.34.4101	100 pF		CE	D...509	50.04.0125	1N4448		any A4
C...620	59.34.4101	100 pF		CE	D...510	50.04.0125	1N4448		any A4
C...621	.	0	not used	A	D...511	50.04.0125	1N4448		any A5
C...622	59.34.4101	100 pF		CE	D...512	50.04.0125	1N4448		any A4
C...623	.	0	not used	A	D...513	50.04.0125	1N4448		any A4
C...624	.	0	not used	A	D...514	50.04.0125	1N4448		any A4
C...625	59.34.4101	100 pF		CE	D...515	50.04.0125	1N4448		any N8
C...626	59.34.4101	100 pF		CE	D...516	50.04.0125	1N4448		any N7
C...627	.	0	not used	A	D...517	50.04.0125	1N4448		any N9
C...628	59.34.4101	100 pF		CE	D...518	50.04.0125	1N4448		any N8
C...629	.	0	not used	A	D...519	50.04.0125	1N4448		any N8
C...630	59.34.4101	100 pF		CE	D...520	.	0	not used	G9
C...631	.	0	not used	A	D...521	50.04.0125	1N4448		any A7
C...632	.	0	not used	A	D...522	50.04.0127	BAT 85	schottky	any A7
C...633	.	0	not used	A	D...523	50.04.0127	BAT 85	schottky	any A8
C...634	59.99.1101	100 pF		CE	D...524	50.04.0125	1N4448		any A8
C...635	59.99.1101	100 pF		CE	D...525	.	0	not used	D7
C...636	59.34.4101	100 pF		CE	D...526	50.04.0125	1N4448		any A5
C...637	59.34.4101	100 pF		CE	D...527	50.04.0125	1N4448		any A4
C...638	.	0	not used	A	D...528	50.04.0125	1N4448		any A5
C...639	.	0	not used	A	D...529	50.04.0125	1N4448		any A4
C...640	.	0	not used	A	D...530	50.04.0125	1N4448		any A4
C...641	59.34.4101	100 pF		CE	D...531	50.04.0125	1N4448		any A3
C...642	.	0	not used	A	D...532	.	0	not used	
C...643	.	0	not used	A	D...533	.	0	not used	
C...644	59.34.4101	100 pF		CE					
C...645	59.34.4101	100 pF		CE	IC...1	50.09.0117	MC33078P	dual op. amp. low noise	Mot H4
C...646	59.34.4101	100 pF		CE	IC...2	50.09.0117	MC33078P	dual op. amp. low noise	Mot N2
C...647	.	0	not used	A	IC...3	.	0	not used	A
C...648	59.34.4101	100 pF		CE	IC...4	50.09.0117	MC33078P	dual op. amp. low noise	Mot L2
C...649	.	0	not used	A	IC...5	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA M3
C...650	.	0	not used	A	IC...6	.	0	not used	A
					IC...7	.	0	not used	A
					IC...8	50.09.0117	MC33078P	dual op. amp. low noise	Mot L4
C...651	.	0	not used	A	IC...9	50.07.0037	AD7528JN	D/A converter 8 bit dual multiplexer	ADI L5
C...652	.	0	not used	A	IC...10	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA K5
C...653	59.06.0104	100 nF		PE					
C...654	59.06.0104	100 nF		PE					
C...655	59.34.7151	150 pF	2%	CE	IC...11	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA K5
C...656	.	0	not used	A	IC...12	50.09.0117	MC33078P	dual op. amp. low noise	Mot K5
C...657	59.34.4221	220 pF		CE	IC...13	50.09.0117	MC33078P	dual op. amp. low noise	Mot K5
C...658	.	0	not used	A	IC...14	.	0	not used	A
C...659	59.06.5103	10 nF		PE	IC...15	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA H4
					IC...16	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA H4
					IC...17	.	0	not used	A
D...1	50.04.0125	1N4448			IC...18	50.09.0117	MC33078P	dual op. amp. low noise	Mot H2
D...2	50.04.0125	1N4448			IC...19	50.09.0101	TL072	dual op. amp. FET	TI I5
D...3	50.04.0125	1N4448			IC...20	.	0	not used	A
D...4	50.04.0125	1N4448							
D...5	.	0	not used	A					
D...6	50.04.0125	1N4448			IC...21	.	0	not used	A
D...7	50.04.0125	1N4448			IC...22	50.09.0117	MC33078P	dual op. amp. low noise	Mot F2
D...8	50.04.0125	1N4448			IC...23	50.09.0117	MC33078P	dual op. amp. low noise	Mot I5
D...9	50.04.0125	1N4448			IC...24	50.09.0117	MC33078P	dual op. amp. low noise	Mot G5
D...10	50.04.0125	1N4448			IC...25	50.09.0117	MC33078P	dual op. amp. low noise	Mot G5
					IC...26	50.09.0117	MC33078P	dual op. amp. low noise	Mot F5
					IC...27	50.09.0117	MC33078P	dual op. amp. low noise	Mot I1
D...11	50.04.0125	1N4448			IC...28	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA H4
D...12	50.04.0125	1N4448			IC...29	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G4

INPUT UNIT MONO B



1.990.220.81

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
IC...30	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G4	IC...331	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K9
IC...31	0	not used	A	F4	IC...332	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K9
IC...32	50.09.0106	NE5532AN	dual op. amp. low noise	Ex,Ra,Sig G3	IC...333	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K8
IC...33	0	not used	A	H3	IC...334	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA D8
IC...34	50.09.0106	NE5532AN	dual op. amp. low noise	Ex,Ra,Sig E4	IC...335	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E8
IC...35	0	not exist	A	E3	IC...336	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E9
IC...36	0	not used	A		IC...337	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA F9
IC...37	0	not exist	A		IC...338	50.09.0119	TL 062	dual fet op. amp.	Tho A8
IC...38	0	not exist	A		IC...339	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA A9
IC...39	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D0	IC...340	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA B9
IC...40	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D1	IC...341	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA C9
IC...41	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D0	IC...342	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA D9
IC...42	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D1	IC...343	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA C9
IC...43	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA C1	IC...344	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA D9
IC...44	50.09.0117	MC33078P	dual op. amp. low noise	Mot D6	IC...345	50.09.0103	TL 071	fet op. amp.	TI A9
IC...45	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	IC...346	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA F9
IC...46	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	IC...347	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA F8
IC...47	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D4	IC...348	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA G8
IC...48	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA D4	IC...349	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA G8
IC...49	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA C5	IC...350	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA G8
IC...50	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA C5	JSJ...1	0	not used	AUX 4	
IC...51	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA C5	JSJ...2	0	not used	AUX 5/6	
IC...52	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA B5	JSJ...3	0	not used	option film out C	{ Leiterbahn
IC...53	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA B5	JSJ...4	0	not used	option film out L	{ Leiterbahn
IC...54	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA B5	JSJ...5	0	not used	option film out S	{ Leiterbahn
IC...55	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA L3	JSJ...6	0	not used	option film out R	{ Leiterbahn
IC...56	0	not used	A	C4	JSJ...7	0	not used	PF-L	
IC...57	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA B4	JSJ...8	54.01.0021	Jumper	AF-L	D7
IC...58	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA B4	K....1	56.04.0195	TQ2-6V		SDS M3
IC...59	0	not used	A	B4	L....1	1.022.207.00			St N3
IC...60	50.09.0106	NE5532AN	dual op. amp. low noise	Ex,Ra,Sig B3	L....2	62.02.3220	22 uH	hf-sym.choke hf-choke-coil	B2
IC...61	0	not used	A	B3	MP....1	53.03.0166	29 pcs	IC-socket 8 pin	
IC...62	0	not used	A	N6	MP....2	0	not exist		
IC...63	50.09.0117	MC33078P	dual op. amp. low noise	Mot M5	MP....3	53.03.0168	34 pcs	IC-socket 16 pin	
IC...64	0	not used	A		MP....4	53.03.0165	1 pcs	IC-socket 20 pin	
IC...65	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA M7	MP....5	0	not exist		
IC...66	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA M7	MP....6	43.01.0108	1 pcs	ESE-Warnschild	ST
IC...67	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA E1	MP....7	1.990.210.12	1 pcs	Input Mono PCB	St
IC...68	0	not used	A	E0	MP....8	54.01.0020	6 pcs	Jumper plug	
IC...69	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA E1	MP....9	54.11.0131	55 pcs	dual Pin (totaly 110 pins)	
IC...70	0	not used	A	E0	MP...10	1.990.210.06	1 pcs	Abschirmung A/D Input links	
IC...71	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA E1	MP...11	1.990.210.07	1 pcs	Abschirmung A/D Input rechts	
IC...72	0	not used	A	E0	MP...12	21.01.0354	3 pcs	Z-Schr. M3*6	
IC...73	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA H1	MP...13	24.16.1030	3 pcs	Rippensch. D 3.2/5.5	
IC...74	50.09.0106	NE5532AN	dual op. amp. low noise	Ex,Ra,Sig H0	MP...14	21.01.2352	6 pcs	S-Schr. M3*4	
IC...75	1.010.051.50	NE5532AN	dual op. amp. low offset <1mV	St B2	MP...15	21.99.0117	7 pcs	Z-Schr. Nylon M3*6	
IC...76	50.09.0117	MC33078P	dual op. amp. low noise	Mot C1	MP...16	24.16.3023	2 pcs	Wellensicherung 2.3	
IC...77	0	not used	A	L6	MP...17	28.99.0119	6 pcs	Rohrnieten D 2.5*0.15*9	
IC...78	50.09.0101	TLO72	dual op. amp. FET	TI L2	MP...18	42.01.0203	2 pcs	Drehknopf gr. D 10/4	
IC...79	0	not used	A	M1	MP...19	1.912.000.03	2 pcs	Drehring D 6.2/13	
IC...80	50.09.0117	MC33078P	dual op. amp. low noise	Mot N6	MP...20	42.01.0228	14 pcs	Knebelknopf gr. D 10/4	
IC...81	50.09.0106	NE5532AN	dual op. amp. low noise	Ex,Ra,Sig L1	MP...21	42.01.0250	7 pcs	Deckel h'gr. D 10	
IC...82	0	not used	A	K1	MP...22	42.01.0251	5 pcs	Deckel d'gr. D 10	
IC...83	0	not used	A	K1	MP...23	42.01.0253	1 pcs	Deckel rt. D 10	
IC...84	0	not exist	A		MP...24	42.01.0254	1 pcs	Deckel bl. D 10	
IC...85	50.09.0119	TL 062	dual fet op. amp.	Tho A2	MP...25	42.01.0255	1 pcs	Deckel gb. D 10	
IC...86	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G0	MP...26	42.01.0256	1 pcs	Deckel gn. D 10	
IC...87	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G1	MP...27	1.010.022.21	2 pcs	Linsensch. spez M3*8	
IC...88	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G0	MP...28	1.010.048.27	3 pcs	Mutterbolzen M3*32.5	
IC...89	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA G1	MP...29	1.022.400.03	2 pcs	Trafo-Isolation	
IC...90	0	not used	A	F1	MP...30	1.990.100.02	2 pcs	Querprintstuetze links	
IC...91	0	not used	A	F0	MP...31	1.990.100.03	2 pcs	Querprintstuetze rechts	
IC...92	0	not used	A	F1	MP...32	1.990.200.03	1 pcs	Schirmblech Input	
IC...93	0	not used	A	F0	MP...33	1.990.200.05	9 pcs	Poti-Achsenverlaengering	
IC...94	50.07.0015	CD4053	3*2 channel analog mux/demux	Ph,Mot,RCA H0	MP...34	1.990.210.02	1 pcs	Traeger Input	
IC...95	1.010.051.50	NE5532AN	dual op. amp. low offset <1mV	St C1	MP...35	1.990.210.05	1 pcs	Fenster Input	
IC...501	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M8	MP...36	1.990.220.01	1 pcs	Frontschild Input	
IC...502	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA L8	MP...37	1.010.366.64	1 pcs	Blankdraht D 0.6 L= 15mm	
IC...503	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA L9	MP...38		not exist		
IC...504	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9	MP...39		not exist		
IC...505	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9	MP...40		not exist	A	
IC...506	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9					
IC...507	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M8					
IC...508	50.07.0014	40106	hex. schmitt-trig. S MC14584;	40014 Ph,Mot M8	MP...41		not exist		
IC...509	50.07.0049	4049	hex inverting buffer CMOS	Ph,To E9	MP...42	1.990.220.04	0 pcs	studer-nr. etikette 10 * 20	
IC...510	50.07.0049	4049	hex inverting buffer CMOS	Ph,To D8	P....1	0	not exist		
IC...511	50.07.0049	4049	hex inverting buffer CMOS	Ph,To C8	P....2	0	not exist		
IC...512	50.07.0049	4049	hex inverting buffer CMOS	Ph,To C9	P....3	0	not exist		
IC...513	50.07.0049	4049	hex inverting buffer CMOS	Ph,To B8	P....4	0	not exist		
IC...514	50.07.0049	4049	hex inverting buffer CMOS	Ph,To B9	P....5	0	not exist		
IC...515	50.07.0049	4049	hex inverting buffer CMOS	Ph,To B8	P....6	54.11.2013	2*16pin	euroconnector	Ht, Ec B0
IC...516	50.07.0049	4049	hex inverting buffer CMOS	Ph,To B9	P....7	54.11.2004	2*32pin	euroconnector	Ht, Ec E0
IC...517	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E8	P....8	0	not used		IO
IC...518	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA D8	P....9	54.11.2004	2*32pin	euroconnector	Ht, Ec M0
IC...519	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA C8	P...501	54.16.0520	20pol	1/40 inch flatcable connector	Ya K7
IC...520	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA C8	P...502	54.16.0520	20pol	1/40 inch flatcable connector	Ya G2
IC...521	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA B8	P...503	54.16.0520	20pol	1/40 inch flatcable connector	Ya E6
IC...522	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA A8	P...504	54.16.0520	20pol	1/40 inch flatcable connector	Ya E2
IC...523	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA I8	P...505	54.16.0520	20pol	1/40 inch flatcable connector	Ya E5
IC...524	50.07.0511	4511	BCD to 7-segment latch/decod/drivr	Mot,To I9	P...506	54.16.0520	20pol	1/40 inch flatcable connector	Ya E2
IC...525	50.07.0511	4511	BCD to 7-segment latch/decod/drivr	Mot,To I9	Q....1	50.03.0516	BC 337	NPN low noise	Sie W4
IC...526	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H8	Q....2	50.03.0350	J 112	N-JFET	NS,Mot,Six M5
IC...527	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H9	Q....3	50.03.0350	J 112	N-JFET	NS,Mot,Six M5
IC...528	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H9	Q....4	50.03.0350	J 112	N-JFET	NS,Mot,Six M5
IC...529	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H8	Q....5	50.03.1130	J 110	N-JFET	NS,Mot,Six M5
IC...530	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K8	Q....6	50.03.1130	J 110	N-JFET	NS,Mot,Six M5
					Q....7	50.03.0350	J 112	N-JFET	NS,Mot,Six M5



INPUT UNIT MONO B

1.990.220.81

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
Q....8		50.03.0485	MPSA92 PNP	UCE >100V Mot N8	R....60		0	not used	A NO
Q....9		50.03.0485	MPSA92 PNP	UCE >100V Mot N8	R....61		0	not used	A NO
Q....10		50.03.0436	BC 237 NPN	IC>100mA, B>100 any K5	R....62		0	not used	A N1
Q....11		50.03.0350	J 112 N-JFET	NS,Mot,Six H6	R....63		0	not used	A N1
Q....12		50.03.0350	J 112 N-JFET	NS,Mot,Six I6	R....64		0	not used	A N1
Q....13		50.03.0515	BC 307 PNP	IC>100mA, B>100 any H6	R....65		0	not used	A N1
Q....14		50.03.0515	BC 307 PNP	IC>100mA, B>100 any I6	R....66		0	not used	A N1
Q....15		50.03.0350	J 112 N-JFET	NS,Mot,Six H6	R....67		0	not used	A M0
Q....16		50.03.0350	J 112 N-JFET	NS,Mot,Six H6	R....68		0	not used	A M0
Q....17		50.03.0515	BC 307 PNP	IC>100mA, B>100 any H6	R....69		0	not used	A M0
Q....18		50.03.0515	BC 307 PNP	IC>100mA, B>100 any G6	R....70		0	not used	A M0
Q....19		50.03.0350	J 112 N-JFET	NS,Mot,Six G6	R....71		0	not used	A M1
Q....20		50.03.0350	J 112 N-JFET	NS,Mot,Six G6	R....72		0	not used	A M1
Q....21		50.03.0515	BC 307 PNP	IC>100mA, B>100 any G6	R....73		0	not used	A M1
Q....22		50.03.0515	BC 307 PNP	IC>100mA, B>100 any G6	R....74		0	not used	A M1
Q....23		50.03.0350	J 112 N-JFET	NS,Mot,Six E6	R....75		0	not used	A M1
Q....24		50.03.0350	J 112 N-JFET	NS,Mot,Six F6	R....76		0	not used	A M1
Q....25		50.03.0515	BC 307 PNP	IC>100mA, B>100 any F6	R....77		0	not exist	
Q....26		50.03.0340	BC 337 NPN	IC>800mA NS,Mot,Six A0	R....78		0	not exist	
Q....27		50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six A0	R....79		0	not exist	
Q....28		50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six A0	R....80		57.11.3330	33 Ohm 5% 0.25W	L2
Q....29		0	not exist		R....81		57.11.3223	22 kOhm 5% 0.25W	L2
Q....30		0	not exist		R....82		57.11.3822	8.2 kOhm 1% 0.25W	L2
Q....31		0	not exist		R....83		57.11.3473	47 kOhm 1% 0.25W	L2
Q....32		0	not exist		R....84		57.11.3101	100 Ohm 1% 0.25W	L2
Q....33		0	not used	H0	R....85		57.11.3101	100 Ohm 1% 0.25W	L2
Q....34		0	not used	H0	R....86		0	not used	A L3
Q....35		50.03.0436	BC 237 NPN	IC>100mA, B>100 any A9	R....87		0	not used	A L3
Q....36		50.03.0436	BC 237 NPN	IC>100mA, B>100 any A8	R....88		57.11.3682	6.8 kOhm 1% 0.25W	L4
Q....501		50.03.0484	MPSA42 NPN	UCE >300V Mot N8	R....89		57.11.3682	6.8 kOhm 1% 0.25W	L3
Q....502		50.03.0436	BC 237 NPN	IC>100mA, B>100 any N8	R....90		57.11.3682	6.8 kOhm 1% 0.25W	M3
Q....503		50.03.0515	BC 307 PNP	IC>100mA, B>100 any N8	R....91		0	not used	A M4
Q....504		50.03.0515	BC 307 PNP	IC>100mA, B>100 any N8	R....92		0	not used	A M2
Q....505		50.03.0515	BC 307 PNP	IC>100mA, B>100 any N8	R....93		0	not exist	
Q....506		50.03.0436	BC 237 NPN	IC>100mA, B>100 any N8	R....94		0	not used	A M2
Q....507		50.03.0515	BC 307 PNP	IC>100mA, B>100 any N8	R....95		0	not used	A M3
Q....508		50.03.0515	BC 307 PNP	IC>100mA, B>100 any N8	R....96		0	not used	A L3
Q....509		50.03.0436	BC 237 NPN	IC>100mA, B>100 any A7	R....97		57.11.3473	47 kOhm 1% 0.25W	L3
R....1		57.11.3103	10 kOhm 1% 0.25W	N3	R....98		0	not exist	
R....2		57.11.3103	10 kOhm 1% 0.25W	N3	R....99		0	not exist	
R....3		57.11.3152	1.5 kOhm 1% 0.25W	N3	R....100		0	not exist	
R....4		57.11.3152	1.5 kOhm 1% 0.25W	N3	R....101		57.11.3822	8.2 kOhm 5% 0.25W	M4
R....5		57.11.3332	3.3 kOhm 5% 0.25W	N3	R....102		57.11.3223	22 kOhm 5% 0.25W	M5
R....6		57.11.3103	10 kOhm 1% 0.25W	N4	R....103		57.11.3473	47 kOhm 1% 0.25W	M4
R....7		57.11.3183	18 kOhm 5% 0.25W	N4	R....104		57.11.3824	820 kOhm 1% 0.25W	M4
R....8		57.11.3183	18 kOhm 5% 0.25W	N4	R....105		57.11.3824	820 kOhm 1% 0.25W	L5
R....9		57.11.3183	18 kOhm 5% 0.25W	N4	R....106		57.11.3512	5.1 kOhm 1% 0.25W	L5
R....10		57.11.3183	18 kOhm 5% 0.25W	N4	R....107		57.11.3105	1 MOhm 1% 0.25W	L5
R....11		57.11.3330	33 Ohm 5% 0.25W	N4	R....108		57.11.3564	560 kOhm 1% 0.25W	L5
R....12		57.11.3223	22 kOhm 5% 0.25W	N4	R....109		57.11.3102	1 kOhm 1% 0.25W	L4
R....13		57.11.3103	10 kOhm 5% 0.25W	N4	R....110		0	not exist	
R....14		57.11.3332	3.3 kOhm 5% 0.25W	N4	R....111		58.05.1103	10 kOhm 10% 0.5 W mehrgangtrimmer	15
R....15		57.11.3561	560 Ohm 1% 0.25W	N5	R....112		57.11.3823	82 kOhm 1% 0.25W	I4
R....16		57.11.3911	910 Ohm 1% 0.25W	N5	R....113		57.11.3223	22 kOhm 5% 0.25W	K5
R....17		57.11.3471	470 Ohm 1% 0.25W	N5	R....114		57.11.3224	220 kOhm 5% 0.25W	K5
R....18		57.11.3751	750 Ohm 1% 0.25W	N5	R....115		57.11.3223	22 kOhm 5% 0.25W	K5
R....19		57.11.3100	10 Ohm 1% 0.25W	N5	R....116		57.11.3752	7.5 kOhm 1% 0.25W	K5
R....20		57.11.3131	130 Ohm 1% 0.25W	N5	R....117		57.11.3823	82 kOhm 1% 0.25W	K4
R....21		57.11.3162	1.6 kOhm 1% 0.25W	N4	R....118		57.11.3392	3.9 kOhm 5% 0.25W	K7
R....22		57.11.3302	3 kOhm 1% 0.25W	N4	R....119		57.11.3162	1.6 kOhm 1% 0.25W	K6
R....23		57.11.3272	2.7 kOhm 1% 0.25W	M5	R....120		22 kOhm 10% -log.->	R123 1.010.028.58 on A14 St 16	
R....24		57.11.3913	91 kOhm 1% 0.25W	M5	R....121		57.11.3104	100 kOhm 5% 0.25W	K6
R....25		57.11.3113	11 kOhm 1% 0.25W	M4	R....122		57.11.3162	1.6 kOhm 1% 0.25W	K6
R....26		57.11.3914	910 kOhm 1% 0.25W	M5	R....123		22 kOhm 10% -log.	comb. with R120/R557	
R....27		57.11.3243	24 kOhm 1% 0.25W	M4	R....124		57.11.3104	100 kOhm 5% 0.25W	K7
R....28		57.11.5125	1.2 MOhm 5% 0.25W	M4	R....125		57.11.3392	3.9 kOhm 1% 0.25W	K6
R....29		57.11.3223	22 kOhm 5% 0.25W	M5	R....126		57.11.3682	6.8 kOhm 1% 0.25W	K7
R....30		57.11.3223	22 kOhm 5% 0.25W	M4	R....127		57.11.3682	6.8 kOhm 1% 0.25W	K6
R....31		57.11.3330	33 Ohm 5% 0.25W	M4	R....128		57.11.3223	22 kOhm 5% 0.25W	K7
R....32		0	not exist		R....129		0	not exist	
R....33		0	not exist		R....130		0	not exist	
R....34		0	not exist		R....131		57.11.3104	100 kOhm 5% 0.25W	H3
R....35		0	not exist		R....132		58.01.8202	2 kOhm 20% trimmer	H3
R....36		57.11.3000	0 Ohm 5% 0.25W	N9	R....133		57.11.3562	5.6 kOhm 5% 0.25W	I3
R....37		57.11.3394	390 kOhm 5% 0.25W	N9	R....134		57.99.0250	6.8 kOhm 0.1% 0.25W	H3
R....38		57.11.3394	390 kOhm 5% 0.25W	N9	R....135		57.99.0250	6.8 kOhm 0.1% 0.25W	H3
R....39		57.11.3104	100 kOhm 1% 0.25W	N3	R....136		57.11.3150	15 Ohm 1% 0.25W	I3
R....40		57.11.3104	100 kOhm 1% 0.25W	N3	R....137		57.11.3150	15 Ohm 1% 0.25W	I3
R....41		57.11.3332	3.3 kOhm 1% 0.25W	N3	R....138		0	not used	A I4
R....42		57.11.3332	3.3 kOhm 1% 0.25W	N3	R....139		57.11.3682	6.8 kOhm 1% 0.25W (gesickt)	H4
R....43		57.11.3222	2.2 kOhm 1% 0.25W	N3	R....140		0	not used	A H4
R....44		57.11.3222	2.2 kOhm 1% 0.25W	N3	R....141		0	not used	A G4
R....45		57.11.3272	2.7 kOhm 5% 0.25W	M2	R....142		57.11.3682	6.8 kOhm 1% 0.25W (gesickt)	G4
R....46		57.11.3242	2.4 kOhm 5% 0.25W	N3	R....143		0	not used	A G4
R....47		58.01.8501	500 Ohm 10% 0.25W trimmer	N3	R....144		57.11.3682	6.8 kOhm 1% 0.25W (gesickt)	G4
R....48		57.11.3223	22 kOhm 5% 0.25W	N3	R....145		0	not used	A I4
R....49		57.11.3332	3.3 kOhm 1% 0.25W	N2	R....146		0	not used	A I4
R....50		57.11.3332	3.3 kOhm 1% 0.25W	N2	R....147		0	not used	A I4
R....51		57.11.3272	2.7 kOhm 1% 0.25W	N2	R....148		0	not used	A I4
R....52		57.11.3272	2.7 kOhm 1% 0.25W	N2	R....149		57.11.3682	6.8 kOhm 1% 0.25W (gesickt)	I4
R....53		57.11.3102	1 kOhm 5% 0.25W	N2	R....150		57.11.5106	10 MOhm 5% 0.25W	K6
R....54		57.11.3102	1 kOhm 5% 0.25W	N2	R....151		57.11.5106	10 MOhm 5% 0.25W	I4
R....55		57.11.3392	3.9 kOhm 5% 0.25W	N2	R....152		57.11.3104	100 kOhm 5% 0.25W	K6
R....56		57.11.3223	22 kOhm 5% 0.25W	N2	R....153		0	not exist	
R....57		0	not used	A	R....154		0	not exist	
R....58		0	not used	A	R....155		0	not exist	
R....59		0	not used	A	R....156		0	not used	A I3



INPUT UNIT MONO B

1.990.220.81

Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	
R...157	.	0	not used	A	K3	R...254	57.11.3102	1 kOhm	1% 0.25W	E6
R...158	.	0	not used	A	K4	R...255	57.11.3223	22 kOhm	5% 0.25W	F5
R...159	.	0	not used	A	K4	R...256	57.11.3103	10 kOhm	1% 0.25W	E5
R...160	.	0	not used	A	I3	R...257	57.11.3103	10 kOhm	1% 0.25W	E5
R...161	.	0	not used	A	K3	R...258	57.11.3684	680 kOhm	5% 0.25W	F5
R...162	.	0	not used	A	K3	R...259	57.11.3682	6.8 kOhm	1% 0.25W	F3
R...163	57.11.3682		6.8 kOhm	1% 0.25W	(gesickt)	R...260	57.11.3682	6.8 kOhm	1% 0.25W	F3
R...164	.	0	not used	A	H4	R...261	57.11.3682	6.8 kOhm	1% 0.25W	F5
R...165	.	0	not used	A	G4	R...262	57.11.3684	680 kOhm	5% 0.25W	F5
R...166	57.11.3682		6.8 kOhm	1% 0.25W	(gesickt)	R...263	57.11.3223	22 kOhm	5% 0.25W	F5
R...167	57.11.3682		6.8 kOhm	1% 0.25W	(gesickt)	R...264	57.11.3684	680 kOhm	5% 0.25W	F5
R...168	.	0	not used	A	H4	R...265	57.11.3472	4.7 kOhm	1% 0.25W	F5
R...169	.	0	not used	A	H4	R...266	.	100 kOhm	10% -log.-> R267 1.010.031.58 on A11 St	F6
R...170	.	0	not used	A	H4	R...267	.	100 kOhm	10% -log. comb. with R266/R553	F5
R...171	.	0	not used	A	H4	R...268	57.11.3472	4.7 kOhm	1% 0.25W	F6
R...172	.	0	not used	A	H4	R...269	57.11.3102	1 kOhm	5% 0.25W	F5
R...173	.	0	not exist			R...270	57.11.5106	10 MOhm	10% 0.25W	F6
R...174	.	0	not exist			R...271	57.11.3104	100 kOhm	5% 0.25W	F6
R...175	.	0	not exist			R...272	57.11.5106	10 MOhm	10% 0.25W	F6
R...176	.	0	not exist			R...273	.	not exist		
R...177	.	0	not exist			R...274	.	not exist		
R...178	.	0	not exist			R...275	.	not exist		
R...179	.	0	not exist			R...276	57.11.3152	1.5 kOhm	1% 0.25W	K1
R...180	.	0	not exist			R...277	57.11.3152	1.5 kOhm	1% 0.25W	K1
R...181	57.11.3104		100 kOhm	5% 0.25W		R...278	57.11.3392	3.9 kOhm	1% 0.25W	K1
R...182	58.01.8502		5 kOhm	20% trimmer	G3	R...279	57.11.3392	3.9 kOhm	1% 0.25W	K1
R...183	57.11.3562		5.6 kOhm	1% 0.25W	G3	R...280	57.11.3272	2.7 kOhm	1% 0.25W	K1
R...184	57.11.3121		120 Ohm	1% 0.25W	H6	R...281	57.11.3272	2.7 kOhm	1% 0.25W	K1
R...185	1.010.108.58		4.7 kOhm	10% lin comb. with R559	St H7	R...282	57.11.3223	22 kOhm	5% 0.25W	K1
R...186	57.11.3121		120 Ohm	1% 0.25W	H6	R...283	.	not used	A	I1
R...187	57.11.3102		1 kOhm	1% 0.25W	H6	R...284	.	not used	A	I1
R...188	57.11.3103		10 kOhm	1% 0.25W	H5	R...285	.	not used	A	I1
R...189	57.11.3103		10 kOhm	1% 0.25W	H5	R...286	.	not used	A	I1
R...190	57.11.3684		680 kOhm	5% 0.25W	H5	R...287	57.11.3272	2.7 kOhm	1% 0.25W	I1
R...191	57.11.3103		10 kOhm	1% 0.25W	H6	R...288	57.11.3272	2.7 kOhm	1% 0.25W	I1
R...192	57.11.3684		680 kOhm	5% 0.25W	I5	R...289	.	not used	A	I1
R...193	57.11.3684		680 kOhm	5% 0.25W	I5	R...290	.	not exist		
R...194	57.11.3392		3.9 kOhm	1% 0.25W	I5	R...291	57.11.3104	100 kOhm	5% 0.25W	G3
R...195	.	0	100 kOhm	10% -log. -> R196 1.010.031.58 on A8 St	H6	R...292	57.11.3752	7.5 kOhm	1% 0.25W	G3
R...196	.	0	100 kOhm	10% -log. comb. with R195/R556	H5	R...293	57.11.3823	82 kOhm	1% 0.25W	G3
R...197	57.11.3392		3.9 kOhm	1% 0.25W	I5	R...294	57.11.3223	22 kOhm	5% 0.25W	G3
R...198	57.11.3102		1 kOhm	5% 0.25W	H7	R...295	57.11.3332	3.3 kOhm	1% 0.25W	G3
R...199	57.11.5106		10 MOhm	10% 0.25W	H7	R...296	57.11.3332	3.3 kOhm	1% 0.25W	G3
R...200	57.11.3684		680 kOhm	5% 0.25W	I7	R...297	57.11.3330	33 Ohm	5% 0.25W	G3
R...201	57.11.3333		33 kOhm	5% 0.25W	H7	R...298	57.11.3223	22 kOhm	1% 0.25W	G3
R...202	57.11.3104		100 kOhm	5% 0.25W	H6	R...299	.	not used	A	H3
R...203	57.11.5106		10 MOhm	10% 0.25W	H6	R...300	.	not used	A	H3
R...204	.	0	not exist			R...301	.	not used	A	H3
R...205	.	0	not exist			R...302	.	not used	A	H3
R...206	1.010.108.58		4.7 kOhm	10% lin comb. with R551	St G7	R...303	.	not used	A	H3
R...207	57.11.3103		10 kOhm	1% 0.25W	G5	R...304	.	not used	A	H3
R...208	57.11.3103		10 kOhm	1% 0.25W	G5	R...305	.	not used	A	H3
R...209	57.11.3684		680 kOhm	5% 0.25W	G5	R...306	.	not used	A	H3
R...210	57.11.3105		1 MOhm	5% 0.25W	H6	R...307	57.11.3332	3.3 kOhm	1% 0.25W	F4
R...211	57.11.3472		4.7 kOhm	1% 0.25W	H6	R...308	57.11.3223	22 kOhm	5% 0.25W	F4
R...212	.	0	100 kOhm	10% -log. -> R213 1.010.031.58 on A9 St	H6	R...309	57.11.3333	33 kOhm	1% 0.25W	E4
R...213	.	0	100 kOhm	10% -log. comb. with R212/R560	H5	R...310	57.11.3103	10 kOhm	1% 0.25W	E4
R...214	57.11.3472		4.7 kOhm	1% 0.25W	H6	R...311	57.11.3472	4.7 kOhm	1% 0.25W	E4
R...215	57.11.3105		1 MOhm	5% 0.25W	H5	R...312	57.11.3684	680 kOhm	5% 0.25W	F4
R...216	57.11.3222		2.2 kOhm	5% 0.25W	G5	R...313	57.11.3823	82 kOhm	1% 0.25W	E4
R...217	57.11.3362		3.6 kOhm	1% 0.25W	H6	R...314	58.05.1104	100 kOhm	10% 0.5 W mehrgangtrimmer	D4
R...218	57.11.3202		2 kOhm	1% 0.25W	H6	R...315	57.11.3332	3.3 kOhm	1% 0.25W	D4
R...219	57.11.3183		18 kOhm	1% 0.25W	G6	R...316	57.11.3223	22 kOhm	1% 0.25W	D4
R...220	57.11.3752		7.5 kOhm	1% 0.25W	G6	R...317	.	not used	A	F3
R...221	57.11.3102		1 kOhm	5% 0.25W	H6	R...318	.	not used	A	F3
R...222	57.11.5106		10 MOhm	10% 0.25W	H6	R...319	.	not used	A	E3
R...223	57.11.3684		680 kOhm	5% 0.25W	G6	R...320	.	not used	A	E3
R...224	57.11.3333		33 kOhm	5% 0.25W	H6	R...321	.	not used	A	E3
R...225	57.11.5106		10 MOhm	10% 0.25W	H6	R...322	.	not used	A	F3
R...226	57.11.3104		100 kOhm	5% 0.25W	G6	R...323	.	not used	A	E3
R...227	1.010.108.58		4.7 kOhm	10% lin comb. with R552	St F7	R...324	.	not used	A	D3
R...228	57.11.3103		10 kOhm	1% 0.25W	F5	R...325	.	not used	A	D3
R...229	57.11.3103		10 kOhm	1% 0.25W	G5	R...326	.	not used	A	D3
R...230	57.11.3684		680 kOhm	5% 0.25W	G5	R...327	.	not exist		
R...231	57.11.3105		1 MOhm	5% 0.25W	G6	R...328	.	not exist		
R...232	57.11.3512		5.1 kOhm	1% 0.25W	G6	R...329	.	not exist		
R...233	.	0	100 kOhm	10% -log.-> R234 1.010.031.58 on A10 St	G6	R...330	.	not exist		
R...234	.	0	100 kOhm	10% neg.log. comb. with R233/R553	St G5	R...331	1.010.106.58	10 kOhm	10% pos.log. comb. with R546	St E7
R...235	57.11.3472		4.7 kOhm	1% 0.25W	G6	R...332	57.11.3752	7.5 kOhm	1% 0.25W	D6
R...236	57.11.3105		1 MOhm	5% 0.25W	G5	R...333	57.11.3823	82 kOhm	1% 0.25W	D6
R...237	57.11.3222		2.2 kOhm	5% 0.25W	G5	R...334	1.010.106.58	10 kOhm	10% pos.log. comb. with R549	St D7
R...238	57.11.3362		3.6 kOhm	1% 0.25W	G6	R...335	57.11.3752	7.5 kOhm	1% 0.25W	D6
R...239	57.11.3202		2 kOhm	1% 0.25W	G6	R...336	57.11.3823	82 kOhm	1% 0.25W	D6
R...240	57.11.3183		18 kOhm	1% 0.25W	G6	R...337	1.010.106.58	10 kOhm	10% pos.log. comb. with R547	St C7
R...241	57.11.3752		7.5 kOhm	1% 0.25W	G6	R...338	57.11.3752	7.5 kOhm	1% 0.25W	C6
R...242	57.11.3102		1 kOhm	5% 0.25W	G6	R...339	57.11.3823	82 kOhm	1% 0.25W	C6
R...243	57.11.5106		10 MOhm	10% 0.25W	G6	R...340	1.010.106.58	10 kOhm	10% pos.log. comb. with R548	St C7
R...244	57.11.3684		680 kOhm	5% 0.25W	G6	R...341	57.11.3752	7.5 kOhm	1% 0.25W	D6
R...245	57.11.3333		33 kOhm	5% 0.25W	G6	R...342	57.11.3823	82 kOhm	1% 0.25W	C6
R...246	57.11.5106		10 MOhm	10% 0.25W	G6	R...343	.	10 kOhm	10% +log.-> R345 1.010.034.58 on A12 St	B6
R...247	57.11.3104		100 kOhm	5% 0.25W	F6	R...344	.	4.7 kOhm	10% +log. see R345	B6
R...248	.	0	not exist			R...345	.	10 kOhm	10% -log. comb. with R343/344/543/545	B6
R...249	.	0	not exist			R...346	57.11.3752	7.5 kOhm	1% 0.25W	B6
R...250	.	0	not exist			R...347	57.11.3823	82 kOhm	1% 0.25W	B6
R...251	57.11.3121		120 Ohm	1% 0.25W	F7	R...348	.	10 kOhm	10% +log.-> R350 1.010.034.58 on A13 St	A6
R...252	1.010.108.58		4.7 kOhm	10% lin comb. with R550	St E7	R...349	.	4.7 kOhm	10% +log. see R350	A6
R...253	57.11.3121		120 Ohm	1% 0.25W	E6	R...350	.	10 kOhm	10% -log. comb. with R348/349/542/544	A6

INPUT UNIT MONO B



1.990.220.81

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER	
R...	552	.	100 kOhm	20% lin. comb. with R227	St	F7	RZ..528	57.88.4104	100 kOhm SIP 9 (8*)	G9
R...	553	.	100 kOhm	20% lin. comb. with R233/R234	St	G6	RZ..529	57.88.2104	100 kOhm SIP 8 (4*)	G9
R...	554	.	100 kOhm	20% lin. comb. with R449	St	N7	RZ..530	57.88.2104	100 kOhm SIP 8 (4*)	H9
R...	555	.	not used							
R...	556	0	100 kOhm	20% lin. comb. with R195/R196	St	H6	RZ..531	57.88.4104	100 kOhm SIP 9 (8*)	H9
R...	557	.	100 kOhm	20% lin. comb. with R120/R123	St	I7	RZ..532	57.88.2104	100 kOhm SIP 8 (4*)	H9
R...	558	.	100 kOhm	20% lin. comb. with R266/R267	St	F6	RZ..533	57.88.2104	100 kOhm SIP 8 (4*)	H9
R...	559	.	100 kOhm	20% lin. comb. with R185	St	H7	RZ..534	57.88.4104	100 kOhm SIP 9 (8*)	H8
R...	560	.	100 kOhm	20% lin. comb. with R212/R213	St	H6	RZ..535	.	0 not used	H8
RZ...	536	.	57.88.2104	100 kOhm			RZ..536	57.88.2104	100 kOhm SIP 8 (4*)	H8
RZ...	537	.	57.88.4104	100 kOhm			RZ..537	57.88.4104	100 kOhm SIP 9 (8*)	I8
RZ...	538	.	57.88.2104	100 kOhm			RZ..538	57.88.2104	100 kOhm SIP 8 (4*)	I8
RZ...	539	.	57.88.2104	100 kOhm			RZ..539	57.88.2104	100 kOhm SIP 8 (4*)	K8
RZ...	540	.	57.88.4104	100 kOhm			RZ..540	57.88.4104	100 kOhm SIP 9 (8*)	I9
RZ...	541	.	57.88.2104	100 kOhm			RZ..541	57.88.2104	100 kOhm SIP 8 (4*)	I9
RZ...	542	.	57.88.2104	100 kOhm			RZ..542	57.88.2104	100 kOhm SIP 8 (4*)	K9
RZ...	543	.	57.88.4104	100 kOhm			RZ..543	57.88.4104	100 kOhm SIP 9 (8*)	K9
RZ...	544	.	57.88.2104	100 kOhm			RZ..544	57.88.2104	100 kOhm SIP 8 (4*)	K9
RZ...	545	.	57.88.2104	100 kOhm			RZ..545	57.88.2104	100 kOhm SIP 8 (4*)	L9
RZ...	546	.	57.88.4104	100 kOhm			RZ..546	57.88.4104	100 kOhm SIP 9 (8*)	K8
RZ...	547	.	57.88.2104	100 kOhm			RZ..547	57.88.2104	100 kOhm SIP 8 (4*)	L8
RZ...	548	.	57.88.2104	100 kOhm			RZ..548	57.88.2104	100 kOhm SIP 8 (4*)	K8
RZ...	549	.	.	0 not exist			RZ..549	.	0 not exist	
RZ...	550	.	57.88.4104	100 kOhm			RZ..550	57.88.4104	100 kOhm SIP 9 (8*)	D7
RZ...	551	.	57.88.2104	100 kOhm			RZ..551	57.88.2104	100 kOhm SIP 8 (4*)	B7
RZ...	552	.	57.88.2104	100 kOhm			RZ..552	57.88.2104	100 kOhm SIP 8 (4*)	E7
RZ...	553	.	57.88.4104	100 kOhm			RZ..553	57.88.4104	100 kOhm SIP 9 (8*)	B8
RZ...	554	.	57.88.2104	100 kOhm			RZ..554	57.88.2104	100 kOhm SIP 8 (4*)	E8
RZ...	555	.	57.88.2104	100 kOhm			RZ..555	57.88.2104	100 kOhm SIP 8 (4*)	E8
RZ...	556	.	57.88.4104	100 kOhm			RZ..556	57.88.4104	100 kOhm SIP 9 (8*)	E9
RZ...	557	.	57.88.2104	100 kOhm			RZ..557	57.88.2104	100 kOhm SIP 8 (4*)	E9
RZ...	558	.	57.88.2104	100 kOhm			RZ..558	57.88.2104	100 kOhm SIP 8 (4*)	E9
RZ...	559	.	57.88.4104	100 kOhm			RZ..559	57.88.4104	100 kOhm SIP 9 (8*)	F9
RZ...	560	.	57.88.2104	100 kOhm			RZ..560	57.88.2104	100 kOhm SIP 8 (4*)	F9
RZ...	561	.	57.88.2104	100 kOhm			RZ..561	57.88.2104	100 kOhm SIP 8 (4*)	F9
RZ...	562	.	57.88.4104	100 kOhm			RZ..562	57.88.4104	100 kOhm SIP 9 (8*)	F8
RZ...	563	.	57.88.2104	100 kOhm			RZ..563	57.88.2104	100 kOhm SIP 8 (4*)	F8
RZ...	564	.	57.88.2104	100 kOhm			RZ..564	57.88.2104	100 kOhm SIP 8 (4*)	D8
RZ...	565	.	57.88.4104	100 kOhm			RZ..565	57.88.4104	100 kOhm SIP 9 (8*)	G8
RZ...	566	.	57.88.2102	1 kOhm			RZ..566	57.88.2102	1 kOhm SIP 8 (4*)	G8
RZ...	567	.	57.88.2102	1 kOhm			RZ..567	57.88.2102	1 kOhm SIP 8 (4*)	F8
RZ...	568	.	57.88.2102	1 kOhm			RZ..568	57.88.2102	1 kOhm SIP 8 (4*)	G8
RZ...	569	.	57.88.2102	1 kOhm			RZ..569	57.88.2102	1 kOhm SIP 8 (4*)	G8
RZ...	570	.	57.88.2102	1 kOhm			RZ..570	57.88.2102	1 kOhm SIP 8 (4*)	G8
RZ...	571	.	57.88.2102	1 kOhm			RZ..571	57.88.2102	1 kOhm SIP 8 (4*)	G9
RZ...	572	.	57.88.2102	1 kOhm			RZ..572	57.88.2102	1 kOhm SIP 8 (4*)	G9
T.....	1	1.022.456.00						input trafo	1:2.24	St M3
T.....	2	1.022.454.00						input trafo	1:3.16	St M2
W.....	1	57.11.3000	0 Ohm							H1
W.....	2	57.11.3000	0 Ohm							N6
W.....	3	57.11.3000	0 Ohm							N6
W.....	4	57.11.3000	0 Ohm							N6
W.....	5	1.010.329.64						wire 2.5mm		N6
W.....	6	.	0 not used							H3
<p>OPTIONS: see optionlist 1.990.210.00 ***** option 1.....: not available option 2.....: not available option 3.....: FILM OUT -> group 1...8 software option A : not available</p>										
RZ...	501	57.88.2101	100 Ohm	SIP 8 (4*)	A3					
RZ...	502	57.88.2101	100 Ohm	SIP 8 (4*)	A3					
RZ...	503	57.88.4104	100 kOhm	SIP 9 (8*)	L8					
RZ...	504	57.88.2104	100 kOhm	SIP 8 (4*)	L8					
RZ...	505	.	not used		A					
RZ...	506	57.88.2104	100 kOhm	SIP 8 (4*)	L9					
RZ...	507	57.88.4104	100 kOhm	SIP 9 (8*)	L9					
RZ...	508	57.88.2104	100 kOhm	SIP 8 (4*)	L9					
RZ...	509	57.88.2104	100 kOhm	SIP 8 (4*)	L9					
RZ...	510	57.88.4104	100 kOhm	SIP 9 (8*)	L9					
RZ...	511	.	not exist							
RZ...	512	57.88.4104	100 kOhm	SIP 9 (8*)	L8					
RZ...	513	.	not used		A					
RZ...	513	57.88.2104	100 kOhm	SIP 8 (4*)	L8					
RZ...	514	.	not exist							
RZ...	515	57.88.2473	47 kOhm	SIP 8 (4*)	I8					
RZ...	516	57.88.2473	47 kOhm	SIP 8 (4*)	I8					
RZ...	517	57.88.4104	100 kOhm	SIP 9 (8*)	E8					
RZ...	518	57.88.4104	100 kOhm	SIP 9 (8*)	D7					
RZ...	519	57.88.4104	100 kOhm	SIP 9 (8*)	C7					
RZ...	521	57.88.4104	100 kOhm	SIP 9 (8*)	B7					
RZ...	522	57.88.4104	100 kOhm	SIP 9 (8*)	B7					
RZ...	523	57.88.4104	100 kOhm	SIP 9 (8*)	A8					
RZ...	524	.	not exist							
RZ...	525	57.88.4104	100 kOhm	SIP 9 (8*)	G8					
RZ...	526	57.88.2104	100 kOhm	SIP 8 (4*)	G8					
RZ...	527	.	not used		A					

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER:

 ADI=Analog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
 Fc=Fairchild, Fa=Farranti, GI=General Instrument, Ha=Harting,
 HP=Hewlett Packard, ITI=Intermetall, Mot=Motorola, Nat=National
 (Matsushita), NS=National Semiconductors, Ph=Philips,
 PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of
 America, SDS=SDS-Relais, Sie=Siemens, Sig= Signetics
 Six=Siliconix, St=Studer,
 Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi

HISTORY:

 1.10.90 Stand RAI-Pult
 13.11.90 Eliminierung digitaler Stoerungen (DAC)
 Aux-Klirr (OV generiert 1)
 PF-Headroom
 21.11.90 Postlst Bereinigung
 19.12.90 MIC-Knacksen (Software Update noetig)
 Verbesserung Rauschabstand bei eingeschaltetem Insert
 8.04.91 Aenderung der B6 auf -81 wegen besserer Produzier-
 barkeit (von LS auf BS) und diverser elektrischer
 Modifikationen.
 Zusatzlich wird MCH-OUT bestueckt.
 24.04.91 3 neue C auf LS wegen HF-Stoerungen vom Prozessor her
 und 1 Stk. Blankdraht wegen fehlender Leiterbahn



INPUT UNIT MONO B

1.990.220.81

Ad ..POS.. ...REF.No... DESCRIPTION.....MANUFACTURER

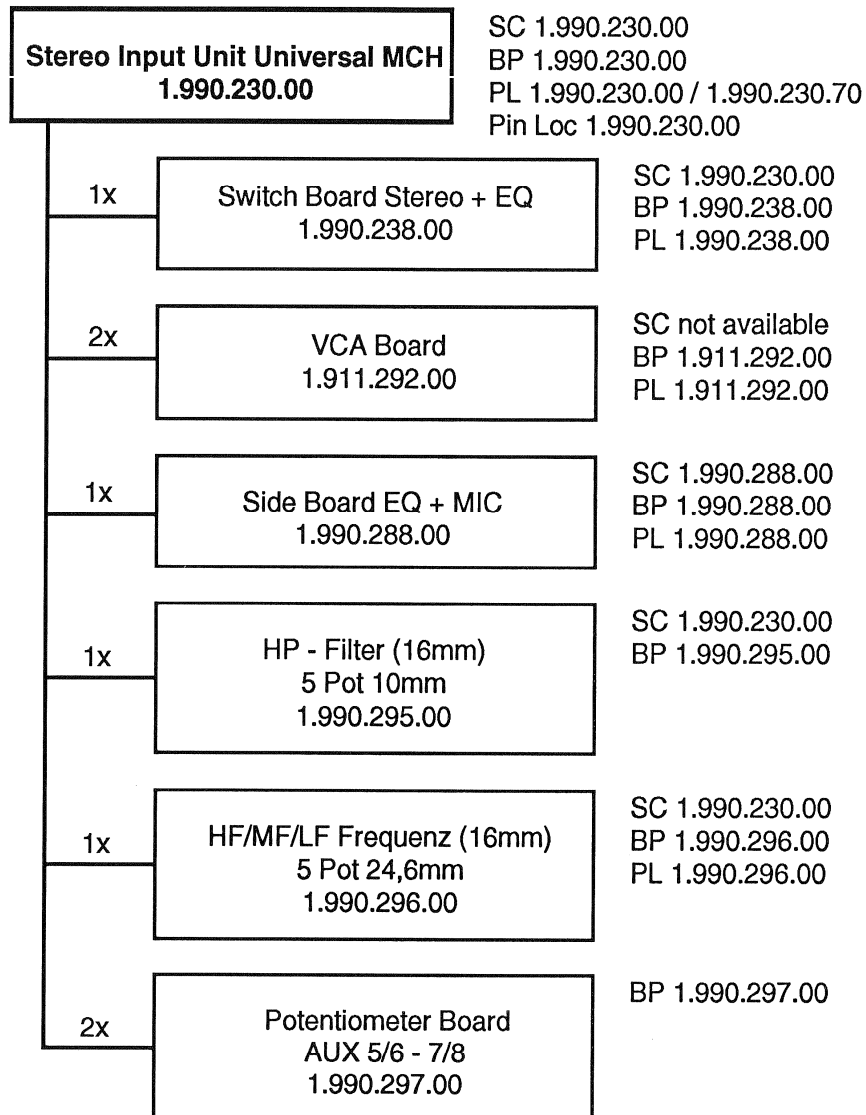
21.05.92 a) Offene Steuerleitung von IC 55 verursacht Schwingen
und Einstreuung digitaler Stoerungen. -> C 537, RZ 513
b) Schwingen von IC 4. -> C 65
c) Fuer Option "MCH Bus Out" fehlen Bauelemente, welche
dann nachbestueckt werden muessen. -> C 508, RZ 505

1.990.220.81	INPUT UNIT MONO B	HOR91/04/2400
1.990.220.81	INPUT UNIT MONO B	HOR92/05/2101

END
→

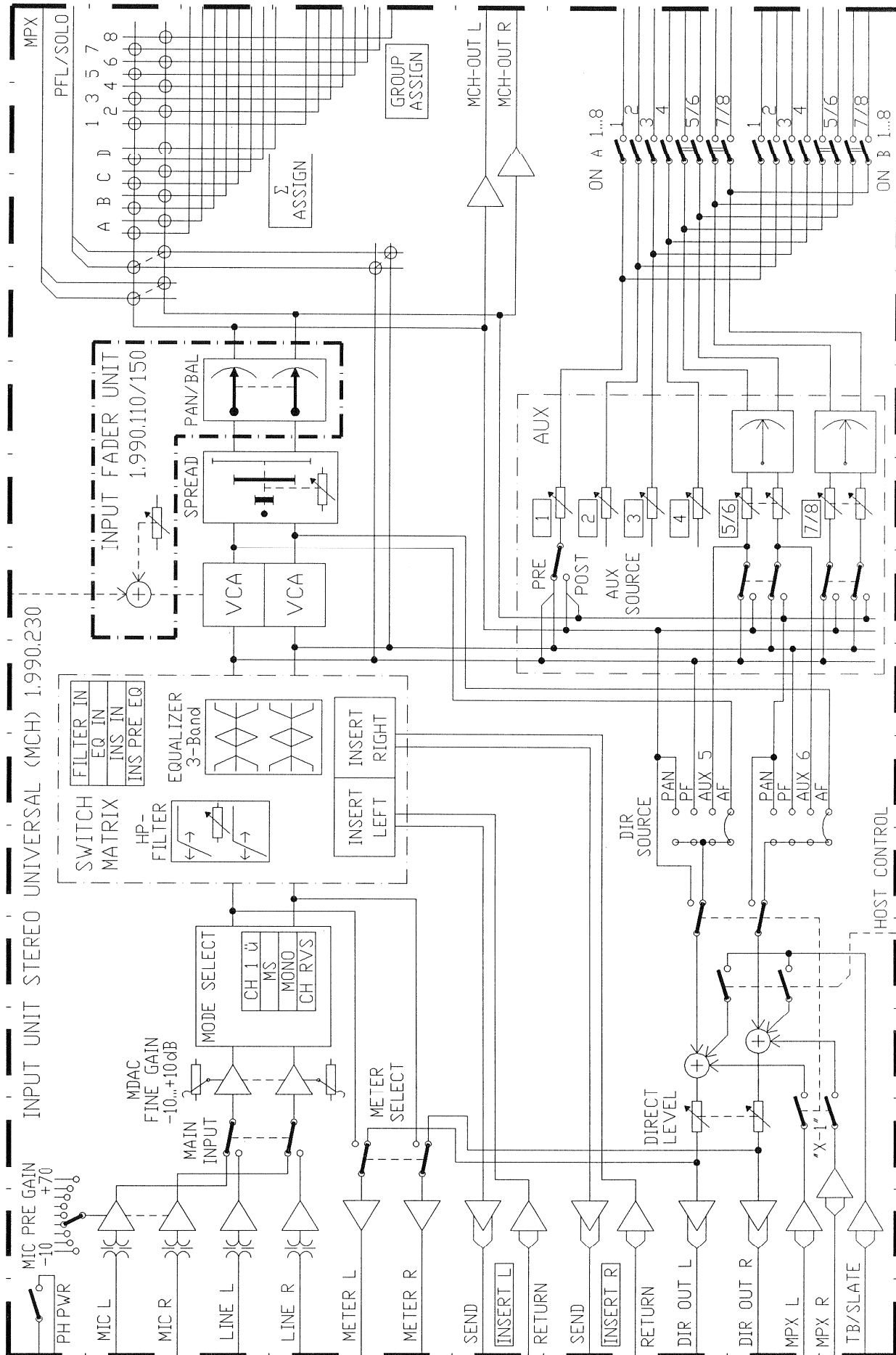
Stereo Input Unit Universal MCH

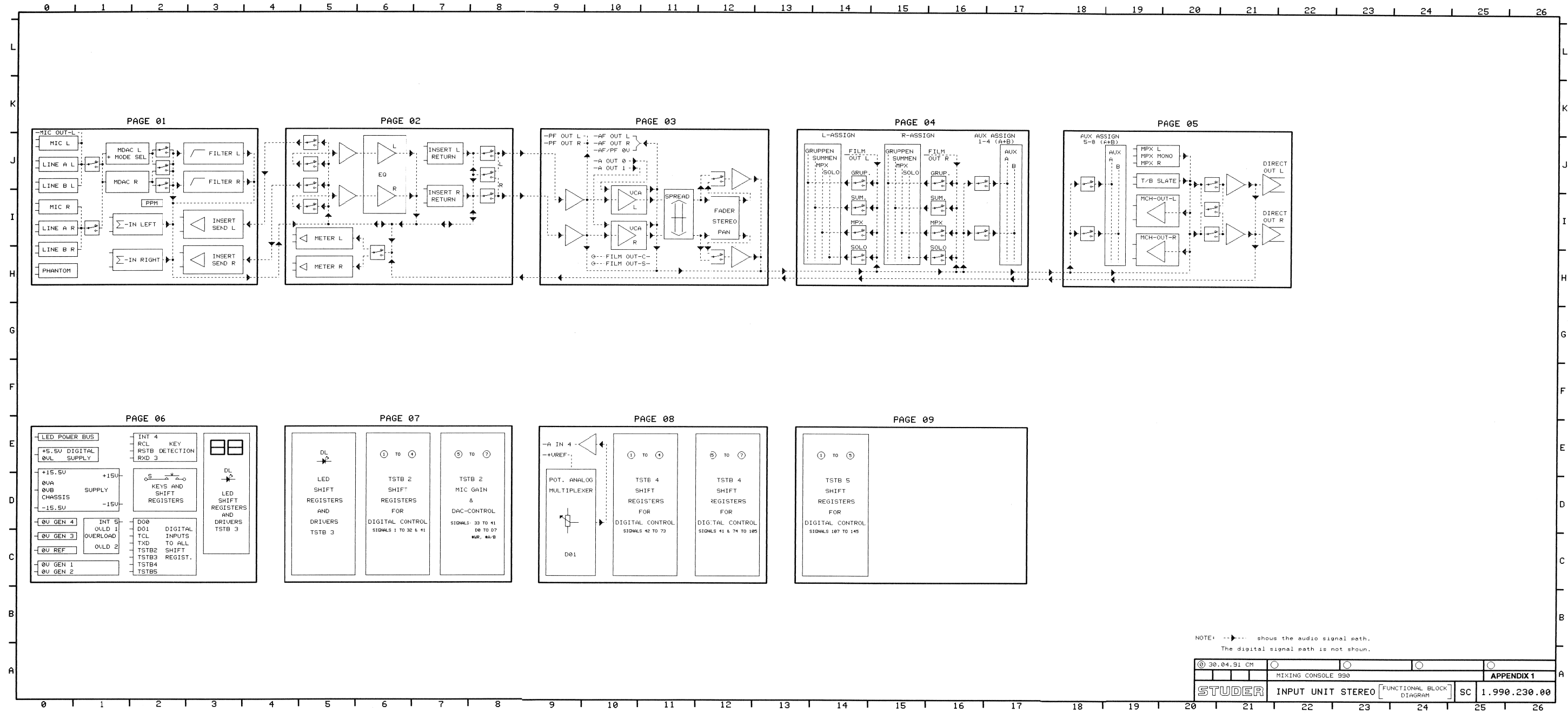
1.990.230.00



SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

STEREO INPUT UNIT UNIVERSAL MCH 1.990.230.00

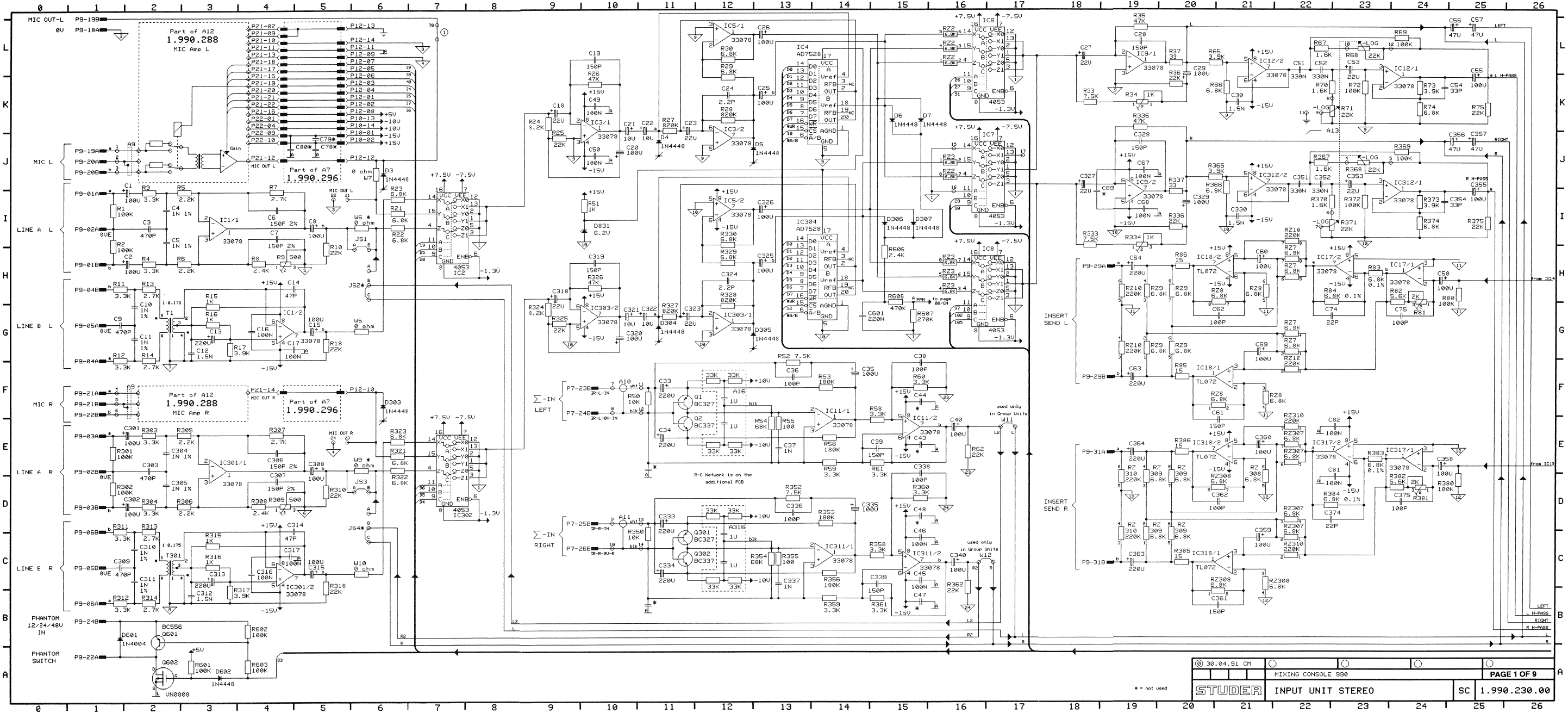




NOTE: - - - shows the audio signal path.
 The digital signal path is not shown.

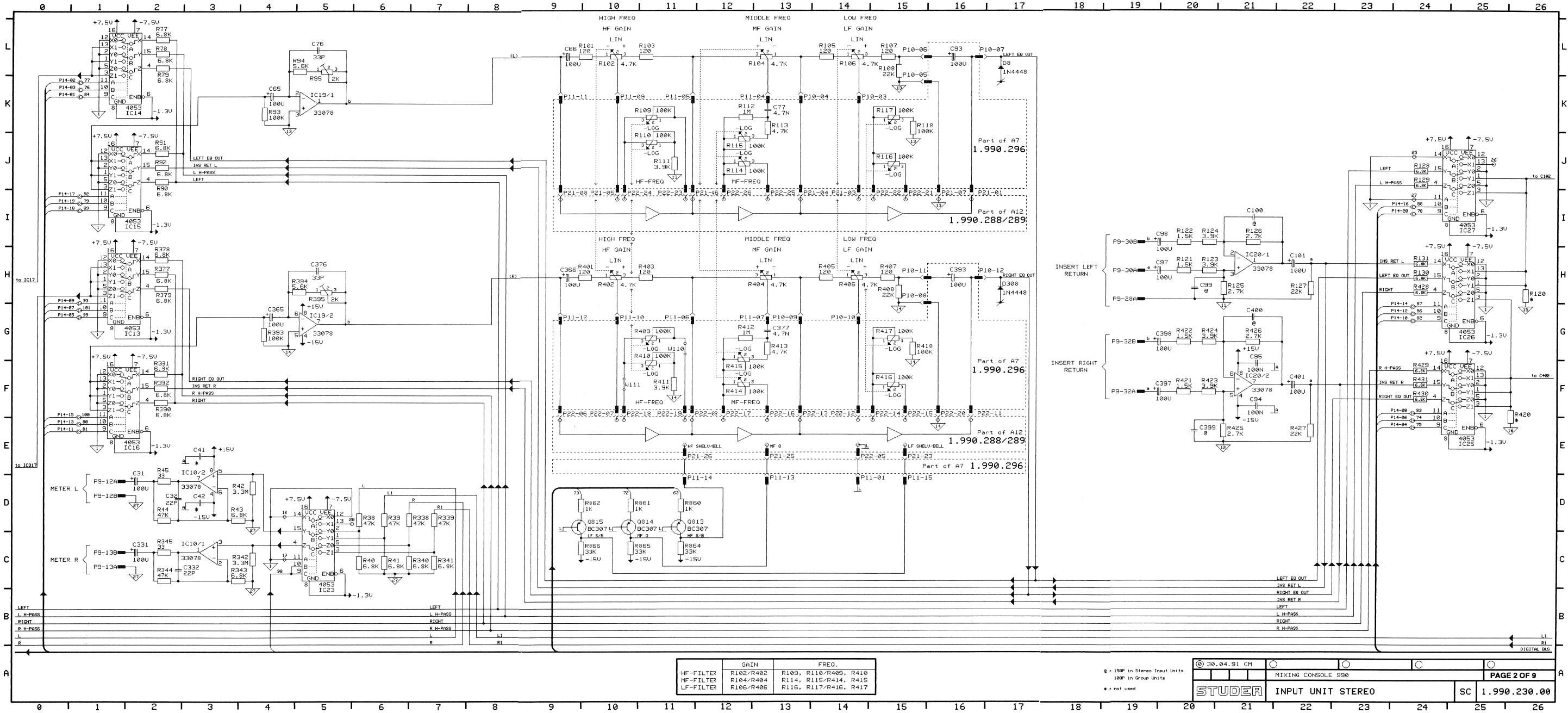
INPUT UNIT STEREO

1.990.230.00



INPUT UNIT STEREO

1.990.230.00

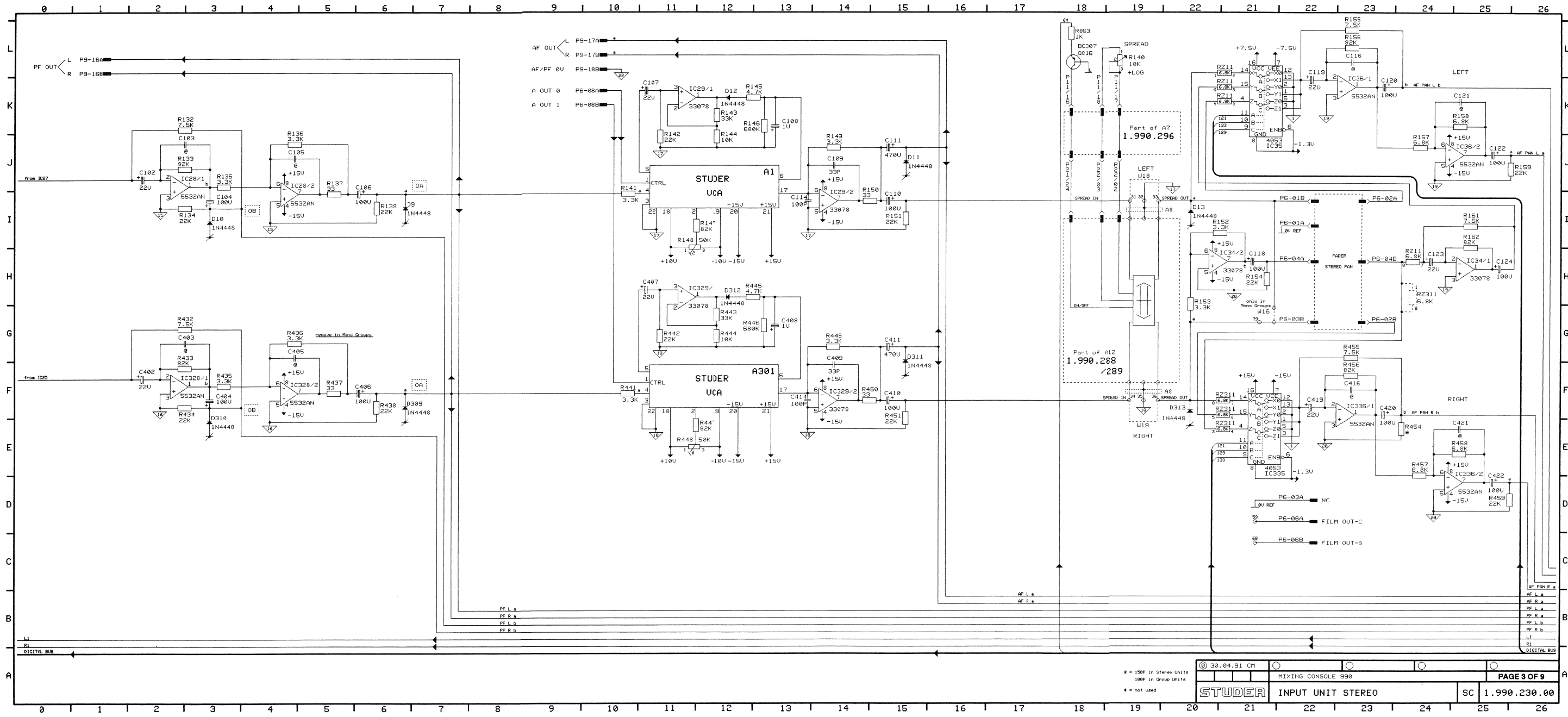


* 150p in Stereo Input Units
 100p in Group Units
 • not used

INPUT UNIT STEREO

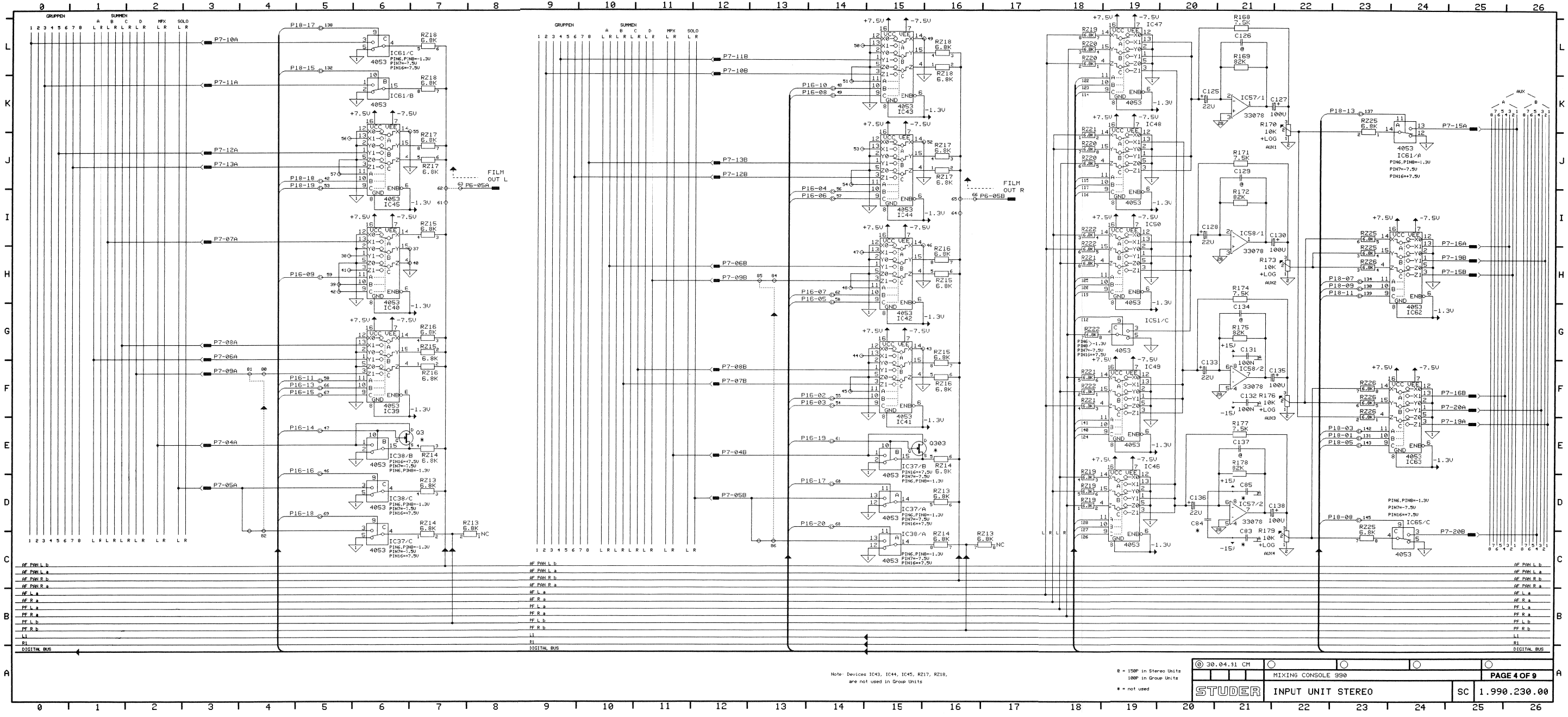


1.990.230.00



* = 150P in Stereo Units
 100P in Group Units
 * = not used

INPUT UNIT STEREO



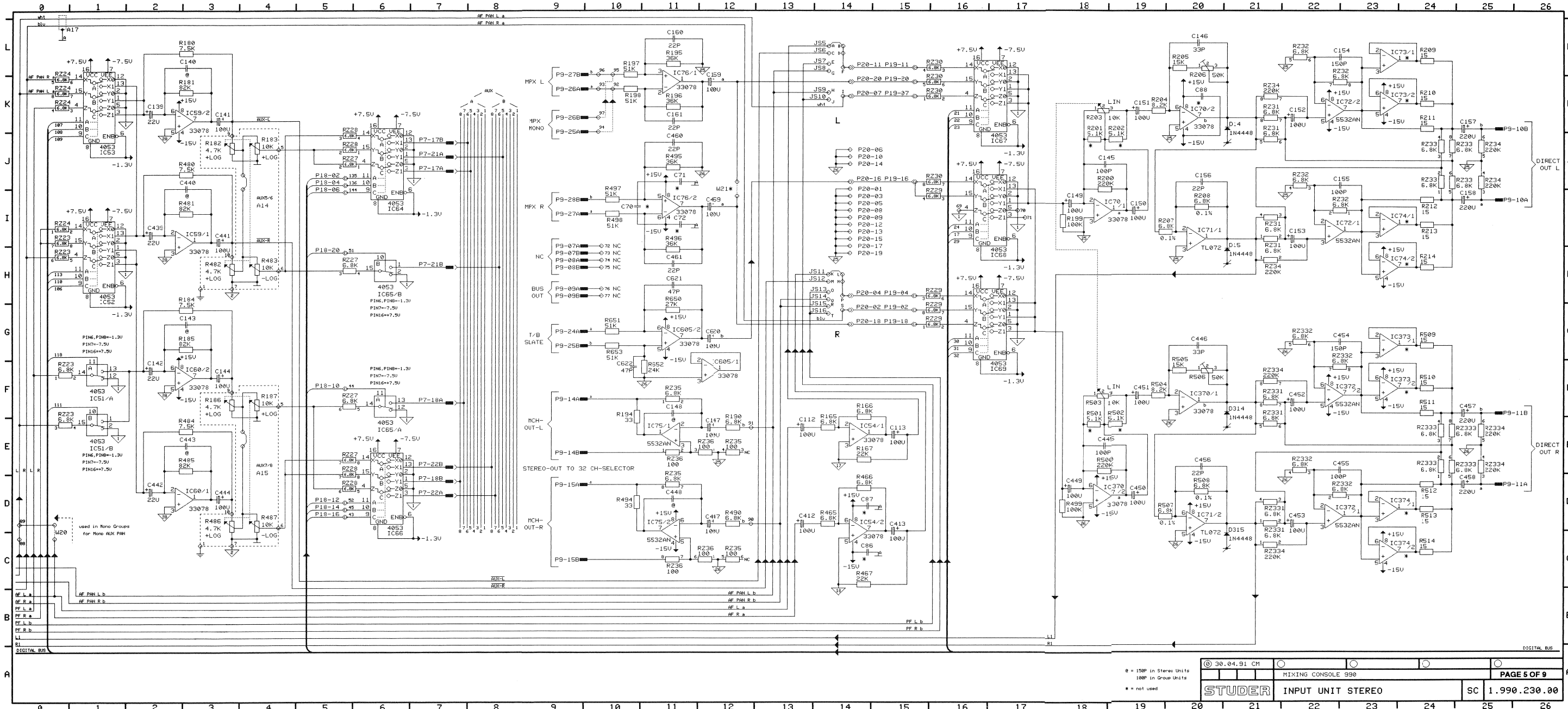
Note: Devices IC43, IC44, IC45, IC47, IC218, are not used in Group Units

* = 150pF in Stereo Units
100pF in Group Units
* = not used

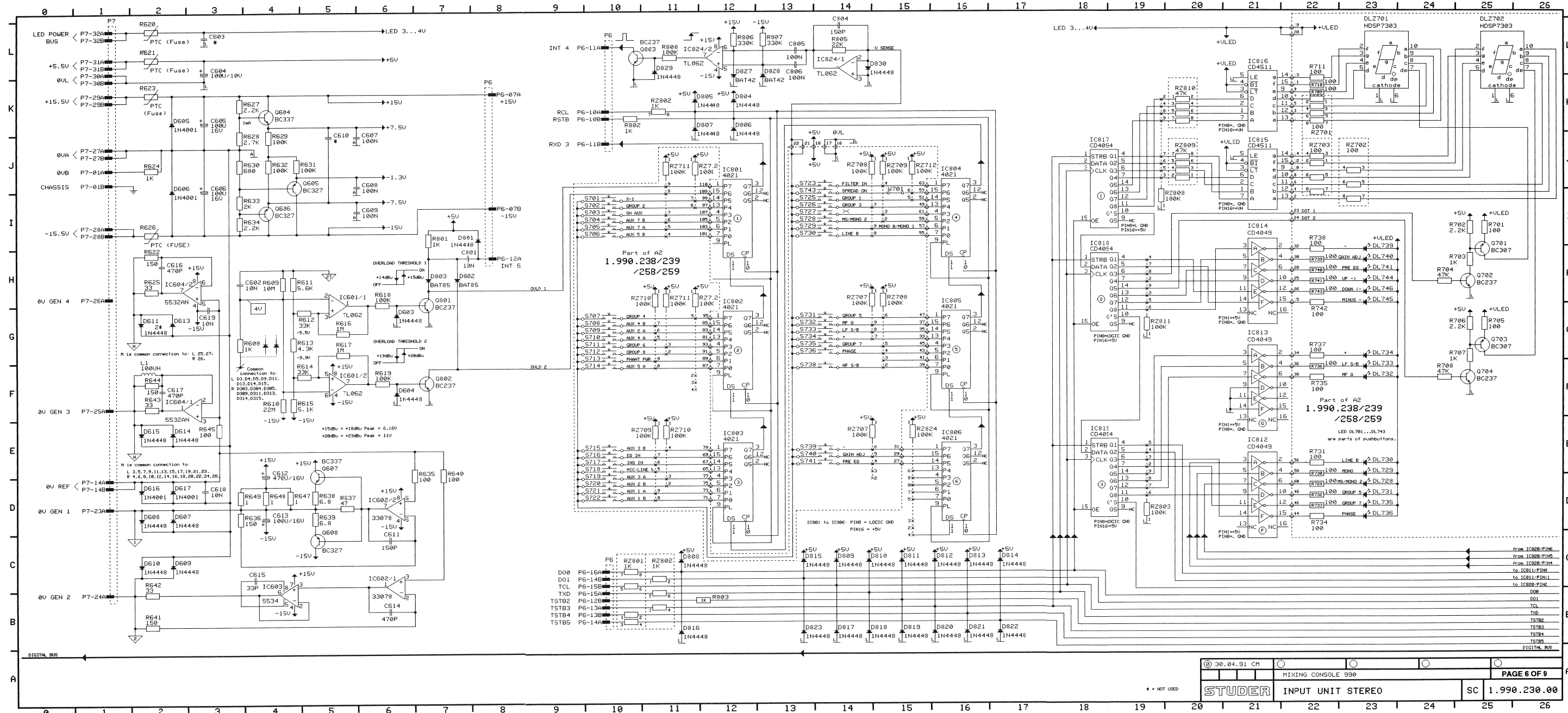


INPUT UNIT STEREO

1.990.230.00



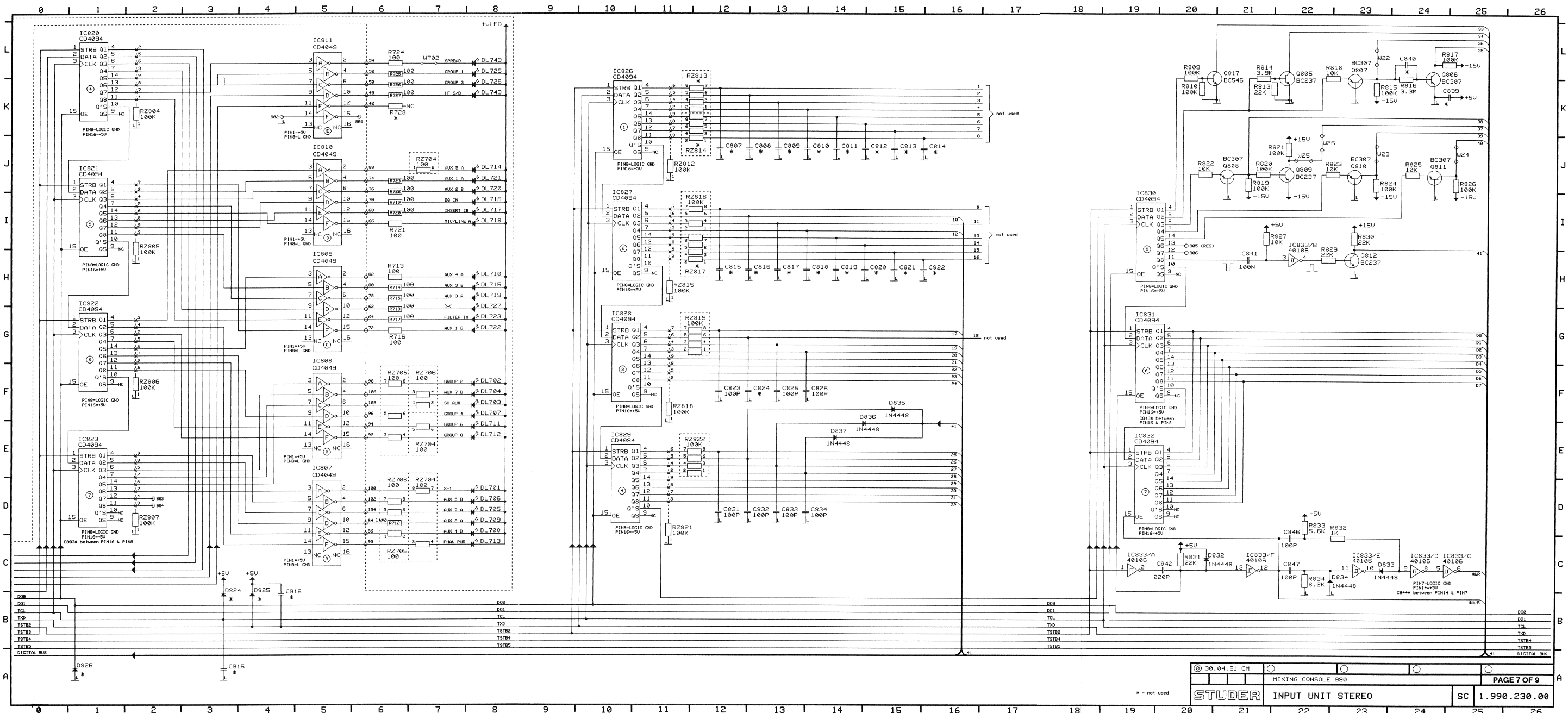
INPUT UNIT STEREO



INPUT UNIT STEREO



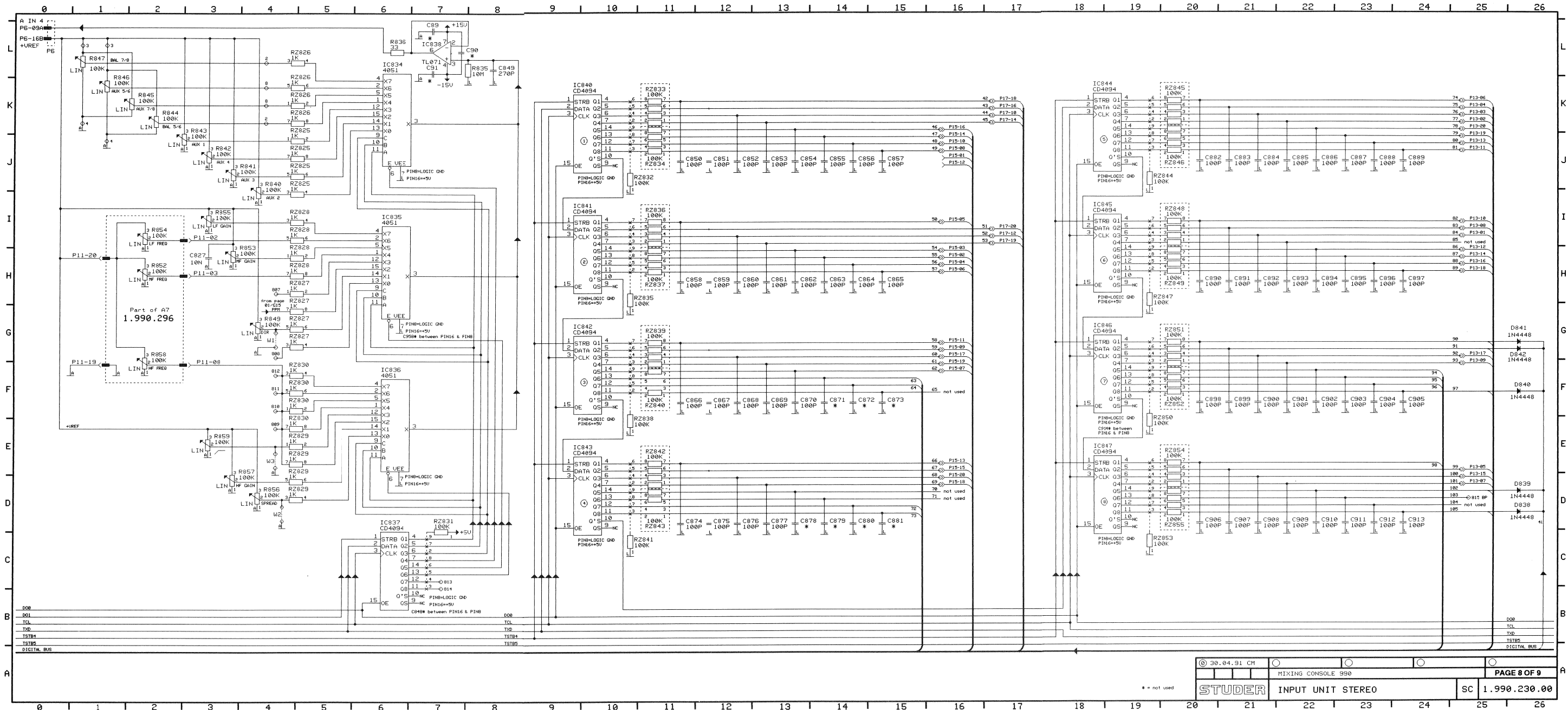
1.990.230.00





INPUT UNIT STEREO

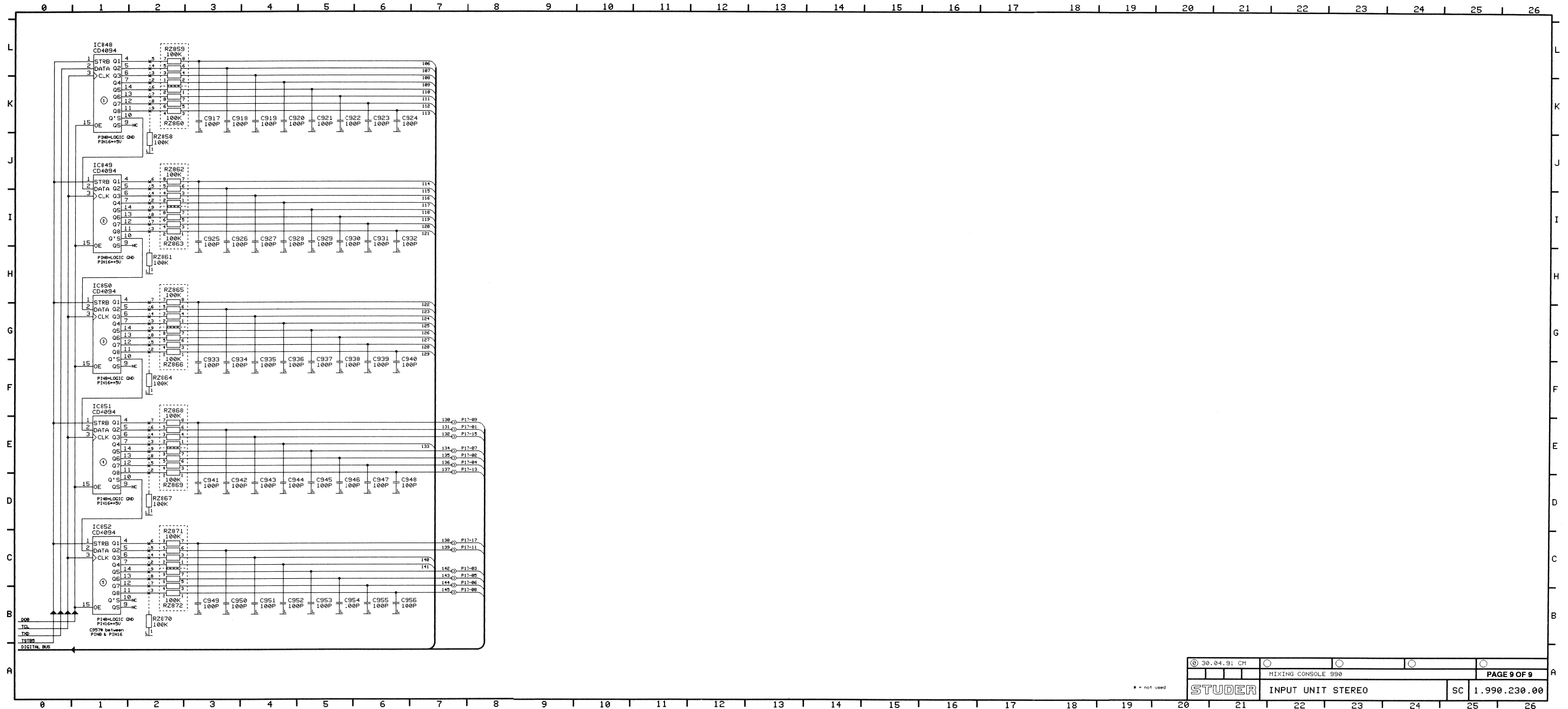
1.990.230.00



INPUT UNIT STEREO



1.990.230.00

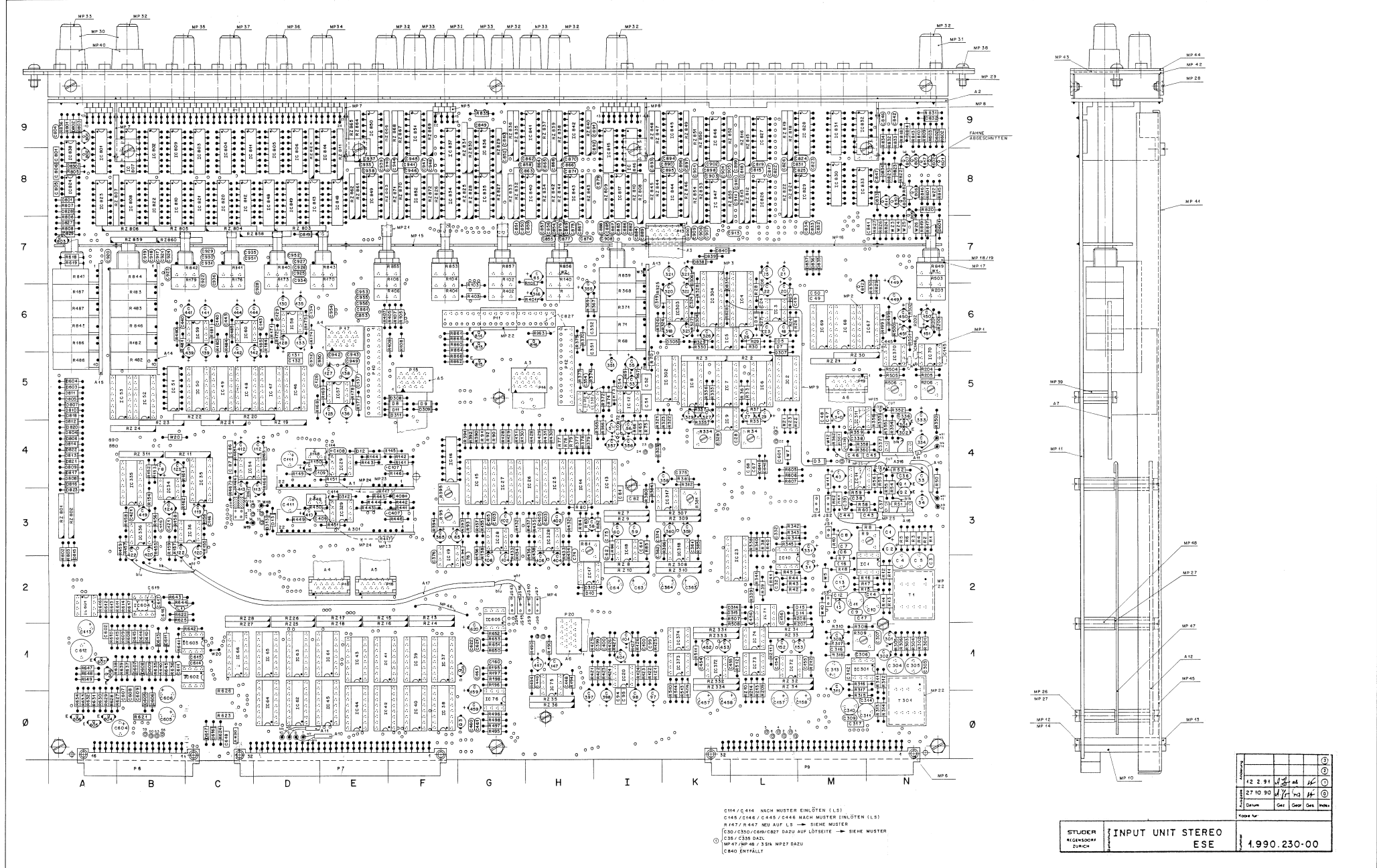


VALID FOR	NR UNIT	POS.-LIST	NR FRONT PANEL	NR. SIDE BOARD
INF UNIT STEREO VORMONTIERT	1.990.230-70	1.990.230-70	MP 44	IA 121
INF UNIT STEREO UNIVERSAL MCH	1.990.230-00	1.990.230-01	1.990.288-00	---
INF UNIT STEREO HL + EG MCH	1.990.232-00	1.990.232-00	1.990.232-01	1.990.289-00
INF UNIT STEREO HL MCH	1.990.235-00	1.990.235-00	1.990.235-01	---
INF UNIT STEREO UNIVERSAL B	1.990.240-00	1.990.230-00	1.990.240-01	1.990.288-00
INF UNIT STEREO HL + EG B	1.990.242-00	1.990.232-00	1.990.242-01	1.990.289-00
INF UNIT STEREO HL B	1.990.245-00	1.990.235-00	1.990.245-01	---

VALID FOR	NR UNIT	POS.-LIST	NR FRONT PANEL	NR. SIDE BOARD
GROUP UNIT VORMONTIERT	1.990.230-70	1.990.230-70	MP 44	IA 121
GROUP UNIT UNIVERSAL MCH	1.990.230-00	1.990.230-00	1.990.230-01	1.990.288-00
GROUP UNIT MCH	1.990.232-00	1.990.232-00	1.990.232-01	1.990.289-00
GROUP UNIT HL + EG B	1.990.240-00	1.990.230-00	1.990.240-01	1.990.288-00
GROUP UNIT HL MCH	1.990.242-00	1.990.232-00	1.990.242-01	1.990.289-00
GROUP UNIT HL B	1.990.245-00	1.990.235-00	1.990.245-01	---

INPUT UNIT STEREO

1.990.230.00



C144 / C 414 NACH MUSTER EINLÖTEN (LS)
 C145 / C146 / C 445 / C 446 NACH MUSTER EINLÖTEN (LS)
 R 471 / R 472 NEU AUF LS - SIEHE MUSTER
 C30 / C30 / C 30 / C 31 DAZU AUF LÖTSEITE - SIEHE MUSTER
 C31 / C35 DAZU
 MP 47 MP 48 / 3 SIK MP2 DAZU
 C840 ENTLÄT!

STUDER INPUT UNIT STEREO ESE 1.990.230.00

12 2 91									
27 10 93									
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10



INPUT UNIT STEREO

Table with 5 columns: Ad., POS., REF.No., DESCRIPTION, MANUFACTURER. It lists various electronic components such as capacitors, resistors, and integrated circuits, along with their specifications and manufacturer names.



1.990.230.00

INPUT UNIT STEREO

Main table containing component lists with columns for Ad., POS., REF.No., DESCRIPTION, MANUFACTURER, and various technical specifications.



INPUT UNIT STEREO

Table with columns: Ad., POS., REF.No., DESCRIPTION, MANUFACTURER. It lists various electronic components like resistors, capacitors, and trimmers with their specifications and manufacturer details.

MANUFACTURER: ADI=Analog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar, F=Fairchild, Fe=Ferranti, GI=General Instrument, Ma=Marling, P=PerkinElmer, R=Radco, S=Siemens, St=Studer, T=Texas Instruments, TI=Texas Instruments, Ya=Yamaichi

1.990.230.70 COMMON INPUT UNIT STEREO AB 91/02/0400
1.990.230.70 COMMON INPUT UNIT STEREO AB 91/02/1201
1.990.230.70 COMMON INPUT UNIT STEREO AB891/09/1002

END

Mit NOT USED bezeichnete Elemente erscheinen z.T. in ubergangender BG. Mit not used bezeichnete Elemente erscheinen nicht in Stereo-Einheiten.

Die Koordinaten bei Manf. beziehen sich auf Bestueckplan

CE=Ceramic, Cf=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol

HISTORY
1.10.90 - Stand RAI-Pult
13.11.90 - Eliminierung digitaler Stoerungen (DAC)
04.02.91 - Postf - Bereinigung NOT USED nicht used
12.02.91 (01) NF-Entstorerung (30, C 330, C 619, C 827 dazu NIC-Knallen c 840 weg Produktions-Bereinigung MP 25 not used

10.09.91 (02) INT 5 (Overload) gleich wie Mono: wechseln von 1M auf 100k - R 618, R 619 werden neu 100 kohm (57.11.3104) Setaewerdaerstein in TCL, T40, T57B, 100 ugw. von 1k auf 100 kohm R 801, RZ 802 werden neu 100 Ohm (57.88.2104) - R 803 wird neu 100 Ohm (57.11.3101)

Pin location list

1.990.230

ALSO USED FOR -INPUT UNIT STEREO UNIV B 1.990.240
 -INPUT UNIT STEREO HL+EQ MCH / B 1.990.232 / 242
 -INPUT UNIT STEREO HL MCH / B 1.990.235 / 245

P	NO	NAME	REMARK	
-----			-----	
				B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC

P6	01A	OVA BAL/PAN1	GROUND SIGN BAL (PAN 1)	0
P6	01B	B-L/PAN1-IN	BAL LEFT IN (PAN 1 IN)	0
P6	02A	B/PAN1-OUT-L	BAL OUT LEFT (PAN 1 OUT LEFT)	0
P6	02B	B/PAN1-OUT-R	BAL OUT RIGHT (PAN 1 OUT RIGHT)	0
P6	03A	-	NC (GROUND SIGN PAN 2)	0
P6	03B	B-R/PAN2-IN	BAL RIGHT IN (PAN 2 IN)	0
P6	04A	B-Rb-IN	BAL IN RIGHT b (PAN 2 OUT LEFT)	I,0
P6	04B	C-OUT	BAL COMMON OUT (PAN 2 OUT RIGHT)	0
P6	05A	FILM-OUT-L	OPTIONAL OUTPUT LEFT	0
P6	05B	FILM-OUT-R	OPTIONAL OUTPUT RIGHT	0
P6	06A	FILM-OUT-C	OPTIONAL OUTPUT	0
P6	06B	FILM-OUT-S	OPTIONAL OUTPUT	0
P6	07A	+ 15V	+ SUPPLY TO FADER UNIT	0
P6	07B	- 15V	- SUPPLY TO FADER UNIT	0
P6	08A	A OUT 0	INPUT ; FROM MCU ANALOG OUT 0	0
P6	08B	A OUT 1	INPUT ; FROM MCU ANALOG OUT 1	0
P6	09A	A IN 4	OUTPUT ; TO MCU ANALOG IN 4	0
P6	09B	A OUT 5	INPUT ; FROM MCU ANALOG OUT 5	0
P6	10A	RCL	RECEIVE CLOCK	0
P6	10B	RSTB	RECEIVE STROBE	0
P6	11A	INT 4	INTERUPT 4	0
P6	11B	RXD 3	RECEIVE DATA 3	0
P6	12A	INT 5	INTERUPT 5	0
P6	12B	TSTB 2	TRANSMIT STROBE 2	0
P6	13A	TSTB 3	TRANSMIT STROBE 3	0
P6	13B	TSTB 4	TRANSMIT STROBE 4	0
P6	14A	TSTB 5	TRANSMIT STROBE 5	0
P6	14B	DO 1	DATA OUT 1 (TRANSMIT STROBE 8)	0
P6	15A	TXD	TRANSMIT DATA	0
P6	15B	TCL	TRANSMIT CLOCK	0
P6	16A	DO 0	DATA OUT 0 (ENABLE)	0
P6	16B	UREF	+ 5V REFERENCE	0
P7	01A	OV-B	GROUND AUDIO (PIN)	0
P7	01B	CHASSIS	METAL FRAME	B
P7	02A	-	RES	0
P7	02B	-	RES	0
P7	03A	-	RES LEFT	B
P7	03B	-	RES RIGHT	B
P7	04A	B-MPX-L	MPX LEFT ; 0-OHM BUS	B,I
P7	04B	B-MPX-R	MPX RIGHT ; 0-OHM BUS	B,I
P7	05A	B-PFL/SOLO-L	PFL/SOLO LEFT ; 0-OHM BUS	B,I
P7	05B	B-PFL/SOLO-R	PFL/SOLO RIGHT ; 0-OHM BUS	B,I
P7	06A	B-A-L	MASTER A LEFT ; 0-OHM BUS	B,I
P7	06B	B-A-R	MASTER A RIGHT ; 0-OHM BUS	B,I
P7	07A	B-B-L	MASTER B LEFT ; 0-OHM BUS	B,I
P7	07B	B-B-R	MASTER B RIGHT ; 0-OHM BUS	B,I
P7	08A	B-C-L	MASTER C LEFT ; 0-OHM BUS	B,I
P7	08B	B-C-R	MASTER C RIGHT ; 0-OHM BUS	B,I

Pin location list

1.990.230

P7	09A	B-D-L	MASTER D LEFT	; 0-OHM BUS	B,I	
P7	09B	B-D-R	MASTER D RIGHT	; 0-OHM BUS	B,I	
P7	10A	B-GR-1	GROUP 1	; 0-OHM BUS	B,I	
P7	10B	B-GR-2	GROUP 2	; 0-OHM BUS	B,I	
P7	11A	B-GR-3	GROUP 3	; 0-OHM BUS	B,I	
P7	11B	B-GR-4	GROUP 4	; 0-OHM BUS	B,I	
P7	12A	B-GR-5	GROUP 5	; 0-OHM BUS	B,I	
P7	12B	B-GR-6	GROUP 6	; 0-OHM BUS	B,I	
P7	13A	B-GR-7	GROUP 7	; 0-OHM BUS	B,I	
P7	13B	B-GR-8	GROUP 8	; 0-OHM BUS	B,I	
P7	14	OV-REF	OV REFERENCE		B	X X
P7	15A	B-AUX-1	AUX 1	; 0-OHM BUS	B,I	
P7	15B	B-AUX-2	AUX 2	; 0-OHM BUS	B,I	
P7	16A	B-AUX-3	AUX 3	; 0-OHM BUS	B,I	
P7	16B	B-AUX-4	AUX 4	; 0-OHM BUS	B,I	
P7	17A	B-AUX-5	AUX 5	; 0-OHM BUS	B,I	
P7	17B	B-AUX-6	AUX 6	; 0-OHM BUS	B,I	
P7	18A	B-AUX-7	AUX 7	; 0-OHM BUS	B,I	
P7	18B	B-AUX-8	AUX 8	; 0-OHM BUS	B,I	
P7	19A	B-AUX-9	AUX 9	; 0-OHM BUS	B,I	
P7	19B	B-AUX-10	AUX 10	; 0-OHM BUS	B,I	
P7	20A	B-AUX-11	AUX 11	; 0-OHM BUS	B,I	
P7	20B	B-AUX-12	AUX 12	; 0-OHM BUS	B,I	
P7	21A	B-AUX-13	AUX 13	; 0-OHM BUS	B,I	
P7	21B	B-AUX-14	AUX 14	; 0-OHM BUS	B,I	
P7	22A	B-AUX-15	AUX 15	; 0-OHM BUS	B,I	
P7	22B	B-AUX-16	AUX 16	; 0-OHM BUS	B,I	
P7	23A	OV GEN 1	GROUND AUDIO GENERIERT 1		0	
P7	23B	-	N.C.	(GROUP)	0	
P7	24A	OV GEN 2	GROUND AUDIO GENERIERT 2		0	
P7	24B	-	N.C.	(GROUP)	0	
P7	25A	OV GEN 3	GROUND AUDIO GENERIERT 3		0	
P7	25B	-	N.C.	(GROUP)	0	
P7	26A	OV GEN 4	GROUND AUDIO GENERIERT 4		0	
P7	26B	-	N.C.	(GROUP)	0	
P7	27	OV-A	GROUND AUDIO		B	X X
P7	28	- 15.5V	- SUPPLY		B	X X
P7	29	+ 15.5V	+ SUPPLY		B	X X
P7	30	OV-L	GROUND SIGN (LOGIC)		B	X X
P7	31	+ 5.5V	+ SUPPLY		B	X X
P7	32	+3..4V LED	LED SUPPLY VARIABLE +3...4V		B	X X
P9	01A	LINE A-L-a	LINE INPUT A LEFT a		S,0	
P9	01B	LINE A-L-b	LINE INPUT A LEFT b		S,0	
P9	02A	LINE A-L-OVE	LINE INPUT A LEFT GROUND EXTERN		0	
P9	02B	LINE A-R-OVE	LINE INPUT A RIGHT GROUND EXTERN		0	
P9	03A	LINE A-R-a	LINE INPUT A RIGHT a		S,0	
P9	03B	LINE A-R-b	LINE INPUT A RIGHT b		S,0	
P9	04A	LINE B-L-a	LINE INPUT B LEFT a		S,0	
P9	04B	LINE B-L-b	LINE INPUT B LEFT b		S,0	
P9	05A	LINE B-L-OVE	LINE INPUT B GROUND EXTERN		0	
P9	05B	LINE B-R-OVE	LINE INPUT B RIGHT GROUND EXTERN		0	
P9	06A	LINE B-R-a	LINE INPUT B RIGHT a		S,0	
P9	06B	LINE B-R-b	LINE INPUT B RIGHT b		S,0	
P9	07A	-	N.C.	(MONO)	0	
P9	07B	-	N.C.	(MONO)	0	
P9	08A	-	N.C.	(MONO)	0	
P9	08B	-	RES		0	
P9	09A	BUS-OUT-a	BUS OUTPUT a		S,0	
P9	09B	BUS-OUT-b	BUS OUTPUT b		S,0	
P9	10A	DIR-OUT-L-a	DIRECT OUT LEFT a		S,0	
P9	10B	DIR-OUT-L-b	DIRECT OUT LEFT b		S,0	

Pin location list

1.990.230

P9	11A	DIR-OUT-R-a	DIRECT OUT RIGHT a	S,0
P9	11B	DIR-OUT-R-b	DIRECT OUT RIGHT b	S,0
P9	12A	METER-L	METER LEFT	AS,0
P9	12B	OV-GEN	GROUND AUDIO GENERIERT	0
P9	13A	METER-OV	METER GROUND	0
P9	13B	METER-R	METER RIGHT	AS,0
P9	14A	MCH-OUT-L-a	TO EURO 32CH BUS SELECTOR LEFT a	S,0
P9	14B	MCH-OUT-L-b	TO EURO 32CH BUS S. LEFT b(GROUND)	S,0
P9	15A	MCH-OUT-R-a	TO EURO 32CH BUS SELECTOR RIGHT a	S,0
P9	15B	MCH-OUT-R-b	TO EURO 32CH BUS S. RIGHT b(GROUND)	S,0
P9	16A	PF-OUT-L	PRE FADER OUT LEFT	AS,0
P9	16B	PF-OUT-R	PRE FADER OUT RIGHT	AS,0
P9	17A	AF-OUT-L	AFTER FADER OUT LEFT	AS,0
P9	17B	AF-OUT-R	AFTER FADER OUT RIGHT	AS,0
P9	18A	MIC-OUT-L-OV	MIC OUTPUT LEFT GROUND	0
P9	18B	AF/PF-OUT-OV	AF/PF OUT GROUND	0
P9	19A	MIC-L-a	MIC INPUT LEFT a	S,0
P9	19B	MIC-OUT-L	MIC OUTPUT LEFT	AS,0
P9	20A	MIC-L-OVE	MIC LEFT GROUND EXTERN	0
P9	20B	MIC-L-b	MIC INPUT LEFT b	S,0
P9	21A	MIC-R-a	MIC INPUT RIGHT a	S,0
P9	21B	MIC-R-OVE	MIC RIGHT GROUND EXTERN	0
P9	22A	PHANT-PWR-SW	PHANTOM SUPPLY SWITCHED	0
P9	22B	MIC-R-b	MIC INPUT RIGHT b	S,0
P9	23A	MLT-BUS-RET-a	MULTI BUS RETURN a	S,0
P9	23B	MLT-BUS-RET-b	MULTI BUS RETURN b	S,0
P9	24A	TB/SLATE-a	TALK BACK / SLATE INPUT a	S,B
P9	24B	PHANT-PWR-IN	PHANTOM SUPPLY BUS INPUT	B
P9	25A	MPX-MONO-a	MPX INPUT MONO a	S,B
P9	25B	TB/SLATE-b	TALK BACK / SLATE INPUT b	S,B
P9	26A	MPX-L-a	MPX INPUT LEFT a	S,B
P9	26B	MPX-MONO-b	MPX INPUT MONO b	S,B
P9	27A	MPX-R-a	MPX INPUT RIGHT a	S,B
P9	27B	MPX-L-b	MPX INPUT LEFT b	S,B
P9	28A	INS-OV	INSERT GROUND	0
P9	28B	MPX-R-b	MPX INPUT RIGHT b	S,B
P9	29A	INS-SEND-L-a	SYM INSERT LEFT OUTPUT a	S,0
P9	29B	INS-SEND-L-b	SYM INSERT LEFT OUTPUT b	S,0
P9	30A	INS-RET -L-a	SYM INSERT LEFT INPUT a	S,0
P9	30B	INS-RET -L-b	SYM INSERT LEFT INPUT b	S,0
P9	31A	INS-SEND-R-a	SYM INSERT RIGHT OUTPUT a	S,0
P9	31B	INS-SEND-R-b	SYM INSERT RIGHT OUTPUT b	S,0
P9	32A	INS-RET -R-a	SYM INSERT RIGHT INPUT a	S,0
P9	32B	INS-RET -R-b	SYM INSERT RIGHT INPUT b	S,0

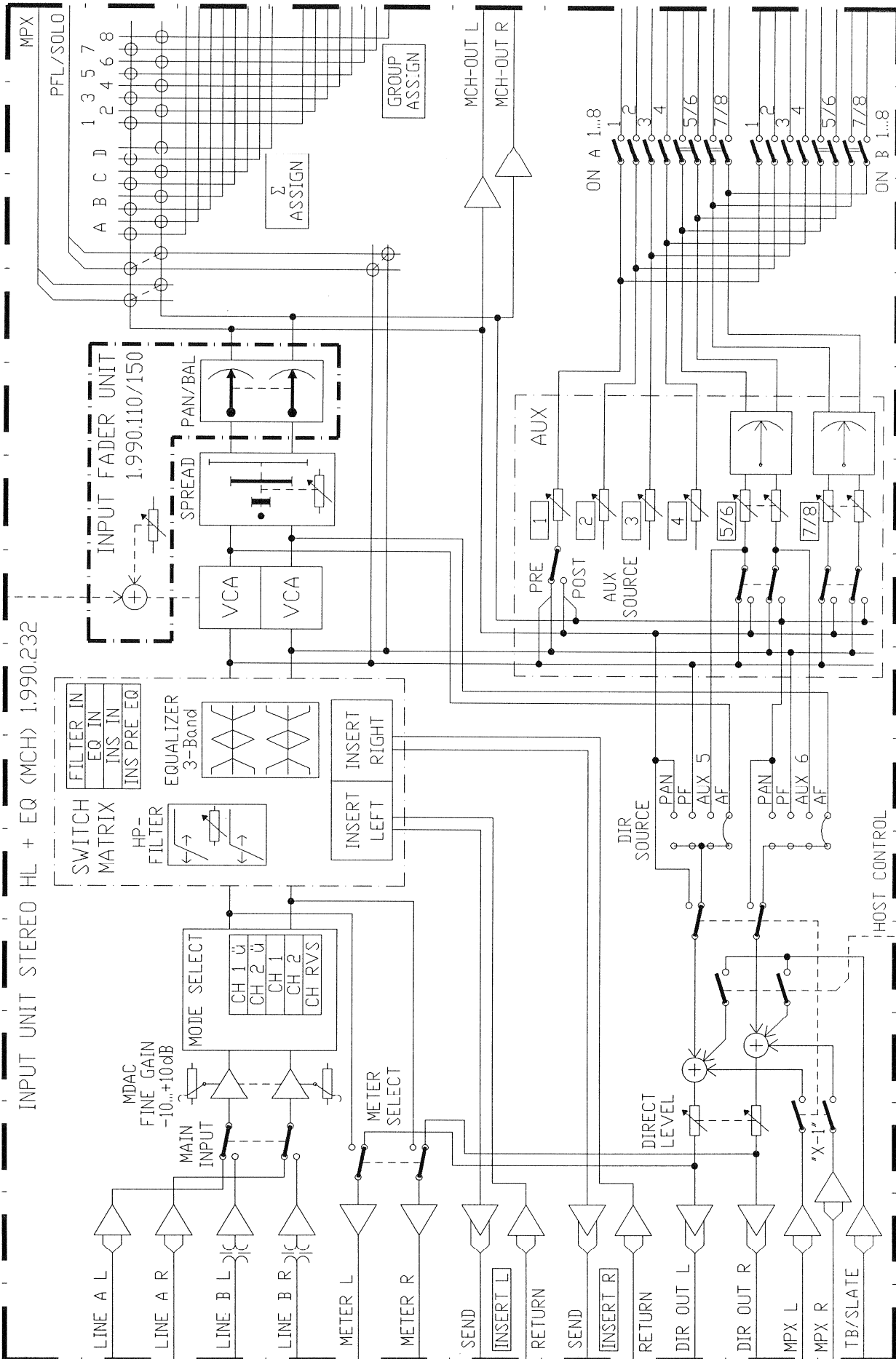
Stereo Input Unit HL + EQ MCH

1.990.232.00

Stereo Input Unit HL + EQ MCH 1.990.232.00		SC 1.990.230.00 BP 1.990.230.00 PL 1.990.232.00 / 1.990.230.70 Pin Loc 1.990.230.00
1x	Switch Board Stereo + EQ 1.990.238.00	SC 1.990.230.00 BP 1.990.238.00 PL 1.990.238.00
2x	VCA Board 1.911.292.00	SC not available BP 1.911.292.00 PL 1.911.292.00
1x	Side Board EQ 1.990.289.00	SC 1.990.288.00 BP 1.990.289.00 PL 1.990.289.00
1x	HP - Filter (16mm) 5 Pot 10mm 1.990.295.00	SC 1.990.230.00 BP 1.990.295.00
1x	HF/MF/LF Frequenz (16mm) 5 Pot 24,6mm 1.990.296.00	SC 1.990.230.00 BP 1.990.296.00 PL 1.990.296.00
2x	Potentiometer Board AUX 5/6 - 7/8 1.990.297.00	SC 1.990.230.00 BP 1.990.297.00

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

STEREO INPUT UNIT HL+EQ MCH 1.990.232.00



INPUT UNIT STEREO HL+EQ MCH

1.990.232.00

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
A....2		1.990.238.00	SWITCH BOARD STEREO +EQ	St	W...110			0 Ohm	57.11.3000 on 1.990.296 G4
A....7		1.990.296.00	3*5 POT. 24.6MM BOARD	St	W...111			0 Ohm	57.11.3000 on 1.990.296 G5
A....8		1.990.230.93	LL INPUT UNIT STEREO	St					
A....12		1.990.289.00	SIDE BOARD FO	St					
A....13		1.990.295.00	5 POT. 10MM BOARD	St I6					
A....70		1.990.230.70	Baugruppe Stereo vorbestueckt	St					
C....77			4700 pF	59.05.2472 on 1.990.296 G6					
C....78			not used	on 1.990.296					
C....79			not used	on 1.990.296					
C....80			not used	on 1.990.296					
C....93			100 uF	59.22.3101 on 1.990.296 E5					
C...377			4700 pF	59.05.2472 on 1.990.296 F6					
C...393			100 uF	59.22.3101 on 1.990.296 E5					
IC...12		50.09.0117	MC33078P dual op. amp. low noise	Mot I5					
IC...312		50.09.0117	MC33078P dual op. amp. low noise	Mot H5					
MP...17		1.010.100.58	4 pcs Masseblech zu Preh-Pot Type 12						
MP...18		22.99.0137	4 pcs 6-Kt. Mutter M7*0.75						
MP...19		23.99.0122	4 pcs U-Scheibe D 7.1/12*0.5						
MP...21		1.990.200.05	4 pcs Poti-Achsverlaengerung						
MP...26		21.01.0279	5 pcs Z-Schr. M2.5*6						
MP...27		24.16.1025	5 pcs Rippenscheibe D 2.7 / 5						
MP...27		24.16.1025	8 pcs Rippenscheibe D 2.7 / 5						
MP...28		21.01.2352	6 pcs S-Schr. M3*4						
MP...29		24.16.3023	2 pcs Wellensicherung 2.3						
MP...30		42.01.0203	2 pcs Drehknopf gr, D 10/4						
MP...31		42.01.0228	13 pcs Knebelknopf gr, D 10/4						
MP...32		42.01.0250	7 pcs Deckel h'gr, D 10						
MP...33		42.01.0251	4 pcs Deckel d'gr, D 10						
MP...34		42.01.0253	1 pcs Deckel rt, D 10						
MP...35		42.01.0254	1 pcs Deckel bl, D 10						
MP...36		42.01.0255	1 pcs Deckel gb, D 10						
MP...37		42.01.0256	1 pcs Deckel gn, D 10						
MP...38		1.010.022.21	2 pcs Linsenschr. spez H3*8						
MP...39		1.010.221.27	1 pcs Mutterbolzen M2.5*10.5						
MP...40		1.912.000.03	2 pcs Drehring D 6.2/13						
MP...41		1.990.200.03	1 pcs Schirmblech Input						
MP...42		1.990.210.02	1 pcs Traeger Input						
MP...43		1.990.210.05	1 pcs Fenster Input						
MP...44		1.990.232.01	1 pcs Frontschild Input (1.990.242.01 -> BG 242!)						
MP...45		1.990.289.02	1 pcs Isolation Side Board						
MP...47		1.990.289.01	1 pcs Schirmblech SIDE BOARD						
MP...48		1.010.208.27	3 pcs Mutterbolzen M2.5x14mm						
P....21			26 pol 1/20"	54.14.2003 on 1.990.296					
P....22			26 pol 1/20"	54.14.2003 on 1.990.296					
R....68			22 kOhm 10% -log.comb.with R71/368/371/859 !295 I6						
R....71			22 kOhm 10% -log.see R 68 1.010.029.58 on A 13 I6						
R...102		1.010.107.58	4.7 kOhm 10% lin. comb.with R402/857 St G7						
R...104		1.010.107.58	4.7 kOhm 10% lin. comb.with R404/853 St F7						
R...106		1.010.107.58	4.7 kOhm 10% lin. comb.with R406/855 St E7						
R...109			100 kOhm 10% neg.log. 1.010.030.58 on 1.990.296 H5						
R...110			100 kOhm 10% neg.log. see R 109 on 1.990.296 H6						
R...111			3.9 kOhm 57.11.3392 on 1.990.296 H6						
R...112			1 MOhm 57.11.3105 on 1.990.296 G5						
R...113			4.7 kOhm 57.11.3472 on 1.990.296 G5						
R...114			100 kOhm 10% neg.log. 1.010.030.58 on 1.990.296 G6						
R...115			100 kOhm 10% neg.log. see R 114 on 1.990.296 G5						
R...116			100 kOhm 10% neg.log. 1.010.030.58 on 1.990.296 F6						
R...117			100 kOhm 10% neg.log. see R 116 on 1.990.296 F5						
R...118			4.7 kOhm 57.11.3472 on 1.990.296 F5						
R...140		1.010.102.58	10 kOhm 10% pos log.comb. with R440/856 St H7						
R...368			22 kOhm 10% neg.log. see R 68 I6						
R...371			22 kOhm 10% neg.log. see R 68 I6						
R...402			4.7 kOhm 10% lin. see R 102 G6						
R...404			4.7 kOhm 10% lin. see R 104 F6						
R...406			4.7 kOhm 10% lin. see R 106 E6						
R...409			100 kOhm 10% neg.log. see R 109 on 1.990.296 H5						
R...410			100 kOhm 10% neg.log. see R 109 on 1.990.296 H5						
R...411			3.9 kOhm 57.11.3392 on 1.990.296 G4						
R...412			1 MOhm 57.11.3105 on 1.990.296 F5						
R...413			4.7 kOhm 57.11.3472 on 1.990.296 F5						
R...414			100 kOhm 10% neg.log. see R 114 on 1.990.296 G5						
R...415			100 kOhm 10% neg.log. see R 114 on 1.990.296 G5						
R...416			100 kOhm 10% neg.log. see R 116 on 1.990.296 F5						
R...417			100 kOhm 10% neg.log. see R 116 on 1.990.296 F5						
R...418			4.7 kOhm 57.11.3472 on 1.990.296 F5						
R...440			0 not used see R 140 H6						
R...852			100 kOhm 20% lin. see R 114 on 1.990.296 G6						
R...853			100 kOhm 20% lin. see R 104 F7						
R...854			100 kOhm 20% lin. see R 116 on 1.990.296 F6						
R...855			100 kOhm 20% lin. see R 106 E7						
R...856			100 kOhm 20% lin. see R 140 H7						
R...857			100 kOhm 20% lin. see R 102 G7						
R...858			100 kOhm 20% lin. see R 109 on 1.990.296 H6						
R...859			100 kOhm 20% lin. see R 68 I7						

12/02/91 (01) Erleichterung Fertigung und Pruefung (Schirmblech und Mutterbolzen zu EQ werden erst am Schluss montiert)

>> POSLST 1.990.232 gilt auch fuer BG 1.990.242.xx (B - Version) <<

Die files zu dieser POSLST heissen #990232A,B

Die posliste 1.990.230.70 ist in den files #990230S,T

 OPTIONS : SEE OPTIONLIST 1.990.230.00

option 1 :.....multichannel out
 option 2 :.....output trim (stereo inputs:standard)
 option 3 :.....0 ohm input to processing (only input unit stereo)

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

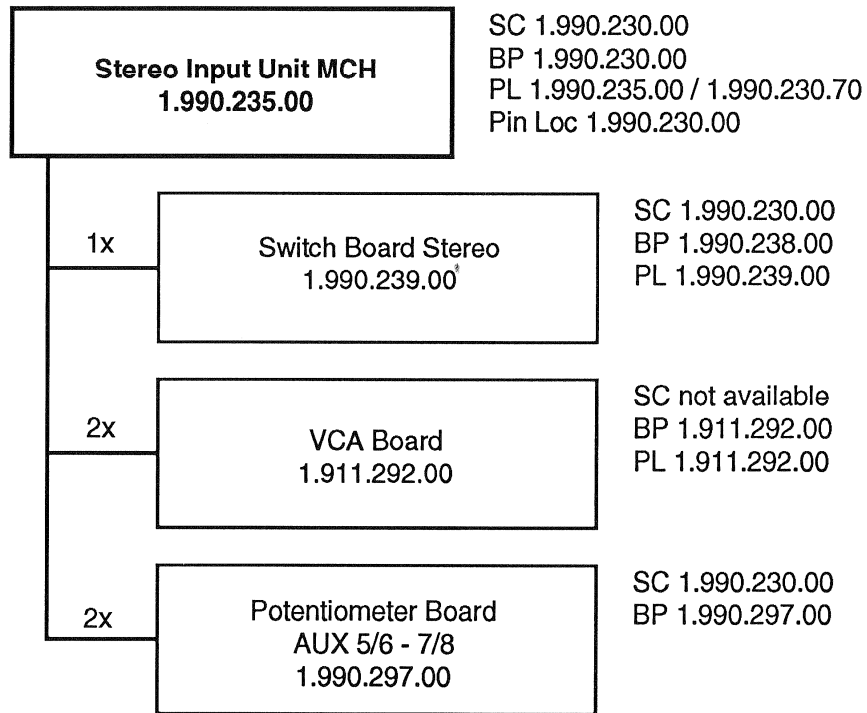
CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER: ADI=Aanalog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar, Fc=Fairchild, Fe=Ferranti, Gl=General Instrument, Ha=Harting, HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=National {Matsushita}, NS=National Semiconductors, Ph=Philips, PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=Studer, Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi

1.990.232.00 INPUT UNIT STEREO HL+EQ MCH AB 91/02/0400

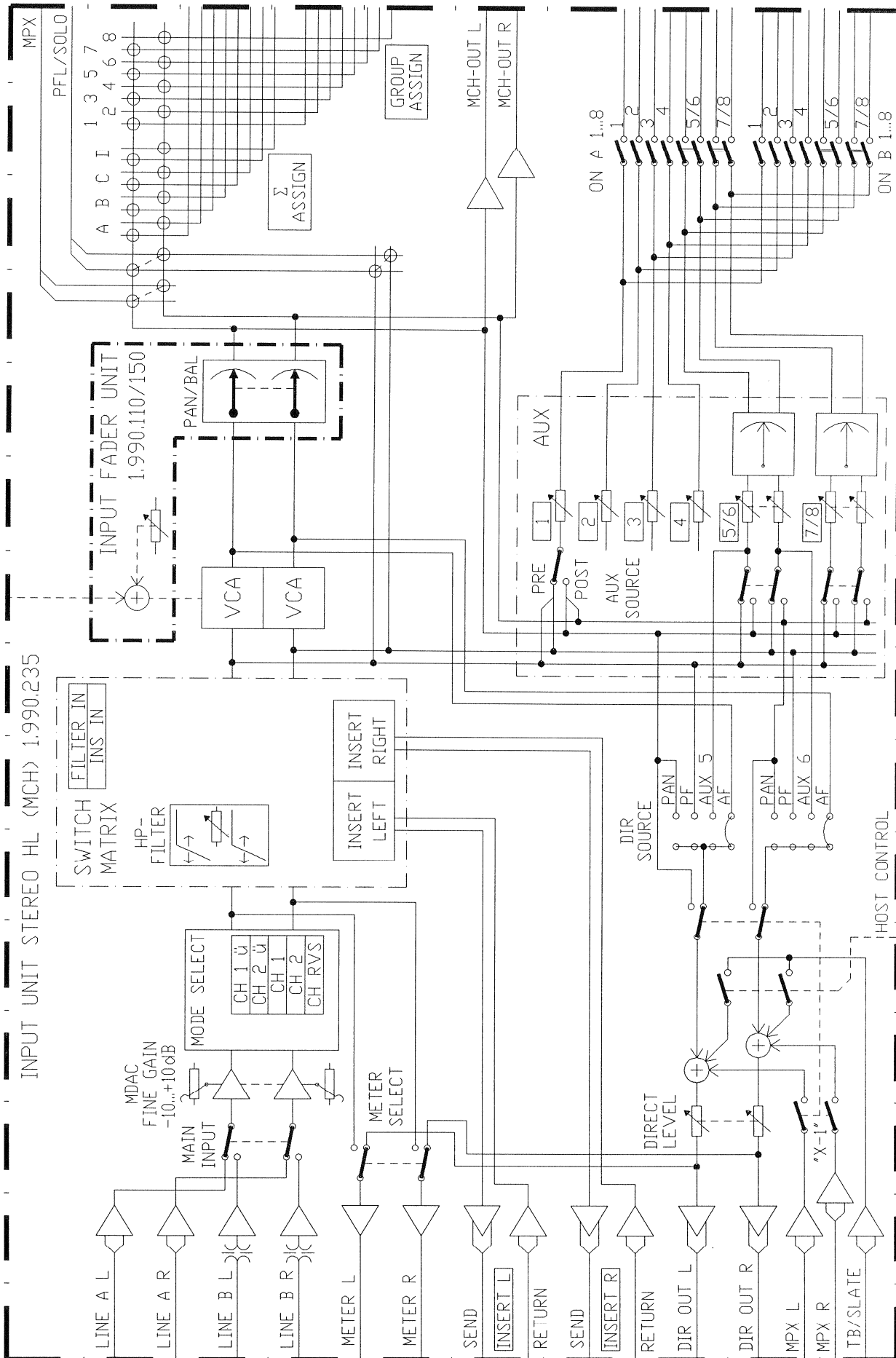
1.990.232.00 INPUT UNIT STEREO HL+EQ MCH AB 91/02/1201

END
 +

Stereo Input Unit MCH**1.990.235.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

INPUT UNIT STEREO HL (MCH) 1.990.235.00



INPUT UNIT STEREO HL MCH

1.990.235.00

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
A....2	1.990.239.00		SWITCH BOARD STEREO	St
A....70	1.990.230.70		Baugruppe Stereo vorbestueckt	St
MP...28	21.01.2352	6 pcs	S-Schr. M3*4	
MP...29	24.16.3023	2 pcs	Wellensicherung 2.3	
MP...30	42.01.0203	2 pcs	Drehknopf gr, D 10/4	
MP...31	42.01.0228	5 pcs	Knebelknopf gr, D 10/4	
MP...32	42.01.0250	2 pcs	Deckel h'gr, D 10	
MP...33	42.01.0251	1 pcs	Deckel d'gr, D 10	
MP...34	42.01.0253	1 pcs	Deckel rt, D 10	
MP...35	42.01.0254	1 pcs	Deckel bl, D 10	
MP...36	42.01.0255	1 pcs	Deckel gb, D 10	
MP...37	42.01.0256	1 pcs	Deckel gn, D 10	
MP...38	1.010.022.21	2 pcs	Linsenschr. spez M3*8	
MP...40	1.912.000.03	2 pcs	Drehring D 6.2/13	
MP...41	1.990.200.03	1 pcs	Schirmblech Input	
MP...42	1.990.210.02	1 pcs	Traeger Input	
MP...43	1.990.210.05	1 pcs	Fenster Input	
MP...44	1.990.235.01	1 pcs	Frontschild Input (1.990245.01 -> BG 245I)	

W....18 1.010.329.64 wire 2.5mm, bypass spread D3
W....19 1.010.329.64 wire 2.5mm, bypass spread C3

>> POSLST 1.990.235 gilt auch fuer BG 1.990.245.xx (B - Version) <<

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>-----<
| Die files zu dieser POSLST heissen #990235A,B |
>-----<

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Die posliste 1.990.230.70 ist in den files #990230S,T

OPTIONS : SEE OPTIONLIST 1.990.230.00

option 1 :.....multichannel out
option 2 :.....output trim (stereo inputs : standard)
option 3 :.....0 ohm input to processing (only input unit stereo)

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
PE=Polyester, PP=Polypropylen, PS=Polystyrol

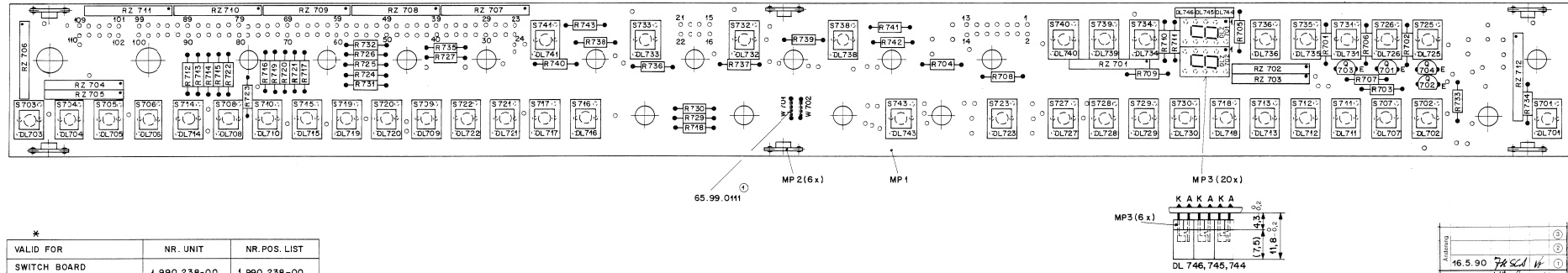
MANUFACTURER: ADI=Aanalog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
Fc=Fairchild, Fe=Ferranti, GI=General Instrument, Ha=Harting,
HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=National
{Matsushita}, NS=National Semiconductors, Ph=Phillips,
PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of
America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=Studer,
Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi

1.990.235.00 INPUT UNIT STEREO HL MCH AB 91/02/0400

END
↓

SWITCH BOARD STEREO

1.990.238.00 / 1.990.239.00



VALID FOR	NR. UNIT	NR. POS. LIST
SWITCH BOARD STEREO + EQ	1.990.238-00	1.990.238-00
SWITCH BOARD STEREO	1.990.239-00	1.990.239-00

STUDER REGENSDORF ZÜRICH	SWITCH BOARD STEREO	1.990.238-00
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Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER			
DL..701	.	.	red see S701		MP..701	1.990.219.11	1	pcs Input Mono PCB		R...741	57.11.3101	100 Ohm	5% 0.25W				
DL..702	.	.	yel see S702		R...702	57.11.3101	100 Ohm	5% 0.25W		R...742	57.11.3101	100 Ohm	5% 0.25W				
DL..703	.	.	yel see S703		MP..703	53.03.0218	26	pcs single line socket		R...743	57.11.3101	100 Ohm	5% 0.25W				
DL..704	.	.	grn see S704		MP..704	1.990.238.04	1	pcs Nr. Etikette 5*20		RZ..701	57.88.2101	100 Ohm	SIP 8 (4*)	S...731	55.15.0604	1 * A	yel/trans.
DL..705	.	.	yel see S705		Q...701	50.03.0515	BC 307	PNP IC-100mA, B-100 any		RZ..702	57.88.2101	100 Ohm	SIP 8 (4*)	S...732	55.15.0605	1 * A	grn/trans.
DL..706	.	.	grn see S706		Q...702	50.03.0436	BC 237	NPN IC-100mA, B-100 any		RZ..703	57.88.2101	100 Ohm	SIP 8 (4*)	S...733	55.15.0605	1 * A	grn/trans.
DL..707	.	.	yel see S707		Q...703	50.03.0515	BC 307	PNP IC-100mA, B-100 any		SZ..705	57.88.2101	100 Ohm	SIP 8 (4*)	S...734	55.15.0655	1 * A	grn/grn
DL..708	.	.	grn see S708		Q...704	50.03.0436	BC 237	NPN IC-100mA, B-100 any		RZ..706	57.88.2101	100 Ohm	SIP 8 (4*)	S...735	55.15.0604	1 * A	yel/trans.
DL..709	.	.	yel see S709		R...701	57.11.3101	100 Ohm	5% 0.25W		RZ..707	57.88.4104	100 Ohm	SIP 9 (8*)	S...736	55.15.0605	1 * A	grn/trans.
DL..710	.	.	yel see S710		R...702	57.11.3222	2.2 kOhm	5% 0.25W		RZ..708	57.88.4104	100 Ohm	SIP 9 (8*)	S...737	.	0 not used	
DL..711	.	.	yel see S711		R...703	57.11.3102	1 kOhm	5% 0.25W		RZ..709	57.88.4104	100 Ohm	SIP 9 (8*)	S...738	55.15.0605	1 * A	grn/grn
DL..712	.	.	yel see S712		R...704	57.11.3473	47 kOhm	5% 0.25W		RZ..710	57.88.4104	100 Ohm	SIP 9 (8*)	S...740	55.15.0644	1 * A	yel/yel
DL..713	.	.	grn see S713		R...705	57.11.3101	100 Ohm	5% 0.25W		RZ..711	57.88.4104	100 Ohm	SIP 9 (8*)	S...741	55.15.0605	1 * A	grn/trans.
DL..714	.	.	yel see S714		R...706	57.11.3222	2.2 kOhm	5% 0.25W		RZ..712	57.88.4104	100 Ohm	SIP 9 (8*)	S...742	.	0 not used	
DL..715	.	.	grn see S715		R...707	57.11.3102	1 kOhm	5% 0.25W		S...701	55.15.0602	1 * A	red/trans.	S...743	55.15.0622	1 * A	red/red
DL..716	.	.	red see S716		R...708	57.11.3473	47 kOhm	5% 0.25W		S...702	55.15.0604	1 * A	yel/yel	W...701	1.010.321.64	5mm	link
DL..717	.	.	red see S717		R...709	57.11.3101	100 Ohm	5% 0.25W		S...703	55.15.0644	1 * A	yel/yel	W...702	1.010.321.64	5mm	link
DL..718	.	.	red see S718		R...710	57.11.3101	100 Ohm	5% 0.25W		S...704	.	0 not used		W...703	.	0 not used	
DL..719	.	.	yel see S719		R...711	57.11.3101	100 Ohm	5% 0.25W		S...705	55.15.0605	1 * A	grn/trans.	W...704	.	0 not used	
DL..720	.	.	grn see S720		R...712	57.11.3101	100 Ohm	5% 0.25W		S...706	55.15.0604	1 * A	yel/trans.				
DL..721	.	.	yel see S721		R...713	57.11.3101	100 Ohm	5% 0.25W		S...707	55.15.0605	1 * A	grn/trans.				
DL..722	.	.	grn see S722		R...714	57.11.3101	100 Ohm	5% 0.25W		S...708	55.15.0604	1 * A	yel/trans.				
DL..723	.	.	yel see S723		R...715	57.11.3101	100 Ohm	5% 0.25W		S...709	55.15.0604	1 * A	yel/trans.				
DL..724	.	0	not used		R...716	57.11.3101	100 Ohm	5% 0.25W		S...710	55.15.0604	1 * A	yel/trans.				
DL..725	.	.	yel see S725		R...717	57.11.3101	100 Ohm	5% 0.25W		S...711	55.15.0604	1 * A	yel/trans.				
DL..726	.	.	yel see S726		R...718	57.11.3101	100 Ohm	5% 0.25W		S...712	55.15.0604	1 * A	yel/trans.				
DL..727	.	.	grn see S727		R...719	57.11.3101	100 Ohm	5% 0.25W		S...713	55.15.0605	1 * A	grn/trans.				
DL..728	.	.	red see S728		R...720	57.11.3101	100 Ohm	5% 0.25W		S...714	55.15.0604	1 * A	yel/trans.				
DL..729	.	.	grn see S729		R...721	57.11.3101	100 Ohm	5% 0.25W		S...715	55.15.0605	1 * A	grn/trans.				
DL..730	.	.	red see S730		R...722	57.11.3101	100 Ohm	5% 0.25W		S...716	55.15.0622	1 * A	red/red				
DL..731	.	.	yel see S731		R...723	57.11.3101	100 Ohm	5% 0.25W		S...717	55.15.0622	1 * A	red/red				
DL..732	.	.	grn see S732		R...724	57.11.3101	100 Ohm	5% 0.25W		S...718	55.15.0604	1 * A	yel/trans.				
DL..733	.	.	grn see S733		R...725	57.11.3101	100 Ohm	5% 0.25W		S...719	55.15.0604	1 * A	yel/trans.				
DL..734	.	.	grn see S734		R...726	57.11.3101	100 Ohm	5% 0.25W		S...720	55.15.0605	1 * A	grn/trans.				
DL..735	.	.	yel see S735		R...727	57.11.3101	100 Ohm	5% 0.25W		S...721	55.15.0604	1 * A	yel/trans.				
DL..736	.	.	grn see S736		R...728	.	0	not used		S...722	55.15.0605	1 * A	grn/trans.				
DL..737	.	0	not used		R...729	57.11.3101	100 Ohm	5% 0.25W		S...723	55.15.0622	1 * A	red/red				
DL..738	.	.	grn see S738		R...730	57.11.3101	100 Ohm	5% 0.25W		S...724	.	0 not used					
DL..739	.	.	grn see S739		R...731	57.11.3101	100 Ohm	5% 0.25W		S...725	55.15.0604	1 * A	yel/trans.				
DL..740	.	.	yel see S740		R...732	57.11.3101	100 Ohm	5% 0.25W		S...726	55.15.0604	1 * A	yel/trans.				
DL..741	.	.	grn see S741		R...733	57.11.3101	100 Ohm	5% 0.25W		S...727	55.15.0605	1 * A	grn/trans.				
DL..742	.	0	not used		R...734	57.11.3101	100 Ohm	5% 0.25W		S...728	55.15.0605	1 * A	grn/trans.				
DL..743	.	.	red see S743		R...735	57.11.3101	100 Ohm	5% 0.25W		S...729	55.15.0605	1 * A	grn/trans.				
DL..744	50.04.2701	MV 57123	red		R...736	57.11.3101	100 Ohm	5% 0.25W		S...730	55.15.0602	1 * A	red/trans.				
DL..745	50.04.2701	MV 57123	red		R...737	57.11.3101	100 Ohm	5% 0.25W									
DL..746	50.04.2701	MV 57123	red		R...738	57.11.3101	100 Ohm	5% 0.25W									
DLZ.701	73.01.0128	HDSPT303	7-segment display common cathode	HP	R...739	57.11.3101	100 Ohm	5% 0.25W									
DLZ.702	73.01.0128	HDSPT303	7-segment display common cathode	HP	R...740	57.11.3101	100 Ohm	5% 0.25W									

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER: Bu=Burdmoy, Ex=Exar, Fc=Fairchild, GI=General Instrument, HP=Hewlett Packard, ITT=International, Mo=Motorola, Na=National (Matsushita), NS=National Semiconductors, Ph=Philips, Ra=Raytheon, Sig=SiGeonics, Six=Siliconix, St=Studer, TI=Texas Instrument

1.990.238.00 SWITCH BOARD STEREO + EQ TA 90/04/0200

SWITCH BOARD STEREO

1.990.239.00

Ad	.POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	.POS.	REF.No.	DESCRIPTION	MANUFACTURER
DL..701	.	.	red	see S701					
DL..702	.	.	yel	see S702	R..741	57.11.3101	100 Ohm	5% 0.25W	
DL..703	.	.	yel	see S703	R..742	57.11.3101	100 Ohm	5% 0.25W	
DL..704	.	.	grn	see S704	R..743	57.11.3101	100 Ohm	5% 0.25W	
DL..705	.	.	yel	see S705					
DL..706	.	.	grn	see S706	RZ..701	57.88.2101	100 Ohm	SIP 8 (4°)	
DL..707	.	.	yel	see S707	RZ..702	57.88.2101	100 Ohm	SIP 8 (4°)	
DL..708	.	.	grn	see S708	RZ..703	57.88.2101	100 Ohm	SIP 8 (4°)	
DL..709	.	.	yel	see S709	RZ..704	57.88.2101	100 Ohm	SIP 8 (4°)	
DL..710	.	.	yel	see S710	RZ..705	57.88.2101	100 Ohm	SIP 8 (4°)	
					RZ..706	57.88.2101	100 Ohm	SIP 8 (4°)	
DL..711	.	.	yel	see S711	RZ..707	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..712	.	.	yel	see S712	RZ..708	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..713	.	.	grn	see S713	RZ..709	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..714	.	.	yel	see S714	RZ..710	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..715	.	.	grn	see S715					
DL..716	.	0	not used		RZ..711	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..717	.	.	red	see S717	RZ..712	57.88.4104	100 kOhm	SIP 9 (8°)	
DL..718	.	.	red	see S718					
DL..719	.	.	grn	see S719					
DL..720	.	.	yel	see S720	S...701	55.15.0602	1 * A	red/trans.	
DL..721	.	.	yel	see S721	S...702	55.15.0604	1 * A	yel/trans.	
DL..722	.	0	not used		S...703	55.15.0644	1 * A	yel/yel	
DL..723	.	0	not used		S...704	55.15.0605	1 * A	grn/trans.	
DL..724	.	0	not used		S...705	55.15.0604	1 * A	yel/trans.	
DL..725	.	.	yel	see S725	S...706	55.15.0605	1 * A	grn/trans.	
DL..726	.	.	yel	see S726	S...707	55.15.0604	1 * A	yel/trans.	
DL..727	.	.	grn	see S727	S...708	55.15.0605	1 * A	grn/trans.	
DL..728	.	.	grn	see S728	S...709	55.15.0604	1 * A	yel/trans.	
DL..729	.	.	grn	see S729	S...710	55.15.0604	1 * A	yel/trans.	
DL..730	.	.	red	see S730					
DL..731	.	.	yel	see S731	S...711	55.15.0604	1 * A	yel/trans.	
DL..732	.	0	not used		S...712	55.15.0604	1 * A	yel/trans.	
DL..733	.	0	not used		S...713	55.15.0605	1 * A	grn/trans.	
DL..734	.	.	grn	see S734	S...714	55.15.0604	1 * A	yel/trans.	
DL..735	.	.	yel	see S735	S...715	55.15.0605	1 * A	grn/trans.	
DL..736	.	.	grn	see S736	S...716	55.15.0605	1 * A	grn/trans.	
DL..737	.	0	not used		S...717	55.15.0622	1 * A	red/red	
DL..738	.	0	not used		S...718	55.15.0602	1 * A	red/trans.	
DL..739	.	0	not used		S...719	55.15.0604	1 * A	yel/trans.	
DL..740	.	.	yel	see S740	S...720	55.15.0605	1 * A	grn/trans.	
					S...721	55.15.0604	1 * A	yel/trans.	
DL..741	.	0	not used		S...722	55.15.0605	1 * A	grn/trans.	
DL..742	.	0	not used		S...723	55.15.0605	1 * A	grn/trans.	
DL..743	.	0	not used		S...724	55.15.0604	1 * A	yel/trans.	
DL..744	50.04.2701	MV 57123	red		S...725	55.15.0604	1 * A	yel/trans.	
DL..745	50.04.2701	MV 57123	red		S...726	55.15.0604	1 * A	grn/trans.	
DL..746	50.04.2701	MV 57123	red		S...727	55.15.0605	1 * A	grn/trans.	
					S...728	55.15.0605	1 * A	grn/trans.	
DLZ.701	73.01.0128	HCSPT303	7-segment display common cathode	HP	S...729	55.15.0605	1 * A	grn/trans.	
DLZ.702	73.01.0128	HCSPT303	7-segment display common cathode	HP	S...730	55.15.0602	1 * A	red/trans.	
MP..701	1.990.219.11	1 pcs	Input Mono PCB		S...731	55.15.0604	1 * A	yel/trans.	
MP..702	1.990.100.05	6 pcs	Querprinthalter		S...732	55.15.0604	1 * A	yel/trans.	
MP..703	53.03.0218	26 pcs	single line socket		S...733	55.15.0605	1 * A	grn/trans.	
MP..704	1.990.239.04	1 pcs	Nr.Etikette S720		S...734	55.15.0655	1 * A	grn/grn	
					S...735	55.15.0604	1 * A	yel/trans.	
Q...701	50.03.0515	BC 307	PNP	I<100mA, B=100 any	S...736	55.15.0605	1 * A	grn/trans.	
Q...702	50.03.0436	BC 237	PNP	I<100mA, B=100 any	S...737	55.15.0605	1 * A	grn/grn	
Q...703	50.03.0515	BC 307	PNP	I<100mA, B=100 any	S...740	55.15.0644	1 * A	yel/yel	
Q...704	50.03.0436	BC 237	PNP	I<100mA, B=100 any					
R...701	57.11.3101	100 Ohm	5% 0.25W		S...741	55.15.0605	1 * A	grn/grn	
R...702	57.11.3222	2.2 kOhm	5% 0.25W		S...742	55.15.0605	1 * A	yel/yel	
R...703	57.11.3102	1 kOhm	5% 0.25W		S...743	55.15.0605	1 * A	yel/yel	
R...704	57.11.3473	47 kOhm	5% 0.25W						
R...705	57.11.3101	100 Ohm	5% 0.25W		W...701	57.11.3101	100 Ohm	5% 0.25W	
R...706	57.11.3222	2.2 kOhm	5% 0.25W		W...702	57.11.3101	100 Ohm	5% 0.25W	
R...707	57.11.3102	1 kOhm	5% 0.25W		W...703	57.11.3101	100 Ohm	5% 0.25W	
R...708	57.11.3473	47 kOhm	5% 0.25W		W...704	57.11.3101	100 Ohm	5% 0.25W	
R...709	57.11.3101	100 Ohm	5% 0.25W						
R...710	57.11.3101	100 Ohm	5% 0.25W						
R...711	57.11.3101	100 Ohm	5% 0.25W						
R...712	57.11.3101	100 Ohm	5% 0.25W						
R...713	57.11.3101	100 Ohm	5% 0.25W						
R...714	57.11.3101	100 Ohm	5% 0.25W						
R...715	57.11.3101	100 Ohm	5% 0.25W						
R...716	57.11.3101	100 Ohm	5% 0.25W						
R...717	57.11.3101	100 Ohm	5% 0.25W						
R...718	57.11.3101	100 Ohm	5% 0.25W						
R...719	57.11.3101	100 Ohm	5% 0.25W						
R...720	57.11.3101	100 Ohm	5% 0.25W						
R...721	57.11.3101	100 Ohm	5% 0.25W						
R...722	57.11.3101	100 Ohm	5% 0.25W						
R...723	57.11.3101	100 Ohm	5% 0.25W						
R...724	57.11.3101	100 Ohm	5% 0.25W						
R...725	57.11.3101	100 Ohm	5% 0.25W						
R...726	57.11.3101	100 Ohm	5% 0.25W						
R...727	57.11.3101	100 Ohm	5% 0.25W						
R...728	57.11.3101	100 Ohm	5% 0.25W						
R...729	57.11.3101	100 Ohm	5% 0.25W						
R...730	57.11.3101	100 Ohm	5% 0.25W						
R...731	57.11.3101	100 Ohm	5% 0.25W						
R...732	57.11.3101	100 Ohm	5% 0.25W						
R...733	57.11.3101	100 Ohm	5% 0.25W						
R...734	57.11.3101	100 Ohm	5% 0.25W						
R...735	57.11.3101	100 Ohm	5% 0.25W						
R...736	57.11.3101	100 Ohm	5% 0.25W						
R...737	57.11.3101	100 Ohm	5% 0.25W						
R...738	57.11.3101	100 Ohm	5% 0.25W						
R...739	57.11.3101	100 Ohm	5% 0.25W						
R...740	57.11.3101	100 Ohm	5% 0.25W						

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,

PE=Polyester, PP=Polypropylen, PS=Polystyrol,

MANUFACTURER: Bu=Burdyn, Ex=Exar, Fc=Fairchild, GI=General Instrument

HP=Hewlett Packard, ITT=Intertec, M=Motorola, Mat=National

(Matsushita), NS=National Semiconductors, Ph=Philips,

Re=Raytheon, Sig=Signetics, Six=Siliconix, St=Studer,

TI=Texas Instrument

1.990.239.00 SWITCH BOARD STEREO TA 50/04/0200

END

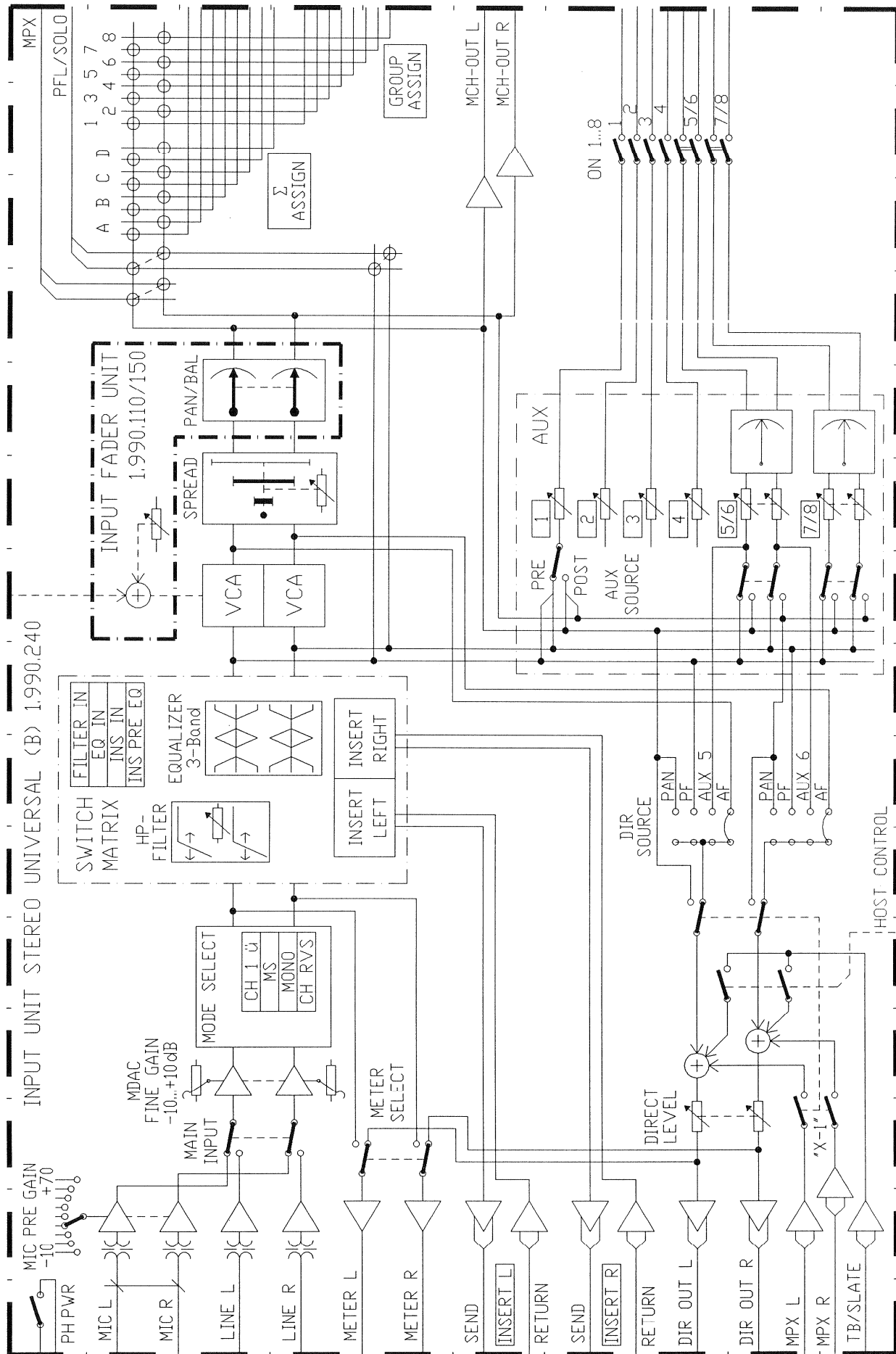
Stereo Input Unit Universal B

1.990.240.00

Stereo Input Unit Universal B 1.990.240.00		SC 1.990.230.00 BP 1.990.230.00 PL 1.990.230.00 / 1.990.230.70 Pin Loc 1.990.230.00
1x	Switch Board Stereo + EQ 1.990.238.00	SC 1.990.230.00 BP 1.990.238.00 PL 1.990.238.00
2x	VCA Board 1.911.292.00	SC not available BP 1.911.292.00 PL 1.911.292.00
1x	Side Board EQ + MIC 1.990.288.00	SC 1.990.288.00 BP 1.990.288.00 PL 1.990.288.00
1x	HP - Filter (16mm) 5 Pot 10mm 1.990.295.00	SC 1.990.230.00 BP 1.990.295.00
1x	HF/MF/LF Frequenz (16mm) 5 Pot 24,6mm 1.990.296.00	SC 1.990.230.00 BP 1.990.296.00 PL 1.990.296.00
2x	Potentiometer Board AUX 5/6 - 7/8 1.990.297.00	SC 1.990.230.00 BP 1.990.297.00

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

STEREO INPUT UNIT UNIVERSAL B 1.990.240.00



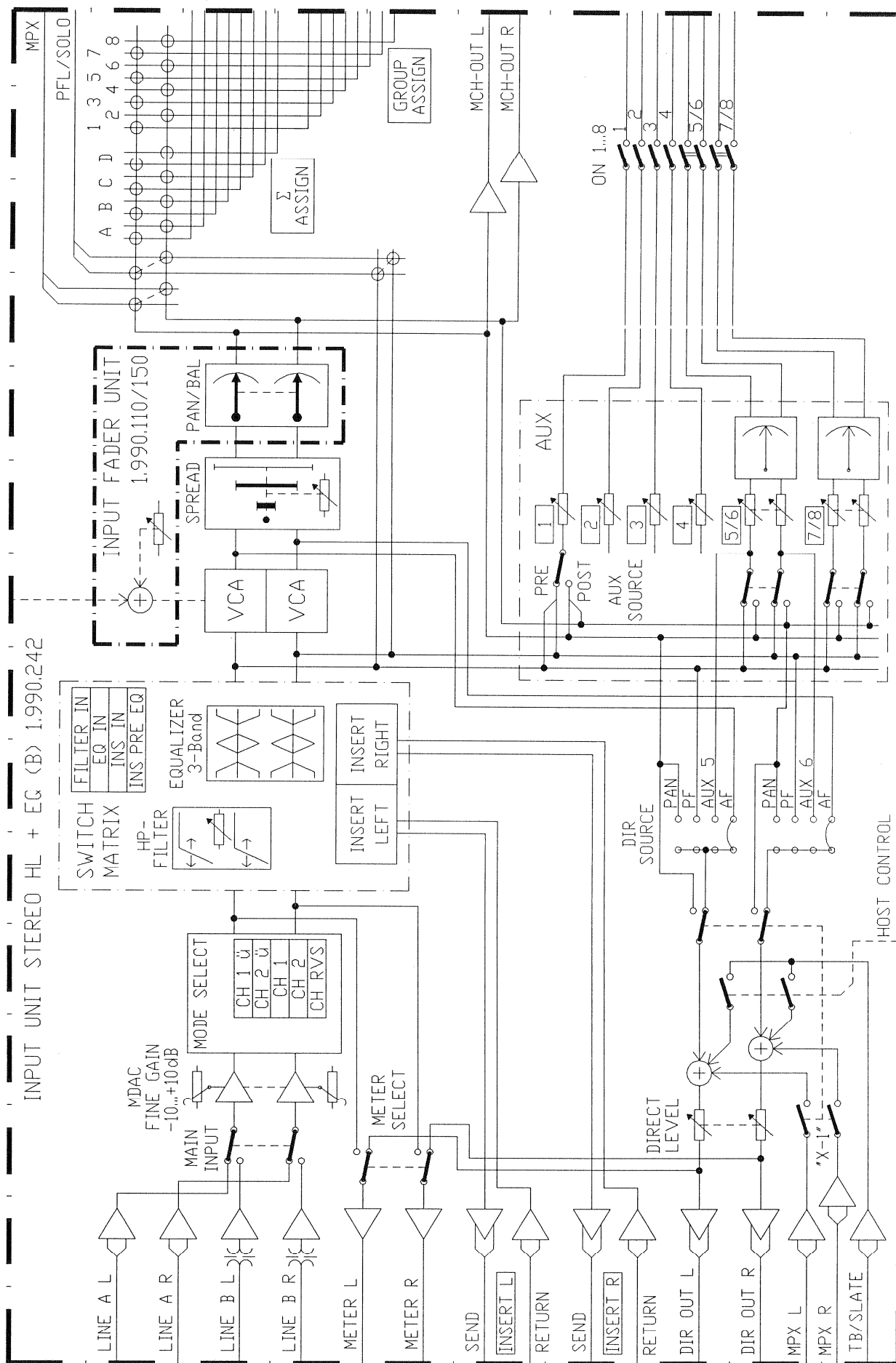
Stereo Input Unit HL + EQ B

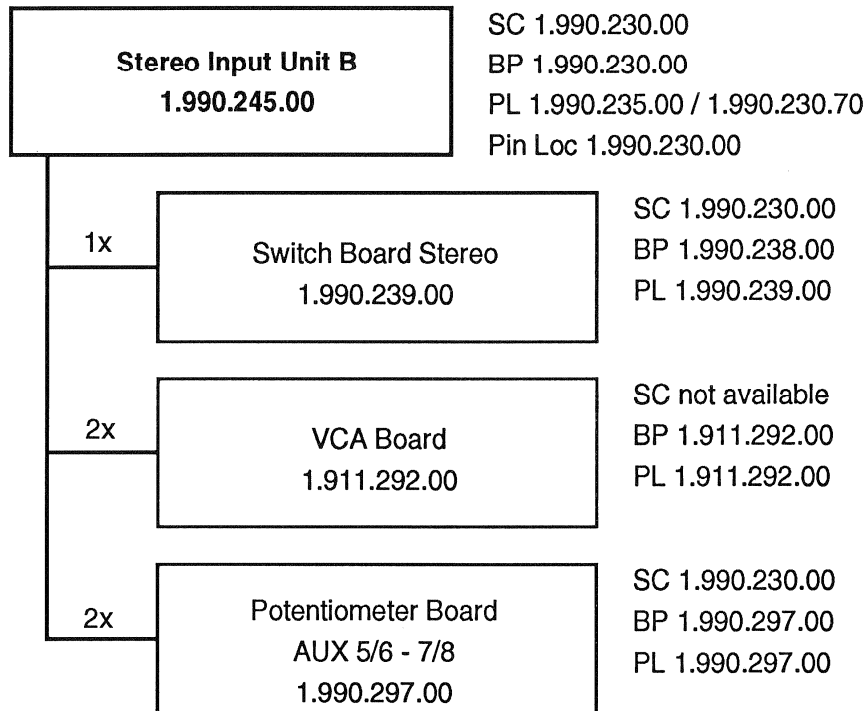
1.990.242.00

Stereo Input Unit HL + EQ B 1.990.242.00		SC 1.990.230.00 BP 1.990.230.00 PL 1.990.232.00 / 1.990.230.70 Pin Loc 1.990.230.00
1x	Switch Board Stereo + EQ 1.990.238.00	SC 1.990.230.00 BP 1.990.238.00 PL 1.990.238.00
2x	VCA Board 1.911.292.00	SC not available BP 1.911.292.00 PL 1.911.292.00
1x	Side Board EQ 1.990.289.00	SC 1.990.288.00 BP 1.990.289.00 PL 1.990.289.00
1x	HP - Filter (16mm) 5 Pot 10mm 1.990.295.00	SC 1.990.230.00 BP 1.990.295.00
1x	HF/MF/LF Frequenz (16mm) 5 Pot 24,6mm 1.990.296.00	SC 1.990.230.00 BP 1.990.296.00 PL 1.990.296.00
2x	Potentiometer Board AUX 5/6 - 7/8 1.990.297.00	SC 1.990.230.00 BP 1.990.297.00

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

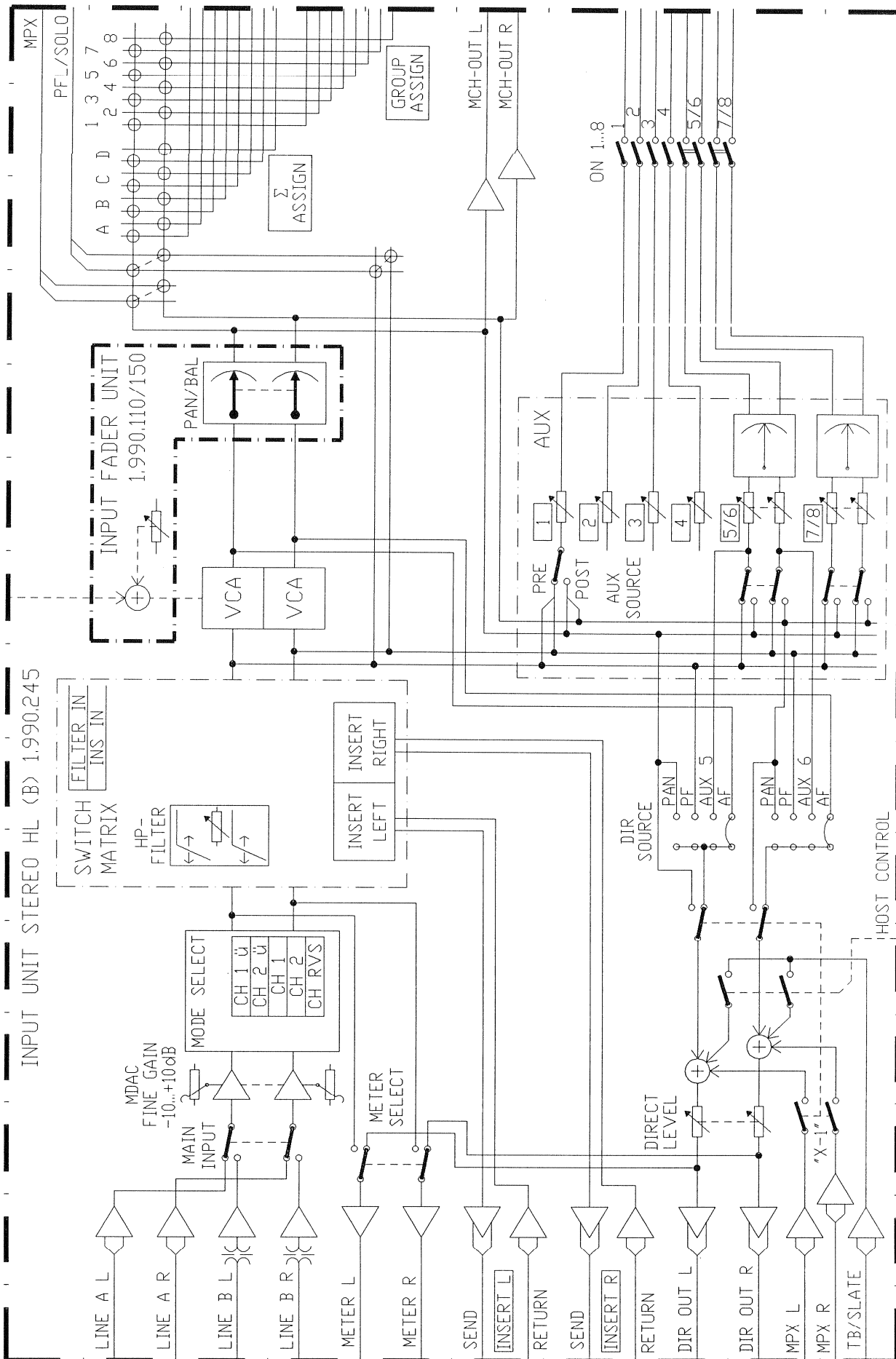
STEREO INPUT UNIT HL+EQ B 1.990.242.00

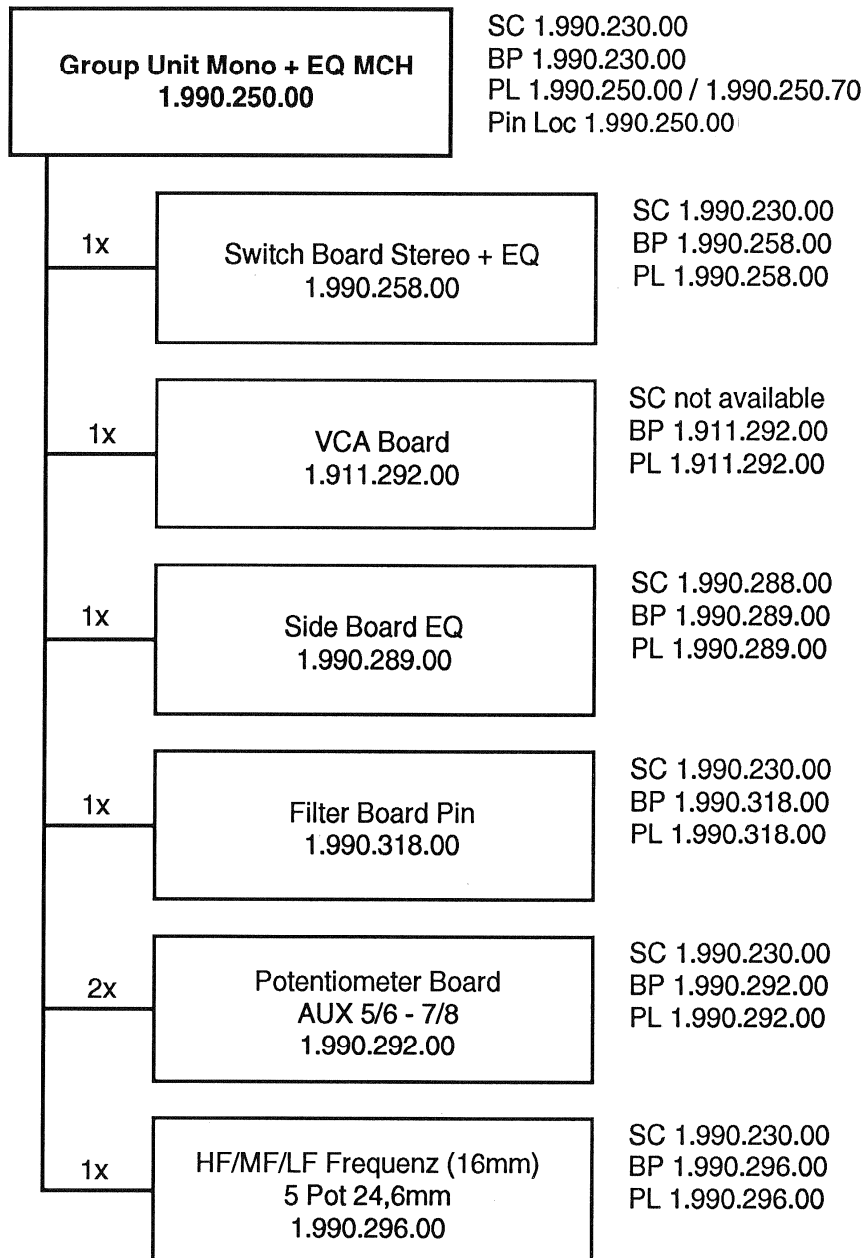


Stereo Input Unit B**1.990.245.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

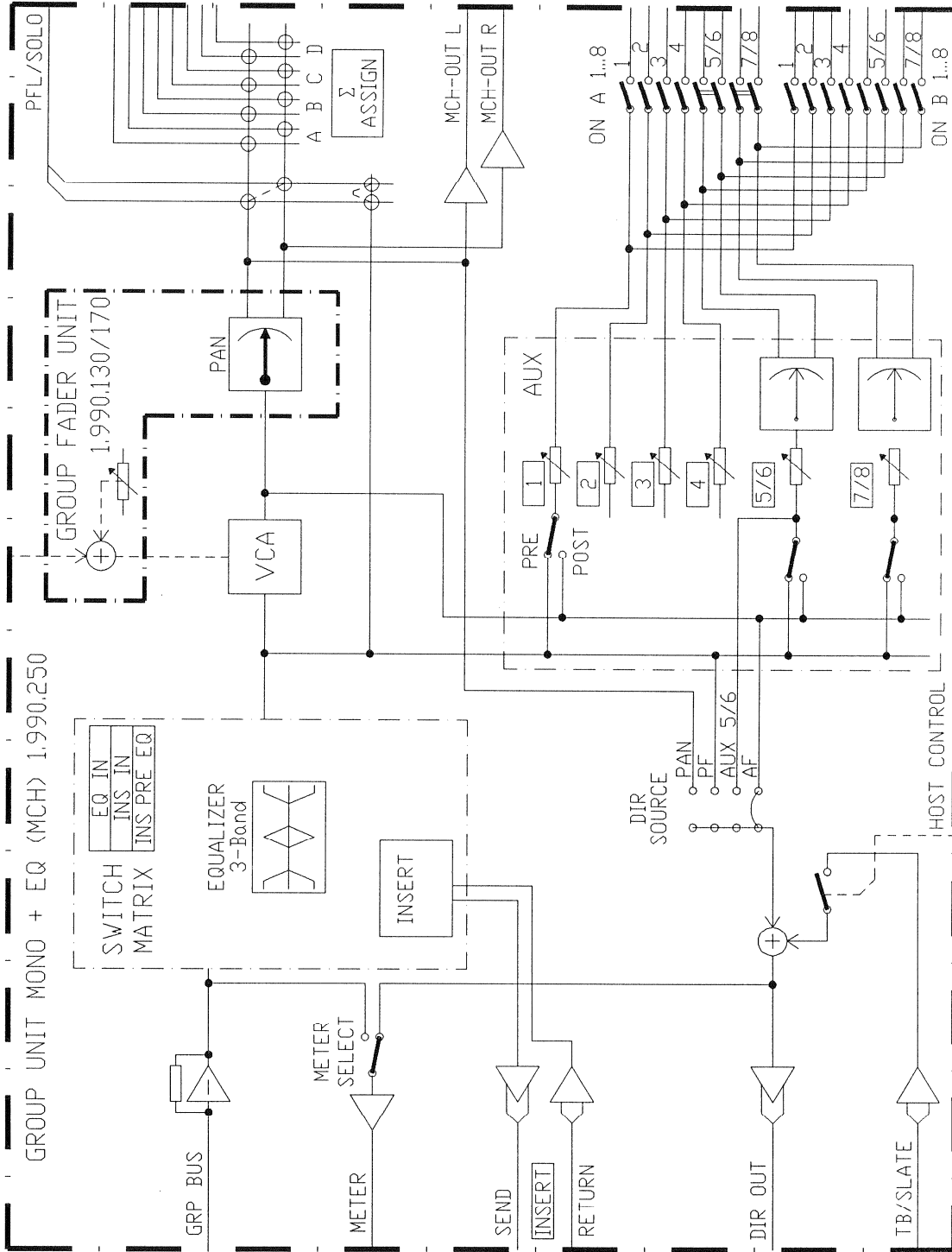
INPUT UNIT STEREO HL (B) 1.990.245.00



Group Unit Mono + EQ MCH**1.990.250.00**

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

GROUP UNIT MONO+EQ MCH 1.990.250.00





GROUP UNIT MONO +EQ

1.990.250.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A....2		1.990.258.00	SWITCH BOARD GROUP +EQ	St	R...857			100 kOhm 20% lin.	see R 102
A....7		1.990.296.00	3*5 POT. 24.6MM BOARD	St	R...858			100 kOhm 20% lin.	see R 109 on 1.990.296
A....12		1.990.289.00	SIDE BOARD EQ	,A St	W....16	1.010.330.64	wire	3.5mm, Group Mono Pan	C1
A....14		1.990.292.00	5 POT. 10MM BOARD	St B6	W....19	0	not used	remove W 19 in MONO GROUPS	C3
A....15		1.990.292.00	5 POT. 10MM BOARD	St B6	W....20	57.11.3000	0 Ohm	Group AUX Mono Pan	B4
A....16		1.990.318.00	FILTER BOARD PIN	St N3	W...110		0 Ohm	57.11.3000 on 1.990.296	
A....70		1.990.250.70	GROUP UNIT VORMONTIERT	,A St	W...111		0 Ohm	57.11.3000 on 1.990.296	
C....77			4700 pF	59.05.2472 on 1.990.296	12/02/91 (01) Erleichterung Fertigung und Pruefung (Schirmblech und Mutterbolzen zu EQ werden erst am Schluss montiert)				
C....93			100 uF	59.22.3101 on 1.990.296	>> POSLST 1.990.250 gilt auch fuer BG 1.990.260.xx (B - Version) <<				
C...377			4700 pF	59.05.2472 on 1.990.296	-----<----- | Die files zu dieser POSLST heissen #990250A,B | ----->-----				
C...393			100 uF	59.22.3101 on 1.990.296	Die posliste 1.990.250.70 ist in den files #990250S,T				
IC...15		50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA G4	*****				
IC...19		50.09.0117	MC33078P	dual op. amp. low noise Mot F3	OPTIONS : SEE OPTIONLIST 1.990.230.00				
IC...75			0	not used see option 1 H1	option 1 :.....multichannel out				
IC..813		50.07.0049	4049	hex inverting buffer CMOS Ph,To D8	option 2 :.....output trim				
IC..814		50.07.0049	4049	hex inverting buffer CMOS Ph,To E9	*****				
IC..835		50.07.0051	CD4051	8-channel analog mux/demux Ph,Mot,RCA G8	Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan				
IC..836		50.07.0051	CD4051	8-channel analog mux/demux Ph,Mot,RCA G9	CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol				
MP...21		1.990.200.05	3 pcs	Poti-Achsverlaengerung	MANUFACTURER: ADI=Analog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,				
MP...26		21.01.0279	5 pcs	Z-Schr. M2.5*6	Fc=Fairchild, Fe=Ferranti, GI=General Instrument, Ha=Harting,				
MP...27		24.16.1025	5 pcs	Rippenscheibe D 2.7 / 5	HP=Hewlett Packard, IT=Intermetall, Mot=Motorola, Nat=National				
MP...27		24.16.1025	8 pcs	Rippenscheibe D 2.7 / 5	{Matsushita}, NS=National Semiconductors, Ph=Philips,				
MP...28		21.01.2352	6 pcs	S-Schr. M3*4	PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of				
MP...29		24.16.3023	2 pcs	Wellensicherung 2.3	America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=Studer,				
MP...30		42.01.0203	2 pcs	Drehknopf gr, D 10/4	Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi				
MP...31		42.01.0228	10 pcs	Knebelknopf gr, D 10/4	1.990.250.00	GROUP UNIT MONO +EQ		AB 91/02/1100	
MP...32		42.01.0250	4 pcs	Deckel h'gr, D 10	1.990.250.00	GROUP UNIT MONO +EQ		AB 91/02/1201	
MP...33		42.01.0251	4 pcs	Deckel d'gr, D 10	END				
MP...34		42.01.0253	1 pcs	Deckel rt, D 10	→				
MP...35		42.01.0254	1 pcs	Deckel bl, D 10					
MP...36		42.01.0255	1 pcs	Deckel gb, D 10					
MP...37		42.01.0256	1 pcs	Deckel gn, D 10					
MP...38		1.010.022.21	2 pcs	Linsenschr. spez M3*8					
MP...39		1.010.221.27	1 pcs	Mutterbolzen M2.5*10.5					
MP...40		1.912.000.03	2 pcs	Drehring D 6.2/13					
MP...41		1.990.200.03	1 pcs	Schirmblech Input					
MP...42		1.990.210.02	1 pcs	Traeger Input					
MP...44		1.990.250.01	1 pcs	Frontschild Input (1.990260.01 -> BG 260!)					
MP...45		1.990.289.02	1 pcs	Isolation Side Board					
MP...46		1.010.108.64	1 pcs	gelber Draht connects PF L&PF R F2					
01 MP...47		1.990.289.01	1 pcs	Schirmblech SIDE BOARD					
01 MP...48		1.010.208.27	3 pcs	Mutterbolzen M2.5x14mm					
P....21			26 pol	1/20" 54.14.2003 on 1.990.296					
P....22			26 pol	1/20" 54.14.2003 on 1.990.296					
R...102		1.010.108.58	4.7 kOhm	10% lin. comb.with 857 St G7					
R...104		1.010.108.58	4.7 kOhm	10% lin. comb.with 853 St F7					
R...106		1.010.108.58	4.7 kOhm	10% lin. comb.with 855 St E7					
R...109			100 kOhm	10% neg.log. 1.010.030.58 on 1.990.296					
R...110			100 kOhm	10% neg.log. see R 109 on 1.990.296					
R...111			3.9 kOhm	57.11.3392 on 1.990.296					
R...112			1 MOhm	57.11.3105 on 1.990.296					
R...113			4.7 kOhm	57.11.3472 on 1.990.296					
R...114			100 kOhm	10% neg.log. 1.010.030.58 on 1.990.296					
R...115			100 kOhm	10% neg.log. see R 114 on 1.990.296					
R...116			100 kOhm	10% neg.log. 1.010.030.58 on 1.990.296					
R...117			100 kOhm	10% neg.log. see R 116 on 1.990.296					
R...118			4.7 kOhm	57.11.3472 on 1.990.296					
R...182			4.7 kOhm	10% +log.comb.withR183/483/844/846 B6					
R...183			10 kOhm	10% +log.see R 182 1.010.034.58 on A 14 B6					
R...186			4.7 kOhm	10% +log.comb.withR187/487/845/847 A6					
R...187			10 kOhm	10% +log.see R 186 1.010.034.58 on A 15 A6					
R...203			0	not used see option 2 N6					
R...409			100 kOhm	10% neg.log. see R 109 on 1.990.296					
R...410			100 kOhm	10% neg.log. see R 109 on 1.990.296					
R...411			3.9 kOhm	57.11.3392 on 1.990.296					
R...412			1 MOhm	57.11.3105 on 1.990.296					
R...413			4.7 kOhm	57.11.3472 on 1.990.296					
R...414			100 kOhm	10% neg.log. see R 114 on 1.990.296					
R...415			100 kOhm	10% neg.log. see R 114 on 1.990.296					
R...416			100 kOhm	10% neg.log. see R 116 on 1.990.296					
R...417			100 kOhm	10% neg.log. see R 116 on 1.990.296					
R...418			4.7 kOhm	57.11.3472 on 1.990.296					
R...436			0	not used remove R 436 in MONO GROUPS H3					
R...483			10 kOhm	10% neg.log. see R 182 B6					
R...487			10 kOhm	10% neg.log. see R 186 A6					
R...844			100 kOhm	20% lin. see R 182 B7					
R...845			100 kOhm	20% lin. see R 186 A6					
R...846			100 kOhm	20% lin. see R 182 B6					
R...847			100 kOhm	20% lin. see R 186 A7					
R...852			100 kOhm	20% lin. see R 114 on 1.990.296					
R...853			100 kOhm	20% lin. see R 104 F7					
R...854			100 kOhm	20% lin. see R 116 on 1.990.296					
R...855			100 kOhm	20% lin. see R 106 E7					



COMMON GROUP UNIT

1.990.250.70

Ad	.POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	.POS.	REF.No.	DESCRIPTION	MANUFACTURER	
A.....1		1.911.292.00	VCA	St E4	C....77		0	NOT USED		
A.....2		0	NOT USED		C....78		0	not used	(on 1.990.296)	
A.....3		1.023.412.02	1/40 " flatcable connect. 200mm 20pol	St	C....79		0	not used	(on 1.990.296)	
A.....4		1.023.412.14	1/40 " flatcable connect. 140mm 20pol	St	C....80		0	not used	(on 1.990.296)	
A.....5		1.023.412.14	1/40 " flatcable connect. 140mm 20pol	St						
A.....6		1.023.412.25	1/40 " flatcable connect. 250mm 20pol	St	C....81	59.06.0104	100 nF		PE I3	
A.....7		0	NOT USED		C....82	59.06.0104	100 nF		PE I3	
A.....8		0	not used		C....83		0	not used	G5	
A.....9		0	not used		C....84		0	not used	G5	
A.....10		1.990.250.94	KL GROUP UNIT	St	C....85		0	not used	G5	
A.....11		0	NOT USED		C....86	59.06.0104	100 nF		PE C4	
A.....12		0	NOT USED		C....87	59.06.0104	100 nF		PE C4	
A.....13		0	not used		C....88		0	not used	N5	
A.....14		0	NOT USED	B5	C....89		0	not used	A7	
A.....15		0	NOT USED	A5	C....90		0	not used	A7	
A.....16		0	NOT USED	N3	C....91		0	not used	A7	
A.....17		0	not used		C....93		0	NOT USED		
A....70		0	NOT USED		C....94	59.06.0104	100 nF		PE I0	
A...301		0	NOT USED	E3	C....95	59.06.0104	100 nF		PE I0	
A...316		0	NOT USED	N4	C....97	59.22.3101	100 uF	-20%	10V EL I0	
C.....1		0	not used	N3	C....98	59.22.3101	100 uF	-20%	10V EL I0	
C.....2		0	not used	N3	C....99	59.34.4101	100 pF		CE I1	
C.....3		0	not used	N2	C...100	59.34.4101	100 pF		CE I1	
C.....4		0	not used	N2	C...101	59.22.3101	100 uF	-20%	10V EL I1	
C.....5		0	not used	N2	C...102	59.22.6220	22 uF	-20%	16V EL G3	
C.....6		0	not used	N3	C...103	59.34.4101	100 pF		CE G3	
C.....7		0	not used	M3	C...104	59.22.3101	100 uF	-20%	10V EL G2	
C.....8		0	not used	M3	C...105	59.34.4101	100 pF		CE G3	
C.....9		0	not used	M3	C...106	59.22.3101	100 uF	-20%	10V EL G2	
C.....10		0	not used	M2	C...107	59.26.1220	22 uF	-20%	10V SAL F4	
C.....11		0	not used	M2	C...108	59.26.5109	1 uF	-20%	10V SAL E4	
C.....12		0	not used	N2	C...109	59.34.2330	33 pF		CE D4	
C.....13		0	not used	N2	C...110	59.22.3101	100 uF	-20%	10V EL D4	
C.....14		0	not used	M2	C...111	59.22.3471	470 uF	-20%	6V EL D4	
C.....15		0	not used	M2	C...112	59.22.3101	100 uF	-20%	10V EL D4	
C.....16		0	not used	M2	C...113	59.22.3101	100 uF	-20%	10V EL D4	
C.....17		0	not used	M2	C...114	59.34.4101	100 pF		CE E4	
C.....18		0	not used	M2	C...115	59.34.4101	100 pF		CE C3	
C.....19		0	not used	M2	C...116	59.34.4101	100 pF		CE C3	
C.....20		0	not used	M2	C...117	59.22.3101	100 uF	-20%	10V EL B4	
C.....21		0	not used	M2	C...118	59.22.3101	100 uF	-20%	10V EL C3	
C.....22		0	not used	L6	C...119	59.22.6220	22 uF	-20%	10V EL C3	
C.....23		0	not used	L6	C...120	59.22.3101	100 uF	-20%	10V EL C3	
C.....24		0	not used	L6	C...121	59.34.4101	100 pF		CE B3	
C.....25		0	not used	L7	C...122	59.22.3101	100 uF	-20%	10V EL B3	
C.....26		0	not used	L6	C...123	59.22.6220	22 uF	-20%	10V EL B4	
C.....27		0	not used	L6	C...124	59.22.3101	100 uF	-20%	10V EL B3	
C.....28		0	not used	L6	C...125	59.22.6220	22 uF	-20%	10V EL E5	
C.....29		0	not used	L7	C...126	59.34.4101	100 pF		CE D5	
C.....30		0	not used	L5	C...127	59.22.3101	100 uF	-20%	10V EL E5	
C.....31		59.22.3101	100 uF	-20%	10V EL	C...128	59.22.6220	22 uF	-20%	10V EL D6
C.....32		59.34.7220	22 pF	2%	CE	C...129	59.34.4101	100 pF		CE D6
C.....33		59.22.2221	220 uF	-20%	6V EL	C...130	59.22.3101	100 uF	-20%	10V EL D6
C.....34		59.22.2221	220 uF	-20%	6V EL	C...131	59.06.0104	100 nF		PE D6
C.....35		0	not used			C...132	59.06.0104	100 nF		PE D6
01 C.....35		59.22.3101	100 uF	-20%	10V EL	C...133	59.22.6220	22 uF	-20%	10V EL D6
C.....36		59.34.4101	100 pF	2%	CE	C...134	59.34.4101	100 pF		CE D6
C.....37		59.06.0102	1.0 nF		PE	C...135	59.22.3101	100 uF	-20%	10V EL D6
C.....38		59.34.4101	100 pF		CE	C...136	59.22.6220	22 uF	-20%	10V EL E5
C.....39		59.34.7151	150 pF	2%	CE	C...137	59.34.4101	100 pF		CE E5
C.....40		59.22.3101	100 uF	-20%	10V EL	C...138	59.22.3101	100 uF	-20%	10V EL E5
C.....41		0	not used			C...139	59.22.6220	22 uF	-20%	10V EL C6
C.....42		0	not used			C...140	59.34.4101	100 pF		CE C6
C.....43		0	not used			C...141	59.22.3101	100 uF	-20%	10V EL D6
C.....44		0	not used			C...142	59.22.6220	22 uF	-20%	10V EL D6
C.....45		59.06.0104	100 nF		PE	C...143	59.34.4101	100 pF		CE D6
C.....46		59.06.0104	100 nF		PE	C...144	59.22.3101	100 uF	-20%	10V EL D6
C.....47		0	not used			C...145	59.34.4101	100 pF		CE N5
C.....48		0	not used			C...146	59.34.2330	33 pF		CE N5
C.....49		59.06.0104	100 nF		PE	C...147	59.22.3101	100 uF	-20%	10V EL H1
C.....50		59.06.0104	100 nF		PE	C...148	59.34.4101	100 pF		CE H1
C.....51		0	not used			C...149	59.22.3101	100 uF	-20%	10V EL W7
C.....52		0	not used			C...150	59.22.3101	100 uF	-20%	10V EL W6
C.....53		0	not used			C...151	59.22.3101	100 uF	-20%	10V EL N6
C.....54		0	not used			C...152	59.22.3101	100 uF	-20%	10V EL L1
C.....55		0	not used			C...153	59.22.3101	100 uF	-20%	10V EL M1
C.....56		59.22.3470	47 uF	-20%	10V EL	C...154	59.34.7151	150 pF	2%	CE L1
C.....57		59.22.3470	47 uF	-20%	10V EL	C...155	59.34.4101	100 pF	2%	CE M1
C.....58		59.22.3101	100 uF	-20%	10V EL	C...156	59.34.7220	22 pF	2%	CE L2
C.....59		59.22.3101	100 uF	-20%	10V EL	C...157	59.22.2221	220 uF	-20%	6V EL L0
C.....60		59.22.3101	100 uF	-20%	10V EL	C...158	59.22.2221	220 uF	-20%	6V EL M0
C.....61		59.34.7151	150 pF	2%	CE	C...159		0	not used	G1
C.....62		59.34.4101	100 pF	2%	CE	C...160		0	not used	G1
C.....63		59.22.2221	220 uF	-20%	6V EL	C...161		0	not used	G1
C.....64		59.22.2221	220 uF	-20%	6V EL	C...301		0	not used	N1
C.....65		59.22.3101	100 uF	-20%	10V EL	C...302		0	not used	N1
C.....66		59.22.3101	100 uF	-20%	10V EL	C...303		0	not used	N1
C.....67		0	not used			C...304		0	not used	N1
C.....68		0	not used			C...305		0	not used	N1
C.....69		0	not used			C...306		0	not used	N1
C.....70		0	not used			C...307		0	not used	N1
C.....71		0	not used			C...308		0	not used	N1
C.....72		0	not used			C...309		0	not used	N0
C.....73		0	not used			C...310		0	not used	N0
C.....74		59.34.7220	22 pF	2%	CE	C...311		0	not used	N0
C.....75		59.34.4101	100 pF	2%	CE	C...312		0	not used	N1
C.....76		59.34.2330	33 pF		CE	C...313		0	not used	N1
						C...314		0	not used	N0
						C...315		0	not used	M1

COMMON GROUP UNIT



1.990.250.70

Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
C...316	.	0	not used	M1	C...604	59.22.4101	100 uF	-20% 16V EL	B0
C...317	.	0	not used	M0	C...605	59.22.4101	100 uF	-20% 16V EL	B0
C...318	.	0	not used	K6	C...606	59.22.4101	100 uF	-20% 16V EL	B0
C...319	.	0	not used	I6	C...607	59.06.0104	100 nF	PE	B0
C...320	.	0	not used	K6	C...608	59.06.0104	100 nF	PE	B0
C...321	.	0	not used	K7	C...609	59.06.0104	100 nF	PE	B0
C...322	.	0	not used	K6	C...610	.	0	not used	CO
C...323	.	0	not used	K6	C...611	59.34.7151	150 pF	CE	B1
C...324	.	0	not used	K6	C...612	59.22.4471	470 uF	-20% 16V EL	A1
C...325	.	0	not used	K7	C...613	59.22.4101	100 uF	-20% 16V EL	A1
C...326	.	0	not used	K6	C...614	59.34.5471	470 pF	CE	C1
C...327	.	0	not used	K5	C...615	59.34.2330	33 pF	2% CE	C1
C...328	.	0	not used	K4	C...616	59.34.5471	470 pF	CE	B2
C...329	.	0	not used	K5	C...617	59.34.5471	470 pF	CE	B2
C...331	59.22.3101	100 uF	-20% 10V EL	M3	01 C...618	59.06.5103	10 nF	PE (LS)	CO
C...332	59.34.7220	22 pF	2% CE	L3	C...619	59.06.0103	10 nF	PE	B2
C...333	59.22.2221	220 uF	-20% 6V EL	N5	C...620	59.22.3101	100 uF	-20% 10V EL	G1
C...334	59.22.2221	220 uF	-20% 6V EL	N4	C...621	59.34.2470	47 pF	2% CE	G1
C...335	.	0	not used	N4	C...622	59.34.2470	47 pF	2% CE	G1
01 C...335	59.22.3101	100 uF	-20% 10V EL	N5	C...801	59.06.5103	10 nF	PE	A8
C...336	59.34.4101	100 pF	2% CE	N5	C...803	.	0	not used	A7
C...337	59.06.0102	1.0 nF	PE	N4	C...804	59.34.7151	150 pF	2% CE	A9
C...338	59.34.4101	100 pF	CE	M4	C...805	59.06.0104	100 nF	PE	A8
C...339	59.34.7151	150 pF	2% CE	M4	C...806	59.06.0104	100 nF	PE	A8
C...340	59.22.3101	100 uF	-20% 10V EL	M5	C...807	.	0	not used	L7
C...351	.	0	not used	H6	C...808	.	0	not used	L7
C...352	.	0	not used	H6	C...809	.	0	not used	L8
C...353	.	0	not used	I5	C...810	.	0	not used	L7
C...354	.	0	not used	H5	C...811	.	0	not used	L7
C...355	.	0	not used	H6	C...812	.	0	not used	L7
C...356	59.22.3470	47 uF	-20% 10V EL	I4	C...813	.	0	not used	L7
C...357	59.22.3470	47 uF	-20% 10V EL	I4	C...814	.	0	not used	L7
C...358	59.22.3101	100 uF	-20% 10V EL	K4	C...815	.	0	not used	L8
C...359	59.22.3101	100 uF	-20% 10V EL	K3	C...816	.	0	not used	L8
C...360	59.22.3101	100 uF	-20% 10V EL	K3	C...817	.	0	not used	L8
C...361	59.34.7151	150 pF	2% CE	K3	C...818	.	0	not used	L8
C...362	59.34.4101	100 pF	2% CE	I3	C...819	.	0	not used	L8
C...363	59.22.2221	220 uF	-20% 6V EL	K2	C...820	.	0	not used	L7
C...364	59.22.2221	220 uF	-20% 6V EL	K2	C...821	.	0	not used	L7
C...365	59.22.3101	100 uF	-20% 10V EL	F3	C...822	.	0	not used	L8
C...366	59.22.3101	100 uF	-20% 10V EL	H6	C...822	.	0	not used	M8
C...374	59.34.7220	22 pF	2% CE	I3	C...823	59.34.4101	100 pF	2% CE	M8
C...375	59.34.4101	100 pF	2% CE	K4	C...824	.	0	not used	M8
C...376	59.34.2330	33 pF	2% CE	F3	C...825	.	0	not used	M8
C...377	.	0	NOT USED	F3	01 C...826	.	0	not used	L8
C...393	.	0	NOT USED	I1	C...827	59.06.0103	10 nF	PE (LS)	F7
C...397	59.22.3101	100 uF	-20% 10V EL	H0	C...831	.	0	not used	M8
C...398	59.22.3101	100 uF	-20% 10V EL	I0	C...832	.	0	not used	M7
C...399	59.34.4101	100 pF	CE	I1	C...833	.	0	not used	M7
C...400	59.34.4101	100 pF	CE	I1	C...834	.	0	not used	M7
C...401	59.22.3101	100 uF	-20% 10V EL	I1	C...839	.	0	not used	N8
C...402	59.22.6220	22 uF	-20% 16V EL	H3	C...840	.	0	not used	N8
C...403	59.34.4101	100 pF	CE	H3	C...841	.	0	not used	N7
C...404	59.22.3101	100 uF	-20% 10V EL	H2	C...842	.	0	not used	N9
C...405	59.34.4101	100 pF	CE	H3	C...843	.	0	not used	M8
C...406	59.22.3101	100 uF	-20% 10V EL	H2	C...844	.	0	not used	N9
C...407	59.26.1220	22 uF	-20% 10V SAL	F3	C...846	.	0	not used	M9
C...408	59.26.5109	1 uF	-20% 10V SAL	F3	C...847	.	0	not used	N9
C...409	59.34.2330	33 pF	CE	D3	C...848	.	0	not used	F9
C...410	59.22.3101	100 uF	-20% 10V EL	D3	C...849	59.34.4271	270 pF	CE	G9
C...411	59.22.3471	470 uF	-20% 6V EL	D3	C...850	.	0	not used	G7
C...412	59.22.3101	100 uF	-20% 10V EL	C4	C...851	59.34.4101	100 pF	2% CE	G8
C...413	59.22.3101	100 uF	-20% 10V EL	C4	C...852	59.99.1101	100 pF	2% CE	E6
C...414	59.34.4101	100 pF	CE (LS)	E3	C...853	59.34.4101	100 pF	2% CE	E7
C...416	59.34.4101	100 pF	CE	B3	C...854	59.99.1101	100 pF	2% CE	H7
C...419	59.22.6220	22 uF	-20% 10V EL	B3	C...855	.	0	not used	H7
C...420	59.22.3101	100 uF	-20% 10V EL	B3	C...856	.	0	not used	H7
C...421	59.34.4101	100 pF	CE	B3	C...857	.	0	not used	H8
C...422	59.22.3101	100 uF	-20% 10V EL	B3	C...858	59.34.4101	100 pF	2% CE	H8
C...439	59.22.6220	22 uF	-20% 10V EL	C6	C...859	59.34.4101	100 pF	2% CE	H7
C...440	59.34.4101	100 pF	CE	B6	C...860	59.99.1101	100 pF	2% CE	G9
C...441	59.22.3101	100 uF	-20% 10V EL	C6	C...861	.	0	not used	E6
C...442	59.22.6220	22 uF	-20% 10V EL	C6	C...862	59.34.4101	100 pF	2% CE	H8
C...443	59.34.4101	100 pF	CE	C6	C...863	59.34.4101	100 pF	2% CE	H8
C...444	59.22.3101	100 uF	-20% 10V EL	C6	C...864	.	0	not used	H8
C...445	59.34.4101	100 pF	CE (LS)	C6	C...865	.	0	not used	H8
C...446	59.34.2330	33 pF	CE (LS)	C6	C...866	59.99.1101	100 pF	2% CE	H8
C...447	59.22.3101	100 uF	-20% 10V EL	H1	C...867	59.34.4101	100 pF	2% CE	H7
C...448	59.34.4101	100 pF	CE	H1	C...868	59.99.1101	100 pF	2% CE	H8
C...449	59.22.3101	100 uF	-20% 10V EL	N6	C...869	.	0	not used	H7
C...450	59.22.3101	100 uF	-20% 10V EL	N6	C...870	59.99.1101	100 pF	2% CE	H8
C...451	59.22.3101	100 uF	-20% 10V EL	N6	C...871	.	0	not used	H8
C...452	59.22.3101	100 uF	-20% 10V EL	K1	C...872	.	0	not used	H8
C...453	59.22.3101	100 uF	-20% 10V EL	K1	C...873	.	0	not used	H8
C...454	59.34.7151	150 pF	2% CE	K1	C...874	59.34.4101	100 pF	2% CE	H7
C...455	59.34.4101	100 pF	2% CE	L1	C...875	59.34.4101	100 pF	2% CE	H7
C...456	59.34.7220	22 pF	2% CE	L2	C...876	59.99.1101	100 pF	2% CE	H7
C...457	59.22.2221	220 uF	-20% 6V EL	K0	C...877	59.99.1101	100 pF	2% CE	H7
C...458	59.22.2221	220 uF	-20% 6V EL	K0	C...878	.	0	not used	18
C...459	.	0	not used	G0	C...879	.	0	not used	18
C...460	.	0	not used	G0	C...880	.	0	not used	17
C...461	.	0	not used	G0	C...881	.	0	not used	H7
C...601	.	0	not used	L4	C...882	59.34.4101	100 pF	2% CE	17
C...602	59.06.5103	10 nF	PE	A1	C...883	59.99.1101	100 pF	2% CE	17
C...603	.	0	not used	G9	C...884	.	0	not used	17
					C...885	59.34.4101	100 pF	2% CE	17
					C...886	.	0	not used	17



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1.990.250.70

Ad	POS	REF.No	DESCRIPTION	MANUFACTURER	Ad	POS	REF.No	DESCRIPTION	MANUFACTURER	
C...887		59.99.1101	100 pF	2%	CE	I7	D...314	50.04.0125	1N4448	any L2
C...888		59.34.4101	100 pF	2%	CE	I7	D...315	50.04.0125	1N4448	any L2
C...889		59.34.4101	100 pF	2%	CE	I7				
C...890		59.34.4101	100 pF	2%	CE	K8	D...601	. . . 0	not used	N7
C...891		. . . 0	not used			I9	D...602	. . . 0	not used	N9
C...892		59.34.4101	100 pF	2%	CE	I9	D...603	50.04.0125	1N4448	any A5
C...893		. . . 0	not used			I8	D...604	50.04.0125	1N4448	any A5
C...894		59.34.4101	100 pF	2%	CE	K8	D...605	50.04.0122	1N4001	1A / 50V
C...895		59.34.4101	100 pF	2%	CE	K8	D...606	50.04.0122	1N4001	1A / 50V
C...896		59.34.4101	100 pF	2%	CE	K8	D...607	50.04.0125	1N4448	any B1
C...897		59.34.4101	100 pF	2%	CE	K8	D...608	50.04.0125	1N4448	any B1
C...898		. . . 0	not used			K8	D...609	50.04.0125	1N4448	any B1
C...899		. . . 0	not used			L8	D...610	50.04.0125	1N4448	any B1
C...900		. . . 0	not used			K7	D...611	50.04.0125	1N4448	any B1
C...901		. . . 0	not used			K8	D...613	50.04.0125	1N4448	any B1
C...902		. . . 0	not used			K8	D...614	50.04.0125	1N4448	any B1
C...903		. . . 0	not used			K8	D...615	50.04.0125	1N4448	any B1
C...904		. . . 0	not used			K8	D...616	50.04.0122	1N4001	1A / 50V
C...905		. . . 0	not used			L8	D...617	50.04.0122	1N4001	1A / 50V
C...906		59.34.4101	100 pF	2%	CE	K7	D...801	50.04.0125	1N4448	any A8
C...907		59.34.4101	100 pF	2%	CE	K7	D...802	50.04.0127	BAT 85	schottky
C...908		. . . 0	not used			I7	D...803	50.04.0127	BAT 85	schottky
C...909		59.34.4101	100 pF	2%	CE	K7	D...804	50.04.0125	1N4448	any A9
C...910		. . . 0	not used			L8	D...805	50.04.0125	1N4448	any A4
C...911		. . . 0	not used			L8	D...806	50.04.0125	1N4448	any A5
C...912		. . . 0	not used			L7	D...807	50.04.0125	1N4448	any A4
C...913		. . . 0	not used			L7	D...808	50.04.0125	1N4448	any A4
C...914		. . . 0	not used			K9	D...809	50.04.0125	1N4448	any A4
C...915		. . . 0	not used			A7	D...810	50.04.0125	1N4448	any A5
C...916		. . . 0	not used (TCL) (TXD)			C8	D...811	50.04.0125	1N4448	any A5
C...917		59.34.4101	100 pF	2%	CE	B7	D...812	50.04.0125	1N4448	any A5
C...918		59.34.4101	100 pF	2%	CE	B7	D...813	50.04.0125	1N4448	any A4
C...919		59.34.4101	100 pF	2%	CE	B7	D...814	50.04.0125	1N4448	any A4
C...920		59.34.4101	100 pF	2%	CE	A7	D...815	50.04.0125	1N4448	any A3
C...921		59.34.4101	100 pF	2%	CE	B7	D...816	50.04.0125	1N4448	any A4
C...922		59.34.4101	100 pF	2%	CE	C7	D...817	50.04.0125	1N4448	any A4
C...923		59.34.4101	100 pF	2%	CE	B7	D...818	50.04.0125	1N4448	any A5
C...924		59.34.4101	100 pF	2%	CE	B7	D...819	50.04.0125	1N4448	any A7
C...925		59.34.4101	100 pF	2%	CE	D7	D...820	50.04.0125	1N4448	any A4
C...926		59.34.4101	100 pF	2%	CE	D7	D...821	50.04.0125	1N4448	any A4
C...927		59.34.4101	100 pF	2%	CE	D7	D...822	50.04.0125	1N4448	any A4
C...928		59.34.4101	100 pF	2%	CE	D7	D...823	50.04.0125	1N4448	any A4
C...929		59.34.4101	100 pF	2%	CE	C7	D...824	. . . 0	not used (TCL) (TXD) (DOO)	A7
C...930		59.34.4101	100 pF	2%	CE	C7	D...825	. . . 0	not used	C8
C...931		59.34.4101	100 pF	2%	CE	C7	D...826	. . . 0	not used	G9
C...932		59.34.4101	100 pF	2%	CE	D5	D...827	50.04.0127	BAT 85	schottky
C...933		59.34.4101	100 pF	2%	CE	E8	D...828	50.04.0127	BAT 85	schottky
C...934		59.34.4101	100 pF	2%	CE	D7	D...829	50.04.0125	1N4448	any A7
C...935		59.34.4101	100 pF	2%	CE	C7	D...830	50.04.0125	1N4448	any A8
C...936		59.34.4101	100 pF	2%	CE	C7	D...831	. . . 0	not used	K7
C...937		59.34.4101	100 pF	2%	CE	E8	D...832	. . . 0	not used	H9
C...938		59.34.4101	100 pF	2%	CE	E8	D...833	. . . 0	not used	H8
C...939		59.99.1101	100 pF	2%	CE	E8	D...834	. . . 0	not used	H7
C...940		59.99.1101	100 pF	2%	CE	E8	D...835	. . . 0	not used	H7
C...941		59.34.4101	100 pF	2%	CE	F8	D...836	. . . 0	not used	H7
C...942		59.34.4101	100 pF	2%	CE	E5	D...837	. . . 0	not used	H7
C...943		. . . 0	not used			E5	D...838	. . . 0	not used	K7
C...944		59.99.1101	100 pF	2%	CE	F8	D...839	. . . 0	not used	K7
C...945		59.34.4101	100 pF	2%	CE	F8	D...840	. . . 0	not used	K7
C...946		59.34.4101	100 pF	2%	CE	F8	D...841	. . . 0	not used	L4
C...947		59.34.4101	100 pF	2%	CE	F8	D...842	. . . 0	not used	L4
C...948		59.34.4101	100 pF	2%	CE	F8				
C...949		. . . 0	not used			E5	IC...1	. . . 0	not used	N7
C...950		59.34.4101	100 pF	2%	CE	D5	IC...2	. . . 0	not used	L5
C...951		59.34.4101	100 pF	2%	CE	C7	IC...3	. . . 0	not used	L6
C...952		59.34.4101	100 pF	2%	CE	D7	IC...4	. . . 0	not used	L6
C...953		59.34.4101	100 pF	2%	CE	E6	IC...5	. . . 0	not used	K6
C...954		59.34.4101	100 pF	2%	CE	E6	IC...6	. . . 0	not used	L5
C...955		59.34.4101	100 pF	2%	CE	E6	IC...7	. . . 0	not used	K5
C...956		59.34.4101	100 pF	2%	CE	E6	IC...8	. . . 0	not used	K5
C...957		. . . 0	not used			F8	IC...9	. . . 0	not used	K5
C...958		. . . 0	not used			G1	IC...10	50.09.0117	MC33078P	dual op. amp. low noise Mot L2
D...3		. . . 0	not used			M4	IC...11	50.09.0117	MC33078P	dual op. amp. low noise Mot M4
D...4		. . . 0	not used			L6	IC...12	. . . 0	not used	L5
D...5		. . . 0	not used			L6	IC...13	. . . 0	NOT USED	14
D...6		. . . 0	not used			L7	IC...14	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA H4
D...7		. . . 0	not used			L6	IC...15	. . . 0	NOT USED	F4
D...8		50.04.0125	1N4448			any F5	IC...16	. . . 0	NOT USED	F4
D...9		50.04.0125	1N4448			any F5	IC...17	50.09.0117	MC33078P	dual op. amp. low noise Mot H2
D...10		50.04.0125	1N4448			any H2	IC...18	50.09.0101	TL072	dual op. amp. FET TI 13
D...11		50.04.0125	1N4448			any F5	IC...19	. . . 0	NOT USED	F3
D...12		50.04.0125	1N4448			any E4	IC...20	50.09.0117	MC33078P	dual op. amp. low noise Mot L1
D...13		50.04.0125	1N4448			any D3	IC...21	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA L2
D...14		50.04.0125	1N4448			any M2	IC...22	. . . 0	NOT USED	H4
D...15		50.04.0125	1N4448			any M2	IC...23	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA H4
D...303		. . . 0	not used			I4	IC...24	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA F1
D...304		. . . 0	not used			K6	IC...25	50.09.0106	NE5532AN	dual op. amp. low noise Sig,Ra G3
D...305		. . . 0	not used			K6	IC...26	50.09.0117	MC33078P	dual op. amp. low noise Mot E4
D...306		. . . 0	not used			K7	IC...27	. . . 0	NOT USED	B4
D...307		. . . 0	not used			L6	IC...28	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA C4
D...308		50.04.0125	1N4448			any F5	IC...29	50.07.0015	NE5532AN	dual op. amp. low noise Sig,Ra C3
D...309		50.04.0125	1N4448			any F5	IC...30	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA F1
D...310		50.04.0125	1N4448			any H2	IC...31	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA F0
D...311		50.04.0125	1N4448			any F5	IC...32	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA F0
D...312		50.04.0125	1N4448			any E3	IC...33	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA E1
D...313		50.04.0125	1N4448			any D3	IC...34	50.07.0015	CD4053	3 * 2 channel analog mux/demux Ph,Mot,RCA E0

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Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
IC...	43	0	not used	E1	IC..844	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K8
IC...	44	0	not used	E0	IC..845	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K9
IC...	45	0	not used	E0	IC..846	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K9
IC..46	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA D5	IC..847	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA K8
IC..47	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA DR	IC..848	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA DR
IC..48	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA C5	IC..849	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E8
IC..49	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA C5	IC..850	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E9
IC..50	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA C5					
IC..51	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA B5	IC..851	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA F9
IC..52	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA B5	IC..852	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA F8
IC..53	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA B5	JS...0	.	.	see also MP 4	
IC..54	50.09.0117	MC33078P	dual op. amp. low noise	Mot C4	JSJ...1	.	0	not used	2 pin not used M3
IC..55	50.09.0117	MC33078P	dual op. amp. low noise	Mot E5	JSJ...2	.	0	not used	3 pin not used M3
IC..56	50.09.0117	MC33078P	dual op. amp. low noise	Mot D6	JSJ...3	.	0	not used	2 pin not used M2
IC..57	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	JSJ...4	.	0	not used	3 pin not used M3
IC..58	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	JSJ...5	54.01.0021	Jumper	AF L Inv. => DIR OUT L	2 pin used C3
IC..59	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	JSJ...6	.	0	not used	AUX L Inv. " 2 pin used C3
IC..60	50.09.0117	MC33078P	dual op. amp. low noise	Mot C6	JSJ...7	.	0	not used	PF L Inv. " 2 pin used H2
IC..61	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA E1	JSJ...8	.	0	not used	AF Pan L Inv. " 1 pin used H2
IC..62	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA D0	JSJ...9	.	0	not used	AF Pan L Inv. " 2 pin used H2
IC..63	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA D1	JSJ...10	.	0	not used	PF L Inv. " 1 pin used H2
IC..64	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA D0	JSJ...11	54.01.0021	Jumper	AF R Inv. => DIR OUT R	2 pin used C3
IC..65	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA D1	JSJ...12	.	0	not used	AUX R Inv. " 2 pin used C3
IC..66	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA C1	JSJ...13	.	0	not used	PF R Inv. " 2 pin used G2
IC..67	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA N6	JSJ...14	.	0	not used	AF Pan R Inv. " 1 pin used G2
IC..68	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA M6	JSJ...15	.	0	not used	AF Pan R Inv. " 2 pin used G2
IC..69	.	0	NOT USED	M6	JSJ...16	.	0	not used	PF R Inv. " 1 pin used G2
IC..70	50.09.0117	MC33078P	dual op. amp. low noise	Mot N5	L....1	62.02.3101	100 uH	hf-choke-coil	B2
IC..71	50.09.0101	TL 072	dual op. amp. FET	TI L2	MP...1	53.03.0166	32 pcs	IC-socket 8 pin	
IC..72	50.09.0106	NE5532AN	dual op. amp. low noise	Sig,Ra L1	MP...2	53.03.0168	31 pcs	IC-socket 16 pin	
IC..73	.	0	not used	L1	MP...3	.	0	not used	
IC..74	.	0	not used	L1	MP...4	54.01.0020	20 pcs	Jumper plug see also JSJ	
IC..75	.	0	NOT USED	(option 1)	MP...5	54.11.0131	55 pcs	dual pin (totally 110 pins)	
IC..76	.	0	not used	H1	MP...6	28.99.0119	6 pcs	Rohrniete, D2.5*0.15*9	
IC..301	.	0	not used	M1	MP...7	1.990.100.02	2 pcs	Querprintstuetze links	St
IC..302	.	0	not used	K5	MP...8	1.990.100.03	2 pcs	Querprintstuetze rechts	St
IC..303	.	0	not used	K6	MP...9	.	0	not used	
IC..304	.	0	not used	K6	MP...10	1.010.048.27	3 pcs	Mutterbolzen M 3 *32.5	St
IC..311	.	0	NOT USED	M5	MP...11	1.990.230.11	1 pcs	Input Stereo PCB	St
IC..312	.	0	not used	H5	MP...12	21.01.0354	3 pcs	Z-Schraube , ZN , M 3 * 6	
IC..317	.	0	NOT USED	K3	MP...13	21.99.0117	7 pcs	Z-Schraube Nylon , M 3 * 6	
IC..318	.	0	NOT USED	K3	MP...14	24.16.1030	3 pcs	Rippen Scheibe D 3.2*5.5	
IC..328	.	0	NOT USED	H3	MP...15	1.990.210.06	1 pcs	Abschirmung A/D Input links	St
IC..329	.	0	NOT USED	E3	MP...16	1.990.210.07	1 pcs	Abschirmung A/D Input rechts	St
IC..335	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA B4	MP...17	.	0	NOT USED	
IC..336	50.09.0106	NE5532AN	dual op. amp. low noise	Sig,Ra B3	MP...18	.	0	NOT USED	
IC..370	.	0	NOT USED	N5	MP...19	.	0	NOT USED	
IC..372	.	0	NOT USED	K1	MP...20	43.01.0108	1 pcs	ESE-Warnschild	St
IC..373	.	0	not used	K1	MP...21	1.990.200.05	4 pcs	Poti-Achsverlaengerung	St
IC..374	.	0	not used	K1	MP...22	1.022.400.03	1 pcs	Trafo-Isolation	
IC..601	50.09.0119	TL 062	dual fet op. amp.	Tho A2	MP...23	1.010.111.65	1 pcs	Schrumf Schlauch	
IC..602	50.09.0117	MC33078P	dual op. amp. low noise	Mot C1	MP...24	1.010.109.64	1 pcs	gelber Draht l = 38mm	
IC..603	50.05.0244	NE5534NB	single op. amp. low noise	Sig,Ra C1	MP...25	1.010.107.64	5 pcs	gelber Draht l = 18mm	
IC..604	1.010.051.50	NE5532AN	dual op. amp. low offset +/- 1mV	St B2	MP...26	.	0	NOT USED	
IC..605	50.09.0117	MC33078P	dual op. amp. low noise	Mot G2	MP...27	.	0	NOT USED	
IC..801	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA A9	MP...28	.	0	NOT USED	
IC..802	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA B9	MP...29	.	0	NOT USED	
IC..803	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA C9	MP...30	.	0	NOT USED	
IC..804	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA C9					
IC..805	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA D9					
IC..806	50.07.1021	CD4021	8-bit static shift register	Ph,Mot,RCA D9	MP...31	.	0	NOT USED	
IC..807	50.07.0049	4049	hex inverting buffer CMOS	Ph, To B9	MP...32	.	0	NOT USED	
IC..808	50.07.0049	4049	hex inverting buffer CMOS	Ph, To B8	MP...33	.	0	NOT USED	
IC..809	50.07.0049	4049	hex inverting buffer CMOS	Ph, To B9	MP...34	.	0	NOT USED	
IC..810	50.07.0049	4049	hex inverting buffer CMOS	Ph, To B8	MP...35	.	0	NOT USED	
IC..811	50.07.0049	4049	hex inverting buffer CMOS	Ph, To C9	MP...36	.	0	NOT USED	
IC..812	50.07.0049	4049	hex inverting buffer CMOS	Ph, To C8	MP...37	.	0	NOT USED	
IC..813	.	0	NOT USED	D8	MP...38	.	0	NOT USED	
IC..814	.	0	NOT USED	E9	MP...39	.	0	NOT USED	
IC..815	.	0	not used	I9	MP...40	.	0	NOT USED	
IC..816	.	0	not used	I9	MP...41	.	0	NOT USED	
IC..817	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA I8	MP...42	.	0	NOT USED	
IC..818	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA E8	MP...43	.	0	NOT USED	
IC..819	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA D8	MP...44	.	0	NOT USED	
IC..820	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA C8	MP...45	.	0	NOT USED	
IC..821	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA C8	MP...46	.	0	NOT USED	
IC..822	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA B8	P....6	54.11.2013	2*16pin	euroconnector	Ht, Ec B0
IC..823	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA A8	P....7	54.11.2004	2*32pin	euroconnector	Ht, Ec E0
IC..824	50.09.0119	TL062	dual fet op. amp.	Tho A8	P....9	54.11.2004	2*32pin	euroconnector	Ht, Ec M0
IC..826	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA L8	P....10	54.01.0294	16 pin	CIS	E5
IC..827	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA L9	P....11	54.01.0226	20 pin	CIS	G6
IC..828	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9	P....12	54.01.0293	14 pin	CIS	H5
IC..829	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M8	P....13	54.16.0520	20pol	1/40 inch flatcable connector (to A 3)	Ya K7
IC..830	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M8	P....14	.	0	not used	see A 3 H5
IC..831	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9	P....15	.	0	not used	see A 5 F5
IC..832	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA M9	P....16	54.16.0520	20pol	1/40 inch flatcable connector (to A 5)	Ya E2
IC..833	.	0	not used	M8	P....17	.	0	not used	see A 4 E6
IC..834	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA F8	P....18	54.16.0520	20pol	1/40 inch flatcable connector (to A 4)	Ya E2
IC..835	.	0	NOT USED	G8	P....19	54.16.0520	20pol	1/40 inch flatcable connector (to A 6)	Ya H5
IC..836	.	0	NOT USED	G9	P....20	.	0	not used	see A 6 H1
IC..837	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA F9	P....21	.	0	NOT USED	
IC..838	50.09.0103	TL 071	fet op. amp.	TI A9	P....22	.	0	NOT USED	
IC..840	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H8					
IC..841	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H9	Q....1	50.03.0351	BC 327	PNP IC<800mA	NS,Mot,Six N4
IC..842	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H9	Q....2	50.03.0516	BC 337	NPN low noise	Sie N3
IC..843	50.07.0018	CD4094	shift and store bus register	Ph,Mot,RCA H8	Q....3	.	0	not used	GO

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Ad	POS	REF.No	DESCRIPTION	MANUFACTURER	Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
Q...	301	50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six N4	R...	81	58.01.8202	2 kOhm 10% 0.25W trimmer	H3
Q...	302	50.03.0516	BC 337 NPN	low noise Sie N4	R...	82	57.11.3562	5.6 kOhm 1% 0.25W	I3
Q...	303	. . . 0	not used		R...	83	57.99.0250	6.8 kOhm 0.1% 0.25W	H3
Q...	601	. . . 0	not used		R...	84	57.99.0250	6.8 kOhm 0.1% 0.25W	H3
Q...	602	. . . 0	not used		R...	85	57.11.3150	15 Ohm 1% 0.25W	I3
Q...	604	50.03.0340	BC 337 NPN	IC>800mA NS,Mot,Six A0	R...	86	57.11.3150	15 Ohm 1% 0.25W	I3
Q...	605	50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six A0	R...	90	57.11.3682	6.8 kOhm 1% 0.25W	G4
Q...	606	50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six A0	R...	91	. . . 0	not used	G4
Q...	607	50.03.0340	BC 337 NPN	IC>800mA NS,Mot,Six A1	R...	92	57.11.3682	6.8 kOhm 1% 0.25W	G4
Q...	608	50.03.0351	BC 327 PNP	IC>800mA NS,Mot,Six A1	R...	93	57.11.3104	100 kOhm 5% 0.25W	G3
Q...	801	50.03.0436	BC 237 NPN	IC>100mA, B>100 any A9	R...	94	57.11.3562	5.6 kOhm 1% 0.25W	G3
Q...	802	50.03.0436	BC 237 NPN	IC>100mA, B>100 any A8	R...	95	58.01.8202	2 kOhm 10% 0.25W trimmer	F3
Q...	803	50.03.0436	BC 237 NPN	IC>100mA, B>100 any A7	R...	101	57.11.3121	120 Ohm 1% 0.25W	H7
Q...	805	. . . 0	not used		R...	102	. . . 0	NOT USED	G7
Q...	806	. . . 0	not used		R...	103	57.11.3121	120 Ohm 1% 0.25W	G7
Q...	807	. . . 0	not used		R...	104	. . . 0	NOT USED	F7
Q...	808	. . . 0	not used		R...	105	57.11.3121	120 Ohm 1% 0.25W	F6
Q...	809	. . . 0	not used		R...	106	. . . 0	NOT USED	E7
Q...	810	. . . 0	not used		R...	107	57.11.3121	120 Ohm 1% 0.25W	F6
Q...	811	. . . 0	not used		R...	108	57.11.3223	22 kOhm 5% 0.25W	F6
Q...	812	. . . 0	not used		R...	109	. . . 0	NOT USED	
Q...	813	50.03.0515	BC 307 PNP	IC>100mA, B>100 any G6	R...	110	. . . 0	NOT USED	
Q...	814	50.03.0515	BC 307 PNP	IC>100mA, B>100 any G6	R...	111	. . . 0	NOT USED	
Q...	815	50.03.0515	BC 307 PNP	IC>100mA, B>100 any G5	R...	112	. . . 0	NOT USED	
Q...	816	. . . 0	not used		R...	113	. . . 0	NOT USED	
Q...	817	. . . 0	not used		R...	114	. . . 0	NOT USED	
R....	1	. . . 0	not used		R...	115	. . . 0	NOT USED	
R....	2	. . . 0	not used		R...	116	. . . 0	NOT USED	
R....	3	. . . 0	not used		R...	117	. . . 0	NOT USED	
R....	4	. . . 0	not used		R...	118	. . . 0	NOT USED	
R....	5	. . . 0	not used		R...	120	. . . 0	not used	G3
R....	6	. . . 0	not used		R...	121	57.11.3152	1.5 kOhm 1% 0.25W	I1
R....	7	. . . 0	not used		R...	122	57.11.3152	1.5 kOhm 1% 0.25W	I1
R....	8	. . . 0	not used		R...	123	57.11.3392	3.9 kOhm 1% 0.25W	I1
R....	9	. . . 0	not used		R...	124	57.11.3392	3.9 kOhm 1% 0.25W	I1
R....	10	. . . 0	not used		R...	125	57.11.3272	2.7 kOhm 1% 0.25W	I1
R....	11	. . . 0	not used		R...	126	57.11.3272	2.7 kOhm 1% 0.25W	I1
R....	12	. . . 0	not used		R...	127	57.11.3223	22 kOhm 5% 0.25W	I1
R....	13	. . . 0	not used		R...	128	57.11.3682	6.8 kOhm 1% 0.25W	G4
R....	14	. . . 0	not used		R...	129	. . . 0	not used	G4
R....	15	. . . 0	not used		R...	130	57.11.3682	6.8 kOhm 1% 0.25W	G4
R....	16	. . . 0	not used		R...	131	57.11.3682	6.8 kOhm 1% 0.25W	G4
R....	17	. . . 0	not used		R...	132	57.11.3752	7.5 kOhm 1% 0.25W	G3
R....	18	. . . 0	not used		R...	133	57.11.3823	82 kOhm 1% 0.25W	G3
R....	21	. . . 0	not used		R...	134	57.11.3223	22 kOhm 5% 0.25W	G3
R....	22	. . . 0	not used		R...	135	57.11.3332	3.3 kOhm 1% 0.25W	G3
R....	23	. . . 0	not used		R...	136	57.11.3332	3.3 kOhm 1% 0.25W	G3
R....	24	. . . 0	not used		R...	137	57.11.3330	33 Ohm 5% 0.25W	G3
R....	25	. . . 0	not used		R...	138	57.11.3223	22 kOhm 5% 0.25W	G3
R....	26	. . . 0	not used		R...	140	. . . 0	not used	H7
R....	27	. . . 0	not used		R...	141	57.11.3332	3.3 kOhm 1% 0.25W	F4
R....	28	. . . 0	not used		R...	142	57.11.3223	22 kOhm 5% 0.25W	F4
R....	29	. . . 0	not used		R...	143	57.11.3333	33 kOhm 1% 0.25W	E4
R....	30	. . . 0	not used		R...	144	57.11.3103	10 kOhm 1% 0.25W	E4
R....	33	. . . 0	not used		R...	145	57.11.3472	4.7 kOhm 1% 0.25W	F4
R....	34	. . . 0	not used		R...	146	57.11.3684	680 kOhm 5% 0.25W	F4
R....	35	. . . 0	not used		R...	147	57.11.3823	82 kOhm 5% 0.25W (LS)	E3
R....	36	. . . 0	not used		R...	148	58.05.1503	50 kOhm 10% 0.25W trimmer	D4
R....	37	. . . 0	not used		R...	149	57.11.3332	3.3 kOhm 1% 0.25W	D4
R....	38	57.11.3473	47 kOhm 1% 0.25W		R...	150	57.11.3330	33 Ohm 5% 0.25W	D4
R....	39	57.11.3473	47 kOhm 1% 0.25W		R...	151	57.11.3223	22 kOhm 5% 0.25W	E4
R....	40	57.11.3682	6.8 kOhm 1% 0.25W		R...	152	57.11.3332	3.3 kOhm 1% 0.25W	B4
R....	41	57.11.3682	6.8 kOhm 1% 0.25W		R...	153	57.11.3332	3.3 kOhm 1% 0.25W	B4
R....	42	57.11.5335	3.3 MOhm 5% 0.25W		R...	154	57.11.3223	22 kOhm 5% 0.25W	B3
R....	43	57.11.3682	6.8 kOhm 1% 0.25W		R...	155	57.11.3752	7.5 kOhm 1% 0.25W	C3
R....	44	57.11.3473	47 kOhm 1% 0.25W		R...	156	57.11.3823	82 kOhm 1% 0.25W	C3
R....	45	57.11.3330	33 Ohm 5% 0.25W		R...	157	57.11.3682	6.8 kOhm 1% 0.25W	B3
R....	50	57.11.3103	10 kOhm 1% 0.25W		R...	158	57.11.3682	6.8 kOhm 1% 0.25W	B3
R....	51	. . . 0	not used		R...	159	57.11.3223	22 kOhm 5% 0.25W	B3
R....	52	57.11.3752	7.5 kOhm 1% 0.25W		R...	161	57.11.3752	7.5 kOhm 1% 0.25W	B4
R....	53	57.11.3184	180 kOhm 1% 0.25W		R...	162	57.11.3823	82 kOhm 1% 0.25W	B3
R....	54	57.11.3683	68 kOhm 1% 0.25W		R...	165	57.11.3682	6.8 kOhm 1% 0.25W	D4
R....	55	57.11.3101	100 Ohm 1% 0.25W		R...	166	57.11.3682	6.8 kOhm 1% 0.25W	D4
R....	56	57.11.3184	180 kOhm 1% 0.25W		R...	167	57.11.3223	22 kOhm 5% 0.25W	C3
R....	57	. . . 0	not used		R...	168	57.11.3752	7.5 kOhm 1% 0.25W	D5
R....	58	57.11.3332	3.3 kOhm 1% 0.25W		R...	169	57.11.3823	82 kOhm 1% 0.25W	E5
R....	59	57.11.3332	3.3 kOhm 1% 0.25W		R...	170	1.010.106.58	10 kOhm 10% pos.log.comb.with R843	St E7
R....	60	57.11.3332	3.3 kOhm 1% 0.25W		R...	171	57.11.3752	7.5 kOhm 1% 0.25W	D6
R....	61	57.11.3332	3.3 kOhm 1% 0.25W		R...	172	57.11.3823	82 kOhm 1% 0.25W	D6
R....	62	57.11.3223	22 kOhm 5% 0.25W		R...	173	1.010.106.58	10 kOhm 10% pos.log.comb.with R840	St D7
R....	65	. . . 0	not used		R...	174	57.11.3752	7.5 kOhm 1% 0.25W	D6
R....	66	. . . 0	not used		R...	175	57.11.3823	82 kOhm 1% 0.25W	D6
R....	67	. . . 0	not used		R...	176	1.010.106.58	10 kOhm 10% pos.log.comb.with R841	St C7
R....	68	. . . 0	not used		R...	177	57.11.3752	7.5 kOhm 1% 0.25W	E5
R....	69	. . . 0	not used		R...	178	57.11.3823	82 kOhm 1% 0.25W	E5
R....	70	. . . 0	not used		R...	179	1.010.106.58	10 kOhm 10% pos.log.comb.with R842	St C7
R....	71	. . . 0	not used		R...	180	57.11.3752	7.5 kOhm 1% 0.25W	C6
R....	72	. . . 0	not used		R...	181	57.11.3823	82 kOhm 1% 0.25W	C6
R....	73	. . . 0	not used		R...	182	. . . 0	NOT USED	B6
R....	74	. . . 0	not used		R...	183	. . . 0	NOT USED	B6
R....	75	. . . 0	not used		R...	184	57.11.3752	7.5 kOhm 1% 0.25W	D6
R....	77	57.11.3682	6.8 kOhm 1% 0.25W		R...	185	57.11.3823	82 kOhm 1% 0.25W	D6
R....	78	. . . 0	not used		R...	186	. . . 0	NOT USED	A6
R....	79	57.11.3682	6.8 kOhm 1% 0.25W		R...	187	. . . 0	NOT USED	A6
R....	80	57.11.3104	100 kOhm 5% 0.25W		R...	190	57.11.3682	6.8 kOhm 1% 0.25W	H1
					R...	194	57.11.3330	33 Ohm 5% 0.25W	H1



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Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
R...195	.	0	not used	G1					
R...196	.	0	not used	G1	R...391	.	0	not used	G4
R...197	.	0	not used	G1	R...392	57.11.3682	6.8 kOhm	1% 0.25W	G4
R...198	.	0	not used	G1	R...393	57.11.3104	100 kOhm	5% 0.25W	G3
R...199	57.11.3104	100	kOhm	N6	R...394	57.11.3562	5.6 kOhm	1% 0.25W	F3
R...200	57.11.3224	220	kOhm	N6	R...395	58.01.8202	2 kOhm	10% 0.25W trimmer	F3
R...201	57.11.3512	5.1	kOhm	N6	R...401	57.11.3121	120 Ohm	1% 0.25W	H6
R...202	57.11.3512	5.1	kOhm	N6	R...402	.	0	NOT USED	G6
R...203	.	0	NOT USED	N6	R...403	57.11.3121	120 Ohm	1% 0.25W	G6
R...204	57.11.3822	8.2	kOhm	N5	R...404	.	0	NOT USED	F6
R...205	57.11.3153	15	kOhm	N5	R...405	57.11.3121	120 Ohm	1% 0.25W	F6
R...206	58.01.8503	50	kOhm	N5	R...406	.	0	NOT USED	E6
R...207	57.99.0250	6.8	kOhm	M2	R...407	57.11.3121	120 Ohm	1% 0.25W	E6
R...208	57.99.0250	6.8	kOhm	M2	R...408	57.11.3223	22 kOhm	5% 0.25W	F6
R...209	57.11.3150	15	Ohm	L1	R...409	.	0	NOT USED	
R...210	57.11.3150	15	Ohm	L1	R...410	.	0	NOT USED	
R...211	57.11.3150	15	Ohm	L1	R...411	.	0	NOT USED	
R...212	57.11.3150	15	Ohm	M1	R...412	.	0	NOT USED	
R...213	57.11.3150	15	Ohm	L1	R...413	.	0	NOT USED	
R...214	57.11.3150	15	Ohm	L1	R...414	.	0	NOT USED	
R...301	.	0	not used	N1	R...415	.	0	NOT USED	
R...302	.	0	not used	N1	R...416	.	0	NOT USED	
R...303	.	0	not used	N1	R...417	.	0	NOT USED	
R...304	.	0	not used	N1	R...418	.	0	NOT USED	
R...305	.	0	not used	N1	R...420	.	0	not used	H3
R...306	.	0	not used	N1	R...421	57.11.3152	1.5 kOhm	1% 0.25W	I1
R...307	.	0	not used	N1	R...422	57.11.3152	1.5 kOhm	1% 0.25W	I1
R...308	.	0	not used	M1	R...423	57.11.3392	3.9 kOhm	1% 0.25W	I1
R...309	.	0	not used	M1	R...424	57.11.3392	3.9 kOhm	1% 0.25W	I1
R...310	.	0	not used	M1	R...425	57.11.3272	2.7 kOhm	1% 0.25W	I1
R...311	.	0	not used	N1	R...426	57.11.3272	2.7 kOhm	1% 0.25W	I1
R...312	.	0	not used	N1	R...427	57.11.3223	22 kOhm	5% 0.25W	I1
R...313	.	0	not used	N0	R...428	57.11.3682	6.8 kOhm	1% 0.25W	H4
R...314	.	0	not used	N0	R...429	.	0	not used	H4
R...315	.	0	not used	M0	R...430	57.11.3682	6.8 kOhm	1% 0.25W	H4
R...316	.	0	not used	M1	R...431	57.11.3682	6.8 kOhm	1% 0.25W	H4
R...317	.	0	not used	M1	R...432	57.11.3752	7.5 kOhm	1% 0.25W	H3
R...318	.	0	not used	M1	R...433	57.11.3823	82 kOhm	1% 0.25W	H3
R...321	.	0	not used	I4	R...434	57.11.3223	22 kOhm	5% 0.25W	H3
R...322	.	0	not used	K4	R...435	57.11.3332	3.3 kOhm	1% 0.25W	H3
R...323	.	0	not used	K4	R...436	57.11.3332	3.3 kOhm	1% 0.25W	H3
R...324	.	0	not used	K4	R...437	57.11.3330	33 Ohm	5% 0.25W	H3
R...325	.	0	not used	K6	R...438	57.11.3223	22 kOhm	5% 0.25W	H3
R...326	.	0	not used	K6	R...440	.	0	not used	H6
R...327	.	0	not used	I6	R...441	57.11.3332	3.3 kOhm	1% 0.25W	F3
R...328	.	0	not used	K6	R...442	57.11.3223	22 kOhm	5% 0.25W	F3
R...329	.	0	not used	K6	R...443	57.11.3333	33 kOhm	1% 0.25W	E3
R...330	.	0	not used	K6	R...444	57.11.3103	10 kOhm	1% 0.25W	E3
R...333	.	0	not used	K5	R...445	57.11.3472	4.7 kOhm	1% 0.25W	E3
R...334	.	0	not used	K4	R...446	57.11.3684	680 kOhm	5% 0.25W	F3
R...335	.	0	not used	K4	R...447	.	0	NOT USED	E3
R...336	.	0	not used	K5	R...448	58.05.1503	50 kOhm	10% 0.25W trimmer	D3
R...337	.	0	not used	K5	R...449	57.11.3332	3.3 kOhm	1% 0.25W	D3
R...338	57.11.3473	47	kOhm	L3	R...450	57.11.3330	33 Ohm	5% 0.25W	D3
R...339	57.11.3473	47	kOhm	L2	R...451	57.11.3223	22 kOhm	5% 0.25W	E3
R...340	57.11.3682	6.8	kOhm	L3	R...454	.	0	not used	B3
R...341	57.11.3682	6.8	kOhm	L2	R...455	57.11.3752	7.5 kOhm	1% 0.25W	B3
R...342	57.11.5335	3.3	MOhm	L3	R...456	57.11.3823	82 kOhm	1% 0.25W	B3
R...343	57.11.3682	6.8	kOhm	L3	R...457	57.11.3682	6.8 kOhm	1% 0.25W	B3
R...344	57.11.3473	47	kOhm	L3	R...458	57.11.3682	6.8 kOhm	1% 0.25W	B3
R...345	57.11.3330	33	Ohm	L3	R...459	57.11.3223	22 kOhm	5% 0.25W	B3
R...350	57.11.3103	10	kOhm	N4	R...465	57.11.3682	6.8 kOhm	1% 0.25W	C4
R...351	.	0	not used	N4	R...466	57.11.3682	6.8 kOhm	1% 0.25W	C4
R...352	57.11.3752	7.5	kOhm	N5	R...467	57.11.3223	22 kOhm	5% 0.25W	C4
R...353	57.11.3184	180	kOhm	N4	R...480	57.11.3752	7.5 kOhm	1% 0.25W	B6
R...354	57.11.3683	68	kOhm	N4	R...481	57.11.3823	82 kOhm	1% 0.25W	B6
R...355	57.11.3101	100	Ohm	N4	R...482	.	0	NOT USED	B6
R...356	57.11.3184	180	kOhm	N4	R...483	.	0	NOT USED	B6
R...357	.	0	not used	N4	R...484	57.11.3752	7.5 kOhm	1% 0.25W	C6
R...358	57.11.3332	3.3	kOhm	M4	R...485	57.11.3823	82 kOhm	1% 0.25W	C6
R...359	57.11.3332	3.3	kOhm	M4	R...486	.	0	NOT USED	A6
R...360	57.11.3332	3.3	kOhm	M4	R...487	.	0	NOT USED	A6
R...361	57.11.3332	3.3	kOhm	N4	R...490	57.11.3682	6.8 kOhm	1% 0.25W	H1
R...362	57.11.3223	22	kOhm	N4	R...494	57.11.3330	33 Ohm	5% 0.25W	H1
R...365	.	0	not used	I	R...495	.	0	not used	G0
R...366	.	0	not used	I	R...496	.	0	not used	G0
R...367	.	0	not used	I6	R...497	.	0	not used	G0
R...368	.	0	not used	I6	R...498	.	0	not used	G0
R...369	.	0	not used	H6	R...499	57.11.3104	100 kOhm	5% 0.25W	N6
R...370	.	0	not used	H6	R...500	57.11.3224	220 kOhm	5% 0.25W	N6
R...371	.	0	not used	I6	R...501	57.11.3512	5.1 kOhm	1% 0.25W option 2:replace by R 503!	N6
R...372	.	0	not used	I5	R...502	57.11.3512	5.1 kOhm	1% 0.25W option 2:replace by R 503!	N6
R...373	.	0	not used	H5	R...503	.	0	not used	N7
R...374	.	0	not used	H5	R...504	57.11.3822	8.2 kOhm	1% 0.25W	N5
R...375	.	0	not used	H6	R...505	57.11.3153	15 kOhm	5% 0.25W	N5
R...377	57.11.3682	6.8	kOhm	H4	R...506	58.01.8503	50 kOhm	10% 0.25W trimmer	N5
R...378	.	0	not used	H4	R...507	57.99.0250	6.8 kOhm	0.1% 0.25W	L2
R...379	57.11.3682	6.8	kOhm	H4	R...508	57.99.0250	6.8 kOhm	0.1% 0.25W	L2
R...380	57.11.3104	100	kOhm	I3	R...509	57.11.3150	15 Ohm	1% 0.25W	K1
R...381	58.01.8202	2	kOhm	K3	R...510	57.11.3150	15 Ohm	1% 0.25W	K1
R...382	57.11.3562	5.6	kOhm	K4	R...511	57.11.3150	15 Ohm	1% 0.25W	K1
R...383	57.99.0250	6.8	kOhm	K4	R...512	57.11.3150	15 Ohm	1% 0.25W	L1
R...384	57.99.0250	6.8	kOhm	I3	R...513	57.11.3150	15 Ohm	1% 0.25W	K1
R...385	57.11.3150	15	Ohm	K3	R...514	57.11.3150	15 Ohm	1% 0.25W	K1
R...386	57.11.3150	15	Ohm	K3					
R...390	57.11.3682	6.8	kOhm	G4					

COMMON GROUP UNIT



1.990.250.70

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R...	601	. . 0	not used		N8	R...852	. . 0	NOT USED	
R...	602	. . 0	not used		N9	R...853	. . 0	NOT USED	F7
R...	603	. . 0	not used		N9	R...854	. . 0	NOT USED	
R...	605	. . 0	not used		L4	R...855	. . 0	NOT USED	E7
R...	606	. . 0	not used		L4	R...856	. . 0	not used	H7
R...	607	57.11.3274	270 kOhm 1% 0.25W		L4	R...857	. . 0	NOT USED	G7
R...	608	57.11.3102	1 kOhm 5% 0.25W		B1	R...858	. . 0	NOT USED	
R...	609	57.11.5106	10 MOhm 10% 0.25W		B1	R...859	. . 0	not used	I7
R...	610	57.11.6226	22 MOhm 10% 0.25W		A1	R...860	57.11.3102	1 kOhm 5% 0.25W	G6
R...	611	57.11.3562	5.6 kOhm 1% 0.25W		A2	R...861	57.11.3102	1 kOhm 5% 0.25W	G6
R...	612	57.11.3333	33 kOhm 5% 0.25W		A2	R...862	57.11.3102	1 kOhm 5% 0.25W	G5
R...	613	57.11.3432	4.3 kOhm 1% 0.25W		A2	R...863	. . 0	not used	H6
R...	614	57.11.3333	33 kOhm 5% 0.25W		B2	R...864	57.11.3333	33 kOhm 5% 0.25W	G6
R...	615	57.11.3512	5.1 kOhm 1% 0.25W		A1	R...865	57.11.3333	33 kOhm 5% 0.25W	G6
R...	616	57.11.3105	1 MOhm 5% 0.25W		A2	R...866	57.11.3333	33 kOhm 5% 0.25W	G5
R...	617	57.11.3105	1 MOhm 5% 0.25W		B2				
R...	618	57.11.3105	1 MOhm 5% 0.25W		A7	RZ...2	. . 0	not used	L5
R...	618	57.11.3104	100 kOhm 5% 0.25W		A7	RZ...3	. . 0	not used	K5
R...	619	57.11.3105	1 MOhm 5% 0.25W		A7	RZ...7	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	I3
R...	619	57.11.3104	100 kOhm 5% 0.25W		A7	RZ...8	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	I2
R...	620	57.92.7013	0.75 Ohm I hold = 0.5A , I trip = 1A R-PTC		C0	RZ...9	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	I3
R...	621	57.92.7013	0.75 Ohm I hold = 0.5A , I trip = 1A R-PTC		B0	RZ...10	57.88.2224	220 kOhm 2% SIP 8 (4*)	I2
R...	622	57.11.3151	150 Ohm 1% 0.25W		B2	RZ...11	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C4
R...	623	57.92.7013	0.75 Ohm I hold = 0.5A , I trip = 1A R-PTC		C0	RZ...13	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	F2
R...	624	57.11.3102	1 kOhm 5% 0.25W		C0	RZ...14	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	F2
R...	625	57.11.3330	33 Ohm 5% 0.25W		B2	RZ...15	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	E2
R...	626	57.92.7013	0.75 Ohm I hold = 0.5A , I trip = 1A R-PTC		C1	RZ...16	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	E2
R...	627	57.11.3222	2.2 kOhm 5% 0.25W		^0	RZ...17	. . 0	not used	E2
R...	628	57.11.3272	2.7 kOhm 5% 0.25W		^0	RZ...18	. . 0	not used	E2
R...	629	57.11.3104	100 kOhm 5% 0.25W		^0	RZ...19	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	D4
R...	630	57.11.3681	680 Ohm 5% 0.25W		A0	RZ...20	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C5
R...	631	57.11.3104	100 kOhm 5% 0.25W		A0	RZ...21	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C5
R...	632	57.11.3104	100 kOhm 5% 0.25W		A0	RZ...22	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C5
R...	633	57.11.3202	2 kOhm 5% 0.25W		A0	RZ...23	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	B4
R...	634	57.11.3222	2.2 kOhm 5% 0.25W		A0	RZ...24	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	B4
R...	635	57.11.3101	100 Ohm 5% 0.25W		B1	RZ...25	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	D2
R...	636	57.11.3151	150 Ohm 5% 0.25W		B1	RZ...26	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	D2
R...	637	57.11.3470	47 Ohm 5% 0.25W		B1	RZ...27	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C2
R...	638	57.11.3689	6.8 Ohm 5% 0.25W		A1	RZ...28	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	C2
R...	639	57.11.3689	6.8 Ohm 5% 0.25W		B1	RZ...29	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	M5
R...	640	57.11.3101	100 Ohm 5% 0.25W		B1	RZ...30	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	M5
R...	641	57.11.3151	150 Ohm 5% 0.25W		B1	RZ...31	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	L1
R...	642	57.11.3330	33 Ohm 5% 0.25W		C1	RZ...32	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	L1
R...	643	57.11.3330	33 Ohm 5% 0.25W		B2	RZ...33	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	L1
R...	644	57.11.3151	150 Ohm 5% 0.25W		B2	RZ...34	57.88.2224	220 kOhm 2% SIP 8 (4*)	L1
R...	645	57.11.3101	100 Ohm 5% 0.25W		B1	RZ...35	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	H0
R...	647	57.11.3109	1 Ohm 5% 0.25W		A1	RZ...36	57.88.2101	100 Ohm 2% SIP 8 (4*)	H0
R...	648	57.11.3109	1 Ohm 5% 0.25W		A1				
R...	649	57.11.3109	1 Ohm 5% 0.25W		A1	RZ...307	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K3
R...	650	57.11.3273	27 kOhm 1% 0.25W		G1	RZ...308	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K2
R...	651	57.11.3513	51 kOhm 1% 0.25W		G1	RZ...309	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K3
R...	652	57.11.3243	24 kOhm 1% 0.25W		G1	RZ...310	57.88.2224	220 kOhm 2% SIP 8 (4*)	K2
R...	653	57.11.3513	51 kOhm 1% 0.25W		G1	RZ...311	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	B4
R...	801	57.11.3102	1 kOhm 5% 0.25W		A9	RZ...331	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K1
R...	802	57.11.3102	1 kOhm 5% 0.25W		A3	RZ...332	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K1
R...	803	57.11.3102	1 kOhm 5% 0.25W		A3	RZ...333	57.88.2682	6.8 kOhm 2% SIP 8 (4*)	K1
R...	803	57.11.3101	100 Ohm 5% 0.25W		A3	RZ...334	57.88.2224	220 kOhm 2% SIP 8 (4*)	K1
R...	805	57.11.3223	22 kOhm 5% 0.25W		A8				
R...	806	57.11.3334	330 kOhm 5% 0.25W		A8	RZ...801	57.88.2102	1 kOhm SIP 8 (4*)	A3
R...	807	57.11.3334	330 kOhm 5% 0.25W		A8	RZ...801	57.88.2101	100 Ohm SIP 8 (4*)	A3
R...	808	57.11.3104	100 kOhm 5% 0.25W		A7	RZ...802	57.88.2102	1 kOhm SIP 8 (4*)	A3
R...	809	. . 0	not used		N9	RZ...802	57.88.2101	100 Ohm SIP 8 (4*)	A3
R...	810	. . 0	not used		N9	RZ...803	57.88.4104	100 kOhm SIP 9 (8*)	D7
R...	813	. . 0	not used		N9	RZ...804	57.88.4104	100 kOhm SIP 9 (8*)	B7
R...	814	. . 0	not used		N9	RZ...805	57.88.4104	100 kOhm SIP 9 (8*)	B7
R...	815	. . 0	not used		N8	RZ...806	57.88.4104	100 kOhm SIP 9 (8*)	A8
R...	816	. . 0	not used		N8	RZ...807	57.88.4104	100 kOhm SIP 9 (8*)	18
R...	817	. . 0	not used		N7	RZ...808	57.88.4104	100 kOhm SIP 9 (8*)	18
R...	818	. . 0	not used		N9	RZ...809	. . 0	not used	18
R...	819	. . 0	not used		N7	RZ...810	. . 0	not used	18
R...	820	. . 0	not used		N8				
R...	821	. . 0	not used		N8	RZ...811	57.88.4104	100 kOhm SIP 9 (8*)	E8
R...	822	. . 0	not used		N8	RZ...812	57.88.4104	100 kOhm SIP 9 (8*)	L8
R...	823	. . 0	not used		N8	RZ...813	. . 0	not used	L8
R...	824	. . 0	not used		N7	RZ...814	. . 0	not used	L8
R...	825	. . 0	not used		N8	RZ...815	57.88.4104	100 kOhm SIP 9 (8*)	L9
R...	826	. . 0	not used		N7	RZ...816	. . 0	not used	L9
R...	827	. . 0	not used		N8	RZ...817	. . 0	not used	L9
R...	828	. . 0	not used		N7	RZ...818	57.88.4104	100 kOhm SIP 9 (8*)	L9
R...	829	. . 0	not used		N7	RZ...819	57.88.2104	100 kOhm SIP 8 (4*)	L9
R...	830	. . 0	not used		K6				
R...	831	. . 0	not used		N7	RZ...821	57.88.4104	100 kOhm SIP 9 (8*)	L8
R...	832	. . 0	not used		N7	RZ...822	. . 0	not used	L8
R...	833	. . 0	not used		N9	RZ...824	57.88.4104	100 kOhm SIP 9 (8*)	D9
R...	834	. . 0	not used		N9	RZ...825	57.88.2102	1 kOhm SIP 8 (4*)	G8
R...	835	57.11.5106	10 MOhm 10% 0.25W		N9	RZ...826	57.88.2102	1 kOhm SIP 8 (4*)	F8
R...	836	57.11.3330	33 Ohm 5% 0.25W		N9	RZ...827	57.88.2102	1 kOhm SIP 8 (4*)	G8
R...	840	. . .	100 kOhm 20% lin. see R 173		G9	RZ...828	57.88.2102	1 kOhm SIP 8 (4*)	G8
R...	841	. . .	100 kOhm 20% lin. see R 176		A9	RZ...829	57.88.2102	1 kOhm SIP 8 (4*)	G9
R...	842	. . .	100 kOhm 20% lin. see R 179		D7	RZ...830	57.88.2102	1 kOhm SIP 8 (4*)	G9
R...	843	. . .	100 kOhm 20% lin. see R 170						
R...	844	. . 0	NOT USED			RZ...831	57.88.4104	100 kOhm SIP 9 (8*)	G9
R...	845	. . 0	NOT USED		C7	RZ...832	57.88.4104	100 kOhm SIP 9 (8*)	G8
R...	846	. . 0	NOT USED		C7	RZ...833	57.88.2104	100 kOhm SIP 8 (4*)	G8
R...	847	. . 0	NOT USED		E7	RZ...834	57.88.2104	100 kOhm SIP 8 (4*)	H8
R...	849	. . 0	not used		B7	RZ...835	57.88.4104	100 kOhm SIP 9 (8*)	G9
					A6	RZ...836	57.88.2104	100 kOhm SIP 8 (4*)	G9
					B6	RZ...837	57.88.2104	100 kOhm SIP 8 (4*)	H9
					A7	RZ...838	57.88.4104	100 kOhm SIP 9 (8*)	H9
					N7	RZ...839	57.88.2104	100 kOhm SIP 8 (4*)	H9
						RZ...840	57.88.2104	100 kOhm SIP 8 (4*)	H9



COMMON GROUP UNIT

1.990.250.70

Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
RZ..841	57.88.4104	100	kOhm SIP 9 (8*)	H8	10.09.91 (02)	INT 5 (Overload) gleich wie Mono: wechseln von 1M auf 100k			
RZ..842	57.88.2104	100	kOhm SIP 8 (4*)	H8		- R 618, R 619 werden neu 100 kOhm (57.11.3104)			
RZ..843	57.88.2104	100	kOhm SIP 8 (4*)	H8		Seriawiderstaende in TCL, TXD, TSTB, D00 usw. von 1k auf 100			
RZ..844	57.88.4104	100	kOhm SIP 9 (8*)	I8		- RZ 801, RZ 802 werden neu 100 Ohm (57.88.2101)			
RZ..845	57.88.2104	100	kOhm SIP 8 (4*)	I8		- R 803 wird neu 100 Ohm (57.11.3101)			
RZ..846	57.88.2104	100	kOhm SIP 8 (4*)	K8	1.990.250.70	COMMON GROUP UNIT			AB 91/01/3000
RZ..847	57.88.4104	100	kOhm SIP 9 (8*)	I9					
RZ..848	57.88.2104	100	kOhm SIP 8 (4*)	I9	1.990.250.70	COMMON GROUP UNIT			AB 91/02/1201
RZ..849	57.88.2104	100	kOhm SIP 8 (4*)	K9					
RZ..850	57.88.4104	100	kOhm SIP 9 (8*)	K9	1.990.250.70	COMMON GROUP UNIT			ABB91/09/1002
RZ..851	. . . 0		not used	K9					
RZ..852	. . . 0		not used	L9					
RZ..853	57.88.4104	100	kOhm SIP 9 (8*)	K8					
RZ..854	57.88.2104	100	kOhm SIP 8 (4*)	K8					
RZ..855	. . . 0		not used	L8					
RZ..858	57.88.4104	100	kOhm SIP 9 (8*)	D7					
RZ..859	57.88.2104	100	kOhm SIP 8 (4*)	B7					
RZ..860	57.88.2104	100	kOhm SIP 8 (4*)	B7					
RZ..861	57.88.4104	100	kOhm SIP 9 (8*)	E8					
RZ..862	57.88.2104	100	kOhm SIP 8 (4*)	E8					
RZ..863	57.88.2104	100	kOhm SIP 8 (4*)	E8					
RZ..864	57.88.4104	100	kOhm SIP 9 (8*)	E9					
RZ..865	57.88.2104	100	kOhm SIP 8 (4*)	E9					
RZ..866	57.88.2104	100	kOhm SIP 8 (4*)	E9					
RZ..867	57.88.4104	100	kOhm SIP 9 (8*)	F9					
RZ..868	57.88.2104	100	kOhm SIP 8 (4*)	F9					
RZ..869	57.88.2104	100	kOhm SIP 8 (4*)	F9					
RZ..870	57.88.4104	100	kOhm SIP 9 (8*)	F8					
RZ..871	57.88.2104	100	kOhm SIP 8 (4*)	F8					
RZ..872	57.88.2104	100	kOhm SIP 8 (4*)	F8					
T....1	. . . 0		not used	N2					
T...301	. . . 0		not used	N0					
W....1	1.010.330.64	wire	3.5mm, alternate to R 849 (option 2)	N7					
W....2	1.010.330.64	wire	3.5mm, replaces R 856 (pin 1&2 shorted)	H7					
W....3	1.010.329.64	wire	2.5mm, replaces R 859 (pin 1&2 shorted)	I7					
W....5	. . . 0		not used	M2					
W....6	. . . 0		not used	M3					
W....7	. . . 0		not used	L4					
W....9	. . . 0		not used	M2					
W....10	. . . 0		not used	M2					
W....11	57.11.3000	0 Ohm	0-Ohm Input to processing	M4					
W....12	57.11.3000	0 Ohm	0-Ohm Input to processing	M4					
W....16	. . . 0		NOT USED	C1					
W....18	1.010.329.64	wire	2.5mm, bypass spread	D3					
W....19	1.010.329.64	wire	2.5mm, bypass spread	C3					
W....20	. . . 0		NOT USED	B4					
W....21	. . . 0		not used	G2					
W....22	. . . 0		not used	N8					
W....23	. . . 0		not used	N7					
W....24	. . . 0		not used	N7					
W....25	. . . 0		not used	N7					
W....26	. . . 0		not used	N7					
W...110	. . . 0		NOT USED						
W...111	. . . 0		NOT USED						

Optionen: Siehe Optionenliste!

Die files heissen #990250S,T

Mit NOT USED bezeichnete Elemente erscheinen z.T. in uebergeordneter BG.
Mit not used bezeichnete Elemente kommen in Groups nicht vor.

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER: ADI=Aanalog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
Fc=Fairchild, Fe=Ferranti, GI=General Instrument, Ha=Harting
HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=National
{Matsushita}, NS=National Semiconductors, Ph=Philips,
PNI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of
America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=Studer
Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi

HISTORY:

- 01.10.90 - Stand RAI-Pult
- 13.11.90 - Eliminierung digitaler Stoeurungen
- AUX-Klirr (OV generiert 1)
- PF-Headroom
- 21.11.90 - Postst Bereinigung
- 08.01.91 - Anwahl-Elektronik (Q und shelv/bell Umschaltung) fuer
nachtraeglich bestueckt.
- Verbesserung Rauschabstand vom Insert Send
- 30.01.91 - Postst Bereinigung (NOT USED/not used) ==> ZAB
- 12.02.91 (01) HF-Entstoeurung C 619, C 827 dazu
Produktions-Bereinigung MP 25, 1 Stk entfaellt
DC-Knacksen: C 35 und C 335 dazu

Pin location list

1.990.250

ALSO USED FOR		-GROUP UNIT MONO + EQ	MCH / B	1.990.250 / 260
		-GROUP UNIT MONO	MCH / B	1.990.255 / 265
		-GROUP UNIT STEREO + EQ	MCH / B	1.990.270 / 280
		-GROUP UNIT STEREO	MCH / B	1.990.275 / 285
P	NO	NAME	REMARK	

				B=BUS
				O=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P6	01A	OVA BAL/PAN1	GROUND SIGN BAL (PAN 1)	0
P6	01B	B-L/PAN1-IN	BAL LEFT IN (PAN 1 IN)	0
P6	02A	B/PAN1-OUT-L	BAL OUT LEFT (PAN 1 OUT LEFT)	0
P6	02B	B/PAN1-OUT-R	BAL OUT RIGHT (PAN 1 OUT RIGHT)	0
P6	03A	-	NC (GROUND SIGN PAN 2)	0
P6	03B	B-R/PAN2-IN	BAL RIGHT IN (PAN 2 IN)	0
P6	04A	B-Rb-IN	BAL IN RIGHT b	I,0
P6	04B	C-OUT	BAL COMMON OUT	0
P6	05A	FILM-OUT-L	OPTIONAL OUTPUT LEFT	0
P6	05B	FILM-OUT-R	OPTIONAL OUTPUT RIGHT	0
P6	06A		N.C.	0
P6	06B		N.C.	0
P6	07A	+ 15V	+ SUPPLY TO FADER UNIT	0
P6	07B	- 15V	- SUPPLY TO FADER UNIT	0
P6	08A	A OUT 0	DC INPUT ; FROM MCU ANALOG OUT 0	0
P6	08B	A OUT 1	DC INPUT ; FROM MCU ANALOG OUT 1	0
P6	09A	A IN 4	DC OUTPUT ; TO MCU ANALOG IN 4	0
P6	09B	A OUT 5	DC INPUT ; FROM MCU ANALOG OUT 5	0
P6	10A	RCL	RECEIVE CLOCK	0
P6	10B	RSTB	RECEIVE STROBE	0
P6	11A	INT 4	INTERUPT 4	0
P6	11B	RXD 3	RECEIVE DATA 3	0
P6	12A	INT 5	INTERUPT 5	0
P6	12B	TSTB 2	TRANSMIT STROBE 2	0
P6	13A	TSTB 3	TRANSMIT STROBE 3	0
P6	13B	TSTB 4	TRANSMIT STROBE 4	0
P6	14A	TSTB 5	TRANSMIT STROBE 5	0
P6	14B	DO 1	DATA OUT 1 (TRANSMIT STROBE 8)	0
P6	15A	TXD	TRANSMIT DATA	0
P6	15B	TCL	TRANSMIT CLOCK	0
P6	16A	DO 0	DATA OUT 0 (ENABLE)	0
P6	16B	UREF	+ 5V REFERENCE	0
P7	01A	0V-B	GROUND AUDIO (PIN)	0
P7	01B	CHASSIS	METAL FRAME	B
P7	02A	-	RES	0
P7	02B	-	RES	0
P7	03A	-	RES LEFT	B
P7	03B	-	RES RIGHT	B
P7	04A	-	N.C.	B,I
P7	04B	-	N.C.	B,I
P7	05A	B-PFL/SOLO-L	PFL/SOLO LEFT ; 0-OHM BUS	B,I
P7	05B	B-PFL/SOLO-R	PFL/SOLO RIGHT ; 0-OHM BUS	B,I
P7	06A	B-A-L	MASTER A LEFT ; 0-OHM BUS	B,I
P7	06B	B-A-R	MASTER A RIGHT ; 0-OHM BUS	B,I
P7	07A	B-B-L	MASTER B LEFT ; 0-OHM BUS	B,I
P7	07B	B-B-R	MASTER B RIGHT ; 0-OHM BUS	B,I
P7	08A	B-C-L	MASTER C LEFT ; 0-OHM BUS	B,I

Pin location list

1.990.250

P7	08B	B-C-R	MASTER C RIGHT	; 0-OHM BUS	B,I	
P7	09A	B-D-L	MASTER D LEFT	; 0-OHM BUS	B,I	
P7	09B	B-D-R	MASTER D RIGHT	; 0-OHM BUS	B,I	
P7	10A	-	N.C.		B,I	
P7	10B	-	N.C.		B,I	
P7	11A	-	N.C.		B,I	
P7	11B	-	N.C.		B,I	
P7	12A	-	N.C.		B,I	
P7	12B	-	N.C.		B,I	
P7	13A	-	N.C.		B,I	
P7	13B	-	N.C.		B,I	
P7	14	0V-REF	0V REFERENCE		B	X X
P7	15A	B-AUX-1	AUX 1	; 0-OHM BUS	B,I	
P7	15B	B-AUX-2	AUX 2	; 0-OHM BUS	B,I	
P7	16A	B-AUX-3	AUX 3	; 0-OHM BUS	B,I	
P7	16B	B-AUX-4	AUX 4	; 0-OHM BUS	B,I	
P7	17A	B-AUX-5	AUX 5	; 0-OHM BUS	B,I	
P7	17B	B-AUX-6	AUX 6	; 0-OHM BUS	B,I	
P7	18A	B-AUX-7	AUX 7	; 0-OHM BUS	B,I	
P7	18B	B-AUX-8	AUX 8	; 0-OHM BUS	B,I	
P7	19A	B-AUX-9	AUX 9	; 0-OHM BUS	B,I	
P7	19B	B-AUX-10	AUX 10	; 0-OHM BUS	B,I	
P7	20A	B-AUX-11	AUX 11	; 0-OHM BUS	B,I	
P7	20B	B-AUX-12	AUX 12	; 0-OHM BUS	B,I	
P7	21A	B-AUX-13	AUX 13	; 0-OHM BUS	B,I	
P7	21B	B-AUX-14	AUX 14	; 0-OHM BUS	B,I	
P7	22A	B-AUX-15	AUX 15	; 0-OHM BUS	B,I	
P7	22B	B-AUX-16	AUX 16	; 0-OHM BUS	B,I	
P7	23A	0V GEN 1	GROUND AUDIO GENERATED 1		0	
P7	23B	GR-L-IN	GROUP 0-OHM INPUT LEFT		0	
P7	24A	0V GEN 2	GROUND AUDIO GENERATED 2		0	
P7	24B	GR-L-0V-IN	GROUP 0-OHM INPUT LEFT GROUND		0	
P7	25A	0V GEN 3	GROUND AUDIO GENERATED 3		0	
P7	25B	GR-R-IN	GROUP 0-OHM INPUT RIGHT		0	
P7	26A	0V GEN 4	GROUND AUDIO GENERATED 4		0	
P7	26B	GR-R-0V-IN	GROUP 0-OHM INPUT RIGHT GROUND		0	
P7	27	0V-A	GROUND AUDIO		B	X X
P7	28	- 15.5V	- SUPPLY		B	X X
P7	29	+ 15.5V	+ SUPPLY		B	X X
P7	30	0V-L	GROUND SIGN (LOGIC)		B	X X
P7	31	+ 5.5V	+ SUPPLY		B	X X
P7	32	+3...4V LED	LED SUPPLY VARIABLE +3...4V		B	X X
P9	01A	-	N.C.		0	
P9	01B	-	N.C.		0	
P9	02A	-	N.C.		0	
P9	02B	-	N.C.		0	
P9	03A	-	N.C.		0	
P9	03B	-	N.C.		0	
P9	04A	-	N.C.		0	
P9	04B	-	N.C.		0	
P9	05A	-	N.C.		0	
P9	05B	-	N.C.		0	
P9	06A	-	N.C.		0	
P9	06B	-	N.C.		0	
P9	07A	-	N.C.		0	
P9	07B	-	N.C.		0	
P9	08A	-	N.C.		0	
P9	08B	-	RES		0	
P9	09A	-	N.C.		0	
P9	09B	-	N.C.		0	
P9	10A	DIR-OUT-L-a	DIRECT OUT LEFT a		S,0	

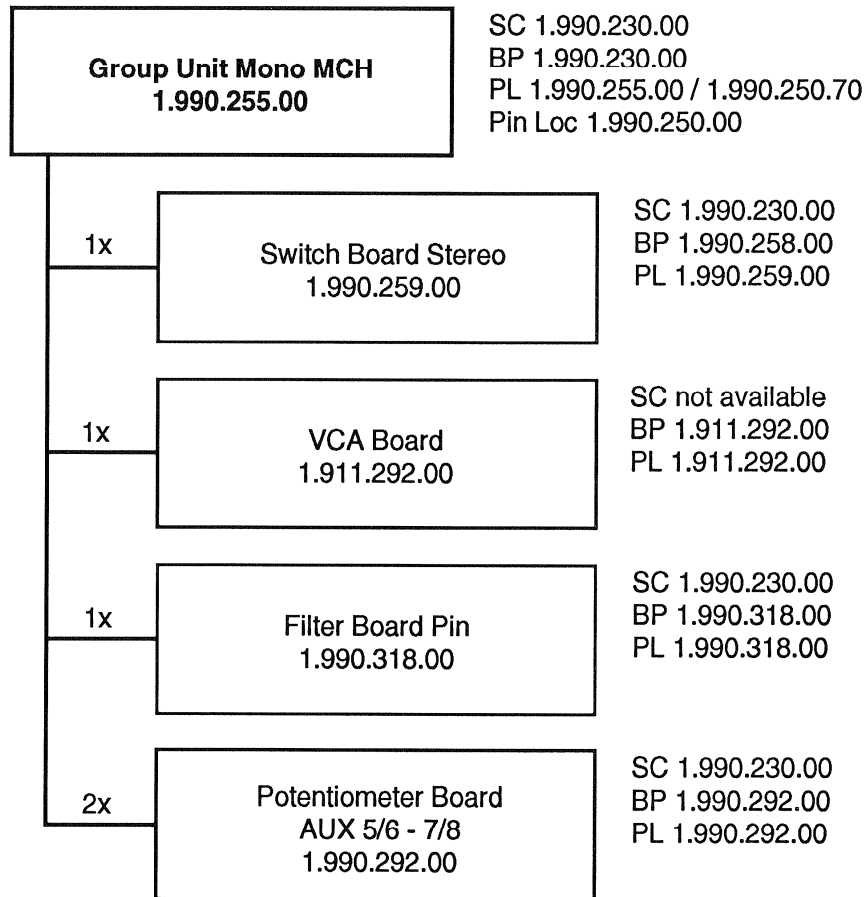
Pin location list

1.990.250

P9	10B	DIR-OUT-L-b	DIRECT OUT LEFT b	S,0
P9	11A	DIR-OUT-R-a	DIRECT OUT RIGHT a	S,0
P9	11B	DIR-OUT-R-b	DIRECT OUT RIGHT b	S,0
P9	12A	METER-L	METER LEFT	AS,0
P9	12B	METER-L-0V	METER L GROUND AUDIO GENERATED	0
P9	13A	METER-R-0V	METER R GROUND AUDIO GENERATED	0
P9	13B	METER-R	METER RIGHT	AS,0
P9	14A	MCH-OUT-L-a	TO EURO 32CH BUS SELECTOR LEFT a	S,0
P9	14B	MCH-OUT-L-b	TO EURO 32CH BUS S. LEFT b (GROUND)	S,0
P9	15A	MCH-OUT-R-a	TO EURO 32CH BUS SELECTOR RIGHT a	S,0
P9	15B	MCH-OUT-R-b	TO EURO 32CH BUS S. RIGHT b (GROUND)	S,0
P9	16A	PF-OUT-L	PRE FADER OUT LEFT	AS,0
P9	16B	PF-OUT-R	PRE FADER OUT RIGHT	AS,0
P9	17A	AF-OUT-L	AFTER FADER OUT LEFT	AS,0
P9	17B	AF-OUT-R	AFTER FADER OUT RIGHT	AS,0
P9	18A	-	N.C.	0
P9	18B	AF/PF-OUT-0V	AF/PF OUT GROUND	0
P9	19A	-	N.C.	S,0
P9	19B	-	N.C.	AS,0
P9	20A	-	N.C.	0
P9	20B	-	N.C.	S,0
P9	21A	-	N.C.	S,0
P9	21B	-	N.C.	0
P9	22A	-	N.C.	0
P9	22B	-	N.C.	0
P9	23A	-	N.C.	0
P9	23B	-	N.C.	0
P9	24A	TB/SLATE-a	TALK BACK / SLATE INPUT a	S,B
P9	24B	-	N.C.	B
P9	25A	-	N.C.	B
P9	25B	TB/SLATE-b	TALK BACK / SLATE INPUT b	S,B
P9	26A	-	N.C.	B
P9	26B	-	N.C.	B
P9	27A	-	N.C.	B
P9	27B	-	N.C.	B
P9	28A	INS-0V	INSERT GROUND	0
P9	28B	-	N.C.	B
P9	29A	INS-SEND-L-a	SYM INSERT LEFT OUTPUT a	S,0
P9	29B	INS-SEND-L-b	SYM INSERT LEFT OUTPUT b	S,0
P9	30A	INS-RET -L-a	SYM INSERT LEFT INPUT a	S,0
P9	30B	INS-RET -L-b	SYM INSERT LEFT INPUT b	S,0
P9	31A	INS-SEND-R-a	SYM INSERT RIGHT OUTPUT a	S,0
P9	31B	INS-SEND-R-b	SYM INSERT RIGHT OUTPUT b	S,0
P9	32A	INS-RET -R-a	SYM INSERT RIGHT INPUT a	S,0
P9	32B	INS-RET -R-b	SYM INSERT RIGHT INPUT b	S,0

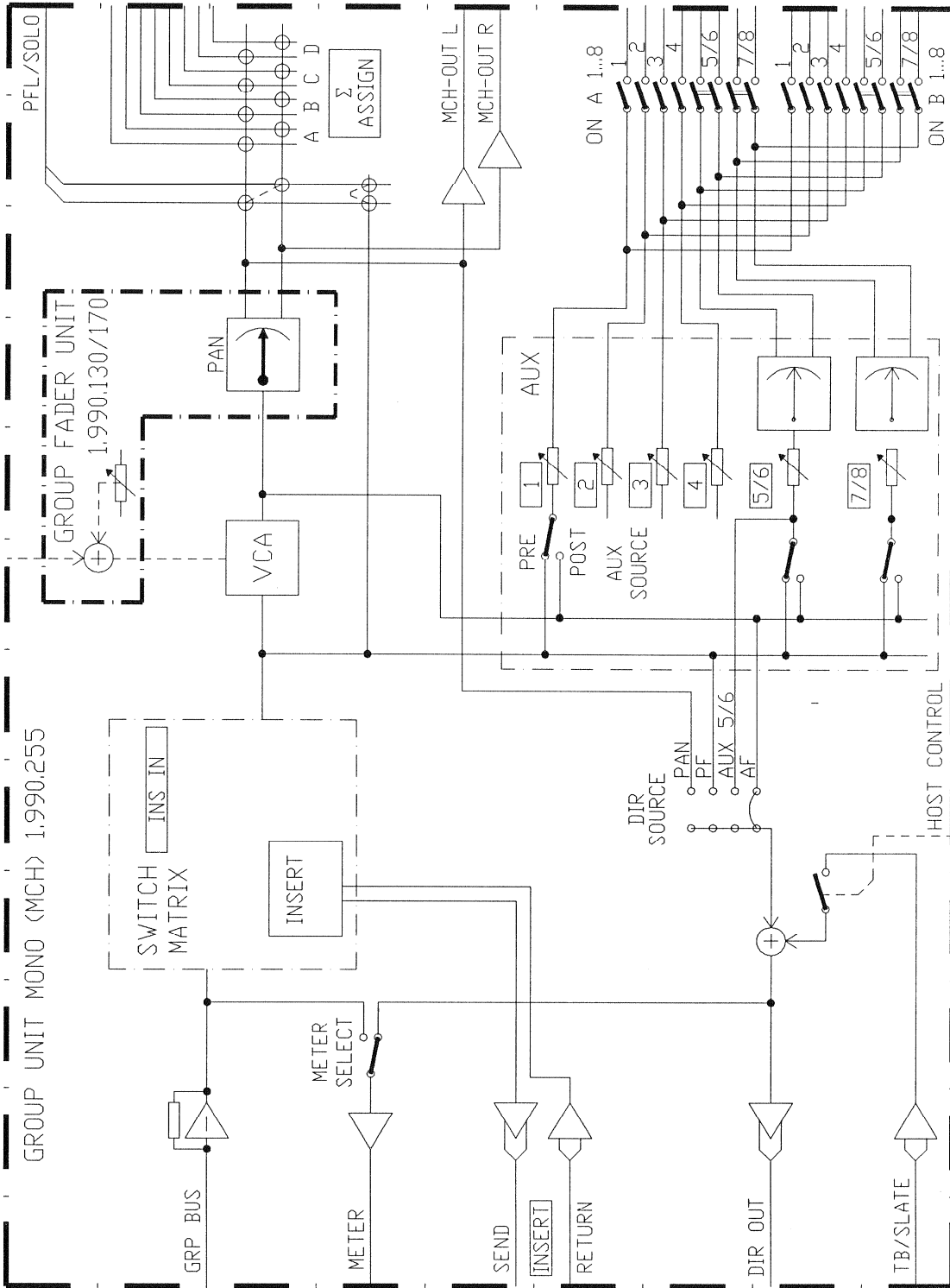
Group Unit Mono MCH

1.990.255.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

GROUP UNIT MONO MCH 1.990.255.00



GROUP UNIT MONO

1.990.255.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A....2	1.990.259.00		SWITCH BOARD GROUP	St
A....14	1.990.292.00		5 POT. 10MM BOARD	St B6
A....15	1.990.292.00		5 POT. 10MM BOARD	St B6
A....16	1.990.318.00		FILTER BOARD PIN	St H3
A....70	1.990.250.70		GROUP UNIT VORMONTIERT	,A St
IC...75	. . . 0	not used		see option 1 H1
IC..835	. . . 0	not used		see option 2 G8
MP...28	21.01.2352	6 pcs	S-Schr. M3*4	
MP...29	24.16.3023	2 pcs	Wellensicherung 2.3	
MP...30	42.01.0203	2 pcs	Drehknopf gr, D 10/4	
MP...31	42.01.0228	4 pcs	Knebelknopf gr, D 10/4	
MP...32	42.01.0250	1 pcs	Deckel h'gr, D 10	
MP...33	42.01.0251	1 pcs	Deckel d'gr, D 10	
MP...34	42.01.0253	1 pcs	Deckel rt, D 10	
MP...35	42.01.0254	1 pcs	Deckel bl, D 10	
MP...36	42.01.0255	1 pcs	Deckel gb, D 10	
MP...37	42.01.0256	1 pcs	Deckel gn, D 10	
MP...38	1.010.022.21	2 pcs	Linsenschr. spez M3*8	
MP...40	1.912.000.03	2 pcs	Drehring D 6.2/13	
MP...41	1.990.200.03	1 pcs	Schirmblech Input	
MP...42	1.990.210.02	1 pcs	Traeger Input	
MP...44	1.990.255.01	1 pcs	Frontschild Input (1.990265.01 -> BG 2651)	
MP...46	1.010.108.64	1 pcs	gelber Draht 28 mm connects PF L&PF R	F2
R...182	. . .	4.7 kOhm	10% +log.comb.withR183/483/844/846	B6
R...183	. . .	10 kOhm	10% +log.see R 182 1.010.034.58 on A 14	B6
R...186	. . .	4.7 kOhm	10% +log.comb.withR187/487/845/847	A6
R...187	. . .	10 kOhm	10% +log.see R 186 1.010.034.58 on A 15	A6
R...203	. . . 0	not used		see option 2 N6
R...436	. . . 0	not used	remove R 436 in MONO GROUPS	H3
R...483	. . .	10 kOhm	10% neg.log. see R 182	B6
R...487	. . .	10 kOhm	10% neg.log. see R 186	A6
R...844	. . .	100 kOhm	20% lin. see R 182	B7
R...845	. . .	100 kOhm	20% lin. see R 186	A6
R...846	. . .	100 kOhm	20% lin. see R 182	B6
R...847	. . .	100 kOhm	20% lin. see R 186	A7
W....16	1.010.330.64	wire	3.5mm, Group Mono Pan	C1
W....19	. . . 0	not used	remove W 19 in MONO GROUPS	C3
W....20	57.11.3000	0 Ohm	Group AUX Mono Pan	B4

>> POSLST 1.990.255 gilt auch fuer BG 1.990.265.xx (B - Version) <<

>-----<
 [Die files zu dieser POSLST heissen #990255A,B]
 <----->

Die posliste 1.990.250.70 ist in den files #990250S,T

OPTIONS : SEE OPTIONLIST 1.990.230.00

option 1 :.....multichannel out
 option 2 :.....output trim

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
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MANUFACTURER: ADI=Analog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
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 (Matsushita), NS=National Semiconductors, Ph=Philips,
 PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Corp. of
 America, SDS=SDS-Relais, Si=Siemens, Six=Siliconix, St=Studer,
 Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaichi

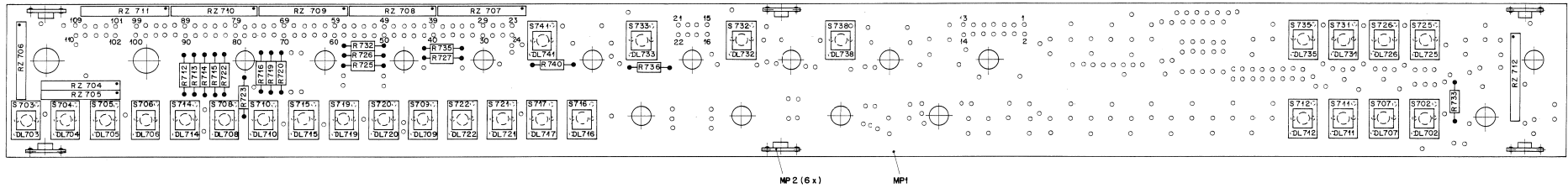
1.990.255.00 GROUP UNIT MONO AB 91/01/3000

END

→

SWITCH BOARD GROUP

1.990.258.00 / 1.990.259.00



VALID FOR	NR. UNIT	NR. POS. LIST
SWITCH BOARD GROUP + EQ	1.990.258-00	1.990.258-00
SWITCH BOARD GROUP	1.990.259-00	1.990.259-00

STUDER RECHENBANK ZÜRICH	SWITCH BOARD GROUP	10.4.90
		1.990.258-00

Rechnung	
Bestell-Nr.	
Datum	
Gez. / Gepr. / Gek. / Index	
Kopie für:	
Nummer	1.990.258-00

Ad .POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad .POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad .POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad .POS.	REF.No.	DESCRIPTION	MANUFACTURER
DL..701	0	not used		MP..701	1.990.219.11	1 pcs	Input Mono PCB	R..741	0	not used		S...731	55.15.0602	1 * A	red/trans.
DL..702	red	see S702		MP..702	1.990.100.05	6 pcs	Querprintheiter	R..742	0	not used		S...732	55.15.0605	1 * A	grn/trans.
DL..703	yel	see S703		MP..703	0	not used		R..743	0	not used		S...733	55.15.0606	1 * A	grn/trans.
DL..704	grn	see S704		MP..704	1.990.258.04	1 pcs	Nr.Etikette 5*20	RZ..701	0	not used		S...734	0	not used	
DL..705	yel	see S705		Q...701	0	not used		RZ..702	0	not used		S...735	55.15.0602	0	not used
DL..706	grn	see S706		Q...702	0	not used		RZ..703	0	not used		S...736	0	not used	
DL..707	red	see S707		Q...703	0	not used		RZ..704	57.88.2101	100 Ohm	SIP 8 (4°)	S...737	0	not used	
DL..708	grn	see S708		Q...704	0	not used		RZ..705	57.88.2101	100 Ohm	SIP 8 (4°)	S...738	55.15.0605	1 * A	grn/trans.
DL..709	yel	see S709		R...701	0	not used		RZ..706	57.88.2101	100 Ohm	SIP 8 (4°)	S...739	0	not used	
DL..710	yel	see S710		R...702	0	not used		RZ..707	57.88.4104	100 Ohm	SIP 9 (8°)	S...740	0	not used	
DL..711	red	see S711		R...703	0	not used		RZ..708	57.88.4104	100 Ohm	SIP 9 (8°)	S...741	55.15.0605	1 * A	grn/trans.
DL..712	red	see S712		R...704	0	not used		RZ..709	57.88.4104	100 Ohm	SIP 9 (8°)	S...742	0	not used	
DL..713	0	not used		R...705	0	not used		RZ..710	57.88.4104	100 Ohm	SIP 9 (8°)	S...743	0	not used	
DL..714	yel	see S714		R...706	0	not used		RZ..711	57.88.4104	100 Ohm	SIP 9 (8°)	W...701	0	not used	
DL..715	grn	see S715		R...707	0	not used		RZ..712	57.88.4104	100 Ohm	SIP 9 (8°)	W...702	0	not used	
DL..716	red	see S716		R...708	0	not used		S...701	0	not used		W...703	0	not used	
DL..717	red	see S717		R...709	0	not used		S...702	55.15.0602	1 * A	red/trans.	W...704	0	not used	
DL..718	0	not used		R...710	0	not used		S...703	55.15.0644	1 * A	yel/yel				
DL..719	yel	see S719		R...711	0	not used		S...704	55.15.0605	1 * A	grn/trans.				
DL..720	grn	see S720		R...712	57.11.3101	100 Ohm	5% 0.25W	S...705	55.15.0604	1 * A	yel/trans.				
DL..721	yel	see S721		R...713	57.11.3101	100 Ohm	5% 0.25W	S...706	55.15.0605	1 * A	grn/trans.				
DL..722	grn	see S722		R...714	57.11.3101	100 Ohm	5% 0.25W	S...707	55.15.0602	1 * A	red/trans.				
DL..723	0	not used		R...715	57.11.3101	100 Ohm	5% 0.25W	S...708	55.15.0605	1 * A	grn/trans.				
DL..724	0	not used		R...716	57.11.3101	100 Ohm	5% 0.25W	S...709	55.15.0604	1 * A	yel/trans.				
DL..725	red	see S725		R...717	0	not used		S...710	55.15.0604	1 * A	yel/trans.				
DL..726	red	see S726		R...718	0	not used		S...711	55.15.0602	1 * A	red/trans.				
DL..727	0	not used		R...719	57.11.3101	100 Ohm	5% 0.25W	S...712	55.15.0602	1 * A	red/trans.				
DL..728	0	not used		R...720	57.11.3101	100 Ohm	5% 0.25W	S...713	0	not used					
DL..729	0	not used		R...721	0	not used		S...714	55.15.0604	1 * A	yel/trans.				
DL..730	0	not used		R...722	57.11.3101	100 Ohm	5% 0.25W	S...715	55.15.0605	1 * A	grn/trans.				
DL..731	red	see S731		R...723	57.11.3101	100 Ohm	5% 0.25W	S...716	55.15.0622	1 * A	red/red				
DL..732	grn	see S732		R...724	0	not used		S...717	55.15.0622	1 * A	red/red				
DL..733	grn	see S733		R...725	57.11.3101	100 Ohm	5% 0.25W	S...718	0	not used					
DL..734	0	not used		R...726	57.11.3101	100 Ohm	5% 0.25W	S...719	55.15.0604	1 * A	yel/trans.				
DL..735	red	see S735		R...727	57.11.3101	100 Ohm	5% 0.25W	S...720	55.15.0605	1 * A	grn/trans.				
DL..736	0	not used		R...728	0	not used		S...721	55.15.0604	1 * A	yel/trans.				
DL..737	0	not used		R...729	0	not used		S...722	55.15.0605	1 * A	grn/trans.				
DL..738	grn	see S738		R...730	0	not used		S...723	0	not used					
DL..739	0	not used		R...731	0	not used		S...724	0	not used					
DL..740	0	not used		R...732	57.11.3101	100 Ohm	5% 0.25W	S...725	55.15.0602	1 * A	red/trans.				
DL..741	grn	see S741		R...733	57.11.3101	100 Ohm	5% 0.25W	S...726	55.15.0602	1 * A	red/trans.				
DL..742	0	not used		R...734	0	not used		S...727	0	not used					
DL..743	0	not used		R...735	57.11.3101	100 Ohm	5% 0.25W	S...728	0	not used					
DL..744	0	not used		R...736	57.11.3101	100 Ohm	5% 0.25W	S...729	0	not used					
DL..745	0	not used		R...737	0	not used		S...730	0	not used					
DL..746	0	not used		R...738	0	not used									
DLZ.701	0	not used		R...739	0	not used									
DLZ.702	0	not used		R...740	57.11.3101	100 Ohm	5% 0.25W								

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film, PE=Polyester, PP=Polypropylen, PS=Polystyrol

MANUFACTURER: Bu=Burdny, Ex=Esar, Fe=Fairchild, GI=General Instrument, HP=Hewlett Packard, IT=Intermettal, Mo=Motorola, Nat=National (Matsushita), NS=National Semiconductor, Ph=Philips, Ra=Raytheon, Sig=Signetics, Si=Siliconix, St=Studer, TI=Texas Instrument

1.990.258.00 SWITCH BOARD GROUP + EQ TA 90/04/0200

SWITCH BOARD GROUP

1.990.259.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
DL..701	.	0	not used		R..741	.	0	not used	
DL..702	.	.	red	see S702	R..742	.	0	not used	
DL..703	.	.	yel	see S703	R..743	.	0	not used	
DL..704	.	.	grn	see S704					
DL..705	.	.	yel	see S705	RZ..701	.	0	not used	
DL..706	.	.	grn	see S706	RZ..702	.	0	not used	
DL..707	.	.	red	see S707	RZ..703	.	0	not used	
DL..708	.	.	grn	see S708	RZ..704	57.88.2101	100	Ohm	SIP 8 (4*)
DL..709	.	.	yel	see S709	RZ..705	57.88.2101	100	Ohm	SIP 8 (4*)
DL..710	.	.	yel	see S710	RZ..706	57.88.2101	100	Ohm	SIP 8 (4*)
					RZ..707	57.88.4104	100	kOhm	SIP 9 (8*)
DL..711	.	.	red	see S711	RZ..708	57.88.4104	100	kOhm	SIP 9 (8*)
DL..712	.	.	red	see S712	RZ..709	57.88.4104	100	kOhm	SIP 9 (8*)
DL..713	.	0	not used		RZ..710	57.88.4104	100	kOhm	SIP 9 (8*)
DL..714	.	.	yel	see S714					
DL..715	.	.	grn	see S715	RZ..711	57.88.4104	100	kOhm	SIP 9 (8*)
DL..716	.	0	not used		RZ..712	57.88.4104	100	kOhm	SIP 9 (8*)
DL..717	.	0	not used	see S717					
DL..718	.	0	not used		S...701	.	0	not used	
DL..719	.	.	yel	see S719	S...702	55.15.0602	1	* A	red/trans.
DL..720	.	.	grn	see S720	S...703	55.15.0644	1	* A	yel/yel
					S...704	55.15.0605	1	* A	grn/trans.
DL..721	.	.	yel	see S721	S...705	55.15.0604	1	* A	yel/trans.
DL..722	.	0	not used	see S722	S...706	55.15.0605	1	* A	grn/trans.
DL..723	.	0	not used		S...707	55.15.0602	1	* A	red/trans.
DL..724	.	0	not used		S...708	55.15.0605	1	* A	grn/trans.
DL..725	.	.	red	see S725	S...709	55.15.0604	1	* A	yel/trans.
DL..726	.	.	red	see S726	S...710	55.15.0604	1	* A	yel/trans.
DL..727	.	0	not used						
DL..728	.	0	not used		S...711	55.15.0602	1	* A	red/trans.
DL..729	.	0	not used		S...712	55.15.0602	1	* A	red/trans.
DL..730	.	0	not used		S...713	.	0	not used	
					S...714	55.15.0604	1	* A	yel/trans.
DL..731	.	.	red	see S731	S...715	55.15.0605	1	* A	grn/trans.
DL..732	.	0	not used		S...716	.	0	not used	
DL..733	.	0	not used		S...717	55.15.0622	1	* A	red/red
DL..734	.	0	not used		S...718	.	0	not used	
DL..735	.	.	red	see S735	S...719	55.15.0604	1	* A	yel/trans.
DL..736	.	0	not used		S...720	55.15.0605	1	* A	grn/trans.
DL..737	.	0	not used						
DL..738	.	0	not used		S...721	55.15.0604	1	* A	yel/trans.
DL..739	.	0	not used		S...722	55.15.0605	1	* A	grn/trans.
DL..740	.	0	not used		S...723	.	0	not used	
					S...724	.	0	not used	
DL..741	.	0	not used		S...725	55.15.0602	1	* A	red/trans.
DL..742	.	0	not used		S...726	55.15.0602	1	* A	red/trans.
DL..743	.	0	not used		S...727	.	0	not used	
DL..744	.	0	not used		S...728	.	0	not used	
DL..745	.	0	not used		S...729	.	0	not used	
DL..746	.	0	not used		S...730	.	0	not used	
DLZ.701	.	0	not used		S...731	55.15.0602	1	* A	red/trans.
DLZ.701	.	0	not used		S...732	.	0	not used	
					S...733	.	0	not used	
MP..701	1.990.219.11	1	pcs	Input Mono PCB	S...734	.	0	not used	
MP..702	1.990.100.05	6	pcs	Querprintheiter	S...735	55.15.0602	1	* A	red/trans.
MP..703	0	0	not used		S...736	.	0	not used	
MP..704	1.990.259.04	1	pcs	Nr. Etikette 5*20	S...737	.	0	not used	
					S...738	.	0	not used	
Q...701	.	0	not used		S...739	.	0	not used	
Q...702	.	0	not used		S...740	.	0	not used	
Q...703	.	0	not used						
Q...704	.	0	not used		S...741	.	0	not used	
					S...742	.	0	not used	
R...701	.	0	not used		S...743	.	0	not used	
R...702	.	0	not used						
R...703	.	0	not used		W...701	.	0	not used	
R...704	.	0	not used		W...702	.	0	not used	
R...705	.	0	not used		W...703	.	0	not used	
R...706	.	0	not used		W...704	.	0	not used	
R...707	.	0	not used						
R...708	.	0	not used						
R...709	.	0	not used						
R...710	.	0	not used						
R...711	.	0	not used						
R...712	57.11.3101	100	Ohm	5% 0.25W					
R...713	57.11.3101	100	Ohm	5% 0.25W					
R...714	57.11.3101	100	Ohm	5% 0.25W					
R...715	57.11.3101	100	Ohm	5% 0.25W					
R...716	57.11.3101	100	Ohm	5% 0.25W					
R...717	.	0	not used						
R...718	.	0	not used						
R...719	.	0	not used						
R...720	57.11.3101	100	Ohm	5% 0.25W					
R...721	.	0	not used						
R...722	57.11.3101	100	Ohm	5% 0.25W					
R...723	57.11.3101	100	Ohm	5% 0.25W					
R...724	.	0	not used						
R...725	57.11.3101	100	Ohm	5% 0.25W					
R...726	57.11.3101	100	Ohm	5% 0.25W					
R...727	.	0	not used						
R...728	.	0	not used						
R...729	.	0	not used						
R...730	.	0	not used						
R...731	.	0	not used						
R...732	57.11.3101	100	Ohm	5% 0.25W					
R...733	57.11.3101	100	Ohm	5% 0.25W					
R...734	.	0	not used						
R...735	.	0	not used						
R...736	.	0	not used						
R...737	.	0	not used						
R...738	.	0	not used						
R...739	.	0	not used						
R...740	.	0	not used						

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
PE=Polyester, PP=Polypropylen, PS=Polystyrol

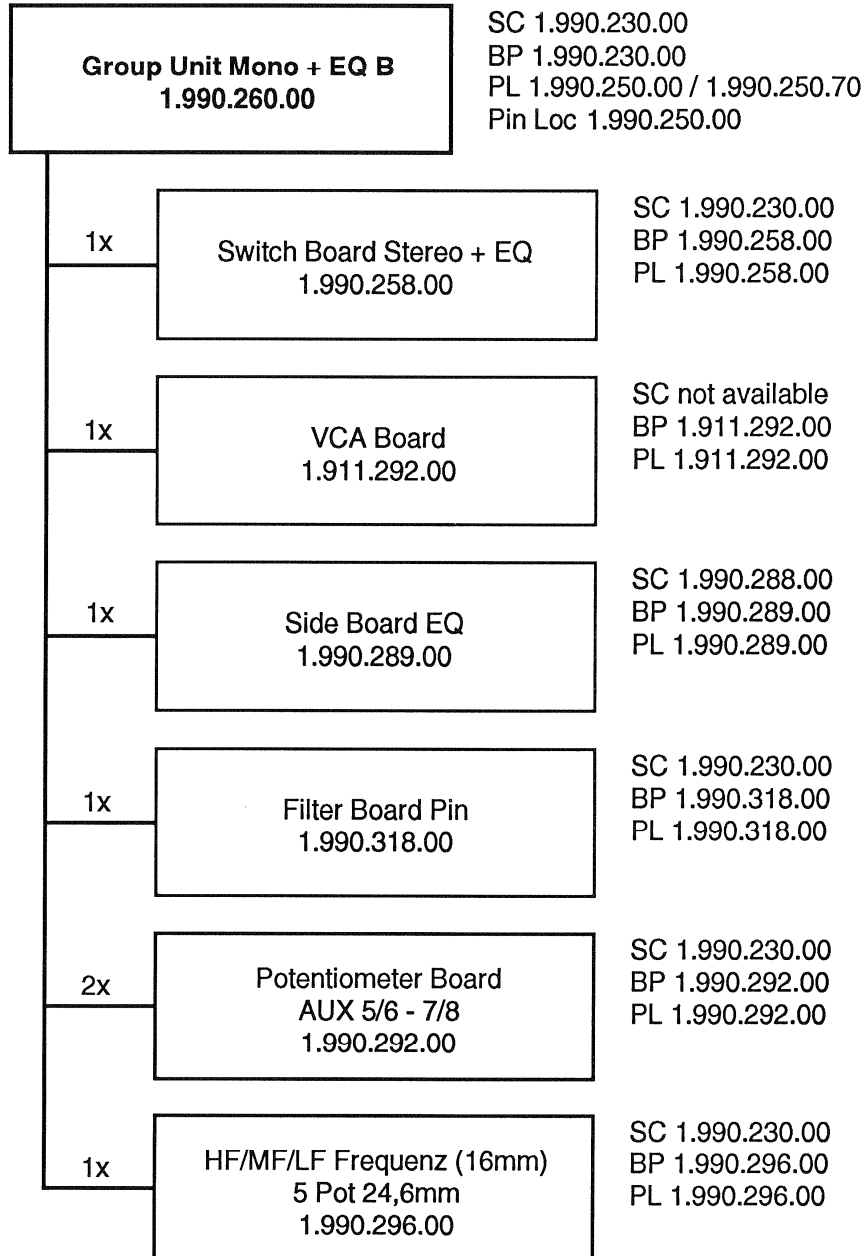
MANUFACTURER: Bu=Bumdy, Ex=Exar, Fc=Fairchild, GI=General Instrument
HP=Hewlett Packard, IT=Intermetal, Mo=Motorola, Na=National
(Matsushita), NS=National Semiconductors, Ph=Philips,
Ra=Raytheon, Sig=Signetics, Six=Siliconix, St=Studer,
TI=Texas Instrument

1.990.259.00 SWITCH BOARD GROUP TA 90/04/0200

END

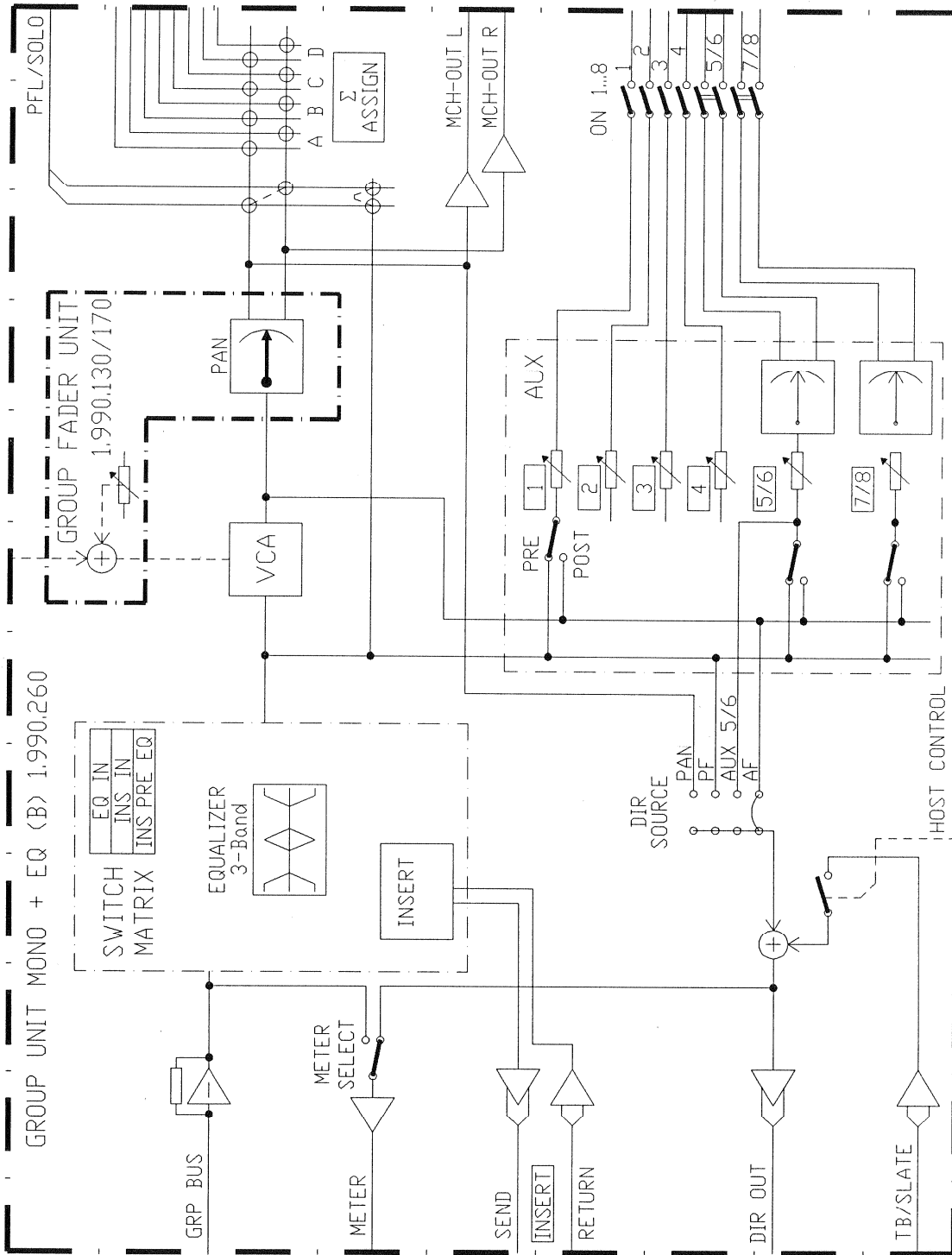
Group Unit Mono + EQ B

1.990.260.00



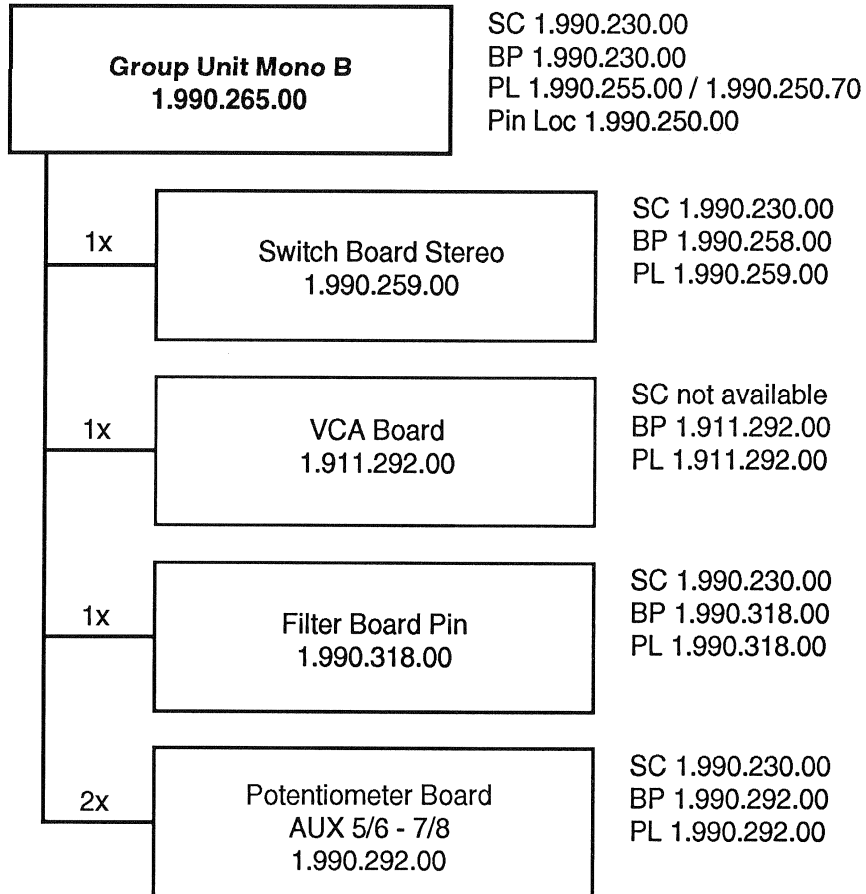
SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

GROUP UNIT MONO+EQ B 1.990.260.00



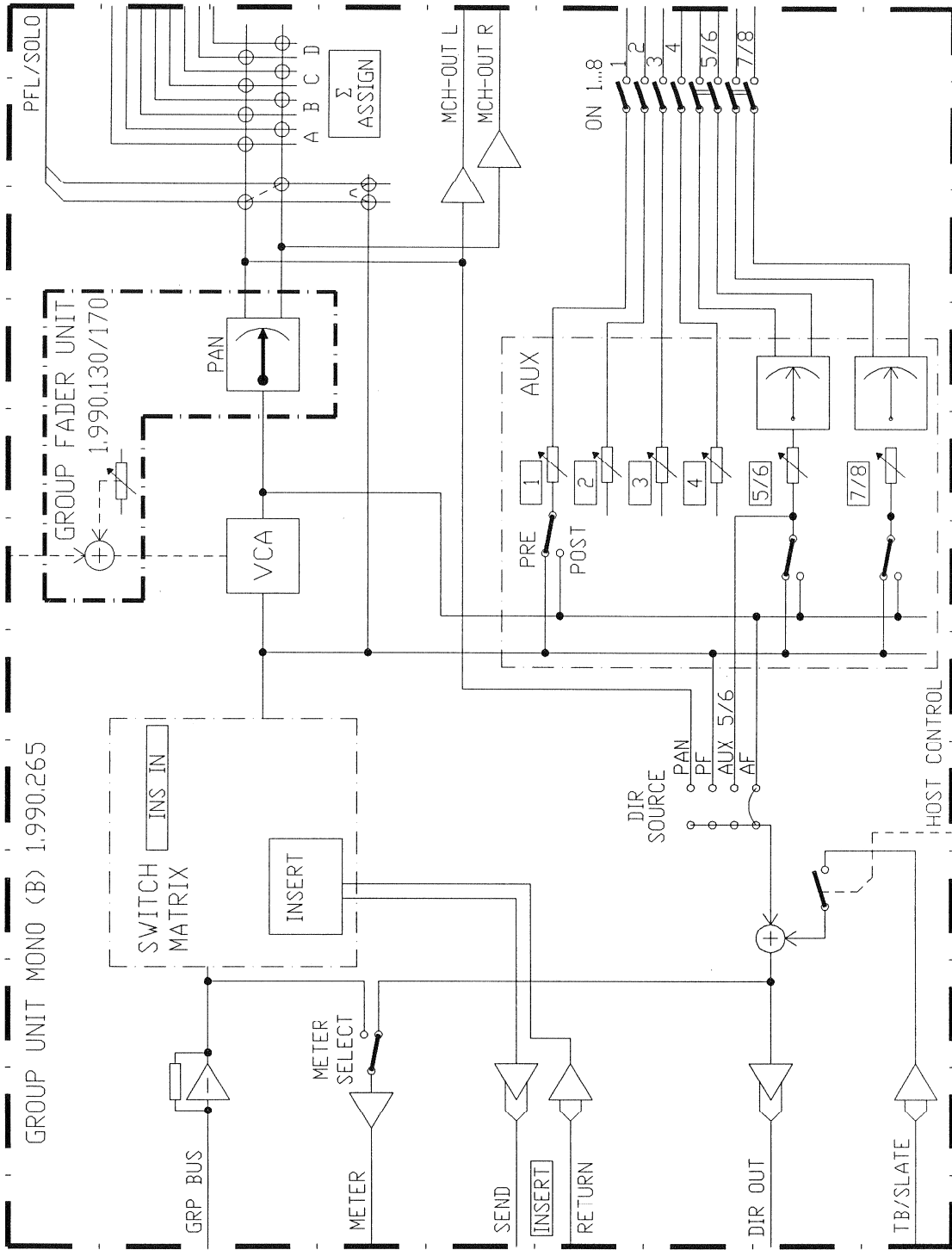
Group Unit Mono B

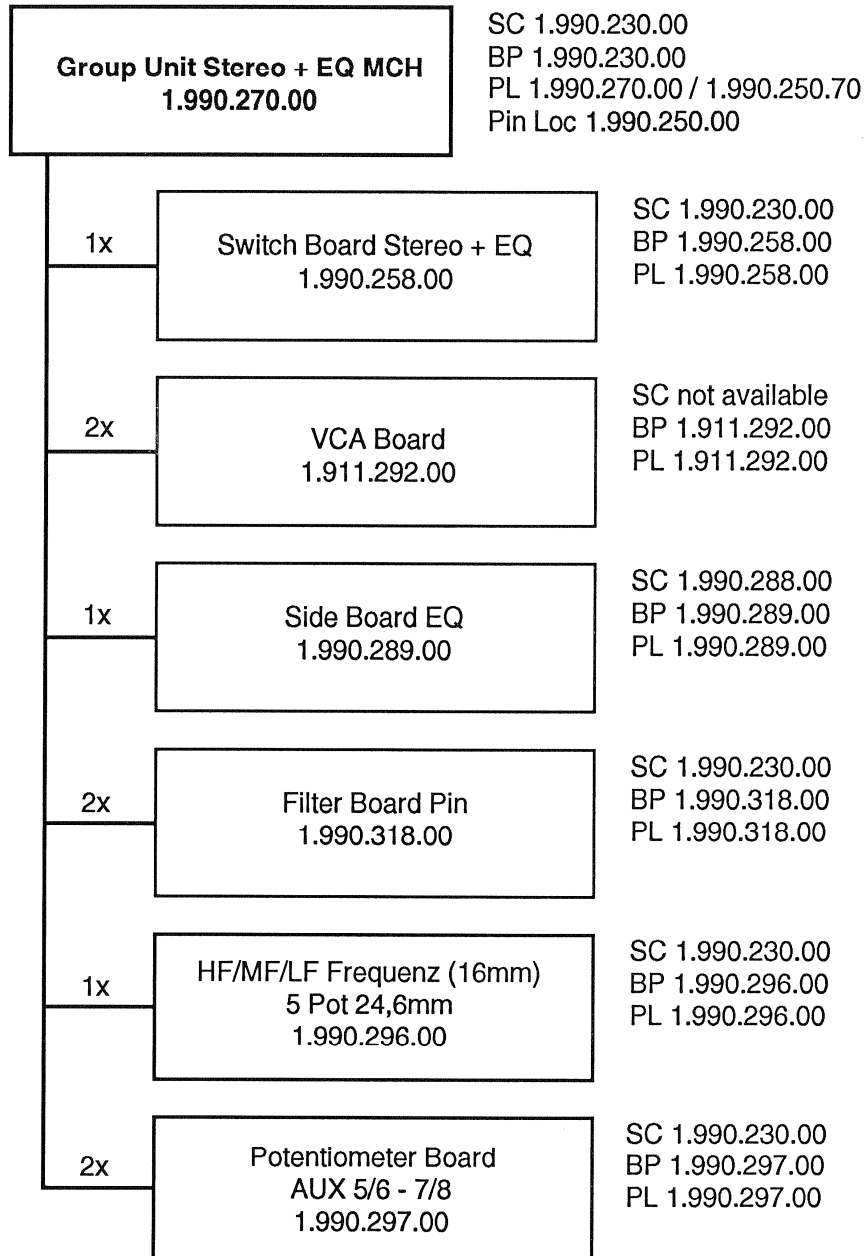
1.990.265.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

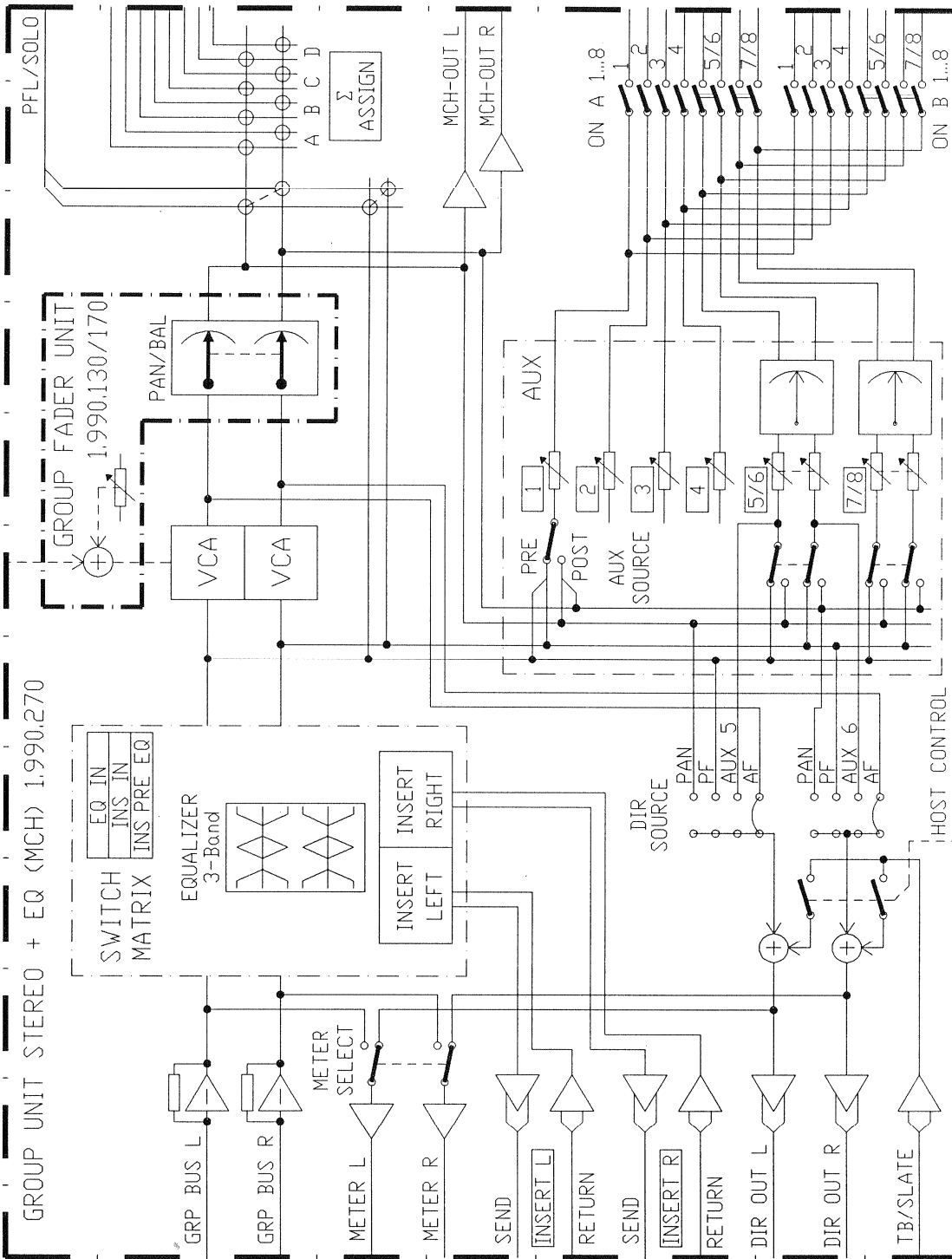
GROUP UNIT MONO B 1.990.265.00



Group Unit Stereo + EQ MCH**1.990.270.00**

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

GROUP UNIT STEREO+EQ MCH 1.990.270.00



GROUP UNIT STEREO + EQ

1.990.270.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A....2		1.990.258.00	SWITCH BOARD GROUP +EQ	St	R...203		0	not used	see option 2 N6
A....7		1.990.296.00	3*5 POT. 24.6MM BOARD	St					
A....11		1.990.250.94	KL GROUP UNIT	St	R...402		4.7 kOhm	10% lin.	see R 102 G6
A....12		1.990.289.00	SIDE BOARD EQ	,A	R...404		4.7 kOhm	10% lin.	see R 104 F6
A....14		1.990.297.00	6 POT. 10MM BOARD	St B6	R...406		4.7 kOhm	10% lin.	see R 106 E6
A....15		1.990.297.00	6 POT. 10MM BOARD	St A6	R...409		100 kOhm	10% neg.log.	see R 109 on 1.990.296
A....16		1.990.318.00	FILTER BOARD PIN	St N3	R...410		100 kOhm	10% neg.log.	see R 109 on 1.990.296
A....70		1.990.250.70	GROUP UNIT VORMONTIERT	,A	R...411		3.9 kOhm		57.11.3392 on 1.990.296
A...301		1.911.292.00	VCA	St G3	R...412		1 MOhm		57.11.3105 on 1.990.296
A...316		1.990.318.00	FILTER BOARD PIN	St M4	R...413		4.7 kOhm		57.11.3472 on 1.990.296
C....77			4700 pF		R...414		100 kOhm	10% neg.log.	see R 114 on 1.990.296
C....93			100 uF		R...415		100 kOhm	10% neg.log.	see R 114 on 1.990.296
C...377			4700 pF		R...416		100 kOhm	10% neg.log.	see R 116 on 1.990.296
C...393			100 uF		R...417		100 kOhm	10% neg.log.	see R 116 on 1.990.296
IC...13	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA I4	R...418		4.7 kOhm		57.11.3472 on 1.990.296
IC...15	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA G4	R...447	57.11.3823	82 kOhm	1% 0.25W	F3
IC...16	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA F4	R...482		4.7 kOhm	10% pos.log.	see R 182 B5
IC...19	50.09.0117	MC33078P	dual op. amp. low noise	Mot F3	R...483		10 kOhm	10% neg.log.	see R 182 B6
IC...25	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA H4	R...486		4.7 kOhm	10% pos.log.	see R 186 A5
IC...34	50.09.0117	MC33078P	dual op. amp. low noise	Mot B4	R...487		10 kOhm	10% neg.log.	see R 186 A6
IC...69	50.07.0015	CD4053	3 * 2 channel analog mux/demux	Ph,Mot,RCA M6	R...844		100 kOhm	20% lin.	see R 182 B7
IC...75		0	not used	see option 1 H1	R...845		100 kOhm	20% lin.	see R 186 A6
IC...311	50.09.0117	MC33078P	dual op. amp. low noise	Mot M5	R...846		100 kOhm	20% lin.	see R 182 B6
IC...317	50.09.0117	MC33078P	dual op. amp. low noise	Mot K3	R...847		100 kOhm	20% lin.	see R 186 A7
IC...318	50.09.0101	TL072	dual op. amp. FET	TI K3	R...852		100 kOhm	20% lin.	see R 114 on 1.990.296
IC...328	50.09.0106	5532AN	dual op. amp. low noise	Sig,Ra H3	R...853		100 kOhm	20% lin.	see R 104 on 1.990.296
IC...329	50.09.0117	MC33078P	dual op. amp. low noise	Mot E3	R...854		100 kOhm	20% lin.	see R 116 on 1.990.296
IC...370	50.09.0117	MC33078P	dual op. amp. low noise	Mot N5	R...855		100 kOhm	20% lin.	see R 106 on 1.990.296
IC...372	50.09.0106	5532AN	dual op. amp. low noise	Sig,Ra K1	R...857		100 kOhm	20% lin.	see R 102 G7
IC...813	50.07.0049	4049	hex inverting buffer CMOS	Ph,To D8	R...858		100 kOhm	20% lin.	see R 109 on 1.990.296
IC...814	50.07.0049	4049	hex inverting buffer CMOS	Ph,To E9	W...110		0 Ohm		57.11.3000 on 1.990.296
IC...835	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA G8	W...111		0 Ohm		57.11.3000 on 1.990.296
IC...836	50.07.0051	CD4051	8-channel analog mux/demux	Ph,Mot,RCA G9					
MP...17	1.010.100.58	3 pcs	Masseblech zu Preh-Pot Type 12						
MP...18	22.99.0137	3 pcs	6-Kt. Mutter M7*0.75						
MP...19	23.99.0122	3 pcs	U-Scheibe D 7.1/12*0.5						
MP...21	1.990.200.05	3 pcs	Poti-Achsvverlängerung						
MP...23	1.010.111.65	1 pcs	Schrumpfschlauch						
MP...24	1.010.109.64	1 pcs	gelber Draht l = 38mm						
MP...26	21.01.0279	5 pcs	Z-Schr. M2.5*6						
MP...27	24.16.1025	5 pcs	Rippenscheibe D 2.7 / 5						
MP...27	24.16.1025	8 pcs	Rippenscheibe D 2.7 / 5						
MP...28	21.01.2352	6 pcs	S-Schr. M3*4						
MP...29	24.16.3023	2 pcs	Wellensicherung 2.3						
MP...30	42.01.0203	2 pcs	Drehknopf gr. D 10/4						
MP...31	42.01.0228	10 pcs	Knebelknopf gr. D 10/4						
MP...32	42.01.0250	4 pcs	Deckel h'gr, D 10						
MP...33	42.01.0251	4 pcs	Deckel d'gr, D 10						
MP...34	42.01.0253	1 pcs	Deckel rt, D 10						
MP...35	42.01.0254	1 pcs	Deckel bl, D 10						
MP...36	42.01.0255	1 pcs	Deckel gb, D 10						
MP...37	42.01.0256	1 pcs	Deckel gn, D 10						
MP...38	1.010.022.21	2 pcs	Linsechr. spez M3*8						
MP...39	1.010.221.27	1 pcs	Mutterbolzen M2.5*10.5						
MP...40	1.912.000.03	2 pcs	Drehring D 6.2/13						
MP...41	1.990.200.03	1 pcs	Schirmblech Input						
MP...42	1.990.210.02	1 pcs	Traeger Input						
MP...44	1.990.250.01	1 pcs	Frontschild Input (1.990260.01 -> BG 280!)						
MP...45	1.990.289.02	1 pcs	Isolation Side Board						
MP...47	1.990.289.01	1 pcs	Schirmblech SIDE BOARD						
MP...48	1.010.208.27	3 pcs	Mutterbolzen M2.5x14mm						
P...21		26 pol	1/20"	54.14.2003	on 1.990.296				
P...22		26 pol	1/20"	54.14.2003	on 1.990.296				
R...102	1.010.107.58	4.7 kOhm	10% lin.	comb.with R402/857	St G7				
R...104	1.010.107.58	4.7 kOhm	10% lin.	comb.with R404/853	St F7				
R...106	1.010.107.58	4.7 kOhm	10% lin.	comb.with R406/855	St E7				
R...109		100 kOhm	10% neg.log.	1.010.030.58	on 1.990.296				
R...110		100 kOhm	10% neg.log.	see R 109	on 1.990.296				
R...111		3.9 kOhm		57.11.3392	on 1.990.296				
R...112		1 MOhm		57.11.3105	on 1.990.296				
R...113		4.7 kOhm		57.11.3472	on 1.990.296				
R...114		100 kOhm	10% neg.log.	1.010.030.58	on 1.990.296				
R...115		100 kOhm	10% neg.log.	see R 114	on 1.990.296				
R...116		100 kOhm	10% neg.log.	1.010.030.58	on 1.990.296				
R...117		100 kOhm	10% neg.log.	see R 116	on 1.990.296				
R...118		4.7 kOhm		57.11.3472	on 1.990.296				
R...182		4.7 kOhm	10%	+log.comb.with R183/482/483/844/846	B6				
R...183		10 kOhm	10%	+log.see R 182 1.010.035.58	on A 14 B6				
R...186		4.7 kOhm	10%	+log.comb.with R187/486/487/845/847	A6				
R...187		10 kOhm	10%	+log.see R 186 1.010.035.58	on A 15 A6				

>> POSLST 1.990.270 gilt auch fuer BG 1.990.280.xx (B - Version) <<

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| Die files zu dieser POSLST heissen #990270A,B |
----->

Die posliste 1.990.250.70 ist in den files #990250S,T

OPTIONS : SEE OPTIONLIST 1.990.230.00

option 1 :.....multichannel out
option 2 :.....output trim

HISTORY

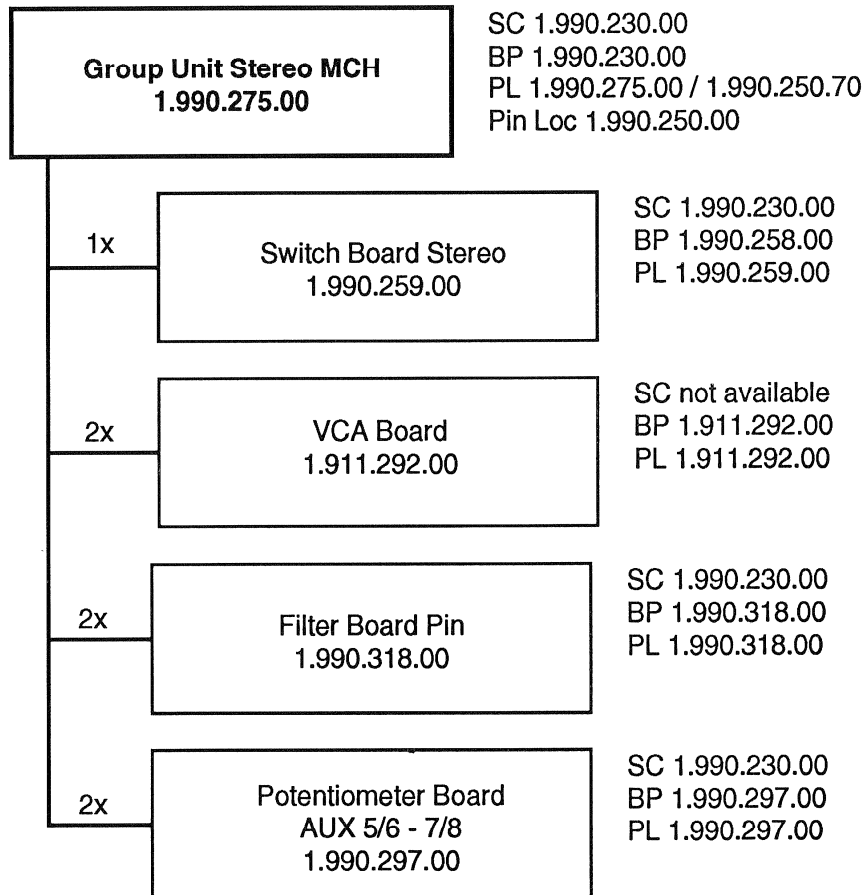
09.01.91 - Verbesserung Rauschabstand vom Insert Send
30.01.91 - Poslisten-Bereinigung ==> ZAB
12.02.91 (01) Erleichterung Fertigung und Pruefung (Schirmblech und Mutterbolzen zu EQ werden erst am Schluss montiert)

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
PE=Polyester, PP=Polypropylen, PS=Polystyrol

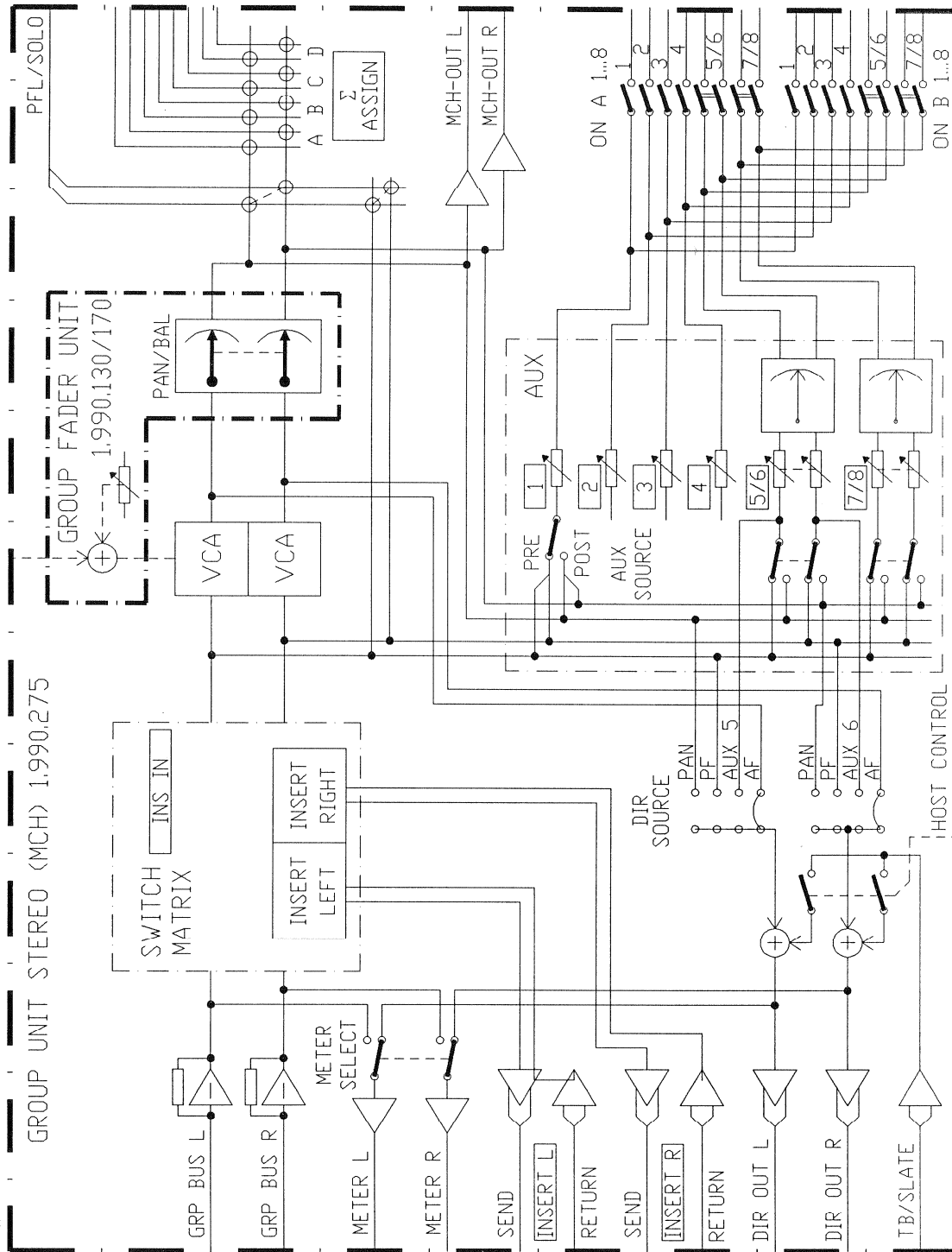
MANUFACTURER: ADI=Analog Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
Fc=Fairchild, Fe=Ferranti, GI=General Instrument, Ha=Har
HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=N
{Matsushita}, NS=National Semiconductors, Ph=Philips,
PHI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Co
America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=
Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaich

1.990.270.00 GROUP UNIT STEREO + EQ AB 91/01/3000
1.990.270.00 GROUP UNIT STEREO + EQ AB 91/02/1201

Group Unit Stereo MCH**1.990.275.00**

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

GROUP UNIT STEREO MCH 1.990.275.00



GROUP UNIT STEREO

1.990.275.00

Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
A....2		1.990.259.00	SWITCH BOARD GROUP	St
A....11		1.990.250.94	KL GROUP UNIT	St
A....14		1.990.297.00	6 POT. 10MM BOARD	St B6
A....15		1.990.297.00	6 POT. 10MM BOARD	St A6
A....16		1.990.318.00	FILTER BOARD PIN	St N3
A....70		1.990.250.70	GROUP UNIT VORMONTIERT	,A St
A...301		1.911.292.00	VCA	St G3
A...316		1.990.318.00	FILTER BOARD PIN	St N4
IC...13		50.07.0015	CD4053 3 * 2 channel analog mux/demux Ph,Mot,RCA I4	
IC...25		50.07.0015	CD4053 3 * 2 channel analog mux/demux Ph,Mot,RCA H4	
IC...34		50.09.0117	MC33078P dual op. amp. low noise	Mot B4
IC...69		50.07.0015	CD4053 3 * 2 channel analog mux/demux Ph,Mot,RCA M6	
IC...75		. . . 0	not used	see option 1 H1
IC...311		50.09.0117	MC33078P dual op. amp. low noise	Mot M5
IC...317		50.09.0117	MC33078P dual op. amp. low noise	Mot K3
IC...318		50.09.0101	TL072 dual op. amp. FET	TI K3
IC...328		50.09.0106	5532AN dual op. amp. low noise	Sig,Ra H3
IC...329		50.09.0117	MC33078P dual op. amp. low noise	Mot E3
IC...370		50.09.0117	MC33078P dual op. amp. low noise	Mot M5
IC...372		50.09.0106	5532AN dual op. amp. low noise	Sig,Ra K1
IC...835		. . . 0	not used	see option 2 G8
MP...23		1.010.111.65	1 pcs Schrumpfschlauch	
MP...24		1.010.109.64	1 pcs gelber Draht l = 38mm	
MP...28		21.01.2352	6 pcs S-Schr. M3*4	
MP...29		24.16.3023	2 pcs Wellensicherung 2.3	
MP...30		42.01.0203	2 pcs Drehknopf gr. D 10/4	
MP...31		42.01.0228	4 pcs Knebelknopf gr. D 10/4	
MP...32		42.01.0250	1 pcs Deckel h'gr, D 10	
MP...33		42.01.0251	1 pcs Deckel d'gr, D 10	
MP...34		42.01.0253	1 pcs Deckel rt, D 10	
MP...35		42.01.0254	1 pcs Deckel bl, D 10	
MP...36		42.01.0255	1 pcs Deckel gb, D 10	
MP...37		42.01.0256	1 pcs Deckel gn, D 10	
MP...38		1.010.022.21	2 pcs Linsenschr. spez M3*8	
MP...40		1.912.000.03	2 pcs Drehring D 6.2/13	
MP...41		1.990.200.03	1 pcs Schirmblech Input	
MP...42		1.990.210.02	1 pcs Traeger Input	
MP...44		1.990.255.01	1 pcs Frontschild Input (1.990265.01 -> BG 285!)	
R...182		. . .	4.7 kOhm 10% +log.comb.withR183/482/483/844/846	B6
R...183		. . .	10 kOhm 10% +log.see R 182 1.010.035.58 on A 14	B6
R...186		. . .	4.7 kOhm 10% +log.comb.withR187/486/487/845/847	A6
R...187		. . .	10 kOhm 10% +log.see R 186 1.010.035.58 on A 15	A6
R...203		. . . 0	not used	see option 2 N6
R...447		57.11.3823	82 kOhm 1% 0.25W	F3
R...482		. . .	4.7 kOhm 10% pos.log. see R 182	B5
R...483		. . .	10 kOhm 10% neg.log. see R 182	B6
R...486		. . .	4.7 kOhm 10% pos.log. see R 186	A5
R...487		. . .	10 kOhm 10% neg.log. see R 186	A6
R...844		. . .	100 kOhm 20% lin. see R 182	B7
R...845		. . .	100 kOhm 20% lin. see R 186	A6
R...846		. . .	100 kOhm 20% lin. see R 182	B6
R...847		. . .	100 kOhm 20% lin. see R 186	A7

>> POSLST 1.990.275 gilt auch fuer BG 1.990.285.xx (B - Version) <<

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| Die files zu dieser POSLST heissen #990275A,B |
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Die posliste 1.990.250.70 ist in den files #990250S,T

OPTIONS : SEE OPTIONLIST 1.990.230.00

option 1 :.....multichannel out
option 2 :.....output trim

HISTORY

09.01.91 - Verbesserung Rauschabstand vom Insert Send

30.01.91 - Poslisten-Bereinigung ==> ZAB

Die Koordinaten bei Manuf. beziehen sich auf Bestueckplan

CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
PE=Polyester, PP=Polypropylen, PS=Polystyrol

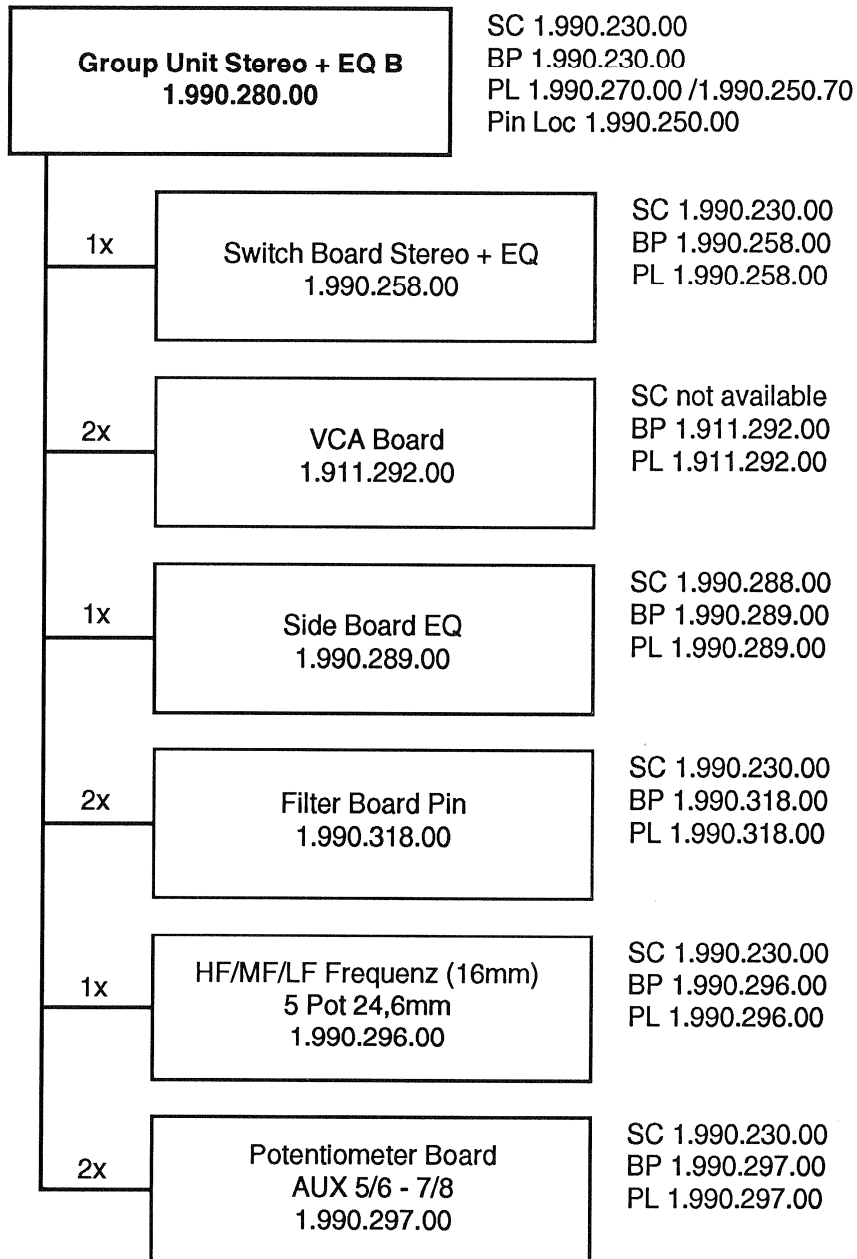
MANUFACTURER: ADI=Aanalogue Devices Inc., Bu=Burndy, El=Elco, Ex=Exar,
Fc=Fairchild, Fe=Ferranti, GI=General Instrument, Ha=Har
HP=Hewlett Packard, ITT=Intermetall, Mot=Motorola, Nat=N
{Matsushita}, NS=National Semiconductors, Ph=Philips,
PMI=Precision Monolithics Inc., Ra=Raytheon, RCA=Radio Co

America, SDS=SDS-Relais, Sie=Siemens, Six=Siliconix, St=Tho-Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamaich
1.990.275.00 GROUP UNIT STEREO AB 91/01/3000

END

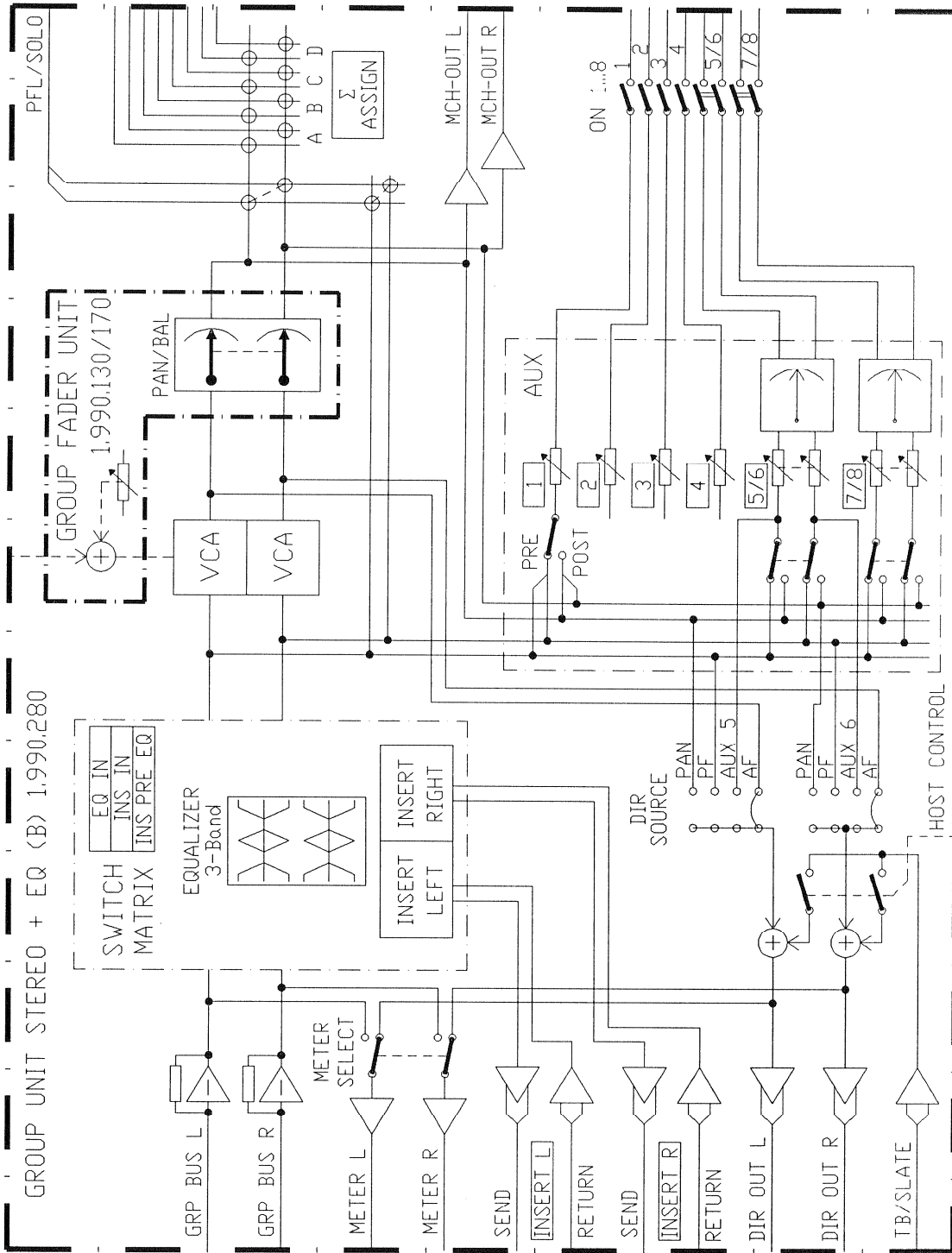
Group Unit Stereo + EQ B

1.990.280.00



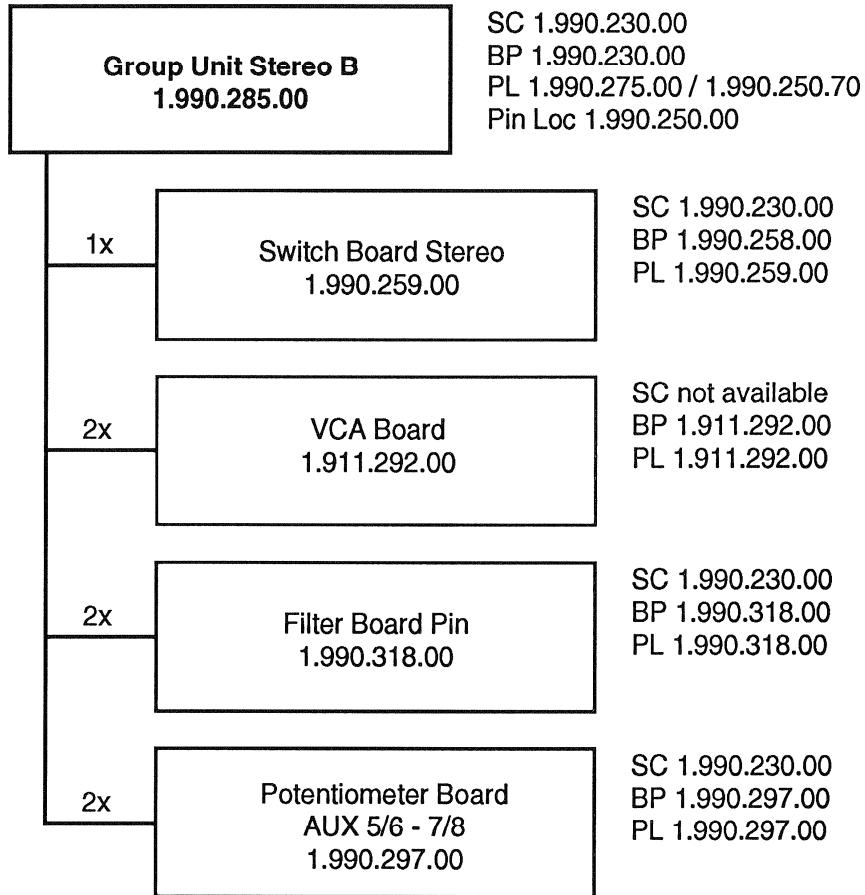
SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

GROUP UNIT STEREO+EQ B 1.990.280.00



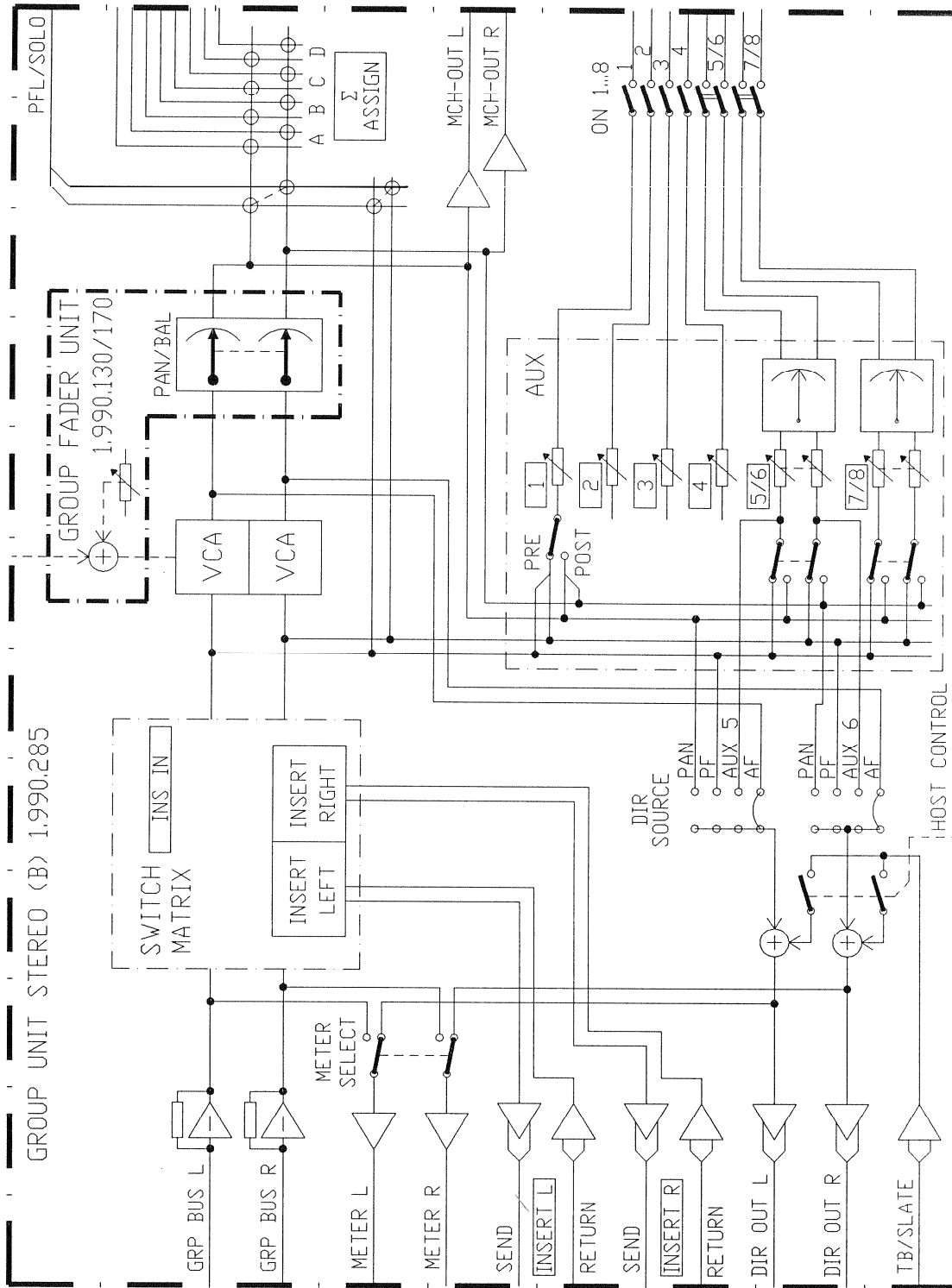
Group Unit Stereo B

1.990.285.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

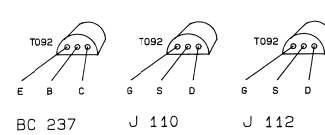
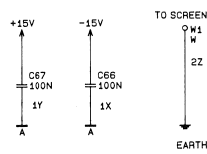
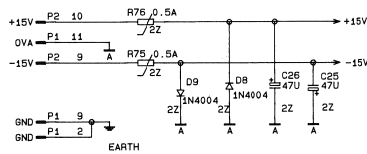
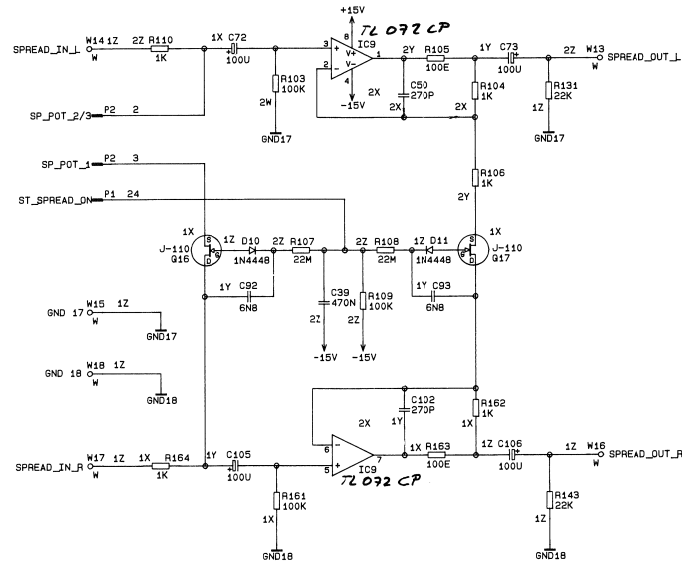
GROUP UNIT STEREO B 1.990.285.00



SIDE BOARD EQ+MIC. AMP.



1.990.288.00



1.023.112.02 1.023.112.01
 P1 PRCC26 P2 PRCC26

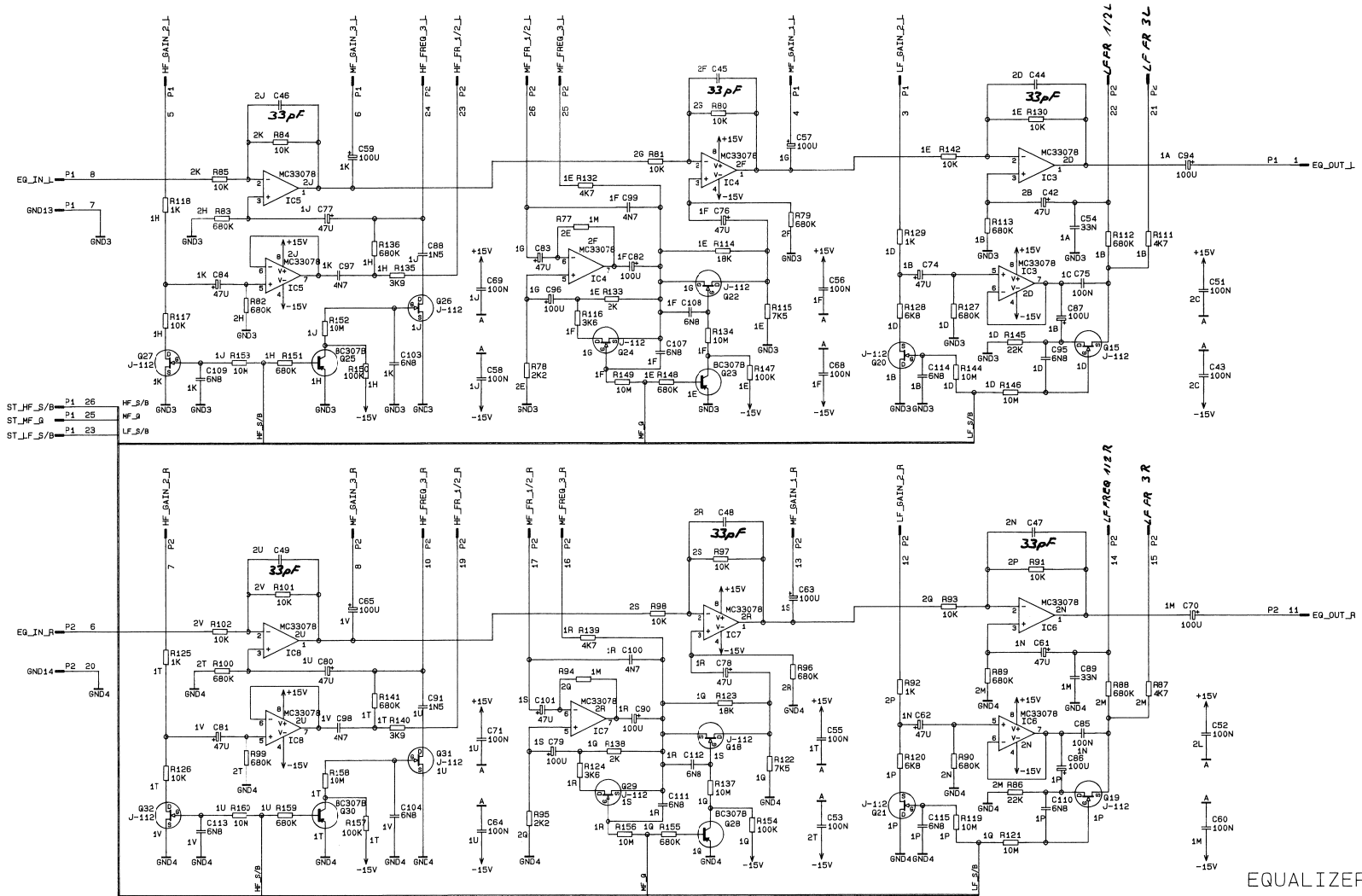
SPREAD

① 24.04.90 SCA	② 11.09.90 SCA	③ 16.09.90 SCA	④ 15.1.91 SCA	⑤ 12.2.91 SCA
MIXING CONSOLE 990				PAGE 1 OF 3
STUDER		SIDE BOARD EQ+MIC. AMP.		SC 1.990.288-00

SIDE BOARD EQ + MIC. AMP.



1.990.288.00



ST_HF_S/B P1 26 HF_S/B
 ST_HF_B P1 25 HF_B
 ST_LF_S/B P1 23 LF_S/B

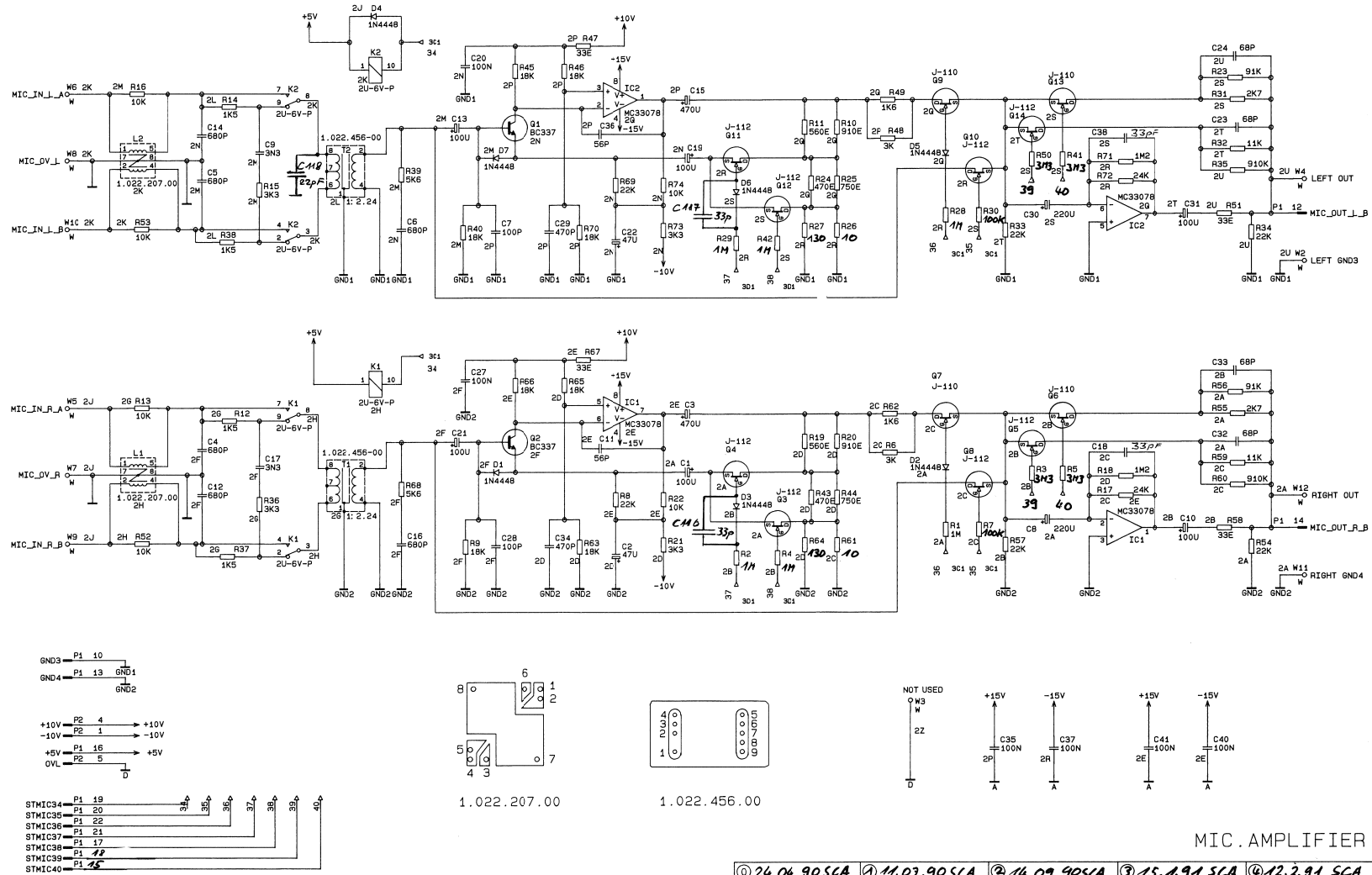
EQUALIZER

① 24.04.90 SCA	② 11.07.90 SCA	③ 14.09.90 SCA	④ 15.1.91 SCA	⑤ 12.2.91 SCA
MIXING CONSOLE 990				
PAGE 2 OF 3				
STUDER		SIDE BOARD EQ+MIC. AMP.		SC 1.990.288-00

SIDE BOARD EQ + MIC. AMP.



1.990.288.00

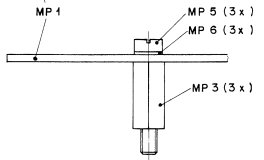
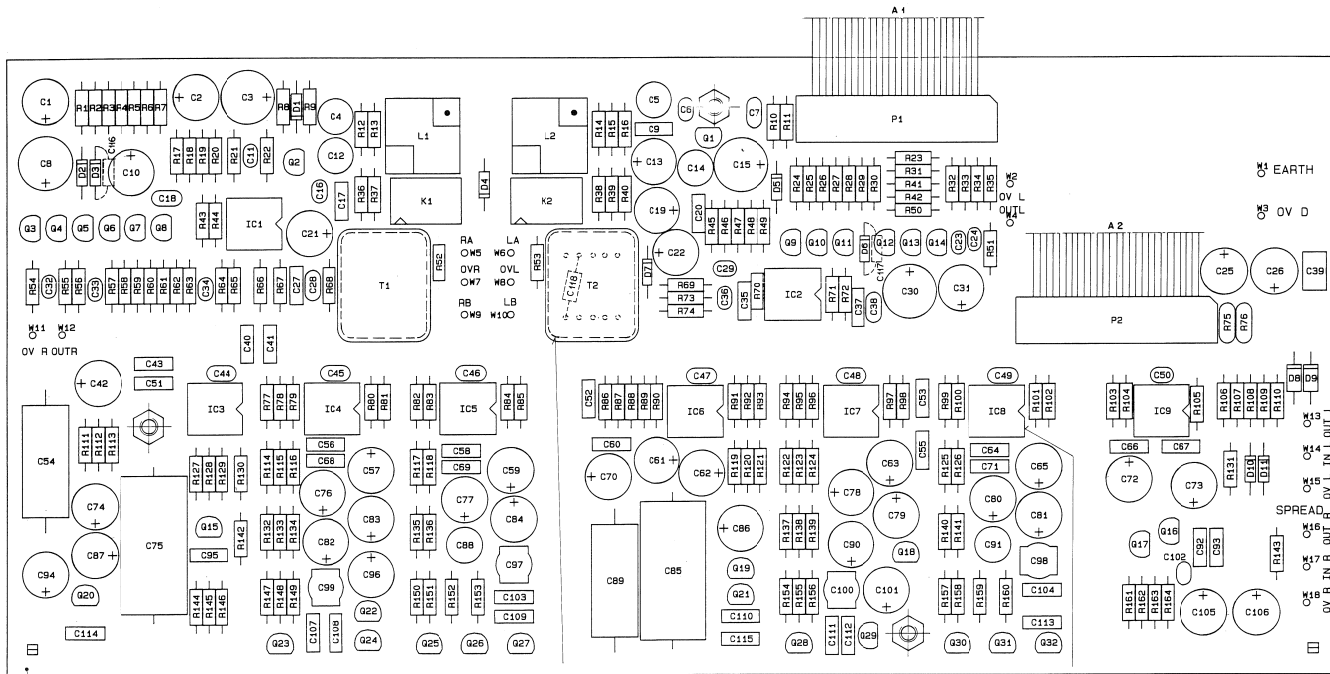


MIC. AMPLIFIER

① 24.04.90SCA	② 11.07.90SCA	③ 14.09.90SCA	④ 15.11.91SCA	⑤ 12.2.91SCA
MIXING CONSOLE 990			PAGE 3 OF 3	
STUDER		SIDE BOARD EQ+MIC. AMP.		SC 1.990.288-00

SIDE BOARD EQ+MIC. AMP. ESE

1.990.288.00



Autoren:	12.2.91	JK	JK	JK	JK
Autoren:	14.9.90	JK	JK	JK	JK
Datum:	27.3.90	JK	JK	JK	JK
Gez.:					
Ges.:					
Index:					

STUDER REGENSDORF ZÜRICH	Bearbeitung: SIDE BOARD EQ + MIC. AMP. ESE	Nummer: 1.990.288-00
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Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A.....1	1.023.112.01		26-wire RIBBON CABLE 0,06 m (einseitige Zugsentl.)	
A.....2	1.023.112.02		26-wire RIBBON CABLE 0,10 m (einseitige Zugsentl.)	
C.....1	59.22.4101		100 u 16 V, 20%	
C.....2	59.22.4470		47 u 16 V, 20%	
C.....3	59.22.2471		470 u 6.3 V, 20%	
C.....4	59.05.1681		680 p 630 V, 1%	
C.....5	59.05.1681		680 p 630 V, 1%	
C.....6	59.32.2681		680 p 50 V, 10%	
C.....7	59.32.1101		100 p 400 V, 10%	
C.....8	59.22.4221		220 u 16 V, 20%	
C.....9	59.06.0332		3.3 n 63 V, 10%	
C.....10	59.22.4101		100 u 16 V, 20%	
C.....11	59.34.4560		56 p 63 V, 5%	N750
C.....12	59.05.1681		680 p 630 V, 1%	
C.....13	59.22.4101		100 u 16 V, 20%	
C.....14	59.05.1681		680 p 630 V, 1%	
C.....15	59.22.2471		470 u 6.3 V, 20%	
C.....16	59.32.2681		680 p 50 V, 10%	
C.....17	59.06.0332		3.3 n 63 V, 10%	
C.....18	59.32.1101		100 p 400 V, 10%	
C.....19	59.34.2330		33 p 63 V, 5%	
C.....20	59.06.0104		100 n 63 V, 10%	
C.....21	59.22.4101		100 u 16 V, 20%	
C.....22	59.22.4470		47 u 16 V, 20%	
C.....23	59.34.4680		68 p 63 V, 5%	N750
C.....24	59.34.4680		68 p 63 V, 5%	N750
C.....25	59.22.4470		47 u 16 V, 20%	
C.....26	59.22.4470		47 u 16 V, 20%	
C.....27	59.06.0104		100 n 63 V, 10%	
C.....28	59.32.1101		100 p 400 V, 10%	
C.....29	59.32.4471		470 p 50 V, 20%	
C.....30	59.22.4221		220 u 16 V, 20%	
C.....31	59.22.4101		100 u 16 V, 20%	
C.....32	59.34.4680		68 p 63 V, 5%	N750
C.....33	59.34.4680		68 p 63 V, 5%	N750
C.....34	59.32.4471		470 p 50 V, 20%	
C.....35	59.06.0104		100 n 63 V, 10%	
C.....36	59.34.4560		56 p 63 V, 10%	N750
C.....37	59.06.0104		100 n 63 V, 10%	
C.....38	59.32.1101		100 p 400 V, 10%	
C.....39	59.34.2330		33 p 63 V, 5%	
C.....40	59.06.0474		470 n 63 V, 10%	
C.....41	59.06.0104		100 n 63 V, 10%	
C.....42	59.22.4470		47 u 16 V, 20%	
C.....43	59.06.0104		100 n 63 V, 10%	
C.....44	59.32.1151		150 p 400 V, 10%	
C.....45	59.34.2330		33 p 63 V, 5%	
C.....46	59.34.2330		33 p 63 V, 5%	
C.....47	59.32.1151		150 p 400 V, 10%	
C.....48	59.34.2330		33 p 63 V, 5%	
C.....49	59.32.1151		150 p 400 V, 10%	
C.....50	59.34.2330		33 p 63 V, 5%	
C.....51	59.06.0104		100 n 63 V, 10%	
C.....52	59.06.0104		100 n 63 V, 10%	
C.....53	59.06.0104		100 n 63 V, 10%	
C.....54	59.12.7333		33 n 63 V, 1%	
C.....55	59.06.0104		100 n 63 V, 10%	
C.....56	59.06.0104		100 n 63 V, 10%	
C.....57	59.22.4101		100 u 16 V, 20%	
C.....58	59.06.0104		100 n 63 V, 10%	
C.....59	59.22.4101		100 u 16 V, 20%	
C.....60	59.06.0104		100 n 63 V, 10%	
C.....61	59.22.4470		47 u 16 V, 20%	
C.....62	59.22.4470		47 u 16 V, 20%	
C.....63	59.22.4101		100 u 16 V, 20%	
C.....64	59.06.0104		100 n 63 V, 10%	
C.....65	59.22.4101		100 u 16 V, 20%	
C.....66	59.06.0104		100 n 63 V, 10%	
C.....67	59.06.0104		100 n 63 V, 10%	
C.....68	59.06.0104		100 n 63 V, 10%	
C.....69	59.06.0104		100 n 63 V, 10%	
C.....70	59.22.4101		100 u 16 V, 20%	
C.....71	59.06.0104		100 n 63 V, 10%	
C.....72	59.22.4101		100 u 16 V, 20%	
C.....73	59.22.4101		100 u 16 V, 20%	
C.....74	59.22.4470		47 u 16 V, 20%	
C.....75	59.12.7104		100 n 63 V, 1%	
C.....76	59.22.4470		47 u 16 V, 20%	
C.....77	59.22.4470		47 u 16 V, 20%	
C.....78	59.22.4470		47 u 16 V, 20%	
C.....79	59.22.4101		100 u 16 V, 20%	
C.....80	59.22.4470		47 u 16 V, 20%	
C.....81	59.22.4470		47 u 16 V, 20%	
C.....82	59.22.4101		100 u 16 V, 20%	
C.....83	59.22.4470		47 u 16 V, 20%	
C.....84	59.22.4470		47 u 16 V, 20%	
C.....85	59.12.7104		100 n 63 V, 1%	
C.....86	59.22.4101		100 u 16 V, 20%	
C.....87	59.22.4101		100 u 16 V, 20%	
C.....88	59.05.2152		1.5 n 160 V, 2.5%	

SIDE BOARD EQ+MIC. AMP.



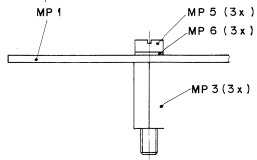
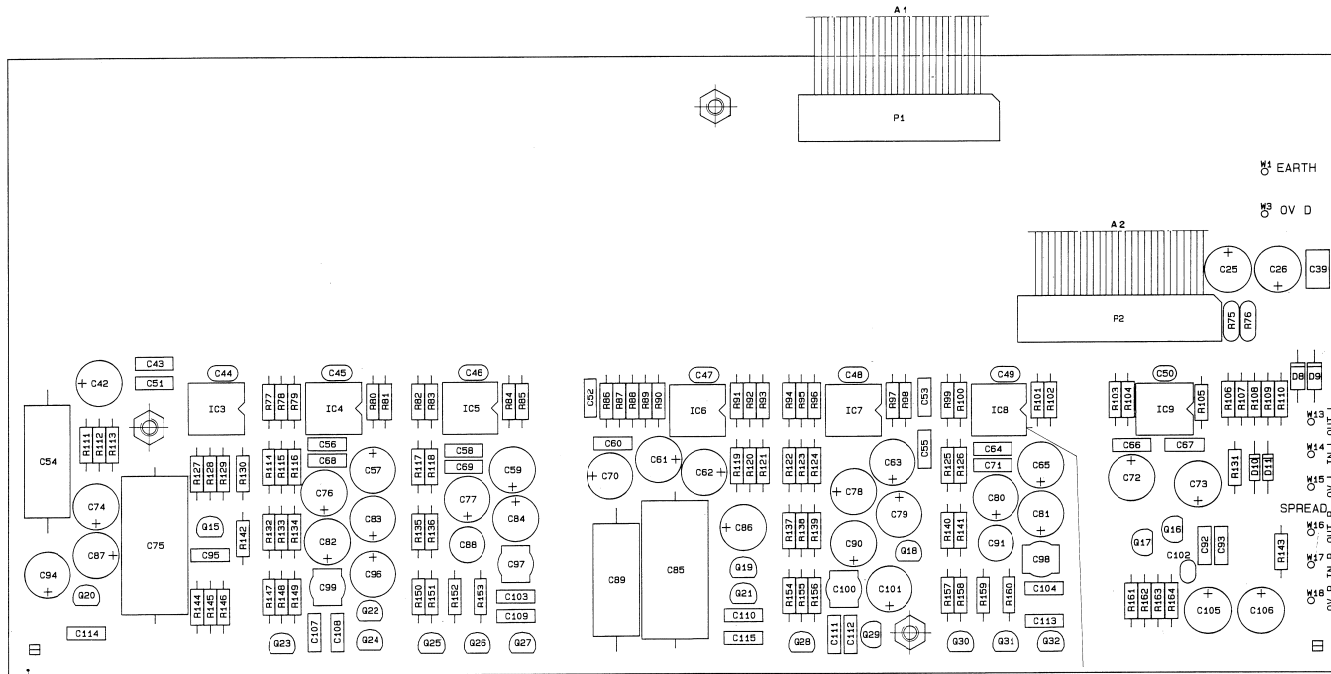
1.990.288.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....89		59.12.7333	33 n	63 V, 1%,					
C....90		59.22.4101	100 u	16 V, 20%,					
C....91		59.05.2152	1.5 n	160 V, 2.5%,					
C....92		59.06.0682	6.8 n	63 V, 10%,					
C....93		59.06.0682	6.8 n	63 V, 10%,					
C....94		59.22.4101	100 u	16 V, 20%,					
C....95		59.06.0682	6.8 n	63 V, 10%,					
C....96		59.22.4101	100 u	16 V, 20%,					
C....97		59.05.2472	4.7 n	63 V, 2.5%,					
C....98		59.05.2472	4.7 n	63 V, 2.5%,					
C....99		59.05.2472	4.7 n	63 V, 2.5%,					
C....100		59.05.2472	4.7 n	63 V, 2.5%,					
C....101		59.22.4470	47 u	16 V, 20%,					
C....102		59.34.4271	270 p	63 V, 5%,					
C....103		59.06.0682	6.8 n	63 V, 10%,					
C....104		59.06.0682	6.8 n	63 V, 10%,					
C....105		59.22.4101	100 u	16 V, 20%,					
C....106		59.22.4101	100 u	16 V, 20%,					
C....107		59.06.0682	6.8 n	63 V, 10%,					
C....108		59.06.0682	6.8 n	63 V, 10%,					
C....109		59.06.0682	6.8 n	63 V, 10%,					
C....110		59.06.0682	6.8 n	63 V, 10%,					
C....111		59.06.0682	6.8 n	63 V, 10%,					
C....112		59.06.0682	6.8 n	63 V, 10%,					
C....113		59.06.0682	6.8 n	63 V, 10%,					
C....114		59.06.0682	6.8 n	63 V, 10%,					
C....115		59.06.0682	6.8 n	63 V, 10%,					
02 C....116		59.34.2330	33 pF	63 V, 5%					
02 C....117		59.34.2330	33 pF	63 V, 5%					
02 C....118		59.34.2220	22 pF	63 V, 5%					
D....1		50.04.0125	1N4448						
D....2		50.04.0125	1N4448						
D....3		50.04.0125	1N4448						
D....4		50.04.0125	1N4448						
D....5		50.04.0125	1N4448						
D....6		50.04.0125	1N4448						
D....7		50.04.0125	1N4448						
D....8		50.04.0105	1N4004						
D....9		50.04.0105	1N4004						
D....10		50.04.0125	1N4448						
D....11		50.04.0125	1N4448						
IC....1		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....2		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....3		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....4		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....5		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....6		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....7		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....8		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
IC....9		50.09.0117	MC33078	DIP08, DUAL LOW NOISE AMPLIFIER					
04 IC....9		50.09.0101	TL072 CP	DIP08, DUAL FET-AMPLIFIER					
K....1		56.04.0195	2*U	RELAYS 6 V					
K....2		56.04.0195	2*U	RELAYS 6 V					
L....1		1.022.207.00	RM6-R/6	COMMON-MODE-REJECTION COIL					
L....2		1.022.207.00	RM6-R/6	COMMON-MODE-REJECTION COIL					
P....1		.	not used	see A1					
P....2		.	not used	see A2					
Q....1		50.03.0516	BC337	NPN, T092-1, MATCH					
Q....2		50.03.0516	BC337	NPN, T092-1, MATCH					
Q....3		50.03.0350	J-112	NFET, T092-5					
Q....4		50.03.0350	J-112	NFET, T092-5					
Q....5		50.03.0350	J-112	NFET, T092-5					
Q....6		50.03.1130	J-110	NFET, T092-5					
Q....7		50.03.1130	J-110	NFET, T092-5					
Q....8		50.03.0350	J-112	NFET, T092-5					
Q....9		50.03.1130	J-110	NFET, T092-5					
Q....10		50.03.0350	J-112	NFET, T092-5					
Q....11		50.03.0350	J-112	NFET, T092-5					
Q....12		50.03.0350	J-112	NFET, T092-5					
Q....13		50.03.1130	J-110	NFET, T092-5					
Q....14		50.03.0350	J-112	NFET, T092-5					
Q....15		50.03.0350	J-112	NFET, T092-5					
Q....16		50.03.1130	J-110	NFET, T092-5					
Q....17		50.03.1130	J-110	NFET, T092-5					
Q....18		50.03.0350	J-112	NFET, T092-5					
Q....19		50.03.0350	J-112	NFET, T092-5					
Q....20		50.03.0350	J-112	NFET, T092-5					
Q....21		50.03.0350	J-112	NFET, T092-5					
Q....22		50.03.0350	J-112	NFET, T092-5					
Q....23		50.03.0515	BC307B	PNP, T092-1					
Q....24		50.03.0350	J-112	NFET, T092-5					
Q....25		50.03.0515	BC307B	PNP, T092-1					
Q....26		50.03.0350	J-112	NFET, T092-5					
Q....27		50.03.0350	J-112	NFET, T092-5					
Q....28		50.03.0515	BC307B	PNP, T092-1					
Q....29		50.03.0350	J-112	NFET, T092-5					
Q....30		50.03.0515	BC307B	PNP, T092-1					
Q....31		50.03.0350	J-112	NFET, T092-5					
Q....32		50.03.0350	J-112	NFET, T092-5					
R....1		57.11.3105	1 MOhm	MF, 1%					
01 R....1		57.11.3103	10 kOhm	MF, 1%					
03 R....1		57.11.3105	1 MOhm	MF, 1%					
R....2		57.11.3105	10 kOhm	MF, 1%					
R....3		57.11.3105	1 MOhm	MF, 1%					
R....4		57.11.3103	10 kOhm	MF, 1%					
R....5		57.11.5335	3.3 MOhm	MF, 5%					
R....6		57.11.3105	1 MOhm	MF, 1%					
R....7		57.11.3103	10 kOhm	MF, 1%					
R....8		57.11.3105	1 MOhm	MF, 1%					
R....9		57.11.3105	1 MOhm	MF, 1%					
R....10		57.11.3103	10 kOhm	MF, 1%					
R....11		57.11.3104	100 kOhm	MF, 1%					
R....12		57.11.3223	22 kOhm	MF, 1%					
R....13		57.11.3183	18 kOhm	MF, 1%					
R....14		57.11.3911	910 Ohm	MF, 1%					
R....15		57.11.3561	560 Ohm	MF, 1%					
R....16		57.11.3152	1.5 kOhm	MF, 1%					
R....17		57.11.3103	10 kOhm	MF, 1%					
R....18		57.11.3152	1.5 kOhm	MF, 1%					
R....19		57.11.3561	560 Ohm	MF, 1%					
R....20		57.11.3911	910 Ohm	MF, 1%					
R....21		57.11.3332	3.3 kOhm	MF, 1%					
R....22		57.11.3103	10 kOhm	MF, 1%					
R....23		57.11.3913	91 kOhm	MF, 1%					
R....24		57.11.3471	470 Ohm	MF, 1%					
R....25		57.11.3751	750 Ohm	MF, 1%					
R....26		57.11.3100	10 Ohm	MF, 1%					
R....27		57.11.3131	130 Ohm	MF, 1%					
R....28		57.11.3105	1 MOhm	MF, 1%					
01 R....28		57.11.3103	10 kOhm	MF, 1%					
03 R....28		57.11.3105	1 MOhm	MF, 1%					
R....29		57.11.3105	1 MOhm	MF, 1%					
R....30		57.11.3105	1 MOhm	MF, 1%					
01 R....30		57.11.3103	10 kOhm	MF, 1%					
03 R....30		57.11.3104	100 kOhm	MF, 1%					
R....31		57.11.3272	2.7 kOhm	MF, 1%					
R....32		57.11.3113	11 kOhm	MF, 1%					
R....33		57.11.3223	22 kOhm	MF, 1%					
R....34		57.11.3223	22 kOhm	MF, 1%					
R....35		57.11.3914	910 kOhm	MF, 1%					
R....36		57.11.3332	3.3 kOhm	MF, 1%					
R....37		57.11.3152	1.5 kOhm	MF, 1%					
R....38		57.11.3152	1.5 kOhm	MF, 1%					
R....39		57.11.3562	5.6 kOhm	MF, 1%					
R....40		57.11.3183	18 kOhm	MF, 1%					
R....41		57.11.3105	1 MOhm	MF, 1%					
01 R....41		57.11.3103	10 kOhm	MF, 1%					
03 R....41		57.11.5335	3.3 MOhm	MF, 5%					
R....42		57.11.3105	1 MOhm	MF, 1%					
01 R....42		57.11.3103	10 kOhm	MF, 1%					
03 R....42		57.11.3105	1 MOhm	MF, 1%					
R....43		57.11.3471	470 Oh						

SIDE BOARD EQ ESE



1.990.289.00



Autoren	
12.2.91	FX 4 4
Datum	27.3.90
Gez.	W. S. A.
Gez.	W.
Index	
Kopie Nr.	

STUDER REGENSDORF ZÜRICH	Bauzeichnung	SIDE BOARD EQ ESE	Nr. 1.990.289-00
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Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
A	1	1.023.112.01	26-wire RIBBON CABLE	0,06 m (einsaitige Zugentl.)
A	2	1.023.112.02	26-wire RIBBON CABLE	0,10 m (einsaitige Zugentl.)
C	25	59.22.4470	47 u 16 V, 20%	
C	26	59.22.4470	47 u 16 V, 20%	
C	39	59.06.0474	470 n 63 V, 10%	
C	42	59.22.4470	47 u 16 V, 20%	
C	43	59.06.0104	100 n 63 V, 10%	
C	44	59.32.1151	150 p 400 V, 10%	
C	44	59.34.2330	33 p 63 V, 5%	
C	45	59.32.1151	150 p 400 V, 10%	
C	45	59.34.2330	33 p 63 V, 5%	
C	46	59.32.1151	150 p 400 V, 10%	
C	46	59.34.2330	33 p 63 V, 5%	
C	47	59.32.1151	150 p 400 V, 10%	
C	47	59.34.2330	33 p 63 V, 5%	
C	48	59.32.1151	150 p 400 V, 10%	
C	48	59.34.2330	33 p 63 V, 5%	
C	49	59.32.1151	150 p 400 V, 10%	
C	49	59.34.2330	33 p 63 V, 5%	
C	50	59.34.4271	270 p 63 V, 5%	N750
C	51	59.06.0104	100 n 63 V, 10%	
C	52	59.06.0104	100 n 63 V, 10%	
C	53	59.06.0104	100 n 63 V, 10%	
C	54	59.12.7333	33 n 63 V, 1%	
C	55	59.06.0104	100 n 63 V, 10%	
C	56	59.06.0104	100 n 63 V, 10%	
C	57	59.22.4101	100 u 16 V, 20%	
C	58	59.06.0104	100 n 63 V, 10%	
C	59	59.22.4101	100 u 16 V, 20%	
C	60	59.06.0104	100 n 63 V, 10%	
C	61	59.22.4470	47 u 16 V, 20%	
C	62	59.22.4470	47 u 16 V, 20%	
C	63	59.22.4101	100 u 16 V, 20%	
C	64	59.06.0104	100 n 63 V, 10%	
C	65	59.22.4101	100 u 16 V, 20%	
C	66	59.06.0104	100 n 63 V, 10%	
C	67	59.06.0104	100 n 63 V, 10%	
C	68	59.06.0104	100 n 63 V, 10%	
C	69	59.06.0104	100 n 63 V, 10%	
C	70	59.22.4101	100 u 16 V, 20%	
C	71	59.06.0104	100 n 63 V, 10%	
C	72	59.22.4101	100 u 16 V, 20%	
C	73	59.22.4101	100 u 16 V, 20%	
C	74	59.22.4470	47 u 16 V, 20%	
C	75	59.12.7104	100 n 63 V, 1%	
C	76	59.22.4470	47 u 16 V, 20%	
C	77	59.22.4470	47 u 16 V, 20%	
C	78	59.22.4470	47 u 16 V, 20%	
C	79	59.22.4101	100 u 16 V, 20%	
C	80	59.22.4470	47 u 16 V, 20%	
C	81	59.22.4470	47 u 16 V, 20%	
C	82	59.22.4101	100 u 16 V, 20%	
C	83	59.22.4470	47 u 16 V, 20%	
C	84	59.22.4470	47 u 16 V, 20%	
C	85	59.12.7104	100 n 63 V, 1%	
C	86	59.22.4101	100 u 16 V, 20%	
C	87	59.22.4101	100 u 16 V, 20%	
C	88	59.05.2152	1.5 n 160 V, 2.5%	
C	89	59.12.7333	33 n 63 V, 1%	
C	90	59.22.4101	100 u 16 V, 20%	
C	91	59.05.2152	1.5 n 160 V, 2.5%	
C	92	59.06.0682	6.8 n 63 V, 10%	
C	93	59.06.0682	6.8 n 63 V, 10%	
C	94	59.22.4101	100 u 16 V, 20%	
C	95	59.06.0682	6.8 n 63 V, 10%	
C	96	59.22.4101	100 u 16 V, 20%	
C	97	59.05.2472	4.7 n 63 V, 2.5%	
C	98	59.05.2472	4.7 n 63 V, 2.5%	
C	99	59.05.2472	4.7 n 63 V, 2.5%	
C	100	59.05.2472	4.7 n 63 V, 2.5%	
C	101	59.22.4470	47 u 16 V, 20%	
C	102	59.34.4271	270 p 63 V, 5%	N750
C	103	59.06.0682	6.8 n 63 V, 10%	
C	104	59.06.0682	6.8 n 63 V, 10%	
C	105	59.22.4101	100 u 16 V, 20%	
C	106	59.22.4101	100 u 16 V, 20%	
C	107	59.06.0682	6.8 n 63 V, 10%	
C	108	59.06.0682	6.8 n 63 V, 10%	
C	109	59.06.0682	6.8 n 63 V, 10%	
C	110	59.06.0682	6.8 n 63 V, 10%	
C	111	59.06.0682	6.8 n 63 V, 10%	
C	112	59.06.0682	6.8 n 63 V, 10%	
C	113	59.06.0682	6.8 n 63 V, 10%	
C	114	59.06.0682	6.8 n 63 V, 10%	
C	115	59.06.0682	6.8 n 63 V, 10%	
D	8	50.04.0105	1M4004	
D	9	50.04.0105	1M4004	
D	10	50.04.0125	1M4448	
D	11	50.04.0125	1M4448	
IC	3	50.09.0117	MC33078 DIP08, DUAL LOW NOISE AMPLIFIER	
IC	4	50.09.0117	MC33078 DIP08, DUAL LOW NOISE AMPLIFIER	
IC	5	50.09.0117	MC33078 DIP08, DUAL LOW NOISE AMPLIFIER	
IC	6	50.09.0117	MC33078 DIP08, DUAL LOW NOISE AMPLIFIER	
IC	7	50.09.0117	MC33078 DIP08, DUAL LOW NOISE AMPLIFIER	



SIDE BOARD EQ

1.990.289.00

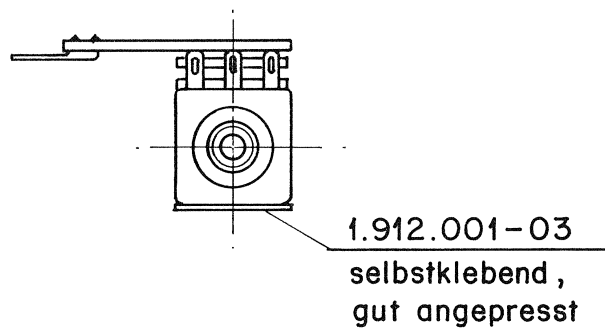
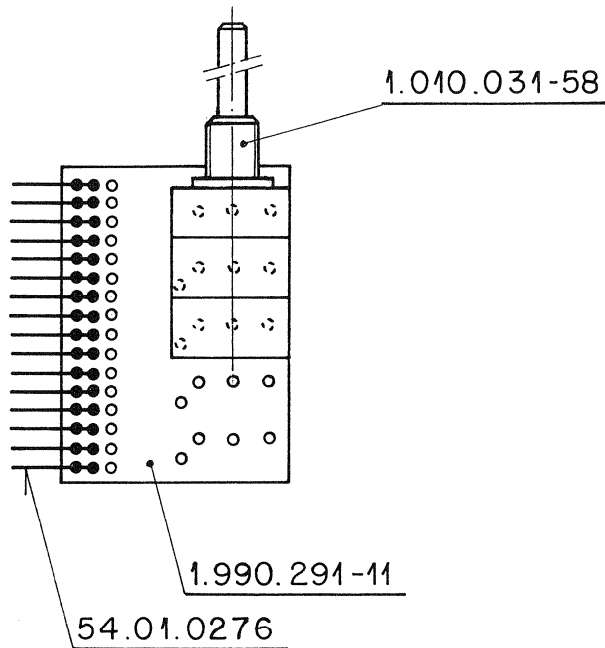
Id	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Id	POS.	REF.No.	DESCRIPTION	MANUFACTURER
IC...	8	50.09.0117	MC3078	DIPOB, DUAL LOW NOISE AMPLIFIER	R...	147	57.11.3104	100 kOhm	MF, 1%
IC...	9	50.09.0117	MC3078	DIPOB, DUAL LOW NOISE AMPLIFIER	R...	148	57.11.3684	680 kOhm	MF, 1%
02 IC...	9	50.09.0101	T1072 CP	DIPOB, DUAL LOW NOISE AMPLIFIER	R...	149	57.11.5106	10 MOhm	MF, 5%
					R...	150	57.11.3104	100 kOhm	MF, 1%
P....	1	.	not used	see A1	R...	151	57.11.3684	680 kOhm	MF, 1%
P....	2	.	not used	see A2	R...	152	57.11.5106	10 MOhm	MF, 5%
Q....	15	50.03.0350	J-112	NFET, T092-5	R...	153	57.11.5106	10 MOhm	MF, 5%
Q....	16	50.03.1130	J-110	NFET, T092-5	R...	154	57.11.3104	100 kOhm	MF, 1%
Q....	17	50.03.1130	J-110	NFET, T092-5	R...	155	57.11.3684	680 kOhm	MF, 1%
Q....	18	50.03.0350	J-112	NFET, T092-5	R...	156	57.11.5106	10 MOhm	MF, 5%
Q....	19	50.03.0350	J-112	NFET, T092-5	R...	157	57.11.3104	100 kOhm	MF, 1%
Q....	20	50.03.0350	J-112	NFET, T092-5	R...	158	57.11.5106	10 MOhm	MF, 5%
					R...	159	57.11.3684	680 kOhm	MF, 1%
					R...	160	57.11.5106	10 MOhm	MF, 5%
Q....	21	50.03.0350	J-112	NFET, T092-5	R...	161	57.11.3104	100 kOhm	MF, 1%
Q....	22	50.03.0350	J-112	NFET, T092-5	R...	162	57.11.3102	1 kOhm	MF, 1%
Q....	23	50.03.0515	BC307B	PNP, T092-1	R...	163	57.11.3101	100 Ohm	MF, 1%
Q....	24	50.03.0350	J-112	NFET, T092-5	R...	164	57.11.3102	1 kOhm	MF, 1%
Q....	25	50.03.0515	BC307B	PNP, T092-1	MP....	1	1.990.289.11	1 pcs	SIDE BOARD PCB
Q....	26	50.03.0350	J-112	NFET, T092-5	MP....	2	1.990.289.01	1 pcs	Schirmblech SIDE BOARD
Q....	27	50.03.0350	J-112	NFET, T092-5	02 MP....	2	0	not used	see 1.990.230.00 ... 280.00
Q....	28	50.03.0515	BC307B	PNP, T092-1	MP....	3	1.010.157.27	3 pcs	Distanzbolzen M2-5x13mm
Q....	29	50.03.0350	J-112	NFET, T092-5	MP....	4	1.010.208.27	3 pcs	Mutterbolzen M2-5x14mm
Q....	30	50.03.0515	BC307B	PNP, T092-1	02 MP....	4	0	not used	see 1.990.230.00 ... 280.00
Q....	31	50.03.0350	J-112	NFET, T092-5	MP....	5	21.01.0279	3 pcs	Z-Schrauben M2-5x 6mm
Q....	32	50.03.0350	J-112	NFET, T092-5	MP....	6	24.16.1025	6 pcs	Rippenscheibe M2-5
R...	75	57.92.7013	0.5 A	60V, POLY-PTC	02 MP....	6	24.16.1025	3 pcs	Rippenscheibe M2-5
R...	76	57.92.7013	0.5 A	60V, POLY-PTC	MP....	7	53.03.0166	7 pcs	IC-Socket 8-pin
R...	77	57.11.3105	1 MOhm	MF, 1%					
R...	78	57.11.3222	2.2 kOhm	MF, 1%					
R...	79	57.11.3684	680 kOhm	MF, 1%					
R...	80	57.11.3103	10 kOhm	MF, 1%					
R...	81	57.11.3103	10 kOhm	MF, 1%					
R...	82	57.11.3684	680 kOhm	MF, 1%					
R...	83	57.11.3684	680 kOhm	MF, 1%					
R...	84	57.11.3103	10 kOhm	MF, 1%					
R...	85	57.11.3103	10 kOhm	MF, 1%					
R...	86	57.11.3223	2.2 kOhm	MF, 1%					
R...	87	57.11.3472	4.7 kOhm	MF, 1%					
R...	88	57.11.3684	680 kOhm	MF, 1%					
R...	89	57.11.3684	680 kOhm	MF, 1%					
R...	90	57.11.3684	680 kOhm	MF, 1%					
R...	91	57.11.3103	10 kOhm	MF, 1%					
R...	92	57.11.3102	1 kOhm	MF, 1%					
R...	93	57.11.3103	10 kOhm	MF, 1%					
R...	94	57.11.3105	1 MOhm	MF, 1%					
R...	95	57.11.3222	2.2 kOhm	MF, 1%					
R...	96	57.11.3684	680 kOhm	MF, 1%					
R...	97	57.11.3103	10 kOhm	MF, 1%					
R...	98	57.11.3103	10 kOhm	MF, 1%					
R...	99	57.11.3684	680 kOhm	MF, 1%					
R...	100	57.11.3684	680 kOhm	MF, 1%					
R...	101	57.11.3103	10 kOhm	MF, 1%					
R...	102	57.11.3103	10 kOhm	MF, 1%					
R...	103	57.11.3104	100 kOhm	MF, 1%					
R...	104	57.11.3102	1 kOhm	MF, 1%					
R...	105	57.11.3101	100 Ohm	MF, 1%					
R...	106	57.11.3102	1 kOhm	MF, 1%					
R...	107	57.11.6226	22 MOhm	MF, 10%					
R...	108	57.11.6226	22 MOhm	MF, 10%					
R...	109	57.11.3104	100 kOhm	MF, 1%					
R...	110	57.11.3102	1 kOhm	MF, 1%					
R...	111	57.11.3472	4.7 kOhm	MF, 1%					
R...	112	57.11.3684	680 kOhm	MF, 1%					
R...	113	57.11.3684	680 kOhm	MF, 1%					
R...	114	57.11.3183	18 kOhm	MF, 1%					
R...	115	57.11.3752	7.5 kOhm	MF, 1%					
R...	116	57.11.3362	3.6 kOhm	MF, 1%					
R...	117	57.11.3103	10 kOhm	MF, 1%					
R...	118	57.11.3102	1 kOhm	MF, 1%					
R...	119	57.11.5106	10 MOhm	MF, 5%					
R...	120	57.11.3682	6.8 kOhm	MF, 1%					
R...	121	57.11.5106	10 MOhm	MF, 5%					
R...	122	57.11.3752	7.5 kOhm	MF, 1%					
R...	123	57.11.3183	18 kOhm	MF, 1%					
R...	124	57.11.3362	3.6 kOhm	MF, 1%					
R...	125	57.11.3102	1 kOhm	MF, 1%					
R...	126	57.11.3103	10 kOhm	MF, 1%					
R...	127	57.11.3684	680 kOhm	MF, 1%					
R...	128	57.11.3682	6.8 kOhm	MF, 1%					
R...	129	57.11.3102	1 kOhm	MF, 1%					
R...	130	57.11.3103	10 kOhm	MF, 1%					
R...	131	57.11.3223	2.2 kOhm	MF, 1%					
R...	132	57.11.3472	4.7 kOhm	MF, 1%					
R...	133	57.11.3202	2 kOhm	MF, 1%					
R...	134	57.11.5106	10 MOhm	MF, 5%					
R...	135	57.11.3392	3.9 kOhm	MF, 1%					
R...	136	57.11.3684	680 kOhm	MF, 1%					
R...	137	57.11.5106	10 MOhm	MF, 5%					
R...	138	57.11.3202	2 kOhm	MF, 1%					
R...	139	57.11.3472	4.7 kOhm	MF, 1%					
R...	140	57.11.3392	3.9 kOhm	MF, 1%					
R...	141	57.11.3684	680 kOhm	MF, 1%					
R...	142	57.11.3103	10 kOhm	MF, 1%					
R...	143	57.11.3223	2.2 kOhm	MF, 1%					
R...	144	57.11.5106	10 MOhm	MF, 5%					
R...	145	57.11.3223	2.2 kOhm	MF, 1%					
R...	146	57.11.5106	10 MOhm	MF, 5%					

[01] 90/07/10 Verbesserung des Frequenzganges im EQ-Teil.
 [02] 91/02/12 Im IC 9 wird HF demoduliert. Dieser Effekt verschwindet bei der Verwendung von TET-OP TL 072CP. Schirmblech, Mutterbolzen und Rippenscheiben werden erst beim Einbau in die uebergordnete Baugruppe benoetigt und sind neu in deren Posliste.

1.990.289.00 SIDE BOARD EQ SCA90/04/2400
 1.990.289.00 SIDE BOARD EQ SCA90/07/1001
 1.990.289.00 SIDE BOARD EQ SCA91/02/1202

3 POT. 24,6mm BOARD

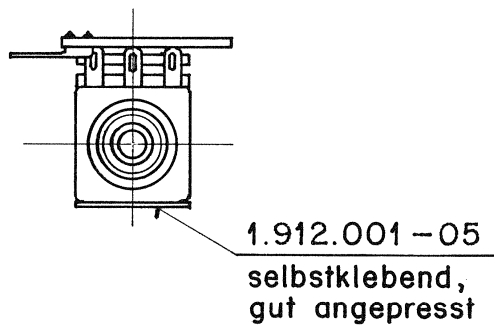
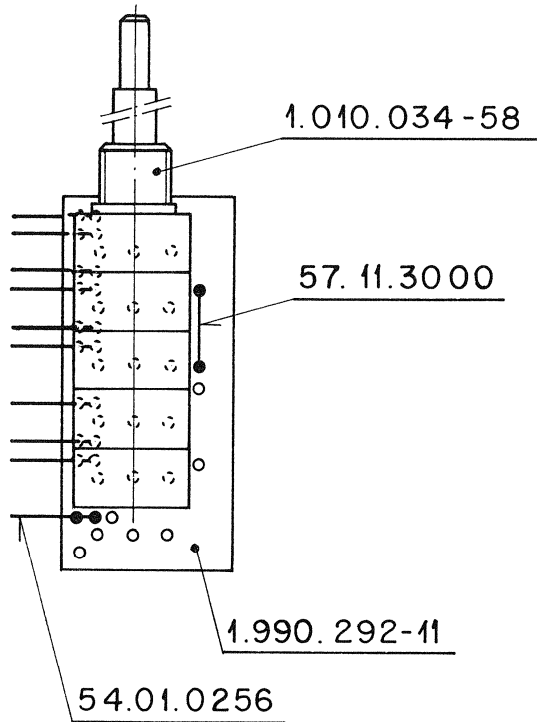
1.990.291.00



Ausgabe					③	
					②	
					①	
	11.10.89	<i>MS</i>	<i>W</i>	<i>90</i>	①	
	Datum	Gez.	Gepr.	Ges.	Index	
Kopie für:						
STUDER REGENSDORF ZÜRICH		Benennung 3 POT. 24,6mm BOARD			Nummer 1.990.291-00	

5 POT. 10mm BOARD

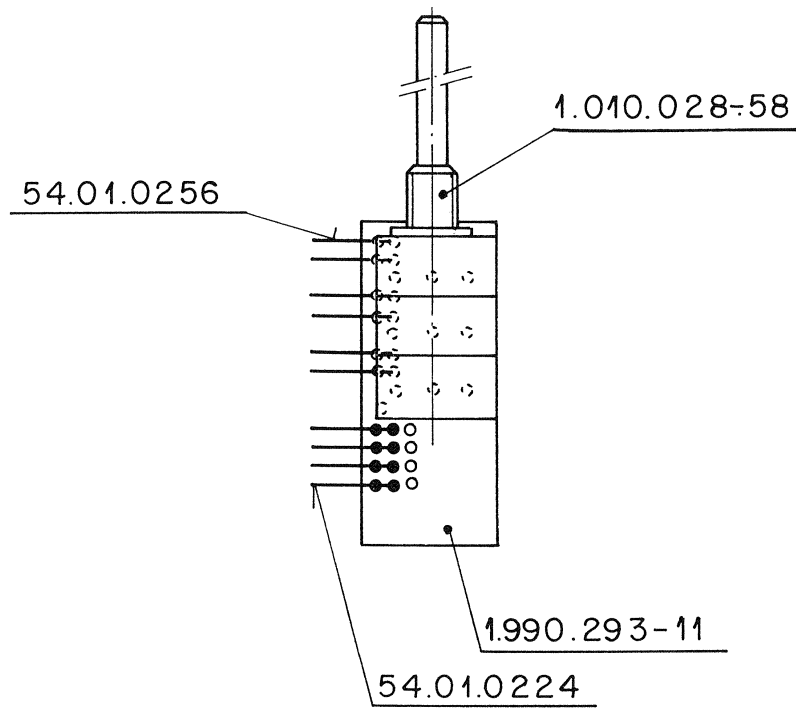
1.990.292.00



STUDER REGENSDORF ZÜRICH	Benennung: 5 POT. 10 mm BOARD	Nummer: 1.990.292-00	Kopie für:				③
			Ausgabe: 11.10.89 <i>W. K. Pa</i>				②
			Datum: 11.10.89				①
			Datum	Gez.	Gepr.	Ges.	Index	④

3 POT. 10mm BOARD

1.990.293.00

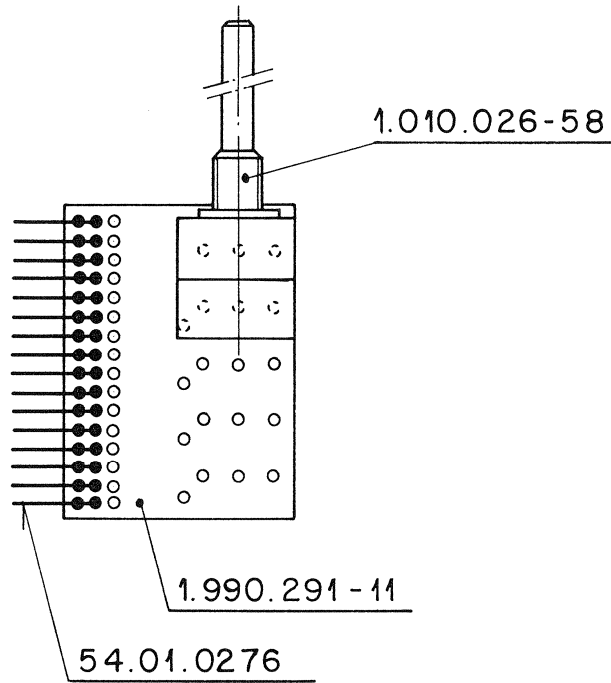


					③
					②
					①
11.10.89	A. St.	V.	Pa		①
11.10.89	Gez.	Gepr.	Ges.	Index	

STUDER REGENSDORF ZÜRICH	Bezeichnung: 3 POT. 10mm BOARD	Kopie für:
		Nummer: 1.990.293-00

2 POT. 24,6mm BOARD

1.990.294.00

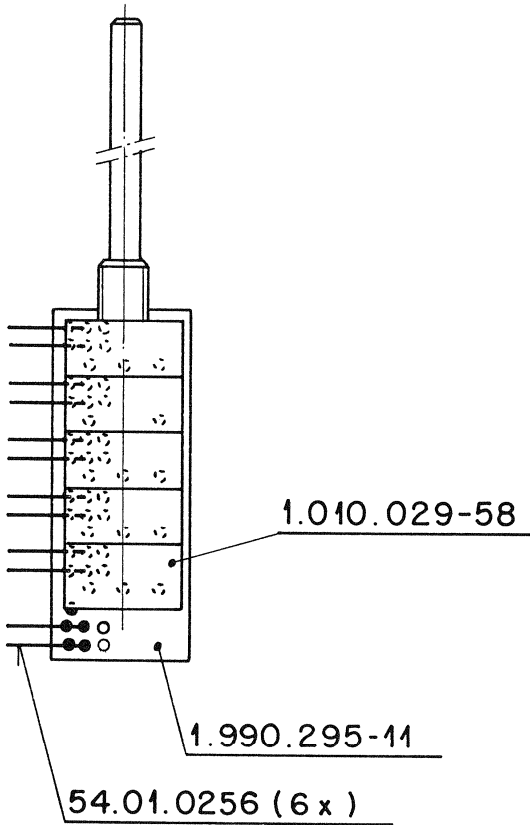


						③
						②
						①
Ausgabe:	11.10.89	<i>W. B.</i>	<i>V.</i>	<i>Go</i>		④
Datum:	Gez.	Gepr.	Ges.	Index		

STUDER REGENSDORF ZÜRICH	Benennung: 2 POT. 24,6mm BOARD	Kopie für:
		Nummer: 1.990.294-00

5 POT. 10mm BOARD

1.990.295.00

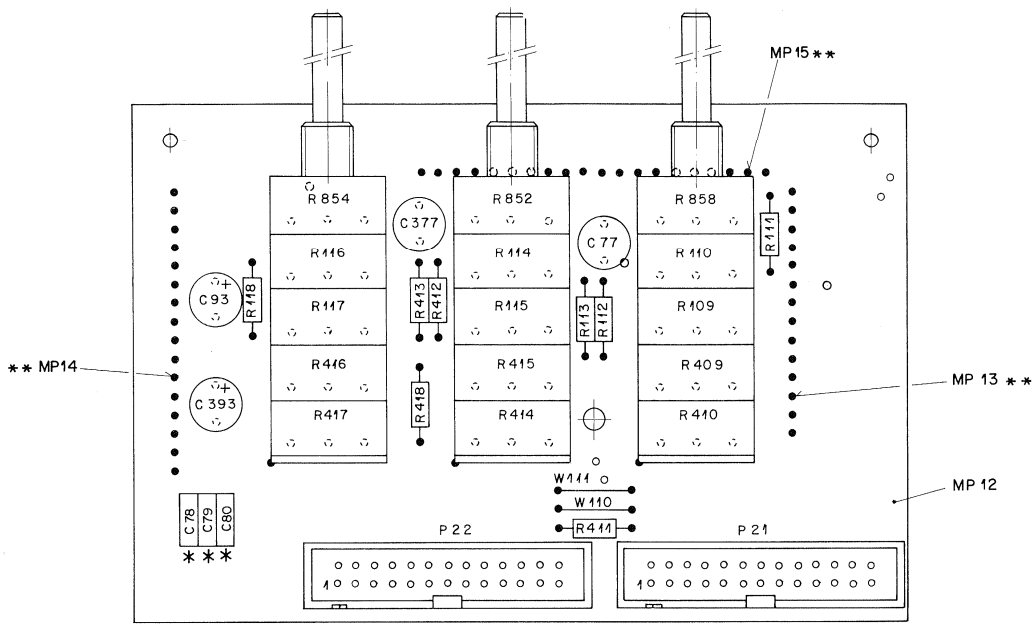


					③
					②
					①
Ausgabe	31.1.90	Gez.	Gepr.	Ges.	Index

STUDER REGENSDORF ZÜRICH	Benennung: 5 POT. 10mm BOARD	Kopie für:
		Nummer: 1.990.295-00

3 * 5 POT. 24,6mm BOARD

1.990.296.00



** MP13, MP14, MP15 auf Lötseite bestückt

* nicht bestückt

Ad ..POS... REF.No... DESCRIPTION.....MANUFACTURER

C...77	59.05.2472	4700 pF	2.5%		
C...78	. . .	not used			
C...79	. . .	not used			
C...80	. . .	not used			
C...93	59.22.3101	100 uF	10V EL		
C...377	59.05.2472	4700 pF	2.5%		
C...393	59.22.3101	100 uF	10V EL		
MP...12	1.990.296.11	1 pcs	3*5 Pot PCB	St	
01 MP...12	1.990.296.12	1 pcs	3*5 pot PCB	St	
MP...13	54.01.0324	1 pcs	Cis connector 14 Pol		
MP...14	54.01.0326	1 pcs	Cis connector 16 Pol		
MP...15	54.01.0330	1 pcs	Cis connector 20 Pol		
P...21	54.14.2003	26Pol	1/20 inch PCB flat-cabel connector	Bu,Ya	
P...22	54.14.2003	26Pol	1/20 inch Pcb flat-cabel connector	Bu,Ya	
R...109	1.010.030.58	100 kOhm	10% neg.log.comb.with R110/409/410/858	St	
R...110	. . .	100 KOhm	10% neg.log. see R109		
R...111	57.11.3392	3.9 kOhm			
R...112	57.11.3105	1 MOhm			
R...113	57.11.3472	4.7 kOhm			
R...114	1.010.030.58	100 kOhm	10% neg.log.comb.with R115/414/415/852	St	
R...115	. . .	100 KOhm	10% neg.log. see R114		
R...116	1.010.030.58	100 kOhm	10% neg.log.comb.with R117/416/417/854	St	
R...117	. . .	100 KOhm	10% neg.log. see R116		
R...118	57.11.3472	4.7 kOhm			
R...409	. . .	100 KOhm	10% neg.log. see R109		
R...410	. . .	100 KOhm	10% neg.log. see R109		
R...411	57.11.3392	3.9 kOhm			
R...412	57.11.3105	1 MOhm			
R...413	57.11.3472	4.7 kOhm			
R...414	. . .	100 KOhm	10% neg.log. see R114		
R...415	. . .	100 KOhm	10% neg.log. see R114		
R...416	. . .	100 KOhm	10% neg.log. see R116		
R...417	. . .	100 KOhm	10% neg.log. see R116		
R...418	57.11.3472	4.7 kOhm			
R...852	. . .	100 kOhm	20% lin. comb.with R114/115/414/415		
R...854	. . .	100 kOhm	20% lin. comb.with R116/117/416/417		
R...858	. . .	100 kOhm	20% lin. comb.with R109/110/409/410		
W...110	57.11.3000	0 Ohm			
W...111	57.11.3000	0 Ohm			

(01) 90/05/30 MP 12 NEW VERSION OF PCB

EL=Electrolytic, PP=Polypropylen

MANUFACTURER:

Bu=Burndy, St=Studer, Ya=Yamaichi

1.990.296.00 3*5 POT. 24.6MM BOARD TA 90/02/0900

1.990.296.00 3*5 POT. 24.6MM BOARD TA 90/05/3001

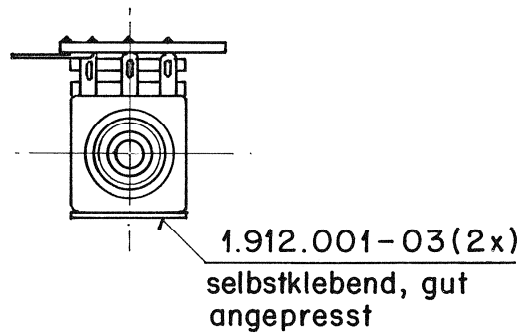
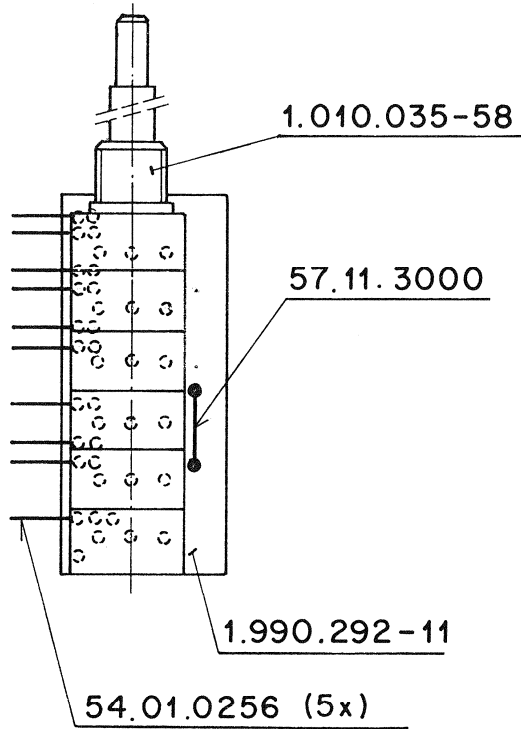
Änderung						③
Ausgaben	6.2.90					①
Datum		Gez.	Gepr.	Ges.	Index	②

Kopie für:

STUDER REGENSDORF ZÜRICH	Benennung: 3 * 5 POT. 24.6 mm BOARD	Nummer: 1.990.296-00
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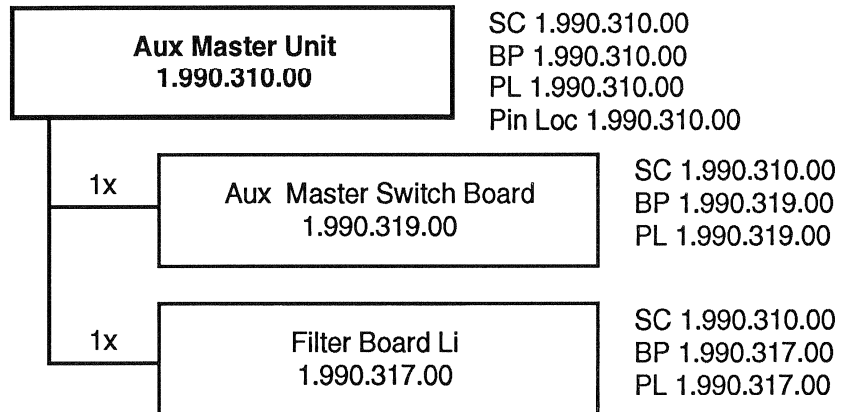
6 POT. 10mm BOARD

1.990.297.00

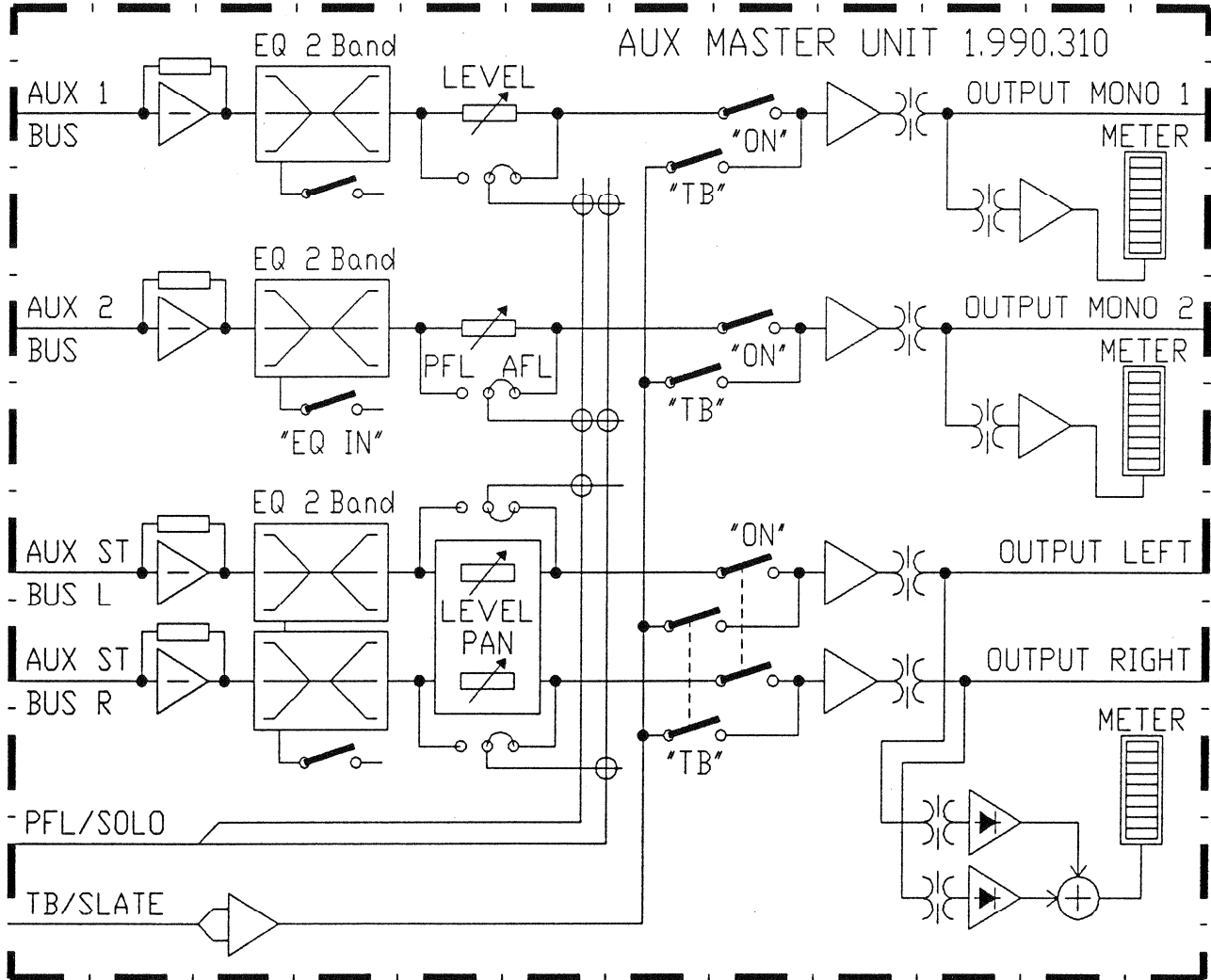


Ausgabe		Datum		Gez.	Gepr.	Ges.	Index
6.2.90				<i>JK</i>	<i>JK</i>	<i>JK</i>	①
Kopie für:							

STUDER REGENSDORF ZÜRICH	Bezeichnung: 6 POT. 10mm BOARD	Nummer: 1.990.297-00

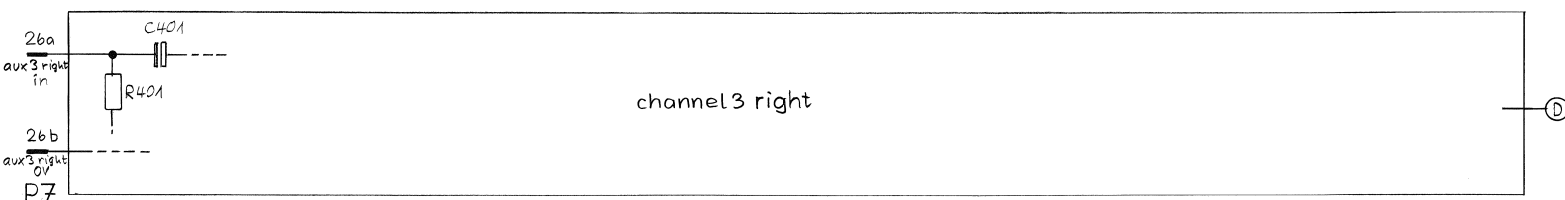
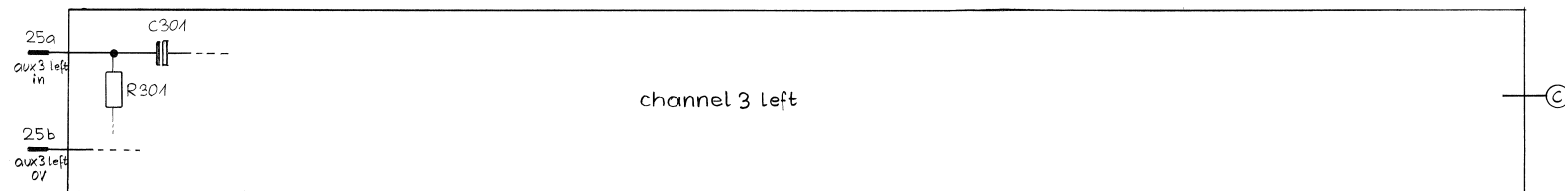
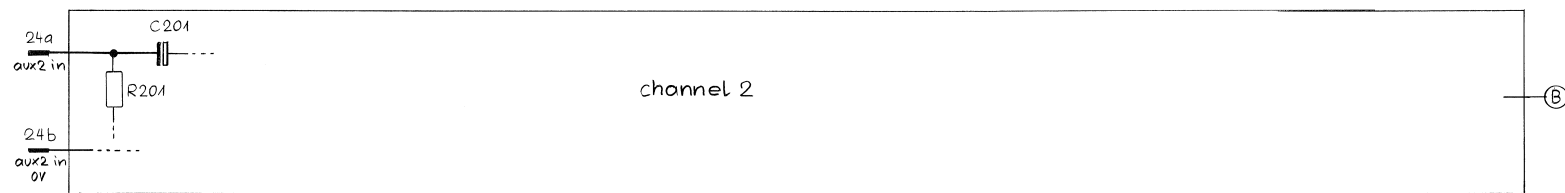
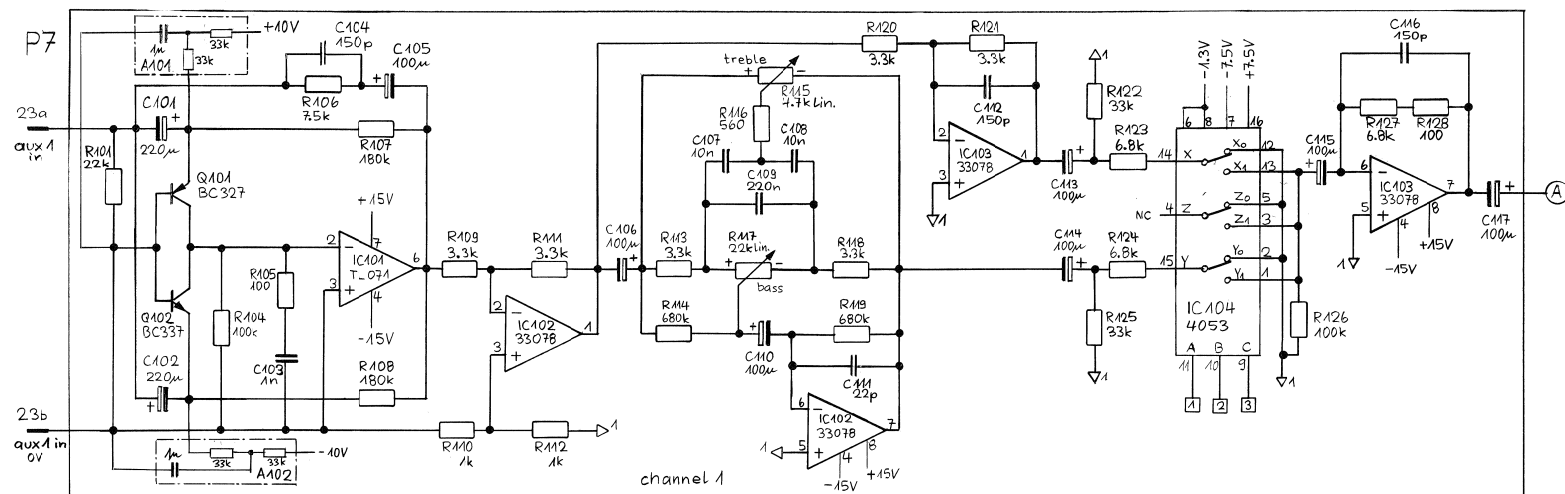
Aux Master Unit**1.990.310.00**

AUX MASTER UNIT 1.990.310.00



AUX MASTER UNIT

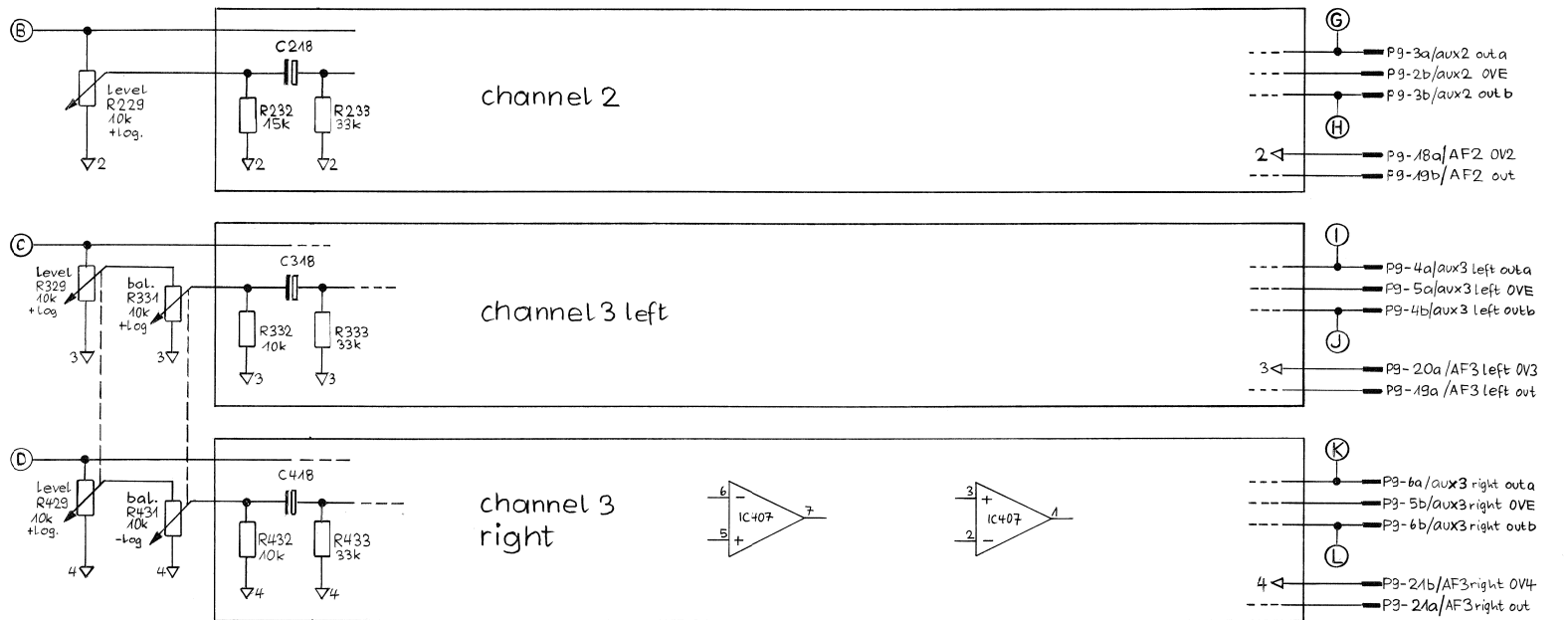
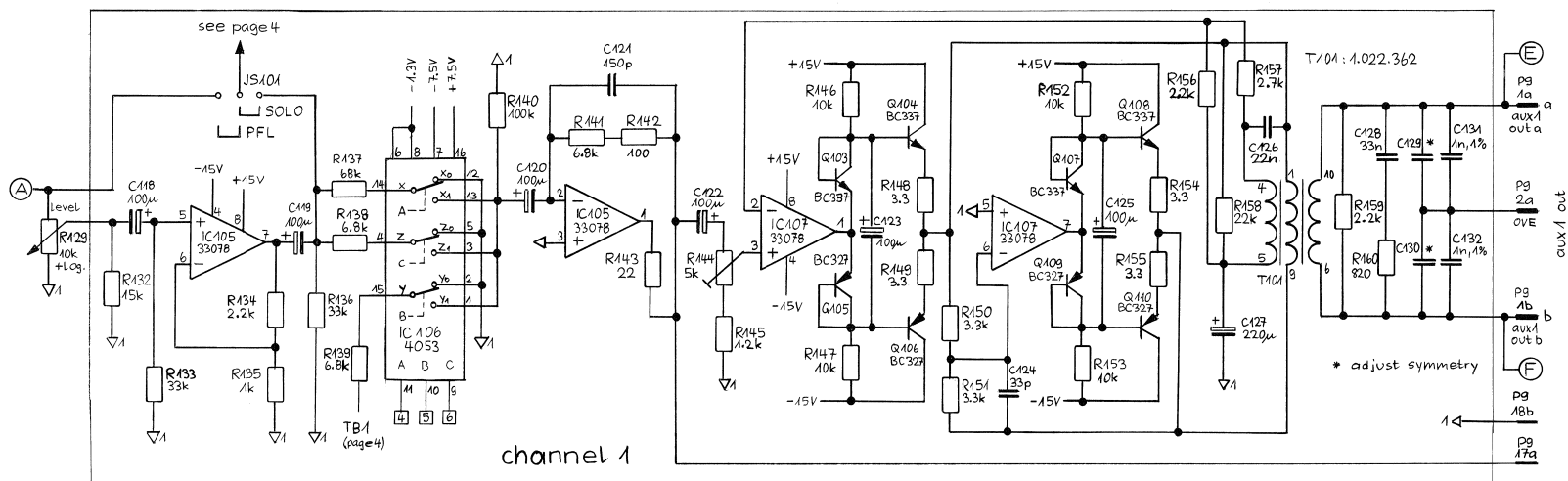
1.990.310.00



0	drawn 1-3-89 WY	1	10-4-91	2	16-3-92	PAGE 1 OF 6
STUDER						SC
AUX MASTER UNIT						1.990.310

AUX MASTER UNIT

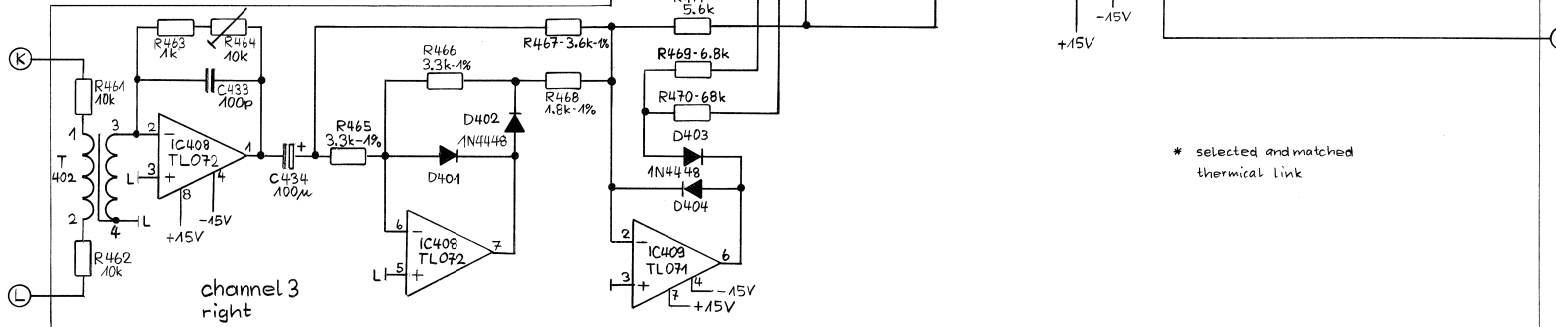
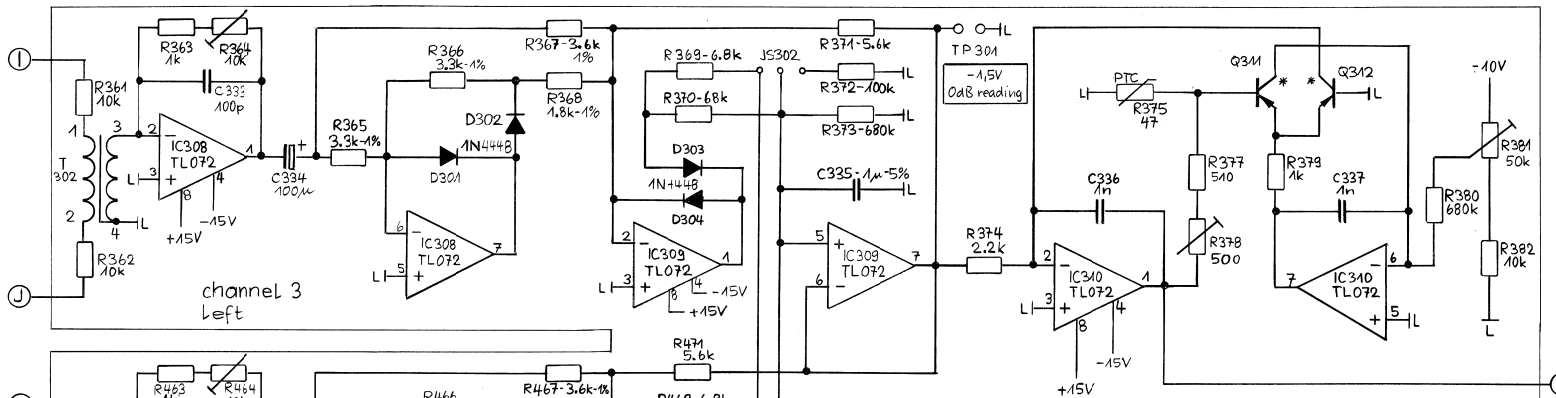
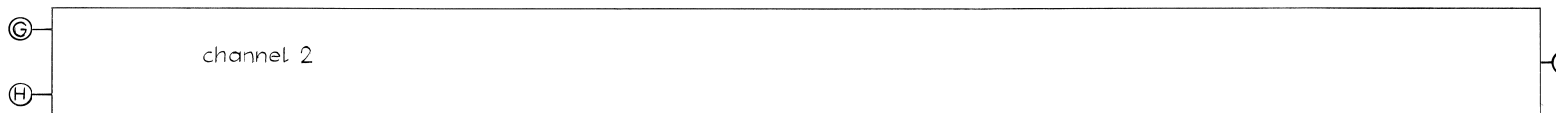
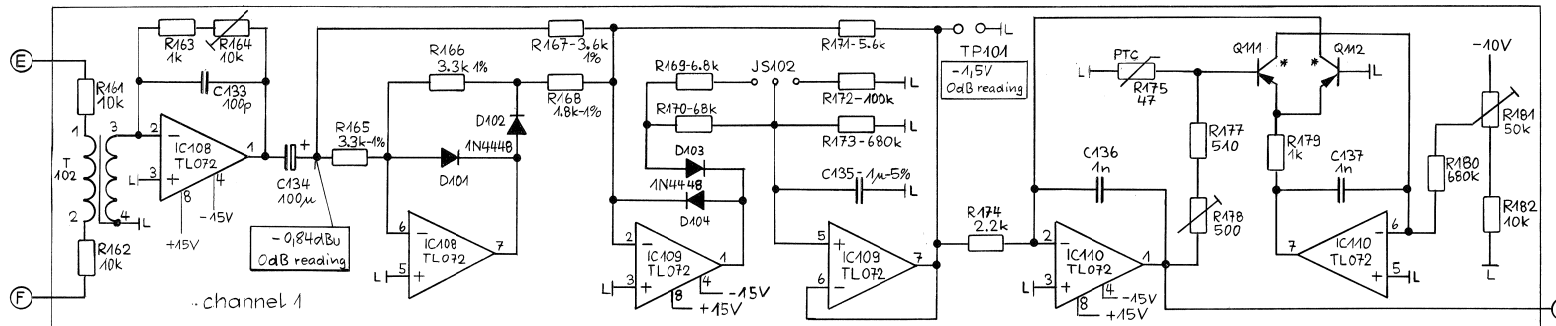
1.990.310.00



0	drawn 1-3-89 wy	1	10-4-91 my	2	16-3-92 my	PAGE 2 OF 6
STUDER						SC 1.990.310
AUX MASTER UNIT						

AUX MASTER UNIT

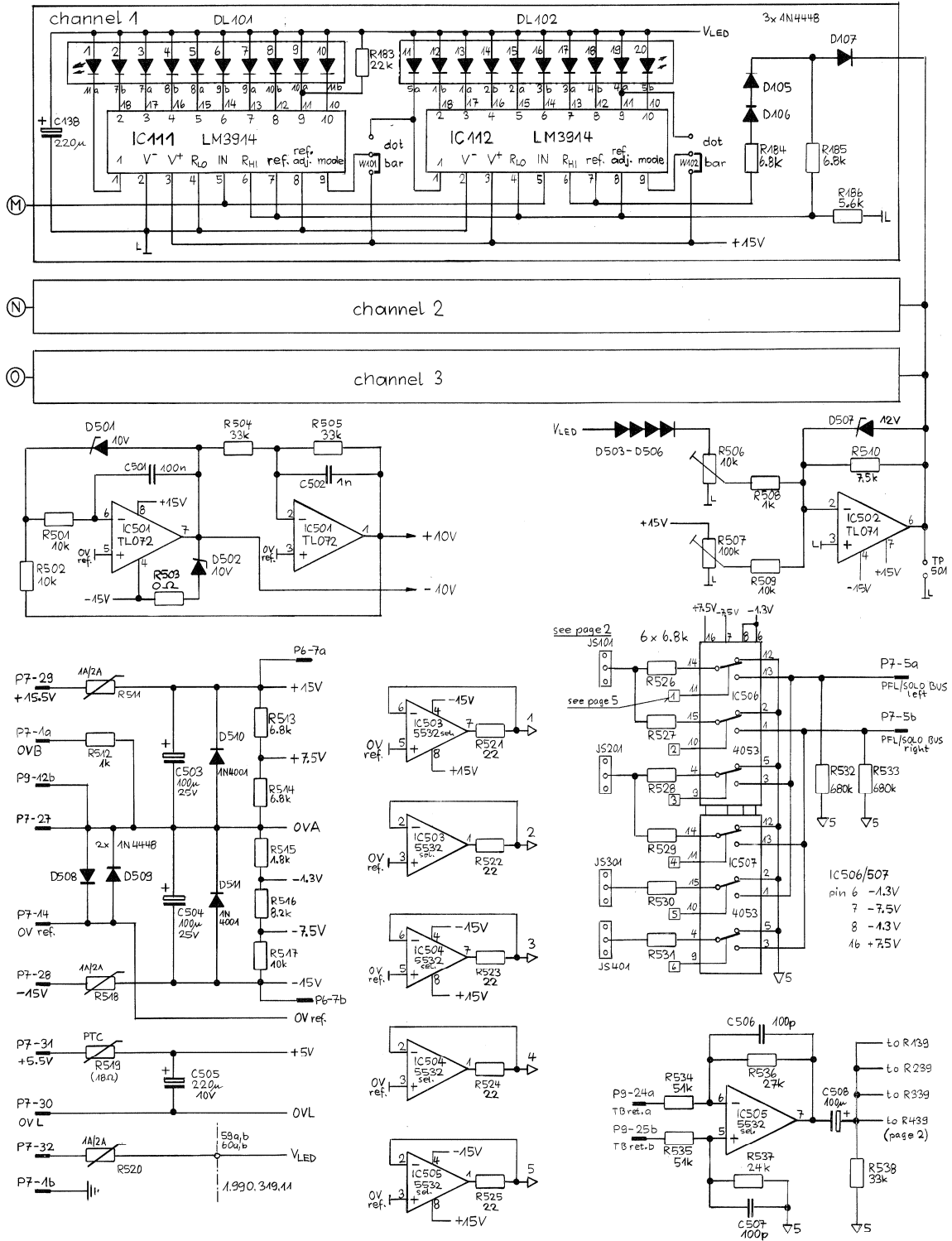
1.990.310.00



* selected and matched thermal link

AUX MASTER UNIT

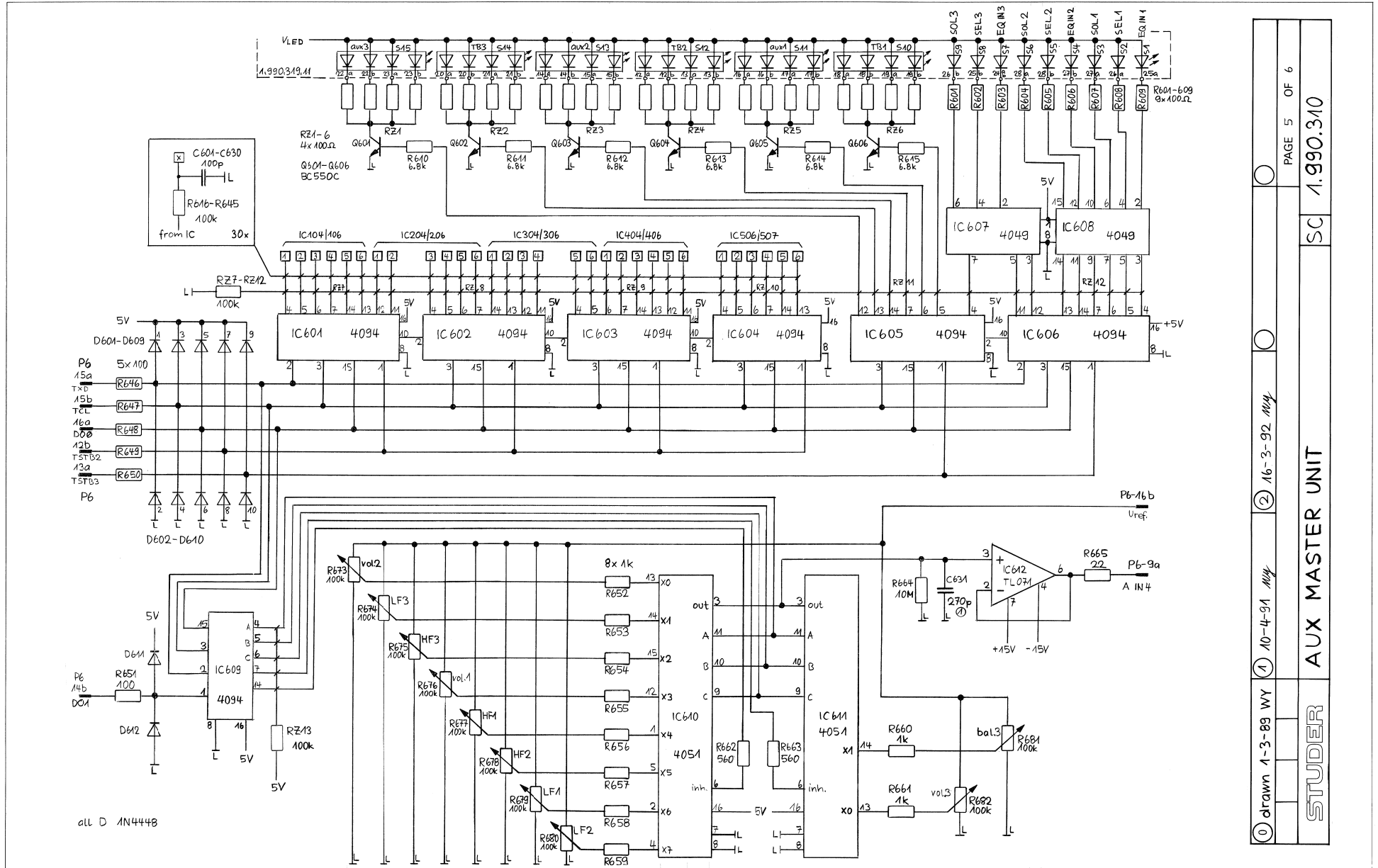
1.990.310.00



① drawn 1-3-89 wy	① 10-4-91 <i>my</i>	② 16-3-92 <i>my</i>	○	○
STUDER			AUX MASTER UNIT	SC 1,990.310
				PAGE 4 OF 6

AUX MASTER UNIT

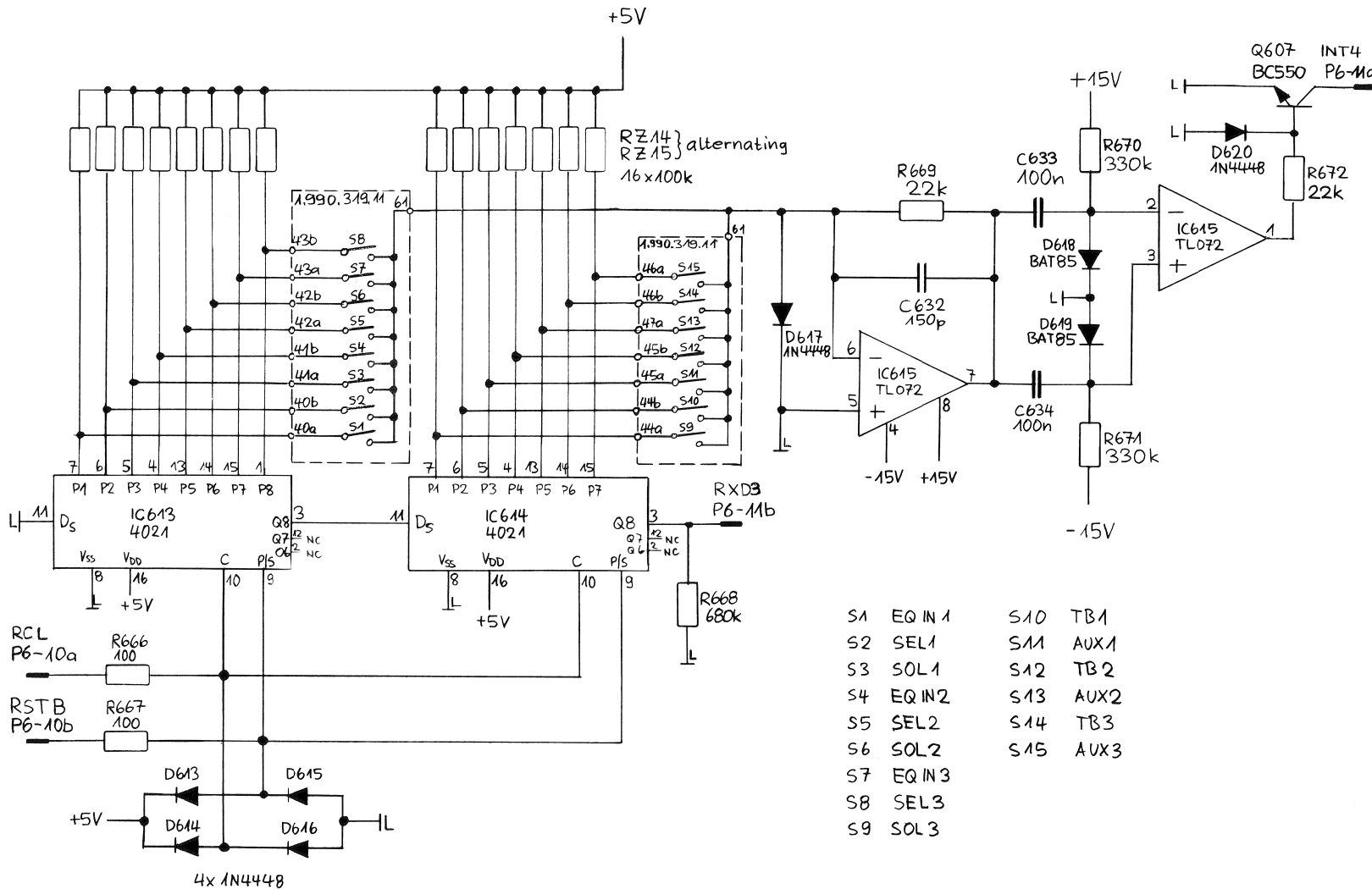
1.990.310.00



0	drawn 1-3-89 WY	1	10-4-91 My	2	16-3-92 My	SC	1.990.310	PAGE 5 OF 6
STUDER							AUX MASTER UNIT	

AUX MASTER UNIT

1.990.310.00



- | | | | |
|----|---------|-----|------|
| S1 | EQ IN 1 | S10 | TB1 |
| S2 | SEL1 | S11 | AUX1 |
| S3 | SOL1 | S12 | TB2 |
| S4 | EQ IN2 | S13 | AUX2 |
| S5 | SEL2 | S14 | TB3 |
| S6 | SOL2 | S15 | AUX3 |
| S7 | EQ IN3 | | |
| S8 | SEL3 | | |
| S9 | SOL3 | | |



AUX MASTER UNIT

1.990.310.00

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
A....1		1.990.319.00	aux master switch board	ST	C...317		59.22.4101	100 uF 16V	EL
A...101		1.990.317.00	filterboard li	ST	C...318		59.22.4101	100 uF 16V	EL
A...201		1.990.317.00	filterboard li	ST	C...319		59.22.4101	100 uF 16V	EL
A...301		1.990.317.00	filterboard li	ST	C...320		59.22.4101	100 uF 16V	EL
A...401		1.990.317.00	filterboard li	ST	C...321		59.34.4151	150 pF	CER
C...101		59.22.3221	220 uF 10V	EL	C...322		59.22.4101	100 uF 16V	EL
C...102		59.22.3221	220 uF 10V	EL	C...323		59.22.4101	100 uF 16V	EL
C...103		59.06.5102	1 nF 5%	PE	C...324		59.34.2330	33 pF	CER
C...104		59.34.4151	150 pF	CER	C...325		59.22.4101	100 uF 16V	EL
C...105		59.22.4101	100 uF 16V	EL	C...326		59.06.0223	22 nF 10%	PE
C...106		59.22.4101	100 uF 16V	EL	C...327		59.22.3221	220 uF 10V	EL
C...107		59.06.5103	10 nF 5%	PE	C...328		59.06.0333	33 nF 10%	PE
C...108		59.06.5103	10 nF 5%	PE	C...331		59.05.1102	1 nF 1%	PP
C...109		59.06.5224	220 nF 5%	PE	C...332		59.05.1102	1 nF 1%	PP
C...110		59.22.4101	100 uF 16V	EL	C...333		59.34.4101	100 pF	CER
C...111		59.34.2220	22 pF	CER	C...334		59.22.4101	100 uF 16V	EL
C...112		59.34.4151	150 pF	CER	C...335		59.06.5105	1 uF 5%	PE
C...113		59.22.4101	100 uF 16V	EL	C...336		59.06.5102	1 nF	EL
C...114		59.22.4101	100 uF 16V	EL	C...337		59.06.5102	1 nF	EL
C...115		59.22.4101	100 uF 16V	EL	C...338		59.22.3221	220 uF 10V	EL
C...116		59.34.4151	150 pF	CER	C...401		59.22.3221	220 uF 10V	EL
C...117		59.22.4101	100 uF 16V	EL	C...402		59.22.3221	220 uF 10V	EL
C...118		59.22.4101	100 uF 16V	EL	C...403		59.06.5102	1 nF 5%	PE
C...119		59.22.4101	100 uF 16V	EL	C...404		59.34.4151	150 pF	CER
C...120		59.22.4101	100 uF 16V	EL	C...405		59.22.4101	100 uF 16V	EL
C...121		59.34.4151	150 pF	CER	C...406		59.22.4101	100 uF 16V	EL
C...122		59.22.4101	100 uF 16V	EL	C...407		59.06.5103	10 nF 5%	PE
C...123		59.22.4101	100 uF 16V	EL	C...408		59.06.5103	10 nF 5%	PE
C...124		59.34.2330	33 pF	CER	C...409		59.06.5224	220 nF 5%	PE
C...125		59.22.4101	100 uF 16V	EL	C...410		59.22.4101	100 uF 16V	EL
C...126		59.06.0223	22 nF 10%	PE	C...411		59.34.2220	22 pF	CER
C...127		59.22.3221	220 uF 10V	EL	C...412		59.34.4151	150 pF	CER
C...128		59.06.0333	33 nF 10%	PE	C...413		59.22.4101	100 uF 16V	EL
C...131		59.05.1102	1 nF 1%	PP	C...414		59.22.4101	100 uF 16V	EL
C...132		59.05.1102	1 nF 1%	PP	C...415		59.22.4101	100 uF 16V	EL
C...133		59.34.4101	100 pF	CER	C...416		59.34.4151	150 pF	CER
C...134		59.22.4101	100 uF 16V	EL	C...417		59.22.4101	100 uF 16V	EL
C...135		59.06.5105	1 uF 5%	PE	C...418		59.22.4101	100 uF 16V	EL
C...136		59.06.5102	1 nF	EL	C...419		59.22.4101	100 uF 16V	EL
C...137		59.06.5102	1 nF	EL	C...420		59.22.4101	100 uF 16V	EL
C...138		59.22.3221	220 uF 10V	EL	C...421		59.34.4151	150 pF	CER
C...201		59.22.3221	220 uF 10V	EL	C...422		59.22.4101	100 uF 16V	EL
C...202		59.22.3221	220 uF 10V	EL	C...423		59.22.4101	100 uF 16V	EL
C...203		59.06.5102	1 nF 5%	PE	C...424		59.34.2330	33 pF	CER
C...204		59.34.4151	150 pF	CER	C...425		59.22.4101	100 uF 16V	EL
C...205		59.22.4101	100 uF 16V	EL	C...426		59.06.0223	22 nF 10%	PE
C...206		59.22.4101	100 uF 16V	EL	C...427		59.22.3221	220 uF 10V	EL
C...207		59.06.5103	10 nF 5%	PE	C...428		59.06.0333	33 nF 10%	PE
C...208		59.06.5103	10 nF 5%	PE	C...431		59.05.1102	1 nF 1%	PP
C...209		59.06.5224	220 nF 5%	PE	C...432		59.05.1102	1 nF 1%	PP
C...210		59.22.4101	100 uF 16V	EL	C...433		59.34.4101	100 pF	CER
C...211		59.34.2220	22 pF	CER	C...434		59.22.4101	100 uF 16V	EL
C...212		59.34.4151	150 pF	CER	C...501		59.06.5104	100 nF	PE
C...213		59.22.4101	100 uF 16V	EL	C...502		59.06.5102	1 nF	PE
C...214		59.22.4101	100 uF 16V	EL	C...503		59.22.5101	100 uF 25V	EL
C...215		59.22.4101	100 uF 16V	EL	C...504		59.22.5101	100 uF 25V	EL
C...216		59.34.4151	150 pF	CER	C...505		59.22.3221	220 uF 10V	EL
C...217		59.22.4101	100 uF 16V	EL	C...506		59.34.4101	100 pF	CER
C...218		59.22.4101	100 uF 16V	EL	C...507		59.34.4101	100 pF	CER
C...219		59.22.4101	100 uF 16V	EL	C...508		59.22.4101	100 uF 16V	EL
C...220		59.22.4101	100 uF 16V	EL	C...601		59.34.4101	100 pF	CER
C...221		59.34.4151	150 pF	CER	C...602		59.34.4101	100 pF	CER
C...222		59.22.4101	100 uF 16V	EL	C...603		59.34.4101	100 pF	CER
C...223		59.22.4101	100 uF 16V	EL	C...604		59.34.4101	100 pF	CER
C...224		59.34.2330	33 pF	CER	C...605		59.34.4101	100 pF	CER
C...225		59.22.4101	100 uF 16V	EL	C...606		59.34.4101	100 pF	CER
C...226		59.06.0223	22 nF 10%	PE	C...607		59.34.4101	100 pF	CER
C...227		59.22.3221	220 uF 10V	EL	C...608		59.34.4101	100 pF	CER
C...228		59.06.0333	33 nF 10%	PE	C...609		59.34.4101	100 pF	CER
C...231		59.05.1102	1 nF 1%	PP	C...610		59.34.4101	100 pF	CER
C...232		59.05.1102	1 nF 1%	PP	C...611		59.34.4101	100 pF	CER
C...233		59.34.4101	100 pF	CER	C...612		59.34.4101	100 pF	CER
C...234		59.22.4101	100 uF 16V	EL	C...613		59.34.4101	100 pF	CER
C...235		59.06.5105	1 uF 5%	PE	C...614		59.34.4101	100 pF	CER
C...236		59.06.5102	1 nF	EL	C...615		59.34.4101	100 pF	CER
C...237		59.06.5102	1 nF	EL	C...616		59.34.4101	100 pF	CER
C...238		59.22.3221	220 uF 10V	EL	C...617		59.34.4101	100 pF	CER
C...301		59.22.3221	220 uF 10V	EL	C...618		59.34.4101	100 pF	CER
C...302		59.22.3221	220 uF 10V	EL	C...619		59.34.4101	100 pF	CER
C...303		59.06.5102	1 nF 5%	PE	C...620		59.34.4101	100 pF	CER
C...304		59.34.4151	150 pF	CER	C...621		59.34.4101	100 pF	CER
C...305		59.22.4101	100 uF 16V	EL	C...622		59.34.4101	100 pF	CER
C...306		59.22.4101	100 uF 16V	EL	C...623		59.34.4101	100 pF	CER
C...307		59.06.5103	10 nF 5%	PE	C...624		59.34.4101	100 pF	CER
C...308		59.06.5103	10 nF 5%	PE	C...625		59.34.4101	100 pF	CER
C...309		59.06.5224	220 nF 5%	PE	C...626		59.34.4101	100 pF	CER
C...310		59.22.4101	100 uF 16V	EL	C...627		59.34.4101	100 pF	CER
C...311		59.34.2220	22 pF	CER	C...628		59.34.4101	100 pF	CER
C...312		59.34.4151	150 pF	CER	C...629		59.34.4101	100 pF	CER
C...313		59.22.4101	100 uF 16V	EL	C...630		59.34.4101	100 pF	CER
C...314		59.22.4101	100 uF 16V	EL	C...631		59.06.0103	10 nF	PE
C...315		59.22.4101	100 uF 16V	EL	C...631	01	59.34.4271	270 pF	CER
C...316		59.34.4151	150 pF	CER	C...632		59.34.4151	150 pF	CER
					C...633		59.06.5104	100 nF	PE
					C...634		59.06.5104	100 nF	PE

AUX MASTER UNIT

1.990.310.00



Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER		
D...	101	50.04.0125	IN4448	any	IC..	402	50.09.0117	MC330078P	dual op.amp.	Hot	
D...	102	50.04.0125	IN4448	any	IC..	403	50.09.0117	MC330078P	dual op.amp.	Hot	
D...	103	50.04.0125	IN4448	any	IC..	404	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	
D...	104	50.04.0125	IN4448	any	IC..	405	50.09.0117	MC330078P	dual op.amp.	Hot	
D...	106	50.04.0125	IN4448	any	IC..	406	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	
D...	106	50.04.0125	IN4448	any	IC..	407	50.09.0117	MC330078P	dual op.amp.	Hot	
D...	107	50.04.0125	IN4448	any	IC..	408	50.09.0101	TL072	dual FET-op.amp.	TI	
D...	201	50.04.0125	IN4448	any	IC..	409	50.09.0103	TL071	single FET-op.amp.	TI	
D...	202	50.04.0125	IN4448	any	IC..	501	50.09.0101	TL072	dual FET-op.amp.	TI	
D...	203	50.04.0125	IN4448	any	IC..	502	50.09.0103	TL071	single FET-op.amp.	TI	
D...	204	50.04.0125	IN4448	any	IC..	503	1.010.051.50	NE5532A	dual op.amp. sel.	ST	
D...	205	50.04.0125	IN4448	any	IC..	504	1.010.051.50	NE5532A	dual op.amp. sel.	ST	
D...	206	50.04.0125	IN4448	any	IC..	505	1.010.051.50	NE5532A	dual op.amp. sel.	ST	
D...	207	50.04.0125	IN4448	any	IC..	506	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	
D...	301	50.04.0125	IN4448	any	IC..	507	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	
D...	302	50.04.0125	IN4448	any	IC..	601	50.07.0018	CD4094	shift and store bus register	2)	
D...	303	50.04.0125	IN4448	any	IC..	602	50.07.0018	CD4094	shift and store bus register	2)	
D...	304	50.04.0125	IN4448	any	IC..	603	50.07.0018	CD4094	shift and store bus register	2)	
D...	305	50.04.0125	IN4448	any	IC..	604	50.07.0018	CD4094	shift and store bus register	2)	
D...	306	50.04.0125	IN4448	any	IC..	605	50.07.0018	CD4094	shift and store bus register	2)	
D...	307	50.04.0125	IN4448	any	IC..	606	50.07.0018	CD4094	shift and store bus register	2)	
D...	401	50.04.0125	IN4448	any	IC..	607	50.07.0049	CD4049	hex inverting buffer CMOS	Ph,To	
D...	402	50.04.0125	IN4448	any	IC..	608	50.07.0049	CD4049	hex inverting buffer CMOS	Ph,To	
D...	403	50.04.0125	IN4448	any	IC..	609	50.07.0018	CD4094	shift and store bus register	2)	
D...	404	50.04.0125	IN4448	any	IC..	610	50.07.0051	CD4051	8-channel analog mux/demux	1)	
D...	501	50.04.1114	zener, 10V, 400mW	any	IC..	611	50.07.0051	CD4051	8-channel analog mux/demux	1)	
D...	502	50.04.1114	zener, 10V, 400mW	any	IC..	612	50.09.0103	TL071	single FET-op.amp.	TI	
D...	503	50.04.0125	IN4448	any	IC..	613	50.07.1021	CD4021	8-bit static shift register	2)	
D...	504	50.04.0125	IN4448	any	IC..	614	50.07.1021	CD4021	8-bit static shift register	2)	
D...	505	50.04.0125	IN4448	any	IC..	615	50.09.0101	TL072	dual FET-op.amp.	TI	
D...	506	50.04.0125	IN4448	any	MP...	1	21.01.2352	6 pcs	S-Schraube M3x4		
D...	507	50.04.1117	zener, 12V, 400mW	any	MP...	2	21.53.0354	3 pcs	Z-Schraube M3x6		
D...	508	50.04.0125	IN4448	any	MP...	3	24.16.1030	3 pcs	Rippenscheibe 3.2 / 5.5		
D...	509	50.04.0125	IN4448	any	MP...	4	24.16.3023	2 pcs	Wellensicherung 2.3		
D...	510	50.04.0122	IN4001	any	MP...	5	1.010.022.21	2 pcs	Linenschraube M3x8 IS spez sw		
D...	511	50.04.0122	IN4001	any	MP...	6	28.99.0119	6 pcs	Rohrniete 2.5 0.15		
D...	601	50.04.0125	IN4448	any	MP...	7	42.01.0228	10 pcs	Knebelknopf GR 10 / 4		
D...	602	50.04.0125	IN4448	any	MP...	8	42.01.0250	7 pcs	Deckel HGR		
D...	603	50.04.0125	IN4448	any	MP...	10	53.03.0166	38 pcs	IC-socket 8 pin		
D...	604	50.04.0125	IN4448	any	MP...	11	53.03.0168	23 pcs	IC-socket 16 pin		
D...	605	50.04.0125	IN4448	any	MP...	12	53.03.0175	6 pcs	IC-socket 38 pin		
D...	606	50.04.0125	IN4448	any	MP...	13	54.11.0131	61 pcs	Steckerstifte 2-reihig, gebogen		
D...	607	50.04.0125	IN4448	any	MP...	14	1.010.048.27	3 pcs	Mutterbolzen M3x2.5		
D...	608	50.04.0125	IN4448	any	MP...	15	1.990.100.02	2 pcs	Querprintstutze links		
D...	609	50.04.0125	IN4448	any	MP...	16	1.990.100.03	2 pcs	Querprintstutze rechts		
D...	610	50.04.0125	IN4448	any	MP...	17	1.990.200.03	1 pcs	Schirmblech input		
D...	611	50.04.0125	IN4448	any	MP...	18	1.990.200.05	10 pcs	Achsverlängerung 61mm pot 12		
D...	612	50.04.0125	IN4448	any	MP...	19	1.990.310.01	1 pcs	Frontschild aux master		
D...	613	50.04.0125	IN4448	any	MP...	20	1.990.310.02	1 pcs	Träger aux master		
D...	614	50.04.0125	IN4448	any	MP...	22	1.990.310.05	3 pcs	Fenster aux master		
D...	615	50.04.0125	IN4448	any	MP...	23	1.990.310.11	1 pcs	aux master PCB		
D...	616	50.04.0125	IN4448	any	MP...	25	1.990.310.06	1 pcs	Abschirmung a/d links		
D...	617	50.04.0125	IN4448	any	MP...	26	1.990.310.07	1 pcs	Abschirmung a/d rechts		
D...	618	50.04.0127	BAT85	BAT42	any	MP...	27	21.99.0117	7 pcs	Z-Schraube Nylon M3x6	
D...	619	50.04.0127	BAT85	BAT42	any	MP...	28	22.99.0137	4 pcs	6-kt-Mutter M7 0.75 PREH	
D...	620	50.04.0125	IN4448	any	MP...	29	23.99.0122	4 pcs	U-Scheibe 7.1 12 0.5 PREH		
IC..	101	50.09.0103	TL071	single FET-op.amp.	TI	MP...	31	50.20.2001	19 pcs	Clip 2*TO92	
IC..	102	50.09.0117	MC330078P	dual op.amp.	Hot	MP...	32	54.01.0020	29 pcs	Steckerstifte 1-reihig, gerade	
IC..	103	50.09.0117	MC330078P	dual op.amp.	Hot	MP...	33	54.01.0021	4 pcs	J Brücke 2*0.63	
IC..	104	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	P....	6	54.11.2013	2*16 pin	eurocard connector, male	
IC..	105	50.09.0117	MC330078P	dual op.amp.	Hot	P....	7	54.11.2004	2*32 pin	eurocard connector, male	
IC..	106	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	P....	9	54.11.2004	2*32 pin	eurocard connector, male	
IC..	107	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	101	50.03.0625	BC327	PNP 800mA	
IC..	108	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	102	50.03.0516	BC337	NPN 800mA	
IC..	109	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	103	50.03.0516	BC337	NPN 800mA	
IC..	110	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	104	50.03.0516	BC337	NPN 800mA	
IC..	111	50.11.0119	LM3914	display driver	NS	Q...	105	50.03.0625	BC327	PNP 800mA	
IC..	112	50.11.0119	LM3914	display driver	NS	Q...	106	50.03.0625	BC327	PNP 800mA	
IC..	201	50.09.0103	TL071	single FET-op.amp.	TI	Q...	107	50.03.0516	BC337	NPN 800mA	
IC..	202	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	108	50.03.0516	BC337	NPN 800mA	
IC..	203	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	109	50.03.0625	BC327	PNP 800mA	
IC..	204	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	Q...	110	50.03.0625	BC327	PNP 800mA	
IC..	205	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	111	50.43.0600	BC560	PNP selected E6310	ST
IC..	206	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	Q...	112	50.43.0600	BC560	PNP selected E6310	ST
IC..	207	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	201	50.03.0625	BC327	PNP 800mA	
IC..	208	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	202	50.03.0516	BC337	NPN 800mA	
IC..	209	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	203	50.03.0516	BC337	NPN 800mA	
IC..	210	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	204	50.03.0516	BC337	NPN 800mA	
IC..	211	50.11.0119	LM3914	display driver	NS	Q...	205	50.03.0625	BC327	PNP 800mA	
IC..	212	50.11.0119	LM3914	display driver	NS	Q...	206	50.03.0625	BC327	PNP 800mA	
IC..	301	50.09.0103	TL071	single FET-op.amp.	TI	Q...	207	50.03.0516	BC337	NPN 800mA	
IC..	302	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	208	50.03.0516	BC337	NPN 800mA	
IC..	303	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	209	50.03.0625	BC327	PNP 800mA	
IC..	304	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	Q...	210	50.03.0625	BC327	PNP 800mA	
IC..	305	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	211	50.43.0600	BC560	PNP selected E6310	ST
IC..	306	50.07.0015	CD4053	3*2-ch.analog mux/demux	1)	Q...	212	50.43.0600	BC560	PNP selected E6310	ST
IC..	307	50.09.0117	MC330078P	dual op.amp.	Hot	Q...	301	50.03.0625	BC327	PNP 800mA	
IC..	308	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	302	50.03.0516	BC337	NPN 800mA	
IC..	309	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	303	50.03.0516	BC337	NPN 800mA	
IC..	310	50.09.0101	TL072	dual FET-op.amp.	TI	Q...	304	50.03.0516	BC337	NPN 800mA	
IC..	311	50.11.0119	LM3914	display driver	NS	Q...	305	50.03.0625	BC327	PNP 800mA	
IC..	312	50.11.0119	LM3914	display driver	NS	Q...	306	50.03.0625	BC327	PNP 800mA	
IC..	401	50.09.0103	TL071	single FET-op.amp.	TI	Q...	307	50.03.0516	BC337	NPN 800mA	



AUX MASTER UNIT

1.990.310.00

Ad	POS	REF.No	DESCRIPTION	MANUFACTURER	Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
Q...	308	50.03.0516	BC337	NPN 800mA					
Q...	309	50.03.0625	BC327	PNP 800mA					
Q...	310	50.03.0625	BC327	PNP 800mA					
Q...	311	50.43.0600	BC560	PNP selected E6310	ST	R...	180	57.11.3684	680 kOhm
Q...	312	50.43.0600	BC560	PNP selected E6310	ST	R...	181	58.01.8503	50 kOhm trimpot.
Q...	401	50.03.0625	BC327	PNP 800mA		R...	182	57.11.3103	10 kOhm
Q...	402	50.03.0516	BC337	NPN 800mA		R...	183	57.11.3223	22 kOhm
Q...	403	50.03.0516	BC337	NPN 800mA		R...	184	57.11.3682	6.8 kOhm
Q...	404	50.03.0516	BC337	NPN 800mA		R...	185	57.11.3682	6.8 kOhm
Q...	405	50.03.0625	BC327	PNP 800mA		R...	186	57.11.3562	5.6 kOhm
Q...	406	50.03.0625	BC327	PNP 800mA		R...	201	57.11.3223	22 kOhm
Q...	407	50.03.0516	BC337	NPN 800mA		R...	204	57.11.3104	100 kOhm
Q...	408	50.03.0516	BC337	NPN 800mA		R...	205	57.11.3101	100 Ohm
Q...	409	50.03.0625	BC327	PNP 800mA		R...	206	57.11.3752	7.5 kOhm 1%
Q...	410	50.03.0625	BC327	PNP 800mA		R...	207	57.11.3184	180 kOhm
Q...	601	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	208	57.11.3184	180 kOhm
Q...	602	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	209	57.11.3332	3.3 kOhm 1%
Q...	603	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	210	57.11.3102	1 kOhm 1%
Q...	604	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	211	57.11.3332	3.3 kOhm 1%
Q...	605	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	212	57.11.3102	1 kOhm 1%
Q...	606	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	213	57.11.3332	3.3 kOhm
Q...	607	50.03.0407	BC550C	NPN 100mA hfe>300	Ph, Sie	R...	214	57.11.3684	680 kOhm
R...	101	57.11.3223	22 kOhm			R...	215	1.010.108.58	4.7 kOhm incl. R678 100k HF2
R...	104	57.11.3104	100 kOhm			R...	216	57.11.3561	560 Ohm
R...	105	57.11.3101	100 Ohm			R...	217	1.010.105.58	22 kOhm incl. R680 100k LF2
R...	106	57.11.3752	7.5 kOhm 1%			R...	218	57.11.3332	3.3 kOhm
R...	107	57.11.3184	180 kOhm			R...	219	57.11.3684	680 kOhm
R...	108	57.11.3184	180 kOhm			R...	220	57.11.3332	3.3 kOhm
R...	109	57.11.3332	3.3 kOhm 1%			R...	221	57.11.3332	3.3 kOhm
R...	110	57.11.3102	1 kOhm 1%			R...	222	57.11.3333	33 kOhm
R...	111	57.11.3332	3.3 kOhm 1%			R...	223	57.11.3682	6.8 kOhm
R...	112	57.11.3102	1 kOhm 1%			R...	224	57.11.3682	6.8 kOhm
R...	113	57.11.3332	3.3 kOhm			R...	225	57.11.3333	33 kOhm
R...	114	57.11.3684	680 kOhm			R...	226	57.11.3104	100 kOhm
R...	115	1.010.108.58	4.7 kOhm incl. R677 100k HF1	ST		R...	227	57.11.3682	6.8 kOhm
R...	116	57.11.3561	560 Ohm			R...	228	57.11.3101	100 Ohm
R...	117	1.010.105.58	22 kOhm incl. R679 100k LF1	ST		R...	229	1.010.106.58	10 kOhm incl. R673 100k level 2
R...	118	57.11.3332	3.3 kOhm			R...	232	57.11.3153	15 kOhm
R...	119	57.11.3684	680 kOhm			R...	233	57.11.3333	33 kOhm
R...	120	57.11.3332	3.3 kOhm			R...	234	57.11.3222	2.2 kOhm
R...	121	57.11.3332	3.3 kOhm			R...	235	57.11.3102	1 kOhm
R...	122	57.11.3333	33 kOhm			R...	236	57.11.3333	33 kOhm
R...	123	57.11.3682	6.8 kOhm			R...	237	57.11.3683	68 kOhm
R...	124	57.11.3682	6.8 kOhm			R...	238	57.11.3682	6.8 kOhm
R...	125	57.11.3333	33 kOhm			R...	239	57.11.3682	6.8 kOhm
R...	126	57.11.3104	100 kOhm			R...	240	57.11.3104	100 kOhm
R...	127	57.11.3682	6.8 kOhm			R...	241	57.11.3682	6.8 kOhm
R...	128	57.11.3101	100 Ohm			R...	242	57.11.3101	100 Ohm
R...	129	1.010.106.58	10 kOhm incl. R676 100k VOL1	ST		R...	243	57.11.3220	22 Ohm
R...	132	57.11.3153	15 kOhm			R...	244	58.01.8502	5 kOhm trimpot.
R...	133	57.11.3333	33 kOhm			R...	245	57.11.3122	1.2 kOhm
R...	134	57.11.3222	2.2 kOhm			R...	246	57.11.3103	10 kOhm
R...	135	57.11.3102	1 kOhm			R...	247	57.11.3103	10 kOhm
R...	136	57.11.3333	33 kOhm			R...	248	57.11.3339	3.3 Ohm
R...	137	57.11.3683	68 kOhm			R...	249	57.11.3339	3.3 Ohm
R...	138	57.11.3682	6.8 kOhm			R...	250	57.11.3332	3.3 kOhm
R...	139	57.11.3682	6.8 kOhm			R...	251	57.11.3332	3.3 kOhm
R...	140	57.11.3104	100 kOhm			R...	252	57.11.3103	10 kOhm
R...	141	57.11.3682	6.8 kOhm			R...	253	57.11.3103	10 kOhm
R...	142	57.11.3101	100 Ohm			R...	254	57.11.3339	3.3 Ohm
R...	143	57.11.3220	22 Ohm			R...	255	57.11.3339	3.3 Ohm
R...	144	58.01.8502	5 kOhm trimpot.			R...	256	57.11.3222	2.2 kOhm
R...	145	57.11.3122	1.2 kOhm			R...	257	57.11.3272	2.7 kOhm
R...	146	57.11.3103	10 kOhm			R...	258	57.11.3223	22 kOhm
R...	147	57.11.3103	10 kOhm			R...	259	57.11.3222	2.2 kOhm
R...	148	57.11.3339	3.3 Ohm			R...	260	57.11.3821	820 Ohm
R...	149	57.11.3339	3.3 Ohm			R...	261	57.11.3103	10 kOhm 1% R261/R262 crossed
R...	150	57.11.3332	3.3 kOhm			R...	262	57.11.3103	10 kOhm 1%
R...	151	57.11.3332	3.3 kOhm			R...	263	57.11.3102	1 kOhm
R...	152	57.11.3103	10 kOhm			R...	264	58.01.8103	10 kOhm trimpot.
R...	153	57.11.3103	10 kOhm			R...	265	57.11.3332	3.3 kOhm 1%
R...	154	57.11.3339	3.3 Ohm			R...	266	57.11.3332	3.3 kOhm 1%
R...	155	57.11.3339	3.3 Ohm			R...	267	57.11.3362	3.6 kOhm 1%
R...	156	57.11.3222	2.2 kOhm			R...	268	57.11.3182	1.8 kOhm 1%
R...	157	57.11.3272	2.7 kOhm			R...	269	57.11.3682	6.8 kOhm
R...	158	57.11.3223	22 kOhm			R...	270	57.11.3683	68 kOhm
R...	159	57.11.3222	2.2 kOhm			R...	271	57.11.3562	5.6 kOhm 1%
R...	160	57.11.3821	820 Ohm			R...	272	57.11.3104	100 kOhm
R...	161	57.11.3103	10 kOhm 1%			R...	273	57.11.3684	680 kOhm
R...	162	57.11.3103	10 kOhm 1%			R...	274	57.11.3222	2.2 kOhm
R...	163	57.11.3102	1 kOhm			R...	275	57.99.0252	47 Ohm Tk+=4500ppm
R...	164	58.01.8103	10 kOhm trimpot.			R...	277	57.11.3511	510 Ohm
R...	165	57.11.3332	3.3 kOhm 1%			R...	278	58.01.8501	500 Ohm trimpot.
R...	166	57.11.3332	3.3 kOhm 1%			R...	279	57.11.3102	1 kOhm
R...	167	57.11.3362	3.6 kOhm 1%			R...	280	57.11.3684	680 kOhm
R...	168	57.11.3182	1.8 kOhm 1%			R...	281	58.01.8503	50 kOhm trimpot.
R...	169	57.11.3682	6.8 kOhm			R...	282	57.11.3103	10 kOhm
R...	170	57.11.3683	68 kOhm			R...	283	57.11.3223	22 kOhm
R...	171	57.11.3562	5.6 kOhm 1%			R...	284	57.11.3682	6.8 kOhm
R...	172	57.11.3104	100 kOhm			R...	285	57.11.3682	6.8 kOhm
R...	173	57.11.3684	680 kOhm			R...	286	57.11.3562	5.6 kOhm
R...	174	57.11.3222	2.2 kOhm			R...	301	57.11.3223	22 kOhm
R...	175	57.99.0252	47 Ohm Tk+=4500ppm			R...	304	57.11.3104	100 kOhm
R...	177	57.11.3511	510 Ohm			R...	305	57.11.3101	100 Ohm
R...	178	58.01.8501	500 Ohm trimpot.			R...	306	57.11.3752	7.5 kOhm 1%
R...	179	57.11.3102	1 kOhm			R...	307	57.11.3184	180 kOhm
						R...	308	57.11.3184	180 kOhm
						R...	309	57.11.3332	3.3 kOhm 1%
						R...	310	57.11.3102	1 kOhm 1%



AUX MASTER UNIT

1.990.310.00

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
R...311	57.11.3332	3.3 kOhm	1%		R...427	57.11.3682	6.8 kOhm		
R...312	57.11.3102	1 kOhm	1%		R...428	57.11.3101	100 Ohm		
R...313	57.11.3332	3.3 kOhm			R...432	57.11.3103	10 kOhm		
R...314	57.11.3684	680 kOhm			R...433	57.11.3333	33 kOhm		
R...315	1.010.107.58	4.7 kOhm	incl. R415, R675 HF3	ST	R...434	57.11.3222	2.2 kOhm		
R...316	57.11.3561	560 Ohm			R...435	57.11.3102	1 kOhm		
R...317	1.010.104.58	22 kOhm	incl. R417, R674 LF3	ST	R...436	57.11.3333	33 kOhm		
R...318	57.11.3332	3.3 kOhm			R...437	57.11.3683	68 kOhm		
R...319	57.11.3684	680 kOhm			R...438	57.11.3682	6.8 kOhm		
R...320	57.11.3332	3.3 kOhm			R...439	57.11.3682	6.8 kOhm		
R...321	57.11.3332	3.3 kOhm			R...440	57.11.3104	100 kOhm		
R...322	57.11.3333	33 kOhm			R...441	57.11.3682	6.8 kOhm		
R...323	57.11.3682	6.8 kOhm			R...442	57.11.3101	100 Ohm		
R...324	57.11.3682	6.8 kOhm			R...443	57.11.3220	22 Ohm		
R...325	57.11.3333	33 kOhm			R...444	58.01.8502	5 kOhm	trimpot.	
R...326	57.11.3104	100 kOhm			R...445	57.11.3122	1.2 kOhm		
R...327	57.11.3682	6.8 kOhm			R...446	57.11.3103	10 kOhm		
R...328	57.11.3101	100 Ohm			R...447	57.11.3103	10 kOhm		
R...329	1.010.103.58	10 kOhm	incl. R429, R682 level 3	ST	R...448	57.11.3339	3.3 Ohm		
R...331	1.010.102.58	10 kOhm	incl. R431, R681 bal. 3	ST	R...449	57.11.3339	3.3 Ohm		
R...332	57.11.3103	10 kOhm			R...450	57.11.3332	3.3 kOhm		
R...333	57.11.3333	33 kOhm			R...451	57.11.3332	3.3 kOhm		
R...334	57.11.3222	2.2 kOhm			R...452	57.11.3103	10 kOhm		
R...335	57.11.3102	1 kOhm			R...453	57.11.3103	10 kOhm		
R...336	57.11.3333	33 kOhm			R...454	57.11.3339	3.3 Ohm		
R...337	57.11.3683	68 kOhm			R...455	57.11.3339	3.3 Ohm		
R...338	57.11.3682	6.8 kOhm			R...456	57.11.3222	2.2 kOhm		
R...339	57.11.3682	6.8 kOhm			R...457	57.11.3272	2.7 kOhm		
R...340	57.11.3104	100 kOhm			R...458	57.11.3223	22 kOhm		
R...341	57.11.3682	6.8 kOhm			R...459	57.11.3222	2.2 kOhm		
R...342	57.11.3101	100 Ohm			R...460	57.11.3821	820 Ohm		
R...343	57.11.3220	22 Ohm			R...461	57.11.3103	10 kOhm	1% R461/R462 crossed	
R...344	58.01.8502	5 kOhm	trimpot.		R...462	57.11.3103	10 kOhm	1%	
R...345	57.11.3122	1.2 kOhm			R...463	57.11.3102	1 kOhm		
R...346	57.11.3103	10 kOhm			R...464	58.01.8103	10 kOhm	trimpot.	
R...347	57.11.3103	10 kOhm			R...465	57.11.3332	3.3 kOhm	1%	
R...348	57.11.3339	3.3 Ohm			R...466	57.11.3332	3.3 kOhm	1%	
R...349	57.11.3339	3.3 Ohm			R...467	57.11.3362	3.6 kOhm	1%	
R...350	57.11.3332	3.3 kOhm			R...468	57.11.3182	1.8 kOhm	1%	
R...351	57.11.3332	3.3 kOhm			R...469	57.11.3682	6.8 kOhm		
R...352	57.11.3103	10 kOhm			R...470	57.11.3683	68 kOhm		
R...353	57.11.3103	10 kOhm			R...471	57.11.3562	5.6 kOhm	1%	
R...354	57.11.3339	3.3 Ohm			R...501	57.11.3103	10 kOhm		
R...355	57.11.3339	3.3 Ohm			R...502	57.11.3103	10 kOhm		
R...356	57.11.3222	2.2 kOhm			R...503	57.11.3101	100 Ohm		
R...357	57.11.3272	2.7 kOhm			R...503	57.11.3000	0 Ohm		
R...358	57.11.3223	22 kOhm			R...504	57.11.3333	33 kOhm		
R...359	57.11.3222	2.2 kOhm			R...505	57.11.3333	33 kOhm		
R...360	57.11.3821	820 Ohm			R...506	58.01.8103	10 kOhm	trimpot.	
R...361	57.11.3103	10 kOhm	1%		R...507	58.01.8104	100 kOhm	trimpot.	
R...362	57.11.3103	10 kOhm	1%		R...508	57.11.3102	1 kOhm		
R...363	57.11.3102	1 kOhm			R...509	57.11.3103	10 kOhm		
R...364	58.01.8103	10 kOhm	trimpot.		R...510	57.11.3752	7.5 kOhm		
R...365	57.11.3332	3.3 kOhm	1%		R...511	57.92.7015		PTC, I-hold 1.1A	
R...366	57.11.3332	3.3 kOhm	1%		R...512	57.11.3102	1 kOhm		
R...367	57.11.3362	3.6 kOhm	1%		R...513	57.11.3682	6.8 kOhm		
R...368	57.11.3182	1.8 kOhm	1%		R...514	57.11.3682	6.8 kOhm		
R...369	57.11.3682	6.8 kOhm			R...515	57.11.3182	1.8 kOhm		
R...370	57.11.3683	68 kOhm			R...516	57.11.3822	8.2 kOhm		
R...371	57.11.3562	5.6 kOhm	1%		R...517	57.11.3103	10 kOhm		
R...372	57.11.3104	100 kOhm			R...518	57.92.7015		PTC, I-hold 1.1A	
R...373	57.11.3684	680 kOhm			R...519	57.92.1151		PTC, 150mA, 18 Ohm	
R...374	57.11.3222	2.2 kOhm			R...520	57.92.7015		PTC, I-hold 1.1A	
R...375	57.99.0252	47 Ohm	Tk=+4500ppm		R...521	57.11.3220	22 Ohm		
R...377	57.11.3511	510 Ohm			R...522	57.11.3220	22 Ohm		
R...378	58.01.8501	500 Ohm	trimpot.		R...523	57.11.3220	22 Ohm		
R...379	57.11.3102	1 kOhm			R...524	57.11.3220	22 Ohm		
R...380	57.11.3684	680 kOhm			R...525	57.11.3220	22 Ohm		
R...381	58.01.8503	50 kOhm	trimpot.		R...526	57.11.3682	6.8 kOhm		
R...382	57.11.3103	10 kOhm			R...527	57.11.3682	6.8 kOhm		
R...383	57.11.3223	22 kOhm			R...528	57.11.3682	6.8 kOhm		
R...384	57.11.3682	6.8 kOhm			R...529	57.11.3682	6.8 kOhm		
R...385	57.11.3682	6.8 kOhm			R...530	57.11.3682	6.8 kOhm		
R...386	57.11.3562	5.6 kOhm			R...531	57.11.3682	6.8 kOhm		
R...401	57.11.3223	22 kOhm			R...532	57.11.3684	680 kOhm		
R...404	57.11.3104	100 kOhm			R...533	57.11.3684	680 kOhm		
R...405	57.11.3101	100 Ohm			R...534	57.11.3513	51 kOhm		
R...406	57.11.3752	7.5 kOhm	1%		R...535	57.11.3513	51 kOhm		
R...407	57.11.3184	180 kOhm			R...536	57.11.3273	27 kOhm		
R...408	57.11.3184	180 kOhm			R...537	57.11.3243	24 kOhm		
R...409	57.11.3332	3.3 kOhm	1%		R...538	57.11.3333	33 kOhm		
R...410	57.11.3102	1 kOhm	1%		R...601	57.11.3101	100 Ohm		
R...411	57.11.3332	3.3 kOhm	1%		R...602	57.11.3101	100 Ohm		
R...412	57.11.3102	1 kOhm	1%		R...603	57.11.3101	100 Ohm		
R...413	57.11.3332	3.3 kOhm			R...604	57.11.3101	100 Ohm		
R...414	57.11.3684	680 kOhm			R...605	57.11.3101	100 Ohm		
R...416	57.11.3561	560 Ohm			R...606	57.11.3101	100 Ohm		
R...418	57.11.3332	3.3 kOhm			R...607	57.11.3101	100 Ohm		
R...419	57.11.3684	680 kOhm			R...608	57.11.3101	100 Ohm		
R...420	57.11.3332	3.3 kOhm			R...609	57.11.3101	100 Ohm		
R...421	57.11.3332	3.3 kOhm			R...610	57.11.3682	6.8 kOhm		
R...422	57.11.3333	33 kOhm			R...611	57.11.3682	6.8 kOhm		
R...423	57.11.3682	6.8 kOhm			R...612	57.11.3682	6.8 kOhm		
R...424	57.11.3682	6.8 kOhm			R...613	57.11.3682	6.8 kOhm		
R...425	57.11.3333	33 kOhm			R...614	57.11.3682	6.8 kOhm		
R...426	57.11.3104	100 kOhm			R...615	57.11.3682	6.8 kOhm		



AUX MASTER UNIT

1.990.310.00

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
R...	616	57.11.3104	100 kOhm						
R...	617	57.11.3104	100 kOhm						
R...	618	57.11.3104	100 kOhm						
R...	619	57.11.3104	100 kOhm						
R...	620	57.11.3104	100 kOhm						
R...	621	57.11.3104	100 kOhm						
R...	622	57.11.3104	100 kOhm						
R...	623	57.11.3104	100 kOhm						
R...	624	57.11.3104	100 kOhm						
R...	625	57.11.3104	100 kOhm						
R...	626	57.11.3104	100 kOhm						
R...	627	57.11.3104	100 kOhm						
R...	628	57.11.3104	100 kOhm						
R...	629	57.11.3104	100 kOhm						
R...	630	57.11.3104	100 kOhm						
R...	631	57.11.3104	100 kOhm						
R...	632	57.11.3104	100 kOhm						
R...	633	57.11.3104	100 kOhm						
R...	634	57.11.3104	100 kOhm						
R...	635	57.11.3104	100 kOhm						
R...	636	57.11.3104	100 kOhm						
R...	637	57.11.3104	100 kOhm						
R...	638	57.11.3104	100 kOhm						
R...	639	57.11.3104	100 kOhm						
R...	640	57.11.3104	100 kOhm						
R...	641	57.11.3104	100 kOhm						
R...	642	57.11.3104	100 kOhm						
R...	643	57.11.3104	100 kOhm						
R...	644	57.11.3104	100 kOhm						
R...	645	57.11.3104	100 kOhm						
R...	646	57.11.3101	100 Ohm						
R...	647	57.11.3101	100 Ohm						
R...	648	57.11.3101	100 Ohm						
R...	649	57.11.3101	100 Ohm						
R...	650	57.11.3101	100 Ohm						
R...	651	57.11.3101	100 Ohm						
R...	652	57.11.3102	1 kOhm						
R...	653	57.11.3102	1 kOhm						
R...	654	57.11.3102	1 kOhm						
R...	655	57.11.3102	1 kOhm						
R...	656	57.11.3102	1 kOhm						
R...	657	57.11.3102	1 kOhm						
R...	658	57.11.3102	1 kOhm						
R...	659	57.11.3102	1 kOhm						
R...	660	57.11.3102	1 kOhm						
R...	661	57.11.3102	1 kOhm						
R...	662	57.11.3561	560 Ohm						
R...	663	57.11.3561	560 Ohm						
R...	664	57.11.5106	10 MOhm						
R...	665	57.11.3220	22 Ohm						
R...	666	57.11.3101	100 Ohm						
R...	667	57.11.3101	100 Ohm						
R...	668	57.11.3684	680 kOhm						
R...	669	57.11.3223	22 kOhm						
R...	670	57.11.3334	330 kOhm						
R...	671	57.11.3334	330 kOhm						
R...	672	57.11.3223	22 kOhm						
RZ...	1	57.88.2101	4*100 Ohm, 8 pin						
RZ...	2	57.88.2101	4*100 Ohm, 8 pin						
RZ...	3	57.88.2101	4*100 Ohm, 8 pin						
RZ...	4	57.88.2101	4*100 Ohm, 8 pin						
RZ...	5	57.88.2101	4*100 Ohm, 8 pin						
RZ...	6	57.88.2101	4*100 Ohm, 8 pin						
RZ...	7	57.88.4104	8*100 kOhm, 9 pin						
RZ...	8	57.88.4104	8*100 kOhm, 9 pin						
RZ...	9	57.88.4104	8*100 kOhm, 9 pin						
RZ...	10	57.88.4104	8*100 kOhm, 9 pin						
RZ...	11	57.88.4104	8*100 kOhm, 9 pin						
RZ...	12	57.88.4104	8*100 kOhm, 9 pin						
RZ...	13	57.88.4104	8*100 kOhm, 9 pin						
RZ...	14	57.88.4104	8*100 kOhm, 9 pin						
RZ...	15	57.88.4104	8*100 kOhm, 9 pin						
T...	101	1.022.362.00							ST
T...	102	1.022.218.00							ST
T...	201	1.022.362.00							ST
T...	202	1.022.218.00							ST
T...	301	1.022.362.00							ST
T...	302	1.022.218.00							ST
T...	401	1.022.362.00							ST
T...	402	1.022.218.00							ST
W...	101	57.11.3000	0 Ohm						
W...	102	57.11.3000	0 Ohm						
W...	103	57.11.3000	0 Ohm						
W...	201	57.11.3000	0 Ohm						
W...	202	57.11.3000	0 Ohm						
W...	203	57.11.3000	0 Ohm						
W...	301	57.11.3000	0 Ohm						
W...	302	57.11.3000	0 Ohm						
W...	303	57.11.3000	0 Ohm						

CER = ceramic, EL = electrolytic, PE = polyester, PP = polypropylen

MANUFACTURER
 1) Ph, Mot, RCA
 2) Ph, Mot, RCA
 Mot=Motorola, NS=National Semiconductors, Ph=Philips, Ra=Raytheon,
 RCA=Radio Corporation of America, Sie=Siemens, ST=Studer,
 TI=Texas Instruments, To=Toshiba

HISTORY
 01 91-04-10 C631 10nF replaced by 270pF
 02 92-03-25 R503 100 Ohm replaced by 0 Ohm

1.990.310.00 AUX MASTER UNIT WY 89/07/0700
 1.990.310.00 AUX MASTER UNIT WY 91/04/1001
 1.990.310.00 AUX MASTER UNIT WY 92/03/2502

END

Pin location list

1.990.310

P	NO	NAME	REMARK	B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC
-----	-----	-----	-----	-----
P6	01A	--	N.C.	O
P6	01B	--	N.C.	O
P6	02A	--	N.C.	O
P6	02B	--	N.C.	O
P6	03A	--	N.C.	O
P6	03B	--	N.C.	O
P6	04A	--	N.C.	O
P6	04B	--	N.C.	O
P6	05A	--	N.C.	O
P6	05B	--	N.C.	O
P6	06A	--	N.C.	O
P6	06B	--	N.C.	O
P6	07A	+ 15V	+ SUPPLY TO FADER UNIT	O
P6	07B	- 15V	- SUPPLY TO FADER UNIT	O
P6	08A	--	N.C.	O
P6	08B	--	N.C.	O
P6	09A	A IN 4	OUTPUT ; TO MCU ANALOG IN 4	O
P6	09B	--	N.C.	O
P6	10A	RCL	RECEIVE CLOCK	O
P6	10B	RSTB	RECEIVE STROBE	O
P6	11A	INT 4	INTERUPT 4	O
P6	11B	RXD 3	RECEIVE DATA 3	O
P6	12A	--	N.C.	O
P6	12B	TSTB 2	TRANSMIT STROBE 2	O
P6	13A	TSTB 3	TRANSMIT STROBE 3	O
P6	13B	--	N.C.	O
P6	14A	--	N.C.	O
P6	14B	DO 1	DATA OUT 1 (TRANSMIT STROBE 8)	O
P6	15A	TXD	TRANSMIT DATA	O
P6	15B	TCL	TRANSMIT CLOCK	O
P6	16A	DO 0	DATA OUT 0 (ENABLE)	O
P6	16B	UREF	+ 5V REFERENZ	O
P7	01A	0V-B	GROUND AUDIO (PIN)	
P7	01B	CHASSIS	METAL FRAME	B
P7	02A	--	RES	O
P7	02B	--	RES	O
P7	03A	--	RES	B
P7	03B	--	RES	B
P7	04A	--	N.C.	B
P7	04B	--	N.C.	B
P7	05A	B-PFL/SOLO-L	PFL/SOLO LEFT ; 0-OHM BUS	B,I
P7	05B	B-PFL/SOLO-R	PFL/SOLO RIGHT ; 0-OHM BUS	B,I
P7	06A	--	N.C.	B
P7	06B	--	N.C.	B
P7	07A	--	N.C.	B
P7	07B	--	N.C.	B
P7	08A	--	N.C.	B
P7	08B	--	N.C.	B
P7	09A	--	N.C.	B
P7	09B	--	N.C.	B
P7	10A	--	N.C.	B
P7	10B	--	N.C.	B
P7	11A	--	N.C.	B
P7	11B	--	N.C.	B
P7	12A	--	N.C.	B

Pin location list

1.990.310

P7	12B	--	N.C.	B	
P7	13A	--	N.C.	B	
P7	13B	--	N.C.	B	
P7	14	OV-REF	OV REFERENCE	B	X X
P7	15A	--	N.C.	B	
P7	15B	--	N.C.	B	
P7	16A	--	N.C.	B	
P7	16B	--	N.C.	B	
P7	17A	--	N.C.	B	
P7	17B	--	N.C.	B	
P7	18A	--	N.C.	B	
P7	18B	--	N.C.	B	
P7	19A	--	N.C.	B	
P7	19B	--	N.C.	B	
P7	20A	--	N.C.	B	
P7	20B	--	N.C.	B	
P7	21A	--	N.C.	B	
P7	21B	--	N.C.	B	
P7	22A	--	N.C.	B	
P7	22B	--	N.C.	B	
P7	23A	AUX-1-IN	AUX 1 INPUT ; FROM 0-OHM BUS	O,I	
P7	23B	AUX-1-OV-IN	AUX 1 INPUT GROUND	O	
P7	24A	AUX-2-IN	AUX 2 INPUT ; FROM 0-OHM BUS	O,I	
P7	24B	AUX-2-OV-IN	AUX 2 INPUT GROUND	O	
P7	25A	AUX-3-IN-L	AUX 3 INPUT LEFT ; FROM 0-OHM BUS	O,I	
P7	25B	AUX-3-OV-IN-L	AUX 3 INPUT GROUND LEFT	O	
P7	26A	AUX-4-IN-R	AUX 4 INPUT RIGHT ; FROM 0-OHM BUS	O,I	
P7	26B	AUX-4-OV-IN-R	AUX 4 INPUT GROUND RIGHT	O	
P7	27	OV-A	GROUND AUDIO	B	X X
P7	28	- 15.5V	- SUPPLY	B	X X
P7	29	+ 15.5V	+ SUPPLY	B	X X
P7	30	OV-L	GROUND SIGN (LOGIC)	B	X X
P7	31	+ 5.5V	+ SUPPLY	B	X X
P7	32	+3...4V LED	LED SUPPLY VARIABLE +3...4V	B	X X
P9	01A	AUX 1-OUT-a	AUX 1 OUTPUT a	S,O	
P9	01B	AUX 1-OUT-b	AUX 1 OUTPUT b	S,O	
P9	02A	AUX 1-OVE	AUX 1 GROUND EXTERN	O	
P9	02B	AUX 2-OVE	AUX 2 GROUND EXTERN	O	
P9	03A	AUX 2-OUT-a	AUX 2 OUTPUT a	S,O	
P9	03B	AUX 2-OUT-b	AUX 2 OUTPUT b	S,O	
P9	04A	AUX 3-L-a	AUX 3 LEFT a	S,O	
P9	04B	AUX 3-L-b	AUX 3 LEFT b	S,O	
P9	05A	AUX 3-L-OVE	AUX 3 LEFT GROUND EXTERN	O	
P9	05B	AUX 3-R-OVE	AUX 3 RIGHT GROUND EXTERN	O	
P9	06A	AUX 3-R-a	AUX 3 RIGHT a	S,O	
P9	06B	AUX 3-R-b	AUX 3 RIGHT b	S,O	
P9	07A	--	RES		
P9	07B	--	RES		
P9	08A	--	RES		
P9	08B	--	RES		
P9	09A	--	RES		
P9	09B	--	RES		
P9	10A	--	RES		
P9	10B	--	RES		
P9	11A	--	RES		
P9	11B	--	RES		
P9	12A	--	RES		
P9	12B	OV-A	GROUND AUDIO	B	
P9	13A	--	RES		
P9	13B	--	RES		
P9	14A	--	RES		

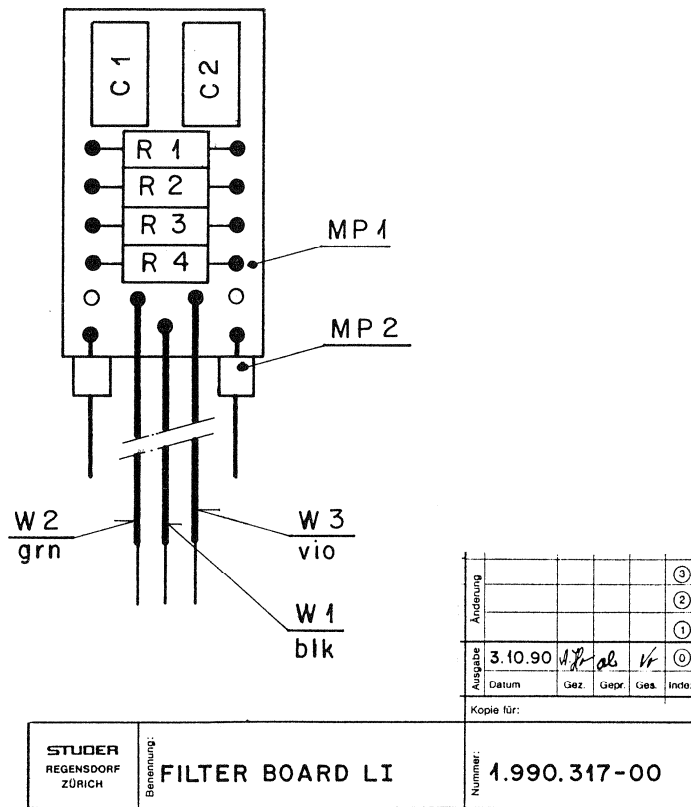
Pin location list

1.990.310

P9	14B	--	RES	
P9	15A	--	RES	
P9	15B	--	RES	
P9	16A	--	RES	
P9	16B	--	RES	
P9	17A	AF 1-OUT	AFTER FADER 1 OUT	AS
P9	17B	--	RES	
P9	18A	AF 2-0V	AFTER FADER 2 GROUND	
P9	18B	AF 1-0V	AFTER FADER 1 GROUND	
P9	19A	AF 3-OUT-L	AFTER FADER 3 OUT LEFT	AS
P9	19B	AF 2-OUT	AFTER FADER 2 OUT	AS
P9	20A	AF 3-0V-L	AFTER FADER 3 GROUND LEFT	
P9	20B	--	RES	
P9	21A	AF 3-OUT-R	AFTER FADER 3 OUT RIGHT	AS
P9	21B	AF 3-0V-R	AFTER FADER 3 GROUND RIGHT	
P9	22A	--	RES	
P9	22B	--	RES	
P9	23A	--	N.C.	
P9	23B	--	N.C.	
P9	24A	TB/SLATE--a	TALK BACK / SLATE INPUT a	S
P9	24B	PHANTOM 48V	PHANTOM 48V BUS	
P9	25A	--	N.C.	
P9	25B	TB/SLATE--b	TALK BACK / SLATE INPUT b	S
P9	26A	--	N.C.	
P9	26B	--	N.C.	
P9	27A	--	N.C.	
P9	27B	--	N.C.	
P9	28A	--	RES	
P9	28B	--	RES	
P9	29A	--	RES	
P9	29B	--	RES	
P9	30A	--	RES	
P9	30B	--	RES	
P9	31A	--	RES	
P9	31B	--	RES	
P9	32A	--	RES	
P9	32B	--	RES	

FILTER BOARD LI

1.990.317.00



Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

C.....1	59.06.0105	1 uF	10%, 25V, PETP	
C.....2	59.06.0105	1 uF	10%, 25V, PETP	
MP....1	1.990.318.11	1 pcs	FILTER BOARD PCB	
MP....2	54.11.0132	2 pcs	Kontakt 1-reihig Winkel	
R.....1	57.11.3333	33 KOhm	1%, 0.25W, MF	
R.....2	57.11.3333	33 KOhm	1%, 0.25W, MF	
R.....3	57.11.3333	33 KOhm	1%, 0.25W, MF	
R.....4	57.11.3333	33 KOhm	1%, 0.25W, MF	
W.....1	1.010.200.64		Litze schwarz	
W.....2	1.010.205.64		Litze gruen	
W.....3	1.010.207.64		Litze violet	

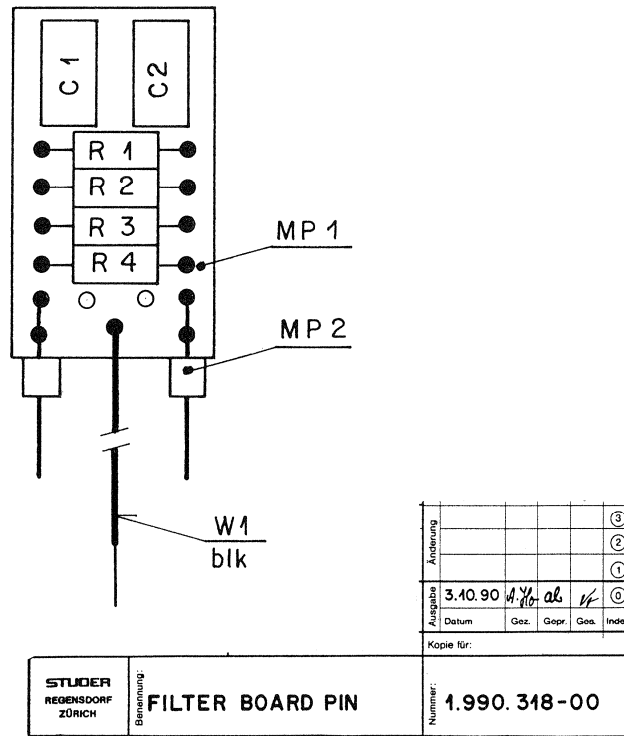
MF=Metall Film

1.990.317.00 FILTER BOARD LI

SP 90/09/1800

FILTER BOARD PIN

1.990.318.00



Ad ..POS... REF.No... DESCRIPTION.....MANUFACTURER

C.....1	59.06.0105	1 uF	10%, 25V, PETP
C.....2	59.06.0105	1 uF	10%, 25V, PETP
MP....1	1.990.318.11	1 pcs	FILTER BOARD PCB
MP....2	54.11.0131	2 pcs	Kontakt 2-reihig Winkel
R.....1	57.11.3333	33 KOhm	1%, 0.25W, MF
R.....2	57.11.3333	33 KOhm	1%, 0.25W, MF
R.....3	57.11.3333	33 KOhm	1%, 0.25W, MF
R.....4	57.11.3333	33 KOhm	1%, 0.25W, MF
W.....1	1.010.200.64		Litze schwarz

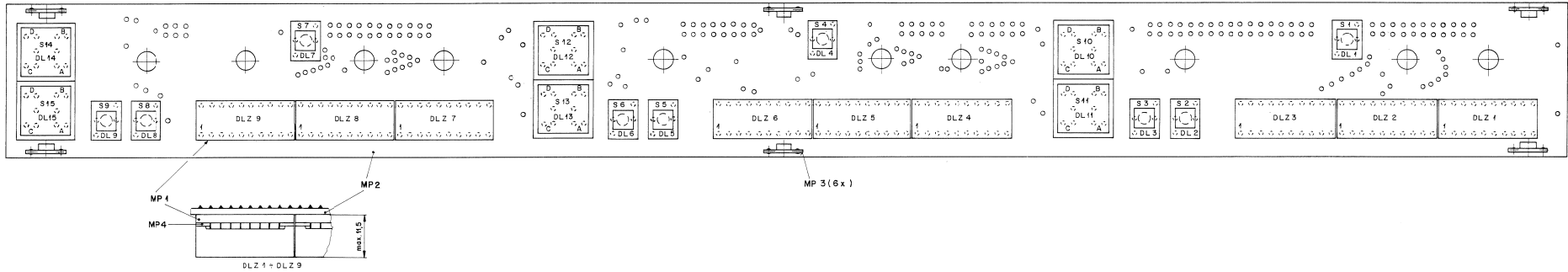
MF=Meta Film

1.990.318.00 FILTER BOARD PIN

SP 90/09/1700

AUX MASTER SWITCH BOARD

1.990.319.00



Ad . . POS. . . . REF. No DESCRIPTION MANUFACTURER

DLZ...1	50.04.2150	MV57164	10°D red
DLZ...2	50.04.2161	HDSP4850	10°D green
DLZ...3	50.04.2161	HDSP4850	10°D green
DLZ...4	50.04.2150	MV57164	10°D red
DLZ...5	50.04.2161	HDSP4850	10°D green
DLZ...6	50.04.2161	HDSP4850	10°D green
DLZ...7	50.04.2150	MV57164	10°D red
DLZ...8	50.04.2161	HDSP4850	10°D green
DLZ...9	50.04.2161	HDSP4850	10°D green
S....1	55.15.0622		non latching, red, LED red
S....2	55.15.0605		non latching, colourless, LED green
S....3	55.15.0604		non latching, colourless, LED yel
S....4	55.15.0622		non latching, red, LED red
S....5	55.15.0605		non latching, colourless, LED green
S....6	55.15.0604		non latching, colourless, LED yel
S....7	55.15.0622		non latching, red, LED red
S....8	55.15.0605		non latching, colourless, LED green
S....9	55.15.0604		non latching, colourless, LED yel
S....10	55.15.0722		non latching, red, LED red
S....11	55.15.0704		non latching, colourless, LED yel
S....12	55.15.0722		non latching, red, LED red
S....13	55.15.0704		non latching, colourless, LED yel
S....14	55.15.0722		non latching, red, LED red
S....15	55.15.0704		non latching, colourless, LED yel
MP...1	53.99.0135	9 pcs	XIC DIL 20 pin, ultra low prof.
MP...2	1.990.319.11	1 pcs	aux master switch PCB
MP...3	1.990.100.05	6 pcs	Querprinthalter
MP...4	1.990.319.01	18 pcs	Unterlage
MP...5	1.990.319.04	0 pcs	Nr.Etikette

1.990.319.00 AUX MASTER SWITCH BOARD Wf 89/08/2500

Arbeits					
Datum	20.3.90	18	18	18	18
Kopie für:					

STUDER REGESBODEN ZÜRICH	Elektronik	AUX MASTER SWITCH BOARD	Number 1.990.319-00
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Section 5 Inline Panel Units

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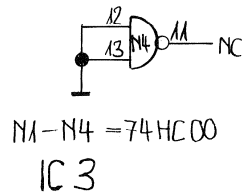
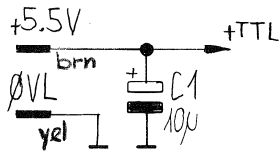
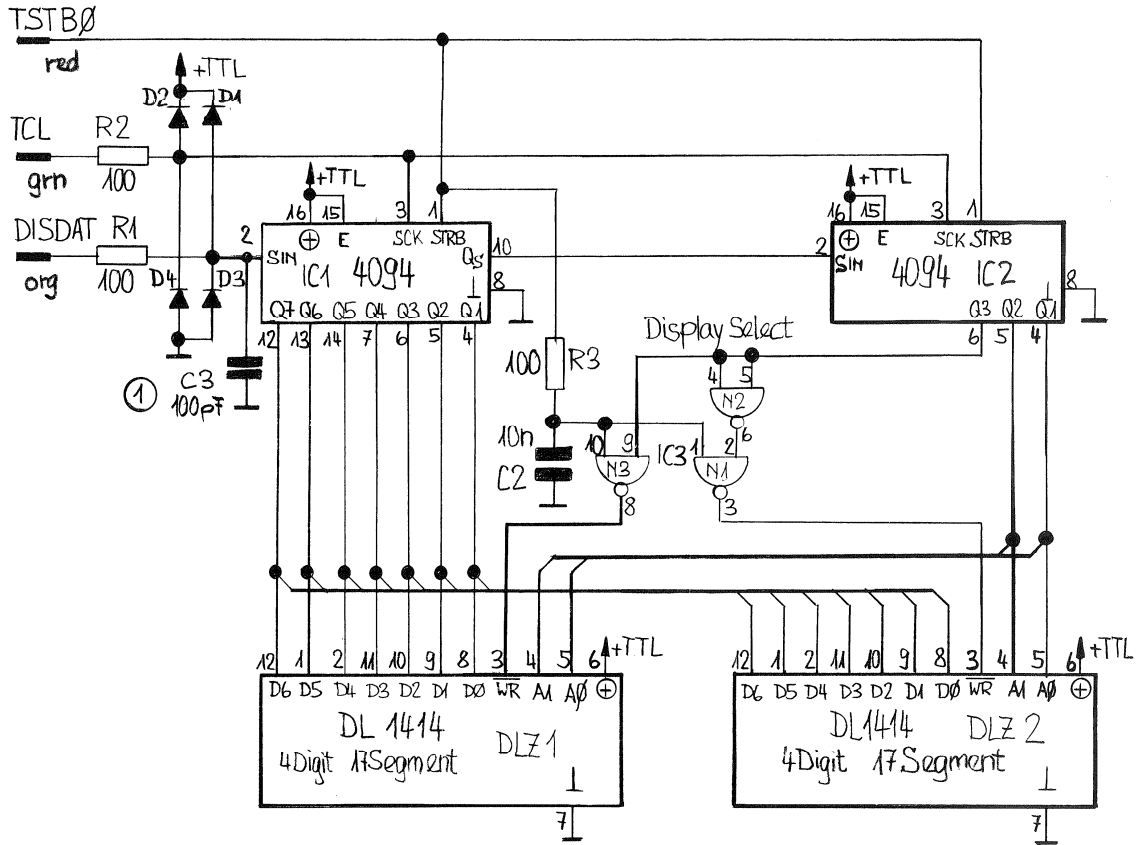
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Source Selector Panel 40 PB.....	1.990.390.00
Source Selector Unit.....	1.990.390.00
Inline Unit.....	1.990.410.00
Pin location list.....	1.990.410
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CR Monitor Control Unit.....	1.990.420.00
CR Monitor Switch Board.....	1.990.429.00
Studio Monitor Control Unit.....	1.990.430.00
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Studio Monitor Control Unit.....	1.990.430.00
Studio Monitor Switch Board.....	1.990.439.00
PFL / Talk Back / Headphone Unit.....	1.990.440.00
Pin location list.....	1.990.440
PFL / Talk Back / Headphone Unit.....	1.990.440.00
PFL/TB/Phones Switch Board.....	1.990.449.00
Source Selector Panel 20 PB.....	1.990.490.00
Source Selector Unit.....	1.990.490.00
Source Selector Board.....	1.990.498.00
Source Selector Switch Board.....	1.990.499.00
Snapshot Unit.....	1.990.810.00
Snapshot Unit.....	1.990.810.00
Snapshot Switch Board.....	1.990.811.00
Serdat Interface Board.....	1.990.812.00
Central Assign Unit.....	1.990.815.00

STUDER AUDIO CONSOLE 990

Central Assign Unit.....	1.990.815.00
Central Assign Switch Board.....	1.990.816.00
Control Panel Faderautomation.....	1.990.820.81
Automation Control Panel.....	1.990.820.81
Serdat Interface Board.....	1.990.812.00
Control Panel Switch Board.....	1.990.821.81

DISPLAY MODULE

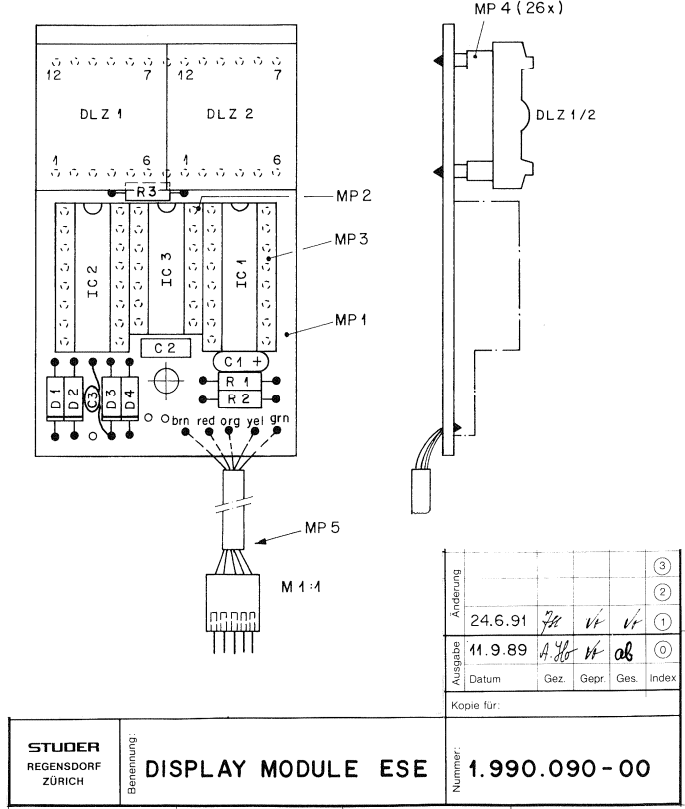
1.990.090.00



04.1083 als	24.06.91 als	..	..	..
				PAGE 1 OF 1
STUDER	DISPLAY MODULE		1.990.090-00	

DISPLAY MODULE ESE

1.990.090.00

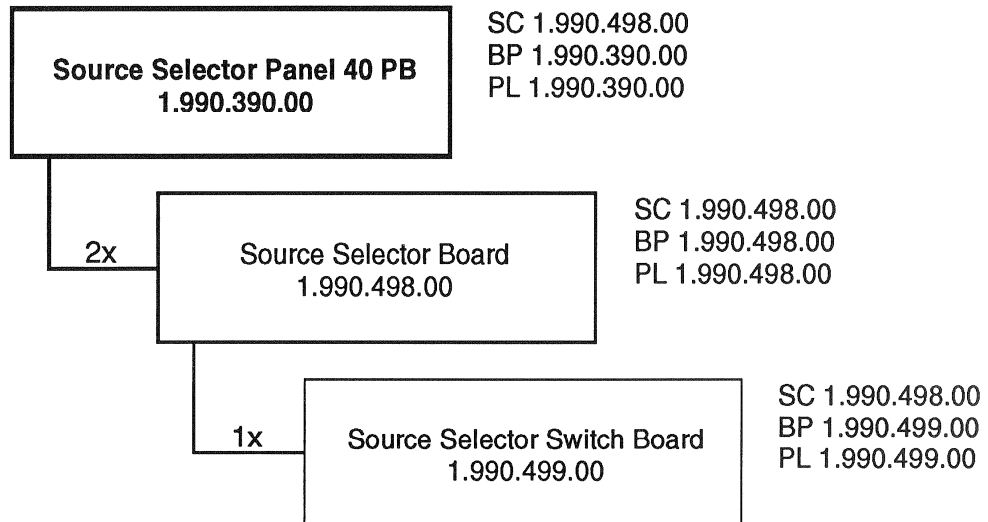


Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
C.....1		59.26.1100	10 uF -20% 10V SAL	
C.....2		59.06.0103	10 nF 10% PE	
01 C.....3		59.34.4101	100 pF 10% CER delay of serial-input	
D.....1		50.04.0125	1N4448	any
D.....2		50.04.0125	1N4448	any
D.....3		50.04.0125	1N4448	any
D.....4		50.04.0125	1N4448	any
DLZ...1		73.01.0127	DL1414 4 Digit 17 Segm. Disp.	Sie,Lix
DLZ...2		73.01.0127	DL1414 4 Digit 17 Segm. Disp.	Sie,Lix
IC....1		50.07.0018	4094 Shift and store bus register	
IC....2		50.07.0018	4094 Shift and store bus register	
IC....3		50.17.1000	74HC00 Quad 2-Input NAND Gate	
MP....1		1.990.090.11	1 pcs Print	St
MP....2		53.03.0167	1 pcs IC-Socket 14 Pin	
MP....3		53.03.0168	2 pcs IC-Socket 16 Pin	
MP....4		53.03.0218	26 pcs IC-Socket Single line	
MP....5		1.911.197.00	1 pcs Kabel mit CIS-Stecker 130 mm	St
R.....1		57.11.3101	100 Ohm 10% 0.25W	
R.....2		57.11.3101	100 Ohm 10% 0.25W	
R.....3		57.11.3101	100 Ohm 10% 0.25W	

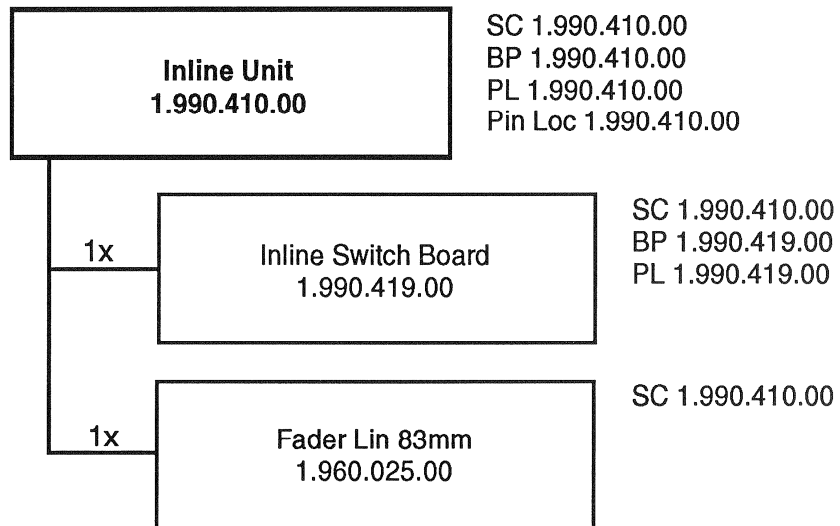
(01) 24.06.91 Timing adjustment. C 3 (100pF) additional to serial-input

MANUFACTURER: Sie=Siemens, Lix=Litronix, St=Studer

1.990.090.00	DISPLAY MODULE	AB 89/06/2100
1.990.090.00	DISPLAY MODULE	AB 91/06/2401

Source Selector Panel 40 PB**1.990.390.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

Inline Unit**1.990.410.00**

Pin location list

1.990.410

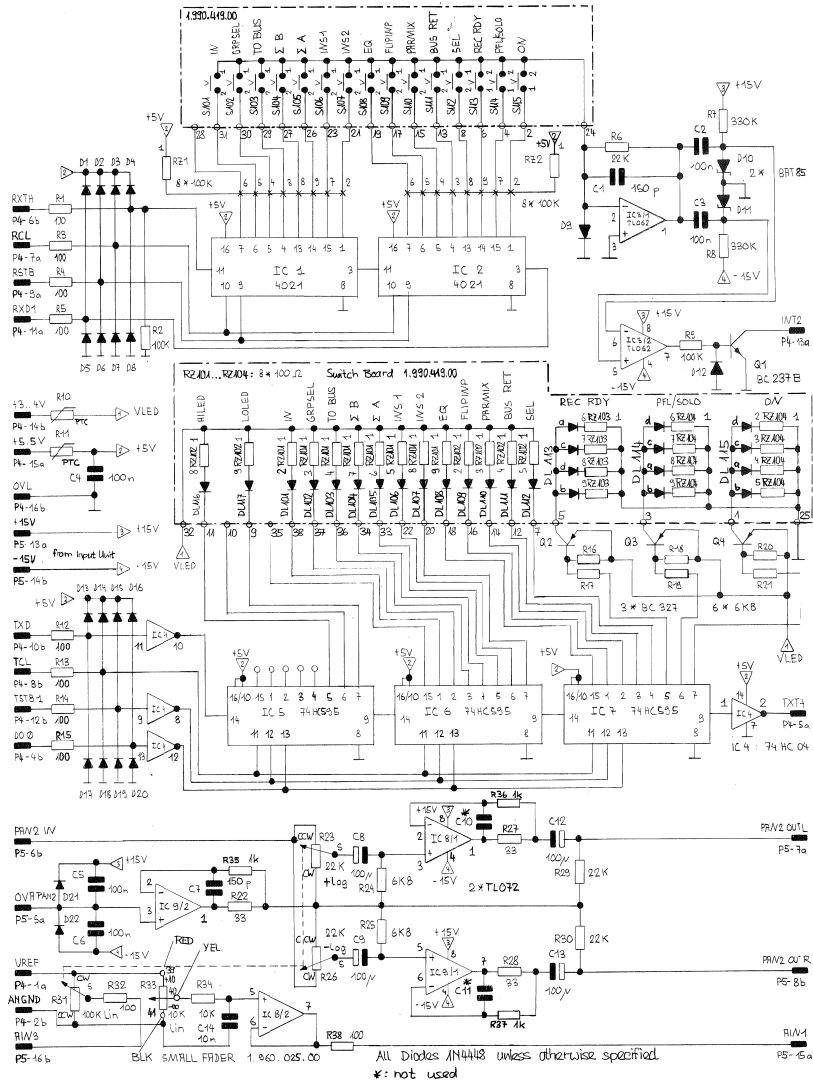
P	NO	NAME	REMARK	
-----				-----
				B=BUS
				O=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P4	01	UREF	+ 5V REFERENZ	B
P4	02	AN GND	ANALOG GROUND	B
P4	03	-	RES	
P4	04	DO 0	DATA OUT 0 (ENABLE)	
P4	05	TXTH	TRANSMIT DATA THROUGH	
P4	06	RXTH	RECEIVE DATA THROUGH	
P4	07	RCL	RECEIVE CLOCK	
P4	08	TCL	TRANSMIT CLOCK	
P4	09	RSTB	RECEIVE STROBE	
P4	10	TXD	TRANSMIT DATA	
P4	11	RXD 1	RECEIVE DATA 1	
P4	12	TSTB 1	TRANSMIT STROBE 1	
P4	13	INT 2	INTERUPT 2	
P4	14	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B
P4	15	+ 5.5V	+ SUPPLY	B
P4	16	0V-L	GROUND SIGN (LOGIC)	B
P5	01	OVA PAN1	GROUND SIGN PAN 1	
P5	02	B-L/PAN1-IN	PAN 1 IN (BAL LEFT IN)	
P5	03	B-L/PAN1-IN	PAN 1 IN / OUTPUT (BAL LEFT IN)	
P5	04	-	RES	
P5	05	OVA PAN2	GROUND SIGN PAN 2	
P5	06	B-R/PAN2-IN	PAN 2 IN (BAL RIGHT IN)	
P5	07	PAN2-OUT-L	PAN 2 OUT LEFT	
P5	08	PAN2-OUT-R	PAN 2 OUT RIGHT	
P5	09	FILM-OUT-S	OPTIONAL OUTPUT	
P5	10	FILM-OUT-C	OPTIONAL OUTPUT	
P5	11	FILM-OUT-R	OPTIONAL OUTPUT	
P5	12	FILM-OUT-L	OPTIONAL OUTPUT	
P5	13	+ 15V	+ SUPPLY FROM INPUT UNIT	
P5	14	- 15V	- SUPPLY FROM INPUT UNIT	
P5	15	A IN 1	OUTPUT ; TO MCU ANALOG IN 1	
P5	16	A IN 3	OUTPUT ; TO MCU ANALOG IN 3	

IN LINE UNIT



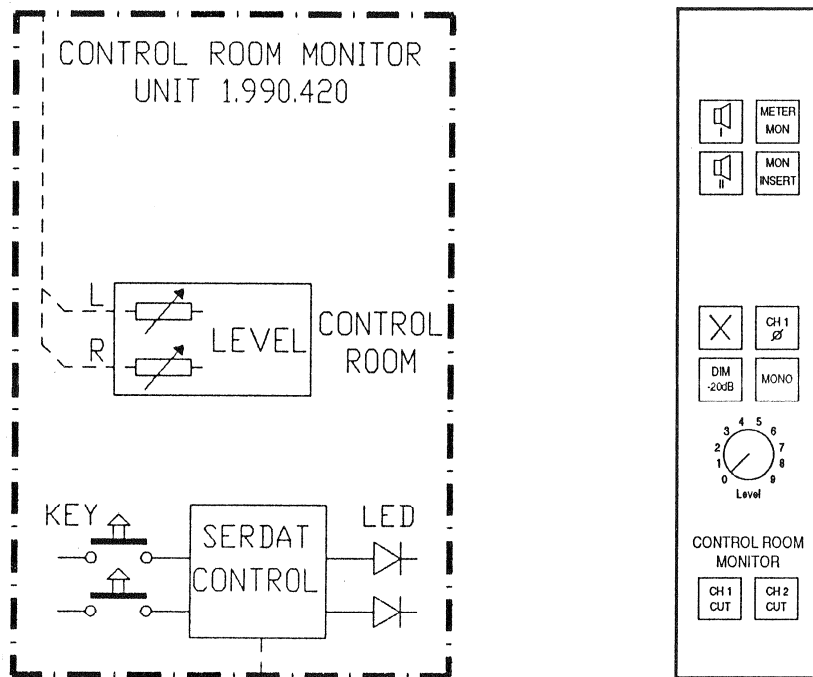
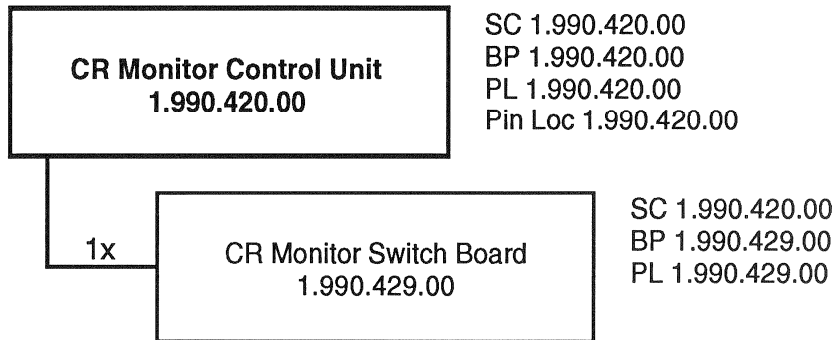
1.990.410.00



3.09.90 ab	INCLUDES 1.990.413.00	PAGE 1 OF 1
STUDER	IN LINE UNIT	1.990.410.00

CR Monitor Control Unit

1.990.420.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

Pin location list

1.990.420

P	NO	NAME	REMARK	
-----			-----	
				B=BUS
				Q=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P4	01A	0V-L	GROUND SIGN (LOGIC)	B
P4	01B	+ 5.5V	+ SUPPLY	B
P4	02A	+ 15.5V	+ SUPPLY	B
P4	02B	0V-A	GROUND AUDIO	B
P4	03A	- 15.5V	- SUPPLY	B
P4	03B	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B
P4	04A	DO 0	DATA OUT 0 (ENABLE)	
P4	04B	INT 0	INTERUPT 0	
P4	05A	INT 1	INTERUPT 1	
P4	05B	INT 2	INTERUPT 2	
P4	06A	INT 3	INTERUPT 3	
P4	06B	INT 4	INTERUPT 4	
P4	07A	INT 5	INTERUPT 5	
P4	07B	INT 6	INTERUPT 6	
P4	08A	TSTB 0	TRANSMIT STROBE 0	
P4	08B	TSTB 1	TRANSMIT STROBE 1	
P4	09A	TSTB 2	TRANSMIT STROBE 2	
P4	09B	TSTB 3	TRANSMIT STROBE 3	
P4	10A	TSTB 4	TRANSMIT STROBE 4	
P4	10B	TSTB 5	TRANSMIT STROBE 5	
P4	11A	TSTB 6	TRANSMIT STROBE 6	
P4	11B	RXD 0	RECEIVE DATA 0	
P4	12A	RXD 1	RECEIVE DATA 1	
P4	12B	RXD 2	RECEIVE DATA 2	
P4	13A	RXD 3	RECEIVE DATA 3	
P4	13B	RXD 4	RECEIVE DATA 4	
P4	14A	RXD 5	RECEIVE DATA 5	
P4	14B	RXD 6	RECEIVE DATA 6	
P4	15A	TXD	TRANSMIT DATA	
P4	15B	RSTB	RECEIVE STROBE	
P4	16A	TCL	TRANSMIT CLOCK	
P4	16B	RCL	RECEIVE CLOCK	

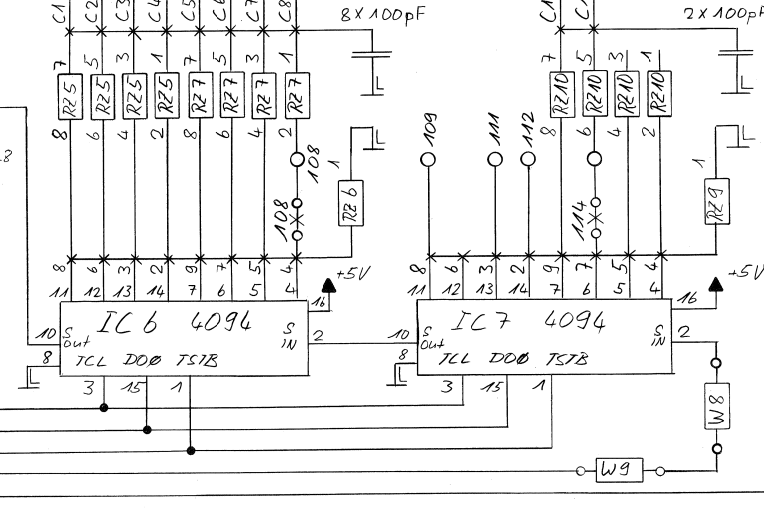
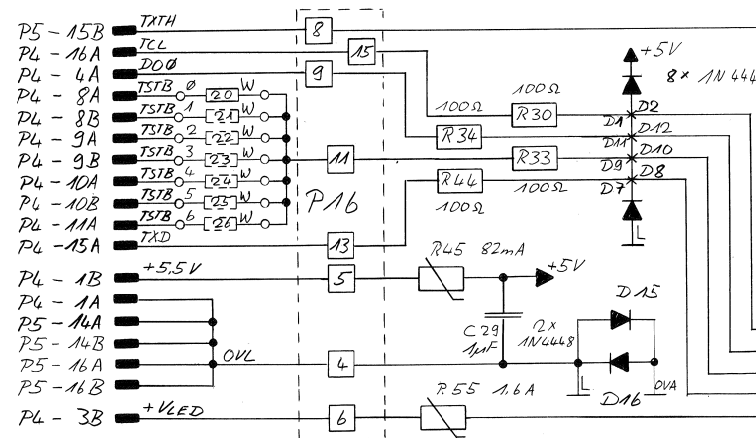
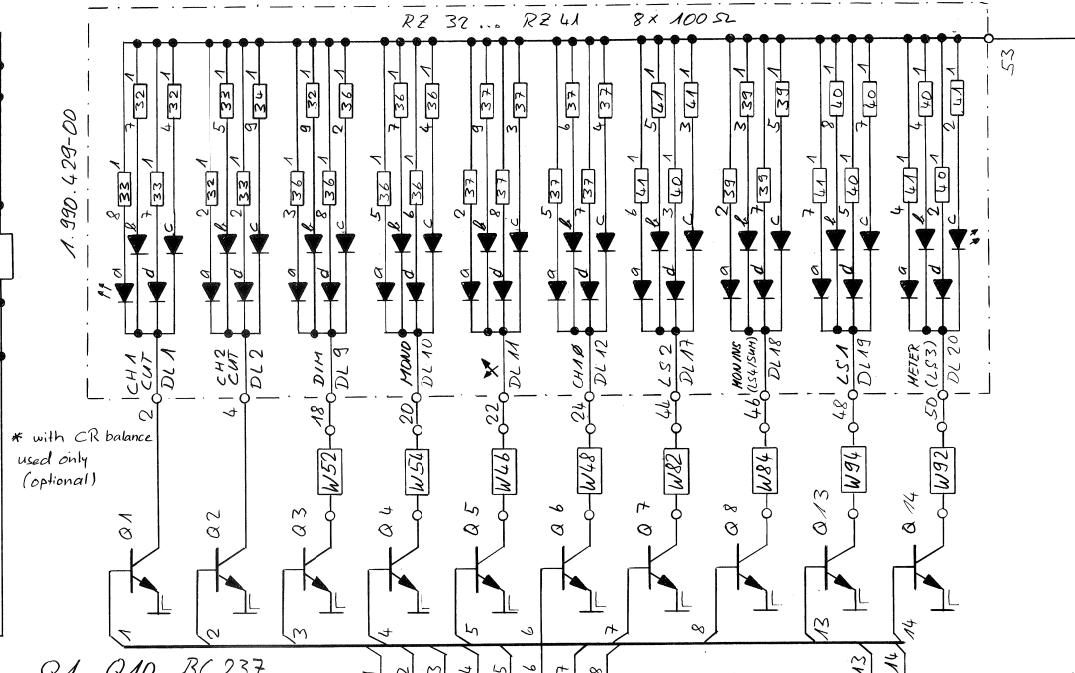
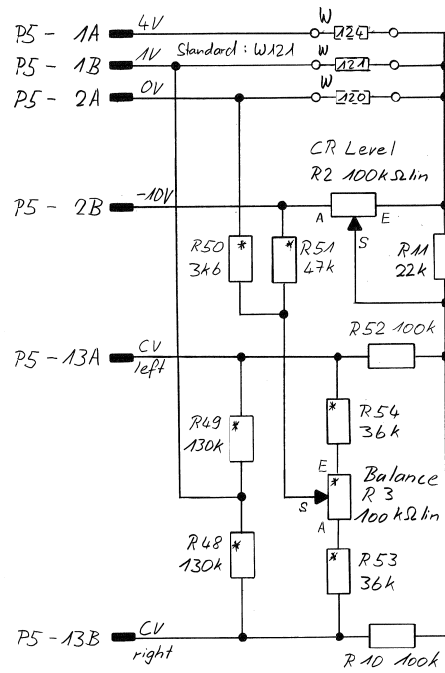
Pin location list

1.990.420

P5	01A	+4V	CONTROL VOLTAGE VCA		
P5	01B	+1V	CONTROL VOLTAGE VCA		
P5	02A	0V	CONTROL VOLTAGE VCA		
P5	02B	-10V	CONTROL VOLTAGE VCA		
P5	03A	-	N.C.		
P5	03B	-	N.C.		
P5	04A	-	N.C.		
P5	04B	-	N.C.		
P5	05A	-	N.C.		
P5	05B	-	N.C.		
P5	06A	-	N.C.		
P5	06B	-	N.C.		
P5	07A	-	N.C.		
P5	07B	-	N.C.		
P5	08A	-	N.C.		
P5	08B	-	N.C.		
P5	09A	-	N.C.		
P5	09B	-	N.C.		
P5	10A	-	N.C.		
P5	10B	-	N.C.		
P5	11A	-	N.C.		
P5	11B	-	N.C.		
P5	12A	-	N.C.		
P5	12B	-	N.C.		
P5	13A	CV-CR-L	CTRL.VOLTAGE CR LEVEL LEFT		
P5	13B	CV-CR-R	CTRL.VOLTAGE CR LEVEL RIGHT		
P5	14	0V-L	GROUND SIGN (LOGIC)	B	X X
P5	15A	RXTH	RECEIVE DATA THROUGH		
P5	15B	TXTH	TRANSMIT DATA THROUGH		
P5	16	0V-L	GROUND SIGN (LOGIC)	B	X X

CR MONITOR CONTROL UNIT

1.990.420.00



7.590 A Schmid

INCL. SWITCH BOARD 1.990.429.00

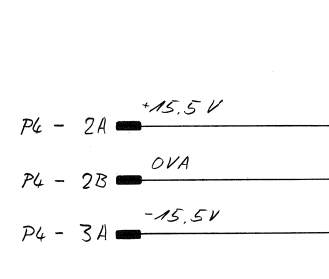
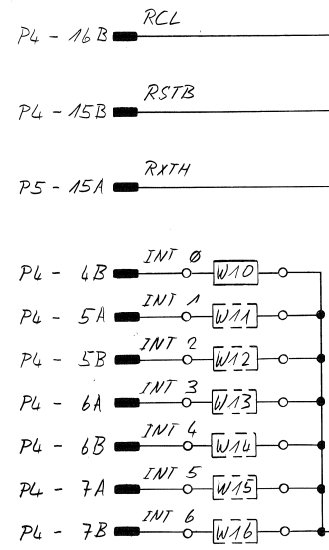
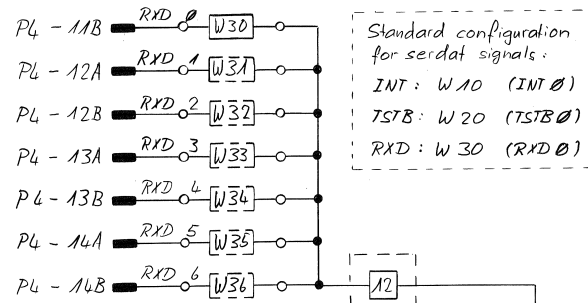
CR MONITOR CONTROL UNIT

PAGE 1 OF 2

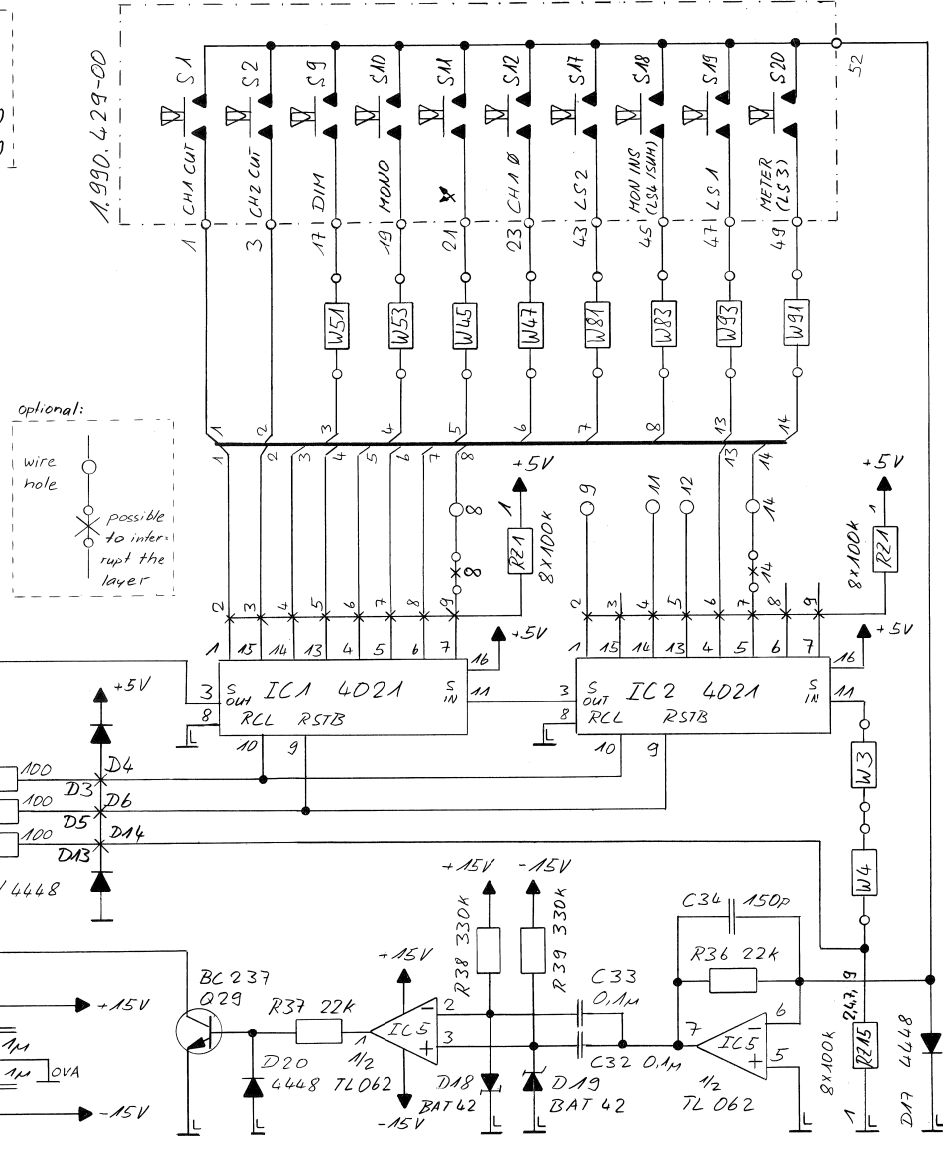
SC 1.990.420-00

CR MONITOR CONTROL UNIT

1.990.420.00



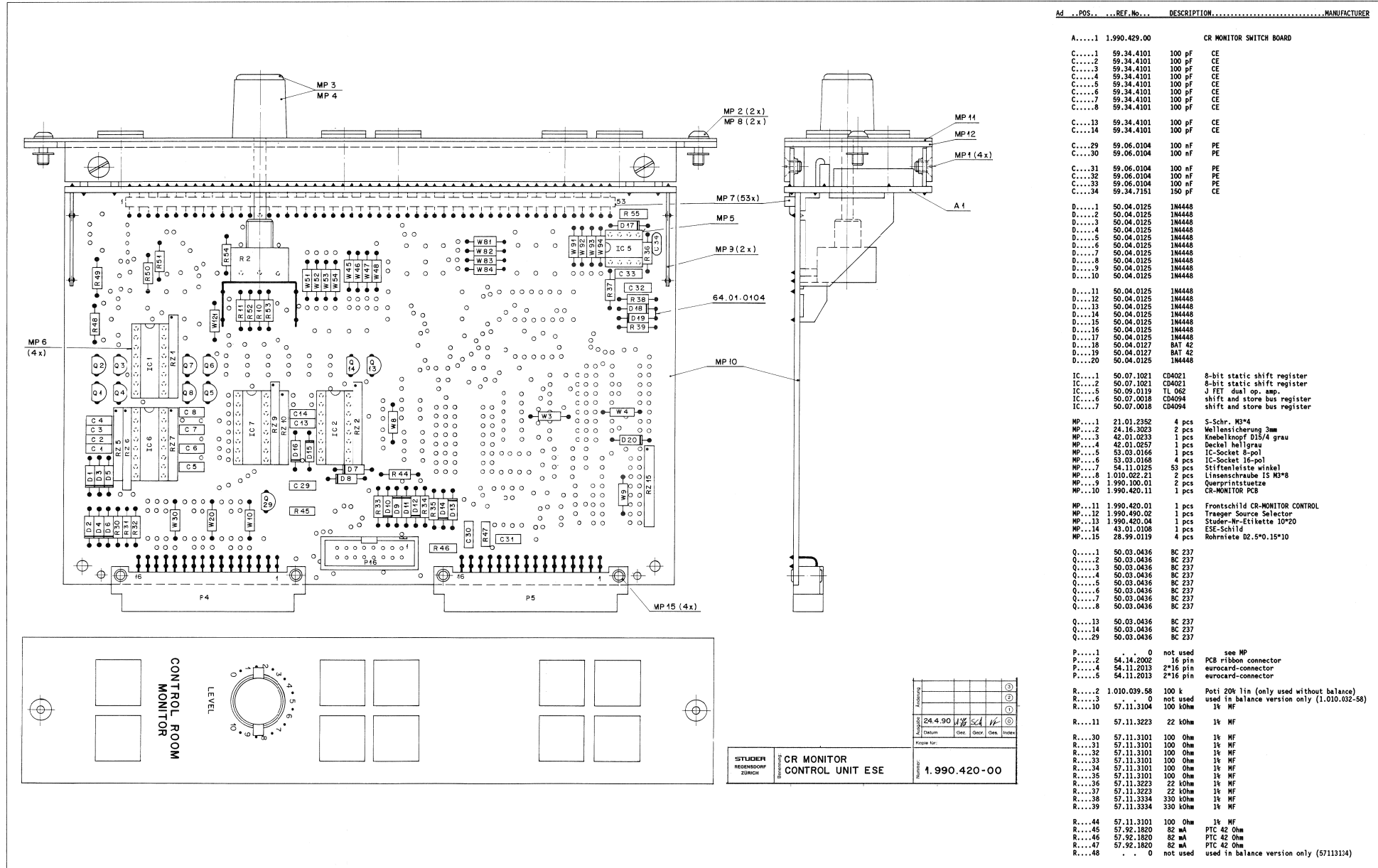
optional:
wire hole
possible to interrupt the layer



7.5.90 A. Schmid	INCL SWITCH BOARD A.990.429.00	PAGE 2 OF 2
STUDER		SC 1.990.420-00

CR MONITOR CONTROL UNIT ESE

1.990.420.00



Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
A....1	1	1.990.429.00	CR MONITOR SWITCH BOARD	
C....1	1	59.34.4101	100 pF	CE
C....2	2	59.34.4101	100 pF	CE
C....3	3	59.34.4101	100 pF	CE
C....4	4	59.34.4101	100 pF	CE
C....5	5	59.34.4101	100 pF	CE
C....6	6	59.34.4101	100 pF	CE
C....7	7	59.34.4101	100 pF	CE
C....8	8	59.34.4101	100 pF	CE
C....13	13	59.34.4101	100 pF	CE
C....14	14	59.34.4101	100 pF	CE
C....29	29	59.06.0104	100 nF	PE
C....30	30	59.06.0104	100 nF	PE
C....31	31	59.06.0104	100 nF	PE
C....32	32	59.06.0104	100 nF	PE
C....33	33	59.06.0104	100 nF	PE
C....34	34	59.34.7151	150 pF	CE
D....1	1	50.04.0125	1N4448	
D....2	2	50.04.0125	1N4448	
D....3	3	50.04.0125	1N4448	
D....4	4	50.04.0125	1N4448	
D....5	5	50.04.0125	1N4448	
D....6	6	50.04.0125	1N4448	
D....7	7	50.04.0125	1N4448	
D....8	8	50.04.0125	1N4448	
D....9	9	50.04.0125	1N4448	
D....10	10	50.04.0125	1N4448	
D....11	11	50.04.0125	1N4448	
D....12	12	50.04.0125	1N4448	
D....13	13	50.04.0125	1N4448	
D....14	14	50.04.0125	1N4448	
D....15	15	50.04.0125	1N4448	
D....16	16	50.04.0125	1N4448	
D....17	17	50.04.0125	1N4448	
D....18	18	50.04.0127	BAT 42	
D....19	19	50.04.0127	BAT 42	
D....20	20	50.04.0125	1N4448	
IC....1	1	50.07.1021	CD4021	8-bit static shift register
IC....2	2	50.07.1021	CD4021	8-bit static shift register
IC....5	5	50.05.0119	11 062	J FET dual op. amp.
IC....6	6	50.07.0018	CD4094	shift and store bus register
IC....7	7	50.07.0018	CD4094	shift and store bus register
MP....1	1	21.01.2352	4 pcs	S-Schr. M3*4
MP....2	2	24.16.3023	2 pcs	Wellensicherung 3mm
MP....3	3	42.01.0233	1 pcs	Knabbelknopf D15/4 grau
MP....4	4	42.01.0257	1 pcs	Deckel belgrau
MP....5	5	53.03.0166	1 pcs	IC-Socket 8-pol
MP....6	6	53.03.0168	1 pcs	IC-Socket 16-pol
MP....7	7	54.11.0125	53 pcs	Stiffenleiste winkel
MP....8	8	1.010.022.21	2 pcs	Linsschraube IS M3*8
MP....9	9	1.990.100.01	2 pcs	Querprintschraube
MP....10	10	1.990.420.11	1 pcs	CR-MONITOR PCB
MP....11	11	1.990.420.01	1 pcs	Frontschild CR-MONITOR CONTROL
MP....12	12	1.990.490.02	15 pcs	Traeger Source Selector
MP....13	13	1.990.420.04	1 pcs	Studer-Nr-Etikette 10*20
MP....14	14	43.01.0108	1 pcs	ESE-Schild
MP....15	15	28.99.0119	4 pcs	Rohrriete 02.5*0.15*10
Q....1	1	50.03.0436	BC 237	
Q....2	2	50.03.0436	BC 237	
Q....3	3	50.03.0436	BC 237	
Q....4	4	50.03.0436	BC 237	
Q....5	5	50.03.0436	BC 237	
Q....6	6	50.03.0436	BC 237	
Q....7	7	50.03.0436	BC 237	
Q....8	8	50.03.0436	BC 237	
Q....13	13	50.03.0436	BC 237	
Q....14	14	50.03.0436	BC 237	
Q....29	29	50.03.0436	BC 237	
P....1	1	0	not used	see MP
P....2	2	54.14.2002	15 pin	PCB ribbon connector
P....4	4	54.11.2013	2*16 pin	eurocard-connector
P....5	5	54.11.2013	2*16 pin	eurocard-connector
R....2	2	1.010.039.58	100 k	Poti 20k lin (only used without balance)
R....3	3	0	not used	used in balance version only (1.010.032-58)
R....10	10	57.11.3104	100 kOhm	1% MF
R....11	11	57.11.3223	22 kOhm	1% MF
R....30	30	57.11.3101	100 Ohm	1% MF
R....31	31	57.11.3101	100 Ohm	1% MF
R....32	32	57.11.3101	100 Ohm	1% MF
R....33	33	57.11.3101	100 Ohm	1% MF
R....34	34	57.11.3101	100 Ohm	1% MF
R....35	35	57.11.3101	100 Ohm	1% MF
R....36	36	57.11.3223	22 kOhm	1% MF
R....37	37	57.11.3223	22 kOhm	1% MF
R....38	38	57.11.3334	330 kOhm	1% MF
R....39	39	57.11.3334	330 kOhm	1% MF
R....44	44	57.11.3101	100 Ohm	1% MF
R....45	45	57.92.1820	82 mA	PTC 42 Ohm
R....46	46	57.92.1820	82 mA	PTC 42 Ohm
R....47	47	57.92.1820	82 mA	PTC 42 Ohm
R....48	48	0	not used	used in balance version only (5711314)

CR MONITOR CONTROL UNIT ESE



1.990.420.00

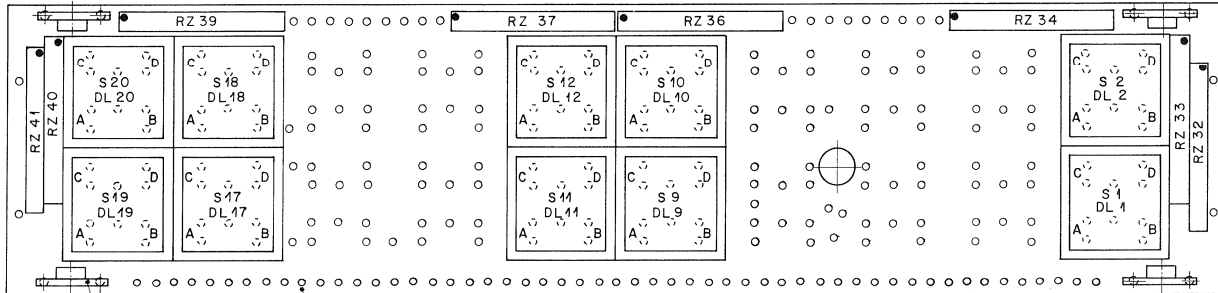
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R....49	.	0	not used	used in balance version only (57113134)
R....50	.	0	not used	used in balance version only (57113362)
R....51	.	0	not used	used in balance version only (57113473)
R....52	57.11.3104		100 kOhm	1% MF
R....53	.	0	not used	used in balance version only (57113363)
R....54	.	0	not used	used in balance version only (57113363)
R....55	57.92.7016		1.6 A	R-PTC 0.22 Ohm
W....3	57.11.3000		0 Ohm	wire bridge RXTH to IC 2
W....4	57.11.3000		0 Ohm	wire bridge RXTH to W 3
W....8	57.11.3000		0 Ohm	wire bridge TXD to IC 7
W....9	57.11.3000		0 Ohm	wire bridge TXD to W 8
W....10	57.11.3000		0 Ohm	wire bridge SERDAT #0 (INT 0)
W....11	.	0	not used	wire bridge SERDAT #1 INT 1 57113000
W....12	.	0	not used	wire bridge SERDAT #2 INT 2 57113000
W....13	.	0	not used	wire bridge SERDAT #3 INT 3 57113000
W....14	.	0	not used	wire bridge SERDAT #4 INT 4 57113000
W....15	.	0	not used	wire bridge SERDAT #5 INT 5 57113000
W....16	.	0	not used	wire bridge SERDAT #6 INT 6 57113000
W....20	57.11.3000		0 Ohm	wire bridge SERDAT #0 (TSTB 0)
W....21	.	0	not used	wire bridge SERDAT #1 TSTB 1 57113000
W....22	.	0	not used	wire bridge SERDAT #2 TSTB 2 57113000
W....23	.	0	not used	wire bridge SERDAT #3 TSTB 3 57113000
W....24	.	0	not used	wire bridge SERDAT #4 TSTB 4 57113000
W....25	.	0	not used	wire bridge SERDAT #5 TSTB 5 57113000
W....26	.	0	not used	wire bridge SERDAT #6 TSTB 6 57113000
W....30	57.11.3000		0 Ohm	wire bridge SERDAT #0 (RXD 0)
W....31	.	0	not used	wire bridge SERDAT #1 RXD 1 57113000
W....32	.	0	not used	wire bridge SERDAT #2 RXD 2 57113000
W....33	.	0	not used	wire bridge SERDAT #3 RXD 3 57113000
W....34	.	0	not used	wire bridge SERDAT #4 RXD 4 57113000
W....35	.	0	not used	wire bridge SERDAT #5 RXD 5 57113000
W....36	.	0	not used	wire bridge SERDAT #6 RXD 6 57113000
W....45	57.11.3000		0 Ohm	wire bridge
W....46	57.11.3000		0 Ohm	wire bridge
W....47	57.11.3000		0 Ohm	wire bridge
W....48	57.11.3000		0 Ohm	wire bridge
W....51	57.11.3000		0 Ohm	wire bridge
W....52	57.11.3000		0 Ohm	wire bridge
W....53	57.11.3000		0 Ohm	wire bridge
W....54	57.11.3000		0 Ohm	wire bridge
W....81	57.11.3000		0 Ohm	wire bridge
W....82	57.11.3000		0 Ohm	wire bridge
W....83	57.11.3000		0 Ohm	wire bridge
W....84	57.11.3000		0 Ohm	wire bridge
W....91	57.11.3000		0 Ohm	wire bridge
W....92	57.11.3000		0 Ohm	wire bridge
W....93	57.11.3000		0 Ohm	wire bridge
W....94	57.11.3000		0 Ohm	wire bridge
W...120	.	0	not used	used only for CR LEVEL -100dB...+0dB
W...121	57.11.3000		0 Ohm	wire bridge CR LEVEL -100dB...+10dB
W...124	.	0	not used	only used for CR LEVEL -100dB...+40dB
RZ....1	57.88.4104		100 kOhm	2% resistor-network
RZ....2	57.88.4104		100 kOhm	2% resistor-network
RZ....5	57.88.2682		6.8 kOhm	2% resistor-network
RZ....6	57.88.4104		100 kOhm	2% resistor-network
RZ....7	57.88.2682		6.8 kOhm	2% resistor-network
RZ....9	57.88.4104		100 kOhm	2% resistor-network
RZ...10	57.88.2682		6.8 kOhm	2% resistor-network
RZ...15	57.88.4104		100 kOhm	2% resistor-network

CE=Ceramic, PE=Polyester
MF=Metal Film

1.990.420.00 CR MONITOR CONTROL UNIT SCA90/12/0500

CR MONITOR SWITCH BOARD

1.990.429.00



Ausgabe					③
Anzeige					②
					①
Datum	6.3.90	Gez.	Gepr.	Ges.	Index

STUDER REGENSDORF ZÜRICH	Benennung: CR MONITOR SWITCH BOARD	Nummer:	1.990.429-00
		Kopie für:	

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

DL...1	. . 0	not used	see S 01	
DL...2	. . 0	not used	see S 02	
DL...9	. . 0	not used	see S 09	
DL...10	. . 0	not used	see S 10	
DL...11	. . 0	not used	see S 11	
DL...12	. . 0	not used	see S 12	
DL...17	. . 0	not used	see S 17	
DL...18	. . 0	not used	see S 18	
DL...19	. . 0	not used	see S 19	
DL...20	. . 0	not used	see S 20	
MP...1	1.990.100.05	4 pcs	Querprinthalter	
MP...2	1.990.429.11	1 pcs	CR MONITOR SWITCH PCB	
MP...3	1.990.429.04	1 pcs	Nr-Etikette	
S....1	55.15.0702		Taste 1*A,12mm RT/Trans	CH I CUT
S....2	55.15.0702		Taste 1*A,12mm RT/Trans	CH II CUT
S....9	55.15.0722		Taste 1*A,12mm RT/RT	DIM - 20dB
S....10	55.15.0705		Taste 1*A,12mm GN/Trans	MONO
S....11	55.15.0705		Taste 1*A,12mm GN/Trans	Kanalvert.
S....12	55.15.0705		Taste 1*A,12mm GN/Trans	CH I Phase
S....17	55.15.0704		Taste 1*A,12mm GB/Trans	speaker ALT.
S....18	55.15.0704		Taste 1*A,12mm GB/Trans	speaker MINI
S....19	55.15.0704		Taste 1*A,12mm GB/Trans	speaker I
S....20	55.15.0704		Taste 1*A,12mm GB/Trans	speaker II
RZ...32	57.88.4101	100 Ohm	2% ,8*	
RZ...33	57.88.4101	100 Ohm	2% ,8*	
RZ...34	57.88.4101	100 Ohm	2% ,8*	
RZ...36	57.88.4101	100 Ohm	2% ,8*	
RZ...37	57.88.4101	100 Ohm	2% ,8*	
RZ...39	57.88.4101	100 Ohm	2% ,8*	
RZ...40	57.88.4101	100 Ohm	2% ,8*	
RZ...41	57.88.4101	100 Ohm	2% ,8*	

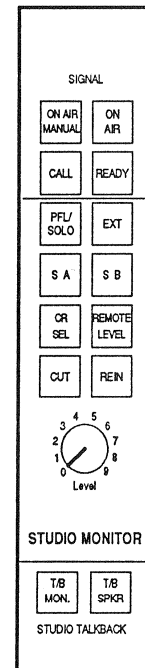
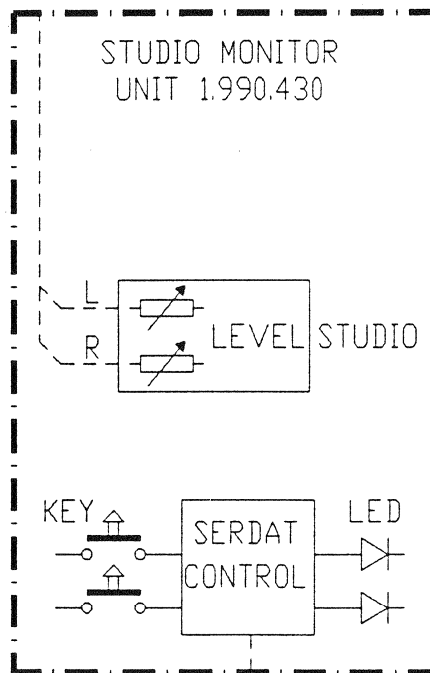
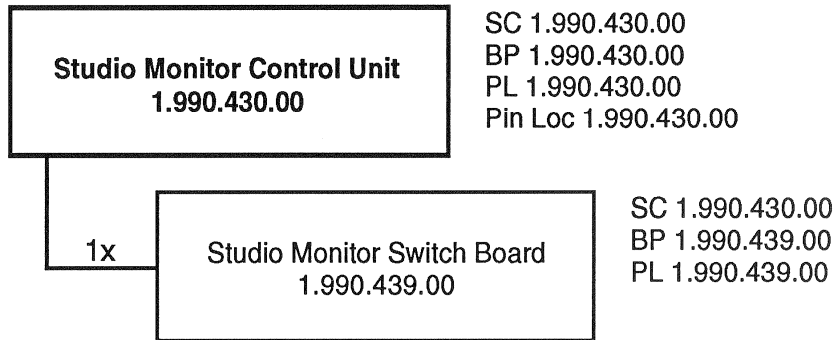
CER=Ceramic, PE=Polyester
MF=Metal Film, PMG=Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,
Sig=Signetics, St=Studer.

1.990.429.00 CR MONITOR SWITCH BOARD SCA88/12/1600

Studio Monitor Control Unit

1.990.430.00



SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

Pin location list

1.990.430

P	NO	NAME	REMARK	

				B=BUS
				O=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P4	01A	0V-L	GROUND SIGN (LOGIC)	B
P4	01B	+ 5.5V	+ SUPPLY	B
P4	02A	+ 15.5V	+ SUPPLY	B
P4	02B	0V-A	GROUND AUDIO	B
P4	03A	- 15.5V	- SUPPLY	B
P4	03B	+3...4V LED	LED SUPPLY VARIABLE +3...4V	B
P4	04A	DO 0	DATA OUT 0 (ENABLE)	
P4	04B	INT 0	INTERUPT 0	
P4	05A	INT 1	INTERUPT 1	
P4	05B	INT 2	INTERUPT 2	
P4	06A	INT 3	INTERUPT 3	
P4	06B	INT 4	INTERUPT 4	
P4	07A	INT 5	INTERUPT 5	
P4	07B	INT 6	INTERUPT 6	
P4	08A	TSTB 0	TRANSMIT STROBE 0	
P4	08B	TSTB 1	TRANSMIT STROBE 1	
P4	09A	TSTB 2	TRANSMIT STROBE 2	
P4	09B	TSTB 3	TRANSMIT STROBE 3	
P4	10A	TSTB 4	TRANSMIT STROBE 4	
P4	10B	TSTB 5	TRANSMIT STROBE 5	
P4	11A	TSTB 6	TRANSMIT STROBE 6	
P4	11B	RXD 0	RECEIVE DATA 0	
P4	12A	RXD 1	RECEIVE DATA 1	
P4	12B	RXD 2	RECEIVE DATA 2	
P4	13A	RXD 3	RECEIVE DATA 3	
P4	13B	RXD 4	RECEIVE DATA 4	
P4	14A	RXD 5	RECEIVE DATA 5	
P4	14B	RXD 6	RECEIVE DATA 6	
P4	15A	TXD	TRANSMIT DATA	
P4	15B	RSTB	RECEIVE STROBE	
P4	16A	TCL	TRANSMIT CLOCK	
P4	16B	RCL	RECEIVE CLOCK	

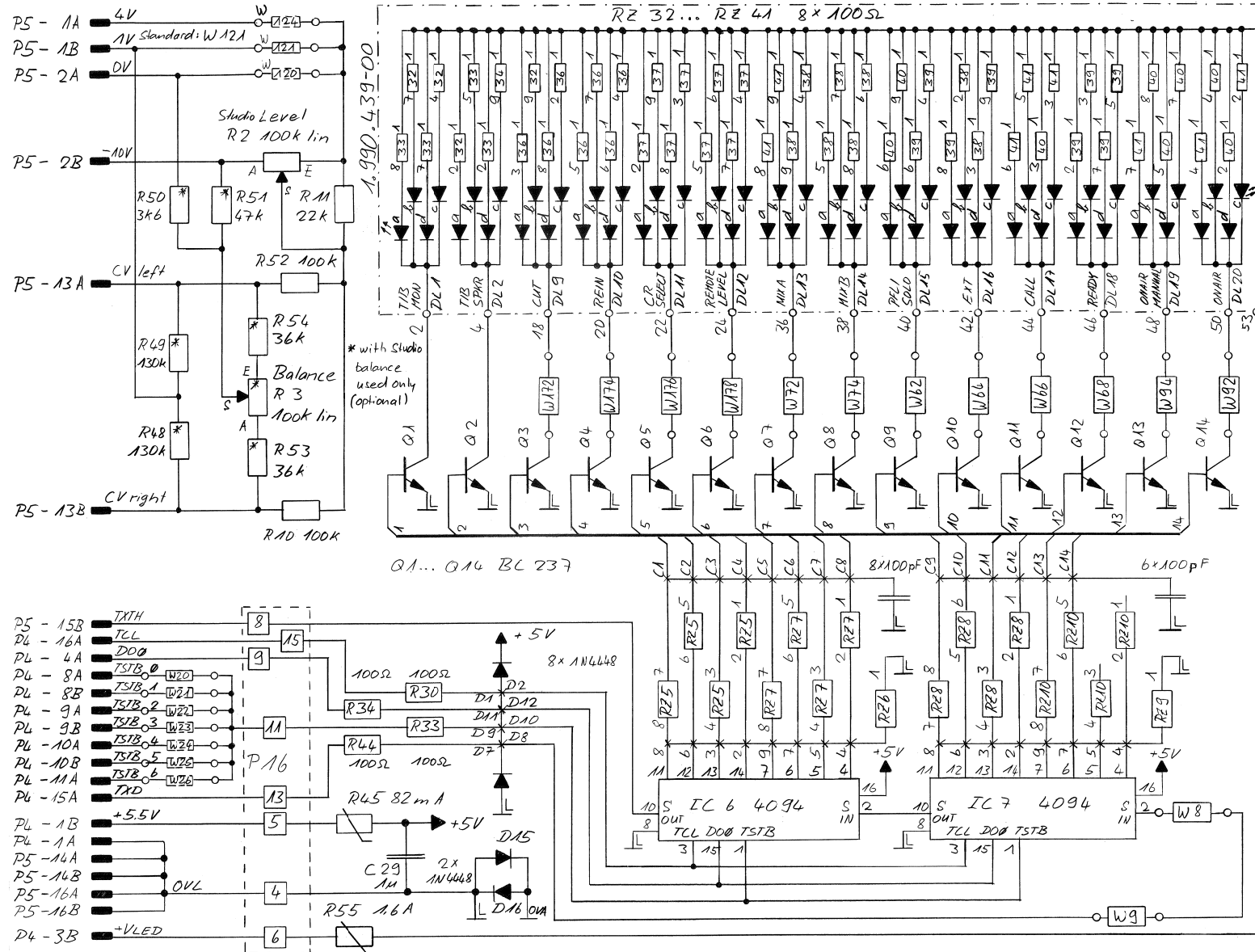
Pin location list

1.990.430

P5	01A	+4V	CONTROL VOLTAGE VCA		
P5	01B	+1V	CONTROL VOLTAGE VCA		
P5	02A	0V	CONTROL VOLTAGE VCA		
P5	02B	-10V	CONTROL VOLTAGE VCA		
P5	03A	-	N.C.		
P5	03B	-	N.C.		
P5	04A	-	N.C.		
P5	04B	-	N.C.		
P5	05A	-	N.C.		
P5	05B	-	N.C.		
P5	06A	-	N.C.		
P5	06B	-	N.C.		
P5	07A	-	N.C.		
P5	07B	-	N.C.		
P5	08A	-	N.C.		
P5	08B	-	N.C.		
P5	09A	-	N.C.		
P5	09B	-	N.C.		
P5	10A	-	N.C.		
P5	10B	-	N.C.		
P5	11A	-	N.C.		
P5	11B	-	N.C.		
P5	12A	-	N.C.		
P5	12B	-	N.C.		
P5	13A	CV-STUDIO-L	CTRL.VOLT.STUDIO LEVEL LEFT		
P5	13B	CV-STUDIO-R	CTRL.VOLT.STUDIO LEVEL RIGHT		
P5	14	0V-L	GROUND SIGN (LOGIC)	B	X X
P5	15A	RXTH	RECEIVE DATA THROUGH		
P5	15B	TXTH	TRANSMIT DATA THROUGH		
P5	16	0V-L	GROUND SIGN (LOGIC)	B	X X

STUDIO MONITOR CONTROL UNIT

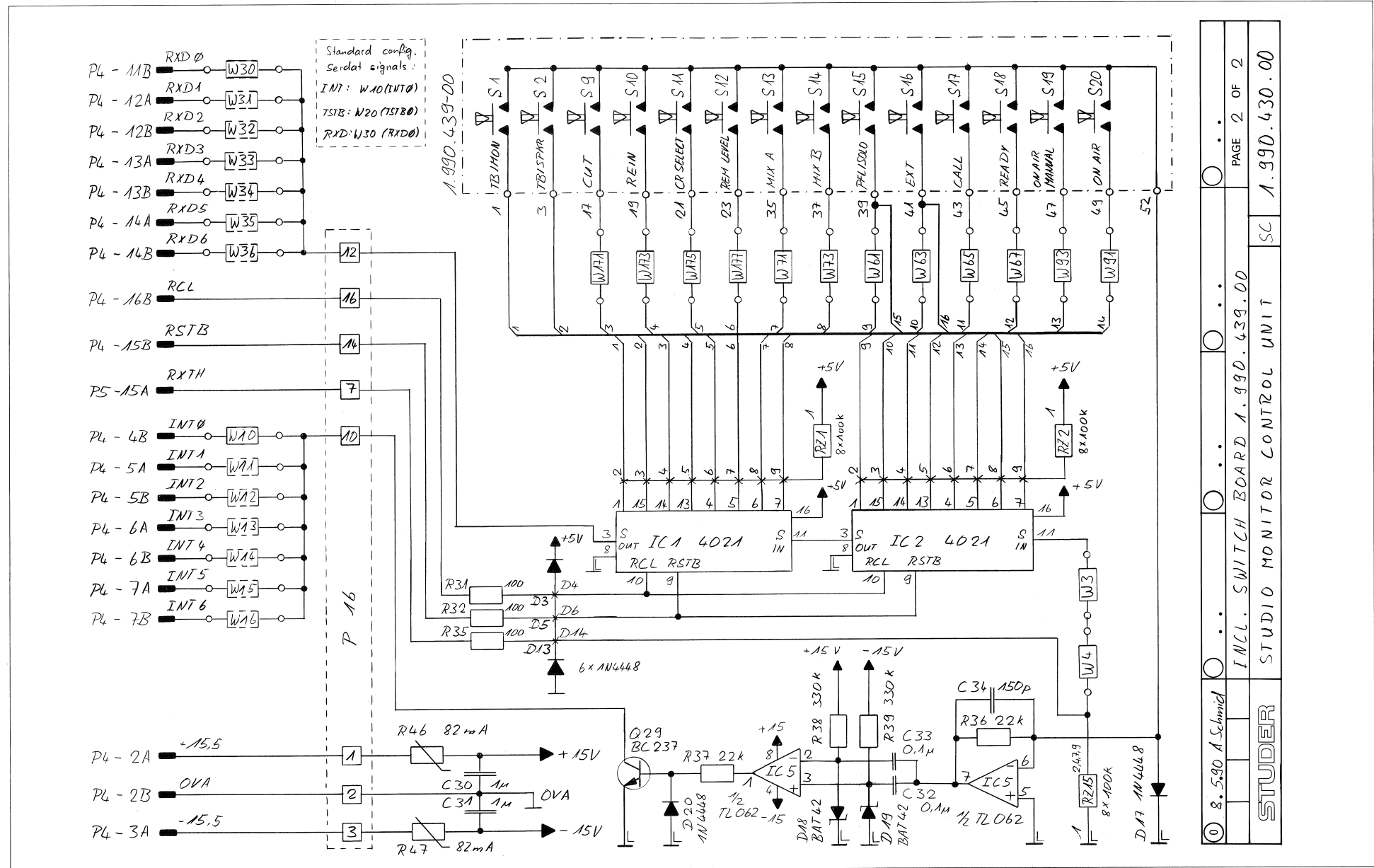
1.990.430.00



8.5.90 A.Schmid	INCL. SWITCH BOARD 1.990.439.00	PAGE 1 OF 2
STUDER	STUDIO MONITOR CONTROL UNIT	SC 1.990.430.00

STUDIO MONITOR CONTROL UNIT

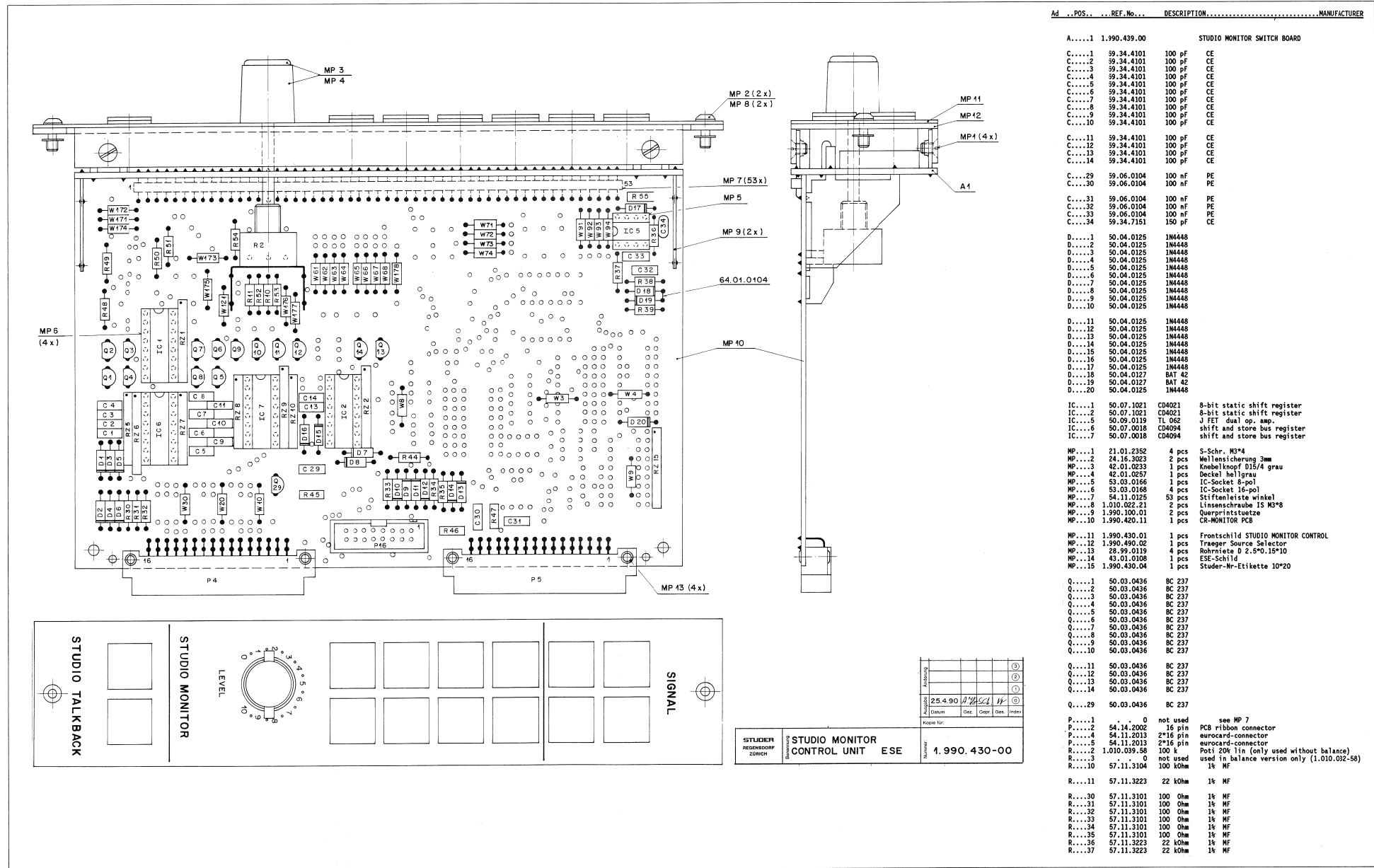
1.990.430.00



8.590 A Schmid	INCL. SWITCH BOARD 1.990.439.00	STUDIO MONITOR CONTROL UNIT	SC	1.990.430.00
PAGE 2 OF 2				

STUDIO MONITOR CONTROL UNIT ESE

1.990.430.00



STUDIO MONITOR CONTROL UNIT ESE



1.990.430.00

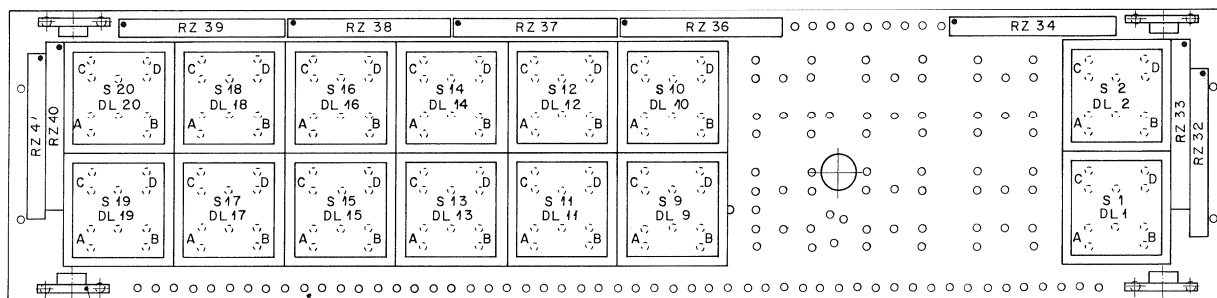
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R....38		57.11.3334	330 kOhm 1% MF	
R....39		57.11.3334	330 kOhm 1% MF	
R....44		57.11.3101	100 Ohm 1% MF	
R....45		57.92.1820	82 mA PTC 42 Ohm	
R....46		57.92.1820	82 mA PTC 42 Ohm	
R....47		57.92.1820	82 mA PTC 42 Ohm	
R....48		. . . 0	not used used in balance version only (57113134)	
R....49		. . . 0	not used used in balance version only (57113134)	
R....50		. . . 0	not used used in balance version only (57113362)	
R....51		. . . 0	not used used in balance version only (57113473)	
R....52		57.11.3104	100 kOhm 1% MF	
R....53		. . . 0	not used used in balance version only (57113363)	
R....54		. . . 0	not used used in balance version only (57113363)	
R....55		57.92.7016	1.6 A R-PTC 0.22 Ohm	
W....3		57.11.3000	0 Ohm wire bridge RXTH to IC 2	
W....4		57.11.3000	0 Ohm wire bridge RXTH to W 3	
W....8		57.11.3000	0 Ohm wire bridge TXD to IC 7	
W....9		57.11.3000	0 Ohm wire bridge TXD to W 8	
W....10		57.11.3000	0 Ohm wire bridge SERDAT #0 (INT 0)	
W....11		. . . 0	not used wire bridge SERDAT #1 INT 1 57113000	
W....12		. . . 0	not used wire bridge SERDAT #2 INT 2 57113000	
W....13		. . . 0	not used wire bridge SERDAT #3 INT 3 57113000	
W....14		. . . 0	not used wire bridge SERDAT #4 INT 4 57113000	
W....15		. . . 0	not used wire bridge SERDAT #5 INT 5 57113000	
W....16		. . . 0	not used wire bridge SERDAT #6 INT 6 57113000	
W....20		57.11.3000	0 Ohm wire bridge SERDAT #0 (TSTB 0)	
W....21		. . . 0	not used wire bridge SERDAT #1 TSTB 1 57113000	
W....22		. . . 0	not used wire bridge SERDAT #2 TSTB 2 57113000	
W....23		. . . 0	not used wire bridge SERDAT #3 TSTB 3 57113000	
W....24		. . . 0	not used wire bridge SERDAT #4 TSTB 4 57113000	
W....25		. . . 0	not used wire bridge SERDAT #5 TSTB 5 57113000	
W....26		. . . 0	not used wire bridge SERDAT #6 TSTB 6 57113000	
W....30		57.11.3000	0 Ohm wire bridge SERDAT #0 (RXD 0)	
W....31		. . . 0	not used wire bridge SERDAT #1 RXD 1 57113000	
W....32		. . . 0	not used wire bridge SERDAT #2 RXD 2 57113000	
W....33		. . . 0	not used wire bridge SERDAT #3 RXD 3 57113000	
W....34		. . . 0	not used wire bridge SERDAT #4 RXD 4 57113000	
W....35		. . . 0	not used wire bridge SERDAT #5 RXD 5 57113000	
W....36		. . . 0	not used wire bridge SERDAT #6 RXD 6 57113000	
W....61		57.11.3000	0 Ohm wire bridge	
W....62		57.11.3000	0 Ohm wire bridge	
W....63		57.11.3000	0 Ohm wire bridge	
W....64		57.11.3000	0 Ohm wire bridge	
W....65		57.11.3000	0 Ohm wire bridge	
W....66		57.11.3000	0 Ohm wire bridge	
W....67		57.11.3000	0 Ohm wire bridge	
W....68		57.11.3000	0 Ohm wire bridge	
W....71		57.11.3000	0 Ohm wire bridge	
W....72		57.11.3000	0 Ohm wire bridge	
W....73		57.11.3000	0 Ohm wire bridge	
W....74		57.11.3000	0 Ohm wire bridge	
W....91		57.11.3000	0 Ohm wire bridge	
W....92		57.11.3000	0 Ohm wire bridge	
W....93		57.11.3000	0 Ohm wire bridge	
W....94		57.11.3000	0 Ohm wire bridge	
W....171		57.11.3000	0 Ohm wire bridge	
W....172		57.11.3000	0 Ohm wire bridge	
W....173		57.11.3000	0 Ohm wire bridge	
W....174		57.11.3000	0 Ohm wire bridge	
W....175		57.11.3000	0 Ohm wire bridge	
W....176		57.11.3000	0 Ohm wire bridge	
W....177		57.11.3000	0 Ohm wire bridge	
W....178		57.11.3000	0 Ohm wire bridge	
W....120		. . . 0	not used used only for CR LEVEL -100dB...+0dB	
W....121		57.11.3000	0 Ohm wire bridge CR LEVEL -100dB...+10dB	
W....124		. . . 0	not used only used for CR LEVEL -100dB...+40dB	
RZ....1		57.88.4104	100 kOhm 2% resistor-network	
RZ....2		57.88.4104	100 kOhm 2% resistor-network	
RZ....5		57.88.2682	6.8 kOhm 2% resistor-network	
RZ....6		57.88.4104	100 kOhm 2% resistor-network	
RZ....7		57.88.2682	6.8 kOhm 2% resistor-network	
RZ....8		57.88.2682	6.8 kOhm 2% resistor-network	
RZ....9		57.88.4104	100 kOhm 2% resistor-network	
RZ....10		57.88.2682	6.8 kOhm 2% resistor-network	
RZ....15		57.88.4104	100 kOhm 2% resistor-network	

CE=Ceramic, PE=Polyester
MF=Metal Film

1.990.430.00 STUDIO MONITOR CONTROL UNIT SCA90/12/0500

STUDIO MONITOR SWITCH BOARD

1.990.439.00



MP1 (4x)

MP2

Änderung									
Abgabe	6.3.90								
Datum		Gez.	Gepr.	Gez.	Index				

STUDER REGENSDORF ZÜRICH	Benennung: STUDIO MONITOR SWITCH BOARD	Nummer: 1.990.439-00
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Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

DL...1	. . . 0	not used	see S 01
DL...2	. . . 0	not used	see S 02
DL...9	. . . 0	not used	see S 09
DL...10	. . . 0	not used	see S 10
DL...11	. . . 0	not used	see S 11
DL...12	. . . 0	not used	see S 12
DL...13	. . . 0	not used	see S 13
DL...14	. . . 0	not used	see S 14
DL...15	. . . 0	not used	see S 15
DL...16	. . . 0	not used	see S 16
DL...17	. . . 0	not used	see S 17
DL...18	. . . 0	not used	see S 18
DL...19	. . . 0	not used	see S 19
DL...20	. . . 0	not used	see S 20
MP...1	1.990.100.05	4 pcs	Querprinthalter
MP...2	1.990.429.11	1 pcs	CR MONITOR SWITCH PCB
MP...3	1.990.439.04	1 pcs	Nr-Etikette 5*20
S....1	55.15.0722		Taste 1*A,12mm RT/RT T/B MON
S....2	55.15.0722		Taste 1*A,12mm RT/RT T/B SPKR
S....9	55.15.0702		Taste 1*A,12mm RT/Trans CUT
S....10	55.15.0705		Taste 1*A,12mm GN/Trans REIN
S....11	55.15.0704		Taste 1*A,12mm GB/Trans CR SELECT
S....12	55.15.0705		Taste 1*A,12mm GN/Trans REMOTE LEVEL
S....13	55.15.0704		Taste 1*A,12mm GB/Trans MIX A
S....14	55.15.0704		Taste 1*A,12mm GB/Trans MIX B
S....15	55.15.0704		Taste 1*A,12mm GB/Trans PFL/SOLO
S....16	55.15.0704		Taste 1*A,12mm GB/Trans EXT.
S....17	55.15.0704		Taste 1*A,12mm GB/Trans CALL
S....18	55.15.0705		Taste 1*A,12mm GN/Trans READY
S....19	55.15.0702		Taste 1*A,12mm RT/Trans ON AIR MANUAL
S....20	55.15.0722		Taste 1*A,12mm RT/RT ON AIR
RZ...32	57.88.4101	100 Ohm	2% ,8*
RZ...33	57.88.4101	100 Ohm	2% ,8*
RZ...34	57.88.4101	100 Ohm	2% ,8*
RZ...36	57.88.4101	100 Ohm	2% ,8*
RZ...37	57.88.4101	100 Ohm	2% ,8*
RZ...38	57.88.4101	100 Ohm	2% ,8*
RZ...39	57.88.4101	100 Ohm	2% ,8*
RZ...40	57.88.4101	100 Ohm	2% ,8*
RZ...41	57.88.4101	100 Ohm	2% ,8*

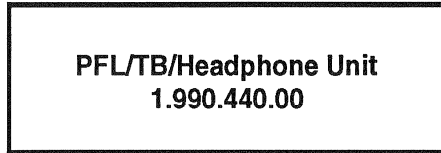
CER=Ceramic, PE=Polyester
MF=Metal Film, PMG=Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips,
Sig=Signetics, St=Studer.

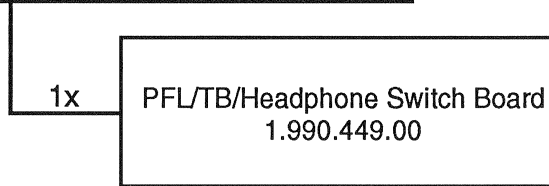
1.990.439.00 STUDIO MONITOR SWITCH BOARD SCA89/07/0500

PFL/Talk Back/Headphone Unit

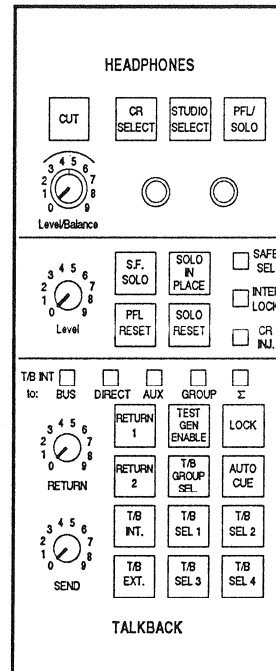
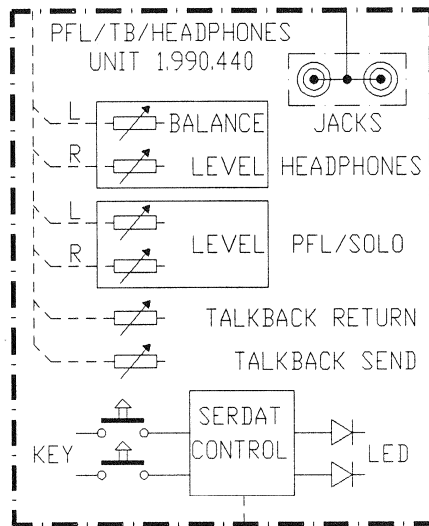
1.990.440.00



SC 1.990.440.00
BP 1.990.440.00
PL 1.990.440.00
Pin Loc 1.990.440.00



SC 1.990.440.00
BP 1.990.449.00
PL 1.990.449.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

Pin location list

1.990.440

P	NO	NAME	REMARK	
-----			-----	
				B=BUS
				O=CONNECTION
				S=SYMMETRIC
				I=INVERS
				AS=ASYMMETRIC

P4	01A	0V-L	GROUND SIGN (LOGIC)	B
P4	01B	+ 5.5V	+ SUPPLY	B
P4	02A	+ 15.5V	+ SUPPLY	B
P4	02B	0V-A	GROUND AUDIO	B
P4	03A	- 15.5V	- SUPPLY	B
P4	03B	+3..4V LED	LED SUPPLY VARIABLE +3...4V	B
P4	04A	DO 0	DATA OUT 0 (ENABLE)	
P4	04B	INT 0	INTERUPT 0	
P4	05A	INT 1	INTERUPT 1	
P4	05B	INT 2	INTERUPT 2	
P4	06A	INT 3	INTERUPT 3	
P4	06B	INT 4	INTERUPT 4	
P4	07A	INT 5	INTERUPT 5	
P4	07B	INT 6	INTERUPT 6	
P4	08A	TSTB 0	TRANSMIT STROBE 0	
P4	08B	TSTB 1	TRANSMIT STROBE 1	
P4	09A	TSTB 2	TRANSMIT STROBE 2	
P4	09B	TSTB 3	TRANSMIT STROBE 3	
P4	10A	TSTB 4	TRANSMIT STROBE 4	
P4	10B	TSTB 5	TRANSMIT STROBE 5	
P4	11A	TSTB 6	TRANSMIT STROBE 6	
P4	11B	RXD 0	RECEIVE DATA 0	
P4	12A	RXD 1	RECEIVE DATA 1	
P4	12B	RXD 2	RECEIVE DATA 2	
P4	13A	RXD 3	RECEIVE DATA 3	
P4	13B	RXD 4	RECEIVE DATA 4	
P4	14A	RXD 5	RECEIVE DATA 5	
P4	14B	RXD 6	RECEIVE DATA 6	
P4	15A	TXD	TRANSMIT DATA	
P4	15B	RSTB	RECEIVE STROBE	
P4	16A	TCL	TRANSMIT CLOCK	
P4	16B	RCL	RECEIVE CLOCK	

Pin location list

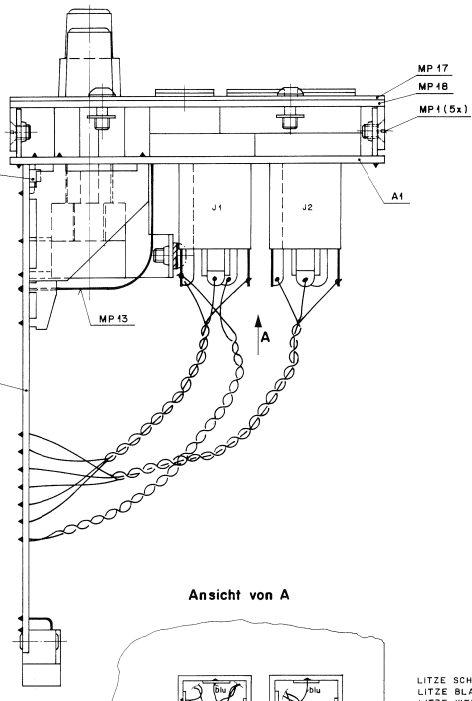
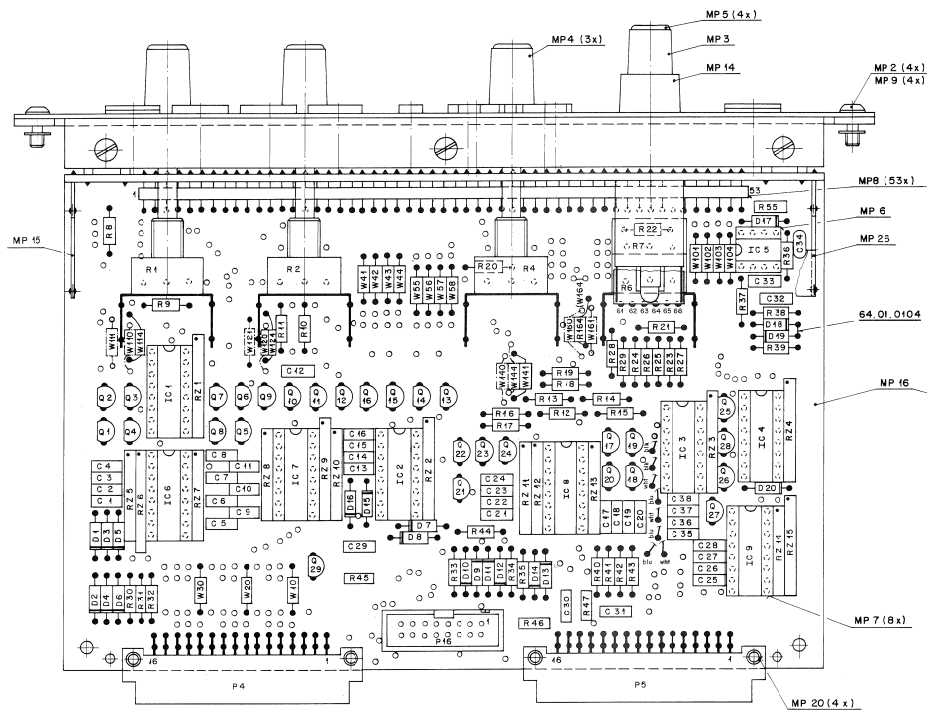
1.990.440

P5	01A	+4V	CONTROL VOLTAGE VCA
P5	01B	+1V	CONTROL VOLTAGE VCA
P5	02A	0V	CONTROL VOLTAGE VCA
P5	02B	-10V	CONTROL VOLTAGE VCA
P5	03A	CV-PHONES-L	CONTROL VOLTAGE HEADPHONE L
P5	03B	CV-PHONES-R	CONTROL VOLTAGE HEADPHONE R
P5	04A	CV-PFL-L	CONTROL VOLTAGE PFL LEFT
P5	04B	CV-PFL-R	CONTROL VOLTAGE PFL RIGHT
P5	05A	-	N.C.
P5	05B	-	N.C.
P5	06A	-	N.C.
P5	06B	-	N.C.
P5	07A	-	N.C.
P5	07B	-	N.C.
P5	08A	-	N.C.
P5	08B	-	N.C.
P5	09A	PHO.IN -1-L	PHONE INPUT 1 LEFT
P5	09B	PHO.IN -1-R	PHONE INPUT 1 RIGHT
P5	10A	PHO.OUT-1-L	PHONE OUTPUT 1 LEFT
P5	10B	PHO.OUT-1-R	PHONE OUTPUT 1 RIGHT
P5	11A	PHONE 1 0V	GROUND SIGN PHONE 1
P5	11B	PHONE 2-0V	GROUND SIGN PHONE 2
P5	12A	PHO.IN-2-L	INPUT PHONE 2 LEFT
P5	12B	PHO.IN-2-R	INPUT PHONE 2 RIGHT
P5	13A	CV-SEND	CTRL.VOLTAGE SEND LEVEL
P5	13B	CV-RETURN	CTRL.VOLTAGE RETURN LEVEL
P5	14	0V-L	GROUND SIGN (LOGIC)
P5	15A	RXTH	RECEIVE DATA THROUGH
P5	15B	TXTH	TRANSMIT DATA THROUGH
P5	16	0V-L	GROUND SIGN (LOGIC)

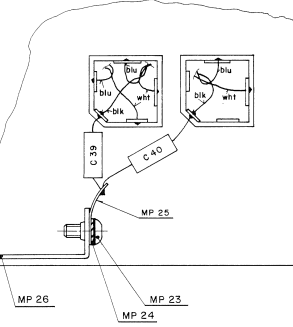
PFL/TB/HEADPHONE UNIT



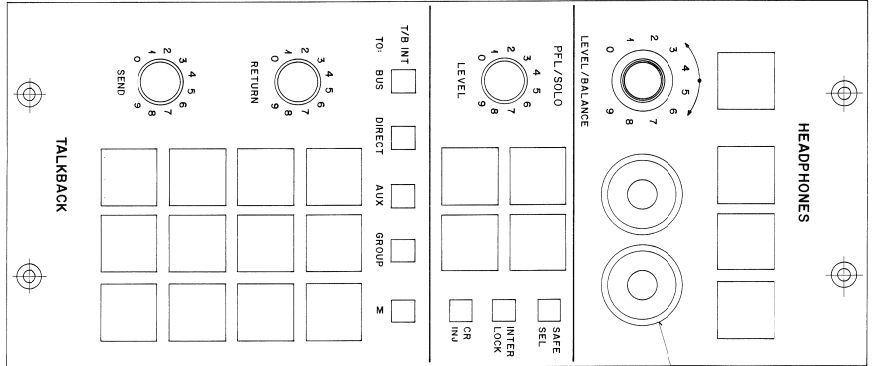
1.990.440.00



Ansicht von A



LITZE SCHWARZ = MP 10 (2x)
 LITZE BLAU = MP 11 (3x)
 LITZE WEISS = MP 12 (3x)



MP 19 (2x)

Änderung					
Datum	27.4.90	OK	Gepr	Gas	Index
Kopie für:					

STUDER REISENDORF ZÜRICH	Produkt PFL / TB / HEADPHONE UNIT	Teilnummer ESE	1.990.440-00
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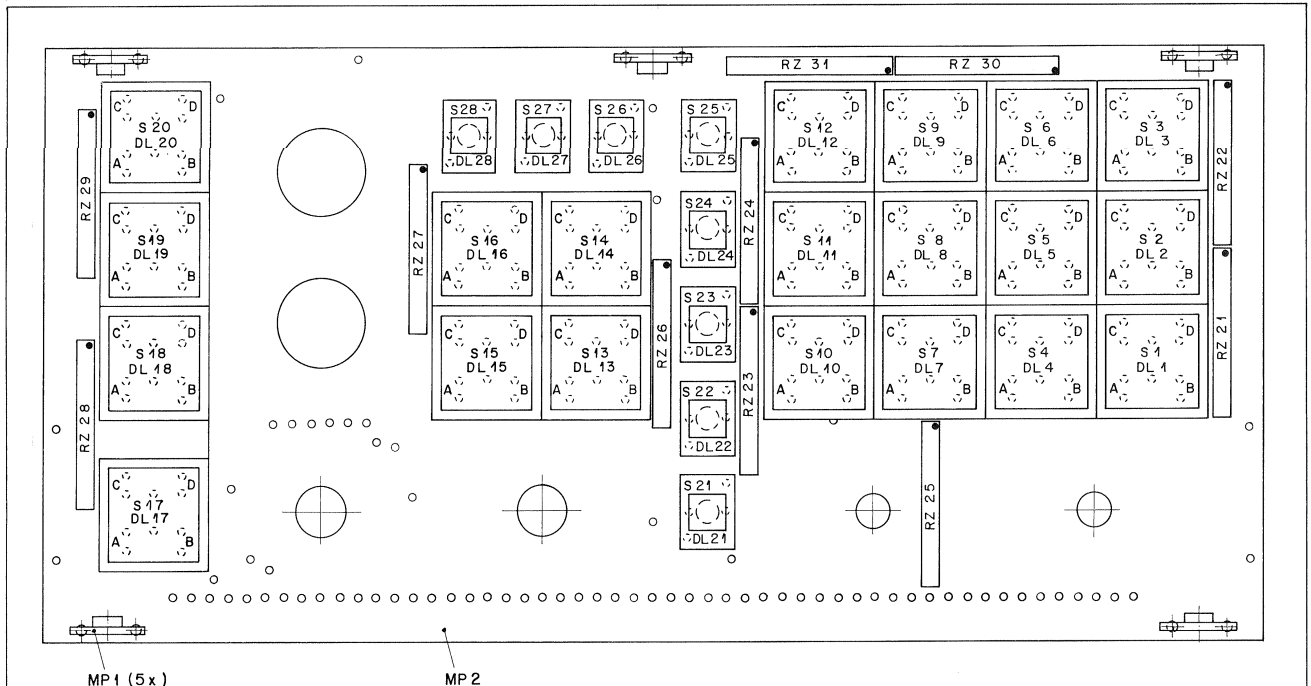
1.990.440.00

PFL/TB/HEADPHONE UNIT ESE

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
A.....1	1.990.440.00		PFL/TB/PHONES SWITCH BOARD		MP...25	29.26.1022	1 pcs	Loetöse M3		W....24	.	0	not used	wire bridge SERDAT #4 TSTB 4 57113000
C.....1	59.34.4101	100 pF	CE		MP...26	1.990.100.03	1 pcs	Querprintstuetze rechts		W....25	.	0	not used	wire bridge SERDAT #5 TSTB 5 57113000
C.....2	59.34.4101	100 pF	CE		Q.....1	50.03.0436	BC 237			W....26	.	0	not used	wire bridge SERDAT #6 TSTB 6 57113000
C.....3	59.34.4101	100 pF	CE		Q.....2	50.03.0436	BC 237			W....30	57.11.3000	0	Ohm	wire bridge SERDAT #0 (RXD 0)
C.....4	59.34.4101	100 pF	CE		Q.....3	50.03.0436	BC 237			W....31	.	0	not used	wire bridge SERDAT #1 RXD 1 57113000
C.....5	59.34.4101	100 pF	CE		Q.....4	50.03.0436	BC 237			W....32	.	0	not used	wire bridge SERDAT #2 RXD 2 57113000
C.....6	59.34.4101	100 pF	CE		Q.....5	50.03.0436	BC 237			W....33	.	0	not used	wire bridge SERDAT #3 RXD 3 57113000
C.....7	59.34.4101	100 pF	CE		Q.....6	50.03.0436	BC 237			W....34	.	0	not used	wire bridge SERDAT #4 RXD 4 57113000
C.....8	59.34.4101	100 pF	CE		Q.....7	50.03.0436	BC 237			W....35	.	0	not used	wire bridge SERDAT #5 RXD 5 57113000
C.....9	59.34.4101	100 pF	CE		Q.....8	50.03.0436	BC 237			W....36	.	0	not used	wire bridge SERDAT #6 RXD 6 57113000
C.....10	59.34.4101	100 pF	CE		Q.....9	50.03.0436	BC 237			W....41	57.11.3000	0	Ohm	Bridge
C.....11	59.34.4101	100 pF	CE		Q.....10	50.03.0436	BC 237			W....42	57.11.3000	0	Ohm	Bridge
C.....12	59.34.4101	100 pF	CE		Q.....11	50.03.0436	BC 237			W....43	57.11.3000	0	Ohm	Bridge
C.....13	59.34.4101	100 pF	CE		Q.....12	50.03.0436	BC 237			W....44	57.11.3000	0	Ohm	Bridge
C.....14	59.34.4101	100 pF	CE		Q.....13	50.03.0436	BC 237			W....55	57.11.3000	0	Ohm	Bridge
C.....15	59.34.4101	100 pF	CE		Q.....14	50.03.0436	BC 237			W....56	57.11.3000	0	Ohm	Bridge
C.....16	59.34.4101	100 pF	CE		Q.....15	50.03.0436	BC 237			W....57	57.11.3000	0	Ohm	Bridge
C.....17	59.34.4101	100 pF	CE		Q.....16	50.03.0436	BC 237			W....58	57.11.3000	0	Ohm	Bridge
C.....18	59.34.4101	100 pF	CE		Q.....17	50.03.0436	BC 237			W....101	57.11.3000	0	Ohm	Bridge
C.....19	59.34.4101	100 pF	CE		Q.....18	50.03.0436	BC 237			W....102	57.11.3000	0	Ohm	Bridge
C.....20	59.34.4101	100 pF	CE		Q.....19	50.03.0436	BC 237			W....103	57.11.3000	0	Ohm	Bridge
C.....21	59.34.4101	100 pF	CE		Q.....20	50.03.0436	BC 237			W....104	57.11.3000	0	Ohm	Bridge
C.....22	59.34.4101	100 pF	CE		Q.....21	50.03.0436	BC 237			W....110	.	0	not used	used only for SEND LEVEL -100dB...+0dB
C.....23	59.34.4101	100 pF	CE		Q.....22	50.03.0436	BC 237			W....111	.	0	not used	used only for SEND LEVEL -100dB...+10dB
C.....24	59.34.4101	100 pF	CE		Q.....23	50.03.0436	BC 237			W....114	57.11.3000	0	Ohm	wire bridge SEND LEVEL -100dB...+40dB
C.....25	59.34.4101	100 pF	CE		Q.....24	50.03.0436	BC 237			W....120	.	0	not used	used only for RETURN LEVEL -100dB...+0dB
C.....26	59.34.4101	100 pF	CE		Q.....25	50.03.0436	BC 237			W....121	.	0	not used	used only for RETURN LEVEL -100dB...+10dB
C.....27	59.34.4101	100 pF	CE		Q.....26	50.03.0436	BC 237			W....124	57.11.3000	0	Ohm	wire bridge RETURN LEVEL -100dB...+40dB
C.....28	59.34.4101	100 pF	CE		Q.....27	50.03.0436	BC 237			W....140	.	0	not used	used only for PFL LEVEL -100dB...+0dB
C.....29	59.06.0104	100 nF	PE		Q.....28	50.03.0436	BC 237			W....141	57.11.3000	0	Ohm	wire bridge PFL LEVEL -100dB...+10dB
C.....30	59.06.0104	100 nF	PE		Q.....29	50.03.0436	BC 237			W....144	.	0	not used	used only for PFL LEVEL -100dB...+40dB
C.....31	59.06.0104	100 nF	PE		P.....1	.	0	not used	see MP 8	W....160	.	0	not used	used only for PHONES LEVEL -100dB...+0dB
C.....32	59.06.0104	100 nF	PE		P.....2	54.14.2002	16 pin	PCB ribbon connector		W....161	.	0	not used	used only for PHONES LEVEL -100dB...+10dB
C.....33	59.06.0104	100 nF	PE		P.....3	54.11.2013	2*16 pin	eurocard-connector		W....164	.	0	not used	used only for PHONES LEVEL -100dB...+40dB
C.....34	59.34.7151	50 pF	CE		P.....4	54.11.2013	2*16 pin	eurocard-connector		RZ....1	57.88.4104	100 kOhm	2%	resistor-network
C.....35	59.06.0222	2.2 nF	PE		R.....1	1.010.027.58	100 kOhm	Poti 20k lin SEND LEVEL		RZ....2	57.88.4104	100 kOhm	2%	resistor-network
C.....36	59.06.0222	2.2 nF	PE		R.....2	1.010.027.58	100 kOhm	Poti 20k lin RETURN LEVEL		RZ....3	57.88.4104	100 kOhm	2%	resistor-network
C.....37	59.06.0222	2.2 nF	PE		R.....3	1.010.027.58	100 kOhm	Poti used only in balance version without balance		RZ....4	57.88.4104	100 kOhm	2%	resistor-network
C.....38	59.06.0222	2.2 nF	PE		R.....4	1.010.027.58	100 kOhm	Poti used only in balance version (1.010.032.58)		RZ....5	57.88.4104	100 kOhm	2%	resistor-network
C.....39	59.03.2104	0.1 uF	NPETP 10% 160/250V		R.....5	.	0	not used	used only in balance version (1.010.032.58)	RZ....6	57.88.4104	100 kOhm	2%	resistor-network
C.....40	59.03.2104	0.1 uF	NPETP 10% 160/250V		R.....6	1.010.032.58	100 kOhm	Poti Incl. R7 (100k lin) PHONES LEVEL/BAL		RZ....7	57.88.4104	100 kOhm	2%	resistor-network
D.....1	50.04.0125	IN4448			R.....7	.	0	not used	see R 6	RZ....8	57.88.4104	100 kOhm	2%	resistor-network
D.....2	50.04.0125	IN4448			R.....8	57.11.3104	100 kOhm	1% MF		RZ....9	57.88.4104	100 kOhm	2%	resistor-network
D.....3	50.04.0125	IN4448			R.....9	57.11.3223	22 kOhm	1% MF		RZ....10	57.88.4104	100 kOhm	2%	resistor-network
D.....4	50.04.0125	IN4448			R.....10	57.11.3104	100 kOhm	1% MF		RZ....11	57.88.4104	100 kOhm	2%	resistor-network
D.....5	50.04.0125	IN4448			R.....11	57.11.3223	22 kOhm	1% MF		RZ....12	57.88.4104	100 kOhm	2%	resistor-network
D.....6	50.04.0125	IN4448			R.....12	.	0	not used	used only in balance version (57113363)	RZ....13	57.88.4104	100 kOhm	2%	resistor-network
D.....7	50.04.0125	IN4448			R.....13	.	0	not used	used only in balance version (57113363)	RZ....14	57.88.4104	100 kOhm	2%	resistor-network
D.....8	50.04.0125	IN4448			R.....14	.	0	not used	used only in balance version (57113364)	RZ....15	57.88.4104	100 kOhm	2%	resistor-network
D.....9	50.04.0125	IN4448			R.....15	.	0	not used	used only in balance version (57113364)	RZ....16	57.88.4104	100 kOhm	2%	resistor-network
D.....10	50.04.0125	IN4448			R.....16	.	0	not used	used only in balance version (57113362)	RZ....17	57.88.4104	100 kOhm	2%	resistor-network
D.....11	50.04.0125	IN4448			R.....17	.	0	not used	used only in balance version (57113473)	RZ....18	57.88.4104	100 kOhm	2%	resistor-network
D.....12	50.04.0125	IN4448			R.....18	57.11.3104	100 kOhm	1% MF		RZ....19	57.88.4104	100 kOhm	2%	resistor-network
D.....13	50.04.0125	IN4448			R.....19	57.11.3104	100 kOhm	1% MF		RZ....20	57.88.4104	100 kOhm	2%	resistor-network
D.....14	50.04.0125	IN4448			R.....20	57.11.3223	22 kOhm	1% MF		RZ....21	57.11.3363	36 kOhm	1% MF	
D.....15	50.04.0125	IN4448			R.....21	57.11.3363	36 kOhm	1% MF		RZ....22	57.11.3363	36 kOhm	1% MF	
D.....16	50.04.0125	IN4448			R.....22	57.11.3363	36 kOhm	1% MF		RZ....23	57.11.3334	330 kOhm	1% MF	
D.....17	50.04.0125	IN4448			R.....23	57.11.3334	330 kOhm	1% MF		RZ....24	57.11.3334	330 kOhm	1% MF	
D.....18	50.04.0127	BAT 42			R.....24	57.11.3362	3.6 kOhm	1% MF		RZ....25	57.11.3362	3.6 kOhm	1% MF	
D.....19	50.04.0127	BAT 42			R.....25	57.11.3473	47 kOhm	1% MF		RZ....26	57.11.3473	47 kOhm	1% MF	
D.....20	50.04.0125	IN4448			R.....26	57.11.3104	100 kOhm	1% MF		RZ....27	57.11.3104	100 kOhm	1% MF	
IC.....1	50.07.1021	CD4021	8-bit static shift register		R.....27	57.11.3104	100 kOhm	1% MF		RZ....28	57.11.3104	100 kOhm	1% MF	
IC.....2	50.07.1021	CD4021	8-bit static shift register		R.....28	57.11.3223	22 kOhm	1% MF		RZ....29	57.11.3223	22 kOhm	1% MF	
IC.....3	50.07.1021	CD4021	8-bit static shift register		R.....29	57.11.3101	100 Ohm	1% MF		RZ....30	57.11.3101	100 Ohm	1% MF	
IC.....4	50.07.1021	CD4021	8-bit static shift register		R.....30	57.11.3101	100 Ohm	1% MF		RZ....31	57.11.3101	100 Ohm	1% MF	
IC.....5	50.09.0119	TL 062	J FET dual op. amp.		RZ....32	57.11.3101	100 Ohm	1% MF		RZ....32	57.11.3101	100 Ohm	1% MF	
IC.....6	50.07.0018	CD4094	shift and store bus register		RZ....33	57.11.3101	100 Ohm	1% MF		RZ....33	57.11.3101	100 Ohm	1% MF	
IC.....7	50.07.0018	CD4094	shift and store bus register		RZ....34	57.11.3101	100 Ohm	1% MF		RZ....34	57.11.3101	100 Ohm	1% MF	
IC.....8	50.07.0018	CD4094	shift and store bus register		RZ....35	57.11.3101	100 Ohm	1% MF		RZ....35	57.11.3101	100 Ohm	1% MF	
IC.....9	50.07.0018	CD4094	shift and store bus register		RZ....36	57.11.3223	22 kOhm	1% MF		RZ....36	57.11.3223	22 kOhm	1% MF	
J.....1	54.24.0103	6.3 mm	3 pol-Klinke 6.3mm		RZ....37	57.11.3223	22 kOhm	1% MF		RZ....37	57.11.3223	22 kOhm	1% MF	
J.....2	54.24.0103	6.3 mm	3 pol-Klinke 6.3mm		RZ....38	57.11.3334	330 kOhm	1% MF		RZ....38	57.11.3334	330 kOhm	1% MF	
MP.....1	21.01.2352	5 pcs	S-Schr. M3*4		RZ....39	57.11.3334	330 kOhm	1% MF		RZ....39	57.11.3334	330 kOhm	1% MF	
MP.....2	24.16.3023	4 pcs	Wellensicherung 3mm		RZ....40	57.11.3101	100 Ohm	1% MF		RZ....40	57.11.3101	100 Ohm	1% MF	
MP.....3	42.01.0203	1 pcs	Knopf grau D 10/4		R....41	57.11.3101	100 Ohm	1% MF		R....41	57.11.3101	100 Ohm	1% MF	
MP.....4	42.01.0220	3 pcs	Knobelknopf grau D 10/4		R....42	57.11.3101	100 Ohm	1% MF		R....42	57.11.3101	100 Ohm	1% MF	
MP.....5	42.01.0250	1 pcs												

PFL/TB/PHONES SWITCH BOARD

1.990.449.00



STUDER REGENSDORF ZÜRICH		Benennung: PFL/TB/PHONES SWITCH BOARD		Nummer: 1.990.449-00	
Ausgabe:		Datum: 7.3.90		Gez. Gepr. Ges. Index	
Kopie für:					

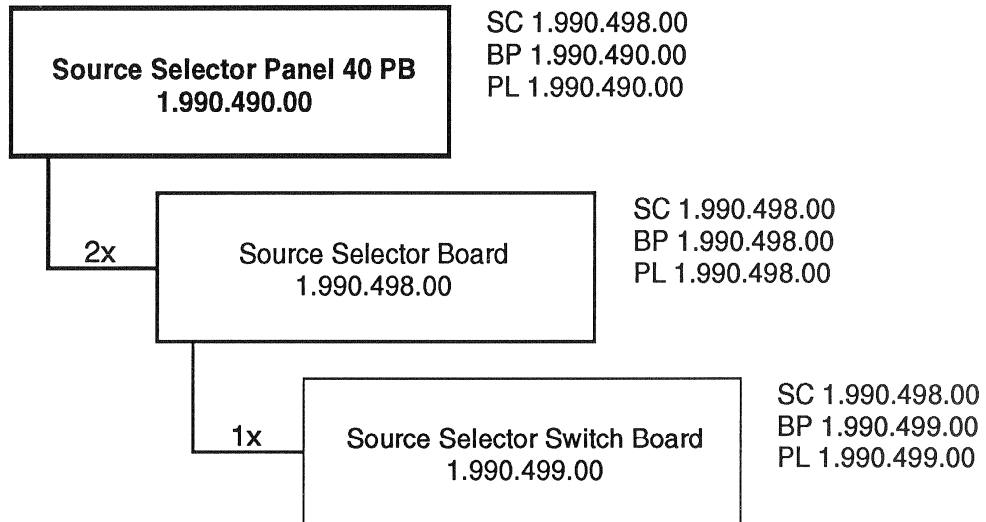
Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
DL....1	.	0	not used see S 01	
DL....2	.	0	not used see S 02	
DL....3	.	0	not used see S 03	
DL....4	.	0	not used see S 04	
DL....5	.	0	not used see S 05	
DL....6	.	0	not used see S 06	
DL....7	.	0	not used see S 07	
DL....8	.	0	not used see S 08	
DL....9	.	0	not used see S 09	
DL....10	.	0	not used see S 10	
DL....11	.	0	not used see S 11	
DL....12	.	0	not used see S 12	
DL....13	.	0	not used see S 13	
DL....14	.	0	not used see S 14	
DL....15	.	0	not used see S 15	
DL....16	.	0	not used see S 16	
DL....17	.	0	not used see S 17	
DL....18	.	0	not used see S 18	
DL....19	.	0	not used see S 19	
DL....20	.	0	not used see S 20	
DL....21	.	0	not used see S 21	
DL....22	.	0	not used see S 22	
DL....23	.	0	not used see S 23	
DL....24	.	0	not used see S 24	
DL....25	.	0	not used see S 25	
DL....26	.	0	not used see S 26	
DL....27	.	0	not used see S 27	
DL....28	.	0	not used see S 28	
MP....1	1.990.100.05	5 pcs	Querprinthalter	
MP....2	1.990.449.11	1 pcs	PFL/TB/PHONES SWITCH PCB	
MP....3	1.990.449.04	1 pcs	Nr-Etikette	
S.....1	55.15.0722		Taste 1*A,12mm RT/RT	T/B EXT 1
S.....2	55.15.0702		Taste 1*A,12mm RT/Trans	T/B SEL.3
S.....3	55.15.0702		Taste 1*A,12mm RT/Trans	T/B SEL.4
S.....4	55.15.0722		Taste 1*A,12mm RT/RT	T/B INT
S.....5	55.15.0702		Taste 1*A,12mm RT/Trans	T/B SEL.1
S.....6	55.15.0702		Taste 1*A,12mm RT/Trans	T/B SEL.2
S.....7	55.15.0705		Taste 1*A,12mm GN/Trans	RETURN 2
S.....8	55.15.0705		Taste 1*A,12mm GN/Trans	T/B GRUOP SELECT
S.....9	55.15.0704		Taste 1*A,12mm GB/Trans	AUTO CUE
S.....10	55.15.0705		Taste 1*A,12mm GN/Trans	RETURN 1

Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
S....11	55.15.0722		Taste 1*A,12mm RT/RT	TEST GEN ENABLE
S....12	55.15.0704		Taste 1*A,12mm GB/Trans	LOCK
S....13	55.15.0705		Taste 1*A,12mm GN/Trans	PFL RESET
S....14	55.15.0704		Taste 1*A,12mm GB/Trans	SOLO SOLO
S....15	55.15.0704		Taste 1*A,12mm GB/Trans	S.F. SOLO
S....16	55.15.0702		Taste 1*A,12mm RT/Trans	SOLO IN PLACE
S....17	55.15.0702		Taste 1*A,12mm RT/Trans	CUT
S....18	55.15.0704		Taste 1*A,12mm GB/Trans	CR SELECT
S....19	55.15.0704		Taste 1*A,12mm GB/Trans	STUDIO SELECT
S....20	55.15.0704		Taste 1*A,12mm GB/Trans	PFL/SOLO
S....21	55.15.0604		Taste 1*A, 5mm GB/Trans	BUS
S....22	55.15.0604		Taste 1*A, 5mm GB/Trans	DIRECT
S....23	55.15.0604		Taste 1*A, 5mm GB/Trans	AUX
S....24	55.15.0604		Taste 1*A, 5mm GB/Trans	GROUP
S....25	55.15.0604		Taste 1*A, 5mm GB/Trans	Summe
S....26	55.15.0602		Taste 1*A, 5mm RT/Trans	CR INJ
S....27	55.15.0602		Taste 1*A, 5mm RT/Trans	INTER LOCK
S....28	55.15.0605		Taste 1*A, 5mm GN/Trans	SAFE SELECT
RZ...21	57.88.4101	100 Ohm	2% ,8*	
RZ...22	57.88.4101	100 Ohm	2% ,8*	
RZ...23	57.88.4101	100 Ohm	2% ,8*	
RZ...24	57.88.4101	100 Ohm	2% ,8*	
RZ...25	57.88.4101	100 Ohm	2% ,8*	
RZ...26	57.88.4101	100 Ohm	2% ,8*	
RZ...27	57.88.4101	100 Ohm	2% ,8*	
RZ...28	57.88.4101	100 Ohm	2% ,8*	
RZ...29	57.88.4101	100 Ohm	2% ,8*	
RZ...30	57.88.4101	100 Ohm	2% ,8*	
RZ...31	57.88.4101	100 Ohm	2% ,8*	

CER=Ceramic, PE=Polyester
MF=Metal Film, PMG=Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,
Sig=Signetics, St=Studer.

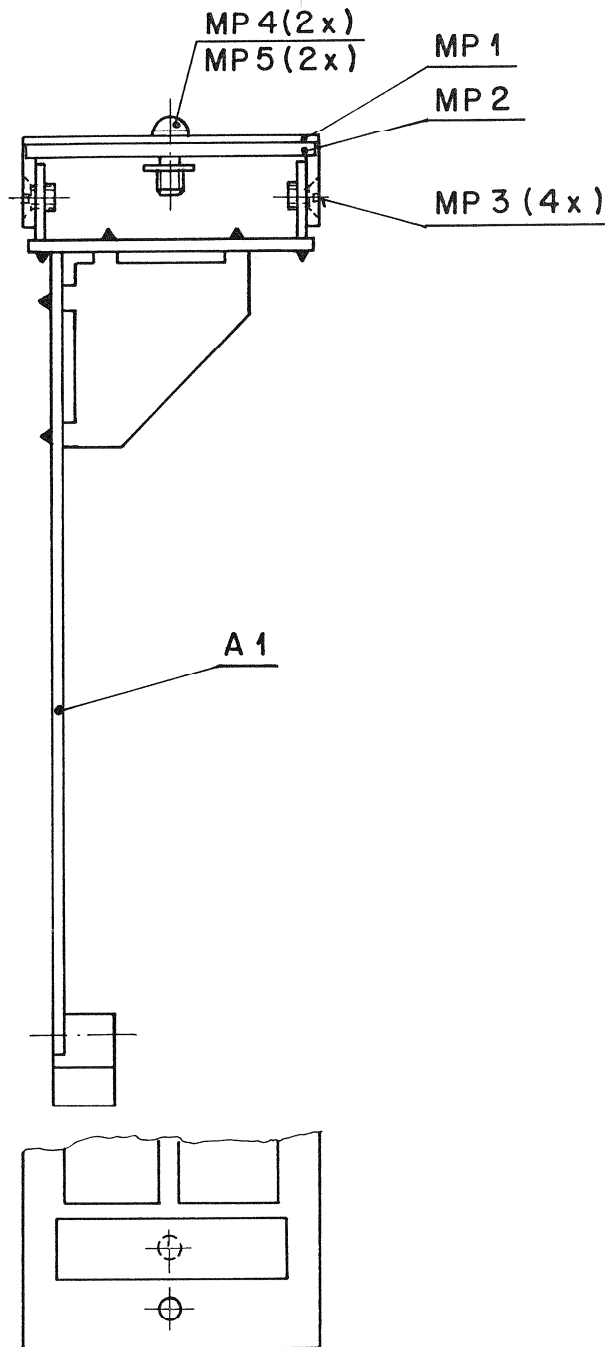
1.990.449.00 PFL/TB/PHONES SWITCH BOARD SCA88/12/1600

Source Selector Panel 20 PB**1.990.490.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

SOURCE SELECTOR UNIT

1.990.490.00



Ad . . . POS . . . REF. No . . . DESCRIPTION MANUFACTURER

A 1	1.990.498.00		SOURCE SELECTOR
MP 1	1.990.490.01	1 pcs	Frontschild SOURCE SELECTOR 20 PB
MP 2	1.990.490.02	1 pcs	Traeger SOURCE SELECTOR
MP 3	21.01.2352	4 pcs	S-Schr. M3*4
MP 4	1.010.022.21	2 pcs	Linse rundschr. IS M3*8
MP 5	24.16.3023	2 pcs	Wellensicherung 3mm
MP 6	1.990.490.04	1 pcs	Studer-Nr-Etikette 10*20

CER=Ceramic, PE=Polyester
MF=Meta Film, PHG=Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,
Sig=Signetics, St=Studer.

1.990.490.00 SOURCE SELECTOR UNIT 20 PB SCA88/11/3000

Änderung					(3)
Änderung					(2)
Änderung					(1)
Änderung					(0)

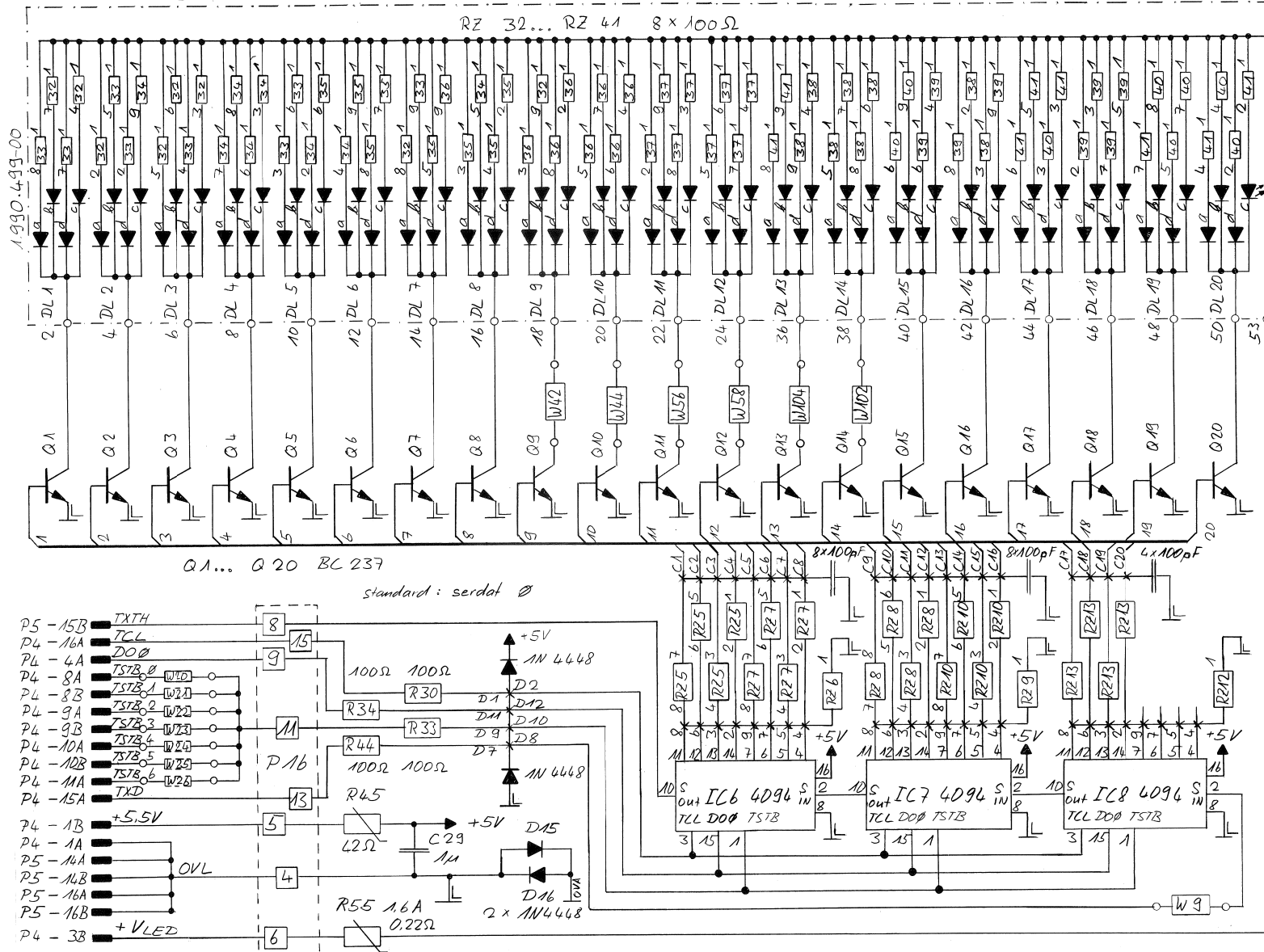
3.4.90	A. J. SCA	W			
Datum	Guz	Gepr	Ges	Index	

Kopie für:

STUDER REGENSDORF ZÜRICH	Benennung	SOURCE SELECTOR UNIT	Nummer:	1.990.490-00
		20 PB		

SOURCE SELECTOR BOARD

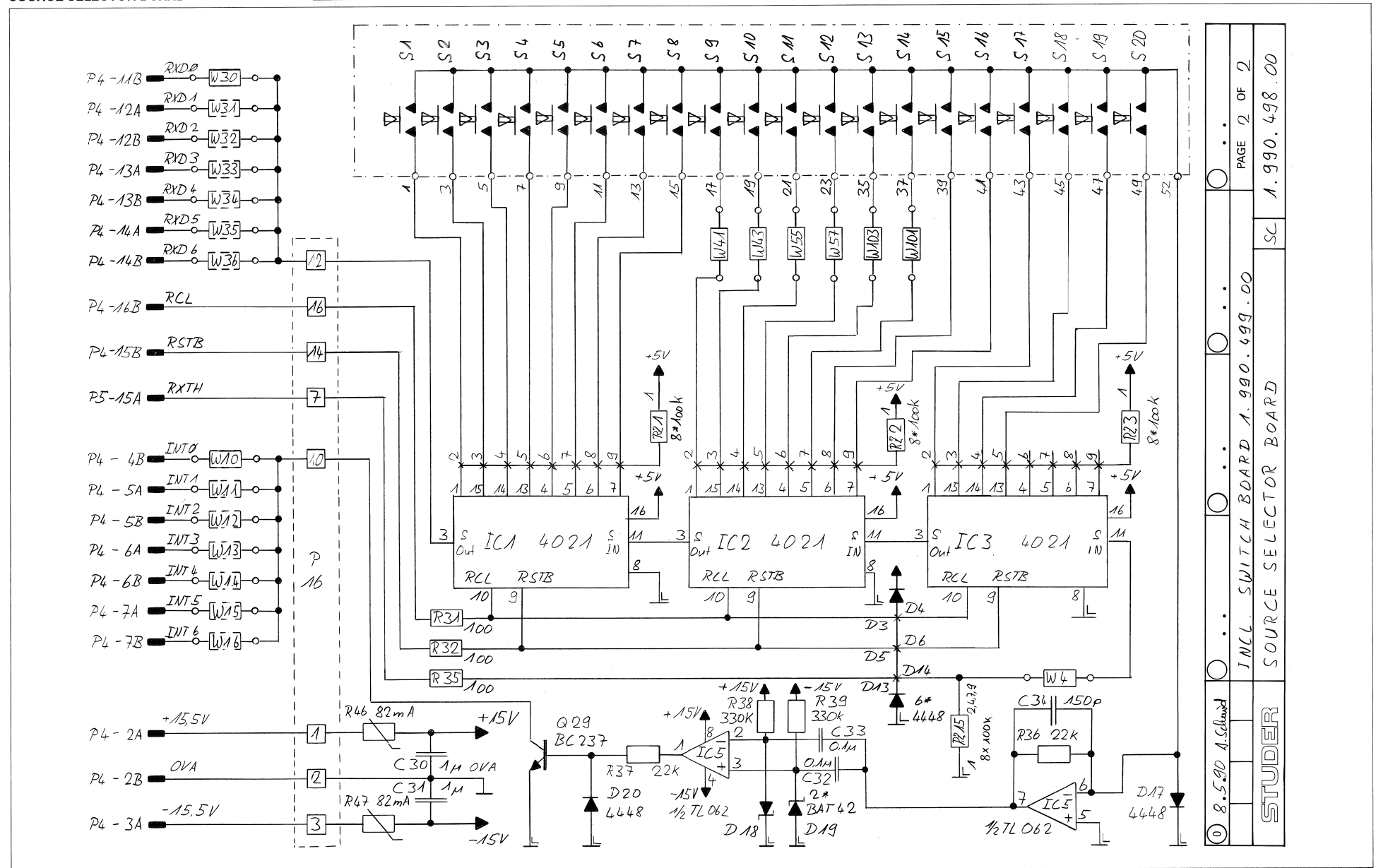
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8.5.90 A Schmid	INCL. SWITCH BOARD 1.990.499.00	PAGE 1 OF 2
STUDER	SOURCE SELECTOR BOARD	SC 1.990.498.00

SOURCE SELECTOR BOARD

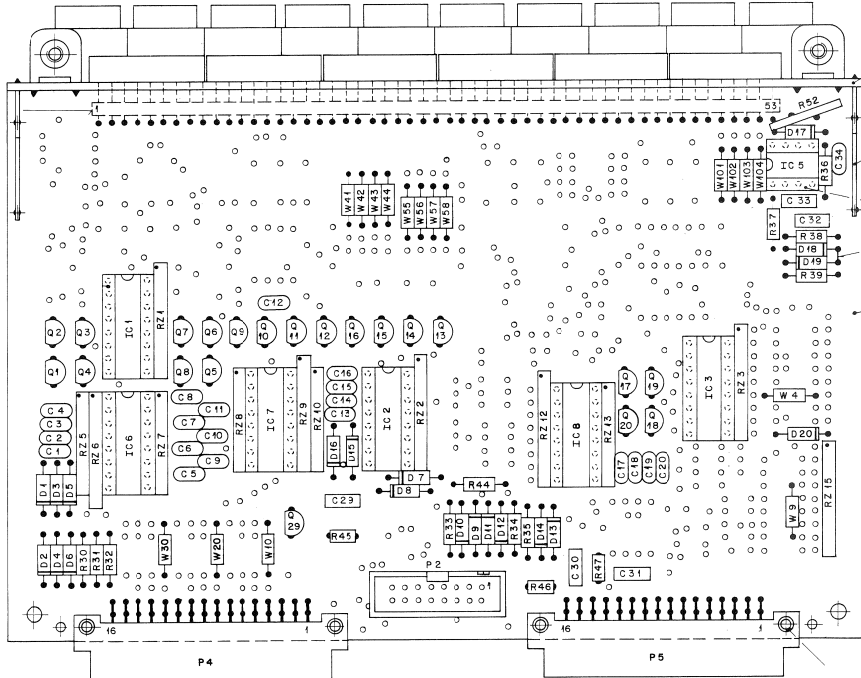
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8.5.90 A. Schmidt
INCL. SWITCH BOARD 1.990.499.00
SOURCE SELECTOR BOARD
PAGE 2 OF 2
SC 1.990.498.00

SOURCE SELECTOR BOARD ESE

1.990.498.00



Pos.	Ref. No.	Descr.	Manuf.
1	2.4.90	St	St
2		St	St
3		St	St
4		St	St
5		St	St
6		St	St
7		St	St
8		St	St
9		St	St
10		St	St

STUDER
REGENSDORF
ZÜRICH

Bezeichnung: SOURCE SELECTOR BOARD ESE

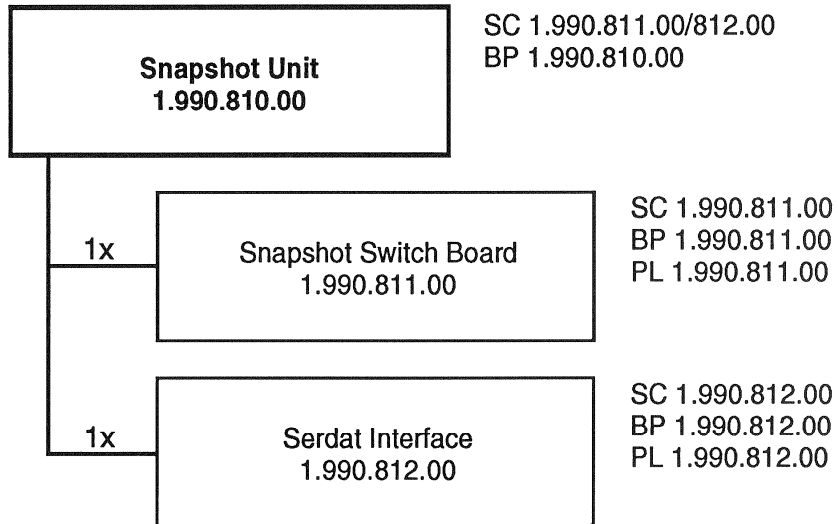
Nummer: 1.990.498-00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A	....1	1.990.499.00	Source Selector Switch Board		R	...36	57.11.3223	22 kOhm 1/4 MF	
C	....1	59.34.4101	100 pF CE		R	...37	57.11.3223	22 kOhm 1/4 MF	
C	....2	59.34.4101	100 pF CE		R	...38	57.11.3334	330 kOhm 1/4 MF	
C	....3	59.34.4101	100 pF CE		R	...39	57.11.3334	330 kOhm 1/4 MF	
C	....4	59.34.4101	100 pF CE		R	...44	57.11.3101	100 Ohm 1/4 MF	
C	....5	59.34.4101	100 pF CE		R	...45	57.92.1820	82 mA PTC 42 Ohm	
C	....6	59.34.4101	100 pF CE		R	...46	57.92.1820	82 mA PTC 42 Ohm	
C	....7	59.34.4101	100 pF CE		R	...47	57.92.1820	82 mA PTC 42 Ohm	
C	....8	59.34.4101	100 pF CE		R	...55	57.92.7016	1.6 A R-PTC 0.22 Ohm	
C	....9	59.34.4101	100 pF CE		W	....4	57.11.3000	0 Ohm Bridge	
C	....10	59.34.4101	100 pF CE		W	....9	57.11.3000	0 Ohm Bridge	
C	....11	59.34.4101	100 pF CE		W	....10	57.11.3000	0 Ohm Bridge	SERDAT #0 (INT 0)
C	....12	59.34.4101	100 pF CE		W	....11	0	not used wire bridge	SERDAT #1 INT 1 57113000
C	....13	59.34.4101	100 pF CE		W	....12	0	not used wire bridge	SERDAT #2 INT 2 57113000
C	....14	59.34.4101	100 pF CE		W	....13	0	not used wire bridge	SERDAT #3 INT 3 57113000
C	....15	59.34.4101	100 pF CE		W	....14	0	not used wire bridge	SERDAT #4 INT 4 57113000
C	....16	59.34.4101	100 pF CE		W	....15	0	not used wire bridge	SERDAT #5 INT 5 57113000
C	....17	59.34.4101	100 pF CE		W	....16	0	not used wire bridge	SERDAT #6 INT 6 57113000
C	....18	59.34.4101	100 pF CE		W	....20	57.11.3000	0 Ohm wire bridge	SERDAT #0 (TSTB 0)
C	....19	59.34.4101	100 pF CE		W	....21	0	not used wire bridge	SERDAT #1 TSTB 1 57113000
C	....20	59.34.4101	100 pF CE		W	....22	0	not used wire bridge	SERDAT #2 TSTB 2 57113000
C	....29	59.06.0104	100 nF PE		W	....23	0	not used wire bridge	SERDAT #3 TSTB 3 57113000
C	....30	59.06.0104	100 nF PE		W	....24	0	not used wire bridge	SERDAT #4 TSTB 4 57113000
C	....31	59.06.0104	100 nF PE		W	....25	0	not used wire bridge	SERDAT #5 TSTB 5 57113000
C	....33	59.06.0104	100 nF PE		W	....26	0	not used wire bridge	SERDAT #6 TSTB 6 57113000
C	....34	59.34.7151	150 pF CE		W	....30	57.11.3000	0 Ohm wire bridge	SERDAT #0 (RXD 0)
D	....1	50.04.0125	1N4448		W	....31	0	not used wire bridge	SERDAT #1 RXD 1 57113000
D	....2	50.04.0125	1N4448		W	....32	0	not used wire bridge	SERDAT #2 RXD 2 57113000
D	....3	50.04.0125	1N4448		W	....33	0	not used wire bridge	SERDAT #3 RXD 3 57113000
D	....4	50.04.0125	1N4448		W	....34	0	not used wire bridge	SERDAT #4 RXD 4 57113000
D	....5	50.04.0125	1N4448		W	....35	0	not used wire bridge	SERDAT #5 RXD 5 57113000
D	....6	50.04.0125	1N4448		W	....36	0	not used wire bridge	SERDAT #6 RXD 6 57113000
D	....7	50.04.0125	1N4448		W	....41	57.11.3000	0 Ohm Bridge	
D	....8	50.04.0125	1N4448		W	....42	57.11.3000	0 Ohm Bridge	
D	....9	50.04.0125	1N4448		W	....43	57.11.3000	0 Ohm Bridge	
D	....10	50.04.0125	1N4448		W	....44	57.11.3000	0 Ohm Bridge	
D	....11	50.04.0125	1N4448		W	....55	57.11.3000	0 Ohm Bridge	
D	....12	50.04.0125	1N4448		W	....56	57.11.3000	0 Ohm Bridge	
D	....13	50.04.0125	1N4448		W	....57	57.11.3000	0 Ohm Bridge	
D	....14	50.04.0125	1N4448		W	....58	57.11.3000	0 Ohm Bridge	
D	....15	50.04.0125	1N4448		W	....101	57.11.3000	0 Ohm Bridge	
D	....16	50.04.0125	1N4448		W	....102	57.11.3000	0 Ohm Bridge	
D	....17	50.04.0125	1N4448		W	....103	57.11.3000	0 Ohm Bridge	
D	....18	50.04.0127	BAT 42		W	....104	57.11.3000	0 Ohm Bridge	
D	....19	50.04.0127	BAT 42		RZ	....1	57.88.4104	100 kOhm 2% resistor-network	
D	....20	50.04.0125	1N4448		RZ	....2	57.88.4104	100 kOhm 2% resistor-network	
IC	....1	50.07.1021	CD4021	8-bit static shift register	RZ	....3	57.88.4104	100 kOhm 2% resistor-network	
IC	....2	50.07.1021	CD4021	8-bit static shift register	RZ	....5	57.88.2682	6.8 kOhm 2% resistor-network	
IC	....3	50.07.1021	CD4021	8-bit static shift register	RZ	....6	57.88.4104	100 kOhm 2% resistor-network	
IC	....5	50.09.0119	TL 062	J FET dual op. amp.	RZ	....7	57.88.2682	6.8 kOhm 2% resistor-network	
IC	....6	50.07.0018	CD4094	shift and store bus register	RZ	....8	57.88.2682	6.8 kOhm 2% resistor-network	
IC	....7	50.07.0018	CD4094	shift and store bus register	RZ	....9	57.88.4104	100 kOhm 2% resistor-network	
IC	....8	50.07.0018	CD4094	shift and store bus register	RZ	....10	57.88.2682	6.8 kOhm 2% resistor-network	
NP	....1	53.03.0166	1 pcs	IC-Socket 8-pin	RZ	....12	57.88.4104	100 kOhm 2% resistor-network	
NP	....2	53.03.0166	6 pcs	IC-Socket 16-pin	RZ	....13	57.88.2682	6.8 kOhm 2% resistor-network	
NP	....3	54.11.0125	53 pcs	Stiftleiste Winkel RM 2.54	RZ	....15	57.88.4104	100 kOhm 2% resistor-network	
NP	....4	1.990.100.01	2 pcs	Querrinnschleife					
NP	....5	1.990.420.11	1 pcs	CR MONITOR PCB					
NP	....6	26.99.0119	4 pcs	Rohrleiste 2.5*0.1510					
NP	....7	43.01.0108	1 pcs	ESE-Schild					
NP	....8	1.990.498.04	1 pcs	Nr-Etikette					
Q	....1	50.03.0436	BC237	uni npn					
Q	....2	50.03.0436	BC237	uni npn					
Q	....3	50.03.0436	BC237	uni npn					
Q	....4	50.03.0436	BC237	uni npn					
Q	....5	50.03.0436	BC237	uni npn					
Q	....6	50.03.0436	BC237	uni npn					
Q	....7	50.03.0436	BC237	uni npn					
Q	....8	50.03.0436	BC237	uni npn					
Q	....9	50.03.0436	BC237	uni npn					
Q	....10	50.03.0436	BC237	uni npn					
Q	....11	50.03.0436	BC237	uni npn					
Q	....12	50.03.0436	BC237	uni npn					
Q	....13	50.03.0436	BC237	uni npn					
Q	....14	50.03.0436	BC237	uni npn					
Q	....15	50.03.0436	BC237	uni npn					
Q	....16	50.03.0436	BC237	uni npn					
Q	....17	50.03.0436	BC237	uni npn					
Q	....18	50.03.0436	BC237	uni npn					
Q	....19	50.03.0436	BC237	uni npn					
Q	....20	50.03.0436	BC237	uni npn					
Q	....29	50.03.0436	BC237	uni npn					
P	....1	0	not used	see NP					
P	....2	54.14.2002	16 pin	PCB ribbon-connector					
P	....4	54.11.2013	2*16 pin	eurocard-connector					
P	....5	54.11.2013	2*16 pin	eurocard-connector					
R	....30	57.11.3101	100 Ohm	1/4 MF					
R	....31	57.11.3101	100 Ohm	1/4 MF					
R	....32	57.11.3101	100 Ohm	1/4 MF					
R	....33	57.11.3101	100 Ohm	1/4 MF					
R	....34	57.11.3101	100 Ohm	1/4 MF					
R	....35	57.11.3101	100 Ohm	1/4 MF					

CER=Ceramic, PE=Polyester
MF=Metal Film, PMG=Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon, Sig=Signetics, St=Studer.

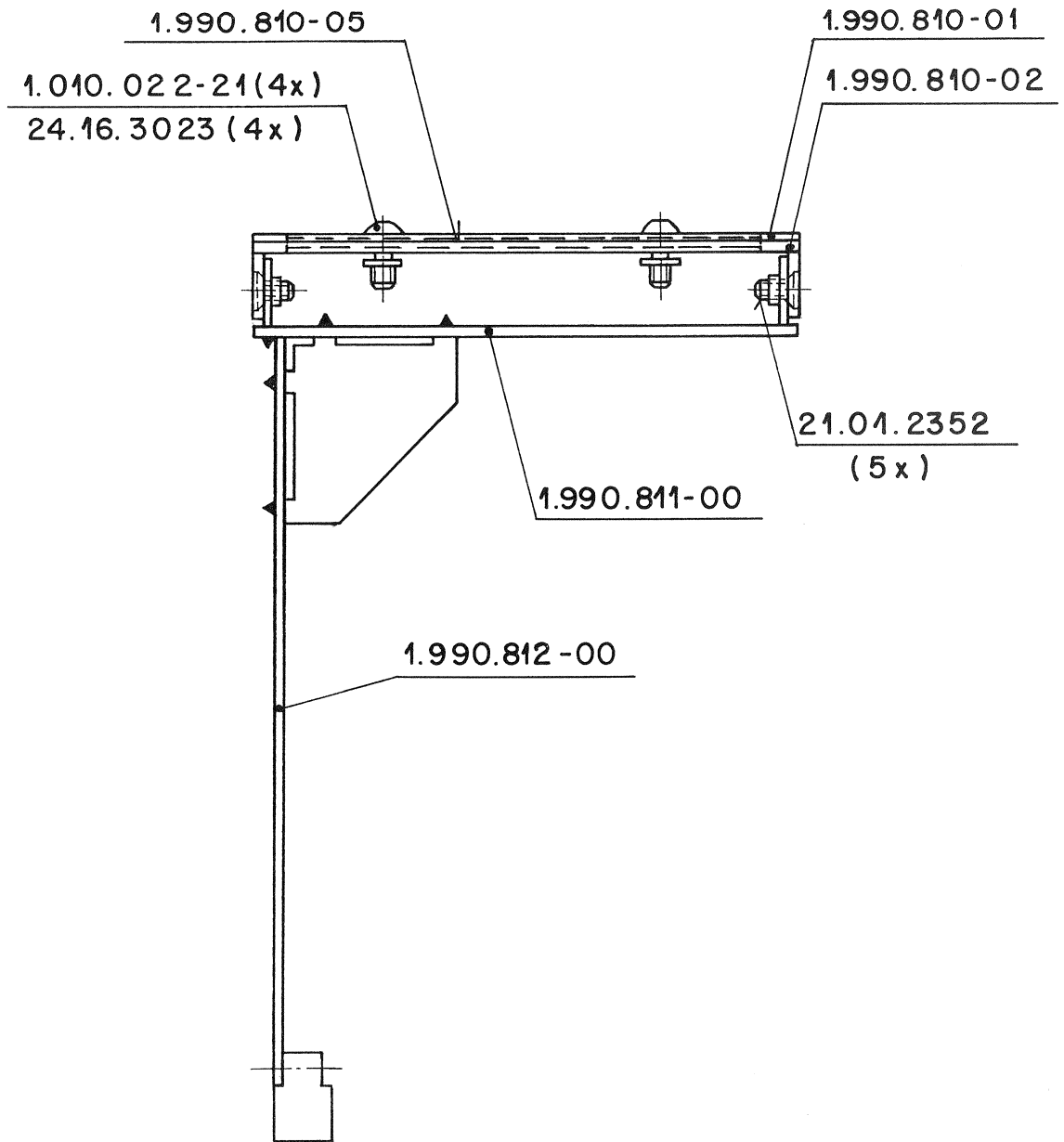
1.990.498.00 SOURCE SELECTOR SCA90/04/2700

Snapshot Unit**1.990.810.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

SNAPSHOT UNIT

1.990.810.00



Änderung					③
					②
					①
Ausgabe	8.3.90	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	①
Datum	Gez.	Gepr.	Ges.	Index	

Kopie für:

Nummer: 1.990.810-00

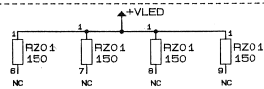
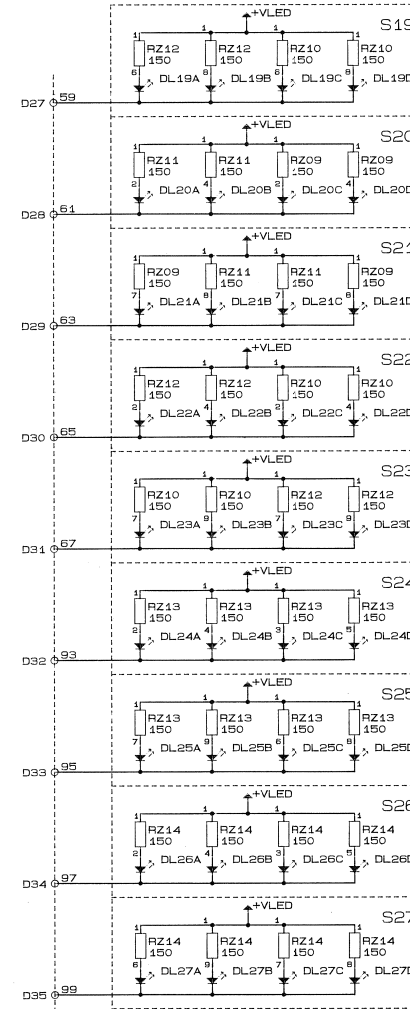
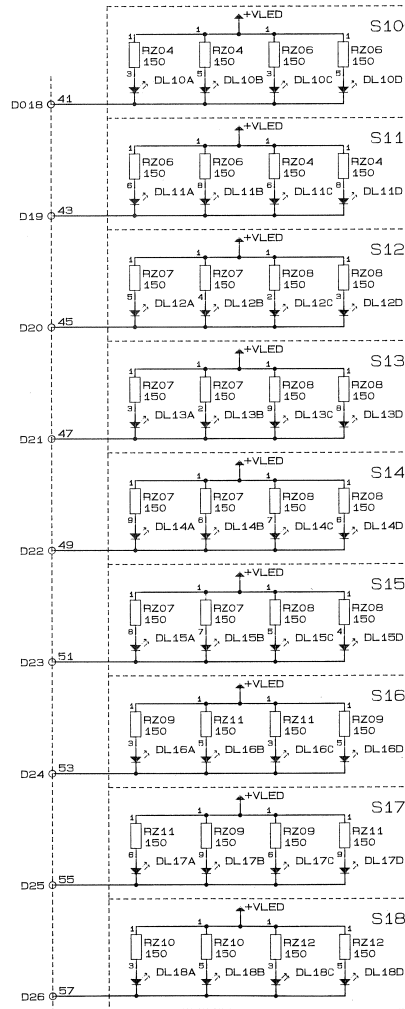
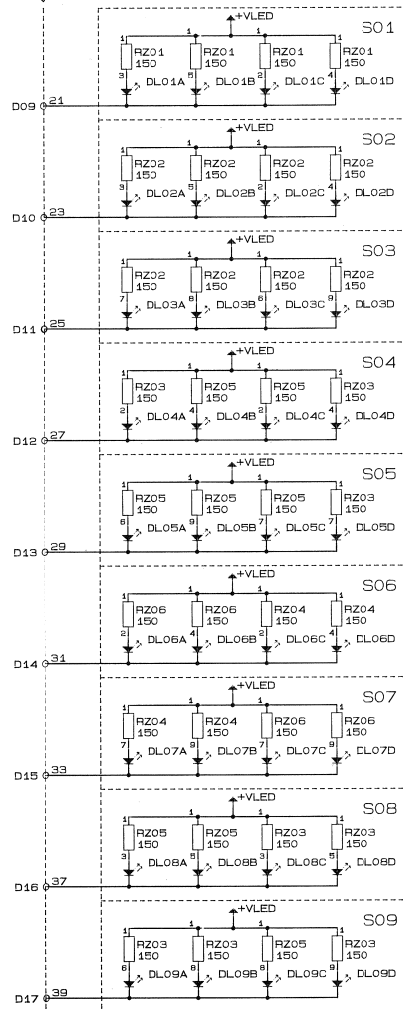
STUDER REGENSDORF ZÜRICH	Benennung: SNAPSHOT UNIT
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SNAPSHOT SWITCH BOARD

1.990.811.00

to SENDAT INTERFACE BOARD 1.990.812-00

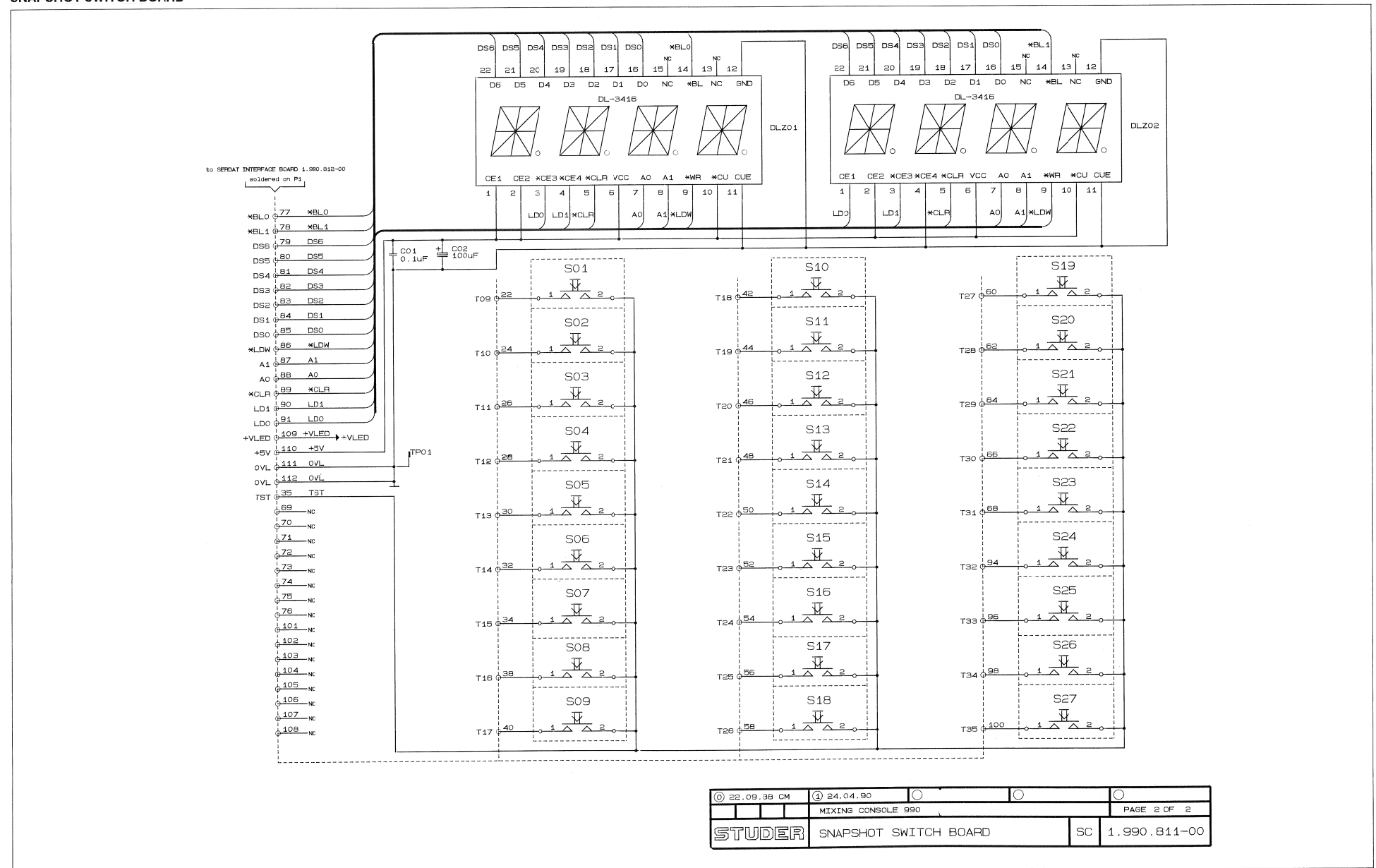
W010P#1 on P1



① 22.09.88 CM	① 24.04.90	○	○	○
MIXING CONSOLE 990			PAGE 1 OF 2	
STUDER		SNAPSHOT SWITCH BOARD		SC 1.990.811-00

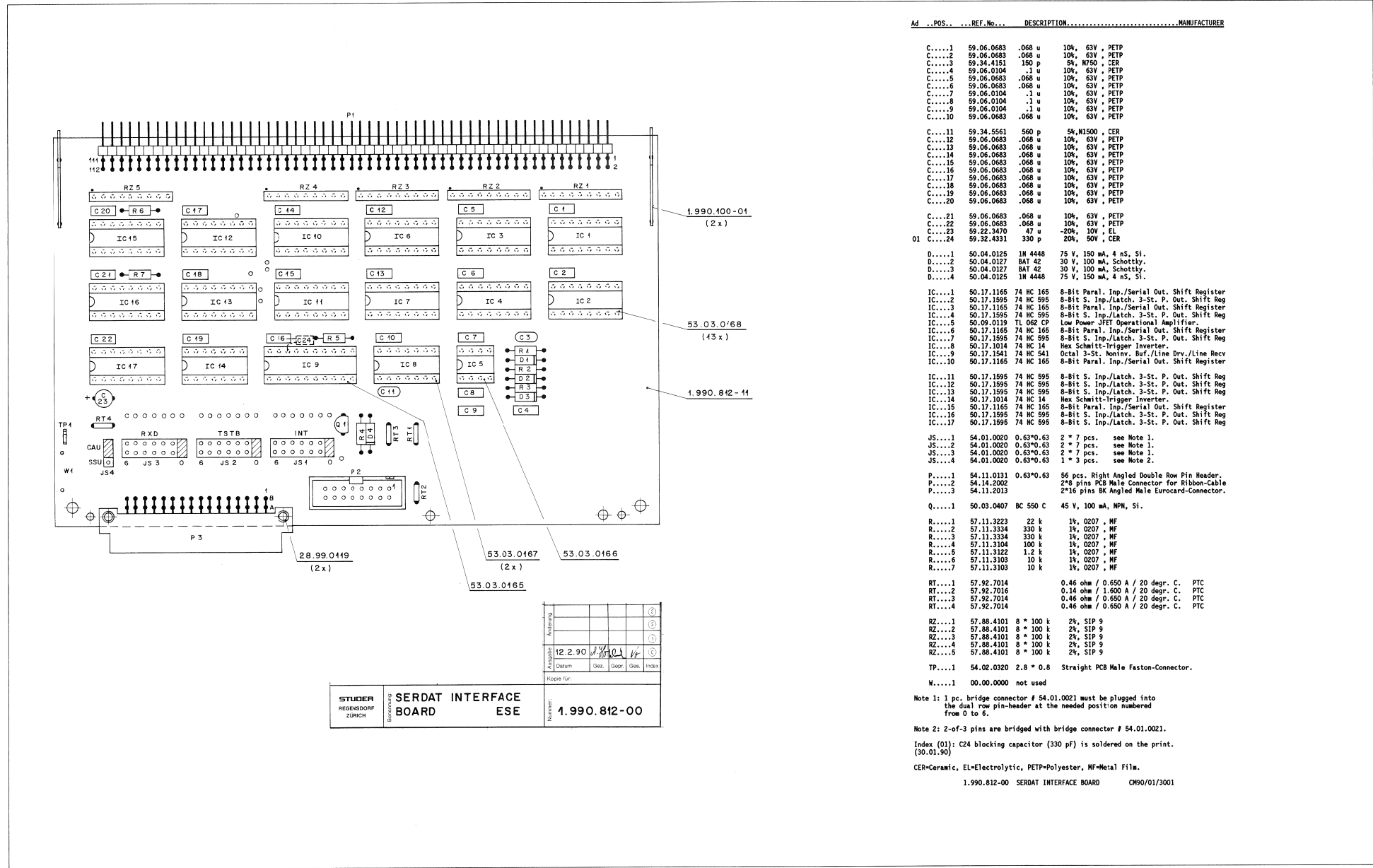
SNAPSHOT SWITCH BOARD

1.990.811.00



SERDAT INTERFACE BOARD ESE

1.990.812.00



Ad . . . POS . . . REF. No . . . DESCRIPTION MANUFACTURER

C....1	59.06.0683	.068 u	10%, 63V	PETP
C....2	59.06.0683	.068 u	10%, 63V	PETP
C....3	59.34.4151	150 p	5%, M750	CER
C....4	59.06.0104	.1 u	10%, 63V	PETP
C....5	59.06.0683	.068 u	10%, 63V	PETP
C....6	59.06.0683	.068 u	10%, 63V	PETP
C....7	59.06.0104	.1 u	10%, 63V	PETP
C....8	59.06.0104	.1 u	10%, 63V	PETP
C....9	59.06.0104	.1 u	10%, 63V	PETP
C....10	59.06.0683	.068 u	10%, 63V	PETP
C....11	59.34.5561	560 p	5%, M1500	CER
C....12	59.06.0683	.068 u	10%, 63V	PETP
C....13	59.06.0683	.068 u	10%, 63V	PETP
C....14	59.06.0683	.068 u	10%, 63V	PETP
C....15	59.06.0683	.068 u	10%, 63V	PETP
C....16	59.06.0683	.068 u	10%, 63V	PETP
C....17	59.06.0683	.068 u	10%, 63V	PETP
C....18	59.06.0683	.068 u	10%, 63V	PETP
C....19	59.06.0683	.068 u	10%, 63V	PETP
C....20	59.06.0683	.068 u	10%, 63V	PETP
C....21	59.06.0683	.068 u	10%, 63V	PETP
C....22	59.06.0683	.068 u	10%, 63V	PETP
C....23	59.22.3470	47 u	>20%, 10V	EL
01 C....24	59.32.4331	330 p	20%, 50V	CER
D....1	50.04.0125	1M 4448	75 V, 150 mA, 4 nS, Si.	
D....2	50.04.0127	BAT 42	30 V, 100 mA, Schottky.	
D....3	50.04.0127	BAT 42	30 V, 100 mA, Schottky.	
D....4	50.04.0125	1M 4448	75 V, 150 mA, 4 nS, Si.	
IC....1	50.17.1165	74 HC 165	8-Bit Paralel. Imp./Serial Out. Shift Register	
IC....2	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....3	50.17.1165	74 HC 165	8-Bit Paralel. Imp./Serial Out. Shift Register	
IC....4	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....5	50.09.0319	TL 062 CP	Low Power JFET Operational Amplifier	
IC....6	50.17.1165	74 HC 165	8-Bit Paralel. Imp./Serial Out. Shift Register	
IC....7	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....8	50.17.1014	74 HC 14	Hex Schmitt-Trigger Inverter.	
IC....9	50.17.1541	74 HC 541	Octal 3-St. Noninv. Buf./Line Drv./Line Recv	
IC....10	50.17.1165	74 HC 165	8-Bit Paralel. Imp./Serial Out. Shift Register	
IC....11	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....12	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....13	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....14	50.17.1014	74 HC 14	Hex Schmitt-Trigger Inverter.	
IC....15	50.17.1165	74 HC 165	8-Bit Paralel. Imp./Serial Out. Shift Register	
IC....16	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
IC....17	50.17.1595	74 HC 595	8-Bit S. Imp./Latch. 3-St. P. Out. Shift Reg	
JS....1	54.01.0020	0.63*0.63	2 * 7 pcs. see Note 1.	
JS....2	54.01.0020	0.63*0.63	2 * 7 pcs. see Note 1.	
JS....3	54.01.0020	0.63*0.63	2 * 7 pcs. see Note 1.	
JS....4	54.01.0020	0.63*0.63	1 * 3 pcs. see Note 2.	
P....1	54.11.0131	0.63*0.63	56 pcs. Right Angled Double Row Pin Header.	
P....2	54.14.2002		2*8 pins PCB Male Connector for Ribbon-Cable	
P....3	54.11.2013		2*16 pins BK Angled Male Eurocard-Connector.	
Q....1	50.03.0407	BC 550 C	45 V, 100 mA, NPN, Si.	
R....1	57.11.3223	22 k	1%, 0207, MF	
R....2	57.11.3334	330 k	1%, 0207, MF	
R....3	57.11.3334	330 k	1%, 0207, MF	
R....4	57.11.3104	100 k	1%, 0207, MF	
R....5	57.11.3122	1.2 k	1%, 0207, MF	
R....6	57.11.3103	10 k	1%, 0207, MF	
R....7	57.11.3103	10 k	1%, 0207, MF	
RT....1	57.92.7014		0.46 ohm / 0.650 A / 20 degr. C. PTC	
RT....2	57.92.7016		0.18 ohm / 1.600 A / 20 degr. C. PTC	
RT....3	57.92.7014		0.46 ohm / 0.650 A / 20 degr. C. PTC	
RT....4	57.92.7014		0.46 ohm / 0.650 A / 20 degr. C. PTC	
RZ....1	57.88.4101	8 * 100 k	2%, SIP 9	
RZ....2	57.88.4101	8 * 100 k	2%, SIP 9	
RZ....3	57.88.4101	8 * 100 k	2%, SIP 9	
RZ....4	57.88.4101	8 * 100 k	2%, SIP 9	
RZ....5	57.88.4101	8 * 100 k	2%, SIP 9	
TP....1	54.02.0320	2.8 * 0.8	Straight PCB Male Faston-Connector.	
W....1	00.00.0000		not used	

Note 1: 1 pc. bridge connector # 54.01.0021 must be plugged into the dual row pin-header at the needed position numbered from 0 to 6.

Note 2: 2-of-3 pins are bridged with bridge connector # 54.01.0021.

Index (01): C24 blocking capacitor (330 pF) is soldered on the print. (30.01.90)

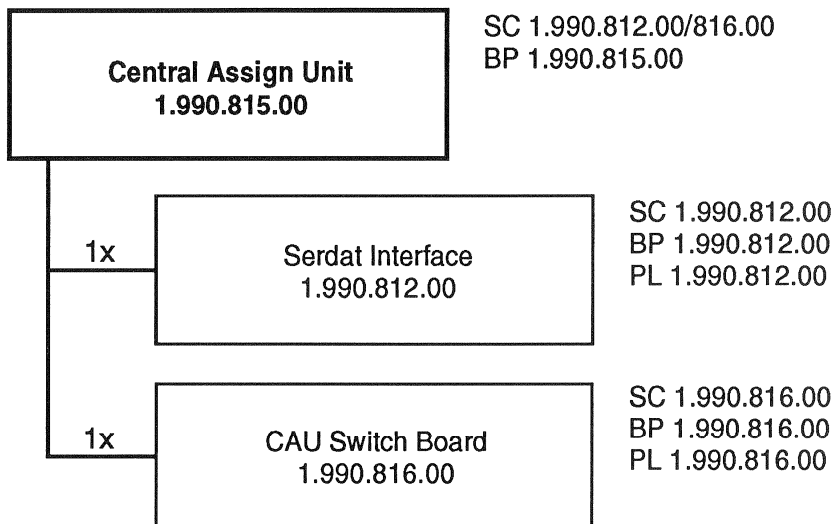
CER=Ceramic, EL=Electrolytic, PETP=Polyester, MF=Metal Film.

1.990.812-00 SERDAT INTERFACE BOARD CMO/01/3001

STUDER REGENSDORF ZÜRICH
SERDAT INTERFACE BOARD ESE
1.990.812-00

Central Assign Unit

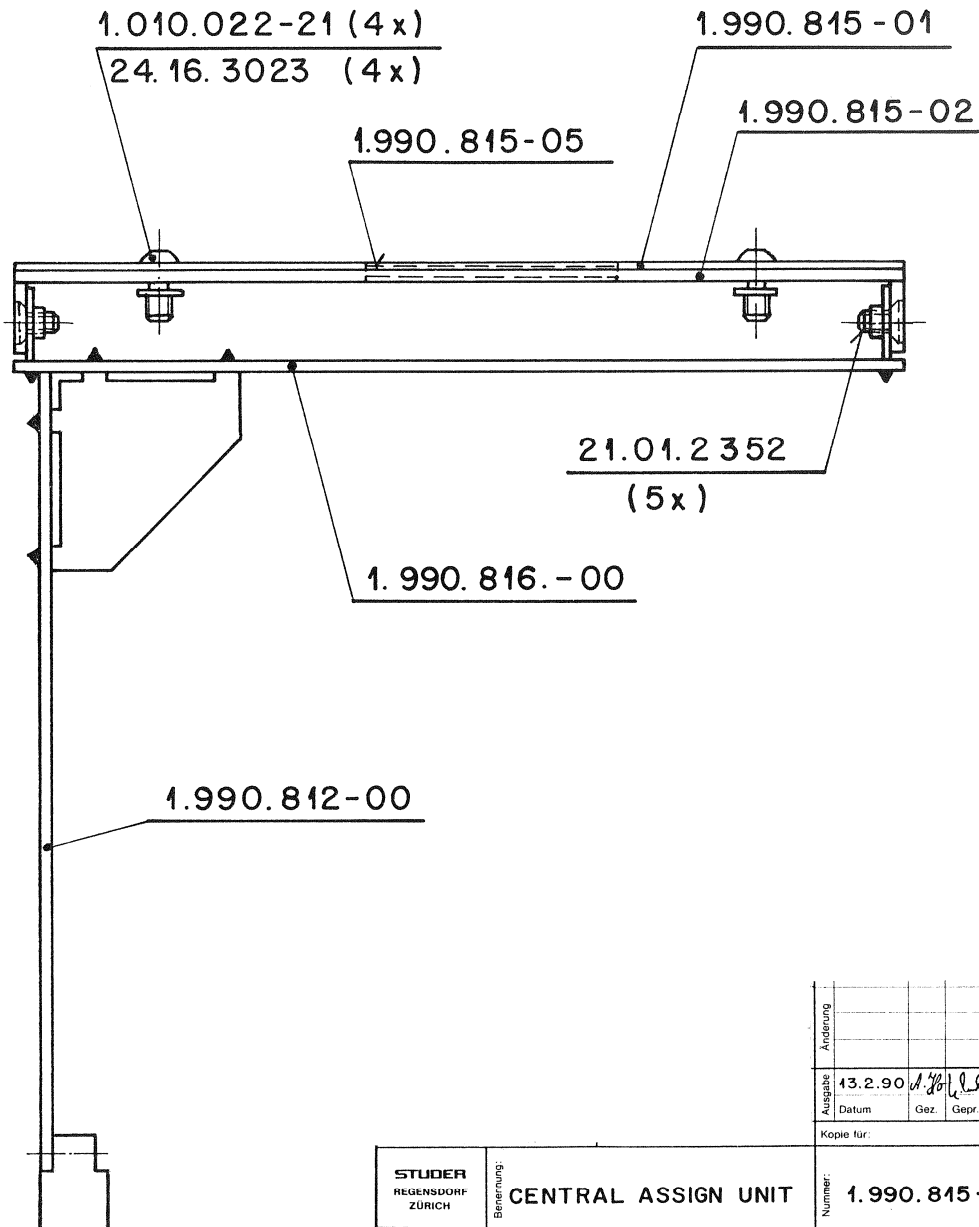
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SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

CENTRAL ASSIGN UNIT

1.990.815.00



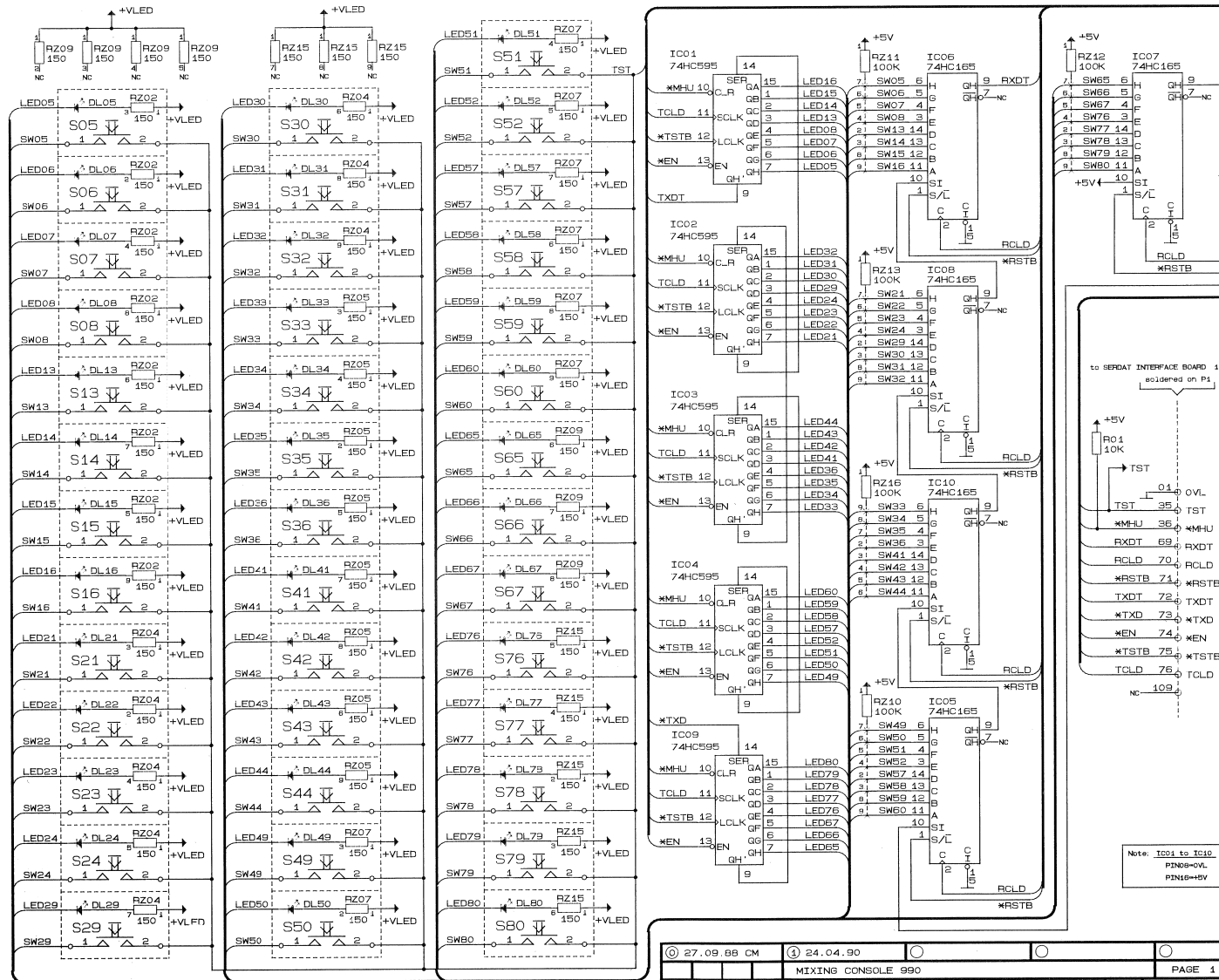
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Änderung						②
						③
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STUDER REGENSDORF ZÜRICH	Benehmung: CENTRAL ASSIGN UNIT	Kopie für:
		Nummer: 1.990.815-00

CENTRAL ASSIGN SWITCH BOARD



1.990.816.00



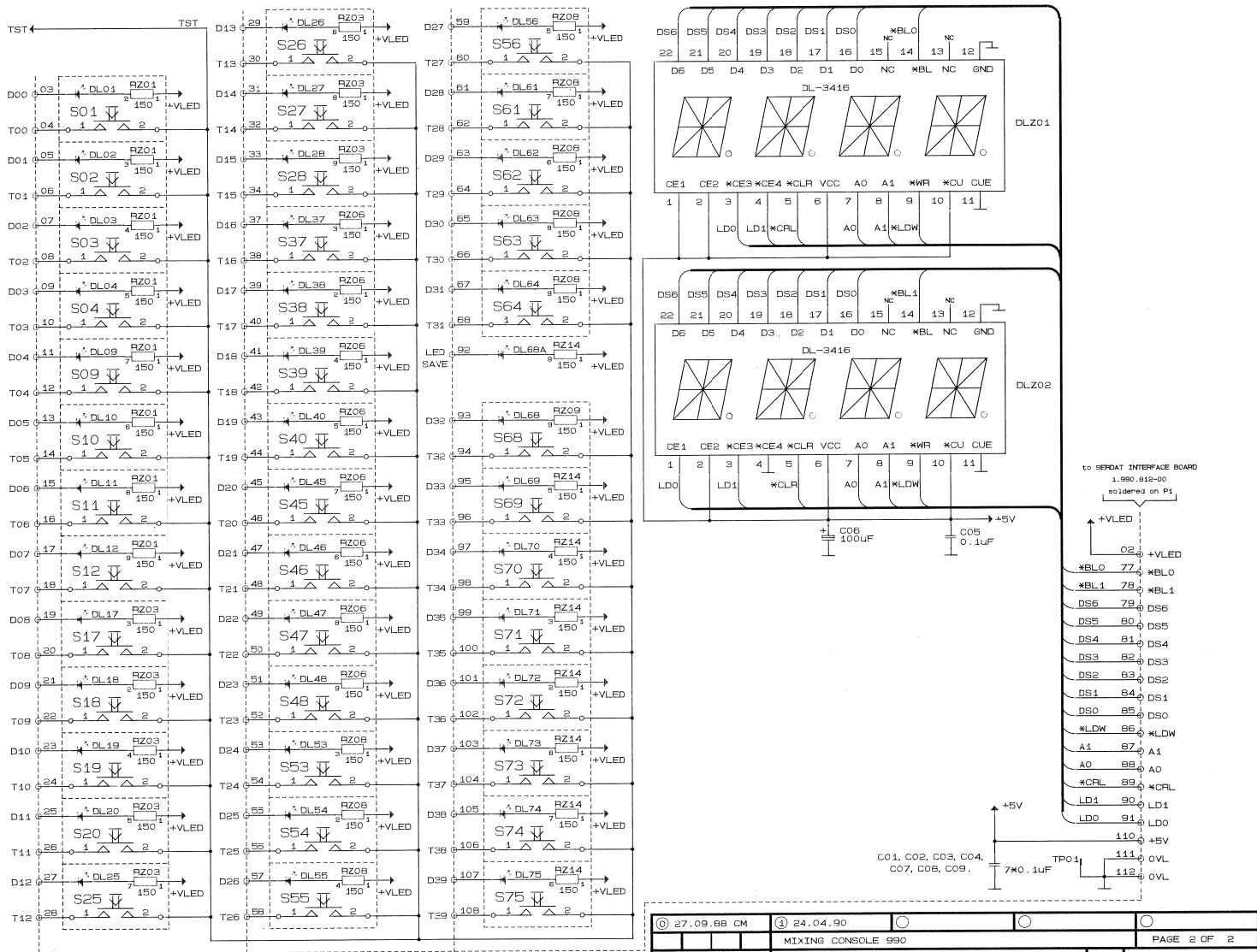
Note: IC01 to IC10
PIN08=OVL
PIN10=+5V

© 27.09.88 CM	④ 24.04.90		
MIXING CONSOLE 990		PAGE 1 OF 2	
STUDER	CENTRAL ASSIGN SWITCH BOARD	SC	1.990.816-00

CENTRAL ASSIGN SWITCH BOARD



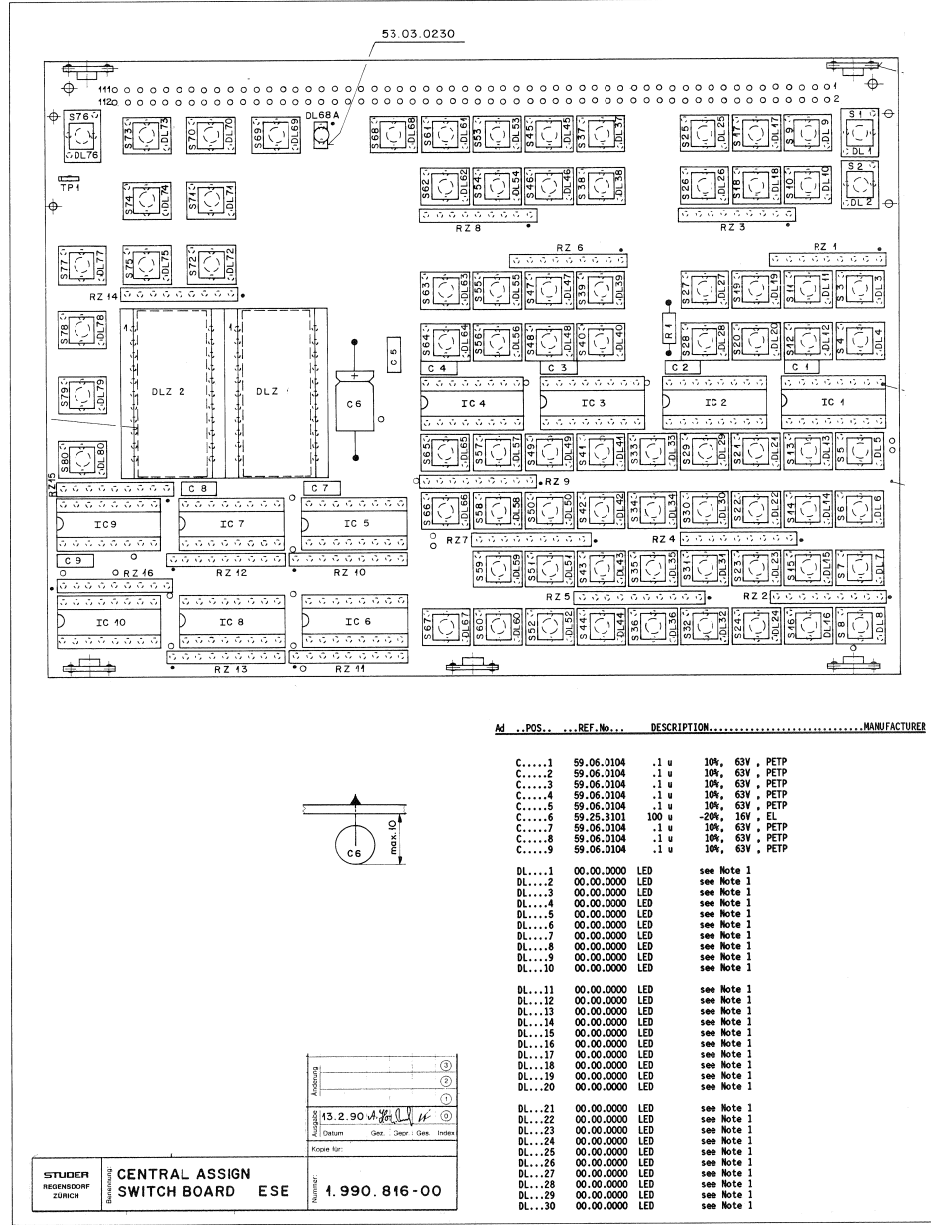
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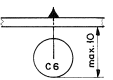
① 27.09.88 CM	① 24.04.90		
MIXING CONSOLE 990			PAGE 2 OF 2
STUDER		CENTRAL ASSIGN SWITCH BOARD	SC 1.990.816-00

CENTRAL ASSIGN SWITCH BOARD

1.990.816.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
DL...	31	00.00.0000	LED	see Note 1	S....	11	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	32	00.00.0000	LED	see Note 1	S....	12	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	33	00.00.0000	LED	see Note 1	S....	13	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	34	00.00.0000	LED	see Note 1	S....	14	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	35	00.00.0000	LED	see Note 1	S....	15	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	36	00.00.0000	LED	see Note 1	S....	16	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	37	00.00.0000	LED	see Note 1	S....	17	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	38	00.00.0000	LED	see Note 1	S....	18	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	39	00.00.0000	LED	see Note 1	S....	19	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	40	00.00.0000	LED	see Note 1	S....	20	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	41	00.00.0000	LED	see Note 1	S....	21	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	42	00.00.0000	LED	see Note 1	S....	22	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	43	00.00.0000	LED	see Note 1	S....	23	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	44	00.00.0000	LED	see Note 1	S....	24	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	45	00.00.0000	LED	see Note 1	S....	25	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	46	00.00.0000	LED	see Note 1	S....	26	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	47	00.00.0000	LED	see Note 1	S....	27	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	48	00.00.0000	LED	see Note 1	S....	28	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	49	00.00.0000	LED	see Note 1	S....	29	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	50	00.00.0000	LED	see Note 1	S....	30	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	51	00.00.0000	LED	see Note 1	S....	31	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	52	00.00.0000	LED	see Note 1	S....	32	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	53	00.00.0000	LED	see Note 1	S....	33	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	54	00.00.0000	LED	see Note 1	S....	34	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	55	00.00.0000	LED	see Note 1	S....	35	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	56	00.00.0000	LED	see Note 1	S....	36	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	57	00.00.0000	LED	see Note 1	S....	37	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	58	00.00.0000	LED	see Note 1	S....	38	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	59	00.00.0000	LED	see Note 1	S....	39	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	60	00.00.0000	LED	see Note 1	S....	40	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	61	00.00.0000	LED	see Note 1	S....	41	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	62	00.00.0000	LED	see Note 1	S....	42	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	63	00.00.0000	LED	see Note 1	S....	43	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	64	00.00.0000	LED	see Note 1	S....	44	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	65	00.00.0000	LED	see Note 1	S....	45	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	66	00.00.0000	LED	see Note 1	S....	46	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	67	00.00.0000	LED	see Note 1	S....	47	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	68	50.04.2129	LS 3160	Diffused Red. see Note 2	Sie.	S....	48	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
DL...	69	00.00.0000	LED	see Note 1	S....	49	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	70	00.00.0000	LED	see Note 1	S....	50	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	71	00.00.0000	LED	see Note 1	S....	51	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	72	00.00.0000	LED	see Note 1	S....	52	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	73	00.00.0000	LED	see Note 1	S....	53	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	74	00.00.0000	LED	see Note 1	S....	54	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	75	00.00.0000	LED	see Note 1	S....	55	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	76	00.00.0000	LED	see Note 1	S....	56	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	77	00.00.0000	LED	see Note 1	S....	57	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	78	00.00.0000	LED	see Note 1	S....	58	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	79	00.00.0000	LED	see Note 1	S....	59	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DL...	80	00.00.0000	LED	see Note 1	S....	60	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	
DLZ...	1	73.01.0250	DL 3416	4-Dig. 16-Seg. + Dec. Intelligent Disp.	Sie	S....	61	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
DLZ...	2	73.01.0250	DL 3416	4-Dig. 16-Seg. + Dec. Intelligent Disp.	Sie	S....	62	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	1	50.17.1595	74 HC 595	8-Bit S. Inp./Latch. 3-St. P. Out. Shift Reg	Sie	S....	63	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	2	50.17.1595	74 HC 595	8-Bit S. Inp./Latch. 3-St. P. Out. Shift Reg	Sie	S....	64	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	3	50.17.1595	74 HC 595	8-Bit S. Inp./Latch. 3-St. P. Out. Shift Reg	Sie	S....	65	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	4	50.17.1595	74 HC 595	8-Bit S. Inp./Latch. 3-St. P. Out. Shift Reg	Sie	S....	66	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	5	50.17.1165	74 HC 165	8-Bit Parale. Inp./Serial Out. Shift Register	Sie	S....	67	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	6	50.17.1165	74 HC 165	8-Bit Parale. Inp./Serial Out. Shift Register	Sie	S....	68	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	7	50.17.1165	74 HC 165	8-Bit Parale. Inp./Serial Out. Shift Register	Sie	S....	69	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	8	50.17.1165	74 HC 165	8-Bit Parale. Inp./Serial Out. Shift Register	Sie	S....	70	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	9	50.17.1595	74 HC 595	8-Bit S. Inp./Latch. 3-St. P. Out. Shift Reg	Sie	S....	71	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
IC...	10	50.17.1165	74 HC 165	8-Bit Parale. Inp./Serial Out. Shift Register	Sie	S....	72	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
R....	1	57.11.3108	10 k	1k, 0207, MF	Sie	S....	73	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	1	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	74	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	2	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	75	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	3	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	76	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	4	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	77	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	5	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	78	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	6	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	79	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	7	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	80	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	8	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	81	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	9	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	82	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	10	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	83	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
RZ...	11	57.88.4104	8 = 100 k	2k, SIP 9	Sie	S....	84	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
RZ...	12	57.88.4104	8 = 100 k	2k, SIP 9	Sie	S....	85	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
RZ...	13	57.88.4104	8 = 100 k	2k, SIP 9	Sie	S....	86	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	14	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	87	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
01 RZ...	15	57.88.4151	8 = 150	2k, SIP 9	Sie	S....	88	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
RZ...	16	57.88.4104	8 = 100 k	2k, SIP 9	Sie	S....	89	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	1	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	90	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	2	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	91	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	3	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	92	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	4	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	93	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	5	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	94	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	6	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	95	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	7	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	96	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	8	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	97	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	9	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	98	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm
S....	10	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm	Sie	S....	99	55.15.0604	1 * A	Momentary Key Switch, wht. cap./yel. LED ddm



Index (01): Due to insufficient brightness of the LED's, the value of (24.04.90) the series resistors was lowered from 330 Ohms (8 = 330, # 57.88.4331) to 150 Ohms (8 = 150, # 57.88.4151).

Note 1: DL LED is part of S device with the same position number.
Example: DL 1 LED is part of S 1, etc.

Note 2: Device DL 68A is plugged into LED-socket No. 53.03.0230.

Under each DLZ device lays 1 pc. support plate No. 1.990.810.03.

PETP=Polyester, EL=Electrolytic, MF=Metal Film.

MANUFACTURERS : Sie = Siemens

1.990.816-00 CENTRAL ASSIGN SWITCH BOARD CMO/04/2401

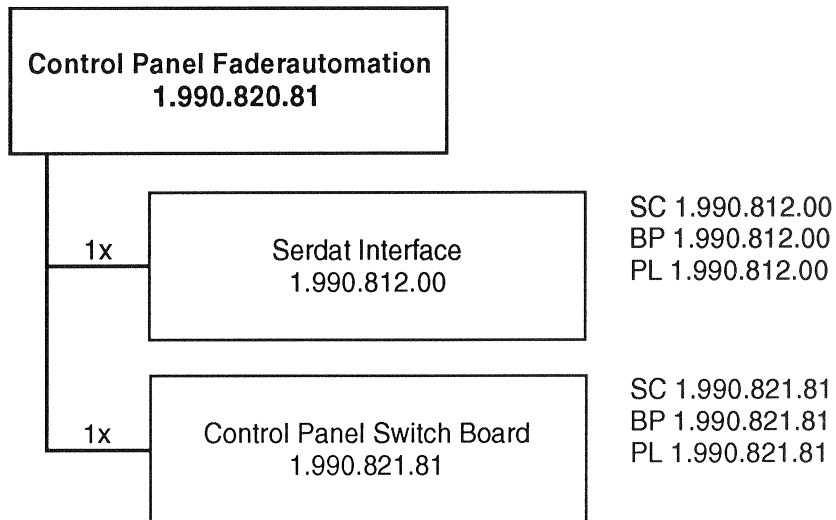
STUDER RECHENFABRIK CHURCH

CENTRAL ASSIGN SWITCH BOARD ESE

1.990.816-00

43.2.90

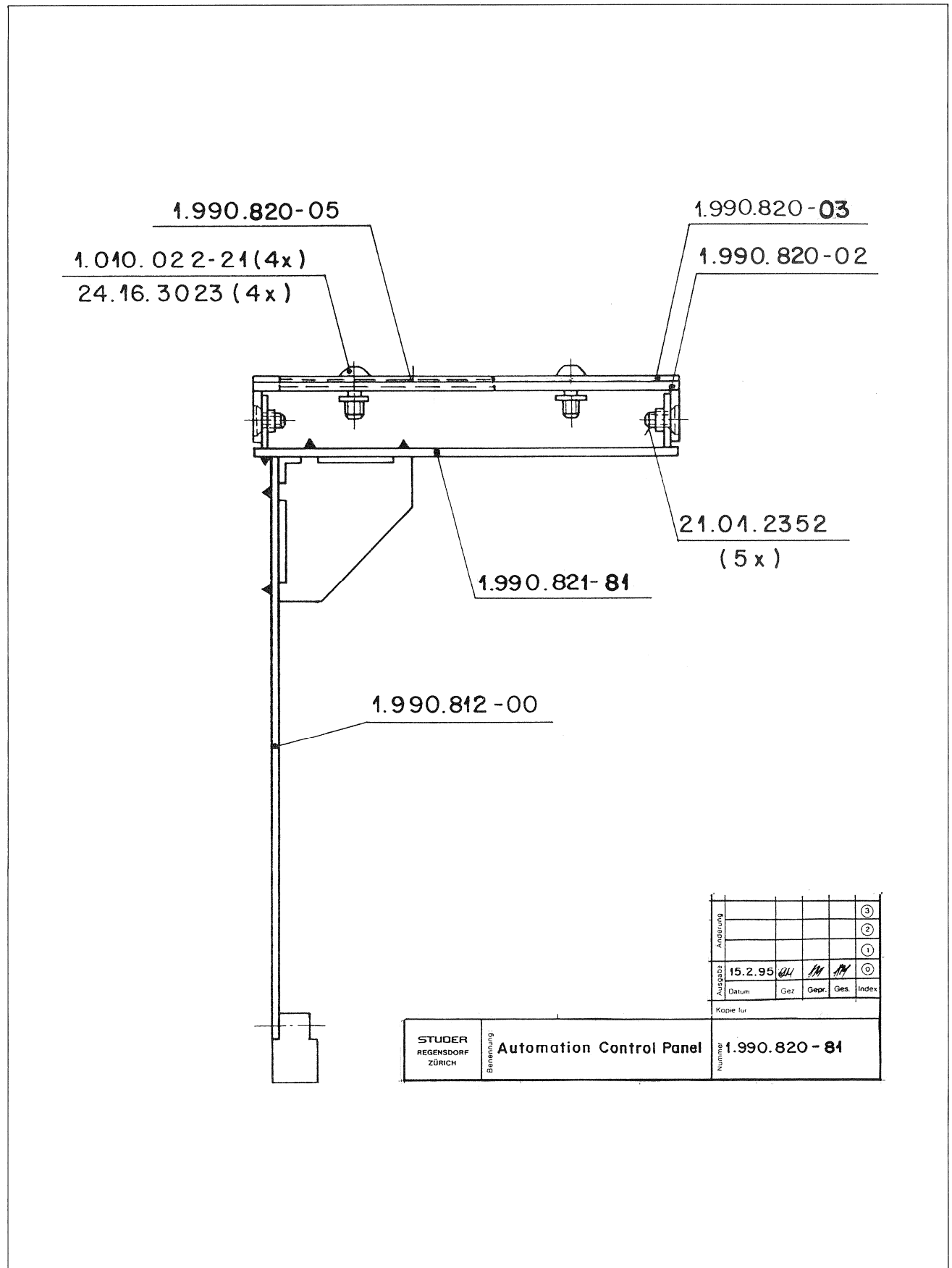
STUDER

Control Panel Faderautomation**1.990.820.81**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

AUTOMATION CONTROL PANEL

1.990.820.81



				③
				②
				①
Ausgabe	15.2.95	WU	MM	①
Datum	Gez	Gepr.	Ges.	Index

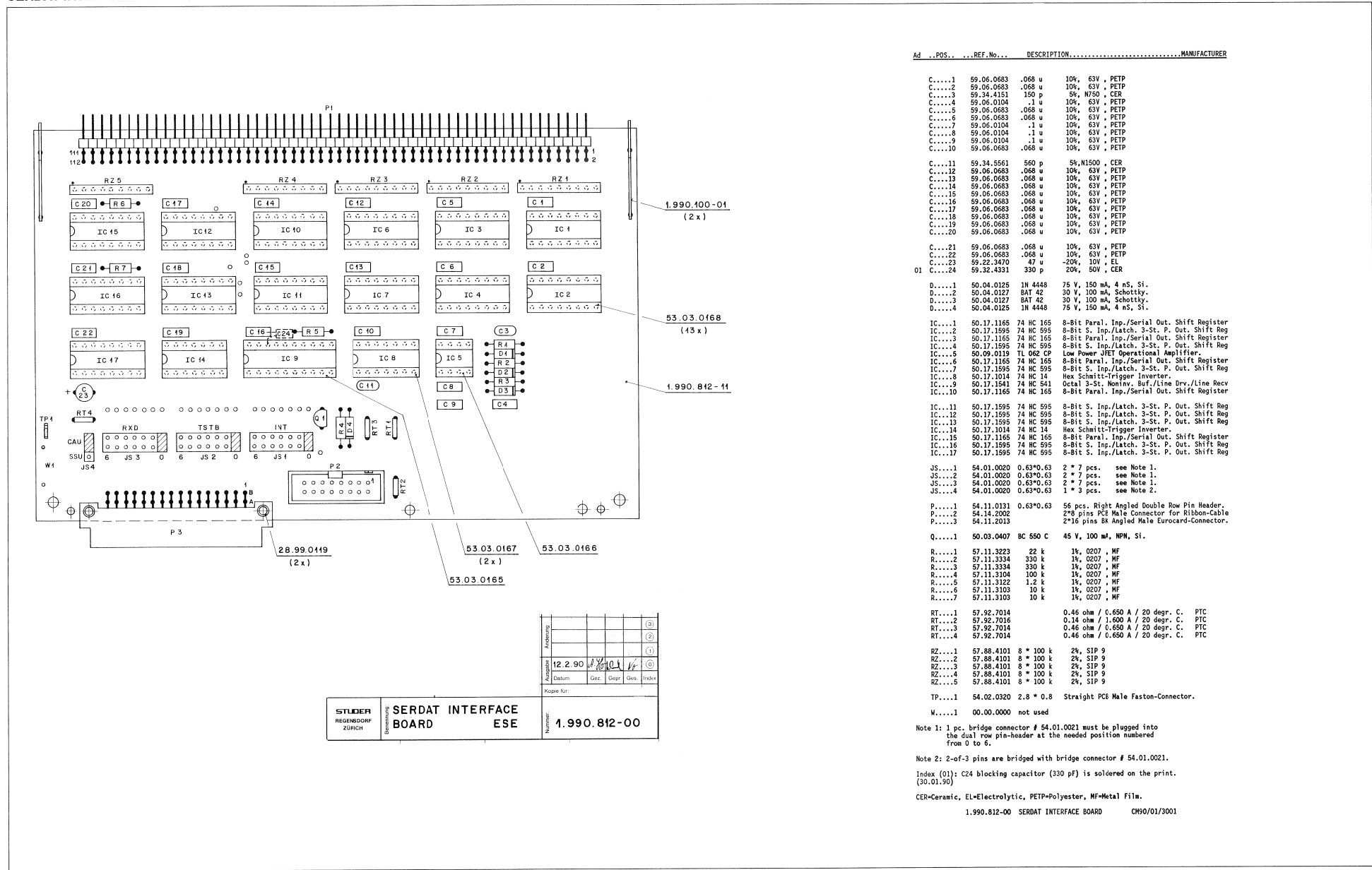
Kopie für

STUDER REGENSDORF ZÜRICH	Benennung Automation Control Panel	Nummer 1.990.820-81
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SERDAT INTERFACE BOARD



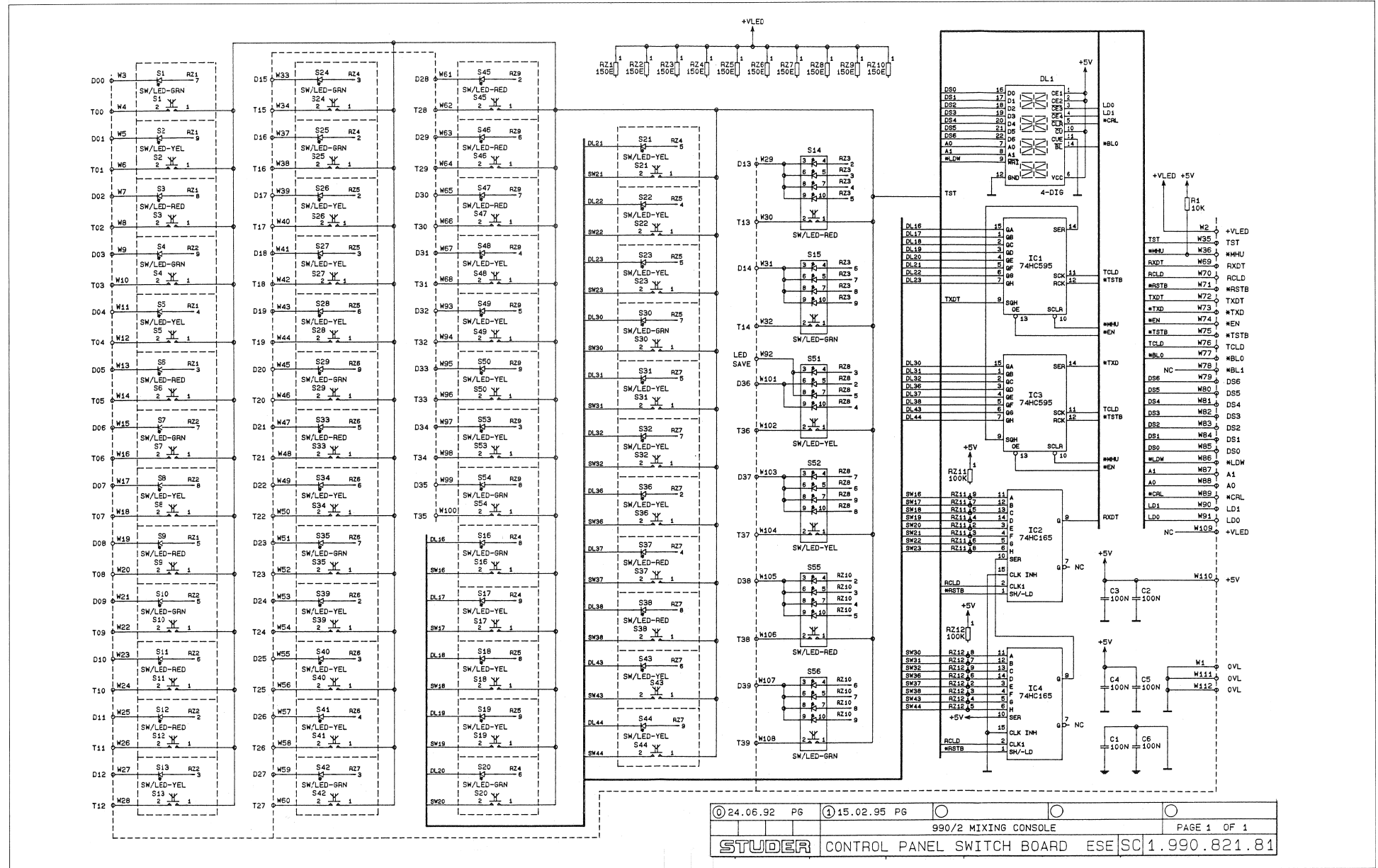
1.990.812.00



CONTROL PANEL SWITCH BOARD



1.990.821.81



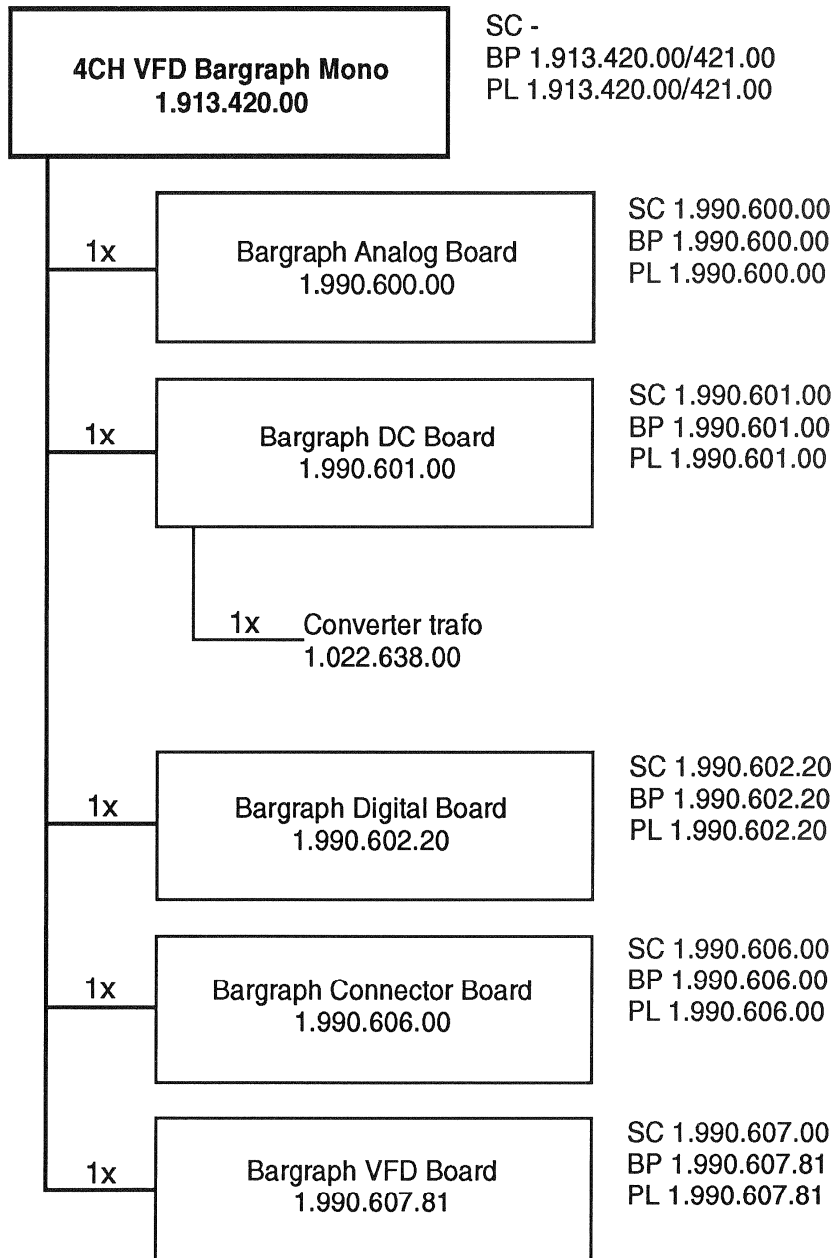
Section 6 Meter Panel and Top Panel Units

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Dynamics Unit.....	1.990.510.00
Dynamics, Digital PCB	1.990.510.00
Dynamics Unit Lim./Comp./Gate.....	1.990.510.00
Dynamics Analog PCB.....	1.990.518.00
Dynamics Analog Board	1.990.518.00
Dynamics Switch Board.....	1.990.519.00
Analog Board.....	1.990.600.00
Bargraph Analog Board.....	1.990.600.00
Bargraph DC Board	1.990.601.00
Bargraph Digital Board	1.990.602.20
Bargraph Connector Board.....	1.990.606.00
Bargraph VFD Board.....	1.990.607.81
Bargraph Connector + Bus Board	1.990.608.00
Bargraph VFD + Bus Board.....	1.990.609.81
4CH VFD Bargraph Mono + Bus	1.990.620.00
4CH VFD Bargraph Stereo + Bus	1.990.621.00
4CH Bargraph Stereo + Bus.....	1.990.621.00
TB Mic/Display Control Board	1.990.650.00
Display Switch Board	1.990.651.00
TB Mic Electret Display Control Unit.....	1.990.652.00
EI Mic/Display Control Unit.....	1.990.652.00
TB Mic Gooseneck Display Control Unit.....	1.990.653.00
TB Mic/Display Control Unit.....	1.990.653.00

4CH VFD Bargraph Mono

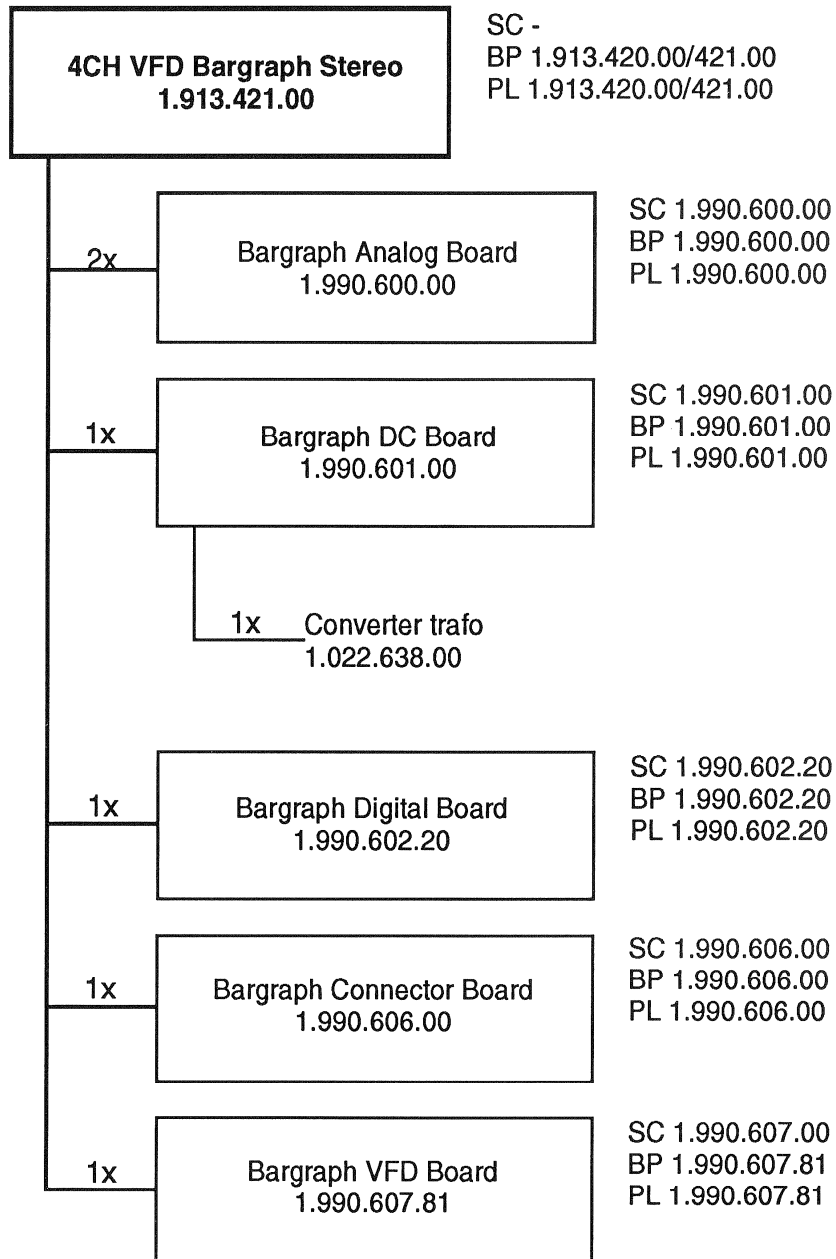
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SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionenliste Positional List

4CH VFD Bargraph Stereo

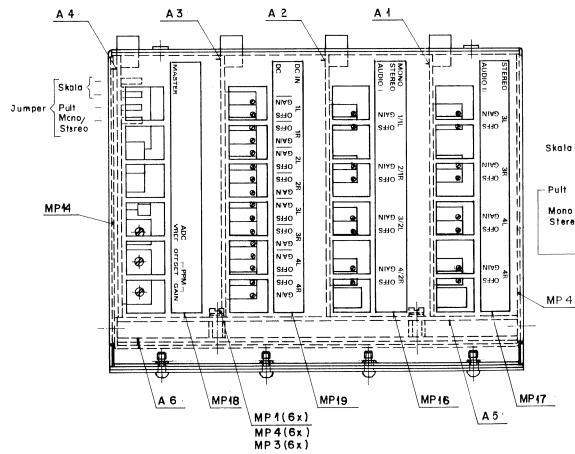
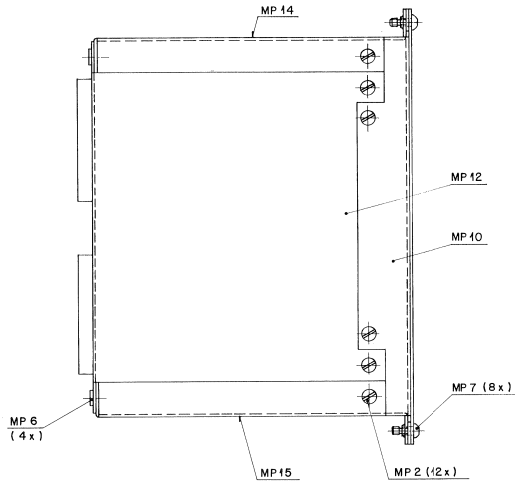
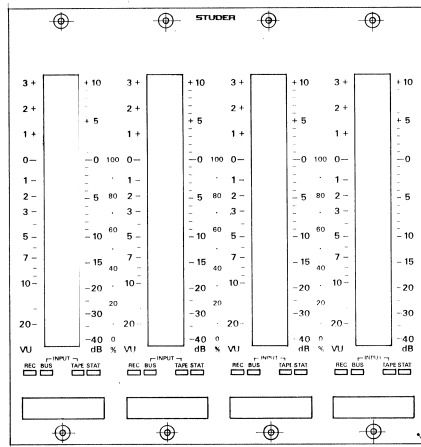
1.913.421.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

4CH BAR-GRAPH STEREO

1.913.421.00



Anordnung der Jumper 54.01.0021 auf dem Digitalprint A 4

	1.913.420.00	1.913.421.00	1.913.422.00	1.913.423.00	1.913.424.00	1.913.425.00	1.913.426.00	1.913.427.00
Mono 990								
Stereo 99C								
Mono N9								
Stereo N9								
Mono IEC								
Stereo IEC								
Mono EBU								
Stereo EBU								

Bei Verwendung im Pult 990 diesen Jumper in der Pult-Endmontage anfertigen.

Zustimmung					
Datum	3.6.94				
Gez.					
Gez.					
Gez.					
Index					

STUDER REGENSDORF ZÜRICH

4 CH BAR-GRAPH STEREO

1.913.421-00

1.913.420.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A.....1		0	not used	
A.....2		1.990.600.00	Bar-Graph Analog Board	St
A.....3		1.990.601.00	Bar-Graph DC Board	St
A.....4		1.990.602.21	Bar-Graph Digital Board	St
A.....5		1.990.606.00	Bar-Graph Connector Board	St
A.....6		1.990.607.81	Bar-Graph VFD Board	St
MP....1		21.01.0353	0006 pcs Z-Schr., ZN, M3 * 5	
MP....2		21.01.2352	0012 pcs S-Schr., ZN, M3 * 4	
MP....3		23.01.1032	0006 pcs U-Scheibe D 3.2/6 * 0.5	
MP....4		24.16.1030	0006 pcs Rippenscheibe D 3.2/5.5	
MP....5		0	not exist	
MP....6		28.31.0005	0004 pcs Blindniete D 3.2 * 6.1	
MP....7		1.010.022.21	0008 pcs Linsenschraube IS spez. M3 * 8 sw	
MP....8		1.010.080.43	0001 pcs Software Version Schild	
MP....9		1.913.420.01	0001 pcs Frontschild VFD Bar-Graph	
MP....10		1.913.420.02	0001 pcs Traeger VFD Bar-Graph	
MP....11		1.913.420.04	0000 pcs Studer-Nr.-Etikette 10 * 20	
MP....12		1.913.420.05	0001 pcs Mantel VFD Bar-Graph	
MP....13		0	not exist	
MP....14		1.913.420.08	0002 pcs Isolation Mantel VFD Bar-Graph	
MP....15		1.990.620.09	0002 pcs Stirrmantel VFD Bar-Graph	
MP....16		1.990.620.21	0001 pcs Schild Potm. Beschr. AUDIO 1	
MP....17		0	not exist	
MP....18		1.990.620.23	0001 pcs Schild Potm. Beschr. MASTER	
MP....19		1.990.620.24	0001 pcs Schild Potm. Beschr. DC	
MP....20		54.01.0021	0003 pcs Jumper Bruecke	

Index 1: U-Scheiben und Rippenscheiben dazu.

Index 2: Aenderung von 1.990.607.00 nach 1.990.607.81

Index 3: Uebertragung der Jumperbruecken von 1.990.602.20

Index 4: 1.990.602.21 neue SW

MANUFACTURER St-Studer

1.913.420.00	4CH BAR-GRAPH MONO (990)	VOL90/02/0600
1.913.420.00	4CH BAR-GRAPH MONO (990)	VOL90/05/0801
1.913.420.00	4CH BAR-GRAPH MONO (990)	VOL90/06/2702
1.913.420.00	4CH BAR-GRAPH MONO (990)	VOL91/06/2603
1.913.420.00	4CH BAR-GRAPH MONO (990)	FR194/04/2804

1.913.421.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A.....1		1.990.600.00	Bar-Graph Analog Board	St
A.....2		1.990.600.00	Bar-Graph Analog Board	St
A.....3		1.990.601.00	Bar-Graph DC Board	St
A.....4		1.990.602.21	Bar-Graph Digital Board	St
A.....5		1.990.606.00	Bar-Graph Connector Board	St
A.....6		1.990.607.81	Bar-Graph VFD Board	St
MP....1		21.01.0353	0006 pcs Z-Schr., ZN, M3 * 5	
MP....2		21.01.2352	0012 pcs S-Schr., ZN, M3 * 4	
MP....3		23.01.1032	0006 pcs U-Scheibe D 3.2/6 * 0.5	
MP....4		24.16.1030	0006 pcs Rippenscheibe D 3.2/5.5	
MP....5		0	not exist	
MP....6		28.31.0005	0004 pcs Blindniete D 3.2 * 6.1	
MP....7		1.010.022.21	0008 pcs Linsenschraube IS spez. M3 * 8 sw	
MP....8		1.010.080.43	0001 pcs Software Version Schild	
MP....9		1.913.420.01	0001 pcs Frontschild VFD Bar-Graph	
MP....10		1.913.420.02	0001 pcs Traeger VFD Bar-Graph	
MP....11		1.913.421.04	0000 pcs Studer-Nr.-Etikette 10 * 20	
MP....12		1.913.420.05	0001 pcs Mantel VFD Bar-Graph	
MP....13		0	not exist	
MP....14		1.913.420.08	0002 pcs Isolation Mantel VFD Bar-Graph	
MP....15		1.990.620.09	0002 pcs Stirrmantel VFD Bar-Graph	
MP....16		1.990.620.21	0001 pcs Schild Potm. Beschr. AUDIO 1	
MP....17		1.990.620.22	0001 pcs Schild Potm. Beschr. AUDIO 2	
MP....18		1.990.620.23	0001 pcs Schild Potm. Beschr. MASTER	
MP....19		1.990.620.24	0001 pcs Schild Potm. Beschr. DC	
MP....20		54.01.0021	0003 pcs Jumper Bruecke	

Index 1: U-Scheiben und Rippenscheiben dazu.

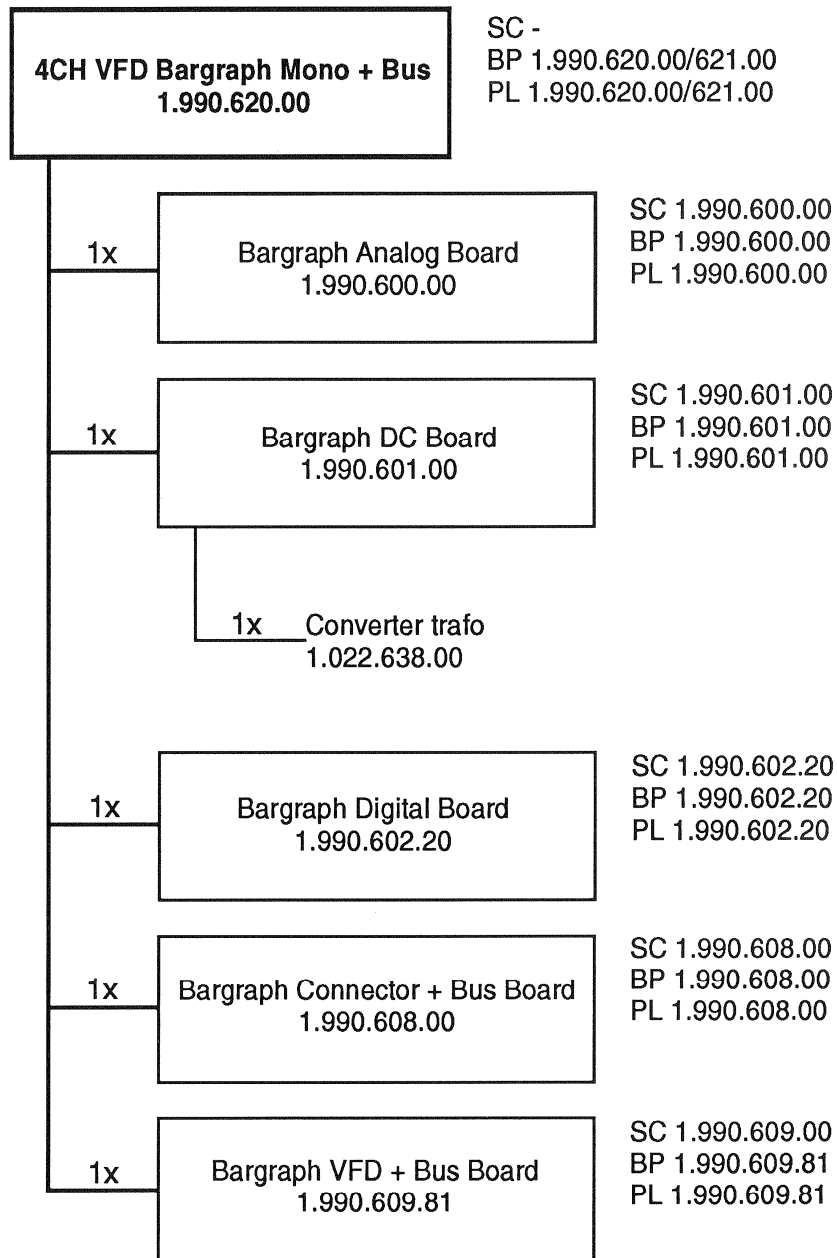
Index 2: Aenderung von 1.990.607.00 nach 1.990.607.81

Index 3: Uebertragung der Jumperbruecken von 1.990.602.20

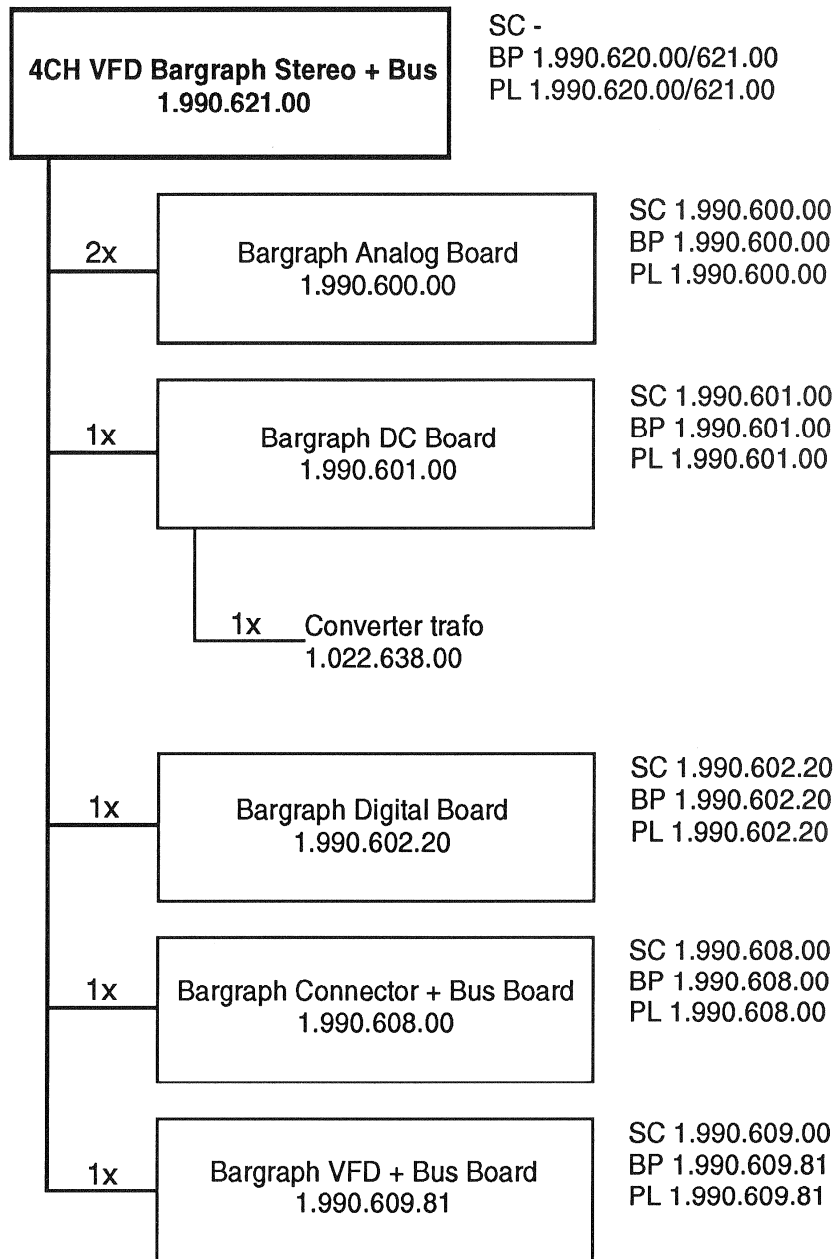
Index 4: 1.990.602.21 neue SW

MANUFACTURER St-Studer

1.913.421.00	4CH BAR-GRAPH STEREO (990)	VOL90/02/0600
1.913.421.00	4CH BAR-GRAPH STEREO (990)	VOL90/05/0801
1.913.421.00	4CH BAR-GRAPH STEREO (990)	VOL90/06/2702
1.913.421.00	4CH BAR-GRAPH STEREO (990)	VOL91/06/2603
1.913.421.00	4CH BAR-GRAPH STEREO (990)	FR194/04/2804

4CH VFD Bargraph Mono + Bus**1.990.620.00**

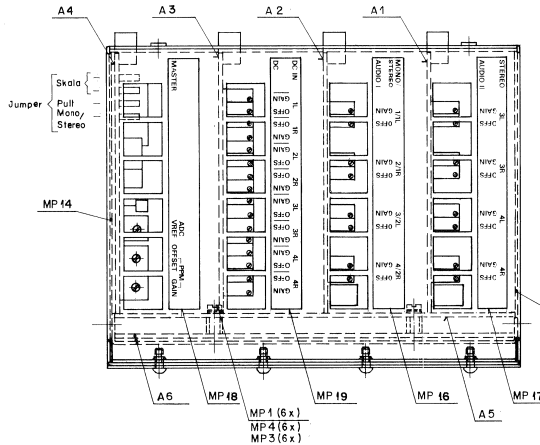
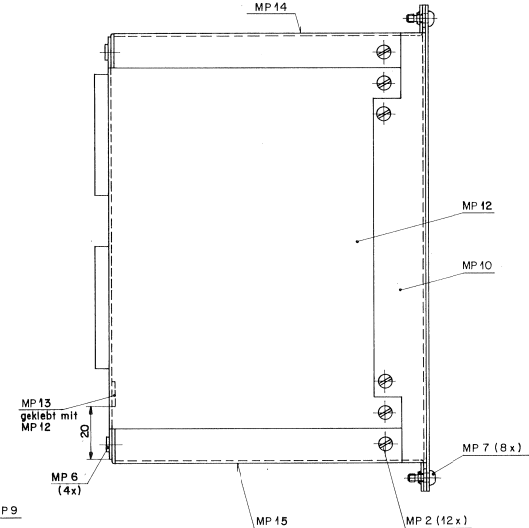
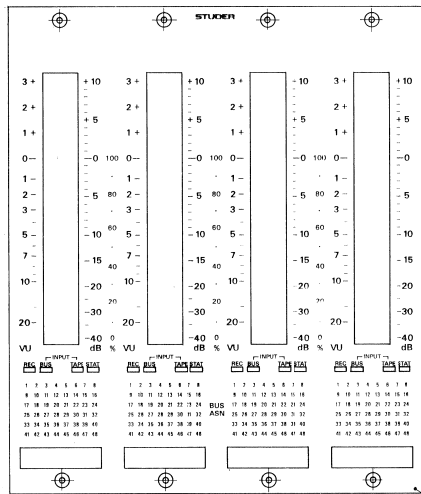
SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

4CH VFD Bargraph Stereo + Bus**1.990.621.00**

SC: Schema Circuit Diagram
 BP: Bestückungsplan PCB Layout
 PL: Positionsliste Positional List

4CH BAR-GRAPH STEREO + BUS

1.990.621.00



Anordnung der Jumper 54.01.0021 auf dem Digitalprint A4

	1.990.620.00	1.990.621.00	1.990.622.00	1.990.623.00	1.990.624.00	1.990.625.00	1.990.626.00	1.990.627.00
	Mono 990	Stereo 990	Mono N 9	Stereo N 9	Mono IEC	Stereo IEC	Mono EBU	Stereo EBU
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Mono / Stereo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Abrechnung					③
	3.6.94	1.1%	1.1%	1.1%	①
Abzahl	21.6.90	1.1%	1.1%	1.1%	①
Datum	Gez.	Gepr.	Gepr.	Index	

STUDER
REGENSDORF
ZÜRICH

Bestellnummer: **4 CH BAR-GRAPH STEREO + BUS**

Nummer: **1.990.621-00**

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
A.....1		0	not used	
A.....2	1.990.600.00		Bar-Graph Analog Board	St
A.....3	1.990.601.00		Bar-Graph DC Board	St
04 A.....4	1.990.602.21		Bar-Graph Digital Board	St
A.....5	1.990.603.00		Bar-Graph Connector+Bus Board	St
02 A.....6	1.990.609.81		Bar-Graph VFD+Bus Board	St
MP.....1	21.01.0353	0006 pcs	Z-Schr. , ZN , M3 * 5	
MP.....2	21.01.2352	0012 pcs	S-Schr. , ZN , M3 * 4	
01 MP.....3	23.01.1032	0006 pcs	U-Scheibe D 3.2/6 * 0.5	
01 MP.....4	24.16.1030	0006 pcs	Rippscheibe D 3.2/5.5	
MP.....5	0		not exist	
MP.....6	28.31.0005	0004 pcs	Blindniete D 3.2 * 6.1	
MP.....7	1.010.022.21	0008 pcs	Linsenschraube IS spez. M3 * 8 sw	
MP.....8	1.010.080.43	0001 pcs	Software Version Schild	
MP.....9	1.990.620.01	0001 pcs	Frontschild 1 VFD Bar-Graph + Bus	
MP.....10	1.990.620.02	0001 pcs	Traeger VFD Bar-Graph + Bus	
MP.....11	1.990.620.04	0000 pcs	Studer-Nr.-Etikette 10 * 20	
MP.....12	1.990.620.05	0001 pcs	Mantel VFD Bar-Graph + Bus	
MP.....13	1.990.620.06	0001 pcs	Distanzstreifen	
MP.....14	1.990.620.08	0002 pcs	Isolation Mantel VFD Bar-Graph	
MP.....15	1.990.620.09	0002 pcs	Strimmantel VFD Bar-Graph	
MP.....16	1.990.620.21	0001 pcs	Schild Potm. Beschr. AUDIO 1	
MP.....17	0		not exist	
MP.....18	1.990.620.23	0001 pcs	Schild Potm. Beschr. MASTER	
MP.....19	1.990.620.24	0001 pcs	Schild Potm. Beschr. DC	
03 MP.....20	54.01.0021	0002 pcs	Jumper Bruecke	

Index 1: U-Scheiben und Rippscheiben dazu.
Index 2: Aenderung von 1.990.609.00 nach 1.990.609.81
Index 3: Uebertragung der Jumperbruecken von 1.990.602.20
Index 4: 1.990.602.21 neue SW

MANUFACTURER St=Studer

1.990.620.00	4CH BAR-GRAPH MONO+BUS (990)	VOL90/02/0600
1.990.620.00	4CH BAR-GRAPH MONO+BUS (990)	VOL90/05/0801
1.990.620.00	4CH BAR-GRAPH MONO+BUS (990)	VOL90/06/2702
1.990.620.00	4CH BAR-GRAPH MONO+BUS (990)	VOL91/06/2603
1.990.620.00	4CH BAR-GRAPH MONO+BUS (990)	FR194/04/2804

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
A.....1	1.990.600.00		Bar-Graph Analog Board	St
A.....2	1.990.600.00		Bar-Graph Analog Board	St
A.....3	1.990.601.00		Bar-Graph DC Board	St
04 A.....4	1.990.602.21		Bar-Graph Digital Board	St
A.....5	1.990.603.00		Bar-Graph Connector+Bus Board	St
02 A.....6	1.990.609.81		Bar-Graph VFD+Bus Board	St
MP.....1	21.01.0353	0006 pcs	Z-Schr. , ZN , M3 * 5	
MP.....2	21.01.2352	0012 pcs	S-Schr. , ZN , M3 * 4	
01 MP.....3	23.01.1032	0006 pcs	U-Scheibe D 3.2/6 * 0.5	
01 MP.....4	24.16.1030	0006 pcs	Rippscheibe D 3.2/5.5	
MP.....5	0		not exist	
MP.....6	28.31.0005	0004 pcs	Blindniete D 3.2 * 6.1	
MP.....7	1.010.022.21	0008 pcs	Linsenschraube IS spez. M3 * 8 sw	
MP.....8	1.010.080.43	0001 pcs	Software Version Schild	
MP.....9	1.990.620.01	0001 pcs	Frontschild 1 VFD Bar-Graph + Bus	
MP.....10	1.990.620.02	0001 pcs	Traeger VFD Bar-Graph + Bus	
MP.....11	1.990.621.04	0000 pcs	Studer-Nr.-Etikette 10 * 20	
MP.....12	1.990.620.05	0001 pcs	Mantel VFD Bar-Graph + Bus	
MP.....13	1.990.620.06	0001 pcs	Distanzstreifen	
MP.....14	1.990.620.08	0002 pcs	Isolation Mantel VFD Bar-Graph	
MP.....15	1.990.620.09	0002 pcs	Strimmantel VFD Bar-Graph	
MP.....16	1.990.620.21	0001 pcs	Schild Potm. Beschr. AUDIO 1	
MP.....17	1.990.620.22	0001 pcs	Schild Potm. Beschr. AUDIO 2	
MP.....18	1.990.620.23	0001 pcs	Schild Potm. Beschr. MASTER	
MP.....19	1.990.620.24	0001 pcs	Schild Potm. Beschr. DC	
03 MP.....20	54.01.0021	0002 pcs	Jumper Bruecke	

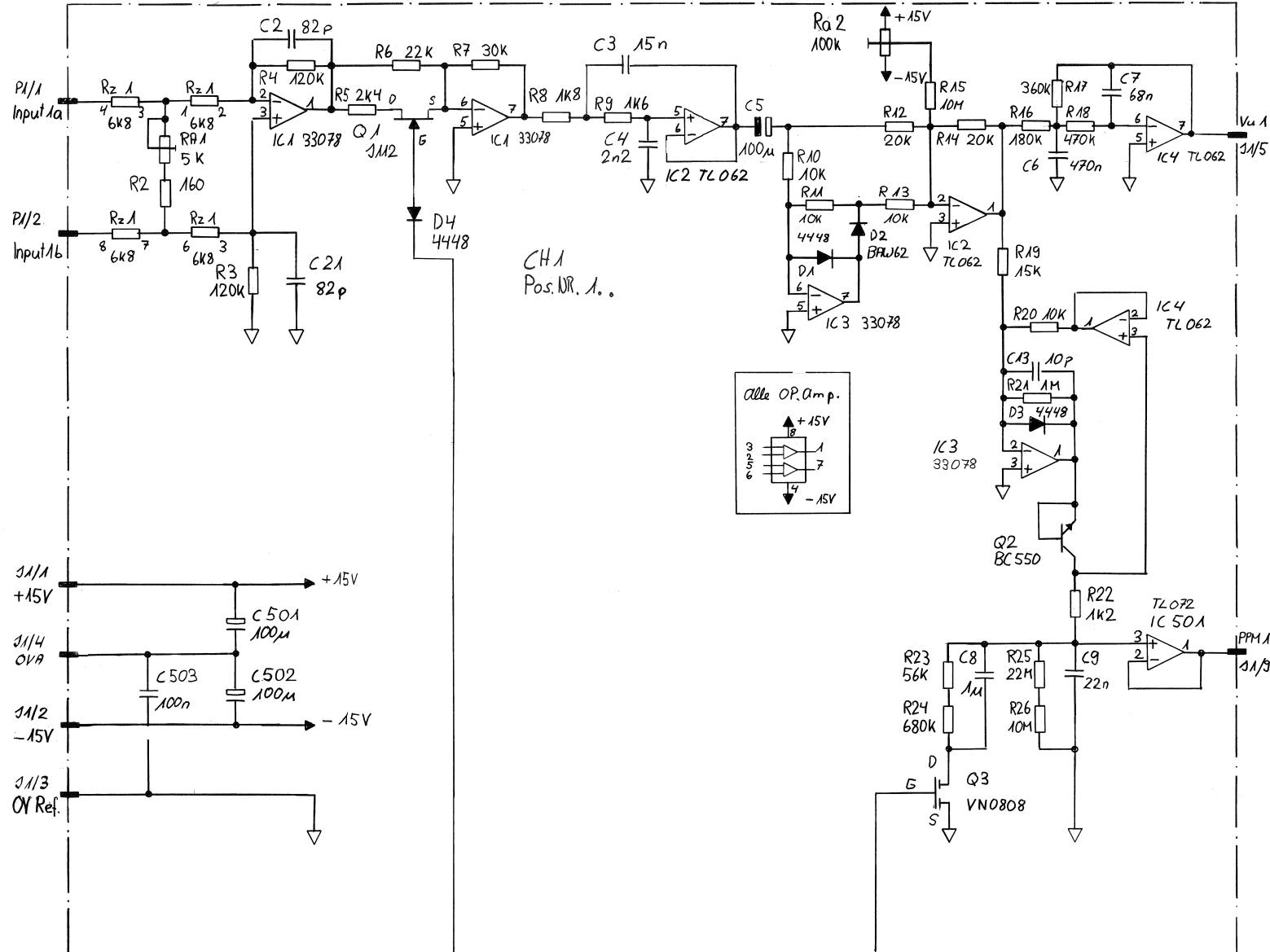
Index 1: U-Scheiben und Rippscheiben dazu.
Index 2: Aenderung von 1.990.609.00 nach 1.990.609.81
Index 3: Uebertragung der Jumperbruecken von 1.990.602.20
Index 4: 1.990.602.21 neue SW

MANUFACTURER St=Studer

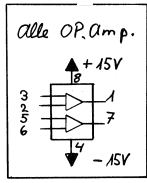
1.990.621.00	4CH BAR-GRAPH STEREO+BUS (990)	VOL90/02/0600
1.990.621.00	4CH BAR-GRAPH STEREO+BUS (990)	VOL90/05/0801
1.990.621.00	4CH BAR-GRAPH STEREO+BUS (990)	VOL90/06/2702
1.990.621.00	4CH BAR-GRAPH STEREO+BUS (990)	VOL91/06/2603
1.990.621.00	4CH BAR-GRAPH STEREO+BUS (990)	FR194/04/2804

ANALOG BOARD

1.990.600.00



CH1 Pos. NR. 1.

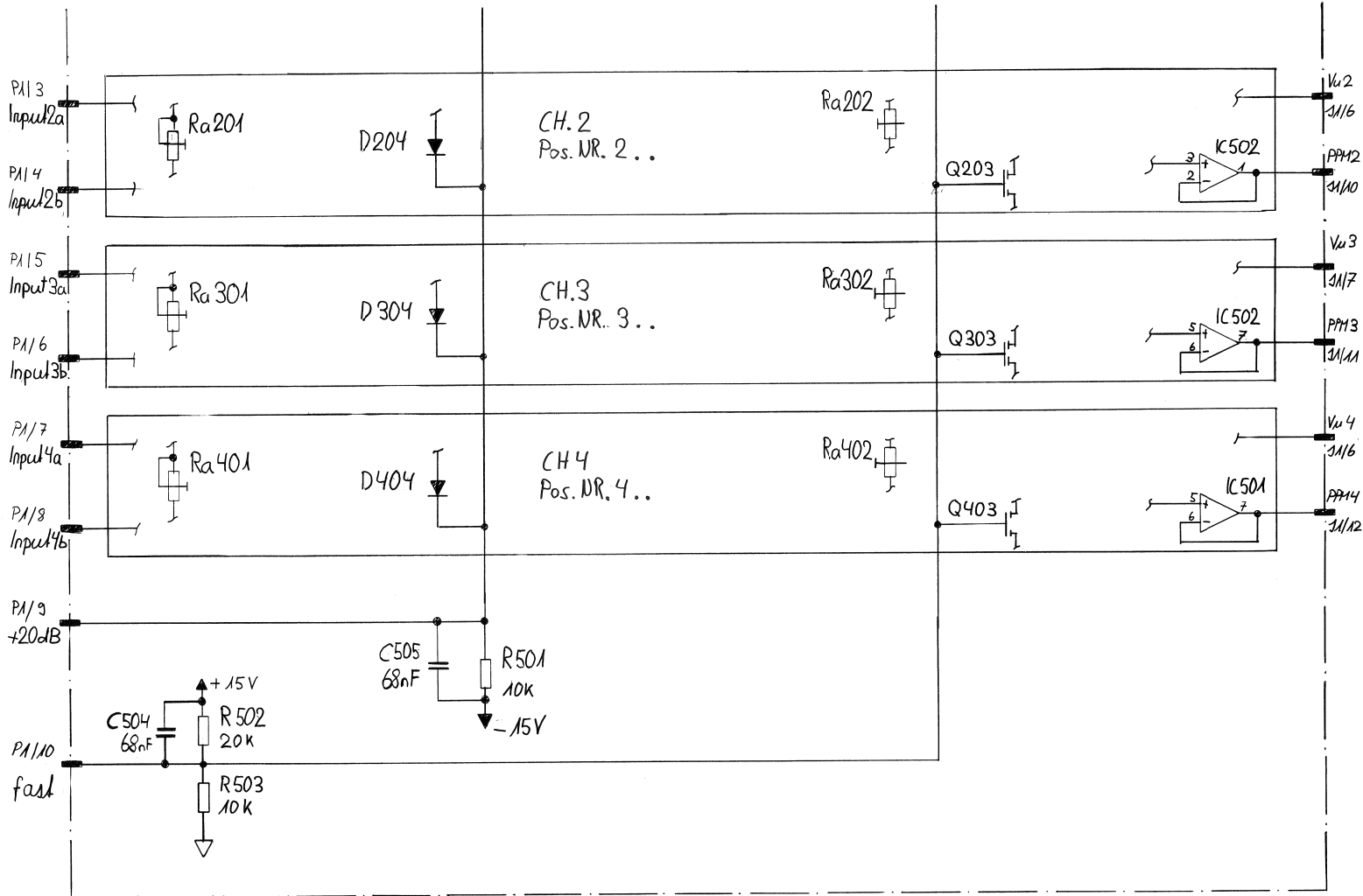


181288 Emi	1.990.600.00	PAGE 1 OF 2
STUDER	ANALOG BOARD	1.990.600.00

ANALOG BOARD



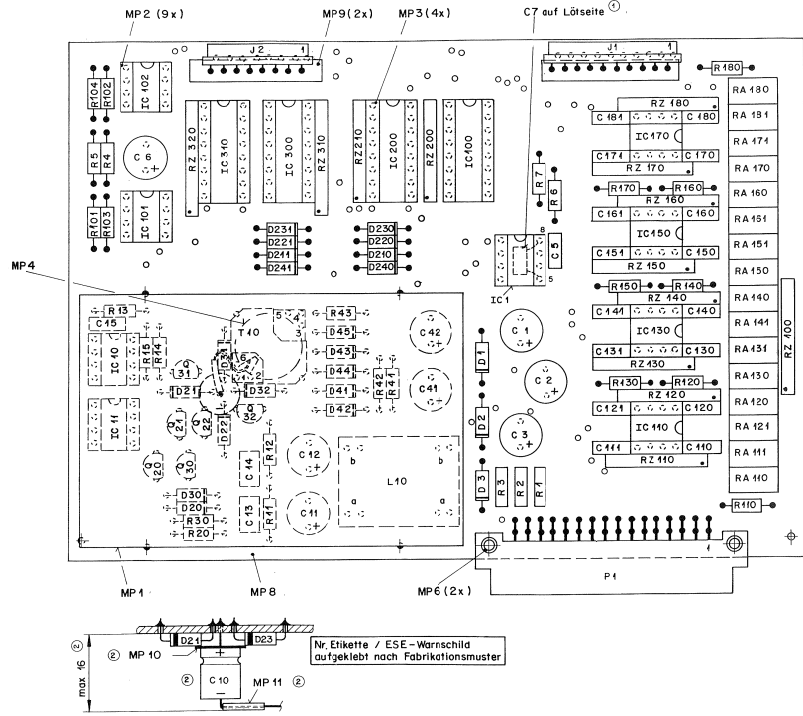
1.990.600.00



18.12.89 Emi	11.9.90 Emi	PAGE 2 OF 2	1.990.600.00
STUDER		ANALOG BOARD	

BAR-GRAPH DC BOARD

1.990.601.00



Nr. Etikette / ESE-Warsschild aufgebracht nach Fabrikationsmuster

STUDER
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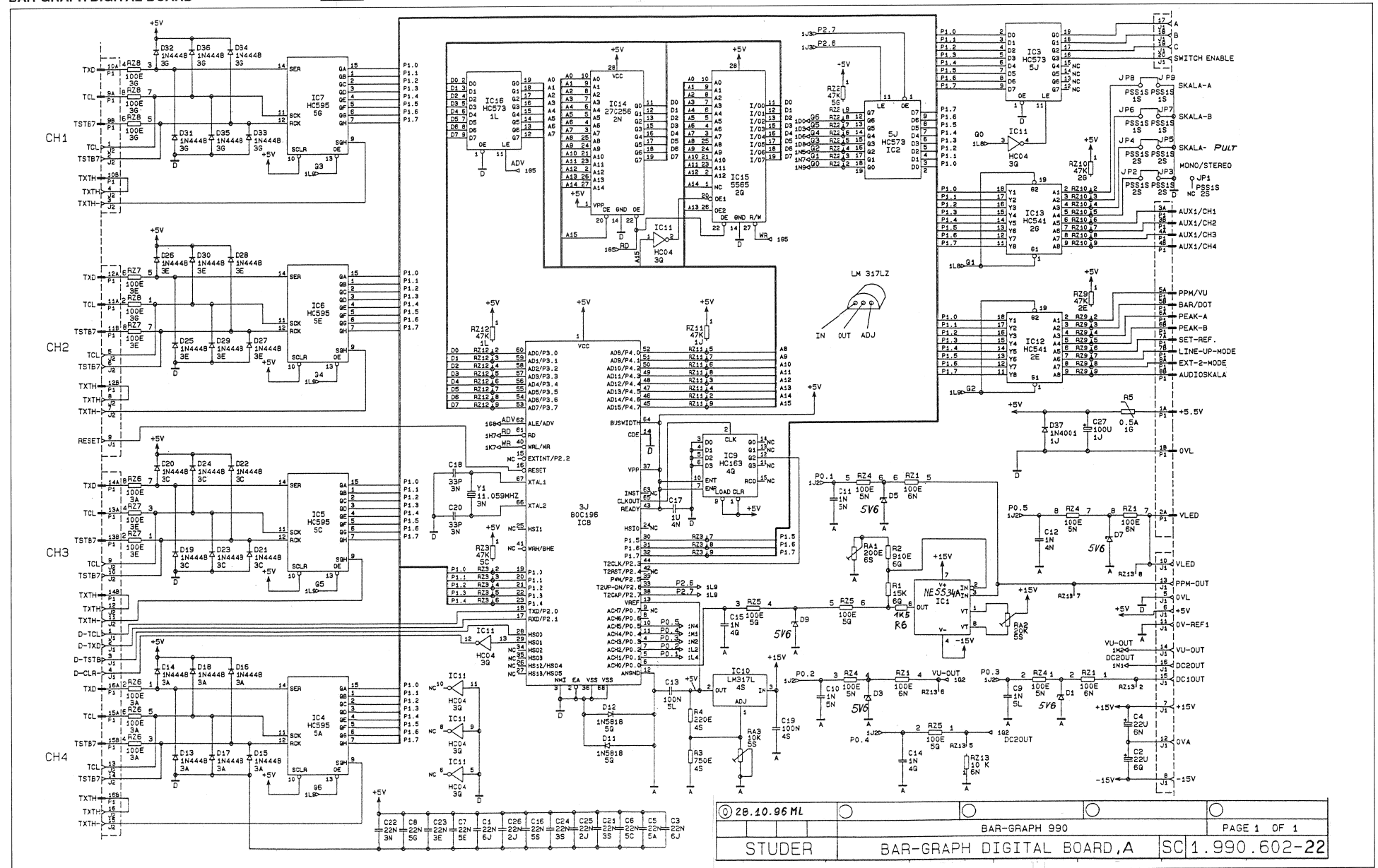
Bauzeichnung
BAR-GRAPH DC BOARD
ESE

Nr.
1.990.601-00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1	59.22.5101	100 uF	25V EL		R....3	57.92.7013	0.75 Ohm	PTC 0.5A	
C....2	59.22.5101	100 uF	25V EL		R....4	57.11.3753	75 kOhm		
C....3	59.22.5101	100 uF	10V EL		R....5	57.11.3153	15 kOhm		
C....4	0	not used			R....6	57.11.3101	100 Ohm		
C....5	59.06.5102	1 nF	5k PE		R....7	57.11.3102	1 kOhm		
C....6	59.22.5101	100 uF	25V EL		R....11	57.11.3103	10 kOhm		
C....7	59.34.1180	18 pF	5k CER	(auf Lötlseite: IC1 zw. Pin 5 & 8)	R....12	57.11.3103	10 kOhm		
C....10	59.99.1721	220 uF	10V EL	stehend	R....13	57.11.3103	10 kOhm	1%	
C....11	59.22.5101	100 uF	25V EL		R....14	57.11.3103	10 kOhm	1%	
C....12	59.22.5101	100 uF	25V EL		R....15	57.11.3552	5.6 kOhm	1%	
C....13	59.06.0104	10 nF	PE		R....20	57.11.3302	3 kOhm		
C....14	59.06.0104	100 nF	PE		R....30	57.11.3302	3 kOhm		
C....15	59.06.5222	2.2 nF	5k PE		R....41	57.11.3101	100 Ohm		
C....41	59.22.8470	47 uF	50V EL		R....42	57.11.3101	100 Ohm		
C....42	59.22.8470	47 uF	50V EL		R....43	57.11.3203	20 kOhm		
C....110	59.06.0102	1 nF	PE		R....101	57.11.3203	20 kOhm		
C....111	59.06.0102	1 nF	PE		R....102	57.11.3203	20 kOhm		
C....120	59.06.0102	1 nF	PE		R....103	57.11.3203	20 kOhm		
C....121	59.06.0102	1 nF	PE		R....104	57.11.3203	20 kOhm		
C....130	59.06.0102	1 nF	PE		R....110	57.11.3124	120 kOhm		
C....131	59.06.0102	1 nF	PE		R....120	57.11.3124	120 kOhm		
C....140	59.06.0102	1 nF	PE		R....130	57.11.3124	120 kOhm		
C....141	59.06.0102	1 nF	PE		R....140	57.11.3124	120 kOhm		
C....150	59.06.0102	1 nF	PE		R....150	57.11.3124	120 kOhm		
C....151	59.06.0102	1 nF	PE		R....160	57.11.3124	120 kOhm		
C....160	59.06.0102	1 nF	PE		R....170	57.11.3124	120 kOhm		
C....161	59.06.0102	1 nF	PE		R....180	57.11.3124	120 kOhm		
C....170	59.06.0102	1 nF	PE		RA..110	58.05.0104	100 kOhm	trim pot lin	
C....171	59.06.0102	1 nF	PE		RA..111	58.05.0502	5 kOhm	trim pot lin	
C....180	59.06.0102	1 nF	PE		RA..120	58.05.0104	100 kOhm	trim pot lin	
C....181	59.06.0102	1 nF	PE		RA..121	58.05.0502	5 kOhm	trim pot lin	
E....1	50.04.0122	1M4001	any		RA..130	58.05.0104	100 kOhm	trim pot lin	
E....2	50.04.0122	1M4001	any		RA..131	58.05.0502	5 kOhm	trim pot lin	
E....3	50.04.0122	1M4001	any		RA..140	58.05.0104	100 kOhm	trim pot lin	
E....20	50.04.0125	1M4448	any		RA..141	58.05.0502	5 kOhm	trim pot lin	
E....21	50.04.0138	UF4004	any		RA..150	58.05.0104	100 kOhm	trim pot lin	
E....22	50.04.0138	UF4004	any		RA..151	58.05.0502	5 kOhm	trim pot lin	
E....30	50.04.0125	1M4448	any		RA..160	58.05.0104	100 kOhm	trim pot lin	
E....31	50.04.0138	UF4004	any		RA..161	58.05.0502	5 kOhm	trim pot lin	
E....32	50.04.0138	UF4004	any		RA..170	58.05.0104	100 kOhm	trim pot lin	
E....41	50.04.0138	UF4004	any		RA..171	58.05.0502	5 kOhm	trim pot lin	
E....42	50.04.0138	UF4004	any		RA..180	58.05.0104	100 kOhm	trim pot lin	
E....43	50.04.0138	UF4004	any		RA..181	58.05.0502	5 kOhm	trim pot lin	
E....44	50.04.0138	UF4004	any		RZ..100	57.88.4332	3.3 kOhm 2% *8		
E....45	50.04.1504	Z 5.6V	1.3W		RZ..110	57.88.2103	10 kOhm 2% *4		
E....210	50.04.0125	1M4448	any		RZ..120	57.88.2103	10 kOhm 2% *4		
E....211	50.04.0125	1M4448	any		RZ..130	57.88.2103	10 kOhm 2% *4		
E....220	50.04.0125	1M4448	any		RZ..140	57.88.2103	10 kOhm 2% *4		
E....221	50.04.0125	1M4448	any		RZ..150	57.88.2103	10 kOhm 2% *4		
E....230	50.04.0125	1M4448	any		RZ..160	57.88.2103	10 kOhm 2% *4		
E....231	50.04.0125	1M4448	any		RZ..170	57.88.2103	10 kOhm 2% *4		
E....240	50.04.0125	1M4448	any		RZ..180	57.88.2103	10 kOhm 2% *4		
E....241	50.04.0125	1M4448	any		RZ..200	57.88.2101	100 Ohm 2% *4		
IC....1	50.05.0283	NE 5534N	single Op-Amp	Ex,Ra,Sig	RZ..210	57.88.2104	100 kOhm 2% *4		
IC....10	50.09.0103	TL 071	single Op-Amp	TI	RZ..300	57.88.4104	10 kOhm 2% *8		
IC....11	50.05.0283	LM 393	dual Comparator	Sig,Tho,TI	RZ..310	57.88.4104	100 kOhm 2% *8		
IC....100	50.07.0051	4051	CMOS 8-Channel analog Mux	Ph,Mot,SGS	T....10	1.022.638.00	10 mH	Konverttrafo VFD-Bargraph	St
IC....101	50.05.0283	LM 393	dual Comparator	Sig,Tho,TI	MP....1	1.913.117.01	1 pcs	Abschirmhaube	
IC....102	50.05.0283	LM 393	dual Comparator	Sig,Tho,TI	MP....2	53.03.0166	9 pcs	IC socket 8 pin	
IC....110	50.09.0119	TL 062	low power Op-Amp	SGS,Tho,TI	MP....3	53.03.0168	4 pcs	IC socket 16 pin	
IC....130	50.09.0119	TL 062	low power Op-Amp	SGS,Tho,TI	MP....4	1.010.601.61	1 pcs	Unterlage zu RMG	
IC....170	50.09.0119	TL 062	low power Op-Amp	SGS,Tho,TI	MP....5	43.01.0108	1 pcs	ESE-Schild	
IC....200	50.07.0051	4051	CMOS 8-Channel analog Mux	Ph,Mot,SGS	MP....6	28.99.0119	2 pcs	Rohrnetze D2.5*9*0.15	
J....1	54.14.5540		Micro-Match, 20 pin	SGS,Tho,TI	MP....7	1.990.601.04	1 pcs	Nr.-Etikette 5 * 20	
J....2	54.14.5536		Micro-Match, 16 pin	SGS,Tho,TI	MP....8	1.990.601.11	1 pcs	Bargraph DC PCB	
L....10	62.03.0100	2.2 mH	Torridial Choke 180mOhm	Ph,Mot,SGS	MP....9	1.990.600.01	2 pcs	Isolierunterlage Micro Match	
F....1	54.11.2013		Euroconnector, 2*16 pin	Ph,Mot,SGS	MP....10	1.010.027.23	1 pcs	Isolierscheibe 9/3,2x0,25 PTFE	
O....20	50.03.0340	BC 337-25	NPN	any	OZ MP....11	1.010.101.65	1 pcs	Schrumpfschlauch 1,2/0,6 x 9	
O....21	50.03.0340	BC 337-25	NPN	any					
O....22	50.03.0351	BC 327-25	PNP	any					
O....30	50.03.0340	BC 337-25	NPN	any					
O....31	50.03.0340	BC 337-25	NPN	any					
O....32	50.03.0351	BC 327-25	PNP	any					
R....1	57.92.7013	0.75 Ohm	PTC 0.5A						
R....2	57.92.7013	0.75 Ohm	PTC 0.5A						

BAR-GRAPH DIGITAL BOARD

1.990.602.22

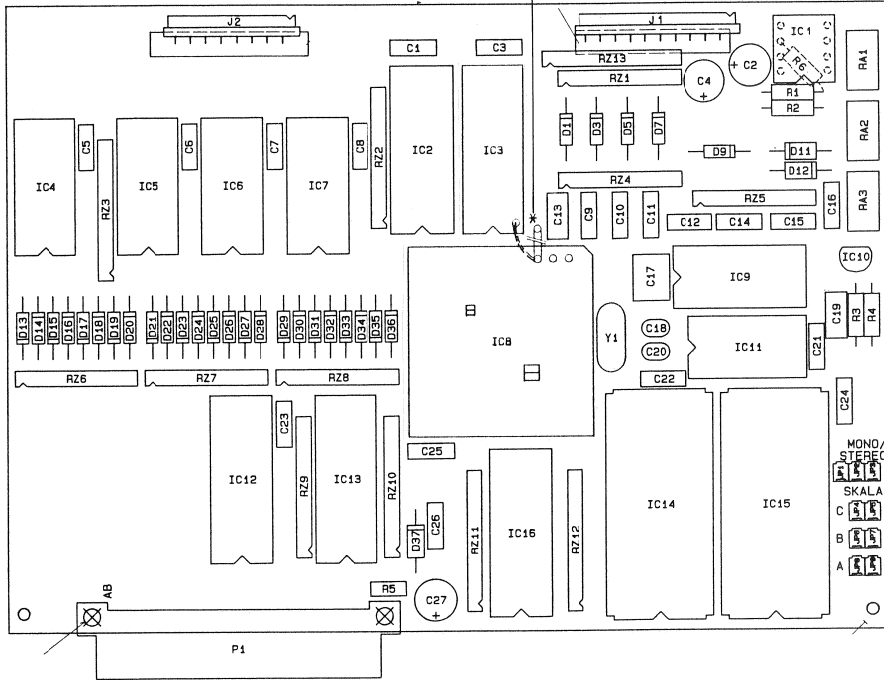


BAR-GRAPH DIGITAL BOARD

1.990.602.22



Cut track to IC8 pin 14 and add wire on solder side between IC3 pin 1 and IC8 pin 14.



Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 2	59.22.6220	22u		EL 35V, 20%, RMS
0	C 3	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 4	59.22.6220	22u		EL 35V, 20%, RMS
0	C 5	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 6	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 7	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 8	59.06.0223	22n		PETP. 63V, 10%, RMS
0	C 9	59.06.0102	1n0		PETP. 63V, 10%, RMS
0	C 10	59.06.0102	1n0		PETP. 63V, 10%, RMS
0	C 11	59.06.0102	1n0		PETP. 63V, 10%, RMS
0	C 12	59.06.0102	1n0		PETP. 63V, 10%, RMS
0	C 13	59.05.0104	100n		PETP. 63V, 10%, RMS
0	C 14	59.05.0102	1n0		PETP. 63V, 10%, RMS
0	C 15	59.05.0102	1n0		PETP. 63V, 10%, RMS
0	C 16	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 17	59.05.0105	1u0		PETP. 50V, 10%, RMS
0	C 18	59.34.2330	33p		CER 63V, 5%, N150
0	C 19	59.05.0104	100n		PETP. 63V, 10%, RMS
0	C 20	59.34.2330	33p		CER 63V, 5%, N150
0	C 21	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 22	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 23	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 24	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 25	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 26	59.05.0223	22n		PETP. 63V, 10%, RMS
0	C 27	59.22.3101	100u		EL 10V, 20%, RMS
0	D 1	50.04.1108	5V6		Zener, 5%, 0.5W, DO-35
0	D 2	not used			
0	D 3	50.04.1108	5V6		Zener, 5%, 0.5W, DO-35
0	D 4	not used			
0	D 5	50.04.1108	5V6		Zener, 5%, 0.5W, DO-35
0	D 6	not used			
0	D 7	50.04.1108	5V6		Zener, 5%, 0.5W, DO-35
0	D 8	not used			
0	D 9	50.04.1108	5V6		Zener, 5%, 0.5W, DO-35
0	D 10	not used			
0	D 11	50.04.0512	1N5818		D 1N 5818, 1N 5819,
0	D 12	50.04.0512	1N5818		D 1N 5818, 1N 5819,
0	D 13	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 14	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 15	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 16	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 17	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 18	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 19	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 20	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 21	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 22	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 23	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 24	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 25	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 26	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 27	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 28	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 29	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 30	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 31	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 32	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 33	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 34	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 35	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 36	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	D 37	50.04.0122	1N4001		1A, DO-41
0	IC 1	50.05.0244	NE5534AN		IC 5534 ANB, NE 5534 SAN, A
0	IC 2	50.17.1573	74HC573		IC ... 74 HC 573, A
0	IC 3	50.17.1573	74HC573		IC ... 74 HC 573, A
0	IC 4	50.17.1595	74HC595		IC ... 74 HC 595, A
0	IC 5	50.17.1595	74HC595		IC ... 74 HC 595, A
0	IC 6	50.17.1595	74HC595		IC ... 74 HC 595, A
0	IC 7	50.17.1595	74HC595		IC ... 74 HC 595, A
0	IC 8	50.63.0003	80C195		N 80 C 195 KB-16
0	IC 9	50.17.1163	74HC163		IC ... 74 HC 163, A
0	IC 10	50.10.0108	LM317L		IC LM 317 L Z,
0	IC 11	50.17.1004	74HC04		IC ... 74 HC 04, A
0	IC 12	50.17.1541	74HC541		IC ... 74 HC 541, A
0	IC 13	50.17.1541	74HC541		IC ... 74 HC 541, A
0	IC 14	50.14.2004	27C256		IC 27 C 256 - 25, A
0	IC 15	50.14.0133	5565		BAR-GRAPH 990 0493 1.990.699.21
0	IC 16	50.17.1573	74HC573		IC ... 74 HC 573, A
0	J 1	54.14.5540	20p		J PCB-BUCHSE WINKEL 20 P
0	J 2	54.14.5536	16p		J PCB-BUCHSE WINKEL 16 P

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	MP 1	28.99.0119	2 pcs		ROHRNETE D 2.5*0.15* 9
0	MP 2	43.01.0108		Label	ESE-WARNschild
0	MP 3	1.101.00122			TEXT-ETIK 5*20 HARDWARE 22
0	MP 4	1.990.600.01			ISOLIERUNTERLAGE MICRO-MATCH
0	MP 5	1.990.602.04			NR-ETIKETTE 5 * 20
0	MP 6	1.990.602.11			BARGRAPH DIGITAL PCB
0	MP 7	1.990.699.01			TEXT-ETIKETTE 10 * 20
0	MP 8	54.01.0020	9 pcs	1p	Pin 0.63*0.63
0	P 1	54.11.2013	32p		EU-BK 2*16p
0	R 1	57.11.3153	15k		MF, 1%, 0207
0	R 2	57.11.3911	910R		MF, 1%, 0207
0	R 3	57.11.3751	750R		MF, 1%, 0207
0	R 4	57.11.3221	220R		MF, 1%, 0207
0	R 5	57.92.7013	0.5A		POLY-PTC, 60V
0	R 6	57.11.3152	1k5		MF, 1%, 0207
0	RA 1	58.01.9201	200R		Cermet, 10%, 0.5W, vertical
0	RA 2	58.01.9203	20k		Cermet, 10%, 0.5W, vertical
0	RA 3	58.01.9103	10k		Cermet, 10%, 0.5W, vertical
0	RZ 1	57.88.2101	4*100R		2%, SIP 8
0	RZ 2	57.88.4473	8*47k		2%, SIP 9
0	RZ 3	57.88.4473	8*47k		2%, SIP 9
0	RZ 4	57.88.2101	4*100R		2%, SIP 8
0	RZ 5	57.88.2101	4*100R		2%, SIP 8
0	RZ 6	57.88.2101	4*100R		2%, SIP 8
0	RZ 7	57.88.2101	4*100R		2%, SIP 8
0	RZ 8	57.88.2101	4*100R		2%, SIP 8
0	RZ 9	57.88.4473	8*47k		2%, SIP 9
0	RZ 10	57.88.4473	8*47k		2%, SIP 9
0	RZ 11	57.88.4473	8*47k		2%, SIP 9
0	RZ 12	57.88.4473	8*47k		2%, SIP 9
0	RZ 13	57.88.4103	8*10k		2%, SIP 9
0	XIC 1	53.03.0165	8p		DIL 0.3", lot, gerade
0	XIC 2	53.03.0165	20p		DIL 0.3", lot, gerade
0	XIC 3	53.03.0165	20p		DIL 0.3", lot, gerade
0	XIC 4	53.03.0168	16p		DIL 0.3", lot, gerade
0	XIC 5	53.03.0168	16p		DIL 0.3", lot, gerade
0	XIC 6	53.03.0168	16p		DIL 0.3", lot, gerade
0	XIC 7	53.03.0168	16p		DIL 0.3", lot, gerade
0	XIC 8	53.03.2268	PLCC86p		PLCC-Socket 68p
0	XIC 9	53.03.0168	16p		DIL 0.3", lot, gerade
0	XIC 11	53.03.0167	14p		DIL 0.3", lot, gerade
0	XIC 12	53.03.0165	20p		DIL 0.3", lot, gerade
0	XIC 13	53.03.0165	20p		DIL 0.3", lot, gerade
0	XIC 14	53.03.0173	28p		DIL 0.6", lot, gerade
0	XIC 15	53.03.0173	28p		DIL 0.6", lot, gerade
0	XIC 16	53.03.0165	20p		DIL 0.3", lot, gerade
0	Y 1	89.01.1004	11.059MHz		Y 11.059 MHz, RW 43

Comments: End of List

STUDER REGENSDORF ZÜRICH

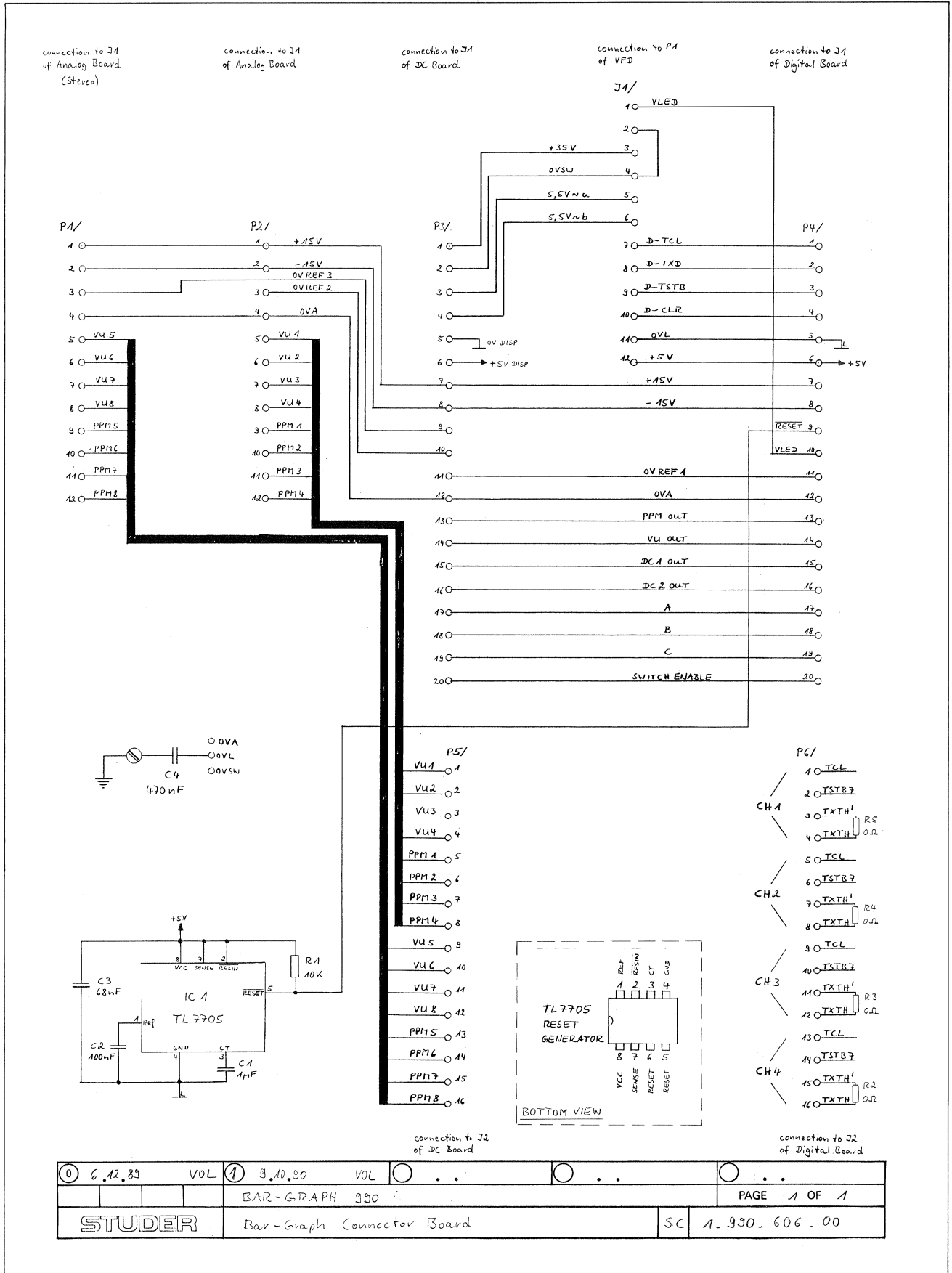
Bargraph Digital Board ESE

1.990.602-22

BAR-GRAPH CONNECTOR BOARD



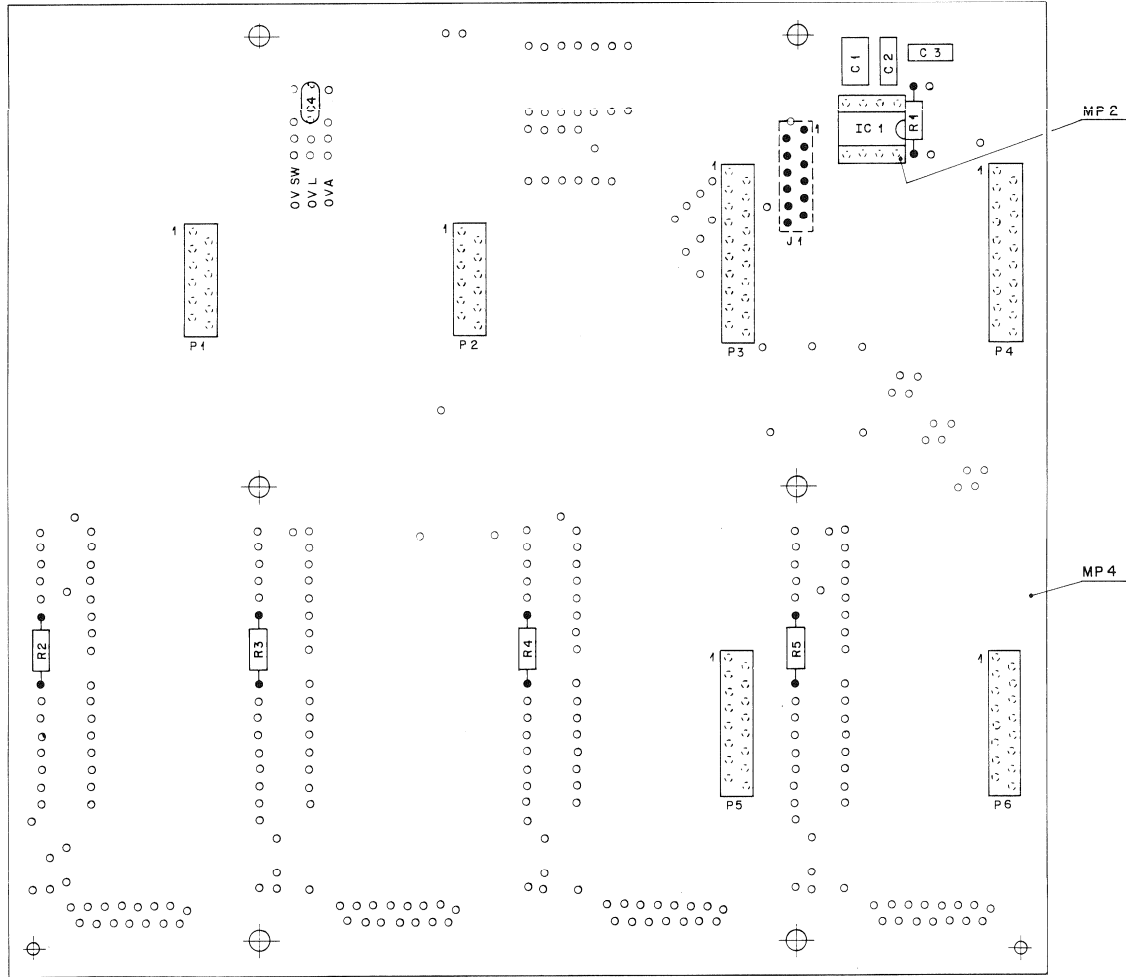
1.990.606.00



① 6.12.83	VOL	① 9.10.90	VOL	...	...	...
BAR-GRAPH 990			PAGE 1 OF 1			
STUDER Bar-Graph Connector Board			SC	1.990.606.00		

BAR-GRAPH CONNECTOR BOARD

1.990.606.00



Ersatz für:		Ersetzt durch:		Ausgabe		Änderung	
STUDER REGENSDORF ZÜRICH		BARGRAPH CONNECTOR BOARD ESE		8.6.90		VOL.	
Benennung		Nummer		Datum		Gez. Gepr. Ges. Index	
		1.990.606-00					
		Kopie für:					

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
	C.....1	59.06.0105	1 uF 10% PE	
	C.....2	59.06.0104	100 nF 10% PE	
	C.....3	59.06.0683	68 nF 10% PE	
	C.....4	59.32.1152	1.5 nF CER 400V	
01	C.....4	59.06.0474	470 nF 10% PE	
	IC.....1	50.11.0122	TL7705ACP Reset generator	SGS, TI
	J.....1	54.14.5512	Micro-Match, 12 pin	AMP
	P.....1	54.14.5582	Micro-Match, 12 pin	AMP
	P.....2	54.14.5582	Micro-Match, 12 pin	AMP
	P.....3	54.14.5590	Micro-Match, 20 pin	AMP
	P.....4	54.14.5590	Micro-Match, 20 pin	AMP
	P.....5	54.14.5586	Micro-Match, 16 pin	AMP
	P.....6	54.14.5586	Micro-Match, 16 pin	AMP
	R.....1	57.11.3103	10 kOhm 1%	
	R.....2	57.11.3000	0 Ohm	
	R.....3	57.11.3000	0 Ohm	
	R.....4	57.11.3000	0 Ohm	
	R.....5	57.11.3000	0 Ohm	
	MP....1	43.01.0108	0001 pcs ESE-Warnschild	
	MP....2	53.03.0166	0001 pcs IC-Sockel, DIL 8	
	MP....3	1.990.606.04	0000 pcs Nr.-Etikette 5 * 20	
	MP....4	1.990.608.11	0001 pcs Bar-Graph Connector+Bus PCB	St

9.10.90 Index 1) Änderung bei: C4

PE = polyester

MANUFACTURER AMP=AMP Incorporated, SGS=SGS/Thomson, St=Studer, TI=Texas Instruments

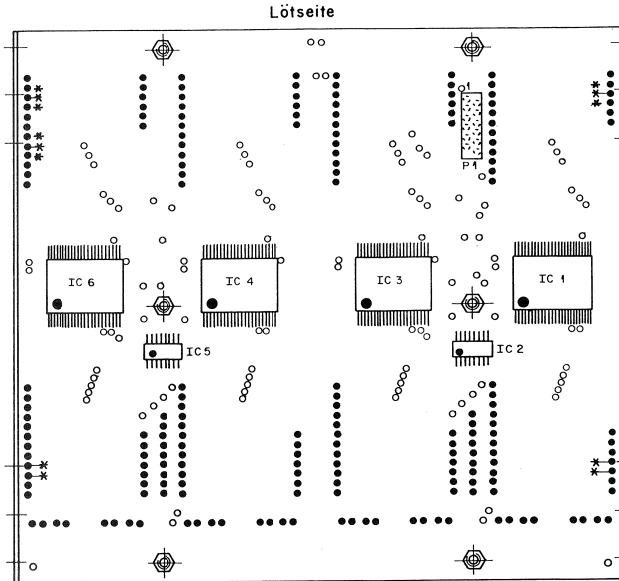
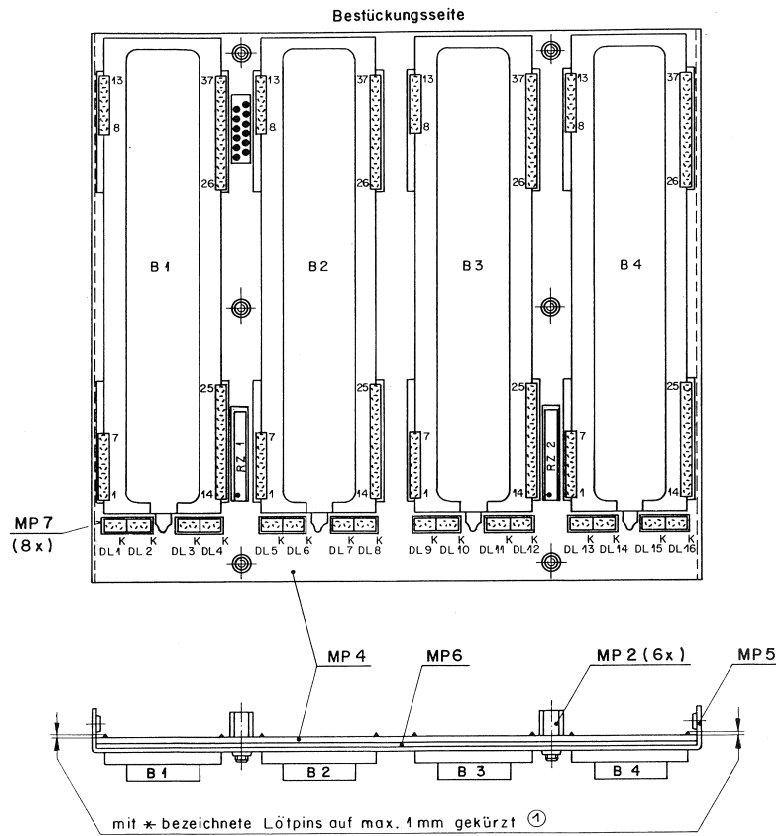
1.990.606.00 BAR-GRAPH CONNECTOR BOARD VOL90/02/0600

1.990.606.00 BAR-GRAPH CONNECTOR BOARD HOR90/10/0901

BAR-GRAPH VFD BOARD



1.990.607.81



Ad.	POS.	REF. No.	DESCRIPTION	MANUFACTURER	
B...	1	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B...	2	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B...	3	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B...	4	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
DL...	1	50.04.2119	MV5124A	LED, red	GI
DL...	2	50.04.2118	MV53124A	LED, yellow	GI
DL...	3	50.04.2146	MV54124A	LED, green	GI
DL...	4	50.04.2118	MV53124A	LED, yellow	GI
DL...	5	50.04.2119	MV5124A	LED, red	GI
DL...	6	50.04.2118	MV53124A	LED, yellow	GI
DL...	7	50.04.2146	MV54124A	LED, green	GI
DL...	8	50.04.2118	MV53124A	LED, yellow	GI
DL...	9	50.04.2119	MV5124A	LED, red	GI
DL...	10	50.04.2118	MV53124A	LED, yellow	GI
DL...	11	50.04.2146	MV54124A	LED, green	GI
DL...	12	50.04.2118	MV53124A	LED, yellow	GI
DL...	13	50.04.2119	MV5124A	LED, red	GI
DL...	14	50.04.2118	MV53124A	LED, yellow	GI
DL...	15	50.04.2146	MV54124A	LED, green	GI
DL...	16	50.04.2118	MV53124A	LED, yellow	GI
IC...	1	50.62.0005	MSC11626SK	VFD driver	OKI
IC...	2	50.62.1595	74 HC 595	8 bit shift register (SMD)	NS, TI
IC...	3	50.62.0005	MSC11626SK	VFD driver	OKI
IC...	4	50.62.0005	MSC11626SK	VFD driver	OKI
IC...	5	50.62.1595	74 HC 595	8 bit shift register (SMD)	NS, TI
IC...	6	50.62.0005	MSC11626SK	VFD driver	OKI
P...	1	54.14.5582		Micro-Match, 12 pin	AMP
RZ...	1	57.88.4101	100 Ohm	2% ,8"	
RZ...	2	57.88.4101	100 Ohm	2% ,8"	
MP...	1	43.01.0108	0001 pcs	ESE-Marsenschild	
MP...	2	1.010.123.27	0006 pcs	Gewindeboizen M3/M3 * 6.5	
MP...	3	1.990.607.04	0000 pcs	Nr.-Etikette 5 * 20	
MP...	4	1.990.607.12	0001 pcs	Bar-Graph VFD PCB	St
MP...	5	1.913.420.03	0001 pcs	Chassis VFD Bar-Graph	
MP...	6	1.913.420.07	0001 pcs	Isolation VFD-Bar-Graph	
MP...	7	1.990.620.10	0008 pcs	Unterlage 2" LED VFD Bar-Graph	

MANUFACTURER AMP=AMP Incorporated, GI=General Instruments, NS=National Semiconductors, OKI=OKI Semiconductors, St=Studer, TI=Texas Instruments

1.990.607.81 BAR-GRAPH VFD BOARD VOL90/05/0900

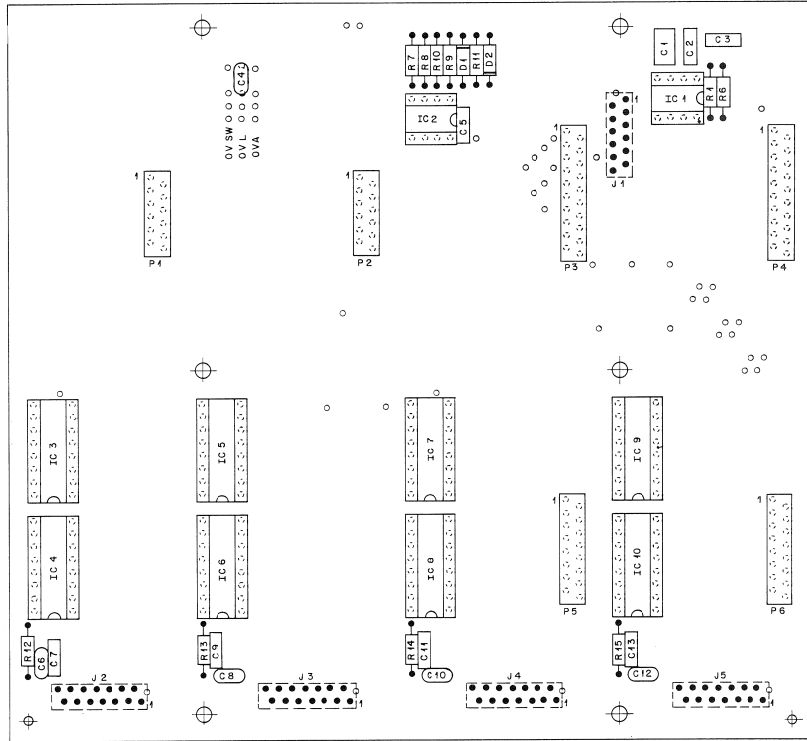
STUDER REGENSDORF ZÜRICH	Bestandteil BAR-GRAPH VFD BOARD ESE	Nummer: 1.990.607-81
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Änderung									
4.9.92									③
6.6.90									②
									①
Datum	Gez.	Gepr.	Ges.	Index					④

Kopie für:

BAR-GRAPH CONNECTOR + BUS BOARD

1.990.608.00



Ad	POS	REF. No.	DESCRIPTION	MANUFACTURER
C....1		59.06.0105	1 uF 10% PE	
C....2		59.06.0104	100 nF 10% PE	
C....3		59.06.0683	68 nF 10% PE	
C....4		59.32.1182	1.5 nF CER 400V	
C....5		59.06.0683	68 nF 10% PE	
C....6		59.34.4101	100 pF 5% CER	
C....7		59.06.0683	68 nF 10% PE	
C....8		59.34.4101	100 pF 5% CER	
C....9		59.06.0683	68 nF 10% PE	
C....10		59.34.4101	100 pF 5% CER	
C....11		59.06.0683	68 nF 10% PE	
C....12		59.34.4101	100 pF 5% CER	
C....13		59.06.0683	68 nF 10% PE	
D....1		50.04.0125	1N4448	ITT, Mot, Phi, Tf, SGS any
D....2		50.04.1904	BZX 85 5.6V	ITT, Mot, Phi, Tf, SGS any
IC....1		50.11.0122	TL7705ACP	Reset generator SGS, TI
IC....2		50.09.0103	TL 071 CP	Single FET op-amp TI
IC....3		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....4		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....5		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....6		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....7		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....8		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....9		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
IC....10		50.17.1595	74 HC 595	8 bit shift register NS, SGS, TI
J....1		54.14.5512	Micro-Match, 12 pin	AMP
J....2		54.14.5514	Micro-Match, 14 pin	AMP
J....3		54.14.5514	Micro-Match, 14 pin	AMP
J....4		54.14.5514	Micro-Match, 14 pin	AMP
J....5		54.14.5514	Micro-Match, 14 pin	AMP
P....1		54.14.5582	Micro-Match, 12 pin	AMP
P....2		54.14.5582	Micro-Match, 12 pin	AMP
P....3		54.14.5590	Micro-Match, 20 pin	AMP
P....4		54.14.5590	Micro-Match, 20 pin	AMP
P....5		54.14.5586	Micro-Match, 16 pin	AMP
P....6		54.14.5586	Micro-Match, 16 pin	AMP
R....1		57.11.3103	10 kOhm 1%	
R....2		0	not used	
R....3		0	not used	
R....4		0	not used	
R....5		0	not used	
R....6		57.11.3103	10 kOhm 1%	
R....7		57.11.3114	110 kOhm 1%	
R....8		57.11.3363	36 kOhm 1%	
R....9		57.11.3183	18 kOhm 1%	
R....10		57.11.3513	51 kOhm 1%	
R....11		57.11.3471	470 Ohm 1%	
R....12		57.11.3101	100 Ohm 1%	
R....13		57.11.3101	100 Ohm 1%	
R....14		57.11.3101	100 Ohm 1%	
R....15		57.11.3101	100 Ohm 1%	
MP....1		43.01.0108	0001 pcs	ESE-Warnschild
MP....2		53.03.0166	0002 pcs	IC-Soeket, DIL 8
MP....3		53.03.0168	0008 pcs	IC-Soeket, DIL 16
MP....4		1.990.608.04	0000 pcs	Nr.-Etiketete 5 * 20
MP....5		1.990.608.11	0001 pcs	Bar-Graph Connector+Bus PCB

9.10.90 Index 1) Aenderung bei: C4

CER = ceramic, PE = polyester

MANUFACTURER AMP=AMP Incorporated, ITT=Intermetall
 Not=Motorola, NS=National Semi conductors
 Phi=Philips, SGS=SGS/Thomson, St=Studer,
 Tf=Telefunken, TI=Texas Instruments

1.990.608.00 BAR-GRAPH CONNECTOR+BUS BOARD VOL90/02/0600

1.990.608.00 BAR-GRAPH CONNECTOR+BUS BOARD HOR90/10/0901

Autograph	Autograph				
Datum	8.6.90	SAZ	GEK	INDEX	
Kopie Nr:					

STUDER
 REGENSBOURG
 ZÜRICH

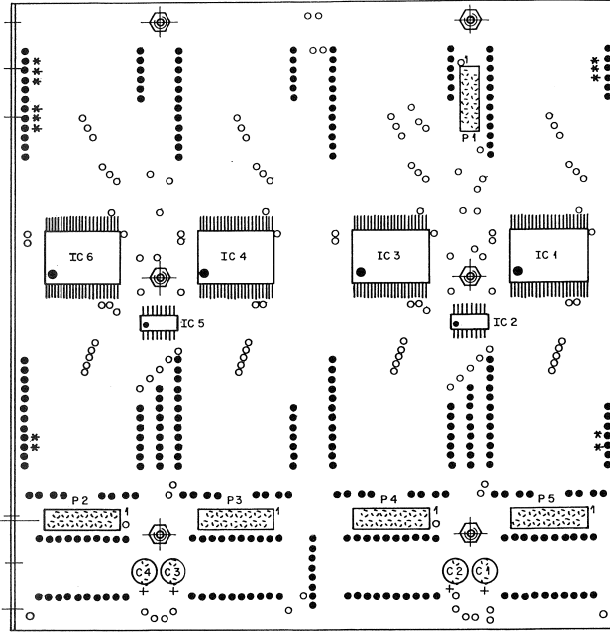
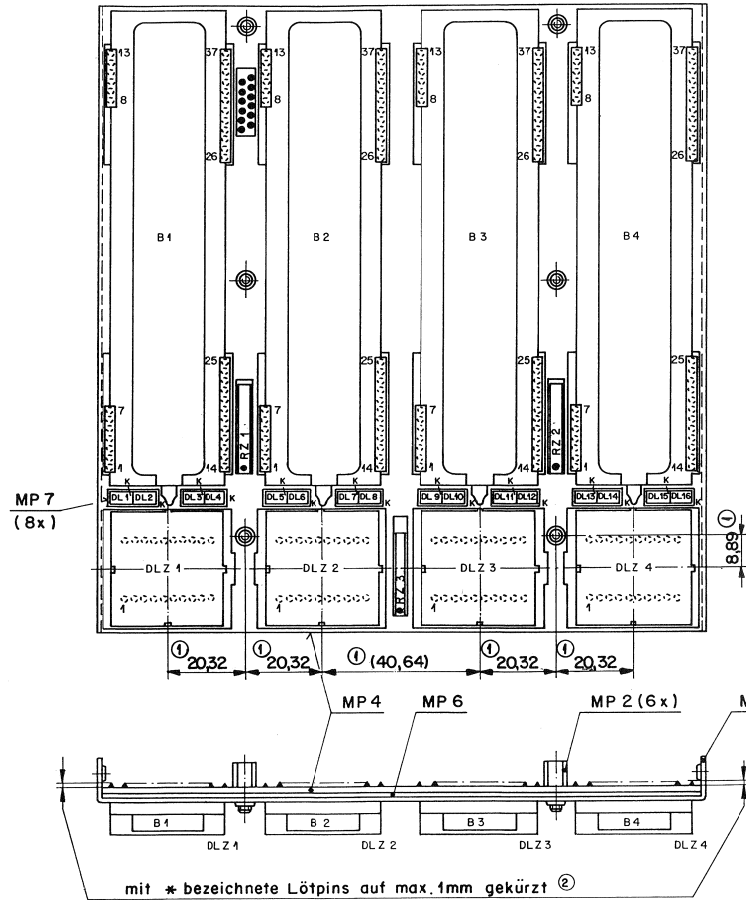
Bestell-Nr. **BARGRAPH CONNECTOR + BUS BOARD ESE**
 Nummer **1.990.608-00**

BAR-GRAPH VFD + BUS BOARD

1.990.609.81

Bestückungsseite

Lötseite



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
B....1	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B....2	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B....3	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
B....4	73.01.0300	F6202SA2	Fluorescent bargraph display	Itron
C....1	59.22.3101	100 uF	10V EL	
C....2	59.22.3101	100 uF	10V EL	
C....3	59.22.3101	100 uF	10V EL	
C....4	59.22.3101	100 uF	10V EL	
DL...1	50.04.2119	MV57124A	LED, red	GI
DL...2	50.04.2118	MV53124A	LED, yellow	GI
DL...3	50.04.2146	MV54124A	LED, green	GI
DL...4	50.04.2118	MV53124A	LED, yellow	GI
DL...5	50.04.2119	MV57124A	LED, red	GI
DL...6	50.04.2118	MV53124A	LED, yellow	GI
DL...7	50.04.2146	MV54124A	LED, green	GI
DL...8	50.04.2118	MV53124A	LED, yellow	GI
DL...9	50.04.2119	MV57124A	LED, red	GI
DL...10	50.04.2118	MV53124A	LED, yellow	GI
DL...11	50.04.2146	MV54124A	LED, green	GI
DL...12	50.04.2118	MV53124A	LED, yellow	GI
DL...13	50.04.2119	MV57124A	LED, red	GI
DL...14	50.04.2118	MV53124A	LED, yellow	GI
DL...15	50.04.2146	MV54124A	LED, green	GI
DL...16	50.04.2118	MV53124A	LED, yellow	GI
DIZ...1	73.01.0400	PD 1165	8*8 dot matrix display	Sie
DIZ...2	73.01.0400	PD 1165	8*8 dot matrix display	Sie
DIZ...3	73.01.0400	PD 1165	8*8 dot matrix display	Sie
DIZ...4	73.01.0400	PD 1165	8*8 dot matrix display	Sie
IC....1	50.62.0005	MSC11626SK	VFD driver	OKI
IC....2	50.62.1595	74 HC 595	8 bit shift register (SMD)	NS, TI
IC....3	50.62.0005	MSC11626SK	VFD driver	OKI
IC....4	50.62.0005	MSC11626SK	VFD driver	OKI
IC....5	50.62.1595	74 HC 595	8 bit shift register (SMD)	NS, TI
IC....6	50.62.0005	MSC11626SK	VFD driver	OKI
P....1	54.14.5582		Micro-Match, 12 pin	AMP
P....2	54.14.5584		Micro-Match, 14 pin	AMP
P....3	54.14.5584		Micro-Match, 14 pin	AMP
P....4	54.14.5584		Micro-Match, 14 pin	AMP
P....5	54.14.5584		Micro-Match, 14 pin	AMP
RZ...1	57.88.4101	100 Ohm	2% ,8"	
RZ...2	57.88.4101	100 Ohm	2% ,8"	
RZ...3	57.88.2332	3,3 kOhm	2% ,4"	
MP...1	43.01.0108	0001 pcs	ESE-Warnschild	
MP...2	1.010.123.27	0006 pcs	Gewindeboizen M3/M3 * 6,5	
MP...3	1.990.609.04	0000 pcs	Nr.-Etikette 5 * 20	
MP...4	1.990.609.12	0001 pcs	Bar-Graph VFD+Bus PCB	St
MP...5	1.990.620.03	0001 pcs	Chassis VFD Bar-Graph + Bus	
MP...6	1.990.620.07	0001 pcs	Isolation VFD Bar-Graph + Bus	
MP...7	1.990.620.10	0008 pcs	Unterlage 2*LED VFD Bar-Graph	

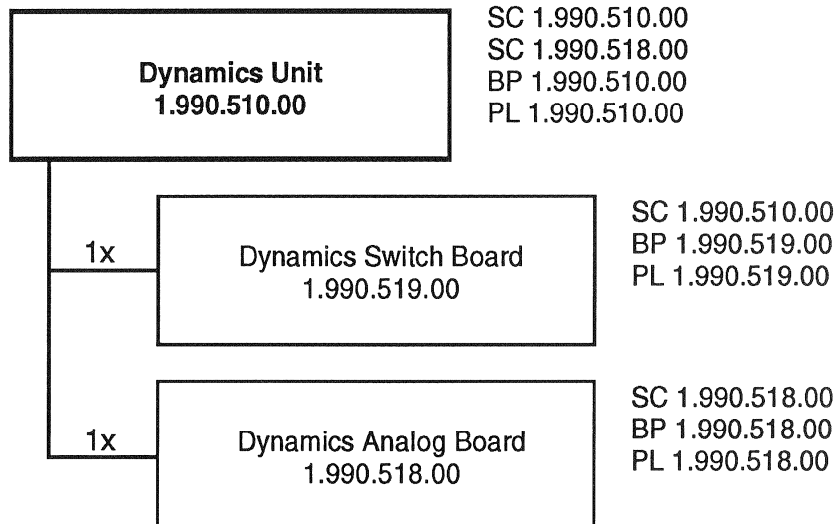
EL = electrolytic

MANUFACTURER AMP=AMP Incorporated, GI=General Instruments, NS=National Semiconductors, OKI=OKI Semiconductors, Sie=Siemens, St=Studer, TI=Texas Instruments

1.990.609.81 BAR-GRAPH VFD+BUS BOARD VOL90/05/0900

4.9.92	FA	W	W	(3)
27.8.91	CH	FA	W	(2)
7.6.90	AB	FA	Vol	(1)
Datum	Gez	Gepr	Ges	Index

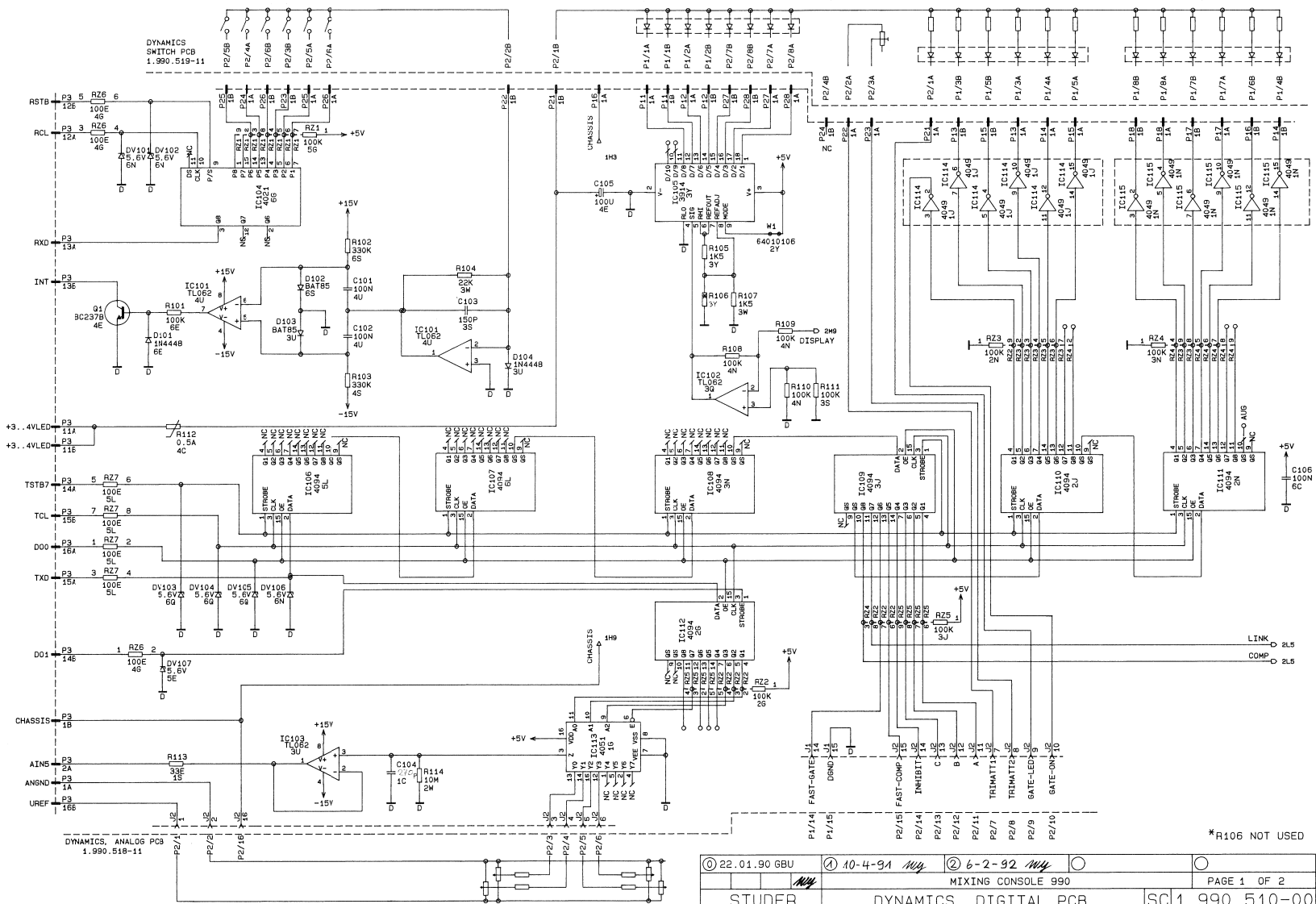
STUDER REGENSDORF ZÜRICH
 BAR-GRAPH VFD+BUS BOARD ESE
 Nummer 1.990.609-81

Dynamics Unit**1.990.510.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

DYNAMICS, DIGITAL PCB

1.990.510.00



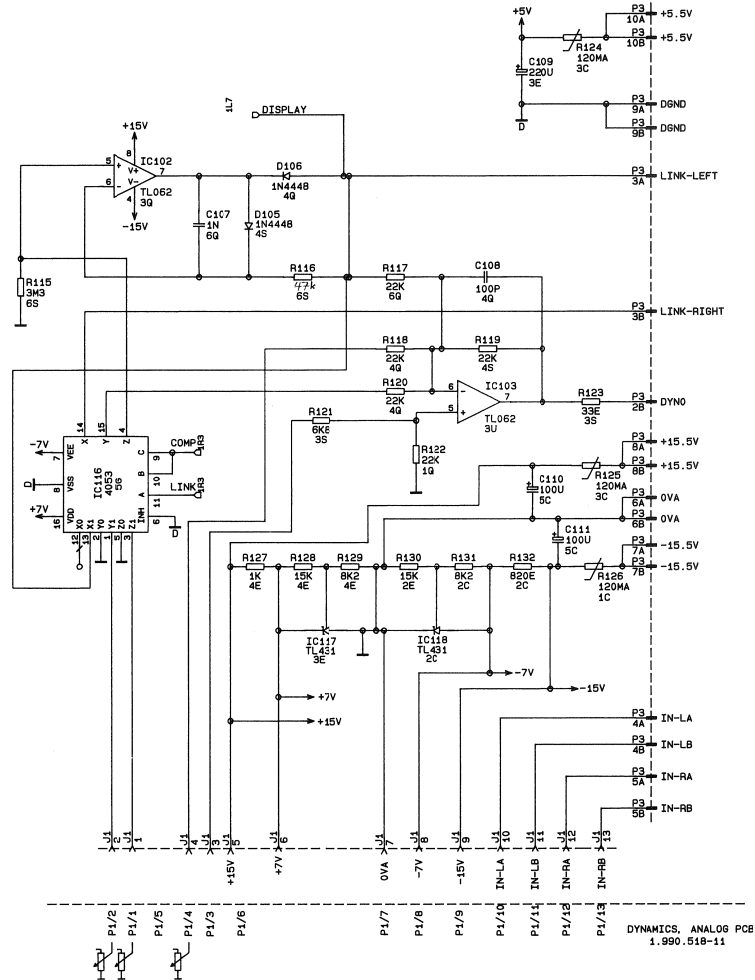
*R106 NOT USED

22.01.90 GBU	10-4-91	6-2-92	
MIXING CONSOLE 990			PAGE 1 OF 2
STUDER	DYNAMICS, DIGITAL PCB		SC 1.990.510-00

DYNAMICS, DIGITAL PCB



1.990.510.00

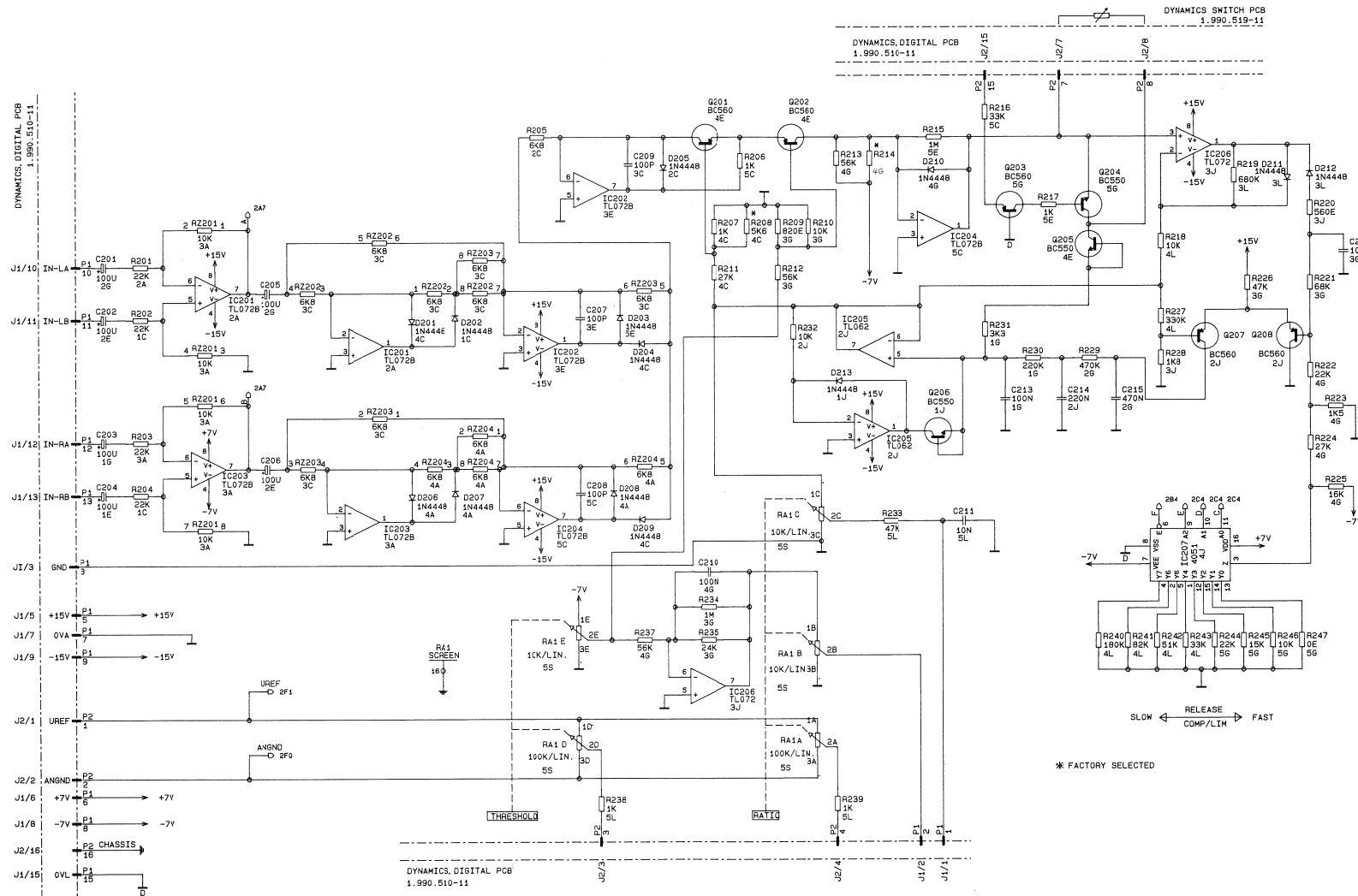


© 22.01.90	GBU	① 10-4-91 <i>NY</i>	② 6-2-92 <i>NY</i>	○	○
MIXING CONSOLE 990			PAGE 2 OF 2		
STUDER	DYNAMICS, DIGITAL PCB		SC	1.990.510-00	

DYNAMICS ANALOG PCB



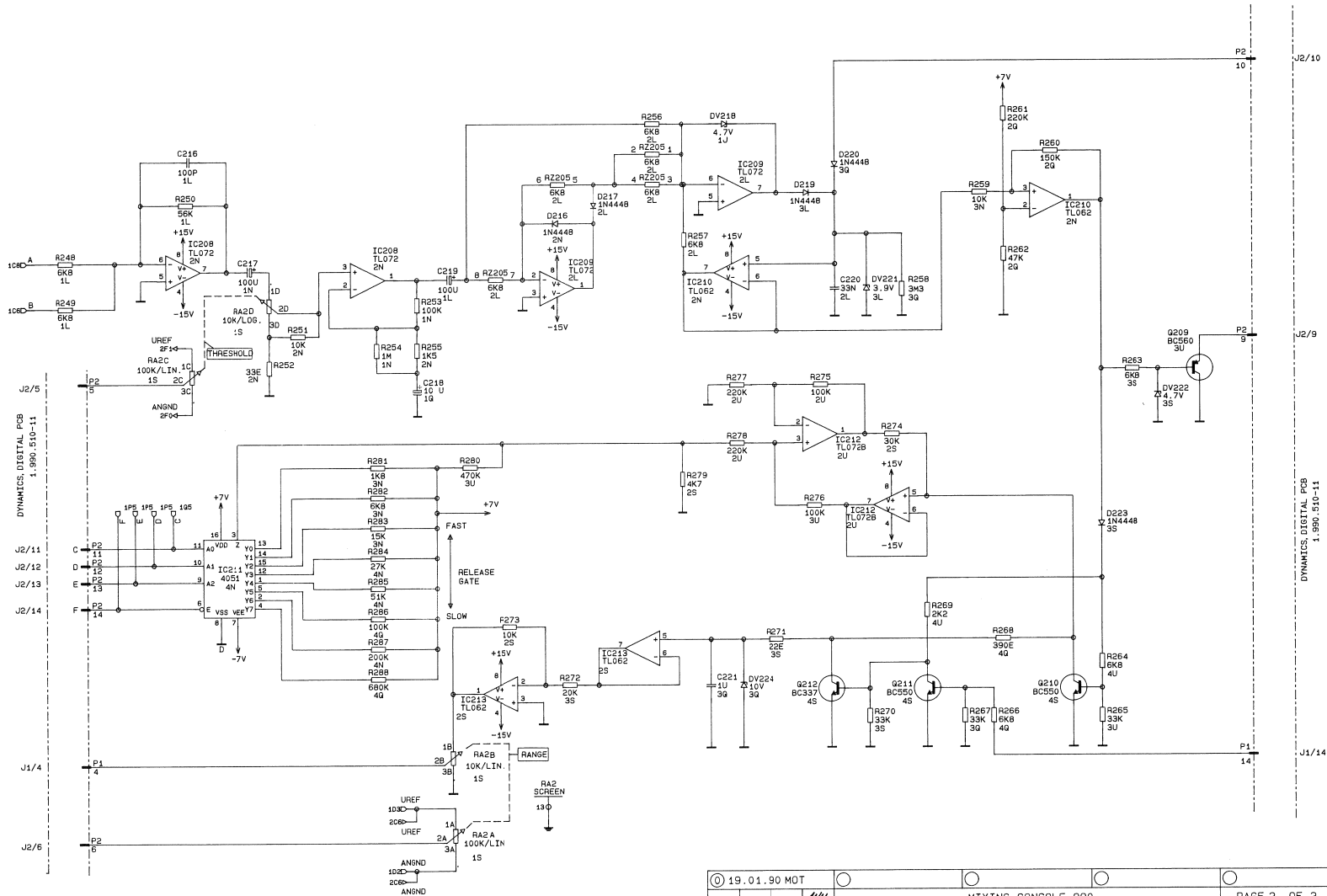
1.990.518.00



© 19.01.90 MOT	MIXING CONSOLE 990	PAGE 1 OF 2
STUDER	DYNAMICS ANALOG PCB	SC 1.990.518-00

DYNAMICS ANALOG PCB

1.990.518.00

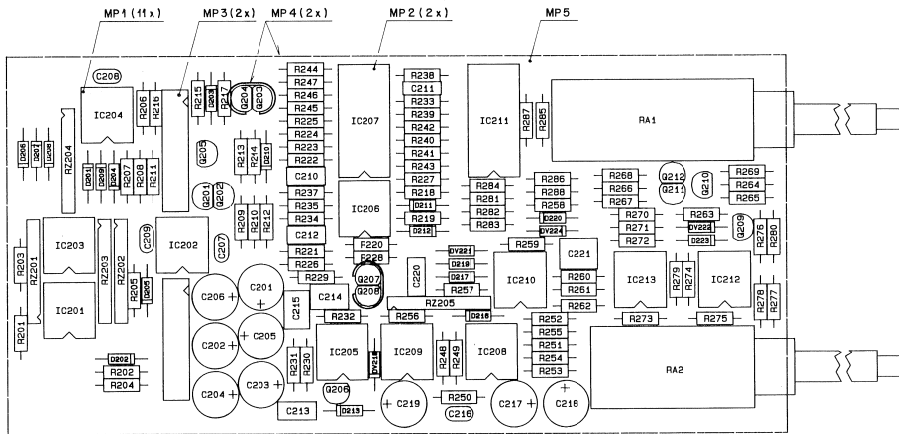


© 19.01.90 MDT			
		MIXING CONSOLE 990	PAGE 2 OF 2
STLDER		DYNAMICS ANALOG PCB	SC 1.990.518-00

DYNAMICS ANALOG BOARD ESE



1.990.518.00



Abgabedatum:	3.4.90	4/90	NY	VF
Datum:	Gez:	Gepr:	Ges:	Index:

Kopie für:
 Nummer: 1.990.518-00

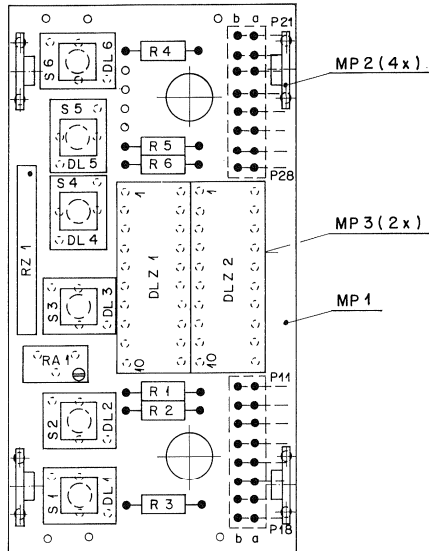
STUDER
 REGENSBERG
 ZÜRICH

Bestellnummer: **DYNAMICS ANALOG BOARD ESE**

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
C...	201	59.22.5101	100 uF 25V	EL	R...	222	57.11.3223	22 kOhm		
C...	202	59.22.5101	100 uF 25V	EL	R...	223	57.11.3152	1.5 kOhm		
C...	203	59.22.5101	100 uF 25V	EL	R...	224	57.11.3273	27 kOhm		
C...	204	59.22.5101	100 uF 25V	EL	R...	225	57.11.3163	16 kOhm		
C...	205	59.22.5101	100 uF 25V	EL	R...	226	57.11.3473	47 kOhm		
C...	206	59.22.5101	100 uF 25V	EL	R...	227	57.11.3334	330 kOhm		
C...	207	59.34.4101	100 pF	CER	R...	228	57.11.3182	1.8 kOhm		
C...	208	59.34.4101	100 pF	CER	R...	229	57.11.3474	470 kOhm		
C...	209	59.34.4101	100 pF	CER	R...	230	57.11.3224	220 kOhm		
C...	210	59.06.5104	100 nF	5%	PE	R...	231	57.11.3332	3.3 kOhm	
C...	211	59.06.5103	10 nF	5%	PE	R...	232	57.11.3103	10 kOhm	
C...	212	59.06.5104	100 nF	5%	PE	R...	233	57.11.3473	47 kOhm	
C...	213	59.06.5104	100 nF	5%	PE	R...	234		not installed	
C...	214	59.06.5224	220 nF	5%	PE	R...	235	57.11.3243	24 kOhm	
C...	215	59.06.5474	470 nF	5%	PE	R...	237	57.11.3563	56 kOhm	
C...	216	59.34.4101	100 pF	CER	R...	238	57.11.3102	1 kOhm		
C...	217	59.22.5101	100 uF 25V	EL	R...	239	57.11.3102	1 kOhm		
C...	218	59.22.8100	10 uF 63V	EL	R...	240	57.11.3184	180 kOhm		
C...	219	59.22.5101	100 uF 25V	EL	R...	241	57.11.3823	82 kOhm		
C...	220	59.06.5333	33 nF	5%	PE	R...	242	57.11.3313	51 kOhm	
C...	221	59.06.5105	1 uF 5%	PE	R...	243	57.11.3333	33 kOhm		
R...	201	50.04.0125	1M4448	any	R...	244	57.11.3223	22 kOhm		
R...	202	50.04.0125	1M4448	any	R...	245	57.11.3153	15 kOhm		
R...	203	50.04.0125	1M4448	any	R...	246	57.11.3103	10 kOhm		
R...	204	50.04.0125	1M4448	any	R...	247	57.11.3000	0 Ohm		
R...	205	50.04.0125	1M4448	any	R...	248	57.11.3682	6.8 kOhm		
R...	206	50.04.0125	1M4448	any	R...	249	57.11.3682	6.8 kOhm		
R...	207	50.04.0125	1M4448	any	R...	250	57.11.3563	56 kOhm		
R...	208	50.04.0125	1M4448	any	R...	251	57.11.3103	10 kOhm		
R...	209	50.04.0125	1M4448	any	R...	252	57.11.3330	33 Ohm		
R...	210	50.04.0125	1M4448	any	R...	253	57.11.3104	100 kOhm		
R...	211	50.04.0125	1M4448	any	R...	254		not installed		
R...	212	50.04.0125	1M4448	any	R...	255	57.11.3152	1.5 kOhm		
R...	213	50.04.0125	1M4448	any	R...	256	57.11.3682	6.8 kOhm		
R...	216	50.04.0125	1M4448	any	R...	258	57.11.5335	3.3 MOhm		
R...	217	50.04.0125	1M4448	any	R...	259	57.11.3103	10 kOhm		
R...	218	50.04.1122	4.7V	Z-diode	R...	260	57.11.3154	150 kOhm		
R...	219	50.04.0125	1M4448	any	R...	261	57.11.3224	220 kOhm		
R...	220	50.04.0125	1M4448	any	R...	262	57.11.3473	47 kOhm		
R...	221	50.04.1101	3.9V	Z-diode	R...	263	57.11.3682	6.8 kOhm		
R...	222	50.04.1122	4.7V	Z-diode	R...	264	57.11.3682	6.8 kOhm		
R...	223	50.04.0125	1M4448	any	R...	265	57.11.3333	33 kOhm		
R...	224	50.04.1114	10V	Z-diode	R...	266	57.11.3682	6.8 kOhm		
IC...	201	50.09.0121	T10728	dual FEI-op-amp.	Not, TI	R...	267	57.11.3333	33 kOhm	
IC...	202	50.09.0121	T10728	dual FEI-op-amp.	Not, TI	R...	268	57.11.3391	390 Ohm	
IC...	203	50.09.0121	T10728	dual FEI-op-amp.	Not, TI	R...	269	57.11.3222	22 kOhm	
IC...	204	50.09.0121	T10728	dual FEI-op-amp.	Not, TI	R...	270	57.11.3333	33 kOhm	
IC...	205	50.09.0115	T1062	dual FEI-op-amp.	Not, TI	R...	271	57.11.3220	22 Ohm	
IC...	206	50.09.0101	T1072	dual FEI-op-amp.	Not, TI	R...	272	57.11.3203	20 kOhm	
IC...	207	50.07.0051	CD4051	8-channel analog mux/demux	Ph, Mot, RCA	R...	273	57.11.3103	10 kOhm	
IC...	208	50.09.0101	T1072	dual FEI-op-amp.	Not, TI	R...	274	57.11.3303	30 kOhm	
IC...	209	50.09.0101	T1072	dual FEI-op-amp.	Not, TI	R...	275	57.11.3104	100 kOhm	
IC...	210	50.09.0115	T1062	dual FEI-op-amp.	Not, TI	R...	276	57.11.3104	100 kOhm	
IC...	211	50.07.0051	CD4051	8-channel analog mux/demux	Ph, Mot, RCA	R...	277	57.11.3224	220 kOhm	
IC...	212	50.09.0121	T10728	dual FEI-op-amp.	Not, TI	R...	278	57.11.3224	220 kOhm	
IC...	213	50.09.0115	T1062	dual FEI-op-amp.	Not, TI	R...	279	57.11.3472	4.7 kOhm	
MP...	1	53.03.0166	11 pcs	IC-socket 8 pin		R...	280	57.11.3474	470 kOhm	
MP...	2	53.03.0166	2 pcs	IC-socket 16 pin		R...	281	57.11.3182	1.8 kOhm	
MP...	3	1.023.391.60	2 pcs	Verbindungslabel mit Stecker 16p		R...	282	57.11.3682	6.8 kOhm	
MP...	4	50.20.2001	2 pcs	CTip		R...	283	57.11.3153	15 kOhm	
MP...	5	1.990.518.11	1 pcs	PCB		R...	284	57.11.3273	27 kOhm	
R...	201	50.43.0600	BC560	PNP selected E6310	ST	R...	285	57.11.3513	51 kOhm	
R...	202	50.43.0600	BC560	PNP selected E6310	ST	R...	286	57.11.3104	100 kOhm	
R...	203	50.03.0600	BC560	PNP		R...	287	57.11.3204	200 kOhm	
R...	204	50.03.0499	BC550	NPN		R...	288	57.11.3684	680 kOhm	
R...	205	50.03.0499	BC550	NPN		RA...	1	1.010.036.58		
R...	206	50.03.0499	BC550	NPN		RA...	2	1.010.037.58		
R...	207	50.43.0600	BC560	PNP selected E6310	ST	RZ...	201	57.88.2103	4*10kOhm	
R...	208	50.43.0600	BC560	PNP selected E6310	ST	RZ...	202	57.88.2682	4*6.8kOhm	
R...	209	50.03.0600	BC560	PNP		RZ...	203	57.88.2682	4*6.8kOhm	
R...	210	50.03.0499	BC550	NPN		RZ...	204	57.88.2682	4*6.8kOhm	
R...	211	50.03.0499	BC550	NPN		RZ...	205	57.88.2682	4*6.8kOhm	
R...	212	50.03.0516	BC337	NPN 800mA		CER = ceramic, EL = electrolytic, PE = polyester				
R...	201	57.11.3223	22 kOhm		MANUFACTURER					
R...	202	57.11.3223	22 kOhm		Hot-Motorola, Ph-Philips, ST-Studer, TI-Texas Instruments					
R...	203	57.11.3223	22 kOhm							
R...	204	57.11.3223	22 kOhm							
R...	205	57.11.3682	6.8 kOhm							
R...	206	57.11.3102	1 kOhm							
R...	207	57.11.3102	1 kOhm							
R...	208	57.11.3563	56 kOhm	(factory selected)						
R...	209	57.11.3821	820 Ohm							
R...	210	57.11.3103	10 kOhm							
R...	211	57.11.3273	27 kOhm							
R...	212	57.11.3563	56 kOhm							
R...	213	57.11.3563	56 kOhm							
R...	214			factory selected						
R...	215	57.11.3105	1 MOhm							
R...	216	57.11.3333	33 kOhm							
R...	217	57.11.3102	1 kOhm							
R...	218	57.11.3103	10 kOhm							
R...	219	57.11.3684	680 kOhm							
R...	220	57.11.3561	560 Ohm							
R...	221	57.11.3683	68 kOhm							

DYNAMICS SWITCH BOARD

1.990.519.00



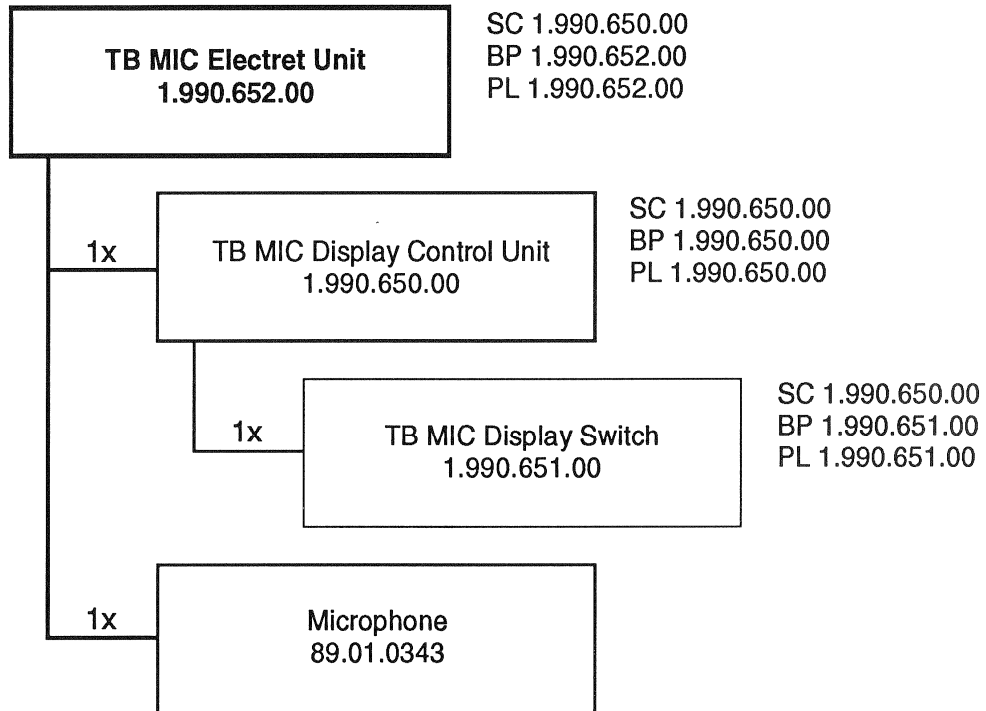
Änderung	③
②	
①	
3.4.90	
Datum	Gez. Gepr. Ges. Index
Kopie für	
Nummer	1.990.519-00

STUDER REGENSDORF ZÜRICH	Bezeichnung DYNAMICS SWITCH BOARD	Nummer 1.990.519-00
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Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
	DLZ...1	50.04.2161	10*D green	MV54164 (GI) GI,HP
	DLZ...2	50.04.2150	10*D red	MV57164 (GI) GI,HP
	R.....1	57.11.3101	100 Ohm 0207 MF	
	R.....2	57.11.3101	100 Ohm 0207 MF	
	R.....3	57.11.3101	100 Ohm 0207 MF	
	R.....4	57.11.3101	100 Ohm 0207 MF	
	R.....5	57.11.3101	100 Ohm 0207 MF	
	R.....6	57.11.3101	100 Ohm 0207 MF	
	RA....1	58.05.1104	100 kOhm adjustable	
	RZ....1	57.88.4101	SIP9 8*100 Ohm	
	S.....1	55.15.0622	red, LED red	
	S.....2	55.15.0604	colourless, LED yel	
	S.....3	55.15.0604	colourless, LED yel	
	S.....4	55.15.0602	colourless, LED red	
	S.....5	55.15.0604	colourless, LED yel	
	S.....6	55.15.0622	red, LED red	
	MP....1	1.990.519.11	1 pcs PCB	
	MP....2	1.990.100.05	4 pcs Querprinthalter	
	MP....3	53.99.0135	2 pcs XIC DIL20P ultra low prof.	

MANUFACTURER: GI-General Instruments, HP-Hewlett-Packard

1.990.519.00 DYNAMICS SWITCH BOARD WY 90.01.1000

TB MIC Electret Display Control Unit**1.990.652.00**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

EL MIC / DISPLAY CONTROL UNIT

1.990.652.00

Ad . . POS. . . REF.No. . . DESCRIPTION . . . MANUFACTURER

A. ....1	1.990.650.00			TB MIC/DISPLAY CONTROL BOARD	St
C. ....16	59.22.3101	100 uF	10V	EL	
C. ....16				n.c.	
C. ....17	59.06.0104	100 nF	10%	PE	
C. ....18	59.34.4221	220 pF	5%	CER	
C. ....19	59.22.5220	22 uF	25V	EL	
MIC. ....1	89.01.0343	EM 60		Electret Microphone	
01 MIC. ....1	89.01.3540			electret microphone	
R. ....29	57.11.3103	10 kOhm	1%		
01 R. ....29	57.11.3182	1.8 kOhm	1%		
R. ....30	57.11.3682	6.8 kOhm	1%		
01 R. ....30	57.11.3272	2.7 kOhm	1%		
R. ....31	57.11.3103	10 kOhm	1%		
R. ....32	57.11.3000	0 Ohm			
MP. ....1	21.01.2352	0006 pcs		S - Schr. , ZN , M3 * 4	
MP. ....2	21.53.0354	0001 pcs		Z - Schr. IS , ZN , M3 * 6	
MP. ....3	23.01.3032	0001 pcs		U - Scheibe D 3.2/9 * 0.8	
MP. ....4	24.16.1030	0001 pcs		Rippenscheibe D 3.2/5.5	
MP. ....5	24.16.3023	0002 pcs		Wellensicherung 2.3	
MP. ....6	35.05.0314	0001 pcs		Kabelbride D 9.5	
MP. ....7	42.01.0228	0001 pcs		Knebelknopf grau D10/ 4	
MP. ....8	42.01.0250	0001 pcs		Deckel hellgrau zu Knopf D10	
MP. ....9	1.010.022.21	0002 pcs		Linsenschraube IS spez. M3 * 8 SW	
MP. ....10	1.169.500.02	0001 pcs		Gewebe	
MP. ....11	1.990.650.01	0001 pcs		Frontschild TB MIC/DISPLAY CONTROL	
MP. ....12	1.990.650.02	0001 pcs		Traeger TB MIC/DISPLAY CONTROL	
MP. ....13	1.990.650.03	0001 pcs		Halblech TB MIC/DISPLAY CONTROL	
MP. ....14	1.990.652.04	0000 pcs		Nr.-Etikette 5 * 20	
MP. ....15	1.990.652.93	0001 pcs		Litzenliste EL Mic/Display Control Unit	St

01 New electret microphone, EM 60 89.01.0343 will be replaced by 89.01.3450. New: two connections.
C 16 delete, R26 1k8, R30 2k7.
MANUFACTURER St=Studer

1.990.652.00	EL MIC/DISPLAY CONTROL UNIT	VOL90/02/2700
1.990.652.00	EL MIC/DISPLAY CONTROL UNIT	FRI93/11/1601

STUDER
REGENSDORF
ZÜRICH

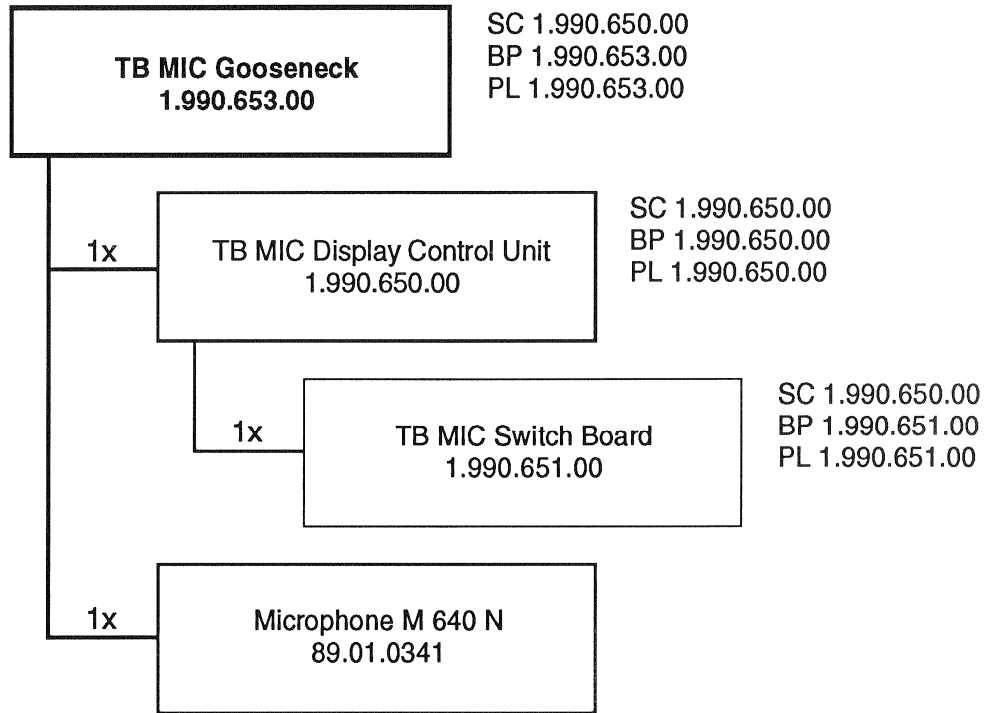
Benennung
EL MIC / DISPLAY CONTROL UNIT

Nummer
1.990.652-00

Änderung					③
Änderung	16.11.93	GM	FF	SE	②
Ausgabe	5.4.90	A. H. VOL	W		①
Datum		Gez	Gepr	Ges	Index
Kopie für					

TB MIC Gooseneck Display Control Unit

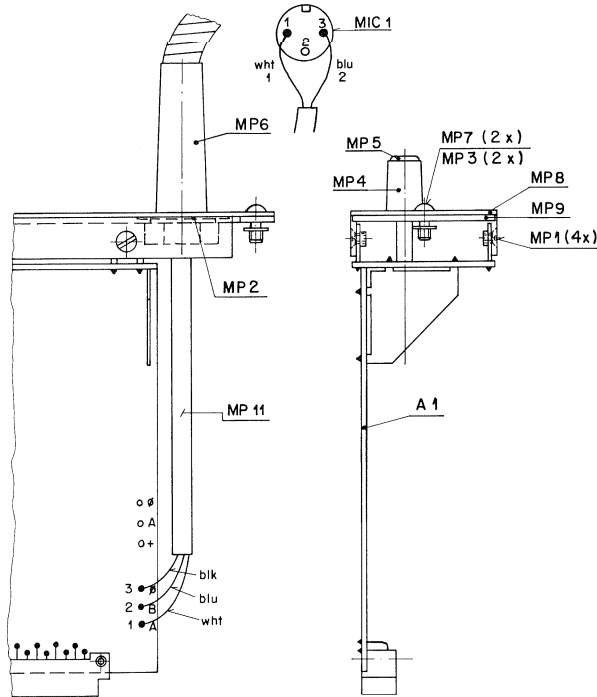
1.990.653.00



SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

TB MIC / DISPLAY CONTROL UNIT

1.990.653.00



Nummer	Abstraktion					(2)
						(2)
						(1)
Datum	5.4.90	U % VOL	U % VOL	U % VOL		(0)

STUDER REGENSDORF ZÜRICH	Bezeichnung TB MIC / DISPLAY CONTROL UNIT	Frage für Nummer 1.990.653-00
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Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

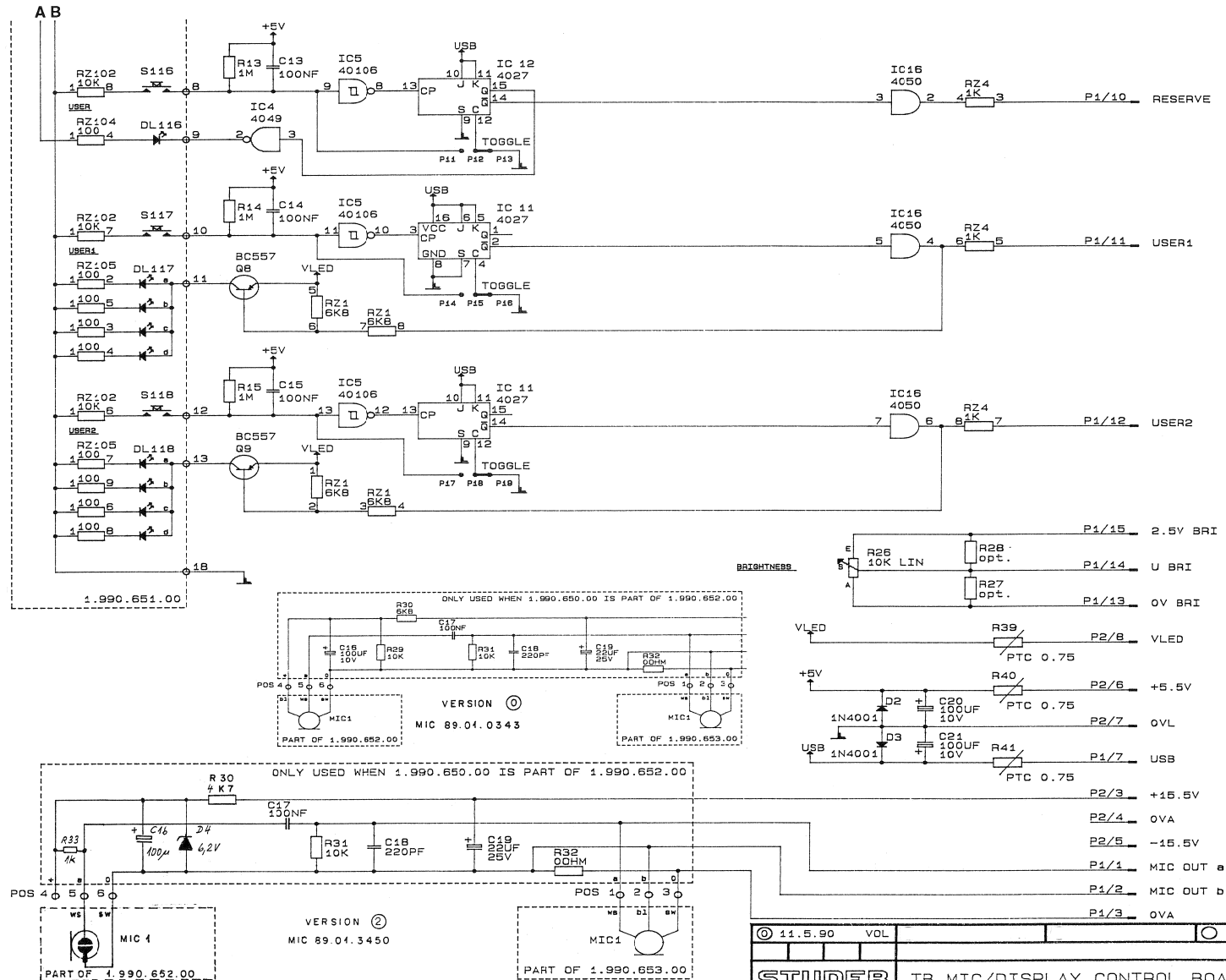
A....1	1.990.650.00			TB MIC/DISPLAY CONTROL BOARD	St
MIC...1	89.01.0341	M 640 N		Talkback Microphone	Beyer
MP....1	21.01.2352	0004 pcs		S - Schr. , ZM , M3 * 4	
MP....2	23.99.0123	0001 pcs		U - Scheibe D 10.1/15 * 0.5 PREH	
MP....3	24.16.3023	0002 pcs		Wellensicherung 2.3	
MP....4	42.01.0228	0001 pcs		Knebelknopf grau D10/ 4	
MP....5	42.01.0250	0001 pcs		Deckel hellgrau zu Knopf D10	
MP....6	89.01.0342	0001 pcs		Schwanenhals SH11-200W HCR	Beyer
MP....7	1.010.022.21	0002 pcs		Limmschraube IS spez. M3 * 8 SW	
MP....8	1.990.650.01	0001 pcs		Frontschild TB MIC/DISPLAY CONTROL	
MP....9	1.990.650.02	0001 pcs		Traeger TB MIC/DISPLAY CONTROL	
MP...10	1.990.653.04	0000 pcs		Nr.-Etikette 5 * 20	
MP...11	1.990.653.94	0001 pcs		Kabelliste TB Mic/Display Control Unit	St

MANUFACTURER St=Studer

1.990.653.00 TB MIC/DISPLAY CONTROL UNIT VOL90/02/2700

TB MIC / DISPLAY CONTROL BOARD

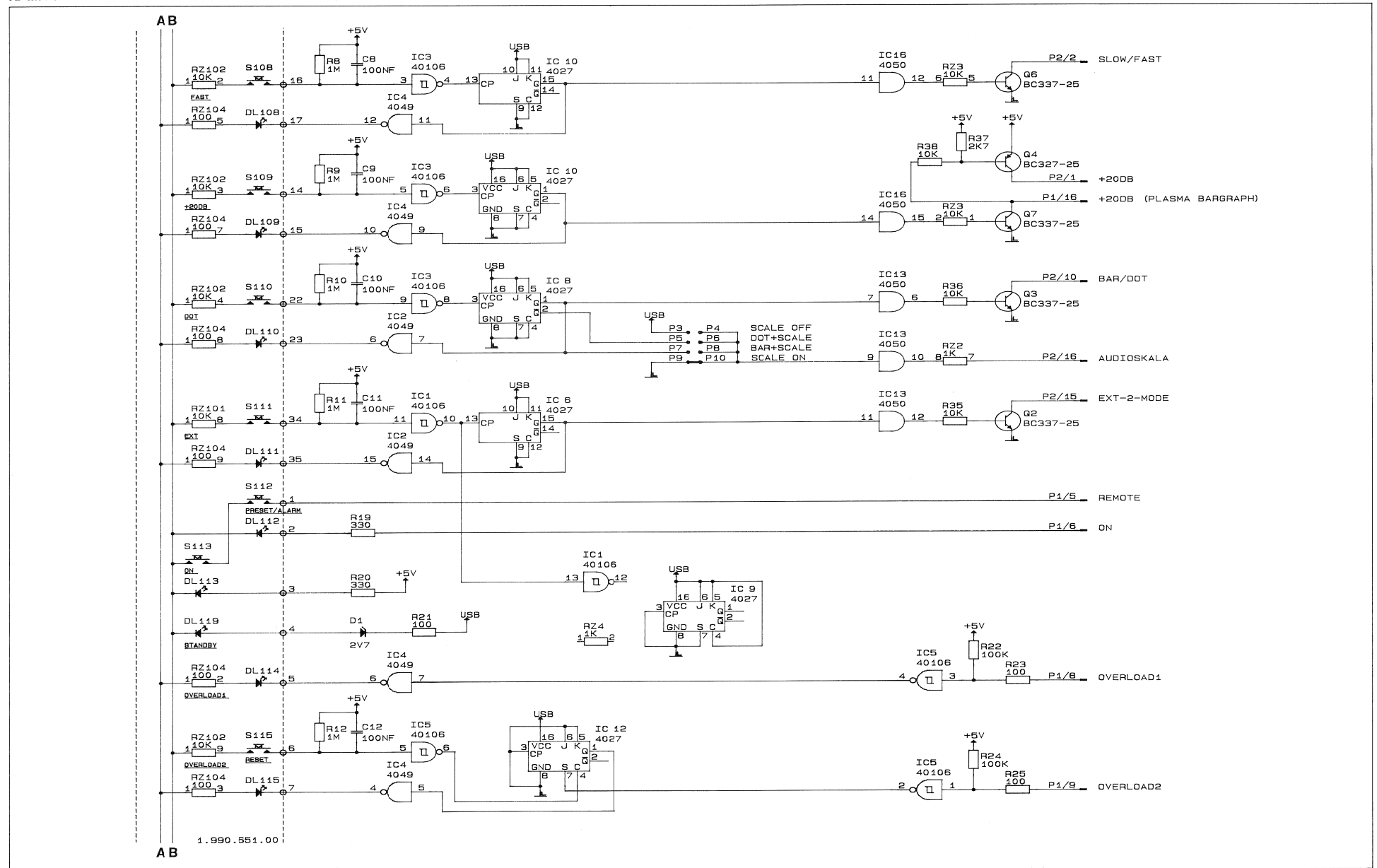
1.990.650.00



© 11.5.90	VOL		
STUDER		TB MIC/DISPLAY CONTROL BOARD	SC 1.990.650.00
		PAGE 1 OF 1	

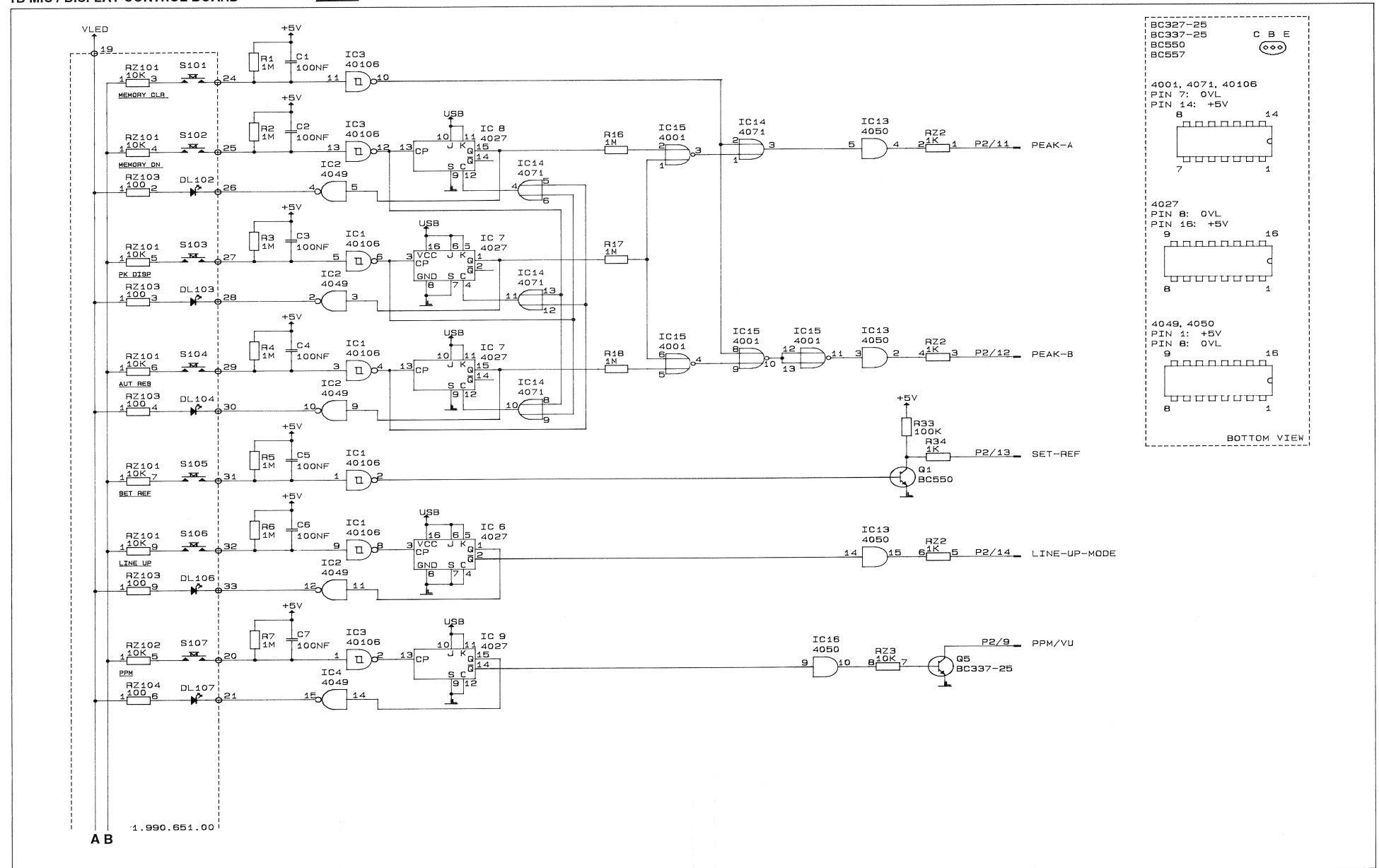
TB MIC / DISPLAY CONTROL BOARD

1.990.650.00



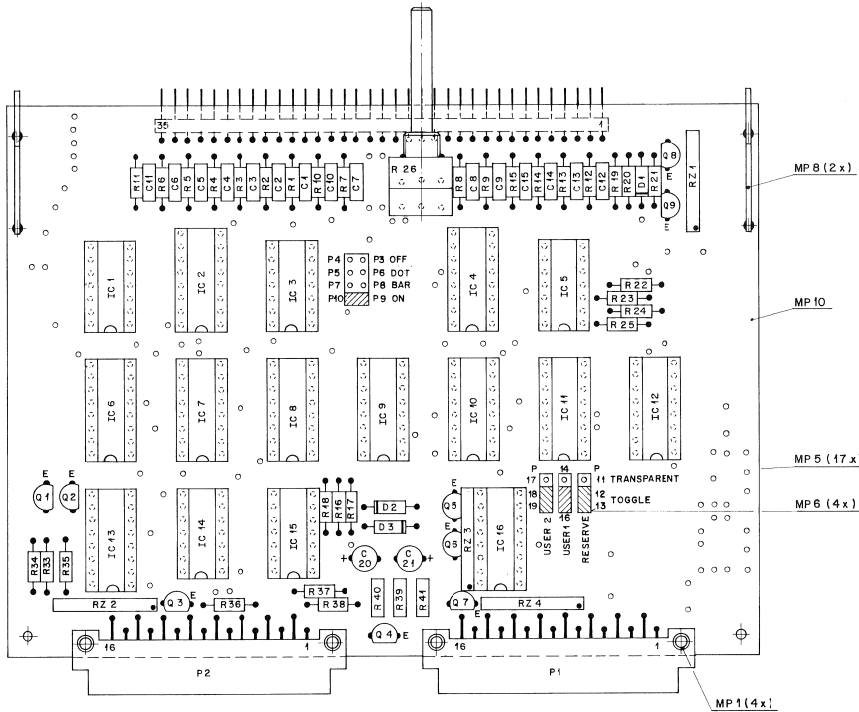
TB MIC / DISPLAY CONTROL BOARD

1.990.650.00



TB MIC/DISPLAY CONTROL BOARD

1.990.650.00

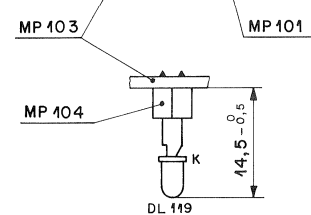
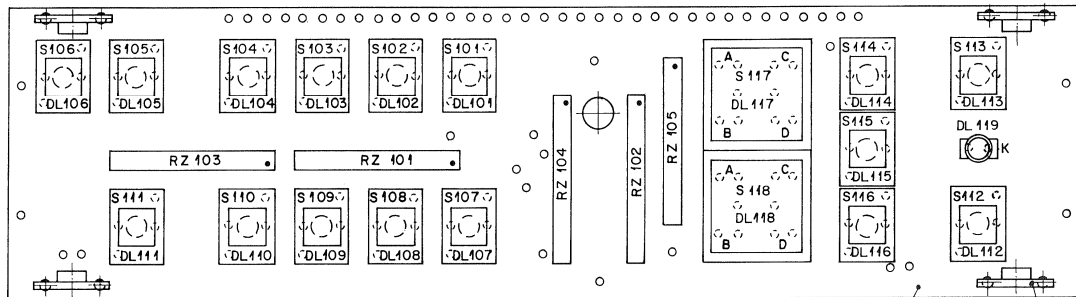


Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
A....1		1.990.651.00	TB MIC/DISPLAY SWITCH BOARD	St	RZ....1	57.88.2682	6.8 kOhm	2% 4W	
C....1	59.06.0104	100 nF	10% PE		RZ....2	57.88.2102	1 kOhm	2% 4W	
C....2	59.06.0104	100 nF	10% PE		RZ....3	57.88.2103	10 kOhm	2% 4W	
C....3	59.06.0104	100 nF	10% PE		RZ....4	57.88.2102	1 kOhm	2% 4W	
C....4	59.06.0104	100 nF	10% PE		MP....1	28.99.0119	0004 pcs	Rohrriete 2.5 * 9 * 0.15	
C....5	59.06.0104	100 nF	10% PE		MP....2	43.01.0108	0001 pcs	ESE - Warnschild	
C....6	59.06.0104	100 nF	10% PE		MP....3	33.03.0167	0005 pcs	IC-Socket, DIL 14	
C....7	59.06.0104	100 nF	10% PE		MP....4	33.03.0168	0011 pcs	IC-Socket, DIL 16	
C....8	59.06.0104	100 nF	10% PE		MP....5	54.01.0020	0017 pcs	Jumper Stiff	
C....9	59.06.0104	100 nF	10% PE		MP....6	54.01.0021	0004 pcs	Jumper Bruecke	
C....10	59.06.0104	100 nF	10% PE		MP....7	54.11.0126	0035 pcs	Stiftanleihte, Winkel	
C....11	59.06.0104	100 nF	10% PE		MP....8	1.990.100.01	0002 pcs	Querprintstuetze	
C....12	59.06.0104	100 nF	10% PE		MP....9	1.990.650.04	0000 pcs	Nr.-Etikette 5 * 20	St
C....13	59.06.0104	100 nF	10% PE		MP....10	1.990.650.11	0001 pcs	TB Mic/Display Control PCB	
C....14	59.06.0104	100 nF	10% PE		* comment: only used, when 1.990.650.00 is part of 1.990.652.00 (EL MIC/DISPLAY CONTROL UNIT)				
C....15	59.06.0104	100 nF	10% PE		CER = ceramic, EL = electrolytic, PE = polyester				
C....16	0	not used			MANUFACTURER ITT=Intermetall, Mot=Motorola, NS=National Semiconductors, Phi=Philips, RCA=Radio Corporation of America, SGS=SGS/Thomson Sie=Siemens, St=Studer, To=Toshiba				
C....17	0	not used			1.990.650.00 TB MIC/DISPLAY CONTROL BOARD VOL90/02/0600				
C....18	0	not used			END				
C....19	0	not used			*				
C....20	59.22.3101	100 uF	10V EL						
C....21	59.22.3101	100 uF	10V EL						
D....1	50.04.1106	RZ555	2.7V	any					
D....2	50.04.0122	1N4001		any					
D....3	50.04.0122	1N4001		any					
IC....1	50.07.0014	40106	Hex Schmitt-Trigger Inverter	Mot,NS,Phi					
IC....2	50.07.0049	4049	Hex Inverting Buffer	Phi,To					
IC....3	50.07.0014	40106	Hex Schmitt-Trigger Inverter	Mot,NS,Phi					
IC....4	50.07.0049	4049	Hex Inverting Buffer	Phi,To					
IC....5	50.07.0014	40106	Hex Schmitt-Trigger Inverter	Mot,NS,Phi					
IC....6	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....7	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....8	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....9	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....10	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....11	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....12	50.07.0027	4027	Dual Flip-Flop	Mot,Phi,RCA					
IC....13	50.07.0050	4050	Hex Buffer	Mot,Phi,RCA					
IC....14	50.07.0022	4071	Quad OR-Gate	Mot,RCA,SGS					
IC....15	50.07.0006	4001	Quad NOR-Gate	Mot,NS,Phi					
IC....16	50.07.0050	4050	Hex Buffer	Mot,Phi,RCA					
P....1	54.11.2007		Eurocard connector, 16 pin						
P....2	54.11.2007		Eurocard connector, 16 pin						
Q....1	50.03.0497	BC 550		Sie					
Q....2	50.03.0340	BC 337-25		ITT,Phi,Sie					
Q....3	50.03.0340	BC 337-25		ITT,Phi,Sie					
Q....4	50.03.0351	BC 327-25		ITT,Phi,Sie					
Q....5	50.03.0340	BC 337-25		ITT,Phi,Sie					
Q....6	50.03.0340	BC 337-25		ITT,Phi,Sie					
Q....7	50.03.0340	BC 337-25		ITT,Phi,Sie					
Q....8	50.03.0515	BC 557		ITT,Mot,Phi					
Q....9	50.03.0515	BC 557		ITT,Mot,Phi					
R....1	57.11.3105	1 Mohm	1%						
R....2	57.11.3105	1 Mohm	1%						
R....3	57.11.3105	1 Mohm	1%						
R....4	57.11.3105	1 Mohm	1%						
R....5	57.11.3105	1 Mohm	1%						
R....6	57.11.3105	1 Mohm	1%						
R....7	57.11.3105	1 Mohm	1%						
R....8	57.11.3105	1 Mohm	1%						
R....9	57.11.3105	1 Mohm	1%						
R....10	57.11.3105	1 Mohm	1%						
R....11	57.11.3105	1 Mohm	1%						
R....12	57.11.3105	1 Mohm	1%						
R....13	57.11.3105	1 Mohm	1%						
R....14	57.11.3105	1 Mohm	1%						
R....15	57.11.3105	1 Mohm	1%						
R....16	57.11.3105	1 Mohm	1%						
R....17	57.11.3105	1 Mohm	1%						
R....18	57.11.3105	1 Mohm	1%						
R....19	57.11.3331	330 Ohm	1%						
R....20	57.11.3331	330 Ohm	1%						
R....21	57.11.3101	100 Ohm	1%						
R....22	57.11.3104	100 kOhm	1%						
R....23	57.11.3101	100 Ohm	1%						
R....24	57.11.3104	100 kOhm	1%						
R....25	57.11.3101	100 Ohm	1%						
R....26	1.010.101.58	10 kOhm	1%in. (Tandem-Pot, 100kOhm not used)						
R....27	0	not used							
R....28	0	not used							
R....29	0	not used							
R....30	0	not used							
R....31	0	not used							
R....32	0	not used							
R....33	57.11.3104	100 kOhm	1%						
R....34	57.11.3102	1 kOhm	1%						
R....35	57.11.3101	10 kOhm	1%						
R....36	57.11.3101	10 kOhm	1%						
R....37	57.11.3272	2.7 kOhm	1%						
R....38	57.11.3101	10 kOhm	1%						
R....39	57.92.7011	.75 Ohm	0.5 A R-PTC						
R....40	57.92.7011	.75 Ohm	0.5 A R-PTC						
R....41	57.92.7011	.75 Ohm	0.5 A R-PTC						

Ersetzt für:	Ersetzt durch:	Kopie für:												
STUDER REGENSDORF ZÜRICH	TB MIC / DISPLAY CONTROL BOARD ESE	1.990.650-00												
<table border="1"> <tr> <td>Abweichung</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Datum</td> <td>Gez</td> <td>Dep</td> <td>Gek</td> <td>Index</td> <td></td> </tr> </table>			Abweichung						Datum	Gez	Dep	Gek	Index	
Abweichung														
Datum	Gez	Dep	Gek	Index										

DISPLAY SWITCH BOARD

1.990.651.00



Ersatz für:		Ersetzt durch:		Kopie für:	
STUDER REGENSDORF ZÜRICH		DISPLAY SWITCH BOARD		Nummer: 1.990.651.00	
4	4	90	MY	VOL	1
Datum	Gez.	Gepr.	Ges.	Index	

Ad . . POS. . . . REF.No. . . . DESCRIPTION MANUFACTURER

DL..101	. . . 0	not used	see S101	
DL..102	. . . 0	not used	see S102	
DL..103	. . . 0	not used	see S103	
DL..104	. . . 0	not used	see S104	
DL..105	. . . 0	not used	see S105	
DL..106	. . . 0	not used	see S106	
DL..107	. . . 0	not used	see S107	
DL..108	. . . 0	not used	see S108	
DL..109	. . . 0	not used	see S109	
DL..110	. . . 0	not used	see S110	
DL..111	. . . 0	not used	see S111	
DL..112	. . . 0	not used	see S112	
DL..113	. . . 0	not used	see S113	
DL..114	. . . 0	not used	see S114	
DL..115	. . . 0	not used	see S115	
DL..116	. . . 0	not used	see S116	
DL..117	. . . 0	not used	see S117	
DL..118	. . . 0	not used	see S118	
DL..119	50.04.2130	LY 3360	-GK yellow	Sie
RZ..101	57.88.4103	10 kOhm	2% ,8*	
RZ..102	57.88.4103	10 kOhm	2% ,8*	
RZ..103	57.88.4101	100 Ohm	2% ,8*	
RZ..104	57.88.4101	100 Ohm	2% ,8*	
RZ..105	57.88.4101	100 Ohm	2% ,8*	
S...101	55.15.0605	1*A	5mm, gn/tr (CLEAR MEM)	
S...102	55.15.0604	1*A	5mm, gb/tr (MEM ON)	
S...103	55.15.0604	1*A	5mm, gb/tr (PEAK DISP)	
S...104	55.15.0604	1*A	5mm, gb/tr (AUTO RESET)	
S...105	55.15.0605	1*A	5mm, gn/tr (SET REF)	
S...106	55.15.0604	1*A	5mm, gb/tr (LINE UP)	
S...107	55.15.0604	1*A	5mm, gb/tr (PPM)	
S...108	55.15.0605	1*A	5mm, gn/tr (FAST)	
S...109	55.15.0602	1*A	5mm, rt/tr (+20dB)	
S...110	55.15.0605	1*A	5mm, gn/tr (DOT)	
S...111	55.15.0604	1*A	5mm, gb/tr (EXT)	
S...112	55.15.0602	1*A	5mm, rt/tr (ON/ALARM)	
S...113	55.15.0602	1*A	5mm, rt/tr (PRESET)	
S...114	55.15.0604	1*A	5mm, gb/tr (OVERLOAD1)	
S...115	55.15.0602	1*A	5mm, rt/tr (OVERLOAD2)	
S...116	55.15.0604	1*A	5mm, gb/tr (RESERVE)	
S...117	55.15.0704	1*A	12mm, gb/tr (USER1)	
S...118	55.15.0702	1*A	12mm, rt/tr (USER2)	
MP..101	53.03.0230	0001 pcs	LED-Sockel Single Line, 2-pol.	
MP..102	1.990.100.05	0004 pcs	Querprinthalter	
MP..103	1.990.651.04	0000 pcs	Nr.-Etikette 5 * 20	
MP..104	1.990.651.11	0001 pcs	TB Mic/Display Switch PCB	St

MANUFACTURER Sie=Siemens, St=Studer

1.990.651.00 TB MIC/DISPLAY SWITCH BOARD VOL90/02/0600

Section 7 Units of the Euro Card Frame

Table of Contents

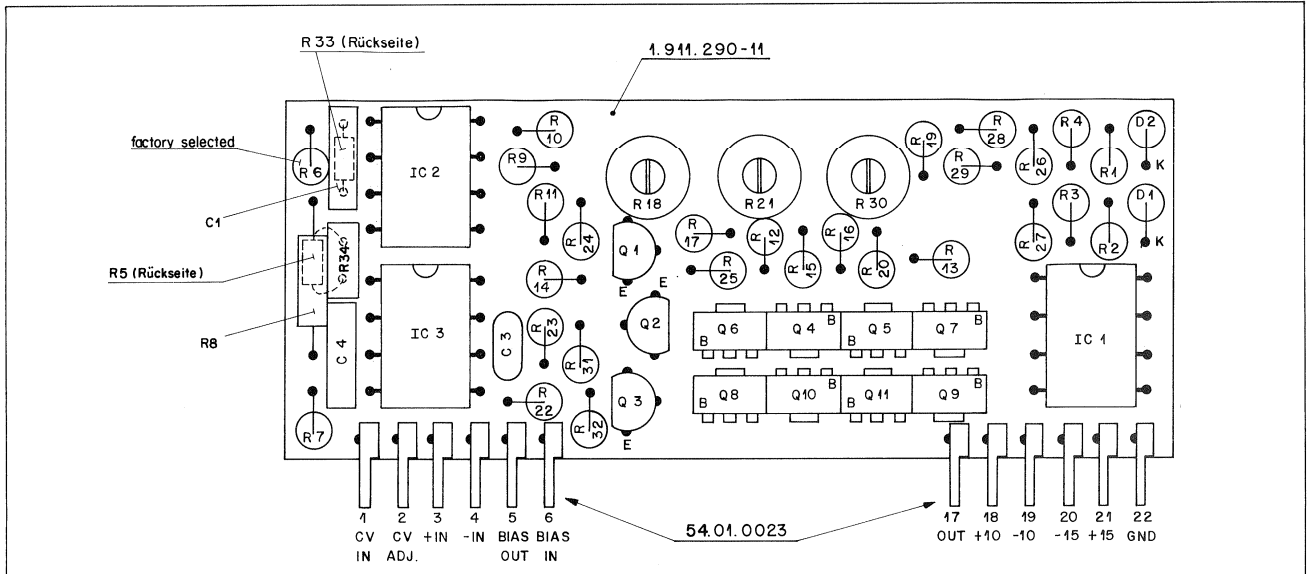
VCA Board Tape 2	1.911.291.00
Diodes/Power Alarm 2 Board	1.915.109.00
Power Supply 3V...6V.....	1.915.111.81
Power Supply LED 3V...6V	1.915.111.81
Pin location list.....	1.917.110
32CH Bus-Selector.....	1.917.110.00
Pin location list.....	1.917.110
Master Amplifier.....	1.917.140.81
Pin location list.....	1.917.140
Master Amplifier.....	1.917.140.81
Limiter Subcard for Master Amplifier	1.917.141.00
Master Amplifier with Limiter.....	1.917.142.81
Master Amplifier with Limiter.....	1.917.142.81
Pin location list.....	1.917.142
Master Amplifier with Limiter.....	1.917.142.81
CR + Studio Monitor Mix Amplifier	1.917.300.00
Pin location list.....	1.917.300
Monitor Mix Amplifier.....	1.917.300.00
CR/Studio Monitor Amplifier	1.917.310.00
Pin location list.....	1.917.310
CR/Studio Monitor Amplifier	1.917.310.00
Subcard for CR/Studio Monitor.....	1.917.311.00
CR/Studio Monitor Amplifier/Out.....	1.917.312.00
CR/Studio Monitor Amplifier/Out 2.....	1.917.312.00
Talk Back Amplifier.....	1.917.320.00
Pin location list.....	1.917.320
Talk Back Amplifier.....	1.917.320.00
PFL/Talk Back Headphones Amplifier	1.917.330.81
Pin location list.....	1.917.330

STUDER AUDIO CONSOLE 990

PFL/Talk Back Headphones Amplifier.....	1.917.330.81
Subcard for PFL/TB Headphone	1.917.331.00
Monitor Relays Unit 8x2/2	1.917.601.00
Pin location list	1.917.601
Monitor Relays Unit 8x2/2	1.917.601.00
Signal Input/Output Interface.....	1.917.611.00
Pin location list	1.917.611
Signal Input/Output Interface.....	1.917.611.00

VCA BOARD TAPE 2

1.911.291.00



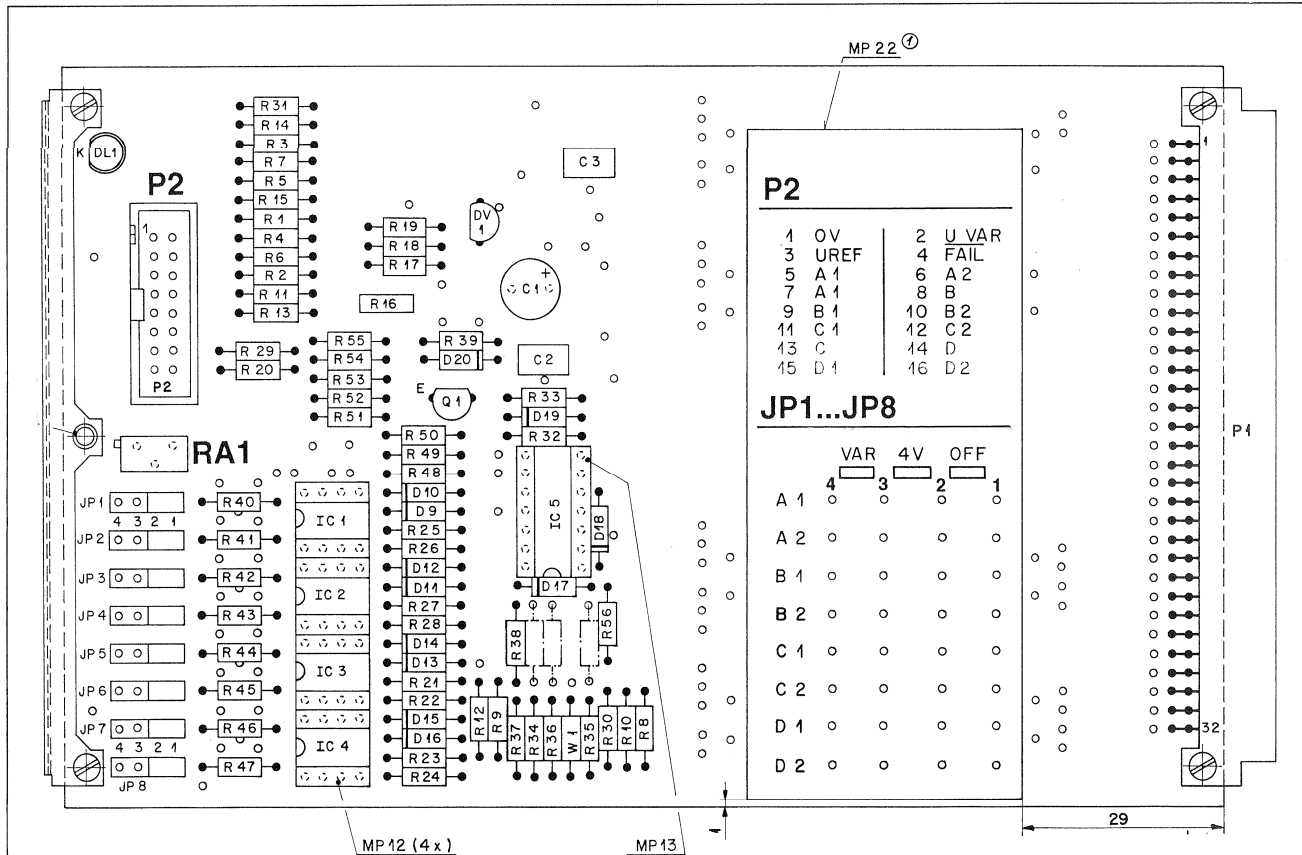
STUDER REGENSDORF ZÜRICH	Bezeichnung: VCA-Board Type 2 ESE	Nummer: 1.911.291-00	Anordnung				③
			Ausgabe				②
			Datum				①
9.2.90		Gez.	Gepr.	Ges.	Index		
Kopie für:							

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
C.....1		59.06.0332	3.3 nF 5% PE	
C.....3		59.99.0236	470 pF 20% CER	
C.....4		59.06.0103	10 nF 20% PE	
D.....1		50.04.1114	10 V zener diode 400mW	any
D.....2		50.04.1112	5.1 V zener diode 400mW	any
IC.....1		50.09.0107	RC4559 dual op. amp.	Ra, TI
IC.....2		50.09.0101	TL072 dual op. amp. J-FET	Mot, TI
IC.....3		50.09.0101	TL072 dual op. amp. J-FET	Mot, TI
Q.....1		1.010.037.50	BC 337 NPN selected	St
Q.....2		1.010.036.50	BC 327 NPN selected	St
Q.....3		1.010.037.50	BC 337 NPN selected	St
Q.....4		50.60.0100	BCX 68 NPN selected	St
Q.....5		50.60.0100	BCX 68 NPN selected	St
Q.....6		50.60.1100	BCX 69 PNP selected	St
Q.....7		50.60.1100	BCX 69 PNP selected	St
Q.....8		50.60.0100	BCX 68 NPN selected	St
Q.....9		50.60.0100	BCX 68 NPN selected	St
Q.....10		50.60.1100	BCX 69 PNP selected	St
Q....11		50.60.1100	BCX 69 PNP selected	St
R.....1		57.11.3103	10 kOhm 1%	
R.....2		57.11.3103	10 kOhm 1%	
R.....3		57.11.3203	20 kOhm 1%	
R.....4		57.11.3103	10 kOhm 1%	
R.....5		57.11.3304	300 kOhm 1%	
R.....6		57.11.9999	factory selected	
R.....7		57.11.3103	10 kOhm 1%	
R.....8		57.11.3105	1 MOhm 1%	
R.....9		57.11.3203	20 kOhm 1%	
R.....10		57.11.3203	20 kOhm 1%	
R....11		57.11.3222	2.2 kOhm 1%	
R....12		57.11.3330	33 Ohm 1%	
R....13		57.11.3100	10 Ohm 1%	
R....14		57.11.3222	2.2 kOhm 1%	
R....15		57.11.3330	33 Ohm 1%	
R....16		57.11.3100	10 Ohm 1%	
R....17		57.11.9999	105 Ohm 1%	
R....18		58.11.6102	1 kOhm variable resistor	
R....19		57.11.3203	20 kOhm 1%	
R....20		57.11.3203	20 kOhm 1%	
R....21		58.11.6503	50 kOhm variable resistor	
R....22		57.11.3105	1 MOhm 1%	
R....23		57.11.5106	10 MOhm 1%	
R....24		57.11.3472	4.7 kOhm 1%	
R....25		57.11.3622	6.2 kOhm 1%	
R....26		57.11.3152	1.5 kOhm 1%	
R....27		57.11.3152	1.5 kOhm 1%	
R....28		57.11.3102	1 kOhm 1%	
R....29		57.11.3102	1 kOhm 1%	
R....30		58.11.6501	500 Ohm variable resistor	
R....31		57.11.3332	3.3 kOhm 1%	
R....32		57.11.3332	3.3 kOhm 1%	
R....33		57.11.3824	820 kOhm 1%	
R....34		57.99.0220	NTC	St
MP....1		1.911.290.11	1 pcs PCB	St
MP....2		54.01.0023	1 pcs STIFTENLEISTE	

CER=ceramic, PE=polyester, MANUFACTURER: Mot=Motorola, TI=Texas Instruments, St=Studer

DIODES/POWER ALARM 2 BOARD

1.915.109.00



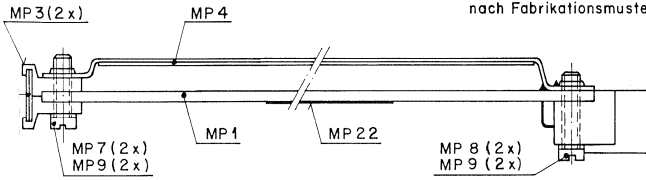
P2

1	OV	2	U VAR
3	UREF	4	FAIL
5	A 1	6	A 2
7	A 1	8	B
9	B 1	10	B 2
11	C 1	12	C 2
13	C	14	D
15	D 1	16	D 2

JP1...JP8

	VAR	4V	OFF	
A 1	4	3	2	1
A 2				
B 1				
B 2				
C 1				
C 2				
D 1				
D 2				

ESE-Warnschild aufgeklebt nach Fabrikationsmuster.



STUDER
REGENSDORF
ZÜRICH

Bezeichnung: **DIODES / POWER ALARM 2 BOARD ESE**

Nummer: **4.915.109-00**

Änderung					③
26.3.91					②
30.11.90					①
Datum	Gez.	Gespr.	Ges.	Index	

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
01	C.....1	59.22.4221	100 uF	EL 16V
	C.....1	59.22.4221	220 uF	EL 16V
	C.....2	59.06.5474	470 nF	PE
	C.....3	59.06.5474	470 nF	PE
	D.....9	50.04.0127	BAT 85	
	D.....10	50.04.0127	BAT 85	
	D.....11	50.04.0127	BAT 85	
	D.....12	50.04.0127	BAT 85	
	D.....13	50.04.0127	BAT 85	
	D.....14	50.04.0127	BAT 85	
	D.....15	50.04.0127	BAT 85	
	D.....16	50.04.0127	BAT 85	
	D.....17	50.04.0125	1N4448	75V 100mA
	D.....18	50.04.0125	1N4448	75V 100mA
	D.....19	50.04.0125	1N4448	75V 100mA
	D.....20	50.04.0125	1N4448	75V 100mA
	DL....1	50.04.2111	Led red	
	DV....1	50.10.0106	TL 431	ref
	IC....1	50.05.0283	LM 393	dual voltage comparator
	IC....2	50.05.0283	LM 393	dual voltage comparator
	IC....3	50.05.0283	LM 393	dual voltage comparator
	IC....4	50.05.0283	LM 393	dual voltage comparator
	IC....5	50.07.0008	4093	quad 2 input nand
	JJ....1	54.01.0021	8 pcs	jumper jack
	JP....1	54.01.0020	32 pcs	jumper pin
	P....1	54.11.2004		2*32 pol eurostecker
	P....2	54.14.2002		16 pol Stecker
	Q....1	50.03.0340	BC 337	npn 800mA



DIODES/POWER ALARM 2 BOARD

1.915.109.00

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
R....1		57.11.3102	1 kOhm 1% 0.25W MF						
R....2		57.11.3102	1 kOhm 1% 0.25W MF						
R....3		57.11.3102	1 kOhm 1% 0.25W MF						
R....4		57.11.3102	1 kOhm 1% 0.25W MF						
R....5		57.11.3102	1 kOhm 1% 0.25W MF						
R....6		57.11.3102	1 kOhm 1% 0.25W MF						
R....7		57.11.3102	1 kOhm 1% 0.25W MF						
R....8		57.11.3102	1 kOhm 1% 0.25W MF						
R....9		57.11.3102	1 kOhm 1% 0.25W MF						
R....10		57.11.3102	1 kOhm 1% 0.25W MF						
R....11		57.11.3102	1 kOhm 1% 0.25W MF						
R....12		57.11.3102	1 kOhm 1% 0.25W MF						
R....13		57.11.3102	1 kOhm 1% 0.25W MF						
R....14		57.11.3102	1 kOhm 1% 0.25W MF						
R....15		57.11.3102	1 kOhm 1% 0.25W MF						
R....16		57.92.1121	22 Ohm PTC						
R....17		57.11.3221	220 Ohm 1% 0.25W MF						
R....18		57.11.3202	2 kOhm 1% 0.25W MF						
R....19		57.11.3332	3.3 kOhm 1% 0.25W MF						
01 R....19		57.11.3103	10 kOhm 1% 0.25W MF						
R....20		57.11.3512	5.1 kOhm 1% 0.25W MF						
R....21		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....21		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....22		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....22		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....23		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....23		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....24		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....24		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....25		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....25		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....26		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....26		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....27		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....27		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....28		57.11.3102	1 kOhm 1% 0.25W MF						
01 R....28		57.11.3332	3.3 kOhm 1% 0.25W MF						
R....29		57.11.3102	1 kOhm 1% 0.25W MF						
R....30		57.11.3103	10 kOhm 1% 0.25W MF						
R....31		57.11.3102	1 kOhm 1% 0.25W MF						
R....32		57.11.3474	470 kOhm 1% 0.25W MF						
R....33		57.11.3103	10 kOhm 1% 0.25W MF						
R....34		57.11.3101	100 Ohm 1% 0.25W MF						
R....35		57.11.3101	100 Ohm 1% 0.25W MF						
R....36		57.11.3101	100 Ohm 1% 0.25W MF						
R....37		57.11.3101	100 Ohm 1% 0.25W MF						
R....38		57.11.3103	10 kOhm 1% 0.25W MF						
R....39		57.11.3103	10 kOhm 1% 0.25W MF						
R....40		57.11.3105	1 MOhm 1% 0.25W MF						
R....41		57.11.3105	1 MOhm 1% 0.25W MF						
R....42		57.11.3105	1 MOhm 1% 0.25W MF						
R....43		57.11.3105	1 MOhm 1% 0.25W MF						
R....44		57.11.3105	1 MOhm 1% 0.25W MF						
R....45		57.11.3105	1 MOhm 1% 0.25W MF						
R....46		57.11.3105	1 MOhm 1% 0.25W MF						
R....47		57.11.3105	1 MOhm 1% 0.25W MF						
R....48		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....48		57.11.3103	10 kOhm 1% 0.25W MF						
R....49		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....49		57.11.3103	10 kOhm 1% 0.25W MF						
R....50		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....50		57.11.3103	10 kOhm 1% 0.25W MF						
R....51		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....51		57.11.3103	10 kOhm 1% 0.25W MF						
R....52		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....52		57.11.3103	10 kOhm 1% 0.25W MF						
R....53		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....53		57.11.3103	10 kOhm 1% 0.25W MF						
R....54		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....54		57.11.3103	10 kOhm 1% 0.25W MF						
R....55		57.11.3104	100 kOhm 1% 0.25W MF						
01 R....55		57.11.3103	10 kOhm 1% 0.25W MF						
R....56		57.11.3104	100 kOhm 1% 0.25W MF						
RA....1		58.05.0502	5 kOhm trimmpoti						
W....1		57.11.3000	0 Ohm						
MP....1		1.915.109.11	1 pcs Print						Studer
MP....2		1.915.109.01	1 pcs Bez. Streifen 6.3*91						Studer
MP....3		1.010.006.33	2 pcs Griffhaelften						Studer
MP....4		1.010.090.49	1 pcs Abschirmblech						
MP....5		1.010.096.49	1 pcs Klarsicht Schild						
MP....6		28.21.1380	1 pcs Rohrriete D2.5/6						
MP....7		21.01.0280	2 pcs Z - Schraube M2.5*8						
MP....8		21.01.0281	2 pcs Z - Schraube M2.5*10						
MP....9		24.16.1025	4 pcs Rippenscheibe D2.7/5						
MP....10		43.01.0108	1 pcs ESE-Warnschild						
MP....11		0	1 pcs						
MP....12		53.03.0166	4 pcs IC-Sockel 8 Pin						
MP....13		53.03.0167	1 pcs IC-Sockel 16 Pin						
MP....22		1.915.109.02	1 pcs Klebschild fuer Jumper						
01 Behebung folgender Fehler: Wenn die Karte kalt ist, wird ein Alarm ausgeloeost. Unterlagen anpassen.									
CER=Ceramic, EL =Elektrolyt MF =Metal Film, PE =Polyesterfolien									
MANUFACTURER :									
Fe =Ferranti									
NE =Nippon Electronic Corp.									
NS =National Semiconductors									
Ra =Raytheon									
Six=Siliconix									
Tho=Thomson									
Ti =Texas Instrument									
1.915.109.00 DIODES/POWER ALARM 2 BOARD SE 90/03/1000									
1.915.109.00 DIODES/POWER ALARM 2 BOARD SE 91/03/2601									

POWER SUPPLY LED 3-6V

1.915.111.81

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
C.....1	59.06.0104	100 nF	PE	
C.....2	59.22.6102	1000 uF	ALU 40V	
C.....3	59.29.4472	4700 uF	EL 40V	
C.....4	59.06.0153	15 nF	PE	
C.....5	59.06.0222	2.2 nF	PE	
C.....6	59.06.0222	2.2 nF	PE	
C.....7	59.06.0222	2.2 nF	PE	
C.....8	59.29.1103	10000 uF	EL 10V	
C.....9	59.22.6102	1000 uF	ALU	
C.....10	59.06.0104	100 nF	PE	
C.....11	59.06.0104	100 nF	PE	
C.....12	59.06.0104	100 nF	PE	
C.....13	59.06.0104	100 nF	PE	
C.....14	59.06.0104	100 nF	PE	
C.....15	59.06.0104	100 nF	PE	
C.....16	59.26.2150	15 uF	ALU 16V dry	
C.....17	59.26.2150	15 uF	ALU 16V dry	
C.....18	59.26.2150	15 uF	ALU 16V dry	
C.....19	59.26.2150	15 uF	ALU 16V dry	
C.....20	59.26.2150	15 uF	ALU 16V dry	
C.....21	59.26.2150	15 uF	ALU 16V dry	
C.....22	59.26.2150	15 uF	ALU 16V dry	
C.....23	59.26.2150	15 uF	ALU 16V dry	
C.....24	59.26.2150	15 uF	ALU 16V dry	
C.....25	59.26.2150	15 uF	ALU 16V dry	
C.....26	59.26.2150	15 uF	ALU 16V dry	
C.....27	59.26.2150	15 uF	ALU 16V dry	
C.....28	59.06.0222	2.2 nF	PE	
C.....29	59.34.4181	100 pF	CFR	
C.....30	59.06.0104	100 nF	PE	
C.....31	59.06.0104	100 nF	PE	
C.....32	59.06.0103	10 nF	PE	
C.....33	59.06.0334	330 nF	PE	
C.....34	59.06.0334	330 nF	PE	
C.....35	59.26.2150	15 uF	ALU 16V dry	
C.....36	59.06.0104	100 nF	PE	
D.....1	50.04.0138	UF4004		
D.....2	50.04.0138	UF4004		
D.....3	50.04.0517	8V 32	dual diode 2*30A	
D.....4	50.04.0517	8V 32	dual diode 2*30A	
D.....5	50.04.0125	1M4448		
D.....6	50.04.1108	Z 5.6V		
DL.....1	50.04.2113	HV5453	LED 5mm green	
DL.....2	50.04.2111	HV5753	LED 5mm red	
DLQ.....1	50.04.3200	CNV17	single optoisolator	GI
DLQ.....2	50.04.3200	CNV17	single optoisolator	GI
F.....1	51.01.0125	6.3A	fuse	
IC.....1	50.05.0283	LM393	dual comparator	NS
IC.....2	50.10.0106	TL431C	shunt voltage regulator	TI
IC.....3	50.10.0108	LM317	series voltage regulator	NS
IC.....4	50.10.0113	UC3843	current mode PWM controller	UN
L.....1	1.022.640.00	38 uH	5A	STUDER
L.....2	1.022.641.00	22 uH	dual coil 2*5A	STUDER
L.....3	1.022.642.00	1.6 mH	dual coil 2*10A	STUDER
MP...1	1.915.111.12	1 pcs	Power Supply Led 3-6V PCB	STUDER
MP...2	50.20.3005	1 pcs	heat-sink black 1.6 kW	
MP...3	0	not used		
MP...4	0	not used		
MP...5	50.20.0305	4 pcs	Glimmerscheibe	
MP...6	50.20.0404	4 pcs	Isolierdurchfuehrung	
MP...7	33.03.0106	1 pcs	fuse holder 10A	
MP...8	1.915.111.33	1 pcs	LL Power Supply Led 3-6V	
MP...9	33.03.0166	2 pcs	IC-socket 8 pins	
MP...10	1.010.012.50	3 pcs	LED-clip (2LED INTC)	
MP...11	1.915.111.01	1 pcs	Abdeckhaube Bestueckseite	STUDER
MP...12	1.915.111.02	1 pcs	Abdeckhaube Loetseite	STUDER
MP...13	21.53.0352	8 pcs	Z Schraube M3*4 (Abdeckhaube)	
MP...14	1.915.111.04	1 pcs	Bez.streifen 6.3*91	
MP...15	1.010.096.49	1 pcs	Klarsichtschild	
MP...16	28.21.1380	3 pcs	Rohrniete D2,25*6.5	
MP...17	28.99.0119	2 pcs	Rohrniete D 2.2*9	
MP...18	24.16.1030	11 pcs	Rippen-scheibe M3	
MP...19	1.010.006.33	2 pcs	Griffhaelfte	
MP...20	37.01.0101	8 pcs	Teilerfeder	
MP...21	21.01.0356	4 pcs	Z Schraube M3*10 (Halbleitern.)	
MP...22	1.010.088.27	4 pcs	Distanzhulsee D 3.1/7*2.3	
MP...23	1.915.111.03	1 pcs	Isolation 138*89 selbstklebend	
MP...24	1.010.088.27	3 pcs	Distanzhulsee D 3.2/7 * 35	
MP...25	21.53.0357	3 pcs	Z Schraube M3*12	
MP...26	0	not used		
MP...27	0	not used		
MP...28	65.03.0158	23 mm	Isolierschlauch (Re)	
MP...30	1.010.123.51	1 pcs	Text-Etikette 5*20 (T 6.3A)	
MP...31	54.02.0320	2 pcs	Flachstecker (Tp1 Tp2)	
MP...32	1.915.111.05	1 pcs	Klebschild (Poti Led Tp)	
P.....1	54.11.2004	32 pins	Eurocard connector	
Q.....1	50.03.1509	IRF 540	power MOS-FET	GE
Q.....2	50.03.1509	IRF 540	power MOS-FET	GE
Q.....3	50.03.0340	BC 327	PNP standard	
Q.....4	50.03.0351	BC 327	PNP standard	
Q.....5	50.03.0523	ZTX 651	PNP 2A	
Q.....6	50.03.0352	ZTX 751	PNP 2A	
Q.....7	50.03.0340	BC 327	PNP standard	



POWER SUPPLY LED 3-6V

1.915.111.81

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
Q....8		50.03.0340	BC 337 NPN standard	
R....1		57.11.3102	1 kOhm	
R....2		57.11.3102	1 kOhm	
R....3		57.11.3220	22 Ohm	
R....4		57.11.3220	22 Ohm	
R....5		57.56.2020	20 mOhm 3W small L (10nH)	
R....6		57.56.2050	50 mOhm 3W small L (10nH)	
R....7		57.11.3120	12 Ohm	
R....8		57.11.3102	1 kOhm 5%	
R....9		57.11.3103	10 kOhm 5%	
R....10		57.11.3362	3.6 kOhm	
R....11		57.11.3220	22 Ohm	
R....12		57.11.3682	6.8 kOhm	
R....13		57.11.3220	22 Ohm	
R....14		57.11.3682	6.8 kOhm	
R....15		57.11.3561	560 Ohm	
R....16		57.11.3682	6.8 kOhm	
R....17		57.11.3103	10 kOhm 5%	
R....18		57.11.3684	680 kOhm 5%	
R....19		57.11.3103	10 kOhm	
R....20		57.11.3102	1 kOhm	
R....21		57.11.3102	1 kOhm	
R....22		57.11.3104	100 kOhm	
R....23		57.11.3162	1.6 kOhm	
R....24		57.11.3391	390 Ohm	
R....25		57.11.3104	100 kOhm	
R....26		57.11.3561	560 Ohm	
R....27		57.11.3241	240 Ohm	
R....28		57.11.3682	6.8 kOhm	
R....29		57.11.3000	0 Ohm	
R....30		57.11.3682	6.8 kOhm	
R....31		57.11.3682	6.8 kOhm 1%	
R....32		57.11.3162	1.6 kOhm 1%	
R....33		57.11.3181	180 Ohm 1%	
R....34		57.11.3202	2 kOhm 1%	
R....35		57.11.3151	150 Ohm 1%	
R....36		57.11.3362	3.6 kOhm 1%	
R....37		57.11.3561	560 Ohm 1%	
R....38		57.11.3682	6.8 kOhm 1%	
R....39		57.11.3563	56 kOhm 1%	
R....40		57.11.3682	6.8 kOhm	
R....41		57.11.3682	6.8 kOhm	
R....42		57.11.3241	240 Ohm	
R....43		57.11.3682	6.8 kOhm	
R....44		57.11.3682	6.8 kOhm 1%	
R....45		58.01.9102	1 kOhm trimmer	
R....46		57.11.3682	6.8 kOhm 1%	
R....47		57.11.3104	100 kOhm 1%	
R....48		57.11.3104	100 kOhm 1%	
R....49		57.11.3202	2 kOhm	
R....50		57.11.3202	2 kOhm	
R....51		57.11.3102	1 kOhm	
R....52		57.11.3151	150 Ohm	
R....53		57.99.0220	16 kOhm NTC	
R....54		57.11.3102	1 kOhm	
R....55		57.11.3102	1 kOhm	
T....1		1.022.639.00	Schalttrafo Power Supply 3 - 6V	STUDEF

PE=Polyester, EL=Electrolytic, ALU=Aluminium, CER=Ceramic

MANUFACTURER: NS=National Semiconductors, TI=Texas Instrument
 GI=General Instruments, UN=Unitrod,
 GE=General Electric,

1.915.111.81 POWER SUPPLY LED 3-6V SE 92/01/2400

Pin location list

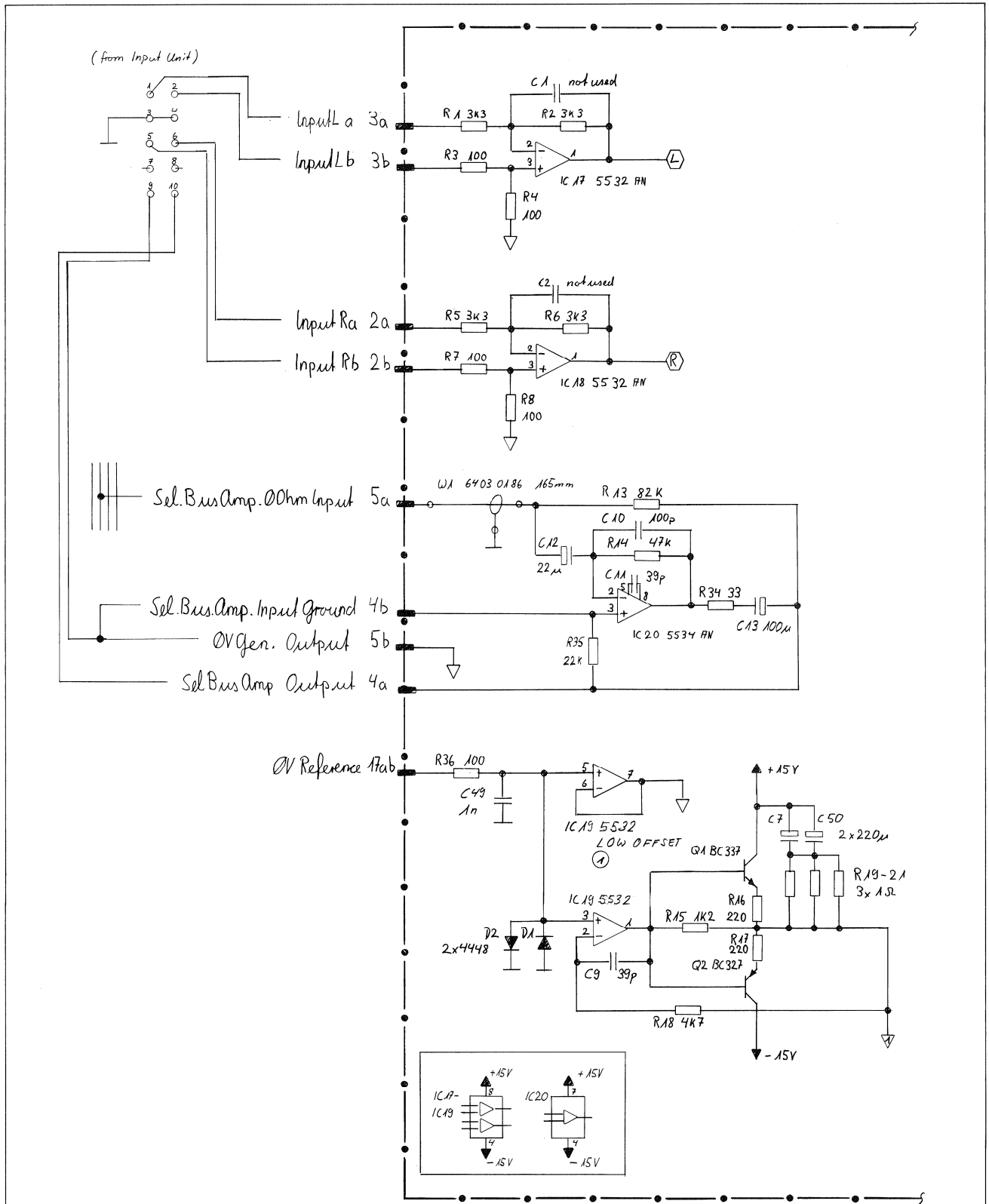
1.917.110

P	NO	NAME	REMARK		B=BUS	O=CONNECTION	S=SYMMETRIC	I=INVERS	AS=ASYMMETRIC

P	01	0V-A	GROUND AUDIO						B X X
P	02A	IN-R-a	INPUT RIGHT a				S		
P	02B	IN-R-b	INPUT RIGHT b				S		
P	03A	IN-L-a	INPUT LEFT a				S		
P	03B	IN-L-b	INPUT LEFT b				S		
P	04A	SEL-BUS-OUT-a	SELECT BUS AMP OUTPUT	(a)		AS,O			
P	04B	SEL-BUS-IN-0V	SELECT BUS AMP INPUT GROUND			O			
P	05A	SEL-BUS-IN -b	SELECT BUS AMP O-OHM INPUT	(b)		AS,I,O			
P	05B	0V-GEN	0V GEN OUTPUT						
P	06A	B-29	29; 0OHM BUS				B,I		
P	06B	B-31	31; 0OHM BUS				B,I		
P	07A	B-25	25; 0OHM BUS				B,I		
P	07B	B-27	27; 0OHM BUS				B,I		
P	08A	B-21	21; 0OHM BUS				B,I		
P	08B	B-23	23; 0OHM BUS				B,I		
P	09A	B-17	17; 0OHM BUS				B,I		
P	09B	B-19	19; 0OHM BUS				B,I		
P	10A	B-13	13; 0OHM BUS				B,I		
P	10B	B-15	15; 0OHM BUS				B,I		
P	11A	B-09	09; 0OHM BUS				B,I		
P	11B	B-11	11; 0OHM BUS				B,I		
P	12A	B-05	05; 0OHM BUS				B,I		
P	12B	B-07	07; 0OHM BUS				B,I		
P	13A	B-01	01; 0OHM BUS				B,I		
P	13B	B-03	03; 0OHM BUS				B,I		
P	14	- 15.5V	- SUPPLY				B		X X
P	15	0V-A	GROUND AUDIO				B		X X
P	16	+ 15.5V	+ SUPPLY				B		X X
P	17	0V-REF	0V REFERENCE				B,I		
P	18A	B-04	04; 0OHM BUS				B,I		
P	18B	B-02	02; 0OHM BUS				B,I		
P	19A	B-08	04; 0OHM BUS				B,I		
P	19B	B-06	06; 0OHM BUS				B,I		
P	20A	B-12	12; 0OHM BUS				B,I		
P	20B	B-10	10; 0OHM BUS				B,I		
P	21A	B-16	16; 0OHM BUS				B,I		
P	21B	B-14	14; 0OHM BUS				B,I		
P	22A	B-20	20; 0OHM BUS				B,I		
P	22B	B-18	18; 0OHM BUS				B,I		
P	23A	B-24	24; 0OHM BUS				B,I		
P	23B	B-22	22; 0OHM BUS				B,I		
P	24A	B-28	28; 0OHM BUS				B,I		
P	24B	B-26	26; 0OHM BUS				B,I		
P	25A	B-32	32; 0OHM BUS				B,I		
P	25B	B-30	30; 0OHM BUS				B,I		
P	26A	-	RES BUS (0V-L ON BUS PCB)				B		
P	26B	-	RES BUS (0V-L ON BUS PCB)				B		
P	27A	-	RES BUS (0V-L ON BUS PCB)				B		
P	27B	-	RES BUS (0V-L ON BUS PCB)				B		
P	28	0V-L	GROUND SIGN (LOGIC)				B		X X
P	29A	DO 0	DATA OUT 0 (ENABLE)				B		
P	29B	TSTB 6	TRANSMIT STROBE 6						
P	30A	-	RES (0V-L ON BUS PCB)						
P	30B	TXTH	TRANSMIT DATA THROUGH						
P	31A	TXD	TRANSMIT DATA						
P	31B	TCL	TRANSMIT CLOCK						
P	32	+ 5.5V	+SUPPLY				B		X X

32CH BUS-SELECTOR

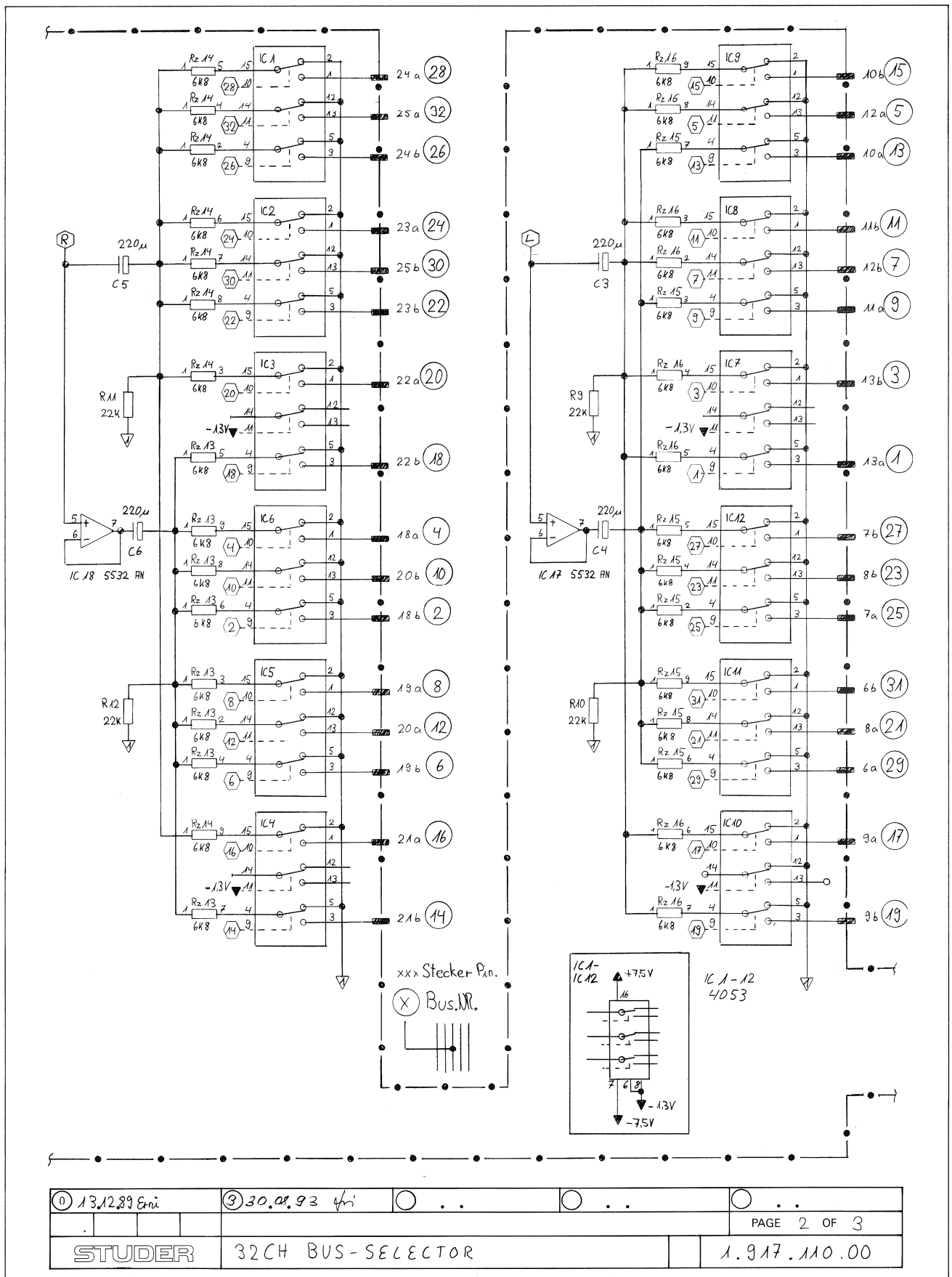
1.917.110.00



① 13.12.89 Eni	① 30.08.93 Trip	○ . .	○ . .	○ . .
STUDER			32CH-BUS. SELECTOR	
			PAGE 1 OF 3	
			1.917.110.00	

32CH BUS-SELECTOR

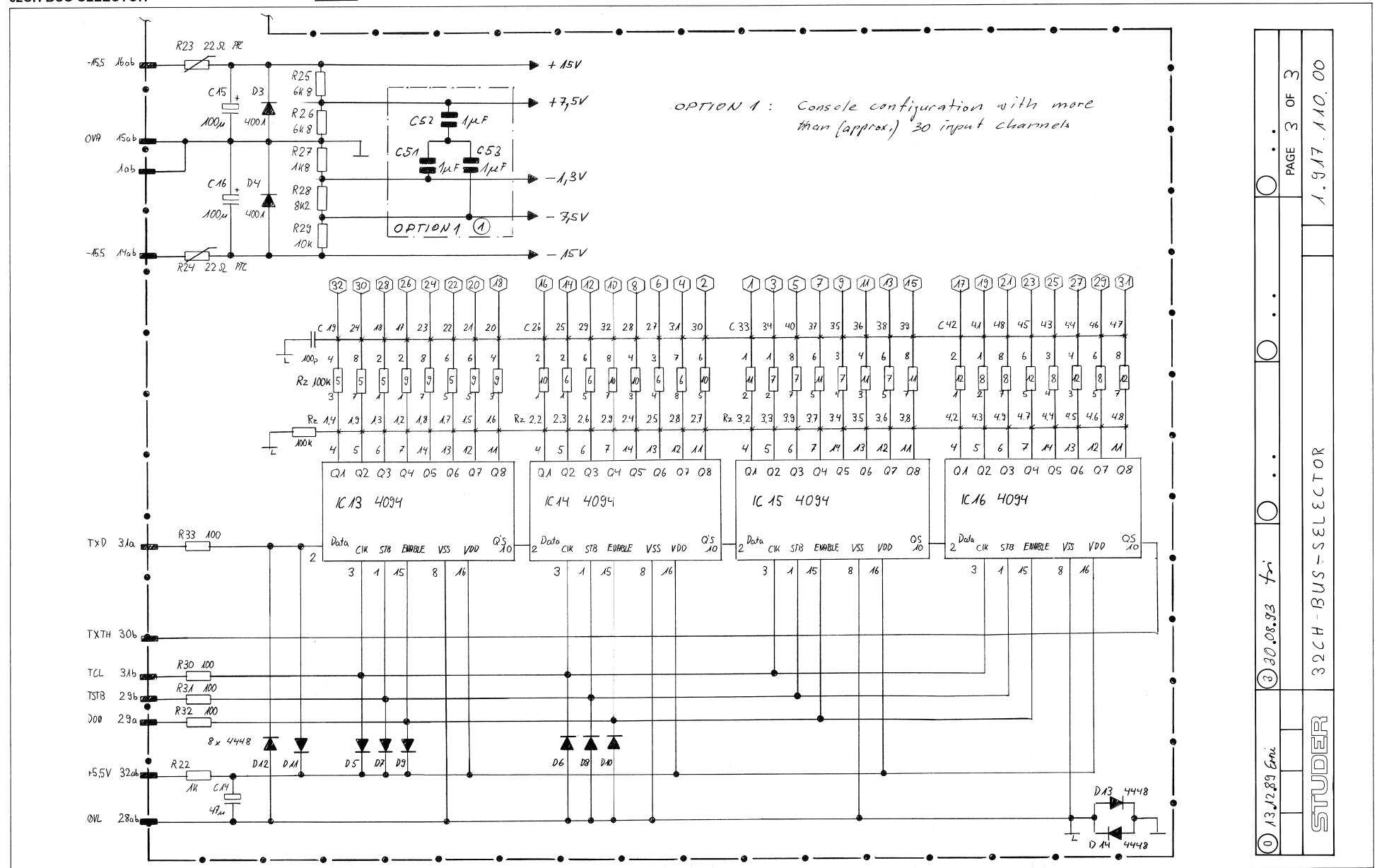
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① 13.12.89 Grn	③ 30.01.93 fr	○ . .	○ . .	○ . .
STUDER		32CH BUS-SELECTOR		PAGE 2 OF 3
				1.917.110.00

32CH BUS-SELECTOR

1.917.110.00



① 13.12.89 Gmi

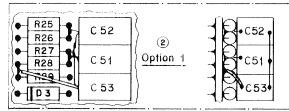
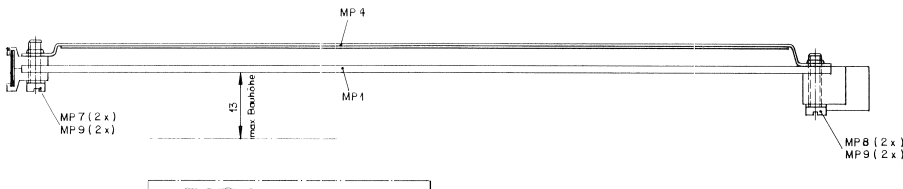
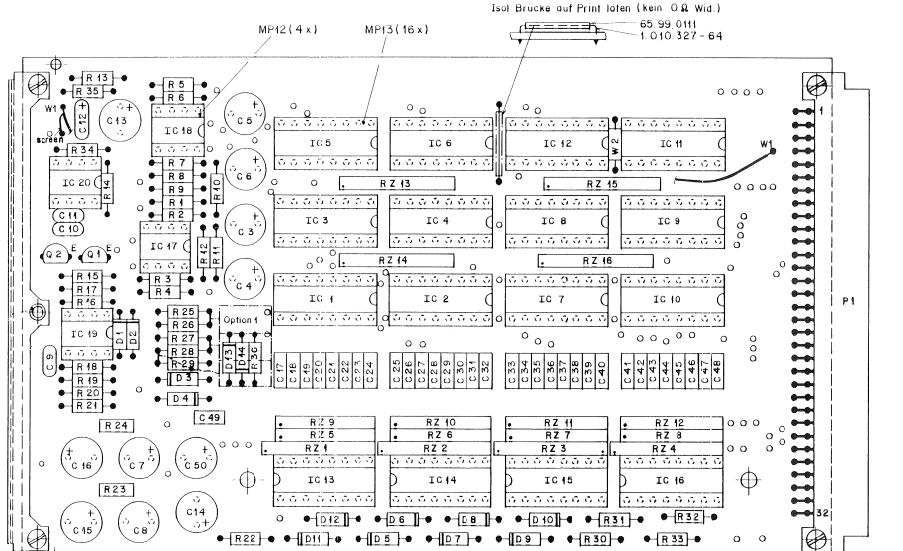
② 20.08.93 fsi

PAGE 3 OF 3

1.917.110.00

32CH BUS-SELECTOR

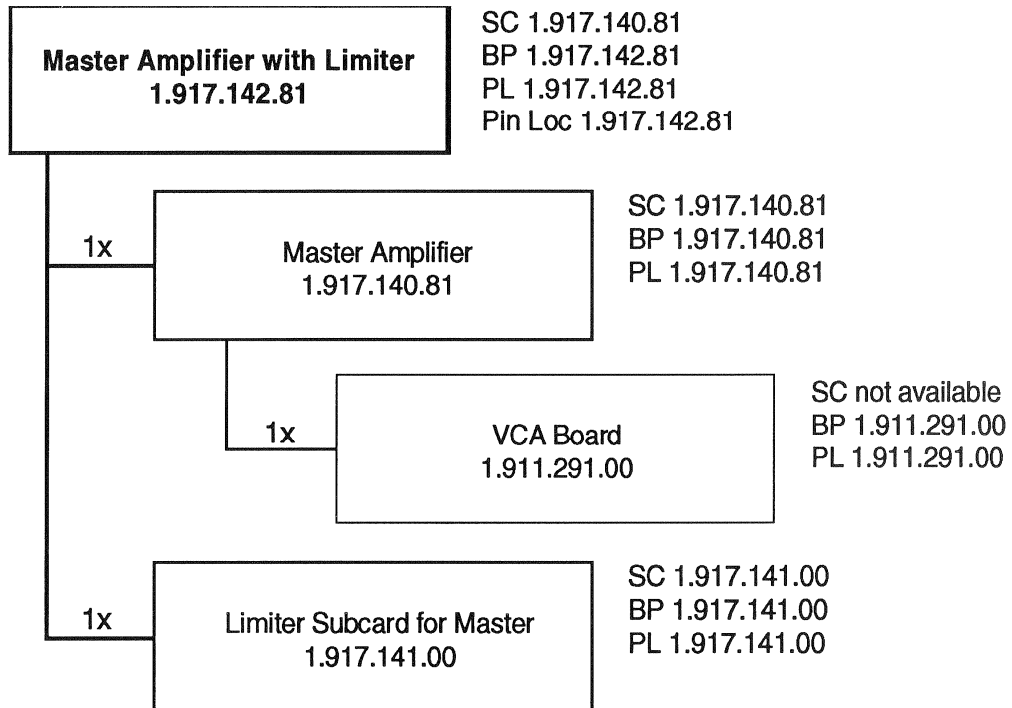
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STUDER REGENDORF ZÜRICH	32 CH BUS SELECTOR	ESE	1.917.110-00
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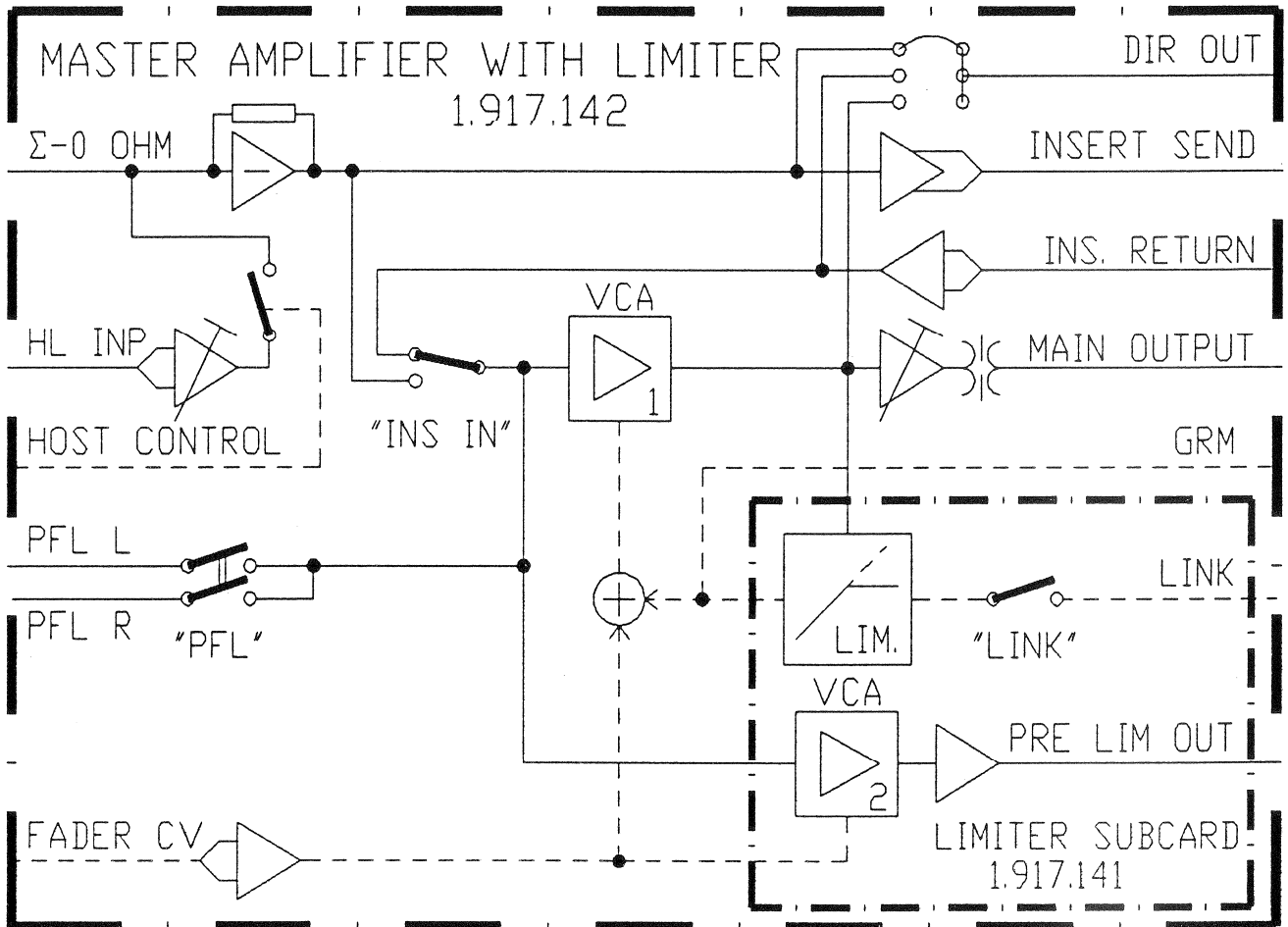
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1			not used	
C....2			not used	
C....3			not used	
C....4	59.22.3221	220 uF	EL 10V	
C....5	59.22.3221	220 uF	EL 10V	
C....6	59.22.3221	220 uF	EL 10V	
C....7	59.22.4221	220 uF	EL 16V	
C....8	59.22.5101	100 uF	EL 16V	
C....9	59.34.2390	39 uF	CER	
C....10	59.34.4101	100 pF	CER	
C....11	59.34.2390	39 uF	CER	
C....12	59.26.1220	22 uF	SAL	
C....13	59.22.5101	100 uF	EL 25V	
C....14	59.22.3221	220 uF	EL 10V	
C....15	59.22.5101	100 uF	EL 25V	
C....16	59.22.5101	100 uF	EL 25V	
C....17	59.34.4101	100 uF	CER	
C....18	59.34.4101	100 uF	CER	
C....19	59.34.4101	100 pF	CER	
C....20	59.34.4101	100 pF	CER	
C....21	59.34.4101	100 pF	CER	
C....22	59.34.4101	100 pF	CER	
C....23	59.34.4101	100 pF	CER	
C....24	59.34.4101	100 pF	CER	
C....25	59.34.4101	100 pF	CER	
C....26	59.34.4101	100 pF	CER	
C....27	59.34.4101	100 pF	CER	
C....28	59.34.4101	100 pF	CER	
C....29	59.34.4101	100 pF	CER	
C....30	59.34.4101	100 pF	CER	
C....31	59.34.4101	100 pF	CER	
C....32	59.34.4101	100 pF	CER	
C....33	59.34.4101	100 pF	CER	
C....34	59.34.4101	100 pF	CER	
C....35	59.34.4101	100 pF	CER	
C....36	59.34.4101	100 pF	CER	
C....37	59.34.4101	100 pF	CER	
C....38	59.34.4101	100 pF	CER	
C....39	59.34.4101	100 pF	CER	
C....40	59.34.4101	100 pF	CER	
C....41	59.34.4101	100 pF	CER	
C....42	59.34.4101	100 pF	CER	
C....43	59.34.4101	100 pF	CER	
C....44	59.34.4101	100 pF	CER	
C....45	59.34.4101	100 pF	CER	
C....46	59.34.4101	100 pF	CER	
C....47	59.34.4101	100 pF	CER	
C....48	59.34.4101	100 pF	CER	
C....49	59.06.0102	1 uF	PE	
C....50	59.22.4221	220 uF	EL 16V	
O3 C....51			OPTION 1	1 uF 63V 10% PE RM 5mm 59.06.0105
O3 C....52			OPTION 1	1 uF 63V 10% PE RM 5mm 59.06.0105
O3 C....53			OPTION 1	1 uF 63V 10% PE RM 5mm 59.06.0105
W.....1	50.04.0125		IM448	
W.....2	50.04.0125		IM448	
W.....3	50.04.0122		IM4001	
W.....4	50.04.0122		IM4001	
W.....5	50.04.0125		IM448	
W.....6	50.04.0125		IM448	
W.....7	50.04.0125		IM448	
W.....8	50.04.0125		IM448	
W.....9	50.04.0125		IM448	
W.....10	50.04.0125		IM448	
W.....11	50.04.0125		IM448	
W.....12	50.04.0125		IM448	
W.....13	50.04.0125		IM448	
W.....14	50.04.0125		IM448	
IC....1	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....2	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....3	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....4	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....5	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....6	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....7	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....8	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....9	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....10	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....11	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....12	50.07.0015	4053	triple 2 ch. analog mux/demux	
IC....13	50.07.0018	4094	shift and store bus register	
IC....14	50.07.0018	4094	shift and store bus register	
IC....15	50.07.0018	4094	shift and store bus register	
IC....16	50.07.0018	4094	shift and store bus register	
IC....17	50.09.0106	NE5532AN	anal op. amp.	
IC....18	50.09.0106	NE5532AN	anal op. amp.	
IC....19	50.09.0117	MC 33078	anal op. amp low offset <1mV (STUDER)	
IC....19	1.010.05.00	NE5532AN	anal op. amp.	
IC....20	50.05.0244	NE5534AN	single op.amp.	
P.....1	54.11.2004		Euro. 2*32 contacts	
Q....1	50.03.0340	BC 337	800mA	
Q....2	50.03.0351	BC 327	800mA	
R....1	57.11.3332	3.3 kOhm	1/4 0.25W MF	
R....2	57.11.3332	3.3 kOhm	1/4 0.25W MF	
R....3	57.11.3101	100 Ohm	1/4 0.25W MF	

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R....4	57.11.3101	100 Ohm	1/4 0.25W MF	
R....5	57.11.3332	3.3 kOhm	1/4 0.25W MF	
R....6	57.11.3332	3.3 kOhm	1/4 0.25W MF	
R....7	57.11.3101	100 Ohm	1/4 0.25W MF	
R....8	57.11.3101	100 Ohm	1/4 0.25W MF	
R....9	57.11.3223	22 kOhm	1/4 0.25W MF	
R....10	57.11.3223	22 kOhm	1/4 0.25W MF	
R....11	57.11.3223	22 kOhm	1/4 0.25W MF	
R....12	57.11.3223	22 kOhm	1/4 0.25W MF	
R....13	57.11.3822	8.2 kOhm	1/4 0.25W MF	
R....14	57.11.3473	47 kOhm	1/4 0.25W MF	
R....15	57.11.3122	1.2 kOhm	1/4 0.25W MF	
R....16	57.11.3221	220 Ohm	1/4 0.25W MF	
R....17	57.11.3221	220 Ohm	1/4 0.25W MF	
R....18	57.11.3472	4.7 kOhm	1/4 0.25W MF	
R....19	57.11.3109	1 Ohm	1/4 0.25W MF	
R....20	57.11.3109	1 Ohm	1/4 0.25W MF	
R....21	57.11.3109	1 Ohm	1/4 0.25W MF	
R....22	57.11.3102	1 kOhm	1/4 0.25W MF	
R....23	57.92.1121	22 Ohm	PTC	
R....24	57.92.1121	22 Ohm	PTC	
R....25	57.11.3682	6.8 kOhm	1/4 0.25W MF	
R....26	57.11.3682	6.8 kOhm	1/4 0.25W MF	
R....27	57.11.3182	1.8 kOhm	1/4 0.25W MF	
R....28	57.11.3822	8.2 kOhm	1/4 0.25W MF	
R....29	57.11.3103	10 kOhm	1/4 0.25W MF	
R....30	57.11.3101	100 Ohm	1/4 0.25W MF	
R....31	57.11.3101	100 Ohm	1/4 0.25W MF	
R....32	57.11.3101	100 Ohm	1/4 0.25W MF	
R....33	57.11.3101	100 Ohm	1/4 0.25W MF	
R....34	57.11.3101	33 Ohm	1/4 0.25W MF	
R....35	57.11.3223	22 kOhm	1/4 0.25W MF	
R....36	57.11.3101	100 Ohm	1/4 0.25W MF	
RZ....1	57.88.4104	100 kOhm	2% resistor-network	
RZ....2	57.88.4104	100 kOhm	2% resistor-network	
RZ....3	57.88.4104	100 kOhm	2% resistor-network	
RZ....4	57.88.4104	100 kOhm	2% resistor-network	
RZ....5	57.88.2104	100 kOhm	2% resistor-network	
RZ....6	57.88.2104	100 kOhm	2% resistor-network	
RZ....7	57.88.2104	100 kOhm	2% resistor-network	
RZ....8	57.88.2104	100 kOhm	2% resistor-network	
RZ....9	57.88.2104	100 kOhm	2% resistor-network	
RZ....10	57.88.2104	100 kOhm	2% resistor-network	
RZ....11	57.88.2104	100 kOhm	2% resistor-network	
RZ....12	57.88.2104	100 kOhm	2% resistor-network	
RZ....13	57.88.2682	6.8 kOhm	2% resistor-network	
O1 RZ....14	57.88.4682	6.8 kOhm	2% resistor-network	
RZ....14	57.88.2682	6.8 kOhm	2% resistor-network	
O1 RZ....15	57.88.4682	6.8 kOhm	2% resistor-network	
RZ....15	57.88.2682	6.8 kOhm	2% resistor-network	
RZ....16	57.88.2682	6.8 kOhm	2% resistor-network	
O1 RZ....16	57.88.4682	6.8 kOhm	2% resistor-network	
W.....1	64.03.0186	165 mm	Kabel abgeschirmt	
O2 W.....1	1.917.110.94	1 pcs	K1 32 CH BUS SELECTOR	
W.....2	57.11.3000	0 Ohm		
MP....1	1.917.110.11	1 pcs	Print	Studer
MP....2	1.917.110.01	1 pcs	Bez. Streifen 6.3*91	Studer
MP....3	1.010.006.33	2 pcs	Griffhaelften	Studer
MP....4	1.010.090.49	1 pcs	Abschirmblech	Studer
MP....5	1.010.096.49	1 pcs	Klarsicht Schild	
MP....6	28.21.1380	1 pcs	Rohrriete D2.5/6	
MP....7	21.01.0280	2 pcs	Z - Schraube M2.5*8	
MP....8	21.01.0281	2 pcs	Z - Schraube M2.5*10	
MP....9	24.16.1025	4 pcs	Rippscheibe D2.7/5	
MP....10	43.01.0108	1 pcs	ES-Marnschild	
MP....11				
MP....12	53.03.0166	4 pcs	IC-Sockel 8 Pin	
MP....13	53.03.0168	16 pcs	IC-Sockel 16 Pin	
OPTION 1:			Console configurations with more than (approx.) 30 input channels need additional DC supply filtering. (Index 3; C51, C52, C53)	
Index 3:			0 Volt generator (IC19) with low offset < 1mV	
CER=ceramic, EL=electrolytic, PE=polyester				
MANUFACTURER:			Bu=Burndy, CK=C&K Components Inc, GI=General Instruments, Mo=Motorola, NS=National Semiconductor, Ra=Raytheon, Sss=Secossem, Si=Siemens, Sig=Signetics, Six=Siliconix, Tl=Texas Instruments	
	1.917.110.00		32 CH BUS SELECTOR	SE87/09/0900
	1.917.110.00		32 CH BUS SELECTOR	SE90/02/0801
	1.917.110.00		32 CH BUS SELECTOR	SE91/10/2802
	1.917.110.00		32 CH BUS SELECTOR	FR193/08/3003
END				

Master Amplifier with Limiter**1.917.142.81**

SC: Schema Circuit Diagram
BP: Bestückungsplan PCB Layout
PL: Positionsliste Positional List

MASTER AMPLIFIER WITH LIMITER 1.917.142.81



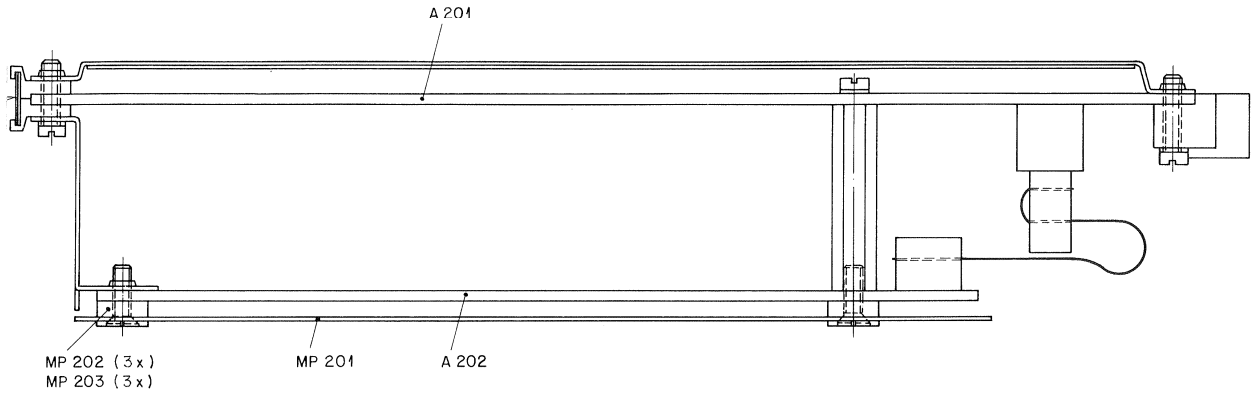
Pin location list

1.917.142

P	NO	NAME	REMARK	
				B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC
P1	01	OVA	(RES)	
P1	02	B-PFL-L	PFL LEFT ; 0-OHM BUS	B,I
P1	03	B-PFL-R	PFL RIGHT ; 0-OHM BUS	B,I
P1	04	OVA-PFL-IN	INPUT GROUND PFL	B
P1	05	OOHM-IN-b	MASTER 0-OHM INPUT (b)	O,I
P1	06	OOHM-IN-OV	GROUND MASTER 0-OHM INPUT	O
P1	07	CV IN +	CONTROL VOLTAGE VCA (+)	O
P1	08	CV IN -	CONTROL VOLTAGE VCA (-)	O
P1	09	LINK/GRM	LINK/GAIN REDUKTION METER	O
P1	10	INS-SEND-a	SYM INSERT OUTPUT a	S
P1	11	INS-SEND-b	SYM INSERT OUTPUT b	S
P1	12	INS-RET -a	SYM INSERT INPUT a	S
P1	13	INS-RET -b	SYM INSERT INPUT b	S
P1	14	- 15.5V	- SUPPLY	B
P1	15	OV-A	GROUND AUDIO	B
P1	16	+ 15.5V	+ SUPPLY	B
P1	17	M-OUT-a	MASTER OUTPUT a	S
P1	18	M-OUT-b	MASTER OUTPUT b	S
P1	19	OVE	GROUND EXTERN	B
P1	20	HL-IN-a	HIGH LEVEL INPUT a	S
P1	21	HL-IN-b	HIGH LEVEL INPUT b	S
P1	22	VCA2-OUT-a	VCA2 OUTPUT a (AUDIO)	S
P1	23	VCA2-OUT-b	VCA2 OUTPUT b (AUDIO)	S
P1	24	DIR-OUT-a	DIRECT OUT (a)	AS
P1	25	AUX	AUXILIARY INPUT/OUTPUT	AS
P1	26	DO 0	DATA OUT 0 (ENABLE)	O
P1	27	TXTH	TRANSMIT DATA THROUGH	O
P1	28	OV-L	GROUND SIGN (LOGIC)	B
P1	29	TSTB 7	TRANSMIT STROBE 7	O
P1	30	TCL	TRANSMIT CLOCK	O
P1	31	TXD	TRANSMIT DATA	O
P1	32	+ 5.5V	+ SUPPLY	B

MASTER AMP. WITH LIMITER

1.917.142.81



Ausgabe					③
Andeuerung					②
					①
Datum	29.8.91	Gez.	Gepr.	Ges.	①
Index					

STUDER REGENSDORF ZÜRICH	Benennung: MASTER AMP. WITH LIMITER	Kopie für:	Nummer:
			1.917.142 -81

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

A...201	1.917.140.81		Master Amplifier	St
A...202	1.917.141.00		Limiter Subcard f.Master Ampl.	St
MP..201	1.917.142.03	0001 pcs	Isolation	
MP..202	1.917.142.02	0003 pcs	Isolierhülse	
MP..203	21.01.2280	0003 pcs	S-Schr.,ZN,M2.5*8	
MP..204	1.917.142.04	0000 pcs	Bezeichnungstreifen	

NOTE 1: Option: Double YCA for better noise performance
 IC108 50110140 DBX 2150 A
 R 132 57113243 24 kOhm 1%
 R 133 57113243 24 kOhm 1%

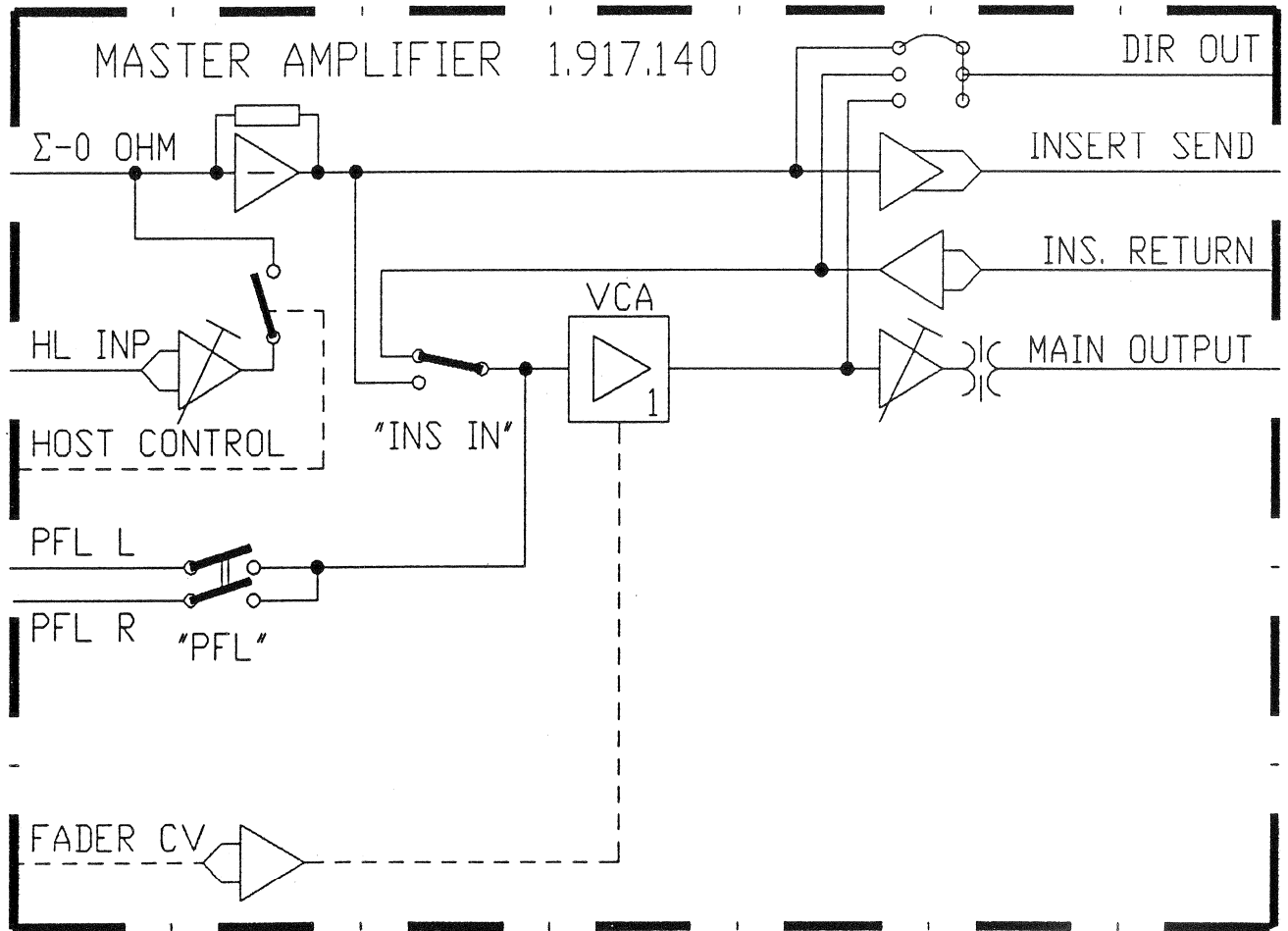
(-81) 91/10/21 A 201 has changed to -81

CER = ceramic, EL = electrolytic, PE = polyester, SAL = Solid Aluminium

MANUFACTURER dbx=dbx-Incorporation, Ex=Exar, ITT=Intermetall,
 JRC=Japan Radio Corporation, Mot=Motorola,
 NS=National Semiconductors, Ph=Philips, Ra=Raytheon,
 RCA=Radio Corporation of America, Sie=Siemens,
 Sig=Signetics, Six=Siliconix, St=Studer, Tf=Telefunken,
 Tho=Thomson, TI=Texas Instruments

1.917.142.81 MASTER AMP.WITH LIMITER HOR91/10/2100

MASTER AMPLIFIER 1.917.140.81



Pin location list

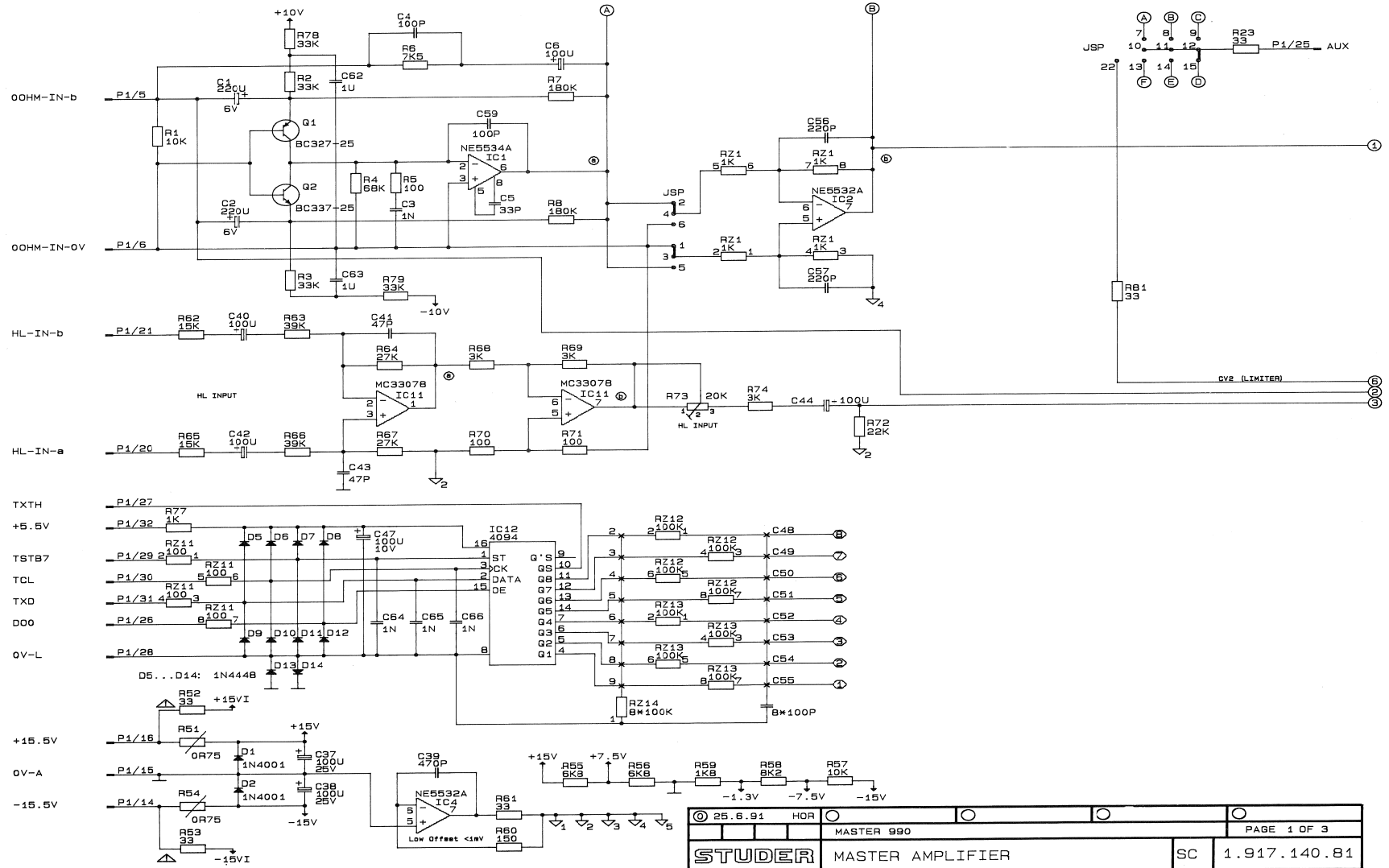
1.917.140

P	NO	NAME	REMARK	

				B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC -----
P1	01	OVA	(RES)	
P1	02	B-PFL-L	PFL LEFT ; 0-OHM BUS	B,I
P1	03	B-PFL-R	PFL RIGHT ; 0-OHM BUS	B,I
P1	04	OVA-PFL-IN	INPUT GROUND PFL	B
P1	05	OOHM-IN-b	MASTER 0-OHM INPUT (b)	O,I
P1	06	OOHM-IN-0V	GROUND MASTER 0-OHM INPUT	O
P1	07	CV IN +	CONTROL VOLTAGE VCA (+)	O
P1	08	CV IN -	CONTROL VOLTAGE VCA (-)	O
P1	09	-	RESERVED	
P1	10	INS-SEND-a	SYM INSERT OUTPUT a	S
P1	11	INS-SEND-b	SYM INSERT OUTPUT b	S
P1	12	INS-RET -a	SYM INSERT INPUT a	S
P1	13	INS-RET -b	SYM INSERT INPUT b	S
P1	14	- 15.5V	- SUPPLY	B
P1	15	0V-A	GROUND AUDIO	B
P1	16	+ 15.5V	+ SUPPLY	B
P1	17	M-OUT-a	MASTER OUTPUT a	S
P1	18	M-OUT-b	MASTER OUTPUT b	S
P1	19	OVE	GROUND EXTERN	B
P1	20	HL-IN-a	HIGH LEVEL INPUT a	S
P1	21	HL-IN-b	HIGH LEVEL INPUT b	S
P1	22	-	RESERVED	
P1	23	-	RESERVED	
P1	24	DIR-OUT-a	DIRECT OUT (a)	AS
P1	25	AUX	AUXILIARY INPUT/OUTPUT	AS
P1	26	DO 0	DATA OUT 0 (ENABLE)	O
P1	27	TXTH	TRANSMIT DATA THROUGH	O
P1	28	OV-L	GROUND SIGN (LOGIC)	B
P1	29	TSTB 7	TRANSMIT STROBE 7	O
P1	30	TCL	TRANSMIT CLOCK	O
P1	31	TXD	TRANSMIT DATA	O
P1	32	+ 5.5V	+ SUPPLY	B

MASTER AMPLIFIER

1.917.140.81

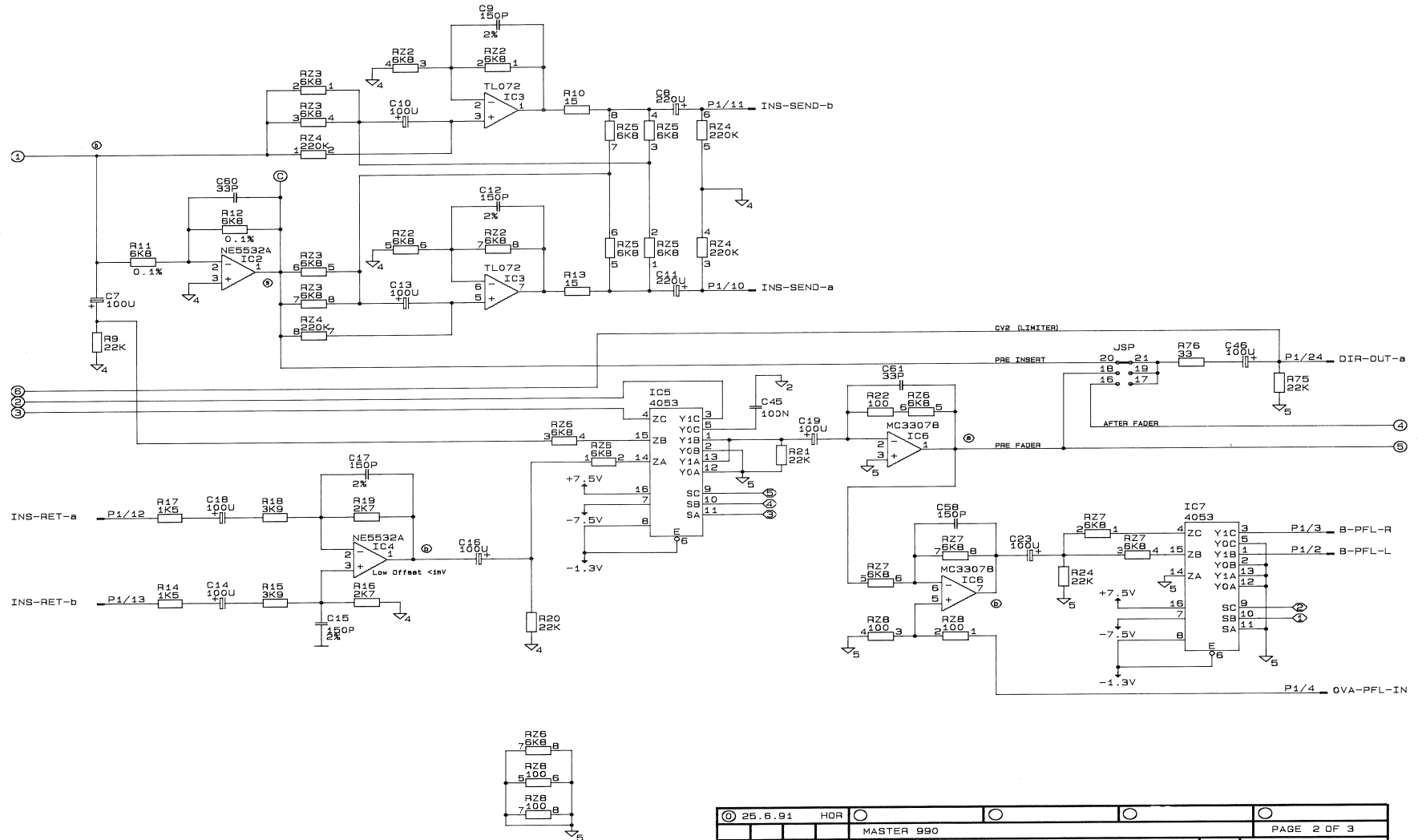


25.6.91	HOR		
MASTER 990		PAGE 1 OF 3	
STUDER		MASTER AMPLIFIER	SC 1.917.140.81

MASTER AMPLIFIER



1.917.140.81

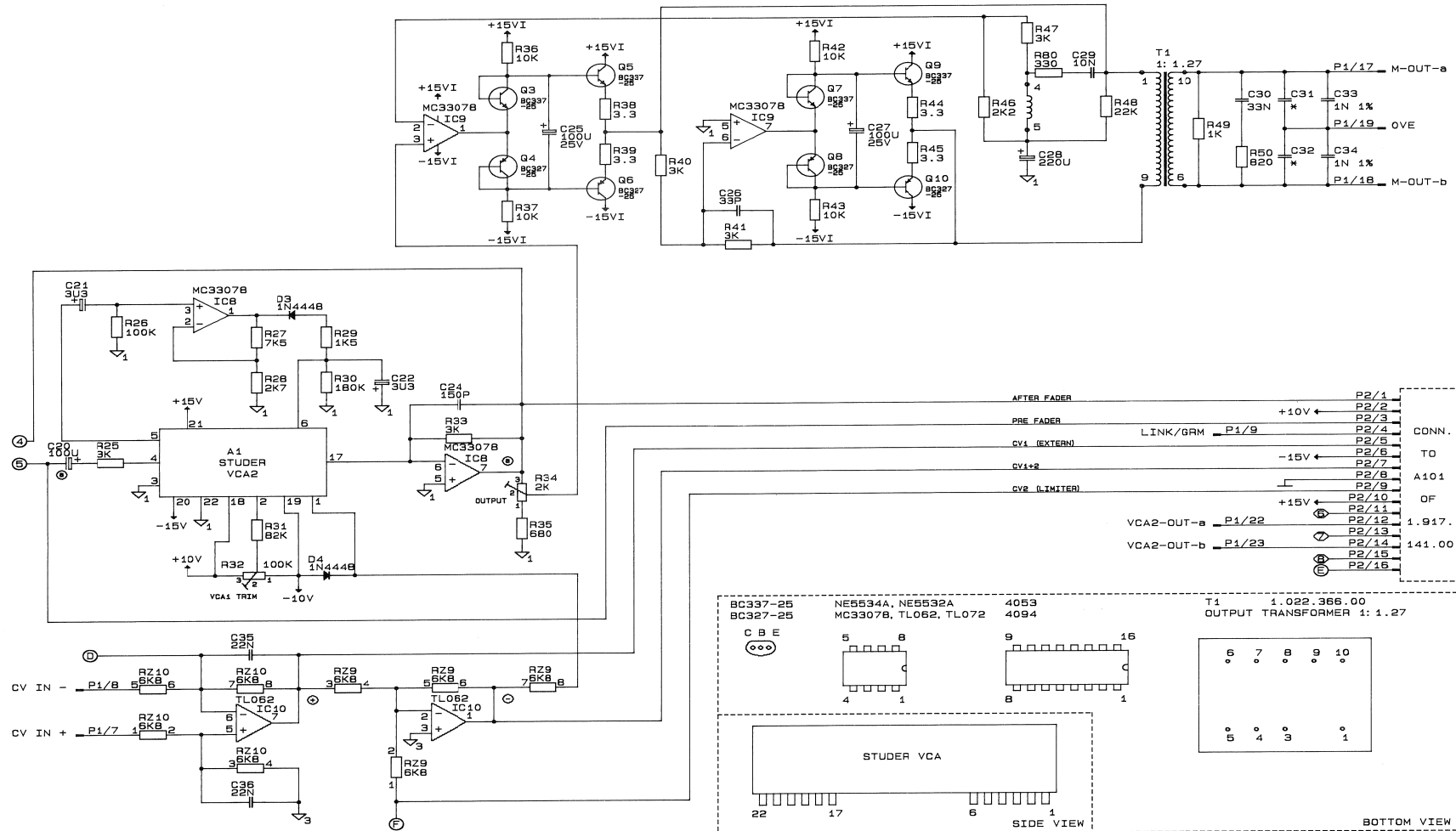


© 25.6.91	HOR			
MASTER 990			PAGE 2 OF 3	
STUDER		MASTER AMPLIFIER		SC 1.917.140.81

MASTER AMPLIFIER



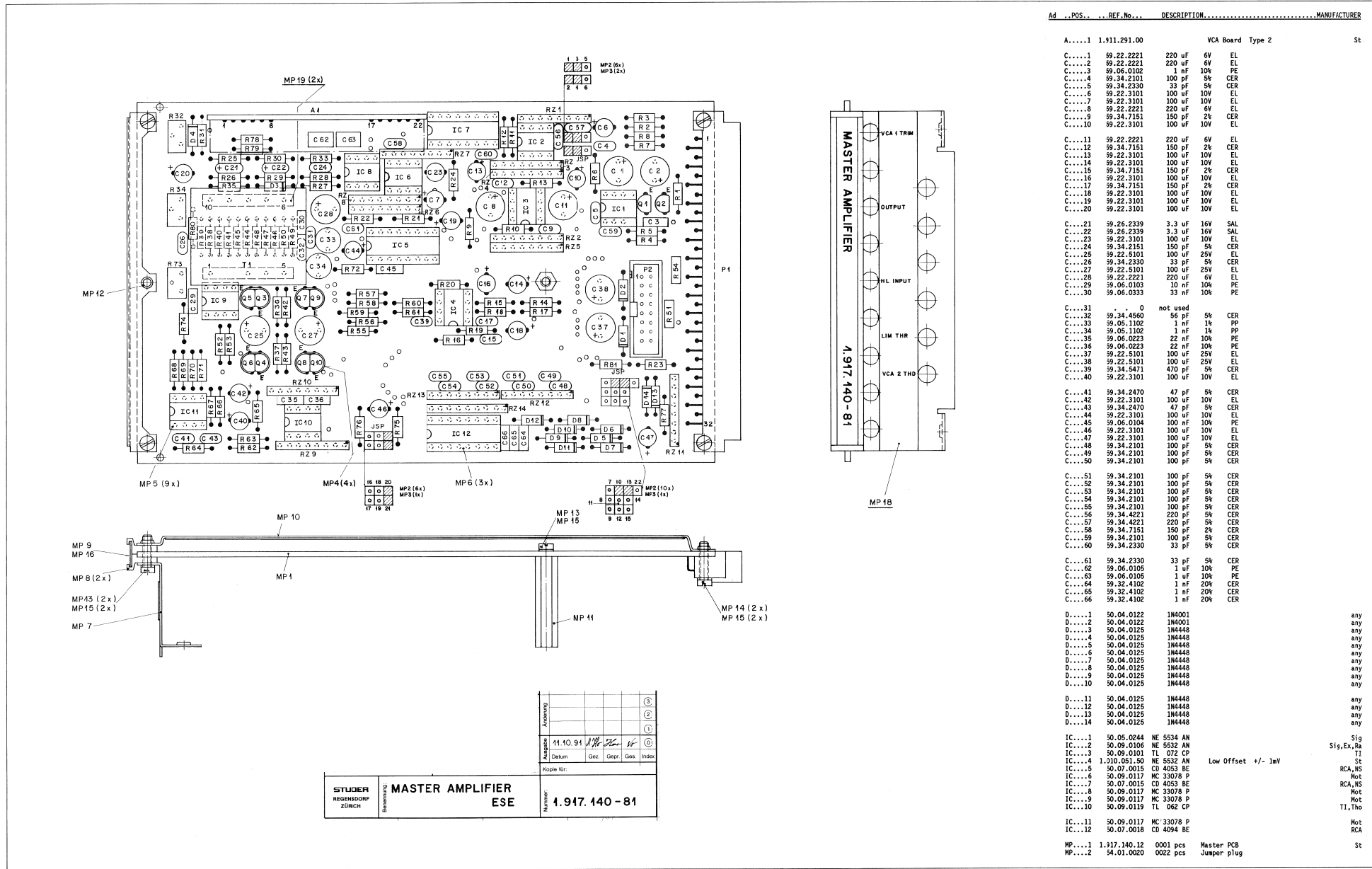
1.917.140.81



25.6.91	HOR				
MASTER 990			PAGE 3 OF 3		
STUDER		MASTER AMPLIFIER		SC	1.917.140.81

MASTER AMPLIFIER

1.917.140.81



MASTER AMPLIFIER



1.917.140.81

Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
MP	...	3	54.01.0021	0004 pcs	Jumper bridge	R...	68	57.11.3302	3 kOhm 1%
MP	...	4	50.20.2001	0004 pcs	Clip for 2*10 92	R...	69	57.11.3302	3 kOhm 1%
MP	...	5	53.03.0166	0009 pcs	IC-Socket, 8 pin	R...	70	57.11.3101	100 Ohm 1%
MP	...	6	53.03.0168	0003 pcs	IC-Socket, 16 pin	R...	71	57.11.3101	100 Ohm 1%
MP	...	7	1.917.142.01	0001 pce	Haltear	R...	72	57.11.3223	22 kOhm 1%
MP	...	8	1.010.006.33	0002 pcs	Griffhaelfte	R...	73	58.01.9203	20 kOhm 10% variable resistor
MP	...	9	1.010.096.49	0001 pcs	Klarsichtschild	R...	74	57.11.3302	3 kOhm 1%
MP	...	10	1.010.090.49	0001 pcs	Abschirmung komplett	R...	75	57.11.3223	22 kOhm 1%
MP	...	11	1.010.204.27	0001 pcs	Mutterbolzen,M2,5*25	R...	76	57.11.3330	33 Ohm 1%
MP	...	12	28.21.1380	0001 pcs	Rohrniete,D2,25*6,5	R...	77	57.11.3102	1 kOhm 1%
01 MP	...	12	28.21.1390	1 pcs	Rohrniete,D2,25*7,0	R...	78	57.11.3333	33 kOhm 1%
MP	...	13	21.01.0280	0003 pcs	Z-Schr.,ZN,M2,5*8	R...	79	57.11.3333	33 kOhm 1%
MP	...	14	21.01.0281	0002 pcs	Z-Schr.,ZN,M2,5*10	R...	80	57.11.3331	330 Ohm 1%
MP	...	15	24.16.1025	0005 pcs	Rippenscheibe,D2,7/5	R...	81	57.11.3330	33 Ohm 1%
MP	...	16	1.917.140.01	0000 pcs	Bezeichnungsstreifen	RZ...	1	57.88.2102	1 kOhm 2% ,4*
MP	...	17	43.01.0108	0001 pcs	ESE-Warnschild	RZ...	2	57.88.2682	6.8 kOhm 2% ,4*
MP	...	18	1.917.140.02	0001 pcs	Schild Potmeterbeschriftung	RZ...	3	57.88.2682	6.8 kOhm 2% ,4*
MP	...	19	1.911.323.01	0002 pcs	Trafo-Unterlage	RZ...	4	57.88.2224	220 kOhm 2% ,4*
P	1	54.01.0359		Eurocard connector, 32 pin	RZ...	5	57.88.2682	6.8 kOhm 2% ,4*
P	2	54.14.2002		PCB connector for ribbon cable, 16 pin	RZ...	6	57.88.2682	6.8 kOhm 2% ,4*
Q	1	50.03.0351	BC 327-25	ITT,Ph,Sie	RZ...	7	57.88.2682	6.8 kOhm 2% ,4*
Q	2	50.03.0340	BC 337-25	ITT,Ph,Sie	RZ...	8	57.88.2101	100 Ohm 2% ,4*
Q	3	50.03.0340	BC 337-25	ITT,Ph,Sie	RZ...	9	57.88.2682	6.8 kOhm 2% ,4*
Q	4	50.03.0351	BC 327-25	ITT,Ph,Sie	RZ...	10	57.88.2682	6.8 kOhm 2% ,4*
Q	5	50.03.0340	BC 337-25	ITT,Ph,Sie	RZ...	11	57.88.2101	100 Ohm 2% ,4*
Q	6	50.03.0351	BC 327-25	ITT,Ph,Sie	RZ...	12	57.88.2104	100 kOhm 2% ,4*
Q	7	50.03.0340	BC 337-25	ITT,Ph,Sie	RZ...	13	57.88.2104	100 kOhm 2% ,4*
Q	8	50.03.0351	BC 327-25	ITT,Ph,Sie	RZ...	14	57.88.4104	100 kOhm 2% ,8*
Q	9	50.03.0340	BC 337-25	ITT,Ph,Sie	T....	1	1.022.366.00	Output Transformer 1:1.27
Q	10	50.03.0351	BC 327-25	ITT,Ph,Sie				St
R	1	57.11.3103	10 kOhm	1%				
R	2	57.11.3333	33 kOhm	1%				
R	3	57.11.3333	33 kOhm	1%				
R	4	57.11.3683	68 kOhm	1%				
R	5	57.11.3101	100 Ohm	1%				
R	6	57.11.3752	7.5 kOhm	1%				
R	7	57.11.3184	180 kOhm	1%				
R	8	57.11.3184	180 kOhm	1%				
R	9	57.11.3223	22 kOhm	1%				
R	10	57.11.3150	15 Ohm	1%				
R	11	57.99.0250	6.8 kOhm	0.1%				
R	12	57.99.0250	6.8 kOhm	0.1%				
R	13	57.11.3150	15 Ohm	1%				
R	14	57.11.3152	1.5 kOhm	1%				
R	15	57.11.3392	3.9 kOhm	1%				
R	16	57.11.3272	2.7 kOhm	1%				
R	17	57.11.3152	1.5 kOhm	1%				
R	18	57.11.3392	3.9 kOhm	1%				
R	19	57.11.3272	2.7 kOhm	1%				
R	20	57.11.3223	22 kOhm	1%				
R	21	57.11.3223	22 kOhm	1%				
R	22	57.11.3101	100 Ohm	1%				
R	23	57.11.3330	33 Ohm	1%				
R	24	57.11.3223	22 kOhm	1%				
R	25	57.11.3302	3 kOhm	1%				
R	26	57.11.3104	100 kOhm	1%				
R	27	57.11.3752	7.5 kOhm	1%				
R	28	57.11.3272	2.7 kOhm	1%				
R	29	57.11.3152	1.5 kOhm	1%				
R	30	57.11.3184	180 kOhm	1%				
R	31	57.11.3823	82 kOhm	1%				
R	32	58.01.9104	100 kOhm	10%				
R	33	57.11.3302	3 kOhm	1%				
R	34	58.01.9202	2 kOhm	10%				
R	35	57.11.3681	680 Ohm	1%				
R	36	57.11.3103	10 kOhm	1%				
R	37	57.11.3103	10 kOhm	1%				
R	38	57.11.3339	3.3 Ohm	1%				
R	39	57.11.3339	3.3 Ohm	1%				
R	40	57.11.3302	3 kOhm	1%				
R	41	57.11.3302	3 kOhm	1%				
R	42	57.11.3103	10 kOhm	1%				
R	43	57.11.3103	10 kOhm	1%				
R	44	57.11.3339	3.3 Ohm	1%				
R	45	57.11.3339	3.3 Ohm	1%				
R	46	57.11.3222	2.2 kOhm	1%				
R	47	57.11.3302	3 kOhm	1%				
R	48	57.11.3223	22 kOhm	1%				
R	49	57.11.3102	1 kOhm	1%				
R	50	57.11.3821	820 Ohm	1%				
R	51	57.92.7013	0.75 Ohm					
R	52	57.19.0330	33 Ohm					
R	53	57.19.0330	33 Ohm					
R	54	57.92.7013	0.75 Ohm					
R	55	57.11.3682	6.8 kOhm	1%				
R	56	57.11.3682	6.8 kOhm	1%				
R	57	57.11.3103	10 kOhm	1%				
R	58	57.11.3822	8.2 kOhm	1%				
R	59	57.11.3182	1.8 kOhm	1%				
R	60	57.11.3151	150 Ohm	1%				
R	61	57.11.3330	33 Ohm	1%				
R	62	57.11.3153	15 kOhm	1%				
R	63	57.11.3393	39 kOhm	1%				
R	64	57.11.3273	27 kOhm	1%				
R	65	57.11.3153	15 kOhm	1%				
R	66	57.11.3393	39 kOhm	1%				
R	67	57.11.3273	27 kOhm	1%				

HISTORY:

26.6.91 Aenderung der BG von -00 Index 2 auf -81:
 AZ,C29,C33,C34,C62,C63,C64,C65,C66,
 MP1,MP2,MP19,R2,R3,R47,R78,R79,R80,R81,T1

28.8.91 ZT neues Bauteil: C32

29.2.92 AB8 Index (01) Rohrniete neu 7.0 statt 6.5 mm

CER = ceramic, EL = electrolytic, PE = polyester, PP = polypropylen
 PS = polystyrol, SAL = solid aluminium

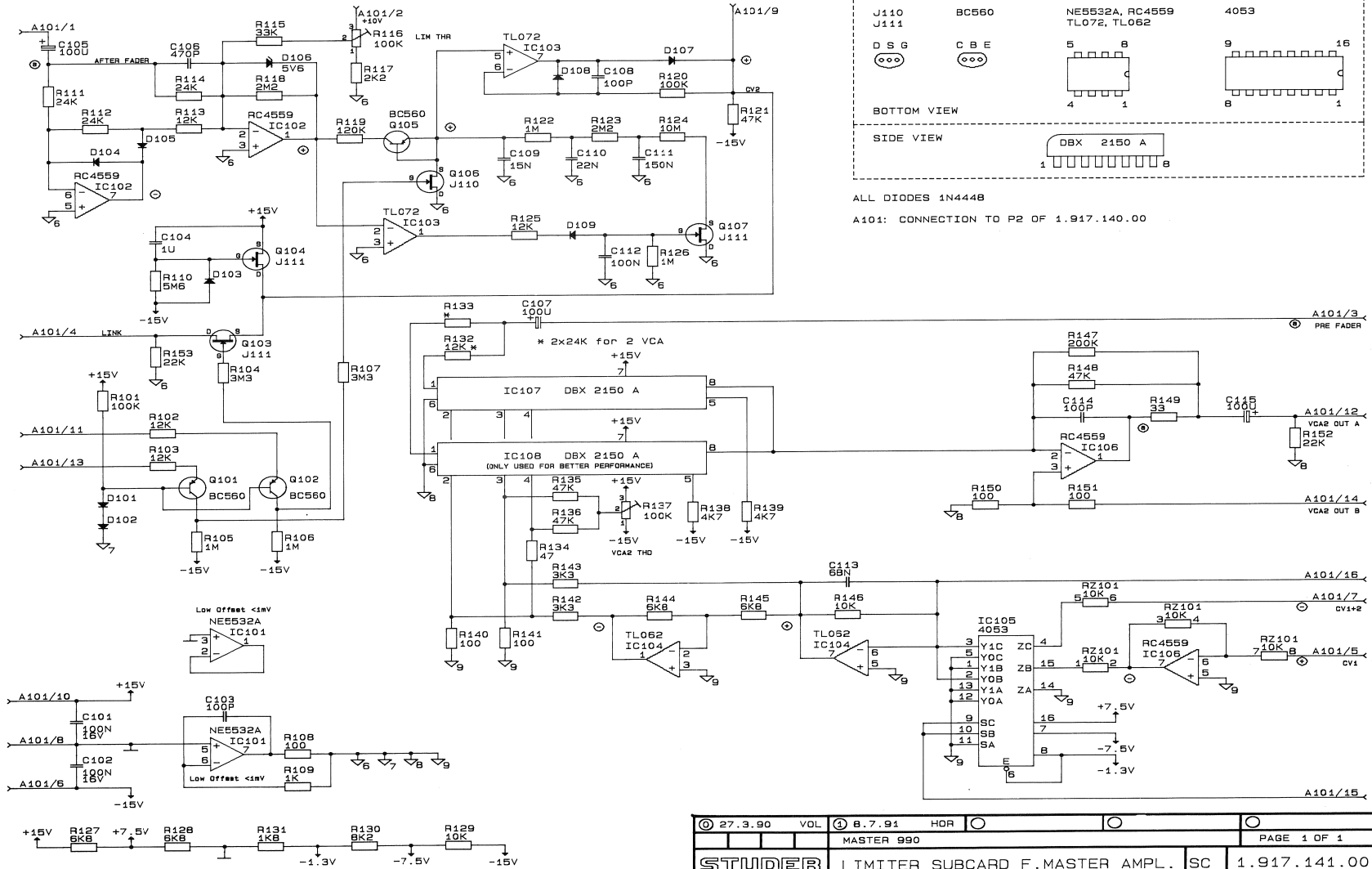
MANUFACTURER Ex=Exar, ITT=Intermetall, JRC=Japan Radio Corporation,
 Mot=Motorola,
 NS=National Semiconductors, Ph=Philips, Ra=Raytheon,
 RCA=Radio corporation of America, Sie=Siemens,
 Sig=Signetics, St=Studer, Tho=Thomson,
 TI=Texas Instruments

1.917.140.81 MASTER AMPLIFIER HOR91/06/2600

1.917.140.81 MASTER AMPLIFIER HOR92/02/2901

LIMITER SUBCARD F. MASTER AMPL.

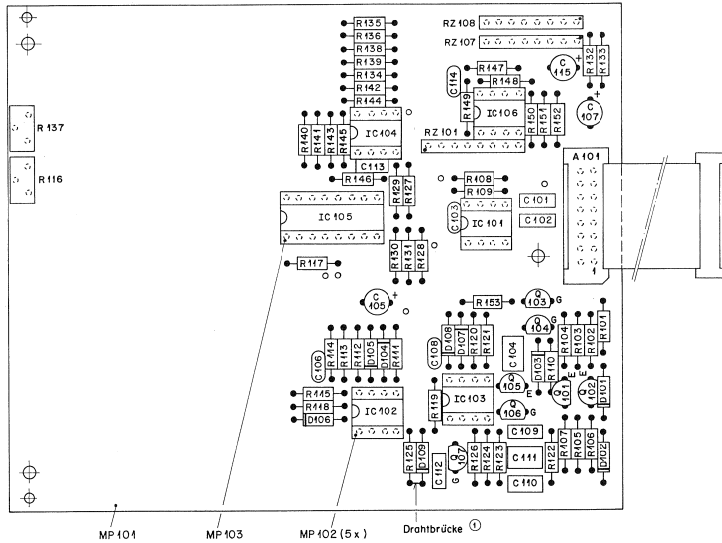
1.917.141.00



27.3.90	VOL	8.7.91	HOR			
MASTER 990						PAGE 1 OF 1
STUDER		LIMITER SUBCARD F. MASTER AMPL. SC			1.917.141.00	

LIMITER SUBCARD F. MASTER AMPL.

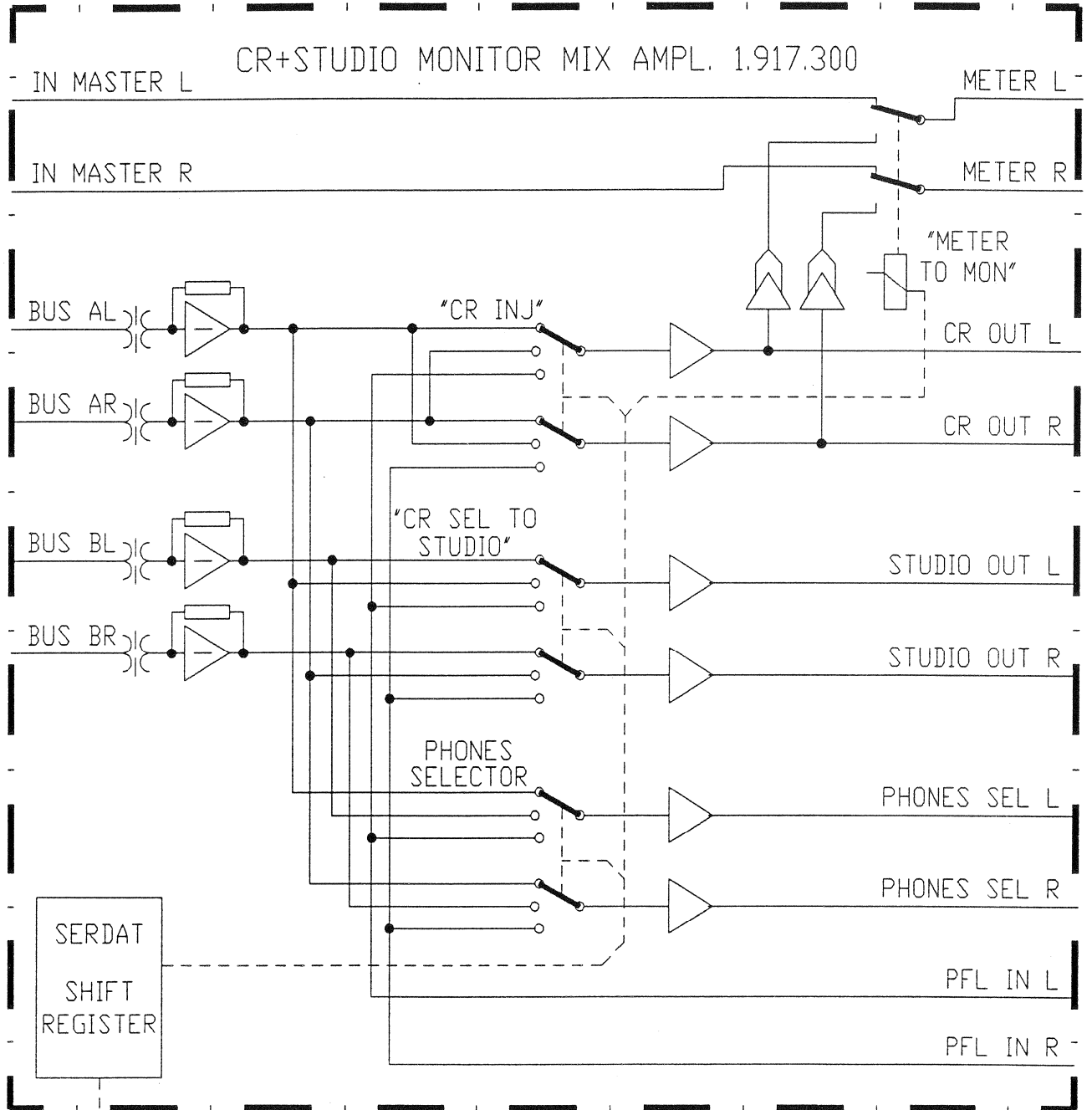
1.917.141.00



Anhang			
25.9.90	JK	JK	JK
Ausgaben:			
2610.89	JK	JK	JK
Datum			
Gez.	Gepr.	Gez.	Index
Kopie für:			
STUDER REGENSDORF ZÜRICH		Bauzeichnung: LIMITER SUBCARD F. MASTER AMPL. ESE Name: 1.917.141-00	

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
A...	101	1.023.111.02	Flat cable, 16 pin, 0.085m	St	R...	146	57.11.3103	10 kOhm 1%	
C...	101	59.06.0104	100 nF 10% PE		R...	147	57.11.3204	200 kOhm 1%	
C...	102	59.06.0104	100 nF 10% PE		R...	148	57.11.3473	47 kOhm 1%	
C...	103	59.34.2101	100 pF 5% CER		R...	149	57.11.3330	33 Ohm 1%	
C...	104	59.06.0105	1 uF 10% PE		R...	150	57.11.3101	100 Ohm 1%	
C...	105	59.22.3101	100 uF 10V EL		R...	151	57.11.3101	100 Ohm 1%	
C...	106	59.34.5471	470 pF 5% CER		R...	152	57.11.3223	22 kOhm 1%	
C...	107	59.22.3101	100 uF 10V EL		R...	153	57.11.3223	22 kOhm 1%	
C...	108	59.34.2101	100 pF 5% CER		RZ...	101	57.88.2103	10 kOhm 2% 4*	
C...	109	59.06.0683	68 nF 10% PE		NOTE 1: Option: Double VCA for better performance				
C...	109	59.06.0153	15 nF 10% PE		IC108 5011040 DBX 2150 A				
C...	110	59.06.0104	100 nF 10% PE		R 132 57113243 24 kOhm 1%				
C...	110	59.06.0223	22 nF 10% PE		R 133 57113243 24 kOhm 1%				
C...	111	59.06.0474	470 nF 10% PE		CER = ceramic, EL = electrolytic, PE = polyester				
C...	111	59.06.5154	150 nF 5% PE		MANUFACTURER dbx=dbx-Incorporation, ITT=Intertec, JRC=Japan Radio Corporation, Mot=Motorola, NS=National Semiconductors, Ph=Philips, Ra=Raytheon, RCA=Radio Corporation of America, Si=Siemens, Si=Siliconix, St=Studer, Tf=Telefunken, Th=Thomson, TI=Texas Instruments				
C...	112	59.06.0104	100 nF 10% PE		1.917.141.00 LIMITER SUBCARD F.MASTER AMPL .VOL90/04/1700				
C...	113	59.06.0683	68 nF 10% PE		1.917.141.00 LIMITER SUBCARD F.MASTER AMPL .VOL90/11/0801				
C...	114	59.34.2101	100 pF 5% CER		END				
C...	115	59.22.3101	100 uF 10V EL		+				
B...	101	50.04.0125	IM4448	any					
B...	102	50.04.0125	IM4448	any					
B...	103	50.04.0125	IM4448	any					
B...	104	50.04.0125	IM4448	any					
B...	105	50.04.0125	IM4448	any					
B...	106	50.04.1108	BZX55C	5.6V					
B...	107	50.04.0125	IM4448	any					
B...	108	50.04.0125	IM4448	any					
B...	109	50.04.0125	IM4448	any					
IC...	101	50.09.0105	NE 5532 N	Sig,Ex,Ra					
IC...	102	50.09.0118	RC 4562 MB	Ra,JRC					
IC...	103	50.09.0101	TL 072 CP	TI					
IC...	104	50.09.0115	TL 062 CP	TI,Tho					
IC...	105	50.07.0015	CD 4053 BE	RCA,NS					
IC...	106	50.09.0118	RC 4562 MB	Ra,JRC					
IC...	107	50.11.0146	DBX 2150 A	dbx					
IC...	108	0	not used	see note 1					
MP...	101	1.917.141.11	0001 pcs	Limiter Sub PCB	St				
MP...	102	53.03.0166	0005 pcs	IC-Socket, 8 pin					
MP...	103	53.03.0168	0001 pcs	IC-Socket,16 pin					
MP...	104	1.917.141.04	0000 pcs	Werkplatte					
MP...	105	43.01.0108	0001 pcs	ESE-Warnschild					
Q...	101	50.03.0496	BC 560	Sie					
Q...	102	50.03.0496	BC 560	Sie					
Q...	103	50.03.0216	J 111	Mot,NS,Six					
Q...	104	50.03.0216	J 111	Mot,NS,Six					
Q...	105	50.03.0496	BC 560	Sie					
Q...	106	50.03.1130	J 110	Mot,NS,Six					
Q...	107	50.03.0216	J 111	Mot,NS,Six					
R...	101	57.11.3104	100 kOhm 1%						
R...	102	57.11.3123	32 kOhm 1%						
R...	103	57.11.3123	32 kOhm 1%						
R...	104	57.11.5335	3.3 MOhm 5%						
R...	105	57.11.3105	1 MOhm 1%						
R...	106	57.11.3105	1 MOhm 1%						
R...	107	57.11.5335	3.3 MOhm 5%						
R...	108	57.11.3101	100 Ohm 1%						
R...	109	57.11.3102	1 kOhm 1%						
R...	110	57.11.4566	5.6 MOhm 5%						
R...	111	57.11.3243	24 kOhm 1%						
R...	112	57.11.3243	24 kOhm 1%						
R...	113	57.11.3123	32 kOhm 1%						
R...	114	57.11.3243	24 kOhm 1%						
R...	115	57.11.3333	33 kOhm 1%						
R...	116	58.01.9104	100 kOhm 10% variable resistor						
R...	117	57.11.3222	2.2 kOhm 1%						
R...	118	57.11.5225	2.2 MOhm 5%						
R...	119	57.11.3243	24 kOhm 1%						
R...	119	57.11.3124	120 kOhm 1%						
R...	120	57.11.3104	100 kOhm 1%						
R...	121	57.11.3473	47 kOhm 1%						
R...	122	57.11.3274	270 kOhm 1%						
R...	122	57.11.3105	1 MOhm 1%						
R...	123	57.11.3684	680 kOhm 1%						
R...	123	57.11.5225	2.2 MOhm 5%						
R...	124	57.11.5335	3.3 MOhm 5%						
R...	124	57.11.5106	10 MOhm 10%						
R...	125	57.11.3123	32 kOhm 1%						
R...	126	57.11.3105	1 MOhm 1%						
R...	127	57.11.3682	6.8 kOhm 1%						
R...	128	57.11.3682	6.8 kOhm 1%						
R...	129	57.11.3103	10 kOhm 1%						
R...	130	57.11.3822	8.2 kOhm 1%						
R...	131	57.11.3182	1.8 kOhm 1%						
R...	132	57.11.3123	32 kOhm 1%	see note 1					
R...	133	0	not used	see note 1					
R...	134	57.11.3470	47 Ohm 1%						
R...	135	57.11.3473	47 kOhm 1%						
R...	136	57.11.3473	47 kOhm 1%						
R...	137	58.01.9104	100 kOhm 10% variable resistor						
R...	138	57.11.3472	4.7 kOhm 1%						
R...	139	57.11.3472	4.7 kOhm 1%						
R...	140	57.11.3101	100 Ohm 1%						
R...	141	57.11.3101	100 Ohm 1%						
R...	142	57.11.3332	3.3 kOhm 1%						
R...	143	57.11.3332	3.3 kOhm 1%						
R...	144	57.11.3682	6.8 kOhm 1%						
R...	145	57.11.3682	6.8 kOhm 1%						

CR+STUDIO MONITOR MIX AMPLIFIER 1.917.300.00



Pin location list

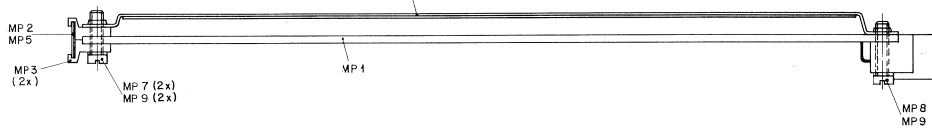
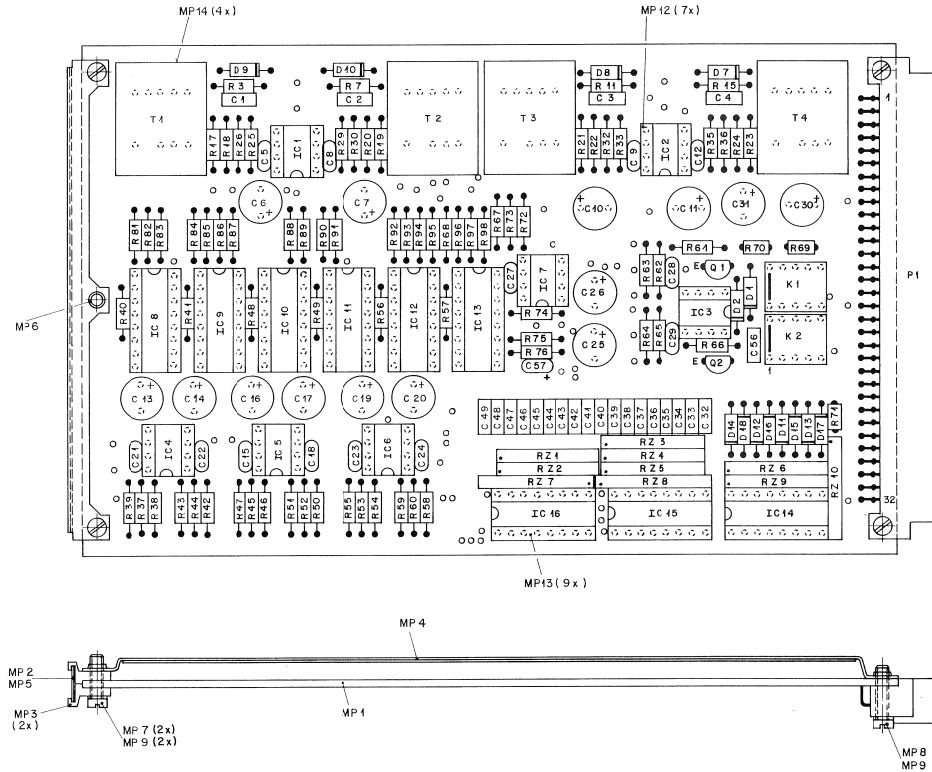
1.917.300

P	NO	NAME	REMARK		
				B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC	

P1	01	0V-A	GROUND AUDIO	B	X X
P1	02A	IN A-L-a	0-OHM INPUT A LEFT a	S	
P1	02B	IN A-L-b	0-OHM INPUT A LEFT b	S	
P1	03A	IN A-R-a	0-OHM INPUT A RIGHT a	S	
P1	03B	IN A-R-b	0-OHM INPUT A RIGHT b	S	
P1	04A	IN B-L-a	0-OHM INPUT B LEFT a	S	
P1	04B	IN B-L-b	0-OHM INPUT B LEFT b	S	
P1	05A	IN B-R-a	0-OHM INPUT B RIGHT a	S	
P1	05B	IN B-R-b	0-OHM INPUT B RIGHT b	S	
P1	06	0V-A	GROUND AUDIO	B	X X
P1	07A	-	RES		
P1	07B	-	RES		
P1	8	0V-A	GROUND AUDIO	B	X X
P1	09A	M-HL-L-a	INPUT MASTER HL LEFT a	S	
P1	09B	M-HL-L-b	INPUT MASTER HL LEFT b	S	
P1	10A	M-HL-R-a	INPUT MASTER HL RIGHT a	S	
P1	10B	M-HL-R-b	INPUT MASTER HL RIGHT b	S	
P1	11A	-	N.C.		
P1	11B	-	N.C.		
P1	12A	-	N.C.		
P1	12B	-	N.C.		
P1	13A	METER-L-a	OUTPUT METER LEFT a	S	
P1	13B	METER-L-b	OUTPUT METER LEFT b	S	
P1	14	- 15.5V	- SUPPLY	B	X X
P1	15	0V-A	GROUND AUDIO	B	X X
P1	16	+ 15.5V	+ SUPPLY	B	X X
P1	17A	METER-R-a	OUTPUT METER RIGHT a	S	
P1	17B	METER-R-b	OUTPUT METER RIGHT b	S	
P1	18	0V-A	GROUND AUDIO	B	X X
P1	19A	0V-A	GROUND AUDIO		
P1	19B	PFL-IN-L-b	PFL INPUT LEFT (b)	AS,I	
P1	20A	0V-A	GROUND AUDIO	B	
P1	20B	-	N.C.		
P1	21A	0V-A	GROUND AUDIO		
P1	21B	PFL-IN-R-b	PFL INPUT RIGHT (b)	AS,I	
P1	22A	0V-A	GROUND AUDIO		
P1	22B	CR-OUT-L-a	CR OUTPUT LEFT (a)	AS	
P1	23A	0V-A	GROUND AUDIO		
P1	23B	CR-OUT-R-a	CR OUTPUT RIGHT (a)	AS	
P1	24A	0V-A	GROUND AUDIO		
P1	24B	S-OUT-L-a	STUDIO OUTPUT LEFT (a)	AS	
P1	25A	0V-A	GROUND AUDIO		
P1	25B	S-OUT-R-a	STUDIO OUTPUT RIGHT (a)	AS	
P1	26A	0V-A	GROUND AUDIO		
P1	26B	PHO-OUT-L-a	PHONE OUTPUT LEFT (a)	AS	
P1	27A	0V-A	GROUND AUDIO		
P1	27B	PHO-OUT-R-a	PHONE OUTPUT RIGHT (a)	AS	
P1	28	0V-L	GROUND SIGN (LOGIC)	B	X X
P1	29A	DO 0	DATA OUT 0 (ENABLE)		
P1	29B	TSTB 5	TRANSMIT STROBE 5		
P1	30A	-	RES		
P1	30B	TXTH	TRANSMIT DATA THROUGH		
P1	31A	TXD	TRANSMIT DATA		
P1	31B	TCL	TRANSMIT CLOCK		
P1	32	+ 5.5V	+ SUPPLY	B	X X

MONITOR MIX AMPLIFIER

1.917.300.00



STUDER REGENSDORF ZÜRICH		Bauzeichnung MONITOR MIX. AMPLIFIER ESE		Nummer: 1.917.300-00	
19.3.80	7A	W	W	W	W
27.10.89	89	W	W	W	W
Datum	Gez.	Gepr.	Gez.	Gepr.	Gez.
Kopie für:					

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1	59.06.0682	6,8 nF	10%, 63V, PE	
C....2	59.06.0682	6,8 nF	10%, 63V, PE	
C....3	59.06.0682	6,8 nF	10%, 63V, PE	
C....4	59.06.0682	6,8 nF	10%, 63V, PE	
C....5	59.34.4331	330 pF	5%, 63V, CER	
C....6	59.22.4101	100 uF	-20%, 10V, EL	
C....7	59.22.4101	100 uF	-20%, 10V, EL	
C....8	59.34.4331	330 pF	5%, 63V, CER	
C....9	59.34.4331	330 pF	5%, 63V, CER	
C....10	59.22.4101	100 uF	-20%, 10V, EL	
C....11	59.22.4101	100 uF	-20%, 10V, EL	
C....12	59.34.4331	330 pF	5%, 63V, CER	
C....13	59.22.4101	100 uF	-20%, 10V, EL	
C....14	59.22.4101	100 uF	-20%, 10V, EL	
C....15	59.34.4101	100 pF	5%, 63V, CER	
C....16	59.22.4101	100 uF	-20%, 10V, EL	
C....17	59.22.4101	100 uF	-20%, 10V, EL	
C....18	59.34.4101	100 pF	5%, 63V, CER	
C....19	59.22.4101	100 uF	-20%, 10V, EL	
C....20	59.22.4101	100 uF	-20%, 10V, EL	
C....21	59.34.4101	100 pF	5%, 63V, CER	
C....22	59.34.4101	100 pF	5%, 63V, CER	
C....23	59.34.4101	100 pF	5%, 63V, CER	
C....24	59.34.4101	100 pF	5%, 63V, CER	
C....25	59.22.4101	100 uF	-20%, 10V, EL	
C....26	59.22.4101	100 uF	-20%, 10V, EL	
C....27	59.34.4101	100 pF	5%, 63V, CER	
C....28	59.34.4101	100 pF	5%, 63V, CER	
C....29	59.34.4101	100 pF	5%, 63V, CER	
C....30	59.22.4101	100 uF	-20%, 10V, EL	
C....31	59.22.5101	100 uF	-20%, 25V, EL	
C....32	59.34.4101	100 pF	5%, 63V, CER	
C....33	59.34.4101	100 pF	5%, 63V, CER	
C....34	59.34.4101	100 pF	5%, 63V, CER	
C....35	59.34.4101	100 pF	5%, 63V, CER	
C....36	59.34.4101	100 pF	5%, 63V, CER	
C....37	59.34.4101	100 pF	5%, 63V, CER	
C....38	59.34.4101	100 pF	5%, 63V, CER	
C....39	59.34.4101	100 pF	5%, 63V, CER	
C....40	59.34.4101	100 pF	5%, 63V, CER	
C....41	59.34.4101	100 pF	5%, 63V, CER	
C....42	59.34.4101	100 pF	5%, 63V, CER	
C....43	59.34.4101	100 pF	5%, 63V, CER	
C....44	59.34.4101	100 pF	5%, 63V, CER	
C....45	59.34.4101	100 pF	5%, 63V, CER	
C....46	59.34.4101	100 pF	5%, 63V, CER	
C....47	59.34.4101	100 pF	5%, 63V, CER	
C....48	59.34.4101	100 pF	5%, 63V, CER	
C....49	59.34.4101	100 pF	5%, 63V, CER	
C....56	59.06.0682	6,8 nF	10%, 63V, PE	
C....57	59.26.0680	68 uF	-20%, 6.3V, SAL	
D....1	50.04.0125	1W	4448	any
D....2	50.04.0125	1W	4448	any
D....7	50.04.0125	1W	4448	any
D....8	50.04.0125	1W	4448	any
D....9	50.04.0105	1W	4004	any
D....10	50.04.0105	1W	4004	any
D....11	50.04.0125	1W	4448	any
D....12	50.04.0125	1W	4448	any
D....13	50.04.0125	1W	4448	any
D....14	50.04.0125	1W	4448	any
D....15	50.04.0125	1W	4448	any
D....16	50.04.0125	1W	4448	any
D....17	50.04.0125	1W	4448	any
D....18	50.04.0125	1W	4448	any
IC....1	50.09.0117	MC33078	Dual Op Amp	any
IC....2	50.09.0117	MC33078	Dual Op Amp	any
IC....3	50.09.0117	MC33078	Dual Op Amp	any
IC....4	50.09.0117	MC33078	Dual Op Amp	any
IC....5	50.09.0117	MC33078	Dual Op Amp	any
IC....6	50.09.0117	MC33078	Dual Op Amp	any
IC....7	50.05.0243	5534	single op.amp.	any
IC....8	50.07.0015	4053	Triple Analog-Switch	any
IC....9	50.07.0015	4053	Triple Analog-Switch	any
IC....10	50.07.0015	4053	Triple Analog-Switch	any
IC....11	50.07.0015	4053	Triple Analog-Switch	any
IC....12	50.07.0015	4053	Triple Analog-Switch	any
IC....13	50.07.0015	4053	Triple Analog-Switch	any
IC....14	50.07.0018	4094	Shift & store bus register	any
IC....15	50.07.0018	4094	Shift & store bus register	any
IC....16	50.07.0018	4094	Shift & store bus register	any
K....1	56.04.0195		SDS Relais, Type TQ2- 6V	any
K....2	56.04.0195		SDS Relais, Type TQ2- 6V	any
K....3	.			any
K....4	.			any
K....5	.			any
K....6	.			any
P....1	54.11.2004	1 pcs	Euro, 2 * 32 contacts	any
Q....1	50.03.0496	BC 237	NPN	any
Q....2	50.03.0436	BC 237	NPN	any
Q....3	50.03.0496	BC 237	NPN	any
Q....4	50.03.0436	BC 237	NPN	any



MONITOR MIX AMPLIFIER

1.917.300.00

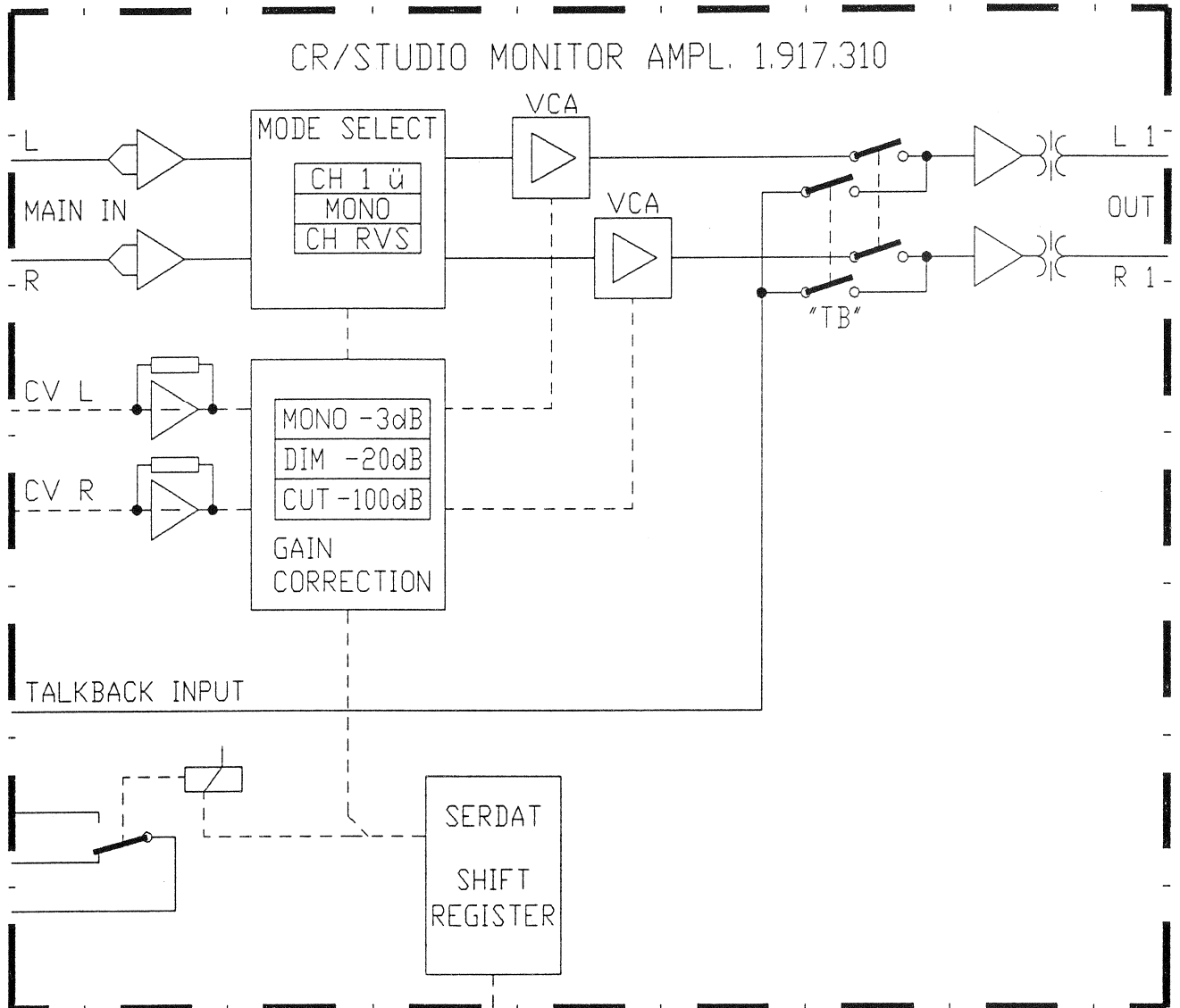
Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
Q....5	.	.			RZ....5	57.88.2104	100 kOhm	2%, 4 * 100k	
Q....6	.	.			RZ....6	57.88.2682	6.8 kOhm	2%, 4 * 6.8k	
R....1	.	.			RZ....7	57.88.4104	100 kOhm	2%, 8 * 100k	
R....2	.	.			RZ....8	57.88.4104	100 kOhm	2%, 8 * 100k	
R....3	57.11.3392	3.9 kOhm	1%		RZ....9	57.88.4104	100 kOhm	2%, 8 * 100k	
R....4	.	.			RZ....10	57.88.2101	100 Ohm	2%, 4 * 100	
R....5	.	.			T....1	1.022.451.00		INPUT TRAF0	STUDER
R....6	.	.			T....2	1.022.451.00		INPUT TRAF0	STUDER
R....7	57.11.3392	3.9 kOhm	1%		T....3	1.022.451.00		INPUT TRAF0	STUDER
R....8	.	.			T....4	1.022.451.00		INPUT TRAF0	STUDER
R....9	.	.			MP....1	1.917.300.11	1 pcs	Print	Studer
R....10	.	.			MP....2	1.917.300.01	1 pcs	Bez. Streifen 6.3*91	Studer
R....11	57.11.3392	3.9 kOhm	1%		MP....3	1.010.006.33	2 pcs	Griffhaelften	Studer
R....12	.	.			MP....4	1.010.090.49	1 pcs	Abschirmblech	Studer
R....13	.	.			MP....5	1.010.096.49	1 pcs	Klarsicht Schild	
R....14	.	.			MP....6	28.21.1380	1 pcs	Rohrniete D2.5/6	
R....15	57.11.3392	3.9 kOhm	1%		MP....7	21.01.0280	2 pcs	Z - Schraube M2.5*8	
R....16	.	.			MP....8	21.01.0281	2 pcs	Z - Schraube M2.5*10	
R....17	57.11.3391	390 Ohm	1%		MP....9	24.16.1025	4 pcs	Rippenscheibe D2.7/5	
R....18	57.11.3123	12 kOhm	1%		MP....10	43.01.0108	1 pcs	ESE-Warnschild	
R....19	57.11.3391	390 Ohm	1%		MP...11	.			
R....20	57.11.3123	12 kOhm	1%		MP...12	53.03.0166	7 pcs	IC-Sockel 8 Pin	
R....21	57.11.3391	390 Ohm	1%		MP...13	53.03.0168	9 pcs	IC-Sockel 16 Pin	
R....22	57.11.3123	12 kOhm	1%		MP...14	1.022.400.03	4 pcs	Isolation zu Trafo	
R....23	57.11.3391	390 Ohm	1%						
R....24	57.11.3123	12 kOhm	1%						
R....25	57.11.3473	47 kOhm	1%						
R....26	57.11.3332	3.3 kOhm	1%						
R....29	57.11.3473	47 kOhm	5%						
R....30	57.11.3332	3.3 kOhm	1%						
R....32	57.11.3473	47 kOhm	1%						
R....33	57.11.3332	3.3 kOhm	1%						
R....35	57.11.3473	47 kOhm	1%						
R....36	57.11.3332	3.3 kOhm	1%						
R....37	57.11.3473	47 kOhm	1%						
R....38	57.11.3822	8.2 kOhm	1%						
R....39	57.11.3330	33 Ohm	1%						
R....40	57.11.3223	22 kOhm	1%						
R....41	57.11.3223	22 kOhm	1%						
R....42	57.11.3330	33 Ohm	1%						
R....43	57.11.3473	47 kOhm	1%						
R....44	57.11.3822	8.2 kOhm	1%						
R....45	57.11.3473	47 kOhm	1%						
R....46	57.11.3822	8.2 kOhm	1%						
R....47	57.11.3330	33 Ohm	1%						
R....48	57.11.3223	22 kOhm	1%						
R....49	57.11.3223	22 kOhm	1%						
R....50	57.11.3330	33 Ohm	1%						
R....51	57.11.3473	47 kOhm	1%						
R....52	57.11.3822	8.2 kOhm	1%						
R....53	57.11.3473	47 kOhm	1%						
R....54	57.11.3822	8.2 kOhm	1%						
R....55	57.11.3330	33 Ohm	1%						
R....56	57.11.3223	22 kOhm	1%						
R....57	57.11.3223	22 kOhm	1%						
R....58	57.11.3330	33 Ohm	1%						
R....59	57.11.3473	47 kOhm	1%						
R....60	57.11.3822	8.2 kOhm	1%						
R....61	57.11.3330	33 Ohm	1%						
R....62	57.11.3682	6.8 kOhm	1%						
R....63	57.11.3682	6.8 kOhm	1%						
R....64	57.11.3682	6.8 kOhm	1%						
R....65	57.11.3682	6.8 kOhm	1%						
R....66	57.11.3330	33 Ohm	1%						
R....67	57.11.3103	10 kOhm	1%						
R....68	57.11.3103	10 kOhm	1%						
R....69	57.92.7014	PTC	650mA						
R....70	57.92.7014	PTC	650mA						
R....71	57.92.7014	PTC	650mA						
R....72	57.11.3682	6.8 kOhm	1%						
R....73	57.11.3682	6.8 kOhm	1%						
R....74	57.11.3103	10 kOhm	1%						
R....75	57.11.3182	1.8 kOhm	1%						
R....76	57.11.3822	8.2 kOhm	1%						
R....81	57.11.3682	6.8 kOhm	1%						
R....82	57.11.3682	6.8 kOhm	1%						
R....83	57.11.3682	6.8 kOhm	1%						
R....84	57.11.3682	6.8 kOhm	1%						
R....85	57.11.3682	6.8 kOhm	1%						
R....86	57.11.3682	6.8 kOhm	1%						
R....87	57.11.3682	6.8 kOhm	1%						
R....88	57.11.3682	6.8 kOhm	1%						
R....89	57.11.3682	6.8 kOhm	1%						
R....90	57.11.3682	6.8 kOhm	1%						
R....91	57.11.3682	6.8 kOhm	1%						
R....92	57.11.3682	6.8 kOhm	1%						
R....93	57.11.3682	6.8 kOhm	1%						
R....94	57.11.3682	6.8 kOhm	1%						
R....95	57.11.3682	6.8 kOhm	1%						
R....96	57.11.3682	6.8 kOhm	1%						
R....97	57.11.3682	6.8 kOhm	1%						
R....98	57.11.3682	6.8 kOhm	1%						
RZ....1	57.88.2104	100 kOhm	2%, 4 * 100k						
RZ....2	57.88.2104	100 kOhm	2%, 4 * 100k						
RZ....3	57.88.2104	100 kOhm	2%, 4 * 100k						
RZ....4	57.88.2104	100 kOhm	2%, 4 * 100k						

EL=Electrolytic, ElBip=Electrolytic Bipolar, PE=Polyester

MANUFACTURER: Fc=Fairchild, ITT=Intermetall, Ph=Philips, Ses=Sescosem, Sie=Siemens, Tf=Telefunken.

1.917.300 00 MONITOR MIX AMPLIFIER SE 89/02/2000
 1.917.300 00 MONITOR MIX AMPLIFIER SE 90/03/1901

CR / STUDIO MONITOR AMPLIFIER 1.917.310.00



Pin location list

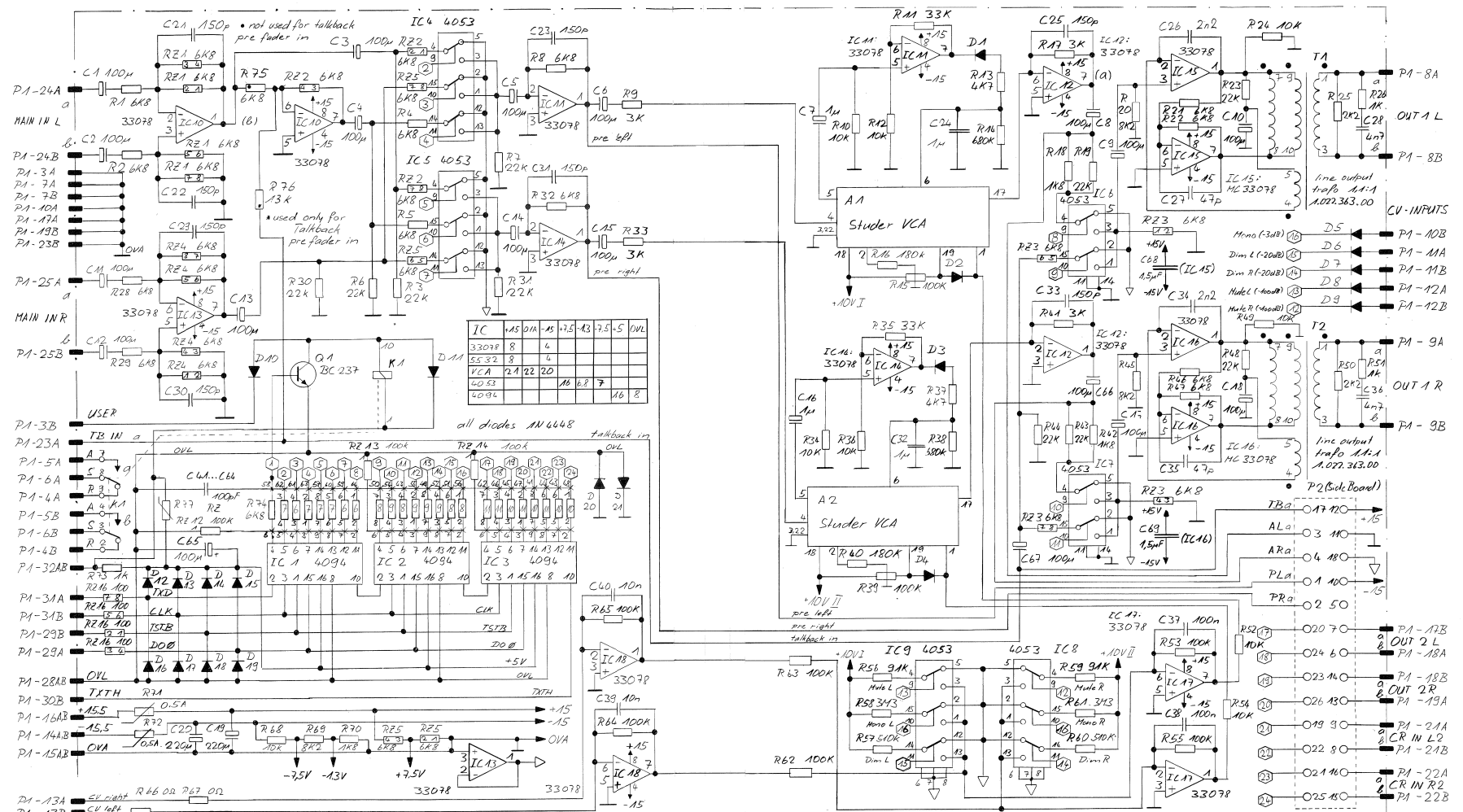
1.917.310

P	NO	NAME	REMARK			
-----			-----			
P1	01A	-	RES			
P1	01B	-	RES			
P1	02A	-	RES			
P1	02B	-	RES			
P1	03A	0V-A	GROUND AUDIO			
P1	03B	D USER				
P1	04A	REL-A-r	RELAIS A ; r= BREAK CONTACT			
P1	04B	REL-B-r	RELAIS B ; r= BREAK CONTACT			
P1	05A	REL-A-a	RELAIS A ; a= MAKE CONTACT			
P1	05B	REL-B-a	RELAIS B ; a= MAKE CONTACT			
P1	06A	REL-A-s	RELAIS A ; s= CONTACT			
P1	06B	REL-B-s	RELAIS B ; s= CONTACT			
P1	07	0V-A	GROUND AUDIO	B	X	X
P1	08A	MON-OUT1-L-a	MONITOR OUTPUT 1 LEFT a	S		
P1	08B	MON-OUT1-L-b	MONITOR OUTPUT 1 LEFT b	S		
P1	09A	MON-OUT1-R-a	MONITOR OUTPUT 1 RIGHT a	S		
P1	09B	MON-OUT1-R-b	MONITOR OUTPUT 1 RIGHT b	S		
P1	10A	0V-A	GROUND AUDIO			
P1	10B	CV-MONO-D	CONTROL VOLTAGE MONO			
P1	11A	CV-DIM -D-L	CONTROL VOLTAGE -20dB LEFT			
P1	11B	CV-DIM -D-R	CONTROL VOLTAGE -20dB RIGHT			
P1	12A	CV-MUTE-D-L	CONTROL VOLTAGE MUTE LEFT			
P1	12B	CV-MUTE D-R	CONTROL VOLTAGE MUTE RIGHT			
P1	13A	CV-VCA-R	CONTROL VOLTAGE VCA RIGHT			
P1	13B	CV-VCA-L	CONTROL VOLTAGE VCA LEFT			
P1	14	- 15.5V	- SUPPLY	B	X	X
P1	15	0V-A	GROUND AUDIO	B	X	X
P1	16	+ 15.5V	+ SUPPLY	B	X	X
P1	17A	0V-A	GROUND AUDIO			
P1	17B	MON-OUT2-L-a	MONITOR OUTPUT 2 LEFT a	S		
P1	18A	MON-OUT2-L-b	MONITOR OUTPUT 2 LEFT b	S		
P1	18B	MON-OUT2-R-a	MONITOR OUTPUT 2 RIGHT a	S		
P1	19A	MON-OUT2-R-b	MONITOR OUTPUT 2 RIGHT b	S		
P1	19B	0V-A	GROUND AUDIO			
P1	20A	-	N.C.			
P1	20B	-	N.C.			
P1	21A	MON-IN2-L-a	MONITOR INPUT 2 LEFT a	S		
P1	21B	MON-IN2-L-b	MONITOR INPUT 2 LEFT b	S		
P1	22A	MON-IN2-R-a	MONITOR INPUT 2 RIGHT a	S		
P1	22B	MON-IN2-R-b	MONITOR INPUT 2 RIGHT b	S		
P1	23A	TB-IN-a	TALKBACK INPUT (a)	AS		
P1	23B	0V-A	GROUND AUDIO			
P1	24A	MON-IN1-L-a	MONITOR INPUT 1 LEFT a	S		
P1	24B	MON-IN1-L-b	MONITOR INPUT 1 LEFT b	S		
P1	25A	MON-IN1-R-a	MONITOR INPUT 1 RIGHT a	S		
P1	25B	MON-IN1-R-b	MONITOR INPUT 1 RIGHT b	S		
P1	26A	-	RES			
P1	26B	-	RES			
P1	27A	-	RES			
P1	27B	-	RES			
P1	28	0V-L	GROUND SIGN (LOGIC)	B	X	X
P1	29A	DO 0	DATA OUT 0 (ENABLE)			
P1	29B	TSTB 4	TRANSMIT STROBE 4			
P1	30A	-	RES			
P1	30B	TXTH	TRANSMIT DATA THROUGH			
P1	31A	TXD	TRANSMIT DATA			
P1	31B	TCL	TRANSMIT CLOCK			
P1	32	+ 5.5V	+ SUPPLY	B	X	X

CR/STUDIO MONITOR AMPLIFIER



1.917.310.00

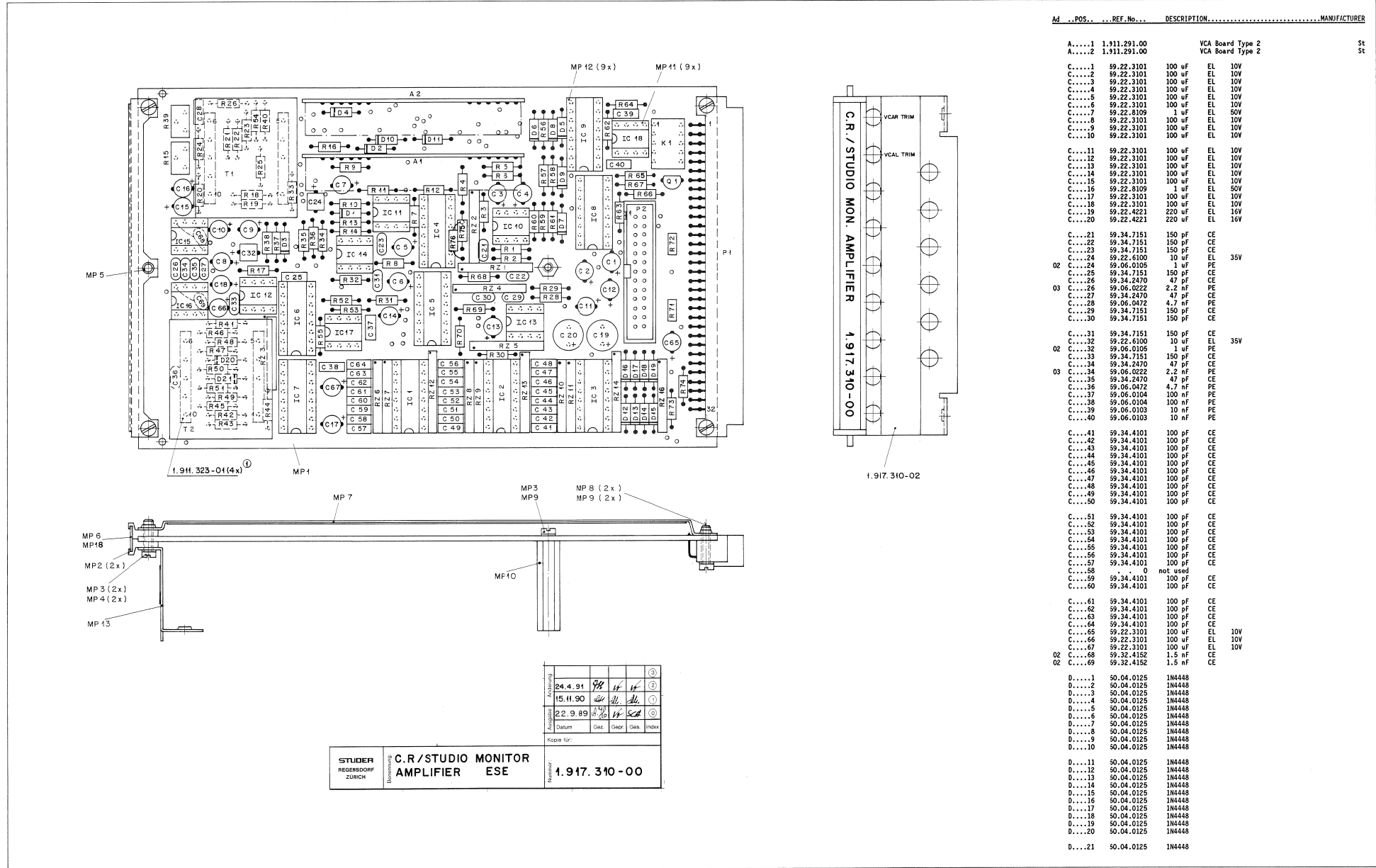


① 10.4.90 A Schmid	② 24.04.91 A Schmid	③ 07.02.92 Emi	...
PAGE 1 OF 2			
STUDER	CR/STUDIO-MONITOR AMPLIFIER	SC	A 9A7 3A0 00

① 10.4.90 A Schmid	② 24.04.91 A Schmid	③ 07.02.92 Emi	...
PAGE 2 OF 2			
STUDER	CR/STUDIO-MONITOR AMPLIFIER	SC	A 9A7 3A0 00

CR/STUDIO MONITOR AMPLIFIER

1.917.310.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A....1		1.911.291.00	VCA Board Type 2	St
A....2		1.911.291.00	VCA Board Type 2	St
C....1		99.22.3101	100 uF EL 10V	
C....2		99.22.3101	100 uF EL 10V	
C....3		99.22.3101	100 uF EL 10V	
C....4		99.22.3101	100 uF EL 10V	
C....5		99.22.3101	100 uF EL 10V	
C....6		99.22.3101	100 uF EL 10V	
C....7		99.22.8109	1 uF EL 50V	
C....8		99.22.3101	100 uF EL 10V	
C....9		99.22.3101	100 uF EL 10V	
C....10		99.22.3101	100 uF EL 10V	
C....11		99.22.3101	100 uF EL 10V	
C....12		99.22.3101	100 uF EL 10V	
C....13		99.22.3101	100 uF EL 10V	
C....14		99.22.3101	100 uF EL 10V	
C....15		99.22.3101	100 uF EL 10V	
C....16		99.22.8109	1 uF EL 50V	
C....17		99.22.3101	100 uF EL 10V	
C....18		99.22.3101	100 uF EL 10V	
C....19		99.22.4221	220 uF EL 16V	
C....20		99.22.4221	220 uF EL 16V	
C....21		99.34.7151	150 pF CE	
C....22		99.34.7151	150 pF CE	
C....23		99.34.7151	150 pF CE	
C....24		99.22.6100	10 uF EL 35V	
C....25		99.06.0105	1 uF PE	
C....26		99.34.7151	150 pF CE	
C....27		99.34.2470	47 pF CE	
C....28		99.06.0222	2.2 nF PE	
C....29		99.34.2470	47 pF CE	
C....30		99.06.0472	4.7 nF PE	
C....31		99.34.7151	150 pF CE	
C....32		99.22.6100	10 uF EL 35V	
C....33		99.06.0105	1 uF PE	
C....34		99.34.7151	150 pF CE	
C....35		99.34.2470	47 pF CE	
C....36		99.06.0222	2.2 nF PE	
C....37		99.06.0472	4.7 nF PE	
C....38		99.06.0104	10 nF PE	
C....39		99.06.0103	10 nF PE	
C....40		99.06.0103	10 nF PE	
C....41		99.34.4101	100 pF CE	
C....42		99.34.4101	100 pF CE	
C....43		99.34.4101	100 pF CE	
C....44		99.34.4101	100 pF CE	
C....45		99.34.4101	100 pF CE	
C....46		99.34.4101	100 pF CE	
C....47		99.34.4101	100 pF CE	
C....48		99.34.4101	100 pF CE	
C....49		99.34.4101	100 pF CE	
C....50		99.34.4101	100 pF CE	
C....51		99.34.4101	100 pF CE	
C....52		99.34.4101	100 pF CE	
C....53		99.34.4101	100 pF CE	
C....54		99.34.4101	100 pF CE	
C....55		99.34.4101	100 pF CE	
C....56		99.34.4101	100 pF CE	
C....57		99.34.4101	100 pF CE	
C....58		0	not used	
C....59		99.34.4101	100 pF CE	
C....60		99.34.4101	100 pF CE	
C....61		99.34.4101	100 pF CE	
C....62		99.34.4101	100 pF CE	
C....63		99.34.4101	100 pF CE	
C....64		99.34.4101	100 pF CE	
C....65		99.22.3101	100 uF EL 10V	
C....66		99.22.3101	100 uF EL 10V	
C....67		99.22.3101	100 uF EL 10V	
02 C....68		99.32.4152	1.5 nF CE	
02 C....69		99.32.4152	1.5 nF CE	
D....1		50.04.0125	IM4448	
D....2		50.04.0125	IM4448	
D....3		50.04.0125	IM4448	
D....4		50.04.0125	IM4448	
D....5		50.04.0125	IM4448	
D....6		50.04.0125	IM4448	
D....7		50.04.0125	IM4448	
D....8		50.04.0125	IM4448	
D....9		50.04.0125	IM4448	
D....10		50.04.0125	IM4448	
D....11		50.04.0125	IM4448	
D....12		50.04.0125	IM4448	
D....13		50.04.0125	IM4448	
D....14		50.04.0125	IM4448	
D....15		50.04.0125	IM4448	
D....16		50.04.0125	IM4448	
D....17		50.04.0125	IM4448	
D....18		50.04.0125	IM4448	
D....19		50.04.0125	IM4448	
D....20		50.04.0125	IM4448	
D....21		50.04.0125	IM4448	

STUDER REGENSDORF ZÜRICH
 C.R./STUDIO MONITOR AMPLIFIER ESE
 1.917.310.00

CR/STUDIO MONITOR AMPLIFIER ESE



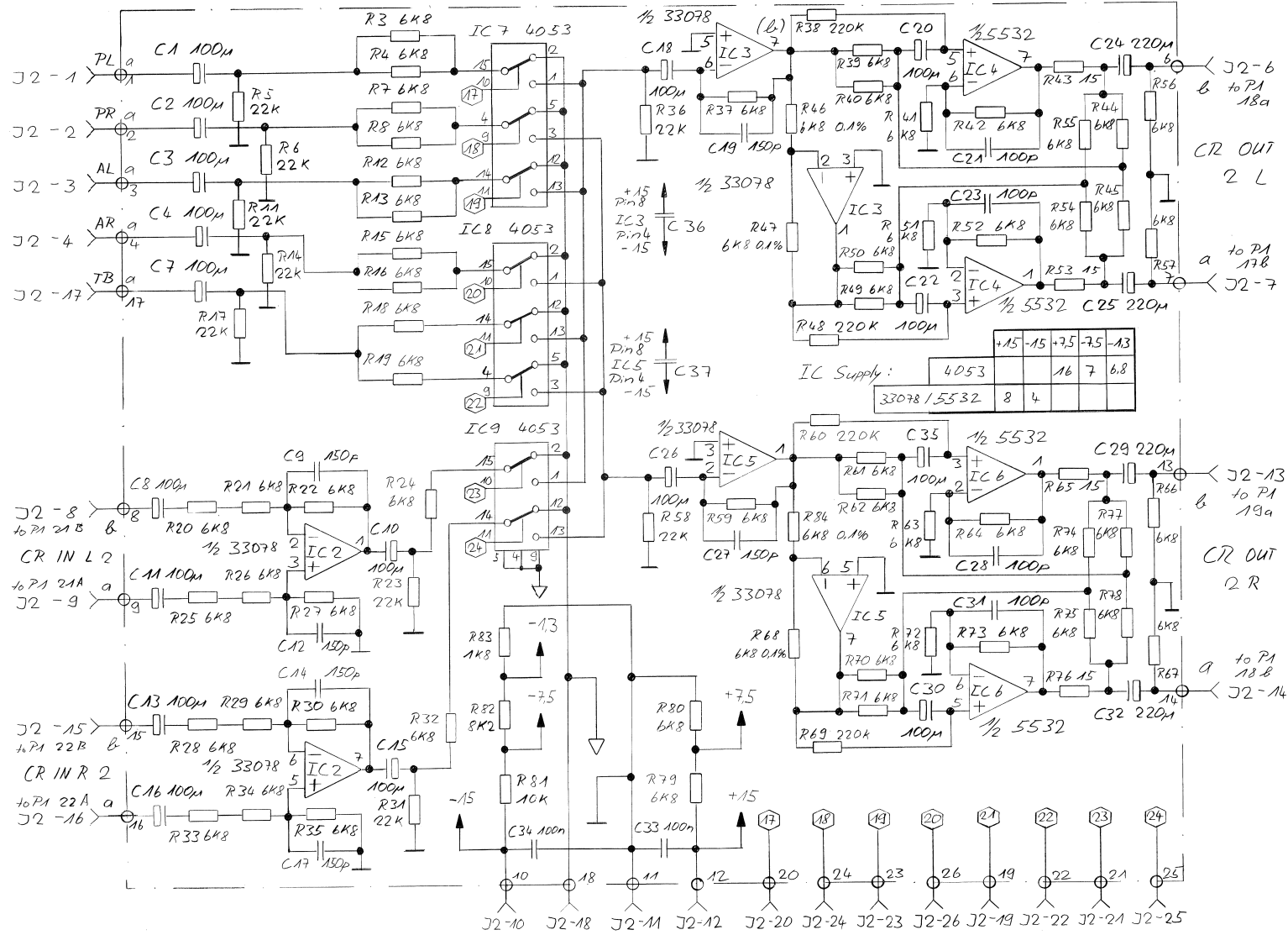
1.917.310.00

Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
					R....55	57.11.3104	100 kOhm	1% MF	
					R....56	57.11.3913	91 kOhm	1% MF	
					R....57	57.11.3514	510 kOhm	1% MF	
					R....58	57.11.5335	3.3 MOhm	1% MF	
					R....59	57.11.3913	91 kOhm	1% MF	
					R....60	57.11.3514	510 kOhm	1% MF	
					R....61	57.11.5335	3.3 MOhm	1% MF	
					R....62	57.11.3104	100 kOhm	1% MF	
					R....63	57.11.3104	100 kOhm	1% MF	
					R....64	57.11.3104	100 kOhm	1% MF	
					R....65	57.11.3104	100 kOhm	1% MF	
					R....66	57.11.3000	0 Ohm	Bridge	
					R....67	57.11.3000	0 Ohm	Bridge	
					R....68	57.11.3103	10 kOhm	1% MF	
					R....69	57.11.3822	8.2 kOhm	1% MF	
					R....70	57.11.3182	1.8 kOhm	1% MF	
					R....71	57.92.7013	500 mA	R - PTC 0.5 Ohm	
					R....72	57.92.7013	500 mA	R - PTC 0.5 Ohm	
					R....73	57.11.3102	1.0 kOhm	1% MF 5V-R Version used only (see R77)	
					R....74	57.11.3682	6.8 kOhm	1% MF	
					R....75	57.11.3682	6.8 kOhm	1% MF TB AF used only (see R76)	
					R....76	. . . 0	not used	TB PF Version used only 57.11.3133(see R75)	
					R....77	. . . 0	not used	5V-PTC Version used only 57.92.1121(see R73)	
					RZ....1	57.88.2682	6.8 kOhm	2% 4*1 network	
					RZ....2	57.88.2682	6.8 kOhm	2% 4*1 network	
					RZ....3	57.88.2682	6.8 kOhm	2% 4*1 network	
					RZ....4	57.88.2682	6.8 kOhm	2% 4*1 network	
					RZ....5	57.88.2682	6.8 kOhm	2% 4*1 network	
					RZ....6	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....7	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....8	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....9	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....10	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....11	57.88.2104	100 kOhm	2% 4*1 network	
					RZ....12	57.88.4104	100 kOhm	2% 8*1 network	
					RZ....13	57.88.4104	100 kOhm	2% 8*1 network	
					RZ....14	57.88.4104	100 kOhm	2% 8*1 network	
					RZ....16	57.88.2101	100 Ohm	2% 4*1 network	
					05 T....1	1.022.363.81		Line Output-Trafo	
					05 T....2	1.022.363.81		Line Output-Trafo	
								index (4) 29.02.92 Rohrniete neu 7.0 statt 6.5 mm	
								(5) 23.11.93 Trafo 1.022.363.81 Ri < 40 Ohm	
								CE = Ceramic, PE=Polyester	
								MANUFACTURER: St = STUDER	
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	SCA88/10/1000
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	SCA90/12/1401
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	SCA91/04/2402
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	SE92/07/0203
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	SE92/02/2904
						1.917.310.00		CR/STUDIO-MONITOR AMPLIFIER	FRI93/11/2305
					R....11	57.11.3333	33 kOhm	1% MF	
					R....12	57.11.3103	10 kOhm	1% MF	
					R....13	57.11.3472	4.7 kOhm	1% MF	
					R....14	57.11.3684	680 kOhm	1% MF	
					R....15	58.01.9104	100 kOhm	trimpot	
					R....16	57.11.3184	180 kOhm	1% MF	
					R....17	57.11.3302	3.0 kOhm	1% MF	
					R....18	57.11.3182	1.8 kOhm	1% MF	
					R....19	57.11.3223	22 kOhm	1% MF	
					R....20	57.11.3822	8.2 kOhm	1% MF	
					R....21	57.11.3682	6.8 kOhm	1% MF	
					R....22	57.11.3682	6.8 kOhm	1% MF	
					R....23	57.11.3223	22 kOhm	1% MF	
					R....24	57.11.3103	10 kOhm	1% MF	
					R....25	57.11.3222	2.2 kOhm	1% MF	
					R....26	57.11.3102	1.0 kOhm	1% MF	
					R....28	57.11.3682	6.8 kOhm	1% MF	
					R....29	57.11.3682	6.8 kOhm	1% MF	
					R....30	57.11.3223	22 kOhm	1% MF	
					R....31	57.11.3223	22 kOhm	1% MF	
					R....32	57.11.3682	6.8 kOhm	1% MF	
					R....33	57.11.3302	3.0 kOhm	1% MF	
					R....34	57.11.3103	10 kOhm	1% MF	
					R....35	57.11.3333	33 kOhm	1% MF	
					R....36	57.11.3103	10 kOhm	1% MF	
					R....37	57.11.3472	4.7 kOhm	1% MF	
					R....38	57.11.3684	680 kOhm	1% MF	
					R....39	58.01.9104	100 kOhm	trimpot	
					R....40	57.11.3184	180 kOhm	1% MF	
					R....41	57.11.3302	3.0 kOhm	1% MF	
					R....42	57.11.3182	1.8 kOhm	1% MF	
					R....43	57.11.3223	22 kOhm	1% MF	
					R....44	57.11.3223	22 kOhm	1% MF	
					R....45	57.11.3822	8.2 kOhm	1% MF	
					R....46	57.11.3682	6.8 kOhm	1% MF	
					R....47	57.11.3682	6.8 kOhm	1% MF	
					R....48	57.11.3223	22 kOhm	1% MF	
					R....49	57.11.3103	10 kOhm	1% MF	
					R....50	57.11.3222	2.2 kOhm	1% MF	
					R....51	57.11.3102	1 kOhm	1% MF	
					R....52	57.11.3103	10 kOhm	1% MF	
					R....53	57.11.3104	100 kOhm	1% MF	
					R....54	57.11.3103	10 kOhm	1% MF	

SUBCARD FOR CR/STUDIO MON



1.917.311.00



PAGE 1 OF 1

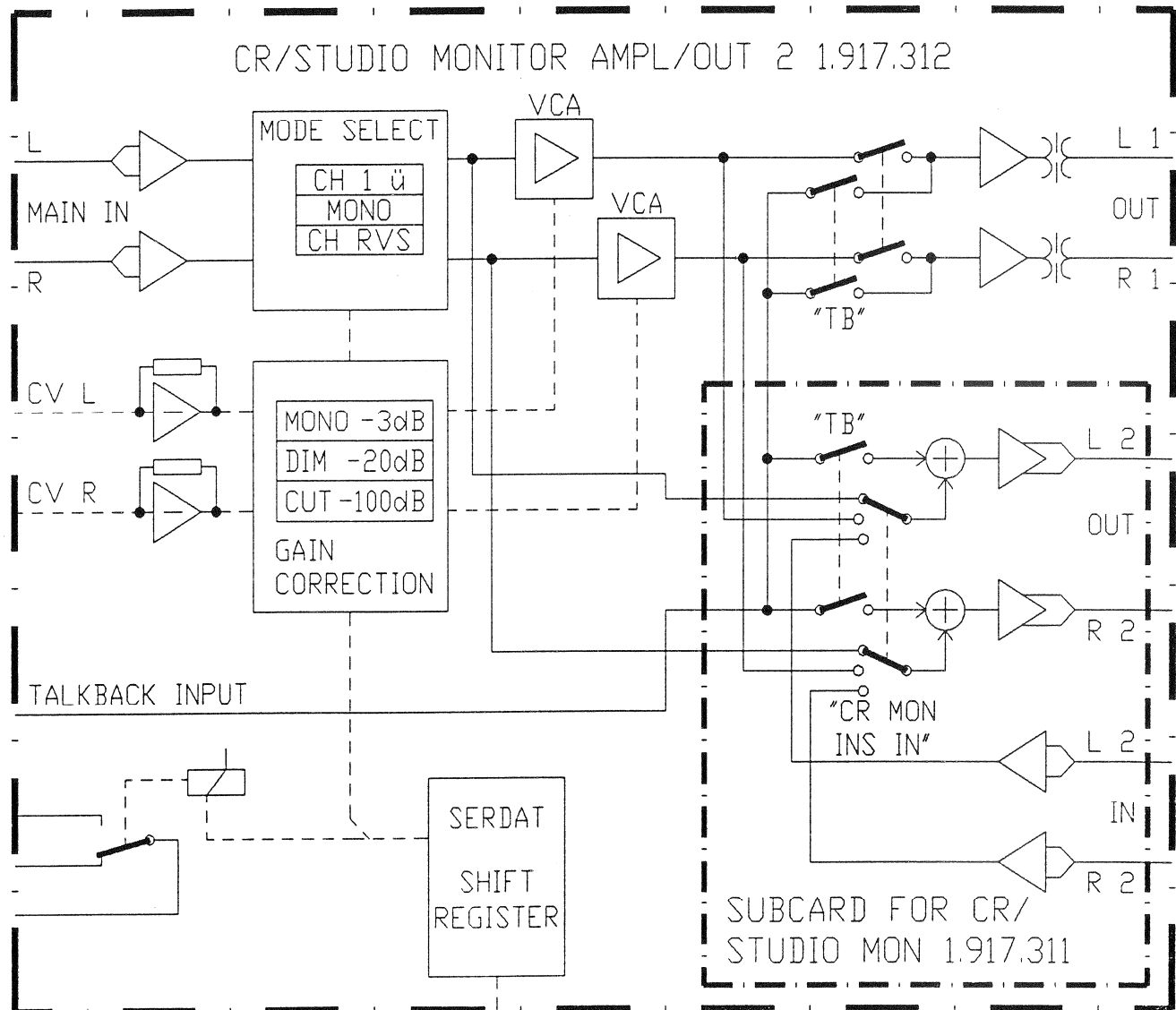
SC 1 917 311 00

SUBCARD FOR CR/STUDIO MON

STUDER

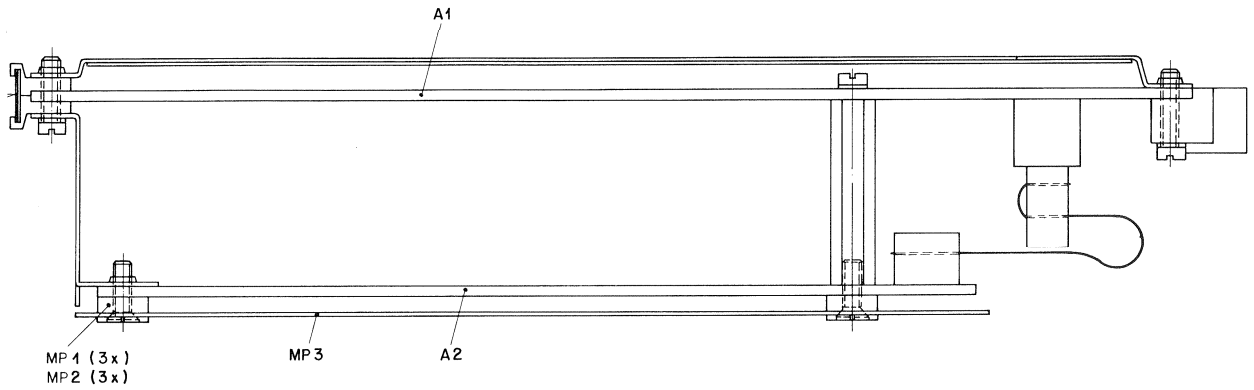
10. 6.90 4-Subcard

CR / STUDIO MONITOR AMPLIFIER / OUT 1.917.312.00



CR / STUDIO MONITOR AMPLIFIER / OUT 2

1.917.312.00



Änderung					③
					②
					①
Ausgabe	30.1.90	AYG	16	SA	①
Datum	Gez	Gepr.	Ges	Index	

STUDER REGENSDORF ZÜRICH	Benennung: C.R./STUDIO MONITOR AMPL./ OUT 2	Kopie für:
	Nummer: 1.917.312 - 00	

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

A.....1	1.917.310.00			CR/STUDIO MONITOR AMP. ,A
A.....2	1.917.311.00			SUBCARD FOR CR/STUDIO MON. ,A
01 MP....1	21.01.2279	3 pcs		S-SCHR. ,ZN,M2.5*6
MP....1	21.01.2280	3 pcs		S-SCHR. ,ZN,M2.5*8
MP....2	1.917.142.02	3 pcs		Isolierhülse
MP....3	1.917.142.03	1 pcs		Isolation
MP....4	1.917.312.01	1 pcs		Bezeichnungstreifen 6,3 * 91

(01) 90/03/01 MP 1 Screws were too short

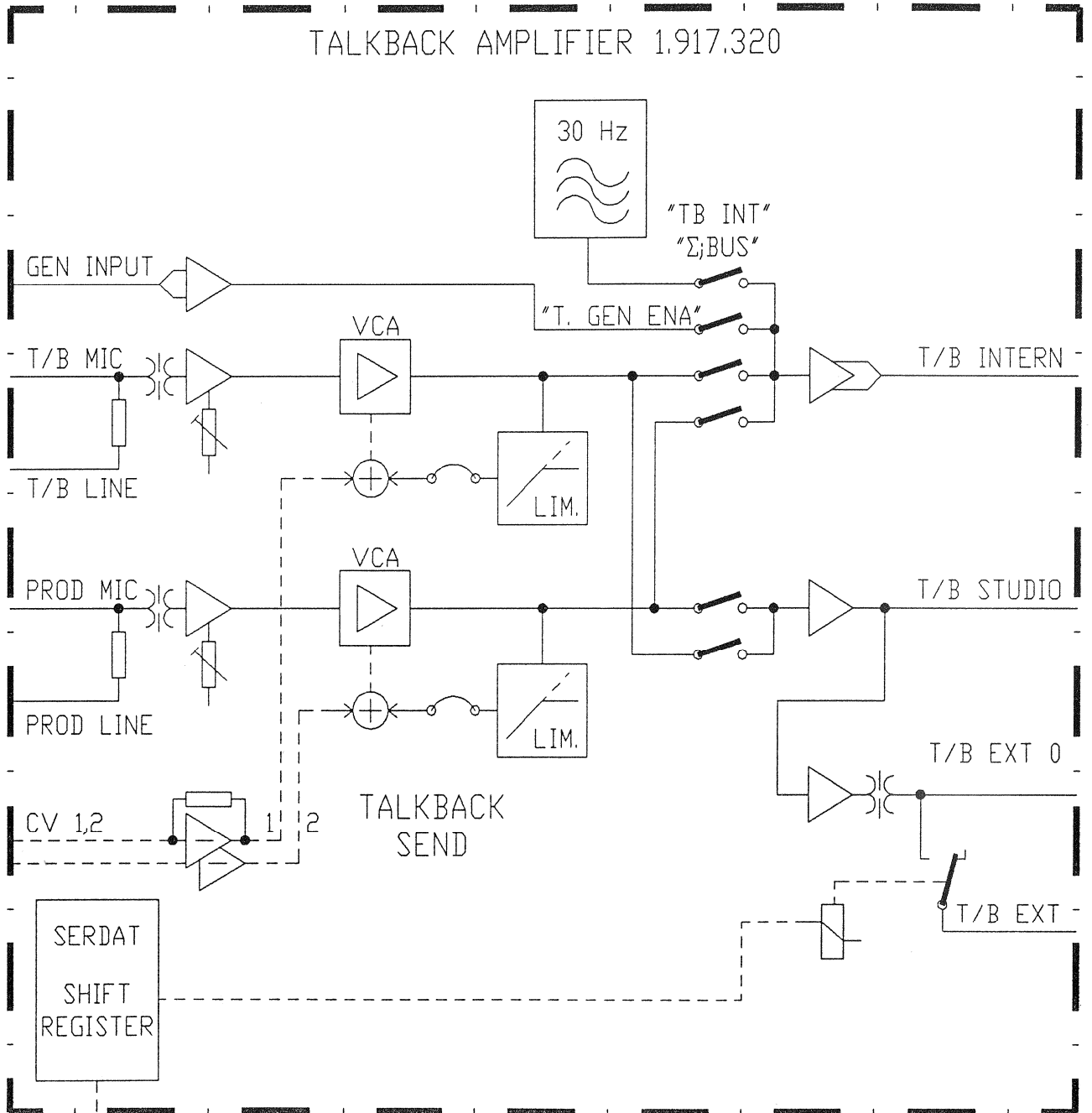
CER=Ceramic, PE=Polyester
 MF=Metal Film, PMG-Cermet

MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,
 Sig=Signetics, St=Studer.

1.917.312.00 CR/STUDIO-MONITOR AMPL/OUT 2 SCA90/08/0100

1.917.312.00 CR/STUDIO-MONITOR AMPL/OUT 2 SCA90/03/0101

TALKBACK AMPLIFIER 1.917.320.00



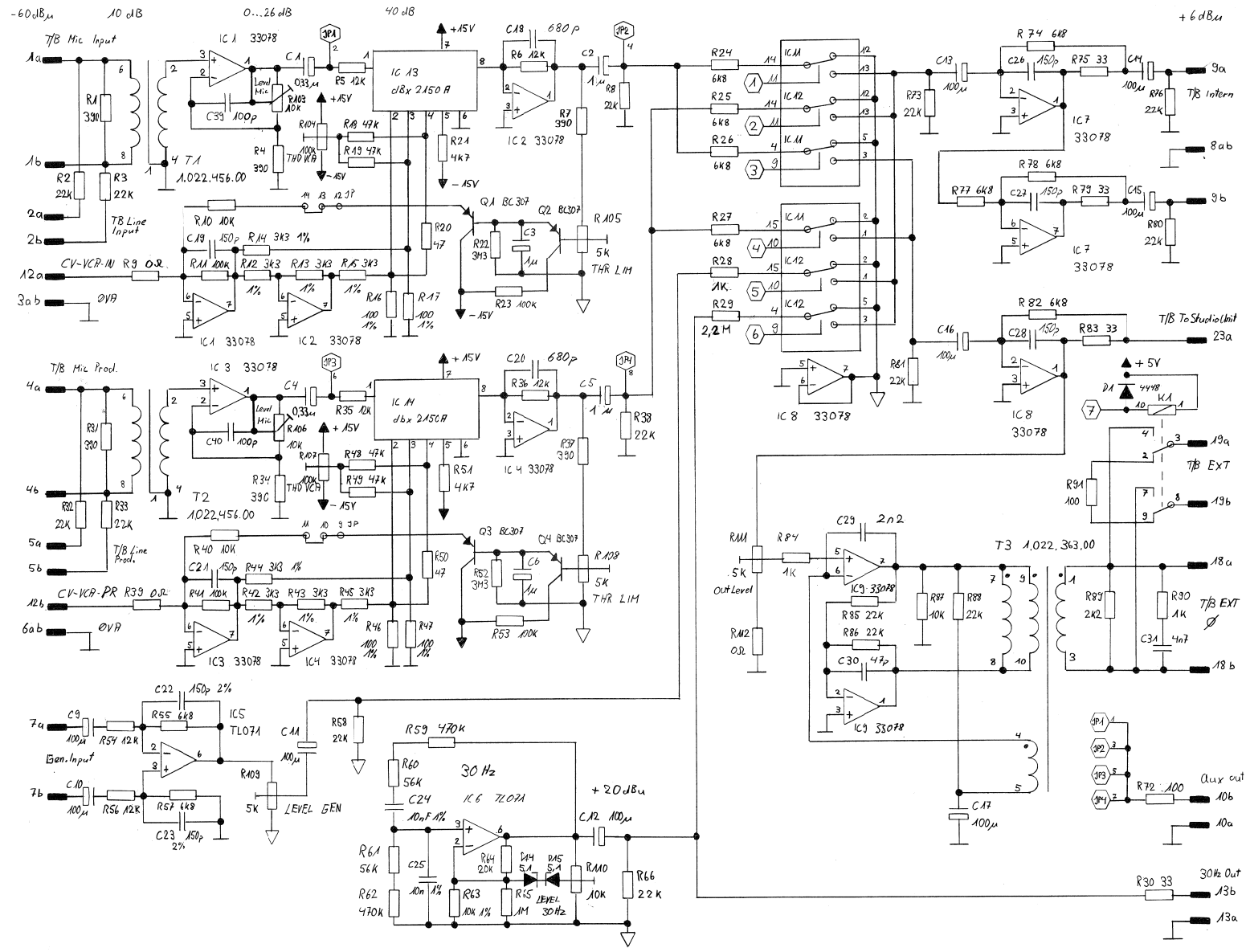
Pin location list

1.917.320

P	NO	NAME	REMARK	B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC
-----			-----	-----
P1	01A	TB-MIC -IN-a	TALKBACK MIC INPUT a	O,S
P1	01B	TB-MIC -IN-b	TALKBACK MIC INPUT b	O,S
P1	02A	TB-LINE-IN-a	TALKBACK LINE INPUT a	O,S
P1	02B	TB-LINE-IN-b	TALKBACK LINE INPUT b	O,S
P1	03	0V-A	GROUND AUDIO	X X
P1	04A	TB-MIC -PR-a	TALKBACK MIC PRODUCER a	O,S
P1	04B	TB-MIC -PR-b	TALKBACK MIC PRODUCER b	O,S
P1	05A	TB-LINE-PR-a	TALKBACK LINE PRODUCER a	O,S
P1	05B	TB-LINE-PR-b	TALKBACK LINE PRODUCER b	O,S
P1	06	0V-A	GROUND AUDIO	X X
P1	07A	OSZ-IN-a	OSZILATOR INPUT a	O,S
P1	07B	OSZ-IN-b	OSZILATOR INPUT b	O,S
P1	08	0V-A	GROUND AUDIO TALKBACK INTERN	X X
P1	09A	TB-INT-a	OUTPUT ; TALKBACK INTERN a	O,S
P1	09B	TB-INT-b	OUTPUT ; TALKBACK INTERN b	O,S
P1	10A	0V-A	GROUND AUDIO	X X
P1	10B	AUX-OUT	AUX OUTPUT	O,AS
P1	11A	-	N.C.	
P1	11B	-	N.C.	
P1	12A	CV-VCA-IN	CONTROL VOLTAGE VCA INPUT	
P1	12B	CV-VCA-PR	CONTROL VOLTAGE VCA PRODUCER	
P1	13A	0V-A	GROUND AUDIO	
P1	13B	30HZ-OUT	30HZ OUTPUT	O,AS
P1	14	- 15.5V	- SUPPLY	B X X
P1	15	0V-A	GROUND AUDIO	B X X
P1	16	+ 15.5V	+ SUPPLY	B X X
P1	17	0V-A	GROUND AUDIO	X X
P1	18A	TB-EXT-0-a	OUTPUT ; TALKBACK EXTERN 0 a	O,S
P1	18B	TB-EXT-0-b	OUTPUT ; TALKBACK EXTERN 0 b	O,S
P1	19A	TB-EXT-1-a	OUTPUT ; TALKBACK EXTERN 1 a	O,S
P1	19B	TB-EXT-1-b	OUTPUT ; TALKBACK EXTERN 1 b	O,S
P1	20A	-	N.C.	
P1	20B	-	N.C.	
P1	21A	-	N.C.	
P1	21B	-	N.C.	
P1	22A	-	N.C.	
P1	22B	-	N.C.	
P1	23A	TB TO STUDIO	OUTPUT ; TALKBACK TO STUDIO	O,S
P1	23B	-	N.C.	
P1	24A	-	N.C.	
P1	24B	-	N.C.	
P1	25A	-	N.C.	
P1	25B	-	N.C.	
P1	26A	-	N.C.	
P1	26B	-	N.C.	
P1	27A	-	N.C.	
P1	27B	-	N.C.	
P1	28	0V-L	GROUND SIGN (LOGIC)	B X X
P1	29A	DO 0	DATA OUT 0 (ENABLE)	
P1	29B	TSTB 4	TRANSMIT STROBE 4	
P1	30A	-	RES	
P1	30B	TXTH	TRANSMIT DATA THROUGH	
P1	31A	TXD	TRANSMIT DATA	
P1	31B	TCL	TRANSMIT CLOCK	
P1	32	+ 5.5V	+ SUPPLY	B X X

TALKBACK AMPLIFIER

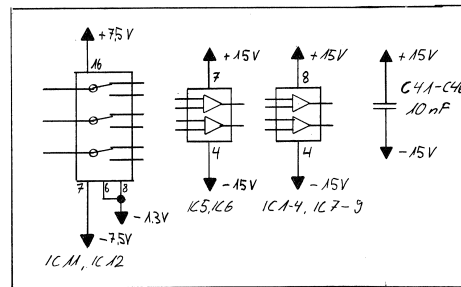
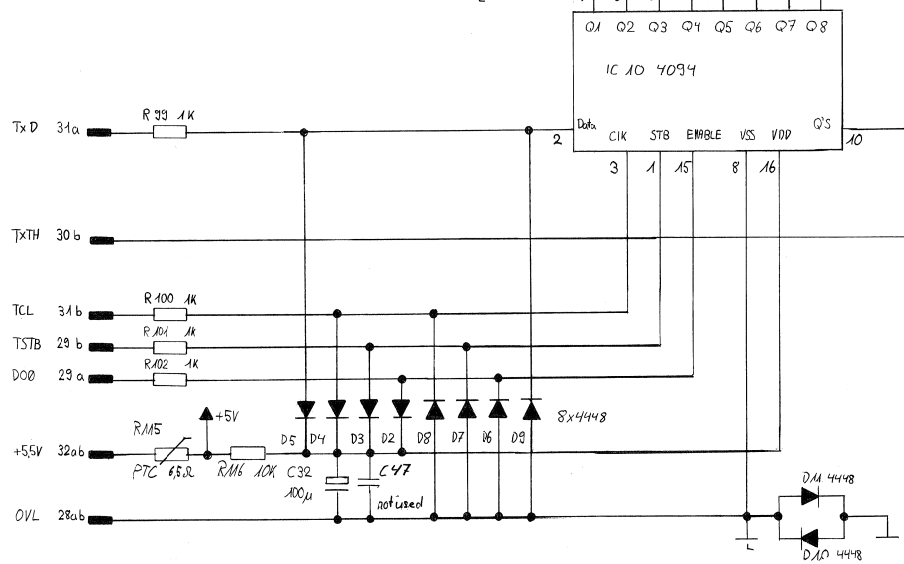
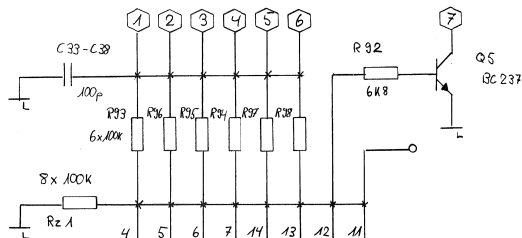
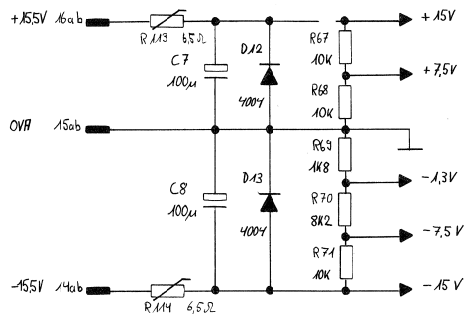
1.917.320.00



① 12.06.89 Emi	② 07.02.92 Emi	PAGE 1 OF 2
STUDER TALK BACK AMPLIFIER 1.917.320.00		

TALKBACK AMPLIFIER ESE

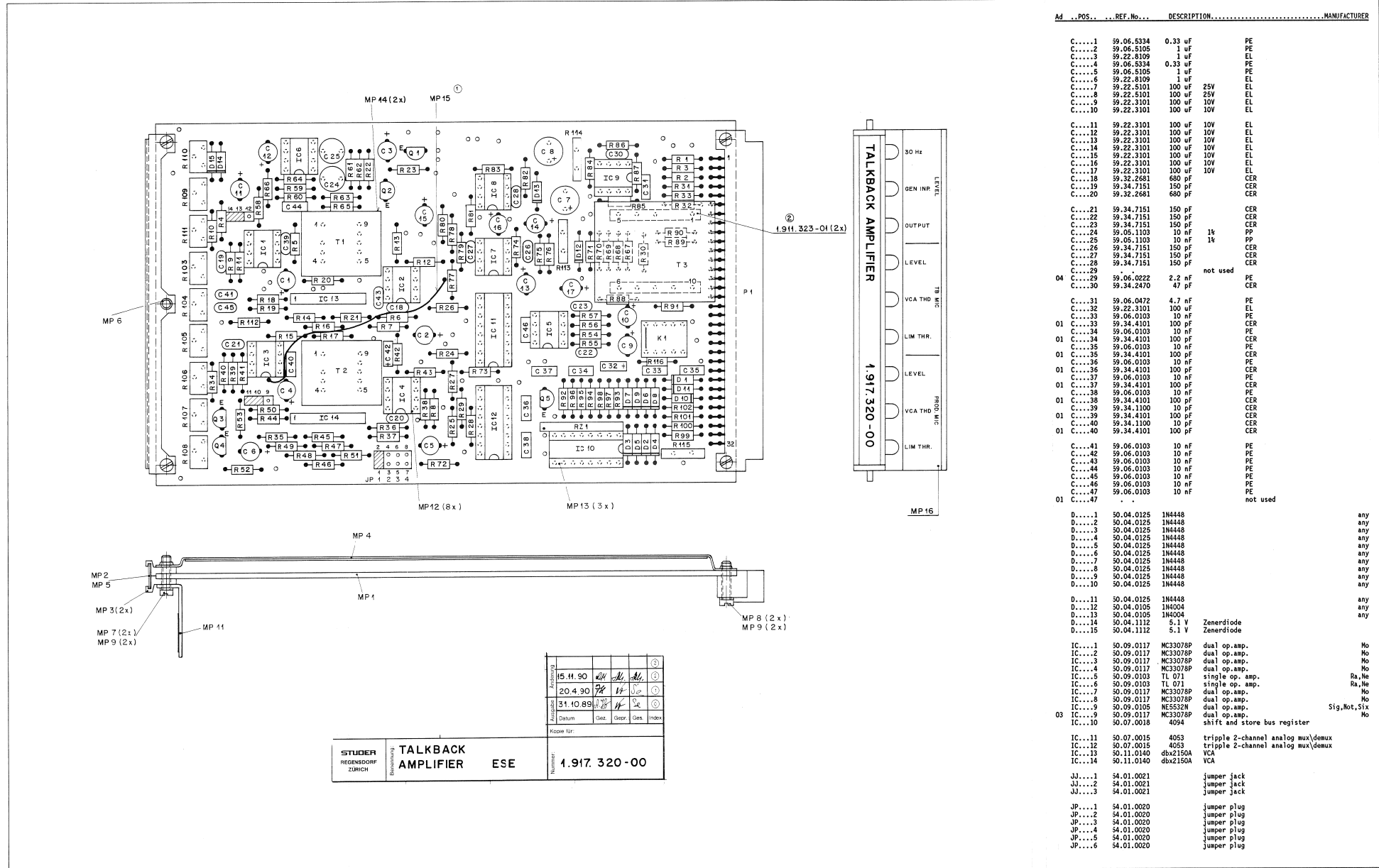
1.917.320.00



① 12,06,89 Emi	② 07,02,92 Emi	③	PAGE 2 OF 2
STUDER			1.917.320.00
TALKBACK AMPLIFIER			

TALKBACK AMPLIFIER

1.917.320.00



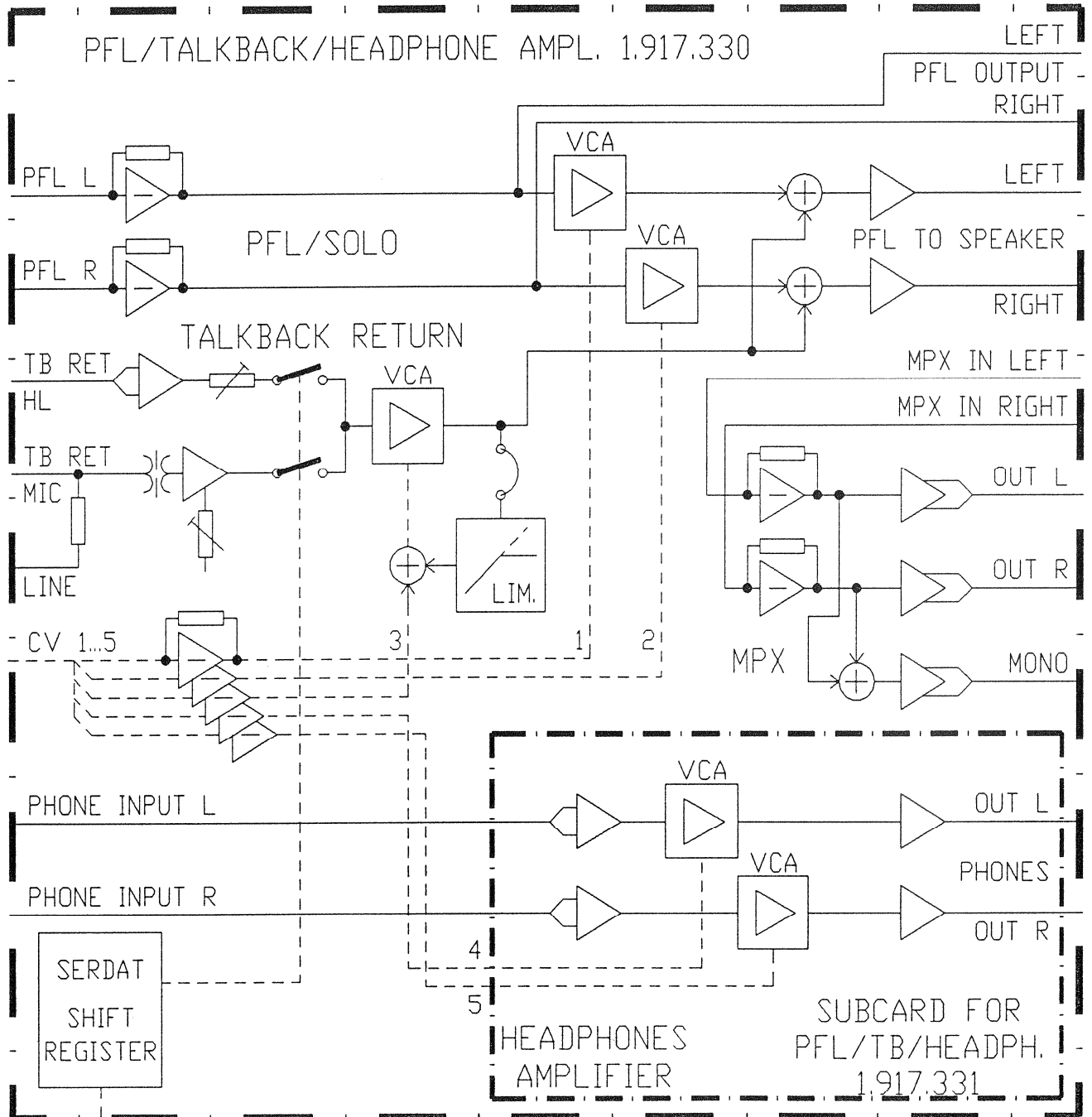
Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
C...	1	59.06.5334	0.33 uF	PE
C...	2	59.06.5105	1 uF	PE
C...	3	59.22.8109	1 uF	EL
C...	4	59.06.5334	0.33 uF	PE
C...	5	59.06.5105	1 uF	PE
C...	6	59.22.8109	1 uF	EL
C...	7	59.22.5101	100 uF 25V	EL
C...	8	59.22.5101	100 uF 25V	EL
C...	9	59.22.3101	100 uF 10V	EL
C...	10	59.22.3101	100 uF 10V	EL
C...	11	59.22.3101	100 uF 10V	EL
C...	12	59.22.3101	100 uF 10V	EL
C...	13	59.22.3101	100 uF 10V	EL
C...	14	59.22.3101	100 uF 10V	EL
C...	15	59.22.3101	100 uF 10V	EL
C...	16	59.22.3101	100 uF 10V	EL
C...	17	59.22.3101	100 uF 10V	EL
C...	18	59.32.2681	680 pF	CER
C...	19	59.34.7151	150 pF	CER
C...	20	59.32.2681	680 pF	CER
C...	21	59.34.7151	150 pF	CER
C...	22	59.34.7151	150 pF	CER
C...	23	59.34.7151	150 pF	CER
C...	24	59.05.1103	10 nF 1k	PP
C...	25	59.05.1103	10 nF 1k	PP
C...	26	59.34.7151	150 pF	CER
C...	27	59.34.7151	150 pF	CER
C...	28	59.34.7151	150 pF	CER
C...	29	59.06.0222	2.2 nF	not used
C...	30	59.34.2470	47 pF	CER
C...	31	59.06.0472	4.7 nF	PE
C...	32	59.22.3101	100 uF	EL
C...	33	59.06.0103	10 nF	PE
C...	34	59.34.4101	100 pF	CER
C...	35	59.06.0103	10 nF	PE
C...	36	59.34.4101	100 pF	CER
C...	37	59.06.0103	10 nF	PE
C...	38	59.34.4101	100 pF	CER
C...	39	59.34.1100	10 pF	CER
C...	40	59.34.1100	10 pF	CER
C...	41	59.06.0103	10 nF	PE
C...	42	59.06.0103	10 nF	PE
C...	43	59.06.0103	10 nF	PE
C...	44	59.06.0103	10 nF	PE
C...	45	59.06.0103	10 nF	PE
C...	46	59.06.0103	10 nF	PE
C...	47	59.06.0103	10 nF	PE
C...	47			not used
D...	1	50.04.0125	1N4448	any
D...	2	50.04.0125	1N4448	any
D...	3	50.04.0125	1N4448	any
D...	4	50.04.0125	1N4448	any
D...	5	50.04.0125	1N4448	any
D...	6	50.04.0125	1N4448	any
D...	7	50.04.0125	1N4448	any
D...	8	50.04.0125	1N4448	any
D...	9	50.04.0125	1N4448	any
D...	10	50.04.0125	1N4448	any
D...	11	50.04.0125	1N4448	any
D...	12	50.04.0105	1N4004	any
D...	13	50.04.0105	1N4004	any
D...	14	50.04.1112	5.1 V Zenerdiode	any
D...	15	50.04.1112	5.1 V Zenerdiode	any
IC...	1	50.09.0117	MC33078P	dual op.amp. No
IC...	2	50.09.0117	MC33078P	dual op.amp. No
IC...	3	50.09.0117	MC33078P	dual op.amp. No
IC...	4	50.09.0117	MC33078P	dual op.amp. No
IC...	5	50.09.0103	TL 071	single op. amp. Ra,Ne
IC...	6	50.09.0103	TL 071	single op. amp. Ra,Ne
IC...	7	50.09.0117	MC33078P	dual op.amp. No
IC...	8	50.09.0117	MC33078P	dual op.amp. No
IC...	9	50.09.0105	NE5552N	dual op.amp. Sig,Not,St
IC...	9	50.09.0117	MC33078P	dual op.amp. No
IC...	10	50.07.0018	4094	shift and store bus register No
IC...	11	50.07.0015	4053	triple 2-channel analog mux/demux
IC...	12	50.07.0015	4053	triple 2-channel analog mux/demux
IC...	13	50.11.0140	dbx2150A	VCA
IC...	14	50.11.0140	dbx2150A	VCA
JJ...	1	54.01.0021		jumper jack
JJ...	2	54.01.0021		jumper jack
JJ...	3	54.01.0021		jumper jack
JP...	1	54.01.0020		jumper plug
JP...	2	54.01.0020		jumper plug
JP...	3	54.01.0020		jumper plug
JP...	4	54.01.0020		jumper plug
JP...	5	54.01.0020		jumper plug
JP...	6	54.01.0020		jumper plug

STUDER TALKBACK AMPLIFIER ESE
 REGENSDORF ZÜRICH

1.917.320-00

Approved by				
Checked by				
Released by				
Drawn by				
Number	1.917.320-00			

PFL / TALKBACK HEADPHONE AMPLIFIER 1.917.330.81



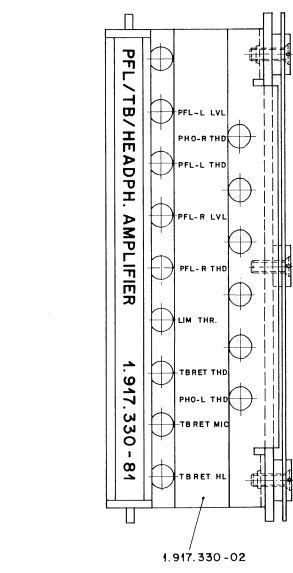
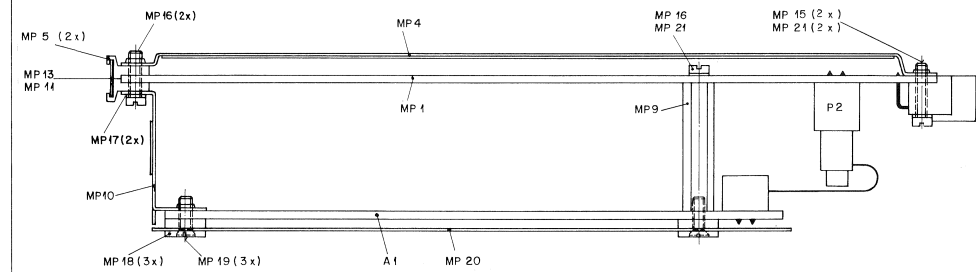
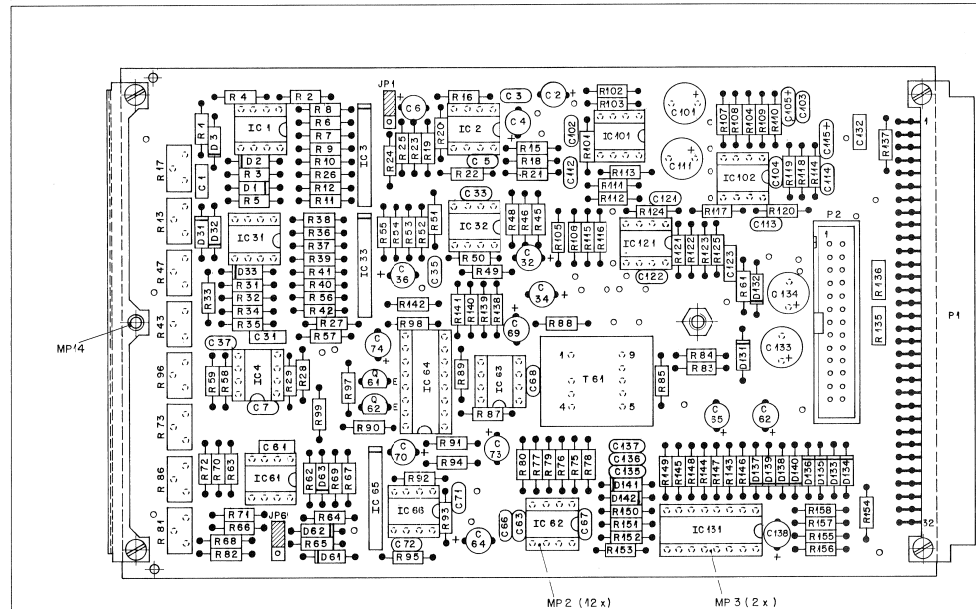
Pin location list

1.917.330

P	NO	NAME	REMARK	B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC
-----			-----	-----
P1	01A	MPX-IN-L	MULTIPLEX INPUT LEFT	O,AS
P1	01B	0V-A MPX	GROUND AUDIO MPX	O
P1	02A	MPX-IN-R	MULTIPLEX INPUT RIGHT	O,AS
P1	02B	0V-A MPX	GROUND AUDIO MPX	O
P1	03A	PFL-IN-L	PFL INPUT LEFT	O,AS
P1	03B	0V PFL-L	GROUND AUDIO PFL LEFT	O
P1	04A	PFL-IN-R	PFL INPUT RIGHT	O,AS
P1	04B	0V PFL-R	GROUND AUDIO PFL RIGHT	O
P1	05A	0V-A	GROUND AUDIO	
P1	05B	PFL-OUT-L	PFL OUTPUT LEFT	O,AS
P1	06A	PFL-OUT-R	PFL OUTPUT RIGHT	O,AS
P1	06B	MPX-OUT-L-a	MULTIPLEX OUTPUT LEFT a	O,S
P1	07A	MPX-OUT-L-b	MULTIPLEX OUTPUT LEFT b	O,S
P1	07B	MPX-OUT-R-a	MULTIPLEX OUTPUT RIGHT a	O,S
P1	08A	MPX-OUT-R-b	MULTIPLEX OUTPUT RIGHT b	O,S
P1	08B	MPX-OUT-M-a	MULTIPLEX OUTPUT MASTER a	O,S
P1	09A	MPX-OUT-M-b	MULTIPLEX OUTPUT MASTER b	O,S
P1	09B	0V-A	GROUND AUDIO	
P1	10A	-10V	CONTROL VOLTAGE VCA	
P1	10B	+1V	CONTROL VOLTAGE VCA	
P1	11A	+4V	CONTROL VOLTAGE VCA	
P1	11B	CV 1-PFL-L	CTRL.VOLTAGE VCA 1 PFL LEFT	
P1	12A	CV 2-PFL-R	CTRL.VOLTAGE VCA 2 PFL RIGHT	
P1	12B	CV 3-TB RET	CTRL.VOLTAGE VCA 3 TB RETURN	
P1	13A	CV 4-PHO-L	CTRL.VOLTAGE VCA 4 PHONE L	
P1	13B	CV 5-PHO-R	CTRL.VOLTAGE VCA 5 PHONE R	
P1	14	- 15.5V	- SUPPLY	B X X
P1	15	0V-A	GROUND AUDIO	B X X
P1	16	+ 15.5V	+ SUPPLY	B X X
P1	17A	PFL TO SPK-L	PFL TO SPEAKER LEFT	O,AS
P1	17B	PFL TO SPK-R	PFL TO SPEAKER RIGHT	O,AS
P1	18A	0V-PHO1	GROUND AUDIO PHONE 1	O
P1	18B	PHO1-OUT-L	PHONE 1 OUTPUT LEFT	O,AS
P1	19A	PHO1-OUT-R	PHONE 1 OUTPUT RIGHT	O,AS
P1	19B	0V PHO2	GROUND AUDIO PHONE 2	O
P1	20A	-	RES	
P1	20B	-	RES	
P1	21A	PHO2-OUT-L	PHONE 2 OUTPUT LEFT	O,AS
P1	21B	PHO2-OUT-R	PHONE 2 OUTPUT RIGHT	O,AS
P1	22A	PHO-IN-L-a	PHONE INPUT LEFT a	O,S
P1	22B	PHO-IN-L-b	PHONE INPUT LEFT b	O,S
P1	23A	PHO-IN-R-a	PHONE INPUT RIGHT a	O,S
P1	23B	PHO-IN-R-b	PHONE INPUT RIGHT b	O,S
P1	24	0V-A	GROUND AUDIO	B X X
P1	25A	TB RET MIC-a	TALKBACK RETURN MIC a	O,S
P1	25B	TB RET MIC-b	TALKBACK RETURN MIC b	O,S
P1	26A	TB RET LIN-a	TALKBACK RETURN LINE a	O,S
P1	26B	TB RET LIN-b	TALKBACK RETURN LINE b	O,S
P1	27A	TB RET HL-a	TALKBACK RETURN HIGH LEVEL a	O,S
P1	27B	TB RET HL-b	TALKBACK RETURN HIGH LEVEL b	O,S
P1	28	0V-L	GROUND SIGN (LOGIC)	B X X
P1	29A	DO 0	DATA OUT 0 (ENABLE)	
P1	29B	TSTB	TRANSMIT STROBE	
P1	30A	-	RES	
P1	30B	TXTH	TRANSMIT DATA THROUGH	
P1	31A	TXD	TRANSMIT DATA	
P1	31B	TCL	TRANSMIT CLOCK	
P1	32	+ 5.5V	+ SUPPLY	B X X

PFL/TB/HEADPHONE AMPLIFIER

1.917.330.81



Ad ... POS. ... REF.No. ... DESCRIPTION ... MANUFACTURER

Ad ... POS.	REF.No.	DESCRIPTION	MANUFACTURER
A....1	1.917.331.00	SUBCARD FOR PFL/TB/HEADPH.	
C....1	59.06.0104	0.1 uF PE, 10%, 63V	
C....2	59.22.3101	100 uF EL, -20%, 10V	
C....3	59.34.7151	150 pF CER, 10%	
C....4	59.22.3101	100 uF EL, -20%, 10V	
C....5	59.34.7151	150 pF CER, 10%	
C....6	59.22.3101	100 uF EL, -20%, 10V	
C....7	59.34.7151	150 pF CER, 10%	
C....8	.. 0	not used	
C....30	.. 0	not used	
C....31	59.06.0104	0.1 uF PE, 10%, 63V	
C....32	59.22.3101	100 uF EL, -20%, 10V	
C....33	59.34.7151	150 pF CER, 10%	
C....34	59.22.3101	100 uF EL, -20%, 10V	
C....35	59.34.7151	150 pF CER, 10%	
C....36	59.22.3101	100 uF EL, -20%, 10V	
C....37	59.34.7151	150 pF CER, 10%	
C....38	.. 0	not used	
C....60	.. 0	not used	
C....61	59.34.7151	150 pF CER, 10%	
C....62	59.22.3101	100 uF EL, -20%, 10V	
C....63	59.34.7151	150 pF CER, 10%	
C....64	59.22.3101	100 uF EL, -20%, 10V	
C....65	59.22.3101	100 uF EL, -20%, 10V	
C....66	59.34.7151	150 pF CER, 10%	
C....67	59.34.2223	22 pF CER, 10%	
C....68	59.34.2223	22 pF CER, 10%	
C....69	59.22.3101	100 uF EL, -20%, 10V	
C....70	59.22.3101	100 uF EL, -20%, 10V	
C....71	59.34.7151	150 pF CER, 10%	
C....72	59.34.2223	22 pF CER, 10%	
C....73	59.22.3101	100 uF EL, -20%, 10V	
C....74	59.22.8109	1 uF EL, -20%, 16V	
C....75	.. 0	not used	
C....100	.. 0	not used	
C....101	59.22.3471	470 uF EL, -20%, 10V	
C....102	59.34.7151	150 pF CER, 10%	
C....103	59.34.5391	390 pF CER, 5%	
C....104	59.34.7151	150 pF CER, 10%	
C....105	59.26.1479	4.7 uF SAL, 20%	
C....110	.. 0	not used	

Ad ... POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....111	59.22.3471	470 uF EL, -20%, 10V	
C....112	59.34.7151	150 pF CER, 10%	
C....113	59.34.5391	390 pF CER, 5%	
C....114	59.34.7151	150 pF CER, 10%	
C....115	59.26.1479	4.7 uF SAL, 20%	
C....120	.. 0	not used	
C....121	59.34.7151	150 pF CER, 10%	
C....122	59.34.7151	150 pF CER, 10%	
C....123	59.32.4102	1 nF CER, 10%	
C....130	.. 0	not used	
C....131	.. 0	not used	
C....132	59.06.0104	0.1 uF PE, 10%, 63V	
C....133	59.22.5101	100 uF EL, -20%, 25V	
C....134	59.22.5101	100 uF EL, -20%, 25V	
C....135	59.34.4101	100 pF CER, 10%	
C....136	59.34.4101	100 pF CER, 10%	
C....137	59.34.4101	100 pF CER, 10%	
C....138	59.22.3101	100 uF EL, -20%, 10V	
D....1	50.04.0125	I14448	any
D....2	50.04.0125	I14448	any
D....3	50.04.0125	I14448	any
D....31	50.04.0125	I14448	any
D....32	50.04.0125	I14448	any
D....33	50.04.0125	I14448	any
D....61	50.04.0125	I14448	any
D....62	50.04.0125	I14448	any
D....63	50.04.0125	I14448	any
D....131	50.04.0122	I14001	any
D....132	50.04.0122	I14001	any
D....133	50.04.0125	I14448	any
D....134	50.04.0125	I14448	any
D....135	50.04.0125	I14448	any
D....136	50.04.0125	I14448	any
D....137	50.04.0125	I14448	any
D....138	50.04.0125	I14448	any
D....139	50.04.0125	I14448	any
D....140	50.04.0125	I14448	any
D....141	50.04.0125	I14448	any
D....142	50.04.0125	I14448	any
IC....1	50.09.0117	MC33078	Dual Op Amp
IC....2	50.09.0105	NE5532N	Dual Op Amp
IC....3	50.11.0140	dbx2150	VCA
IC....4	50.09.0117	MC33078	Dual Op Amp
IC....31	50.09.0117	MC33078	Dual Op Amp
IC....32	50.09.0105	NE5532N	Dual Op Amp
IC....33	50.11.0140	dbx2150	VCA
IC....61	50.09.0117	MC33078	Dual Op Amp
IC....62	50.09.0103	TL 071	Single Fet-Op Amp
IC....63	50.09.0103	TL 071	Single Fet-Op Amp
IC....64	50.07.0015	4053	Triple Analog Switch
IC....65	50.11.0140	dbx2150	VCA
IC....66	50.09.0103	TL 071	Single Fet-Op Amp
IC....101	50.09.0105	NE5532N	Dual Op Amp
IC....102	50.09.0105	NE5532N	Dual Op Amp
IC....121	50.09.0105	NE5532N	Dual Op Amp
IC....131	50.07.0018	4094	Shift and store bus register
JP....1	.. 0	see MP 6 PFL Mono/Stereo	
JP....61	.. 0	see MP 7 TB-RET-Limiter: On/Off	
JS....1	54.01.0021	Jumper	Jumper for JP 1
JS....61	54.01.0021	Jumper	Jumper for JP 61
MP....1	1.917.330.12	1 pcs	Print
MP....2	53.03.0166	12 pcs	IC-socket 8 pin
MP....3	53.03.0168	2 pcs	IC-socket 16 pin
MP....4	1.010.090.49	1 pcs	Abschirmblech
MP....5	1.010.006.33	2 pcs	Griffhaelften
MP....6	54.01.0020	3 pcs	Stiftleiste see also JP1
MP....7	54.01.0020	3 pcs	Stiftleiste see also JP1
MP....8	.. 0	not used	
MP....9	1.010.204.27	1 pcs	Mutterboelzen M2.5*25
MP....10	1.917.142.01	1 pcs	Halter
MP....11	1.917.330.01	1 pcs	Bez. Streifen 6.3*91
MP....12	43.01.0108	1 pcs	ESE-Waermschild
MP....13	1.010.096.49	1 pcs	Klarsichtschild
MP....14	28.21.1380	1 pcs	Rohrniette D2.25*6.5
MP....14	28.21.1390	1 pcs	Rohrniette D2.25*7.0
MP....15	21.01.0281	2 pcs	Z-Schr. 2N, M2.5*10
MP....16	21.01.0280	2 pcs	Z-Schr. 2N, M2.5*8
MP....17	24.16.1025	2 pcs	Rippenscheibe, D2.75/5
MP....18	1.917.142.02	3 pcs	Isolierhuelse
MP....19	21.01.2280	3 pcs	S-Schr. 2N, M2.5*8
MP....20	1.917.142.03	1 pcs	Isolation
MP....21	24.16.1025	3 pcs	Rippenscheibe, D2.75/5
P....1	54.11.2004	Euro, 2*32 contacts	
P....2	54.14.2003	26 pin PCB Ribbon Connector	
Q....61	50.03.0515	BC557	PMP
Q....62	50.03.0515	BC557	PMP

PFL/TB/HEADPHONE AMPLIFIER ESE

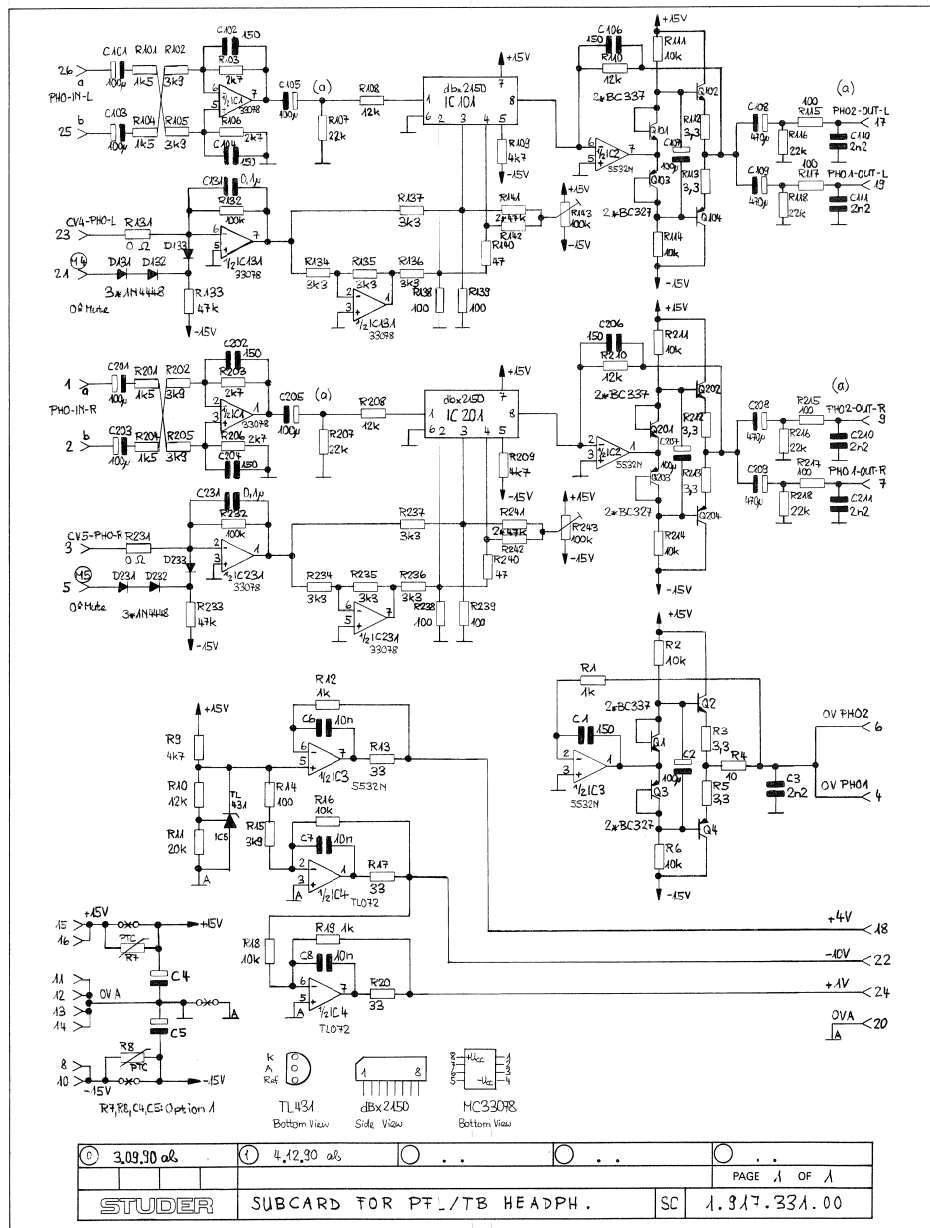


1.917.330.81

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R....1		57.11.3000	0 Ohm	Wiring Bridge	R...91		57.11.3223	22 kOhm	10 %
R....2		57.11.3104	100 kOhm	1 %	R...92		57.11.3472	4.7 kOhm	10 %
R....3		57.11.3473	47 kOhm	10 %	R...93		57.11.3123	12 kOhm	1 %
R....4		57.11.3332	3.3 kOhm	1 %	R...94		57.11.3223	22 kOhm	10 %
R....5		57.11.3332	3.3 kOhm	1 %	R...95		57.11.3391	390 Ohm	10 %
R....6		57.11.3332	3.3 kOhm	1 %	R...96		58.01.9502	5 kOhm	10 %, variable resistor
R....7		57.11.3332	3.3 kOhm	1 %	R...97		57.11.3104	100 kOhm	10 %
R....8		57.11.3101	100 Ohm	1 %	R...98		57.11.3105	1 MOhm	10 %
R....9		57.11.3101	100 Ohm	1 %	R...99		57.11.3103	10 kOhm	10 %
R....10		57.11.3470	47 Ohm	10 %	R...100		.	0	not used
R...11		57.11.3473	47 kOhm	10 %	R...101		57.11.3472	4.7 kOhm	1 %
R...12		57.11.3473	47 kOhm	10 %	R...102		57.11.3181	180 Ohm	1 %
R...13		58.01.9104	100 kOhm	10 %, variable resistor	R...103		57.11.3330	33 Ohm	10 %
R...14		.	0	not used	R...104		57.11.3562	5.6 kOhm	1 %
R...15		57.11.3473	47 kOhm	10 %	R...105		57.11.3164	160 kOhm	1 %
R...16		57.11.3152	1.5 kOhm	10 %	R...106		57.11.3822	8.2 kOhm	1 %
R...17		58.01.9203	20 kOhm	10 %, variable resistor	R...107		57.11.3392	3.9 kOhm	1 %
R...18		57.11.3473	47 kOhm	10 %	R...108		57.11.3133	13 kOhm	1 %
R...19		57.11.3102	1.0 kOhm	1 %	R...109		57.11.3330	33 Ohm	10 %
R...20		57.11.3332	3.3 kOhm	1 %	R...110		57.11.3102	1 kOhm	1 %
R...21		57.11.3101	100 Ohm	1 %	R...111		57.11.3472	4.7 kOhm	1 %
R...22		57.11.3331	330 Ohm	1 %	R...112		57.11.3181	180 Ohm	1 %
R...23		57.11.3330	33 Ohm	10 %	R...113		57.11.3330	33 Ohm	10 %
R...24		57.11.3223	22 kOhm	10 %	R...114		57.11.3562	5.6 kOhm	1 %
R...25		57.11.3123	12 kOhm	1 %	R...115		57.11.3164	160 kOhm	1 %
R...26		57.11.3472	4.7 kOhm	10 %	R...116		57.11.3822	8.2 kOhm	1 %
R...27		57.11.3223	22 kOhm	1 %	R...117		57.11.3392	3.9 kOhm	1 %
R...28		57.11.3123	12 kOhm	1 %	R...118		57.11.3133	13 kOhm	1 %
R...29		57.11.3330	33 Ohm	10 %	R...119		57.11.3330	33 Ohm	10 %
R...30		.	0	not used	R...120		57.11.3102	1 kOhm	1 %
R...31		57.11.3000	0 Ohm	Wiring Bridge	R...121		57.11.3392	3.9 kOhm	1 %
R...32		57.11.3104	100 kOhm	1 %	R...122		57.11.3392	3.9 kOhm	1 %
R...33		57.11.3473	47 kOhm	10 %	R...123		57.11.3392	3.9 kOhm	1 %
R...34		57.11.3332	3.3 kOhm	1 %	R...124		57.11.3330	33 Ohm	10 %
R...35		57.11.3332	3.3 kOhm	1 %	R...125		57.11.3102	1 kOhm	1 %
R...36		57.11.3332	3.3 kOhm	1 %	R...126		.	0	not used
R...37		57.11.3332	3.3 kOhm	1 %	R...127		.	0	not used
R...38		57.11.3101	100 Ohm	1 %	R...128		.	0	not used
R...39		57.11.3101	100 Ohm	1 %	R...129		.	0	not used
R...40		57.11.3470	47 Ohm	10 %	R...130		.	0	not used
R...41		57.11.3473	47 kOhm	10 %	R...131		.	0	not used
R...42		57.11.3473	47 kOhm	10 %	R...132		.	0	not used
R...43		58.01.9104	100 kOhm	10 %, variable resistor	R...133		.	0	not used
R...44		.	0	not used	R...134		.	0	not used
R...45		57.11.3473	47 kOhm	10 %	R...135		57.92.7013	0.5 Ohm	PTC, 0.5 A
R...46		57.11.3152	1.5 kOhm	10 %	R...136		57.92.7013	0.5 Ohm	PTC, 0.5 A
R...47		58.01.9203	20 kOhm	10 %, variable resistor	R...137		57.11.3101	100 Ohm	10 %
R...48		57.11.3473	47 kOhm	10 %	R...138		57.11.3562	5.6 kOhm	1 %
R...49		57.11.3102	1.0 kOhm	1 %	R...139		57.11.3562	5.6 kOhm	1 %
R...50		57.11.3332	3.3 kOhm	1 %	R...140		57.11.3182	1.8 kOhm	1 %
R...51		57.11.3101	100 Ohm	1 %	R...141		57.11.3822	8.2 kOhm	1 %
R...52		57.11.3331	330 Ohm	1 %	R...142		57.11.3103	10 kOhm	1 %
R...53		57.11.3330	33 Ohm	10 %	R...143		57.11.3104	100 kOhm	10 %
R...54		57.11.3223	22 kOhm	10 %	R...144		57.11.3104	100 kOhm	10 %
R...55		57.11.3123	12 kOhm	1 %	R...145		57.11.3104	100 kOhm	10 %
R...56		57.11.3472	4.7 kOhm	10 %	R...146		57.11.3104	100 kOhm	10 %
R...57		57.11.3223	22 kOhm	1 %	R...147		57.11.3104	100 kOhm	10 %
R...58		57.11.3123	12 kOhm	1 %	R...148		57.11.3104	100 kOhm	10 %
R...59		57.11.3330	33 Ohm	10 %	R...149		57.11.3104	100 kOhm	10 %
R...60		.	0	not used	R...150		57.11.3104	100 kOhm	10 %
R...61		57.11.3000	0 Ohm	Wiring Bridge	R...151		57.11.3104	100 kOhm	10 %
R...62		57.11.3104	100 kOhm	1 %	R...152		57.11.3104	100 kOhm	10 %
R...63		57.11.3473	47 kOhm	10 %	R...153		57.11.3104	100 kOhm	10 %
R...64		57.11.3332	3.3 kOhm	1 %	R...154		57.11.3102	1 kOhm	10 %
R...65		57.11.3332	3.3 kOhm	1 %	R...155		57.11.3101	100 Ohm	10 %
R...66		57.11.3332	3.3 kOhm	1 %	R...156		57.11.3101	100 Ohm	10 %
R...67		57.11.3332	3.3 kOhm	1 %	R...157		57.11.3101	100 Ohm	10 %
R...68		57.11.3101	100 Ohm	1 %	R...158		57.11.3101	100 Ohm	10 %
R...69		57.11.3101	100 Ohm	1 %	T...61		1.022.417.00	1:3.16	MIC INPUT TRAF0 10dB St
R...70		57.11.3470	47 Ohm	10 %	PFL-L		: Pos No 1...29		
R...71		57.11.3473	47 kOhm	10 %	PFL-R		: Pos No 31...59		
R...72		57.11.3473	47 kOhm	10 %	TB-RET		: Pos No 61...99		
R...73		58.01.9104	100 kOhm	10 %, variable resistor	MPX-L		: Pos No 101...109		
R...74		.	0	not used	MPX-R		: Pos No 111...119		
R...75		57.11.3152	1.5 kOhm	1 %	MPX-M		: Pos No 121...129		
R...76		57.11.3392	3.9 kOhm	1 %	Global		: Pos No 131...		
R...77		57.11.3272	2.7 kOhm	1 %	Index (1)		29.02.92 ABB	Rohrnete neu 7.0 statt 6.5 mm	
R...78		57.11.3152	1.5 kOhm	1 %	CER=Ceramic, EL=Electrolytic, PE=Polyester,				
R...79		57.11.3392	3.9 kOhm	1 %	SAL=Solid Aluminum lacquered				
R...80		57.11.3272	2.7 kOhm	1 %	MANUFACTURER: TI=Texas Instrument, St=Studer				
R...81		58.01.9103	10 kOhm	10 %, variable resistor	1.917.330.81		PFL/TB/HEADPH. AMPLIFIER	ABB91/10/2200	
R...82		57.11.3471	470 Ohm	1 %	1.917.330.81		PFL/TB/HEADPH. AMPLIFIER	ABB92/02/2901	
R...83		57.11.3223	22 kOhm	1 %					
R...84		57.11.3223	22 kOhm	1 %					
R...85		.	0	not used					
R...86		58.01.9103	10 kOhm	10 %, variable resistor					
R...87		57.11.3391	390 Ohm	1 %					
R...88		57.11.3223	22 kOhm	10 %					
R...89		57.11.3682	6.8 kOhm	1 %					
R...90		57.11.3223	22 kOhm	1 %					

SUBCARD FOR PFL / TB HEADPHONE

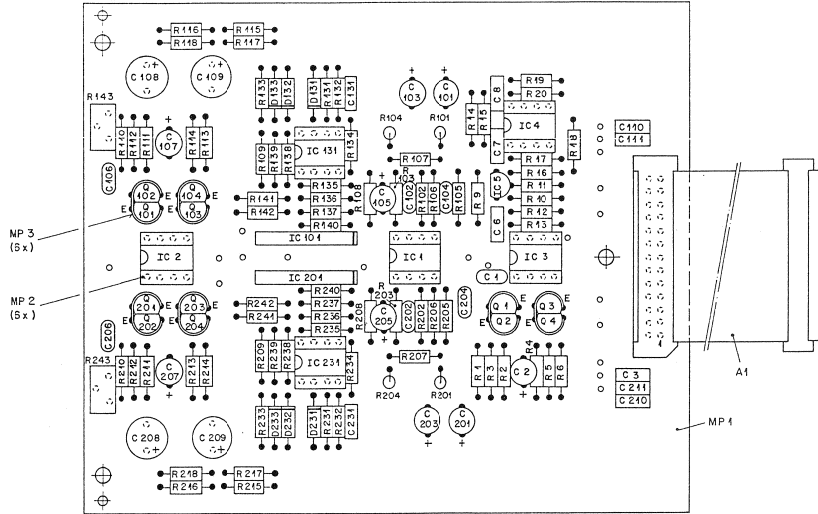
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3.09.90 ab	4.12.90 ab								
PAGE 1 OF 1									
STUDER		SUBCARD FOR PFL/TB HEADPH.			SC	1.917.331.00			

SUBCARD FOR PFL / TB HEADPHONE

1.917.331.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
A	...	1.023.112.01	Flackkabel konf. 26-po1		R	...	57.11.3152	1.5 kOhm 2 %	
C	...	59.34.7151	150 pF CER, 10%		R	...	57.11.3392	3.9 kOhm 2 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3272	2.7 kOhm 2 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3152	1.5 kOhm 2 %	
C	...	59.34.7151	150 pF CER, 5%		R	...	57.11.3392	3.9 kOhm 2 %	
C	...	59.22.3101	100 uF EL, -20%, 25V	59.22.5101 Option 1	R	...	57.11.3272	2.7 kOhm 2 %	
C	...	59.06.0103	10 nF PE, 10%, 63V	59.22.5101 Option 1	R	...	57.11.3223	22 kOhm 10 %	
C	...	59.06.0103	10 nF PE, 10%, 63V		R	...	57.11.3123	12 kOhm 2 %	
C	...	59.06.0103	10 nF PE, 10%, 63V		R	...	57.11.3472	4.7 kOhm 10 %	
C	...	59.06.0103	10 nF PE, 10%, 63V		R	...	57.11.3123	12 kOhm 2 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3103	10 kOhm 10 %	
C	...	59.34.7151	150 pF CER, 2%		R	...	57.11.3339	3.3 Ohm 10 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3392	3.9 kOhm 2 %	
C	...	59.34.7151	150 pF CER, 5%		R	...	57.11.3103	10 kOhm 10 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3101	100 Ohm 10 %	
C	...	59.34.7151	150 pF CER, 10%		R	...	57.11.3223	22 kOhm 10 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3101	100 Ohm 10 %	
C	...	59.22.3471	470 uF EL, -20%, 10V		R	...	57.11.3223	22 kOhm 10 %	
C	...	59.22.3471	470 uF EL, -20%, 10V		R	...	57.11.3101	100 Ohm 10 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3223	22 kOhm 10 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3000	0 Ohm Wiring Bridge	
C	...	59.06.0104	0.1 uF PE, 10%, 63V		R	...	57.11.3104	100 kOhm 1 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3473	47 kOhm 10 %	
C	...	59.34.7151	150 pF CER, 2%		R	...	57.11.3332	3.3 kOhm 1 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3332	3.3 kOhm 1 %	
C	...	59.34.7151	150 pF CER, 2%		R	...	57.11.3332	3.3 kOhm 1 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3101	100 Ohm 1 %	
C	...	59.34.7151	150 pF CER, 2%		R	...	57.11.3101	100 Ohm 1 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3473	47 kOhm 10 %	
C	...	59.22.3101	100 uF EL, -20%, 10V		R	...	57.11.3473	47 kOhm 10 %	
C	...	59.22.3471	470 uF EL, -20%, 10V		R	...	58.01.9104	100 kOhm 10 %, variable resistor	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3152	1.5 kOhm 2 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3392	3.9 kOhm 2 %	
C	...	59.06.0104	0.1 uF PE, 10%, 63V		R	...	57.11.3272	2.7 kOhm 2 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3223	22 kOhm 10 %	
C	...	59.06.0104	0.1 uF PE, 10%, 63V		R	...	57.11.3392	3.9 kOhm 2 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3272	2.7 kOhm 2 %	
C	...	59.06.0104	0.1 uF PE, 10%, 63V		R	...	57.11.3223	22 kOhm 10 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3123	12 kOhm 2 %	
C	...	59.06.0104	0.1 uF PE, 10%, 63V		R	...	57.11.3472	4.7 kOhm 10 %	
C	...	59.06.0222	2.2 nF PE, 10%, 63V		R	...	57.11.3123	12 kOhm 2 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3103	10 kOhm 10 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3339	3.3 Ohm 10 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3392	3.9 kOhm 2 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3101	100 Ohm 10 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3223	22 kOhm 10 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3472	4.7 kOhm 10 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3123	12 kOhm 2 %	
C	...	50.04.0125	1W4448	any	R	...	57.11.3103	10 kOhm 10 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3392	3.9 kOhm 2 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3272	2.7 kOhm 2 %	
C	...	50.09.0105	NE5532N Dual Op Amp	any	R	...	57.11.3152	1.5 kOhm 2 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3392	3.9 kOhm 2 %	
C	...	50.09.0105	NE5532N Dual Op Amp	any	R	...	57.11.3272	2.7 kOhm 2 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3223	22 kOhm 10 %	
C	...	50.09.0101	TL 072 Dual FET-Op Amp	any	R	...	57.11.3101	100 Ohm 10 %	
C	...	50.10.0106	TL431C Shunt Regulator	any	R	...	57.11.3223	22 kOhm 10 %	
C	...	50.11.0140	dbx2150 VCA	any	R	...	57.11.3000	0 Ohm Wiring Bridge	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3104	100 kOhm 1 %	
C	...	50.11.0140	dbx2150 VCA	any	R	...	57.11.3473	47 kOhm 10 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3332	3.3 kOhm 1 %	
C	...	50.11.0140	dbx2150 VCA	any	R	...	57.11.3332	3.3 kOhm 1 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3332	3.3 kOhm 1 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3101	100 Ohm 1 %	
C	...	50.09.0117	MC33078 Dual Op Amp	any	R	...	57.11.3470	47 Ohm 10 %	
C	...	50.03.0516	BC 337 NPN	any	R	...	57.11.3473	47 kOhm 10 %	
C	...	50.03.0516	BC 337 NPN	any	R	...	57.11.3473	47 kOhm 10 %	
C	...	50.03.0625	BC 327 PNP	any	R	...	58.01.9104	100 kOhm 10 %, variable resistor	
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0516	BC 337 NPN	any					
C	...	50.03.0625	BC 327 PNP	any					
C	...	50.03.0625	BC 327 PNP	any					
F	...	57.11.3102	1 kOhm 10 %						
F	...	57.11.3103	10 kOhm 10 %						
F	...	57.11.3339	3.3 Ohm 10 %						
F	...	57.11.3100	10 Ohm 10 %						
F	...	57.11.3339	3.3 Ohm 10 %						
F	...	57.11.3103	10 kOhm 10 %						
F	...	57.11.3103	10 kOhm 10 %						
F	...	0.5 Ohm PTC, 0.5 A	57.92.7013 Option 1						
F	...	0.5 Ohm PTC, 0.5 A	57.92.7013 Option 1						
F	...	4.7 kOhm 2 %							
F	...	12 kOhm 2 %							
F	...	57.11.3203	20 kOhm 2 %						
F	...	57.11.3102	1 kOhm 2 %						
F	...	57.11.3330	33 Ohm 10 %						
F	...	57.11.3101	100 Ohm 2 %						
F	...	57.11.3392	3.9 kOhm 2 %						
F	...	57.11.3103	10 kOhm 2 %						
F	...	57.11.3330	33 Ohm 10 %						
F	...	57.11.3103	10 kOhm 2 %						
F	...	57.11.3102	1 kOhm 2 %						
F	...	57.11.3330	33 Ohm 10 %						

(01) 90/12/04 Better output performance. IC 2,3,4 changed
 Global or both: Pos No 101...
 Left channel: Pos No 101...
 Right channel: Pos No 201...
 CER=Ceramic, EL=Electrolytic, PE=Polyester

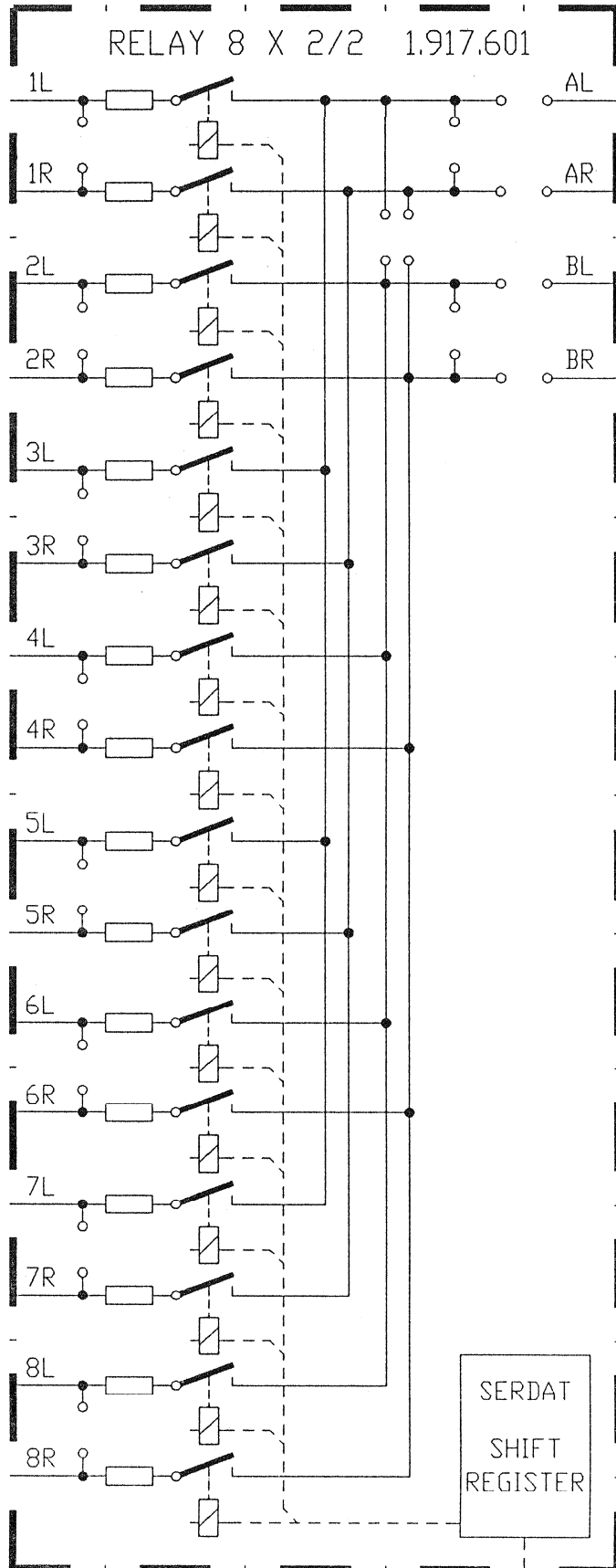
MANUFACTURER: TI=Texas Instrument, St=Studer
 1.917.331.00 SUBCARD FOR PFL/TB/HEADPH. AB 89/09/2900
 1.917.331.00 SUBCARD FOR PFL/TB/HEADPH. AB 90/12/0401

END

Handwritten: 17.9.90	Handwritten: 2.11.89	Handwritten: 74	Handwritten: 16	Handwritten: 16	Handwritten: 16
Datum	Gez.	Gez.	Gez.	Gez.	Index
Kopie Nr.: 1.917.331-00					

STUDER REGENSDORF ZÜRICH
 SUBCARD FOR PFL / TB HEADPH. ESE
 1.917.331-00

MONITOR RELAYS UNIT 8x2/2 1.917.601.00



Pin location list

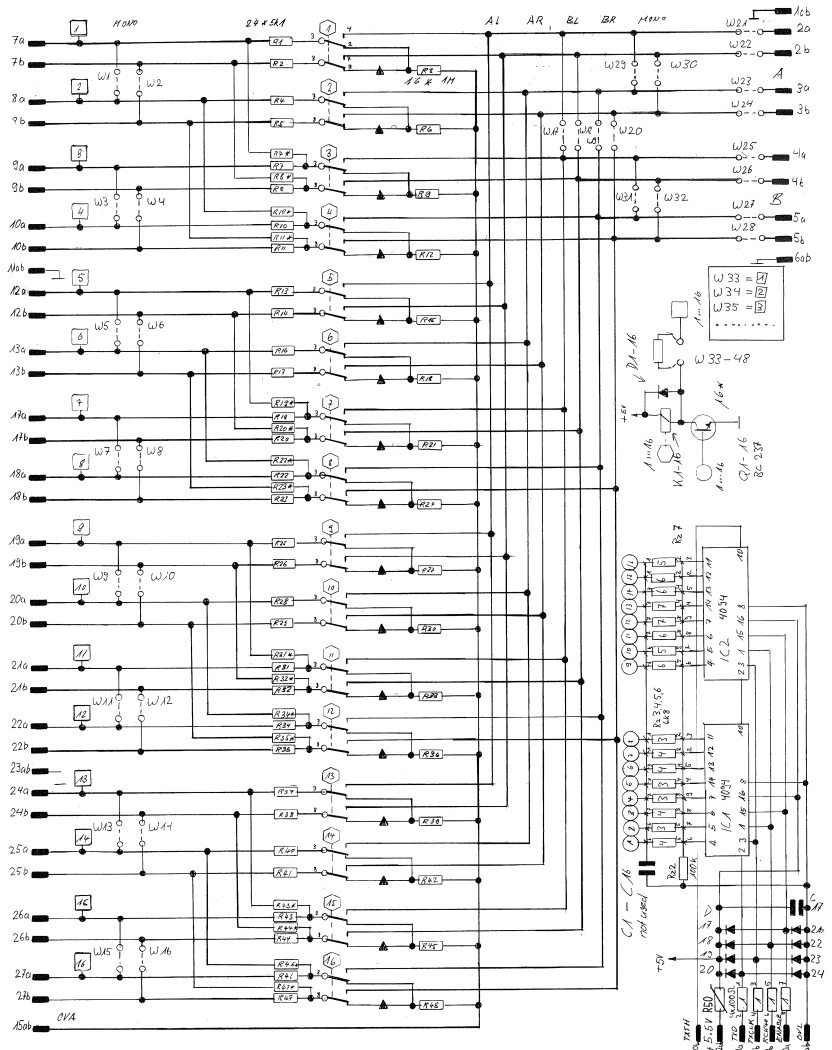
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P	NO	NAME	REMARK	B=BUS O=CONNECTION S=SYMMETRIC I=INVERS AS=ASYMMETRIC

P1	01	0V-A	GROUND AUDIO	X X
P1	02A	BUS A-L-a	OUTPUT A LEFT a ; 0-OHM BUS	B,S
P1	02B	BUS A-L-b	OUTPUT A LEFT b ; 0-OHM BUS	B,S
P1	03A	BUS A-R-a	OUTPUT A RIGHT a ; 0-OHM BUS	B,S
P1	03B	BUS A-R-b	OUTPUT A RIGHT b ; 0-OHM BUS	B,S
P1	04A	BUS B-L-a	OUTPUT B LEFT a ; 0-OHM BUS	B,S
P1	04B	BUS B-L-b	OUTPUT B LEFT b ; 0-OHM BUS	B,S
P1	05A	BUS B-R-a	OUTPUT B RIGHT a ; 0-OHM BUS	B,S
P1	05B	BUS B-R-b	OUTPUT B RIGHT b ; 0-OHM BUS	B,S
P1	06	0V-A	GROUND AUDIO	X X
P1	07A	IN 1-L-a	INPUT 1 LEFT a ; RELAIS 1	O,S
P1	07B	IN 1-L-b	INPUT 1 LEFT b ; RELAIS 1	O,S
P1	08A	IN 1-R-a	INPUT 1 RIGHT a ; RELAIS 2	O,S
P1	08B	IN 1-R-b	INPUT 1 RIGHT b ; RELAIS 2	O,S
P1	09A	IN 2-L-a	INPUT 2 LEFT a ; RELAIS 3	O,S
P1	09B	IN 2-L-b	INPUT 2 LEFT b ; RELAIS 3	O,S
P1	10A	IN 2-R-a	INPUT 2 RIGHT a ; RELAIS 4	O,S
P1	10B	IN 2-R-b	INPUT 2 RIGHT b ; RELAIS 4	O,S
P1	11	0V-A	GROUND AUDIO	X X
P1	12A	IN 3-L-a	INPUT 3 LEFT a ; RELAIS 5	O,S
P1	12B	IN 3-L-b	INPUT 3 LEFT b ; RELAIS 5	O,S
P1	13A	IN 3-R-a	INPUT 3 RIGHT a ; RELAIS 6	O,S
P1	13B	IN 3-R-b	INPUT 3 RIGHT b ; RELAIS 6	O,S
P1	14	- 15.5V	- SUPPLY	B X X
P1	15	0V-A	GROUND AUDIO	B X X
P1	16	+ 15.5V	+ SUPPLY	B X X
P1	17A	IN 4-L-a	INPUT 4 LEFT a ; RELAIS 7	O,S
P1	17B	IN 4-L-b	INPUT 4 LEFT b ; RELAIS 7	O,S
P1	18A	IN 4-R-a	INPUT 4 RIGHT a ; RELAIS 8	O,S
P1	18B	IN 4-R-b	INPUT 4 RIGHT b ; RELAIS 8	O,S
P1	19A	IN 5-L-a	INPUT 5 LEFT a ; RELAIS 9	O,S
P1	19B	IN 5-L-b	INPUT 5 LEFT b ; RELASI 9	O,S
P1	20A	IN 5-R-a	INPUT 5 RIGHT a ; RELAIS 10	O,S
P1	20B	IN 5-R-b	INPUT 5 RIGHT b ; RELAIS 10	O,S
P1	21A	IN 6-L-a	INPUT 6 LEFT a ; RELAIS 11	O,S
P1	21B	IN 6-L-b	INPUT 6 LEFT b ; RELASI 11	O,S
P1	22A	IN 6-R-a	INPUT 6 RIGHT a ; RELAIS 12	O,S
P1	22B	IN 6-R-b	INPUT 6 RIGHT b ; RELAIS 12	O,S
P1	23	0V-A	GROUND AUDIO	X X
P1	24A	IN 7-L-a	INPUT 7 LEFT a ; RELAIS 13	O,S
P1	24B	IN 7-L-b	INPUT 7 LEFT b ; RELAIS 13	O,S
P1	25A	IN 7-R-a	INPUT 7 RIGHT a ; RELAIS 14	O,S
P1	25B	IN 7-R-b	INPUT 7 RIGHT b ; RELAIS 14	O,S
P1	26A	IN 8-L-a	INPUT 8 LEFT a ; RELAIS 15	O,S
P1	26B	IN 8-L-b	INPUT 8 LEFT b ; RELAIS 15	O,S
P1	27A	IN 8-R-a	INPUT 8 RIGHT a ; RELAIS 16	O,S
P1	27B	IN 8-R-b	INPUT 8 RIGHT b ; RELAIS 16	O,S
P1	28	0V-L	GROUND SIGN (LOGIC)	B X X
P1	29A	DO 0	DATA OUT 0 (ENABLE)	
P1	29B	TSTB 5	TRANSMIT STROBE 5	
P1	30A	-	RES	
P1	30B	TXTH	TRANSMIT DATA THROUGH	
P1	31A	TXD	TRANSMIT DATA	
P1	31B	TCL	TRANSMIT CLOCK	
P1	32	+ 5.5V	+ SUPPLY	B X X

MONITOR RELAYS UNIT 8x2/2

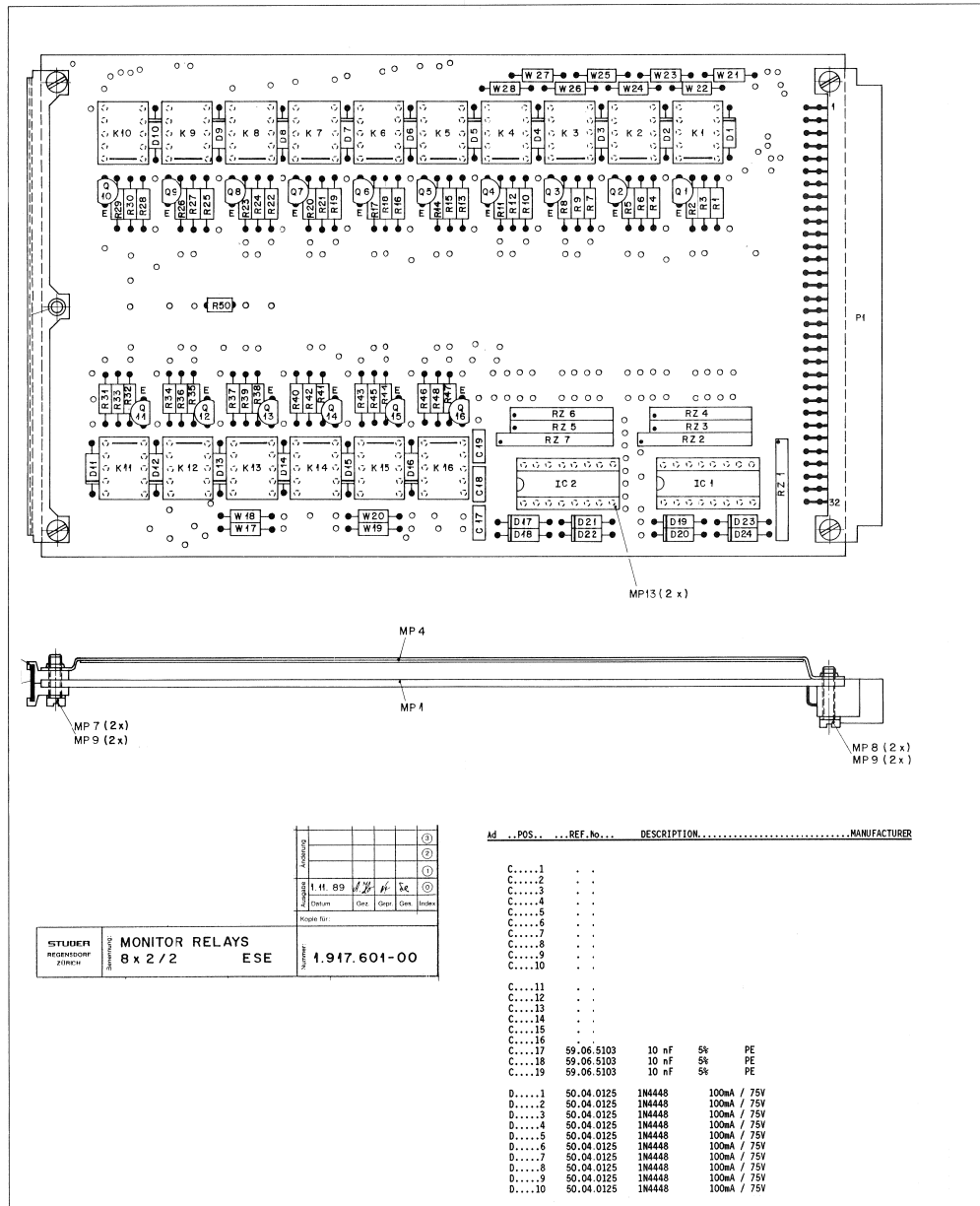
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① 1.9.88/14	① 1.9.88/14	○ . . .	○ . . .	○ . . .
STUDER		MONITOR RELAYS UNIT 8x2/2		PAGE 1 OF 1
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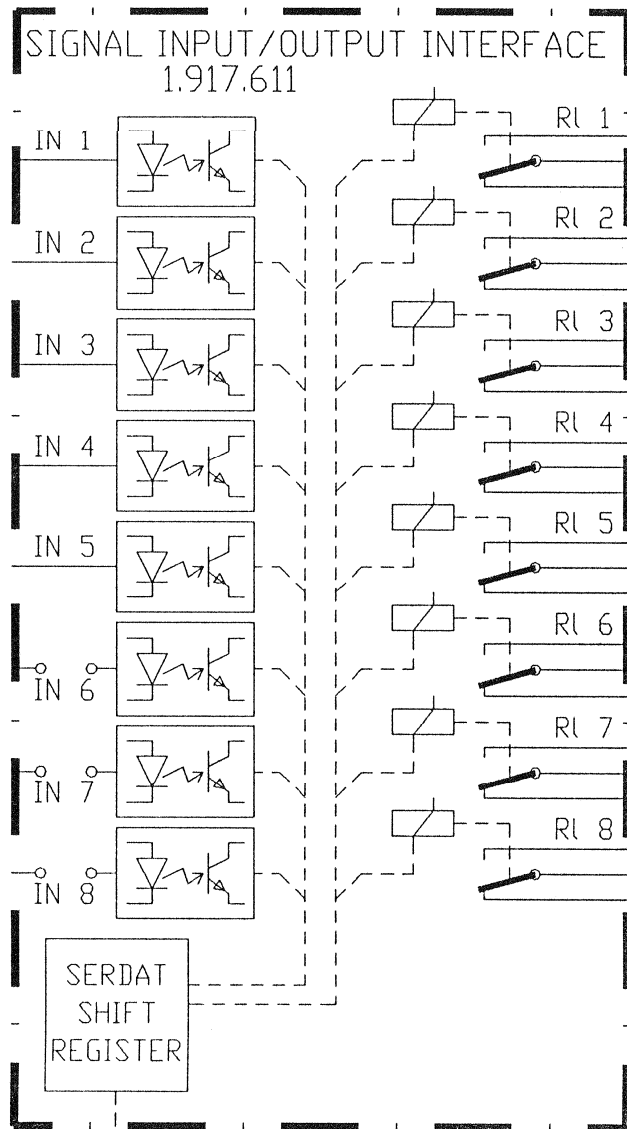
MONITOR RELAYS 8x2/2

1.917.601.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
D....11	50.04.0125	1M4448	100mA / 75V		R....45	57.11.3105	1 MOhm	5% 0.25W MF	
D....12	50.04.0125	1M4448	100mA / 75V		R....46	57.11.3512	5.1 kOhm	1% 0.25W MF	
D....13	50.04.0125	1M4448	100mA / 75V		R....47	57.11.3512	5.1 kOhm	1% 0.25W MF	
D....14	50.04.0125	1M4448	100mA / 75V		R....48	57.11.3105	1 MOhm	5% 0.25W MF	
D....15	50.04.0125	1M4448	100mA / 75V		R....50	57.92.7014		PTC 0.650mA	
D....16	50.04.0125	1M4448	100mA / 75V		RZ....1	57.88.2101	100 Ohm	2% resistor networks	
D....17	50.04.0125	1M4448	100mA / 75V		RZ....2	57.88.4104	100 kOhm	2% resistor networks	
D....18	50.04.0125	1M4448	100mA / 75V		RZ....3	57.88.2682	6.8 kOhm	2% resistor networks	
D....19	50.04.0125	1M4448	100mA / 75V		RZ....4	57.88.2682	6.8 kOhm	2% resistor networks	
D....20	50.04.0125	1M4448	100mA / 75V		RZ....5	57.88.2682	6.8 kOhm	2% resistor networks	
D....21	50.04.0125	1M4448	100mA / 75V		RZ....6	57.88.2682	6.8 kOhm	2% resistor networks	
D....22	50.04.0125	1M4448	100mA / 75V		RZ....7	57.88.4104	100 kOhm	2% resistor networks	
D....23	50.04.0125	1M4448	100mA / 75V		W....1	57.11.3000	0 Ohm	not used (nur fuer mono)	
D....24	50.04.0125	1M4448	100mA / 75V		W....2	57.11.3000	0 Ohm	"	
F.....1		not used	T 60mA / 250V	5*20mm(5101115)	W....3	57.11.3000	0 Ohm	"	
IC....1	50.07.0018	4094	Shift and store bus register		W....4	57.11.3000	0 Ohm	"	
IC....2	50.07.0018	4094	Shift and store bus register		W....5	57.11.3000	0 Ohm	"	
K.....1	56.04.0195	SDS Relais	Type TQ2-6V		W....6	57.11.3000	0 Ohm	"	
K.....2	56.04.0195	SDS Relais	Type TQ2-6V		W....7	57.11.3000	0 Ohm	"	
K.....3	56.04.0195	SDS Relais	Type TQ2-6V		W....8	57.11.3000	0 Ohm	"	
K.....4	56.04.0195	SDS Relais	Type TQ2-6V		W....9	57.11.3000	0 Ohm	"	
K.....5	56.04.0195	SDS Relais	Type TQ2-6V		W....10	57.11.3000	0 Ohm	"	
K.....6	56.04.0195	SDS Relais	Type TQ2-6V		W....11	57.11.3000	0 Ohm	"	
K.....7	56.04.0195	SDS Relais	Type TQ2-6V		W....12	57.11.3000	0 Ohm	"	
K.....8	56.04.0195	SDS Relais	Type TQ2-6V		W....13	57.11.3000	0 Ohm	"	
K.....9	56.04.0195	SDS Relais	Type TQ2-6V		W....14	57.11.3000	0 Ohm	"	
K.....10	56.04.0195	SDS Relais	Type TQ2-6V		W....15	57.11.3000	0 Ohm	"	
K.....11	56.04.0195	SDS Relais	Type TQ2-6V		W....16	57.11.3000	0 Ohm	"	
K.....12	56.04.0195	SDS Relais	Type TQ2-6V		W....17	57.11.3000	0 Ohm	"	
K.....13	56.04.0195	SDS Relais	Type TQ2-6V		W....18	57.11.3000	0 Ohm	"	
K.....14	56.04.0195	SDS Relais	Type TQ2-6V		W....19	57.11.3000	0 Ohm	"	
K.....15	56.04.0195	SDS Relais	Type TQ2-6V		W....20	57.11.3000	0 Ohm	"	
K.....16	56.04.0195	SDS Relais	Type TQ2-6V		W....21	57.11.3000	0 Ohm	"	
P.....1	54.11.2004		Euro.2*32 contacts		W....22	57.11.3000	0 Ohm	"	
Q.....1	50.03.0436	BC 237	npn	100mA	W....23	57.11.3000	0 Ohm	"	
Q.....2	50.03.0436	BC 237	npn	100mA	W....24	57.11.3000	0 Ohm	"	
Q.....3	50.03.0436	BC 237	npn	100mA	W....25	57.11.3000	0 Ohm	"	
Q.....4	50.03.0436	BC 237	npn	100mA	W....26	57.11.3000	0 Ohm	"	
Q.....5	50.03.0436	BC 237	npn	100mA	W....27	57.11.3000	0 Ohm	"	
Q.....6	50.03.0436	BC 237	npn	100mA	W....28	57.11.3000	0 Ohm	"	
Q.....7	50.03.0436	BC 237	npn	100mA	W....29	57.11.3000	0 Ohm	not used	
Q.....8	50.03.0436	BC 237	npn	100mA	W....30	57.11.3000	0 Ohm	not used	
Q.....9	50.03.0436	BC 237	npn	100mA	W....31	57.11.3000	0 Ohm	not used	
Q.....10	50.03.0436	BC 237	npn	100mA	W....32	57.11.3000	0 Ohm	not used	
Q.....11	50.03.0436	BC 237	npn	100mA	W....33	57.11.3000	0 Ohm	not used	Col. 1
Q.....12	50.03.0436	BC 237	npn	100mA	W....34	57.11.3000	0 Ohm	not used	Col. 2
Q.....13	50.03.0436	BC 237	npn	100mA	W....35	57.11.3000	0 Ohm	not used	Col. 3
Q.....14	50.03.0436	BC 237	npn	100mA	W....36	57.11.3000	0 Ohm	not used	Col. 4
Q.....15	50.03.0436	BC 237	npn	100mA	W....37	57.11.3000	0 Ohm	not used	Col. 5
Q.....16	50.03.0436	BC 237	npn	100mA	W....38	57.11.3000	0 Ohm	not used	Col. 6
R....1	57.11.3512	5.1 kOhm	1% 0.25W MF		W....39	57.11.3000	0 Ohm	not used	Col. 7
R....2	57.11.3512	5.1 kOhm	1% 0.25W MF		W....40	57.11.3000	0 Ohm	not used	Col. 8
R....3	57.11.3105	1 MOhm	5% 0.25W MF		W....41	57.11.3000	0 Ohm	not used	Col. 9
R....4	57.11.3512	5.1 kOhm	1% 0.25W MF		W....42	57.11.3000	0 Ohm	not used	Col.10
R....5	57.11.3512	5.1 kOhm	1% 0.25W MF		W....43	57.11.3000	0 Ohm	not used	Col.11
R....6	57.11.3105	1 MOhm	5% 0.25W MF		W....44	57.11.3000	0 Ohm	not used	Col.12
R....7	57.11.3512	5.1 kOhm	1% 0.25W MF		W....45	57.11.3000	0 Ohm	not used	Col.13
R....8	57.11.3512	5.1 kOhm	1% 0.25W MF		W....46	57.11.3000	0 Ohm	not used	Col.14
R....9	57.11.3105	1 MOhm	5% 0.25W MF		W....47	57.11.3000	0 Ohm	not used	Col.15
R....10	57.11.3512	5.1 kOhm	1% 0.25W MF		W....48	57.11.3000	0 Ohm	not used	Col.16
R....11	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....1	1.917.601.11	1 pcs	Print	Studer
R....12	57.11.3105	1 MOhm	5% 0.25W MF		MP....2	1.917.601.01	1 pcs	Bez. Streifen 6.3*91	Studer
R....13	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....3	1.310.006.33	2 pcs	Griffhaelften	Studer
R....14	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....4	1.310.090.49	1 pcs	Abschirmblech	
R....15	57.11.3105	1 MOhm	5% 0.25W MF		MP....5	1.310.096.49	1 pcs	Klarsicht Schild	
R....16	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....6	28.21.1380	1 pcs	Rohrniete D2.5/6	
R....17	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....7	21.01.0280	2 pcs	Z Schraube M2.5*8	
R....18	57.11.3105	1 MOhm	5% 0.25W MF		MP....8	21.01.0261	2 pcs	Z Schraube M2.5*10	
R....19	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....9	24.16.1025	4 pcs	Rippenscheibe D2.7/5	
R....20	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....10	43.01.0108	1 pcs	ESE-Warnschild	
R....21	57.11.3105	1 MOhm	5% 0.25W MF		MP....11				
R....22	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....12				
R....23	57.11.3512	5.1 kOhm	1% 0.25W MF		MP....13	53.03.0168	2 pcs	IC-Sockel 16 Pin	
R....24	57.11.3105	1 MOhm	5% 0.25W MF						
R....25	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....26	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....27	57.11.3105	1 MOhm	5% 0.25W MF						
R....28	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....29	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....30	57.11.3105	1 MOhm	5% 0.25W MF						
R....31	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....32	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....33	57.11.3105	1 MOhm	5% 0.25W MF						
R....34	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....35	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....36	57.11.3105	1 MOhm	5% 0.25W MF						
R....37	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....38	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....39	57.11.3105	1 MOhm	5% 0.25W MF						
R....40	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....41	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....42	57.11.3105	1 MOhm	5% 0.25W MF						
R....43	57.11.3512	5.1 kOhm	1% 0.25W MF						
R....44	57.11.3512	5.1 kOhm	1% 0.25W MF						

SIGNAL INPUT/OUTPUT INTERFACE 1.917.611.00



Pin location list

1.917.611

1.1 = RELAIS 1 , CONTACT 1
 a = MAKE CONTACT ; ARBEITSKONTAKT
 r = BREAK CONTACT ; RUHEKONTAKT
 s = SWITCH CONTACT ; SCHALTKONTAKT

P	NO	NAME	REMARK			
				B=BUS		
				Q=CONNECTION		
				S=SYMMETRIC		
				I=INVERS		
				AS=ASYMMETRIC		

P1	01A	1.1-a	RELAIS 1.1			A
P1	01B	1.1-s	RELAIS 1.1			A
P1	02A	1.2-a/1.1-r	RELAIS 1.2 / RELAIS 1.1			A
P1	02B	1.2-s	RELAIS 1.2			A
P1	03A	2.2-a/2.1-r	RELAIS 2.2 / RELAIS 2.1			A
P1	03B	2.2-s	RELAIS 2.2			A
P1	04A	2.1-a	RELAIS 2.1			B
P1	04B	2.1-s	RELAIS 2.1			B
P1	05A	3.2-a/3.1-r	RELAIS 3.2 / RELAIS 3.1			B
P1	05B	3.2-s	RELAIS 3.2			B
P1	06A	3.1-a	RELAIS 3.1			B
P1	06B	3.1-s	RELAIS 3.1			B
P1	07A	4.2-a/4.1-r	RELAIS 4.2 / RELAIS 4.1			C
P1	07B	4.2-s	RELAIS 4.2			C
P1	08A	4.1-a	RELAIS 4.1			C
P1	08B	4.1-s	RELAIS 4.1			C
P1	09A	5.1-a	RELAIS 5.1			C
P1	09B	5.1-s	RELAIS 5.1			C
P1	10A	5.2-a/5.1-r	RELAIS 5.2 / RELAIS 5.1			D
P1	10B	5.2-s	RELAIS 5.2			D
P1	11A	6.1-a	RELAIS 6.1			D
P1	11B	6.1-s	RELAIS 6.1			D
P1	12A	6.2-a/6.1-r	RELAIS 6.2 / RELAIS 6.1			D
P1	12B	6.2-s	RELAIS 6.2			D
P1	13A	7.2-a	RELAIS 7.2			E
P1	13B	7.2-r	RELAIS 7.2			E
P1	14	- 15.5V	- SUPPLY		B	X X
P1	15	0V-A	GROUND AUDIO		B	X X
P1	16	+ 15.5V	+ SUPPLY		B	X X
P1	17A	7.2-s	RELAIS 7.2			E
P1	17B	8.2-s	RELAIS 8.2			E
P1	18A	8.2-a	RELAIS 8.2			F
P1	18B	8.2-r	RELAIS 8.2			F
P1	19A	IN 8+ / 7.1-a	OPTO IN 8+ / RELAIS 7.1			F
P1	19B	IN 8- / 7.1-r	OPTO IN 8- / RELAIS 7.1			F
P1	20A	IN 7+ / 7.1-s	OPTO IN 7+ / RELAIS 7.1			F
P1	20B	IN 7- / 8.1-a	OPTO IN 7- / RELAIS 8.1			F
P1	21A	IN 6+ / 8.1-r	OPTO IN 6+ / RELAIS 8.1			F
P1	21B	IN 6- / 8.1-s	OPTO IN 6- / RELAIS 8.1			F
P1	22A	IN 5+	OPTO IN 5+			G
P1	22B	IN 5-	OPTO IN 5-			G
P1	23A	IN 4+	OPTO IN 4+			G
P1	23B	IN 4-	OPTO IN 4-			G
P1	24A	IN 3+	OPTO IN 3+			G
P1	24B	IN 3-	OPTO IN 3-			G
P1	25A	IN 2+	OPTO IN 2+			H

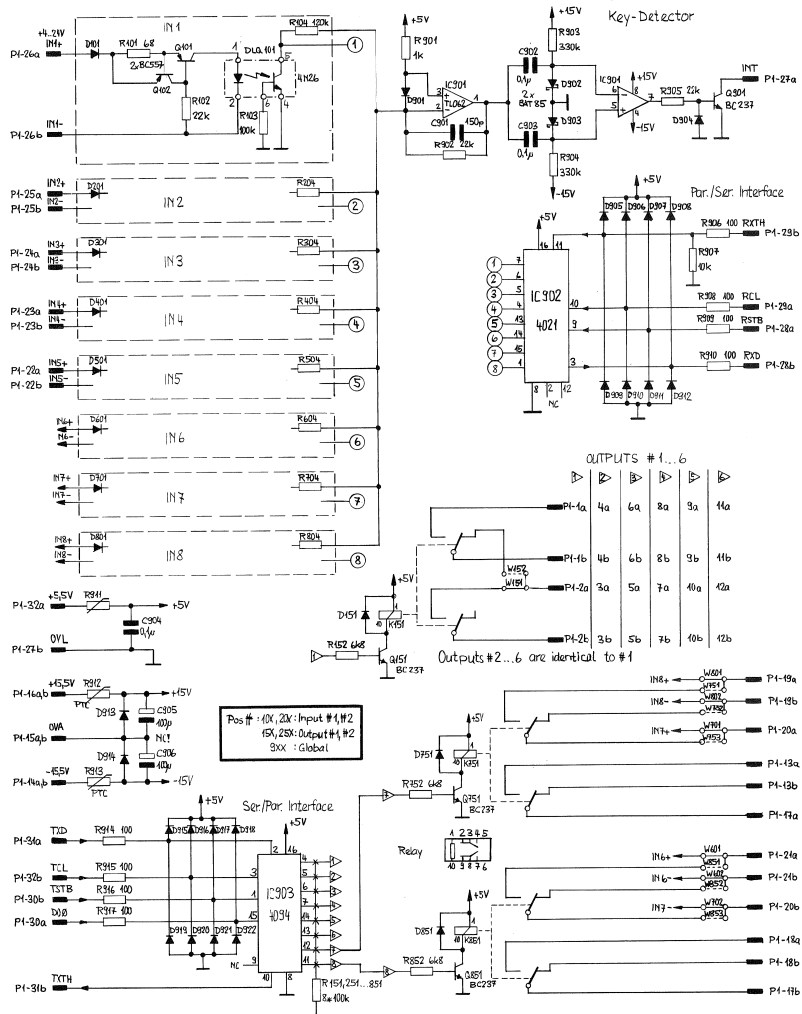
Pin location list

1.917.611

P1	25B	IN 2-	OPTO IN 2-	H		
P1	26A	IN 1+	OPTO IN 1+	H		
P1	26B	IN 1-	OPTO IN 1-	H		
P1	27A	INT	INTERUPT			
P1	27B	DV-L	GROUND SIGN (LOGIC)		B	X X
P1	28A	RSTB	RECEIVE STROBE			
P1	28B	RXD	RECEIVE DATA			
P1	29A	RCL	RECEIVE CLOCK			
P1	29B	RXTH	RECEIVE DATA THROUGH			
P1	30A	DO 0	DATA OUT 0 (ENABLE)			
P1	30B	TSTB	TRANSMIT STROBE			
P1	31A	TXD	TRANSMIT DATA			
P1	31B	TXTH	TRANSMIT DATA THROUGH			
P1	32A	+ 5.5V	+ SUPPLY		B	
P1	32B	TCL	TRANSMIT CLOCK			

SIGNAL INPUT/OUTPUT INTERFACE

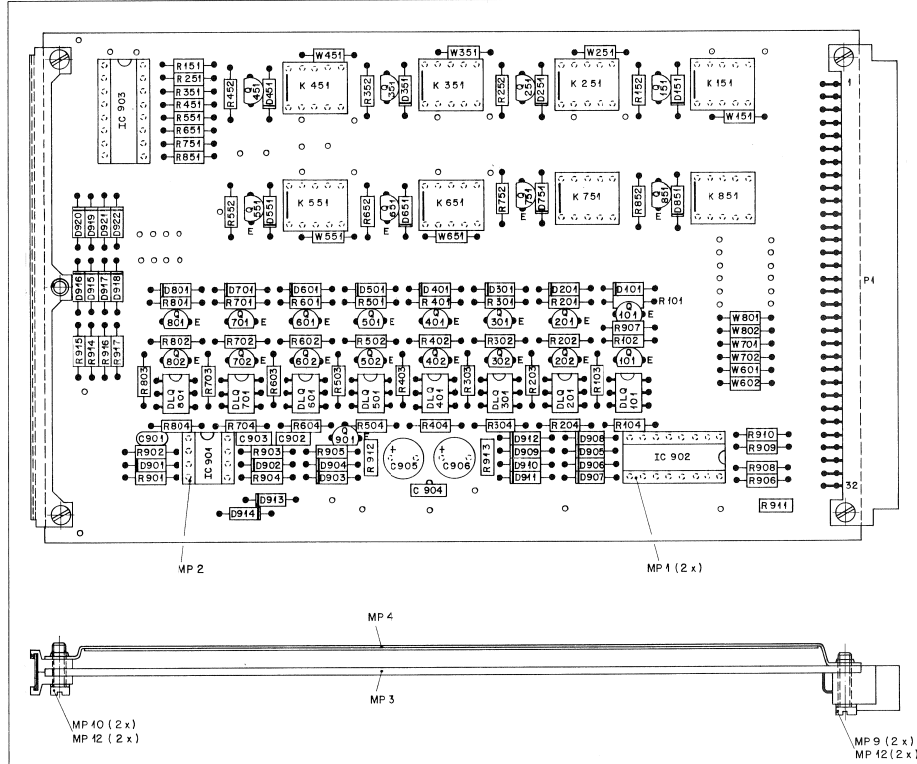
1.917.611.00



① 3,03,90 ab	○ . . ○ . . ○ . . ○ . . ○ . .	PAGE 1 OF 1
STUDER	SIGNAL INPUT/OUTPUT INTERFACE	SC 1.917.611.00

SIGNAL INPUT/OUTPUT INTERFACE

1.917.611.00



STUDER REGENERATOR ZÜRICH	STUDER	SIGNAL I/O INTERFACE	ESE
1.917.611.00			
Kopie Nr.:			
Datum: Gest: Dror: Gest: Index:			

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
D..501	50.04.0125	IN4448		any
D..551	50.04.0125	IN4448		any
D..601	50.04.0125	IN4448		any
D..651	50.04.0125	IN4448		any
D..701	50.04.0125	IN4448		any
D..751	50.04.0125	IN4448		any
D..801	50.04.0125	IN4448		any
D..851	50.04.0125	IN4448		any
D..901	50.04.0125	IN4448		any
D..902	50.04.0127	BAT85	scottky	any
D..903	50.04.0127	BAT85	scottky	any
D..904	50.04.0125	IN4448		any
D..905	50.04.0125	IN4448		any
D..906	50.04.0125	IN4448		any
D..907	50.04.0125	IN4448		any
D..908	50.04.0125	IN4448		any
D..909	50.04.0125	IN4448		any
D..910	50.04.0125	IN4448		any
D..911	50.04.0125	IN4448		any
D..912	50.04.0125	IN4448		any
D..913	50.04.0125	IN4448		any
D..914	50.04.0125	IN4448		any
D..915	50.04.0125	IN4448		any
D..916	50.04.0125	IN4448		any
D..917	50.04.0125	IN4448		any
D..918	50.04.0125	IN4448		any
D..919	50.04.0125	IN4448		any
D..920	50.04.0125	IN4448		any
D..401	50.04.0125	IN4448		any
D..451	50.04.0125	IN4448		any

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
DLQ.101	50.99.0126	4N26	Opto-Coupler		R...501	57.11.3680	68 Ohm		
DLQ.201	50.99.0126	4N26	Opto-Coupler		R...502	57.11.3223	22 kOhm		
DLQ.301	50.99.0126	4N26	Opto-Coupler		R...503	57.11.3104	100 kOhm		
DLQ.401	50.99.0126	4N26	Opto-Coupler		R...504	57.11.3124	120 kOhm		
DLQ.501	50.99.0126	4N26	Opto-Coupler		R...551	57.11.3104	100 kOhm		
DLQ.601	50.99.0126	4N26	Opto-Coupler		R...552	57.11.3682	6.8 kOhm		
DLQ.701	50.99.0126	4N26	Opto-Coupler		R...601	57.11.3680	68 Ohm		
DLQ.801	50.99.0126	4N26	Opto-Coupler		R...602	57.11.3223	22 kOhm		
IC..901	50.09.0119	TL082	Dual Op Amp		R...603	57.11.3104	100 kOhm		
IC..902	50.07.1021	4021	Shift register PI/SO		R...604	57.11.3124	120 kOhm		
IC..903	50.07.0018	4094	Shift and store bus register		R...651	57.11.3104	100 kOhm		
K...151	56.04.0155		SDS Relais, Type TQ2-6V		R...652	57.11.3682	6.8 kOhm		
K...251	56.04.0155		SDS Relais, Type TQ2-6V		R...701	57.11.3680	68 Ohm		
K...351	56.04.0155		SDS Relais, Type TQ2-6V		R...702	57.11.3223	22 kOhm		
K...451	56.04.0155		SDS Relais, Type TQ2-6V		R...703	57.11.3104	100 kOhm		
K...551	56.04.0155		SDS Relais, Type TQ2-6V		R...704	57.11.3124	120 kOhm		
K...651	56.04.0155		SDS Relais, Type TQ2-6V		R...751	57.11.3104	100 kOhm		
K...751	56.04.0155		SDS Relais, Type TQ2-6V		R...752	57.11.3682	6.8 kOhm		
K...851	56.04.0155		SDS Relais, Type TQ2-6V		R...801	57.11.3680	68 Ohm		
MP...1	53.03.0148		2 pcs IC-Sockets 16 Pin		R...802	57.11.3223	22 kOhm		
MP...2	53.03.0146		1 pcs IC-Socket 8 Pin		R...803	57.11.3104	100 kOhm		
MP...3	1.917.611.1		1 pcs Print	St	R...804	57.11.3124	120 kOhm		
MP...4	1.010.090.49		2 pcs Absch. komplett	St	R...851	57.11.3104	100 kOhm		
MP...5	1.010.006.23		2 pcs Griffhaelften	St	R...852	57.11.3682	6.8 kOhm		
MP...6	43.01.0108		1 pcs ESE Wernschild		R...901	57.11.3102	1 kOhm		
MP...7	1.917.611.01		1 pcs Bez. Streifen 6.3*91	St	R...902	57.11.3223	22 kOhm		
MP...8	28.21.1300		1 pcs Rohrniete, D2.5*6.5		R...903	57.11.3334	330 kOhm		
MP...9	21.01.0281		2 pcs Z Schr. ZN M2.5*10		R...904	57.11.3334	330 kOhm		
MP...10	21.01.0280		2 pcs Z Schr. ZN M2.5*8		R...905	57.11.3223	22 kOhm		
MP...11	1.010.096.49		1 pcs Klarsichtschild	St	R...906	57.11.3101	100 Ohm		
MP...12	24.16.1025		4 pcs Rippenscheibe, D2.75/5		R...907	57.11.3103	10 kOhm		
P...1	54.11.2004		Euro, 2*32 contacts		R...908	57.11.3101	100 Ohm		
Q...101	50.03.0515	BC557	PNP	any	R...909	57.11.3101	100 Ohm		
Q...102	50.03.0515	BC557	PNP	any	R...910	57.11.3101	100 Ohm		
Q...151	50.03.0436	BC237	NPN	any	R...911	57.92.7013	0.75 Ohm	Hold=0.5A	PTC
Q...201	50.03.0515	BC557	PNP	any	R...912	57.92.7013	0.75 Ohm	Hold=0.5A	PTC
Q...202	50.03.0515	BC557	PNP	any	R...913	57.92.7013	0.75 Ohm	Hold=0.5A	PTC
Q...251	50.03.0436	BC237	NPN	any	R...914	57.11.3101	100 Ohm		
Q...301	50.03.0515	BC557	PNP	any	R...915	57.11.3101	100 Ohm		
Q...302	50.03.0515	BC557	PNP	any	R...916	57.11.3101	100 Ohm		
Q...351	50.03.0436	BC237	NPN	any	R...917	57.11.3101	100 Ohm		
Q...401	50.03.0515	BC557	PNP	any	W...151	57.11.3000		Wiring Bridge	
Q...402	50.03.0515	BC557	PNP	any	W...152	.. 0	not used	Wiring Bridge	
Q...451	50.03.0436	BC237	NPN	any	W...251	57.11.3000		Wiring Bridge	
Q...501	50.03.0515	BC557	PNP	any	W...252	.. 0	not used	Wiring Bridge	
Q...502	50.03.0515	BC557	PNP	any	W...351	57.11.3000		Wiring Bridge	
Q...551	50.03.0436	BC237	NPN	any	W...352	.. 0	not used	Wiring Bridge	
Q...601	50.03.0515	BC557	PNP	any	W...451	57.11.3000		Wiring Bridge	
Q...602	50.03.0515	BC557	PNP	any	W...452	.. 0	not used	Wiring Bridge	
Q...651	50.03.0436	BC237	NPN	any	W...551	57.11.3000		Wiring Bridge	
Q...701	50.03.0515	BC557	PNP	any	W...552	.. 0	not used	Wiring Bridge	
Q...702	50.03.0515	BC557	PNP	any	W...601	57.11.3000		Wiring Bridge	
Q...801	50.03.0515	BC557	PNP	any	W...602	57.11.3000		Wiring Bridge	
Q...802	50.03.0515	BC557	PNP	any	W...651	57.11.3000		Wiring Bridge	
Q...851	50.03.0436	BC237	NPN	any	W...652	.. 0	not used	Wiring Bridge	
Q...901	50.03.0436	BC237	NPN	any	W...701	57.11.3000		Wiring Bridge	
R...101	57.11.3680	68 Ohm			W...702	57.11.3000		Wiring Bridge	
R...102	57.11.3223	22 kOhm			W...751	.. 0	not used	Wiring Bridge	
R...103	57.11.3104	100 kOhm			W...752	.. 0	not used	Wiring Bridge	
R...104	57.11.3124	120 kOhm			W...753	.. 0	not used	Wiring Bridge	
R...151	57.11.3104	100 kOhm			W...801	57.11.3000		Wiring Bridge	
R...152	57.11.3682	6.8 kOhm			W...802	57.11.3000		Wiring Bridge	
R...201	57.11.3680	68 Ohm			W...851	.. 0	not used	Wiring Bridge	
R...202	57.11.3223	22 kOhm			W...852	.. 0	not used	Wiring Bridge	
R...203	57.11.3104	100 kOhm			W...853	.. 0	not used	Wiring Bridge	
R...204	57.11.3124	120 kOhm			Input 1, 2, ... : Pos No 10X, 20X, ...				
R...251	57.11.3104	100 kOhm			Output 1, 2, ... : Pos No 15X, 25X, ...				
R...252	57.11.3682	6.8 kOhm			Global parts : Pos No 9XX				
R...301	57.11.3680	68 Ohm			CER=Ceramic, EL=Electrolytic, PE=Polyester				
R...302	57.11.3223	22 kOhm			MANUFACTURER: TI=Texas Instrument, St=Studer				
R...303	57.11.3104	100 kOhm			1.917.611.00 SIGNAL INPUT/OUTPUT INTERFACE AB 89/11/0600				
R...304	57.11.3124	120 kOhm							
R...351	57.11.3104	100 kOhm							
R...352	57.11.3682	6.8 kOhm							
R...401	57.11.3680	68 Ohm							
R...402	57.11.3223	22 kOhm							
R...403	57.11.3104	100 kOhm							
R...404	57.11.3124	120 kOhm							
R...451	57.11.3104	100 kOhm							
R...452	57.11.3682	6.8 kOhm							

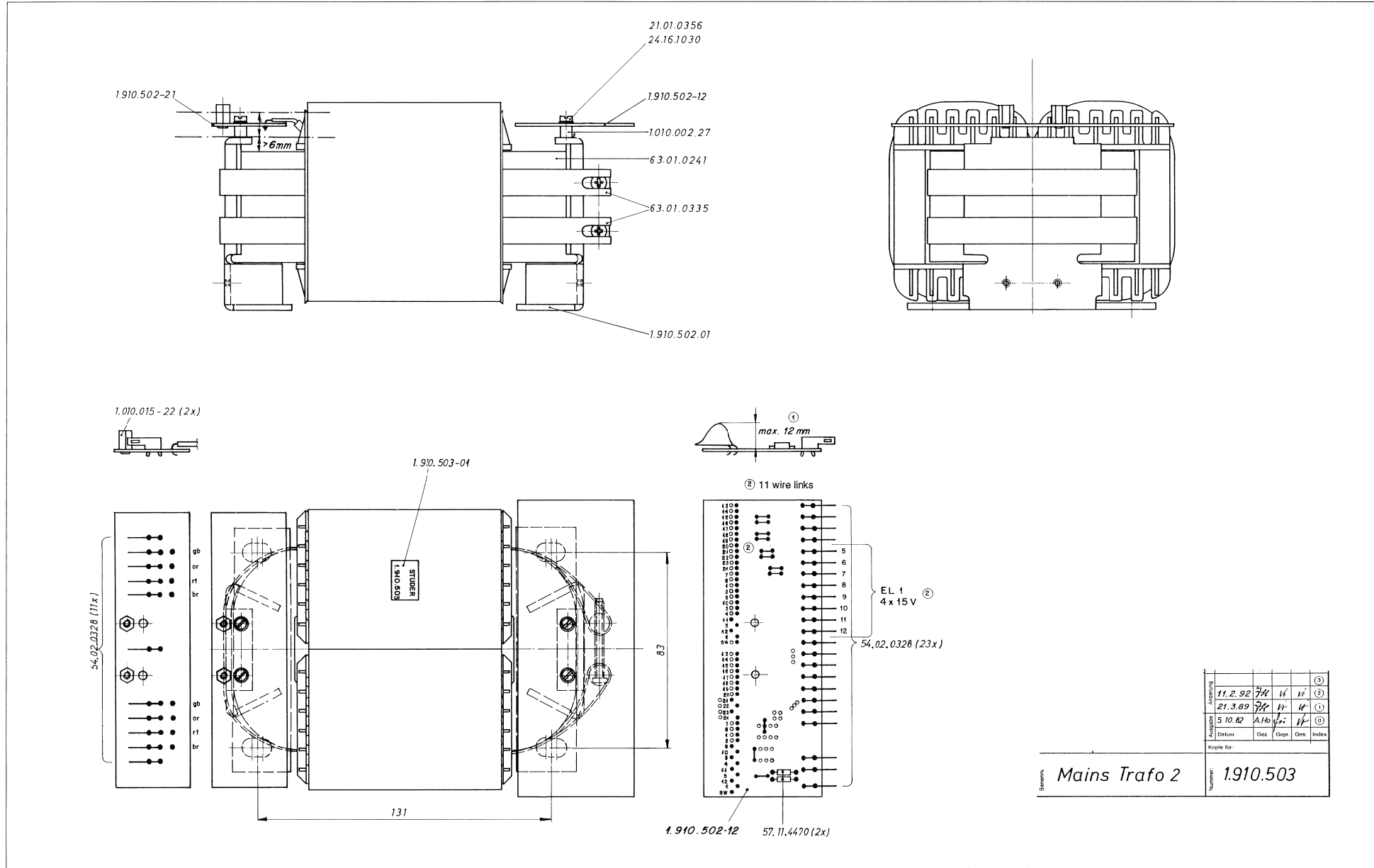
Section 8 19" Rack Mount Power Supply

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LED Board.....	1.918.082.00
Rectifier/Condensator Board.....	1.918.083.00
±15V Stabilizer Board.....	1.918.084.00
Mains Selector Board.....	1.918.085.00
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Feed Through Board.....	1.918.089.00

MAINS TRAF0 2

1.910.503

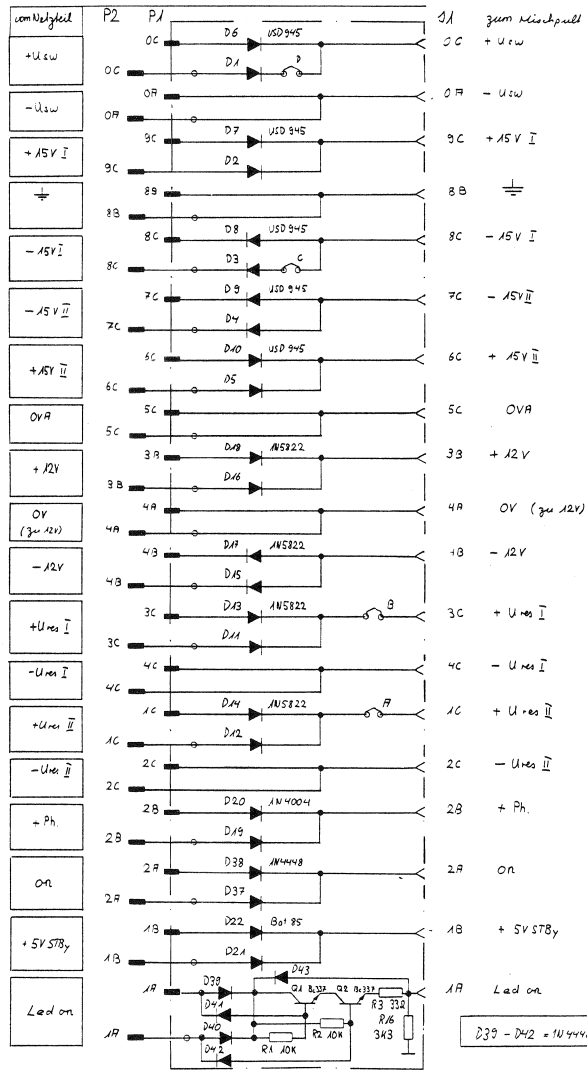


Erstellung	11.2.92	74	VK	VK	②
Ausgabe	21.3.89	74	VK	VK	①
Datum	5.10.82	A.H.	VK	VK	①
Kopie für:					
Blatt					

Blatt: Mains Trafo 2
 Nummer: 1.910.503

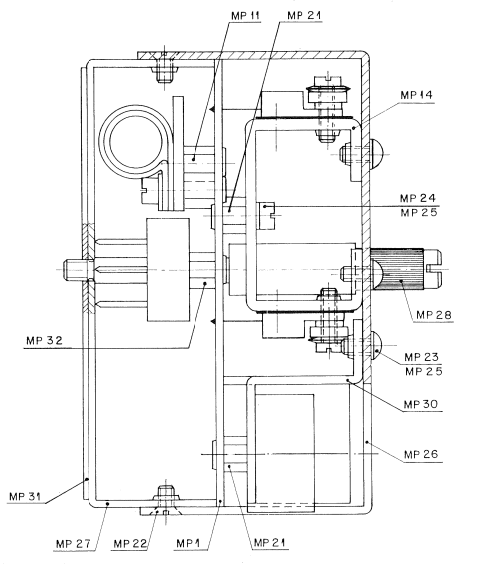
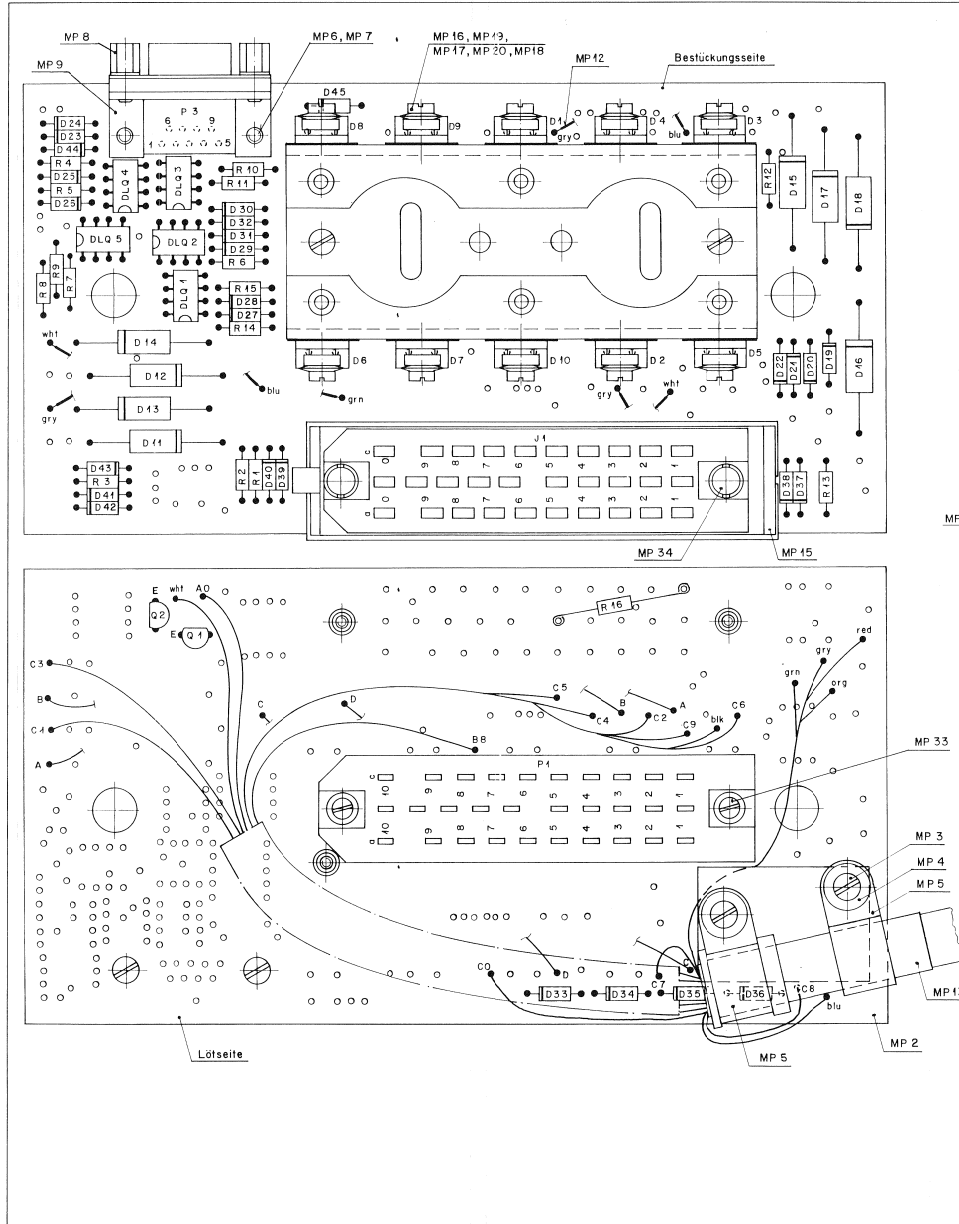
CHANGE-OVER BOARD

1.918.075.00



CHANGE-OVER BOARD

1.918.075.00



STUDER
REGENDORF
ZÜRICH

Benennung: **CHANGE-OVER BOARD**

1.918.075-00

Änderung					
14	2	91			
Datum	Doc	Zeich	Gez	Verf	Index

Kreuz für

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
D....31		0	not used	
D....32		0	not used	
D....33		0	not used	
D....34		0	not used	
D....35		0	not used	
D....36		0	not used	
D....37	50.04.0125	1N4448	(darf nicht bat 85 sein)	
D....38	50.04.0125	1N4448	(darf nicht bat 85 sein)	
D....39	50.04.0125	1N4448	75V 100mA	
D....40	50.04.0125	1N4448	75V 100mA	
D....41	50.04.0125	1N4448	75V 100mA	
D....42	50.04.0125	1N4448	75V 100mA	
D....43	50.04.0125	1N4448	75V 100mA	
D....44		0	not used	
D....45		0	not used	
DLQ...1		0	not used	DLQ1 - DLQ5 not used
MP....1	1.918.075.11	1 pcs	CHANGE OVER PCB	STUDER
MP....2	1.918.075.05	1 pcs	Hilfblech (Platte Zugentlastung)	STUDER
MP....3	23.01.0356	2 pcs	Z-Schraube M3*10	
MP....4	23.01.1032	2 pcs	U schein	
MP....5	35.05.0315	2 pcs	Kabelbrücke D 11.1	
MP....6		0 pcs	Schraube M3*6	
MP....7		0 pcs	Rippenscheibe	
MP....8		0 pcs	Sechskantbolzen	
MP....9		0 pcs	Befestigung 9 Pol Stecker	STUDER
MP....11	1.010.017.22	2 pcs	Loetnettmutter 6mm (Zugentlastung)	
MP....12	1.918.075.93	1 pcs	Litzon Litze CHANGE OVER BOARD	STUDER
MP....13	1.918.076.00	1 pcs	CHANGE OVER CABLE	STUDER
MP....14	1.915.106.03	1 pcs	Kuehlboegel	
MP....15	54.14.7022	2 pcs	Rieghammer zu Buchsenleiste	
MP....16	21.53.0356	10 pcs	Z-Schraube M3*10 (diode mon)	
MP....17	1.010.098.27	10 pcs	Distanshülse "	
MP....18	50.20.0305	10 pcs	Glimmerscheibe "	
MP....19	37.01.0101	20 pcs	Tellerfeder "	
MP....20	50.20.0404	10 pcs	Durchfuehrung "	
MP....21	1.010.014.22	4 pcs	Loetnettmutter 4.5mm	
MP....22	1.010.045.21	4 pcs	S-Schr IS sw M 3*6	
MP....23	1.010.025.21	6 pcs	Linsenschraube M 3*6	
MP....24	21.53.0356	2 pcs	Schraube M3*6 (Kuehlboegel)	
MP....25	24.16.1030	8 pcs	Rippenscheibe (Kuehlboegel) D 3.2/5.5	
MP....26	1.918.075.01	1 pcs	Abdeckung	STUDER
MP....27	1.918.075.02	1 pcs	Chassis	STUDER
MP....28	1.918.075.03	2 pcs	Befestigungsschraube	STUDER
MP....29	1.918.075.04	0 pcs	Studer-Nr.-Etikette 10*20	STUDER
MP....30	1.918.075.06	1 pcs	Blende	STUDER
MP....31	1.918.075.07	1 pcs	Unterlage	STUDER
MP....32	1.010.016.22	2 pcs	Loetnettmutter 5mm	
MP....33	54.14.7020	2 pcs	Pass Stift	
MP....34	54.14.7023	2 pcs	Pass Buchse	
J....1	54.14.1032	1 pcs	30 pol Stecker Buchsenleiste Print	
P....1	54.14.1022	1 pcs	30 pol Stecker Messenleiste Print	
P....2		30 pol Stecker	1.918.076.00	
P....3		0	not used	(9 pol Stecker M)
Q....1	50.03.0340	BC337	nnp standard	
Q....2	50.03.0340	BC337	nnp standard	
R....1	57.11.3103	10 kOhm	1k 0.25W MF	
R....2	57.11.3103	10 kOhm	1k 0.25W MF	
R....3	57.11.3330	33 Ohm	1k 0.25W MF	
R....4		0	not used	R4 - R15 not used
R....16	57.11.3332	3.3kOhm	1k 0.25W MF	

Mit Spannungserwachung bitte #9180751 ausdrucken.

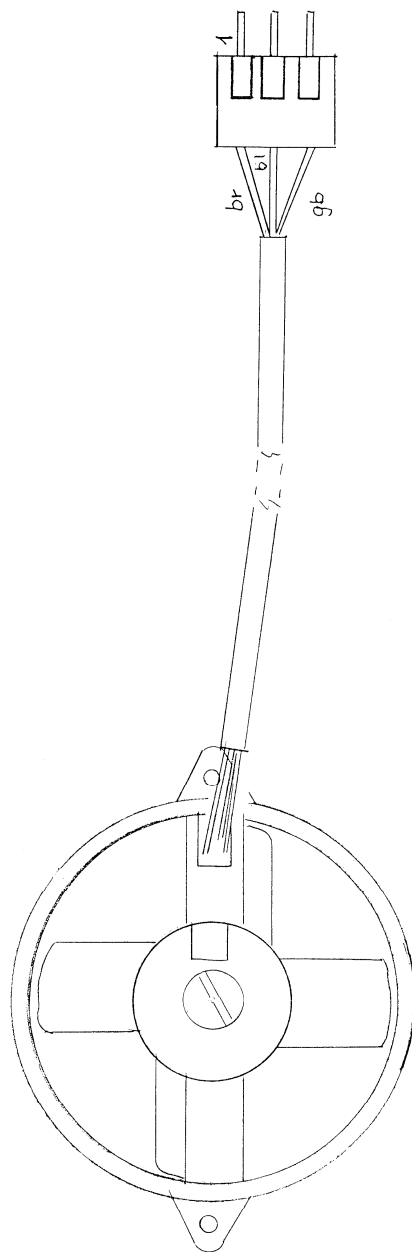
CER=Ceramic, EL=Elektrolyt
MF=Metall Film, PE=Polyesterfolien

MANUFACTURER :
Fe =Ferranti
NE =Nippon Electronic Corp.
NS =National Semiconductors
Ra =Raytheon
Si =Siliconix
Tho=Thomson
TI =Texas Instrument

1.918.075.00 CHANGE-OVER BOARD SE 90/12/0400

VENTILATOR

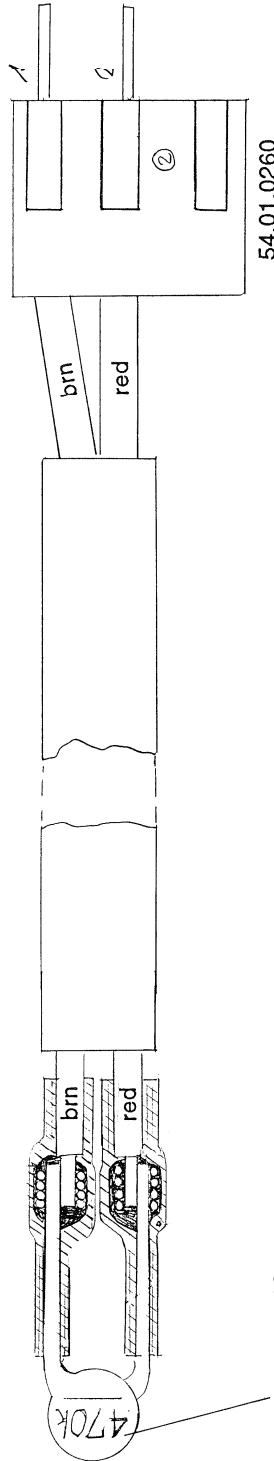
1.918.078.00



① 9.1.90 frp.	① 15.11.90 ab	○ ..	○ ..	○ ..
				PAGE 1 OF 1
STUDER	VENTILATOR			1.918.078.00

NTC-SENSOR

1.918.079.00



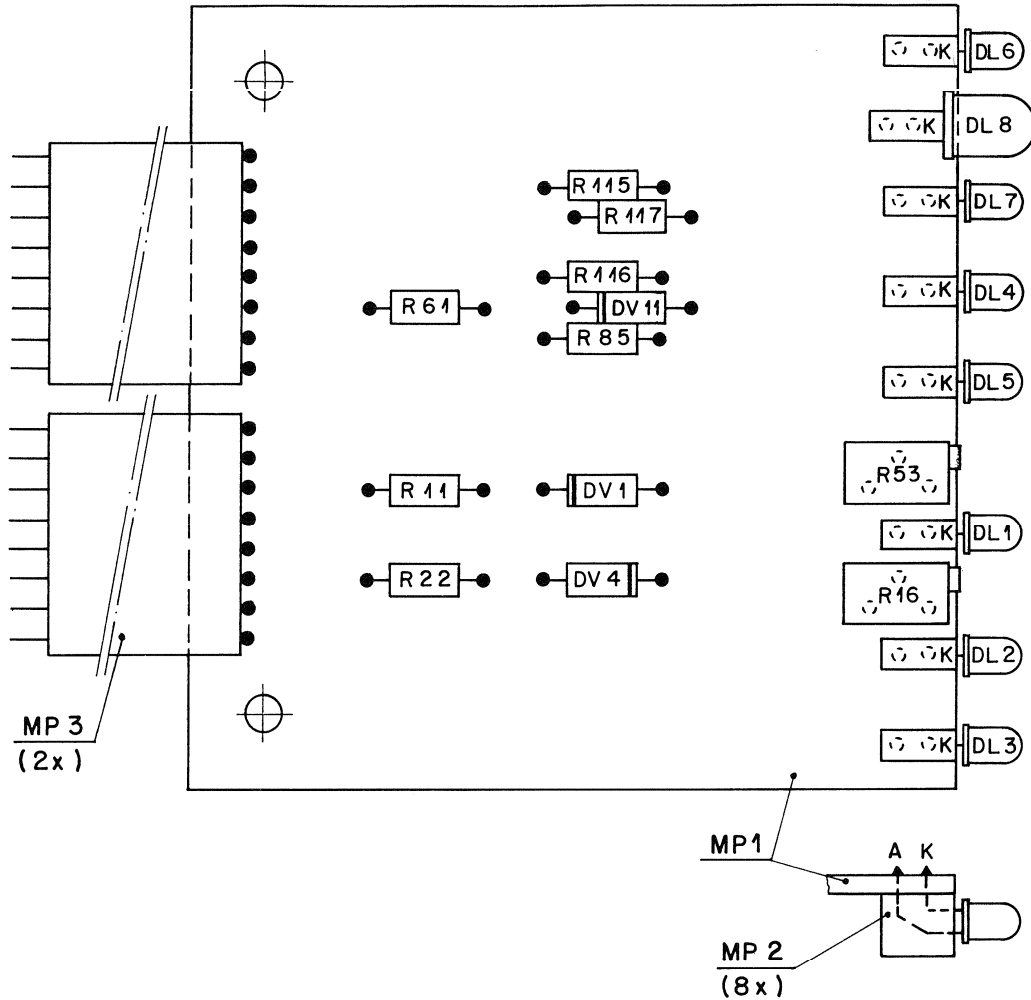
54.01.0260

NTC 470k @ 25°C
57.99.0802

① 13.12.80 /r	① 12.3.90 /r.	② 15.11.90 ab	③ 23.09.91 /r	○ . .
				PAGE 1 OF 1
STUDER		NTC - SENSOR		1.918.079.00

LED BOARD

1.918.082.00



Ad . . . POS. REF. No. DESCRIPTION MANUFACTURER

DL...1	50.04.2130	LY3360	LED 3.18mm gb	Sie
DL...2	50.04.2130	LY3360	LED 3.18mm gb	Sie
DL...3	50.04.2129	LS3360	LED 3.18mm rt	Sie
DL...4	50.04.2130	LY3360	LED 3.18mm gb	Sie
DL...5	50.04.2130	LY3360	LED 3.18mm gb	Sie
DL...6	50.04.2129	LS3360	LED 3.18mm rt	Sie
DL...7	50.04.2129	LS3360	LED 3.18mm rt	Sie
DL...8	50.04.2111	MV5753	rt/dif 5.6mm	GI
DV...1	50.04.1103	Z 7.5V	500 mW	any
DV...4	50.04.1103	Z 7.5V	500 mW	any
DV...11	50.04.1106	Z 2.7V	500 mW	any
R...115	57.11.3821	820	Ohm	
R...116	58.05.0501	500	Ohm	22-turn Trim. +/- 12V
R...22	57.11.3821	820	Ohm	
R...53	58.05.0501	500	Ohm	22-turn Trim. Phantom
R...61	57.11.3151	150	Ohm	
R...85	57.11.3471	470	Ohm	
R...115	57.11.3102	1	kOhm	
R...116	57.11.3102	1	kOhm	
R...117	57.11.3102	1	kOhm	
MP...1	1.918.082.11	1	pcs	LED Board PCB
MP...2	1.010.012.50	8	pcs	Led Holder
MP...3	64.03.0502	2	pcs	Flat Cable

GI = General Instruments, SIE = Siemens, St=Studer

1.918.082.00 LED BOARD

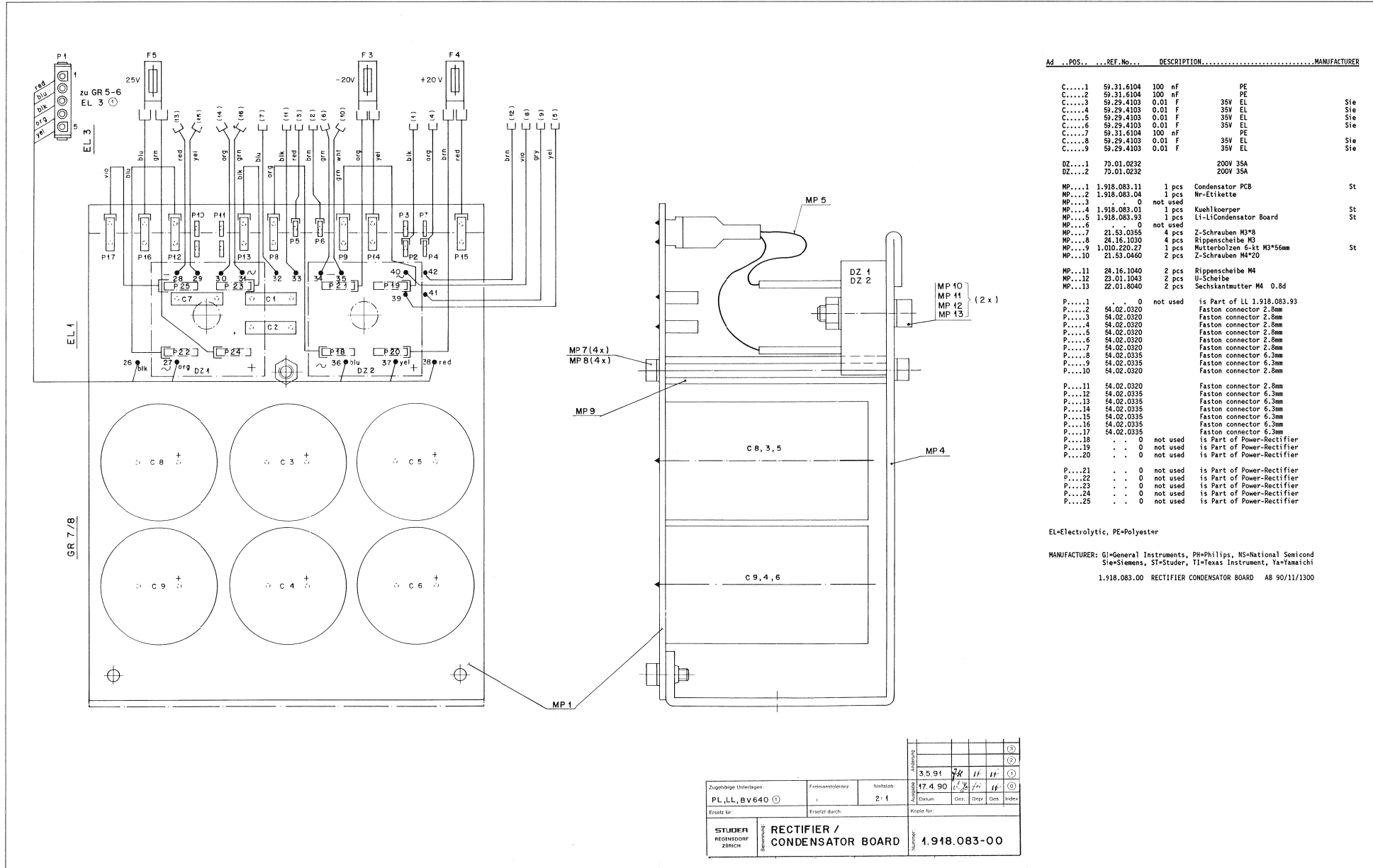
FRI89/10/2400

Änderung					(3)
					(2)
					(1)
Ausgabe	17.4.90	W. H.	f. s.	W.	(1)
Datum		Gez	Gepr	Gez	Index
Prozessur:					

STUDER REGENSDORF ZÜRICH	Bearbeitung	LED BOARD	Nummer	1.918.082-00
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RECTIFIER/CONDENSATOR BOARD

1.918.083.00



Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
C....1	59.31.6104	100 nF	PE	
C....2	59.31.6104	100 nF	PE	
C....3	59.29.4103	0.01 F	35V EL	Sie
C....4	59.29.4103	0.01 F	35V EL	Sie
C....5	59.29.4103	0.01 F	35V EL	Sie
C....6	59.29.4103	0.01 F	35V EL	Sie
C....7	59.31.6104	100 nF	PE	
C....8	59.29.4103	0.01 F	35V EL	Sie
C....9	59.29.4103	0.01 F	35V EL	Sie
DZ....1	70.01.0232		200V 35A	
DZ....2	70.01.0232		200V 35A	
MP....1	1.918.083.11	1 pcs	Condensator PCB	St
MP....2	1.918.083.04	1 pcs	Nr-Etikette	
MP....3	0	not used		
MP....4	1.918.083.01	1 pcs	Kuehlkoerper	St
MP....5	1.918.083.93	1 pcs	Li-LiCondensator Board	St
MP....6	0	not used		
MP....7	21.53.0355	4 pcs	Z-Schrauben M3*8	
MP....8	20.16.1030	4 pcs	Rippscheibe M3	
MP....9	1.010.220.27	1 pcs	Mutterbolzen 6-kt M3*56mm	St
MP....10	21.53.0460	2 pcs	Z-Schrauben M4*20	
MP....11	24.16.1040	2 pcs	Rippscheibe M4	
MP....12	23.01.1043	2 pcs	U-Scheibe	
MP....13	22.01.8040	2 pcs	Sechskantmutter M4 0.8d	
P....1	0	not used	is Part of LL 1.918.083.93	
P....2	54.02.0320		Faston connector 2.8mm	
P....3	54.02.0320		Faston connector 2.8mm	
P....4	54.02.0320		Faston connector 2.8mm	
P....5	54.02.0320		Faston connector 2.8mm	
P....6	54.02.0320		Faston connector 2.8mm	
P....7	54.02.0320		Faston connector 2.8mm	
P....8	54.02.0335		Faston connector 6.3mm	
P....9	54.02.0335		Faston connector 6.3mm	
P....10	54.02.0320		Faston connector 2.8mm	
P....11	54.02.0320		Faston connector 2.8mm	
P....12	54.02.0335		Faston connector 6.3mm	
P....13	54.02.0335		Faston connector 6.3mm	
P....14	54.02.0335		Faston connector 6.3mm	
P....15	54.02.0335		Faston connector 6.3mm	
P....16	54.02.0335		Faston connector 6.3mm	
P....17	54.02.0335		Faston connector 6.3mm	
P....18	0	not used	is Part of Power-Rectifier	
P....19	0	not used	is Part of Power-Rectifier	
P....20	0	not used	is Part of Power-Rectifier	
P....21	0	not used	is Part of Power-Rectifier	
P....22	0	not used	is Part of Power-Rectifier	
P....23	0	not used	is Part of Power-Rectifier	
P....24	0	not used	is Part of Power-Rectifier	
P....25	0	not used	is Part of Power-Rectifier	

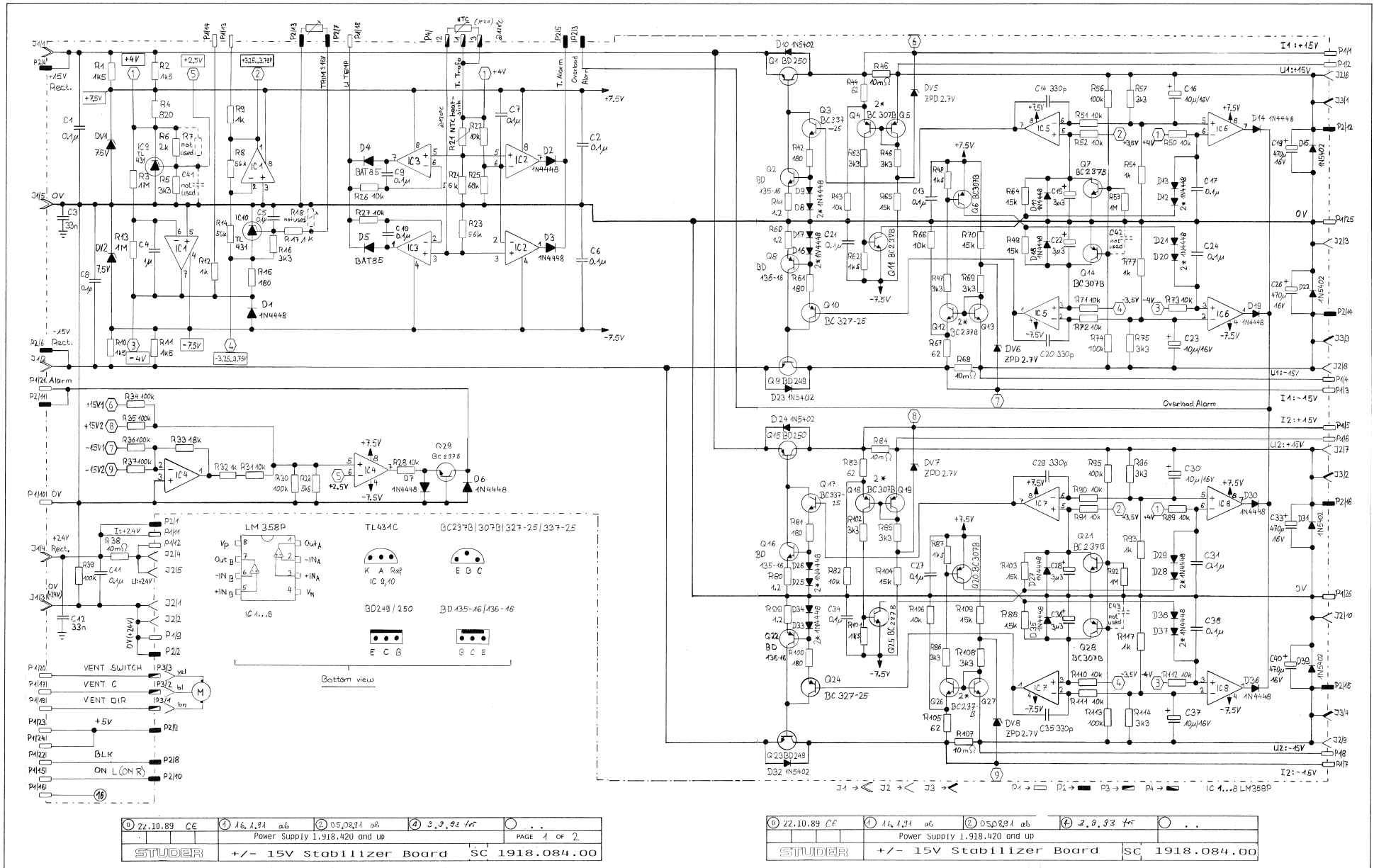
EL=Electrolytic, PE=Polyester

MANUFACTURER: GI=General Instruments, PH=Philips, NS=National Semicond
 Sie=Siemens, ST=Studer, TI=Texas Instrument, Ya=Yamaichi
 1.918.083.00 RECTIFIER CONDENSATOR BOARD AB 90/11/1300

Zugehörige Unterlagen:	Frühjahrstoleranz:	Anzahl:	
PL, LL, BV640	1	21	
Ersatz Nr.	Ersatz durch:	Kopie für:	
STUDER RECHENWERK ZÜRICH	RECTIFIER / CONDENSATOR BOARD	1.918.083-00	

+/-15V STABILIZER BOARD

1.918.084.00

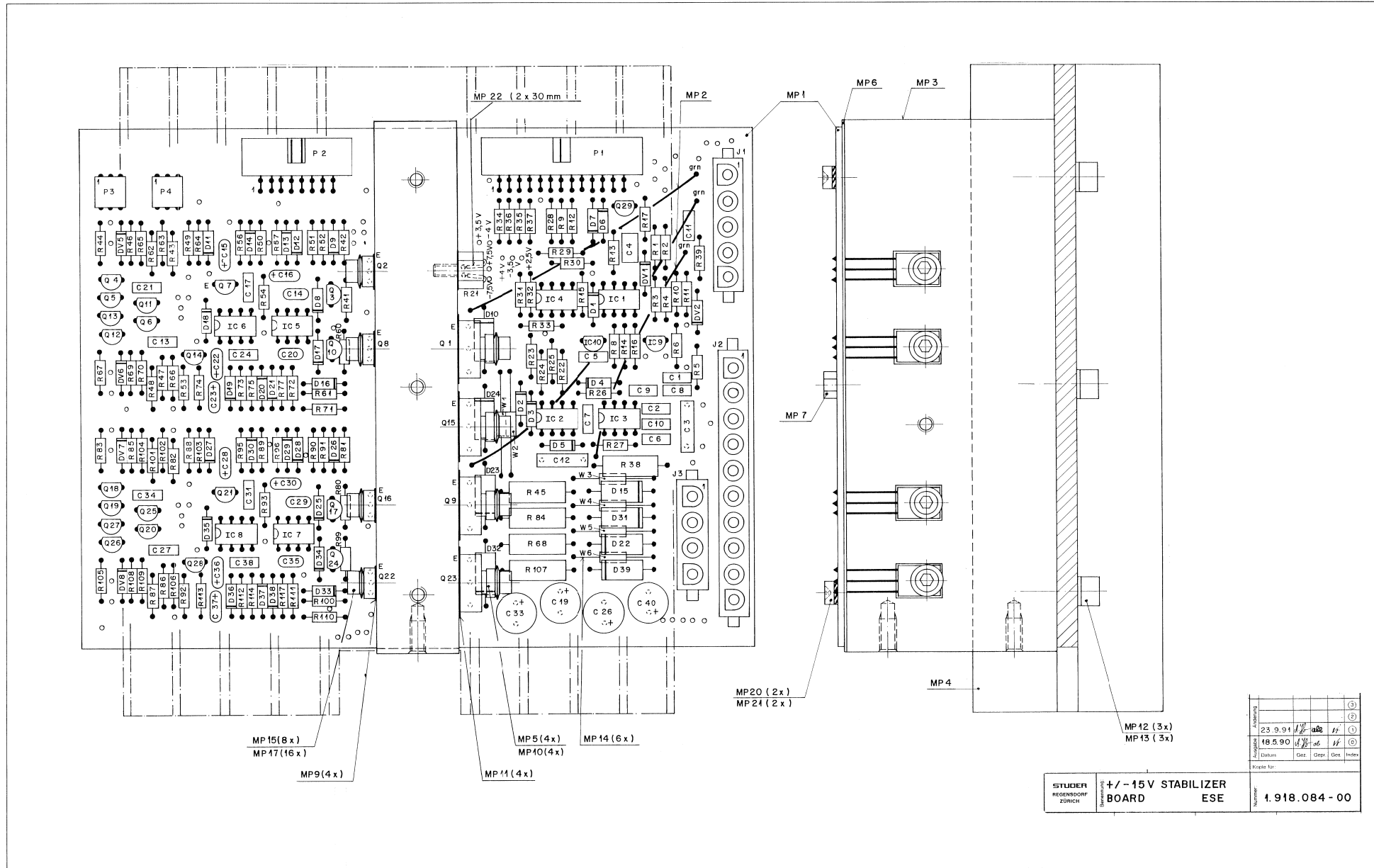


① 22.10.89 CE	① 16.1.91 a6	② 05.08.91 a6	④ 3.9.92 fr	○ . . .
Power Supply 1.918.420 and up				
PAGE 1 OF 2				
STUDER +/- 15V Stabilizer Board SC 1918.084.00				

① 22.10.89 CE	① 16.1.91 a6	② 05.08.91 a6	④ 3.9.92 fr	○ . . .
Power Supply 1.918.420 and up				
PAGE 1 OF 2				
STUDER +/- 15V Stabilizer Board SC 1918.084.00				

±15V STABILIZER BOARD ESE

1.918.084.00





±15V STABILIZER BOARD

1.918.084.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C.....1		59.06.0104	100 nF	PE					
C.....2		59.06.0104	100 nF	PE	J.....1	54.25.0005	5PIN	Power-Connector	
C.....3		59.31.8333	33 nF	400V PE	J.....2	54.25.0010	10PIN	Power-Connector	
C.....4		59.06.0105	1 uF	PE	J.....3	54.25.0004	4PIN	Power-Connector	
C.....5		59.06.0104	100 nF	PE	MP....1	1.918.084.11	1 pcs	Print	St
C.....6		59.06.0104	100 nF	PE	MP....2	1.918.084.93	1 pcs	Litzenliste	St
C.....7		59.06.0104	100 nF	PE	MP....3	1.918.084.01	1 pcs	Kuehlprofiltraeger	St
C.....8		59.06.0104	100 nF	PE	MP....4	1.918.084.02	1 pcs	Kuehlprofil	St
C.....9		59.06.0104	100 nF	PE	MP....5	1.010.098.27	4 pcs	Isolierunterlage	St
C.....10		59.06.0104	100 nF	PE	MP....6	1.918.084.03	1 pcs	Isolierunterlage	St
					MP....7	1.010.013.22	1 pcs	Nietmuttern M3*3mm	St
C.....11		59.06.0104	100 nF	PE	MP....8	43.01.0108	1 pcs	ESE Warnschild	
C.....12		59.31.8333	33 nF	400V PE	MP....9	50.20.0317	4 pcs	Glimmer TO 218	
C.....13		59.06.0104	100 nF	PE	MP...10	50.20.0404	4 pcs	Durchfuehrung	
C.....14		59.34.4331	330 pF	CER	MP....11	50.20.0310	4 pcs	Glimmer TO 126	
C.....15		59.26.2339	3.3uF	16V SAL	MP....12	21.53.0456	3 pcs	Schrauben M4*10mm Z	
C.....16		59.26.2100	10 uF	16V SAL	MP....13	24.16.1040	3 pcs	Rippenscheiben M4	
C.....17		59.06.0104	100 nF	PE	MP....14	57.11.3000	6 pcs	0 Ohm Drahtbruecken	W1...W6
C.....18		. . . 0	not used		MP....15	21.53.0355	8 pcs	Schrauben M3*8mm Z	
C.....19		59.22.4471	470 uF	16V EL	MP....15	21.53.0356	8 pcs	Schrauben M3*10mm Z	
C.....20		59.34.4331	330 pF	CER	MP....16	. . . 0	not used		
C.....21		59.06.0104	100 nF	PE	MP....17	37.01.0101	16 pcs	Federscheiben M3	
C.....22		59.26.2339	3.3uF	16V SAL	MP....18	. . . 0	not used		
C.....23		59.26.2100	10 uF	16V SAL	MP....19	. . . 0	not used		
C.....24		59.06.0104	100 nF	PE	MP....20	21.38.0355	2 pcs	Schrauben M3*8mm A2 Z	
C.....25		. . . 0	not used						
C.....26		59.22.4471	470 uF	16V EL	MP...21	24.16.2030	2 pcs	Faecherscheibe A d 3,2	
C.....27		59.06.0104	100 nF	PE	MP...22	65.99.0111	2 * 30 mm	PTFE-Schlauch Spez. 0.89 * 0.152 mm.	
C.....28		59.26.2339	3.3uF	16V SAL	P....1	54.14.2074	26PIN	PCB Flat-cabel connector	Ya
C.....29		59.34.4331	330 pF	CER	P....2	54.14.2072	16PIN	PCB Flat-cabel connector	Ya
C.....30		59.26.2100	10 uF	16V SAL	P....3	54.01.0249	3PIN	CIS Connector	
					P....4	54.01.0249	3PIN	CIS Connector	
C.....31		59.06.0104	100 nF	PE	Q....1	50.03.0951	BD 250	PNP	TI
C.....32		. . . 0	not used		Q....2	50.03.0495	BD 135-16	NPN	Ph
C.....33		59.22.4471	470 uF	16V EL	Q....3	50.03.0340	BC 337-25	NPN	any
C.....34		59.06.0104	100 nF	PE	Q....4	50.03.0515	BC 307B	PNP	any
C.....35		59.34.4331	330 pF	CER	Q....5	50.03.0515	BC 307B	PNP	any
C.....36		59.26.2339	3.3uF	16V SAL	Q....6	50.03.0515	BC 307B	PNP	any
C.....37		59.26.2100	10 uF	16V SAL	Q....7	50.03.0436	BC 237B	NPN	any
C.....38		59.06.0104	100 nF	PE	Q....8	50.03.0510	BD 136-16	PNP	Ph
C.....39		. . . 0	not used		Q....9	50.03.0901	BD 249	NPN	TI
C.....40		59.22.4471	470 uF	16V EL	Q....10	50.03.0351	BC 327-25	PNP	any
D.....1		50.04.0125	1N 4448	Si Diode	any				
D.....2		50.04.0125	1N 4448	Si Diode	any				
D.....3		50.04.0125	1N 4448	Si Diode	any				
D.....4		50.04.0127	BAT 85	Schottky Diode	any				
D.....5		50.04.0127	BAT 85	Schottky Diode	any	Q....11	50.03.0436	BC 237B	NPN
D.....6		50.04.0125	1N 4448	Si Diode	any	Q....12	50.03.0436	BC 237B	NPN
D.....7		50.04.0125	1N 4448	Si Diode	any	Q....13	50.03.0436	BC 237B	NPN
D.....8		50.04.0125	1N 4448	Si Diode	any	Q....14	50.03.0515	BC 307B	PNP
D.....9		50.04.0125	1N 4448	Si Diode	any	Q....15	50.03.0951	BD 250	PNP
D.....10		50.04.0507	1N 5402	Si Diode 3A	any	Q....16	50.03.0495	BD 135-16	NPN
					any	Q....17	50.03.0340	BC 337-25	NPN
					any	Q....18	50.03.0515	BC 307B	PNP
D.....11		50.04.0125	1N 4448	Si Diode	any	Q....19	50.03.0515	BC 307B	PNP
D.....12		50.04.0125	1N 4448	Si Diode	any	Q....20	50.03.0515	BC 307B	PNP
D.....13		50.04.0125	1N 4448	Si Diode	any				
D.....14		50.04.0125	1N 4448	Si Diode	any	Q....21	50.03.0436	BC 237B	NPN
D.....15		50.04.0507	1N 5402	Si Diode 3A	any	Q....22	50.03.0510	BD 136-16	PNP
D.....16		50.04.0125	1N 4448	Si Diode	any	Q....23	50.03.0901	BD 249	NPN
D.....17		50.04.0125	1N 4448	Si Diode	any	Q....24	50.03.0351	BC 327-25	PNP
D.....18		50.04.0125	1N 4448	Si Diode	any	Q....25	50.03.0436	BC 237B	NPN
D.....19		50.04.0125	1N 4448	Si Diode	any	Q....26	50.03.0436	BC 237B	NPN
D.....20		50.04.0125	1N 4448	Si Diode	any	Q....27	50.03.0436	BC 237B	NPN
					any	Q....28	50.03.0515	BC 307B	PNP
					any	Q....29	50.03.0436	BC 237B	NPN
D.....21		50.04.0125	1N 4448	Si Diode	any	R....1	57.11.3152	1.5 kOhm	1% 0.25W
D.....22		50.04.0507	1N 5402	Si Diode 3A	any	R....2	57.11.3152	1.5 kOhm	1% 0.25W
D.....23		50.04.0507	1N 5402	Si Diode 3A	any	R....3	57.11.3105	1 MOhm	5% 0.25W
D.....24		50.04.0507	1N 5402	Si Diode 3A	any	R....4	57.11.3821	820 Ohm	1% 0.25W
D.....25		50.04.0125	1N 4448	Si Diode	any	R....5	57.11.3332	3.3 kOhm	1% 0.25W
D.....26		50.04.0125	1N 4448	Si Diode	any	R....6	57.11.3202	2 kOhm	1% 0.25W
D.....27		50.04.0125	1N 4448	Si Diode	any	R....7	. . . 0	not used	
D.....28		50.04.0125	1N 4448	Si Diode	any	R....8	57.11.3563	56 kOhm	1% 0.25W
D.....29		50.04.0125	1N 4448	Si Diode	any	R....9	57.11.3102	1 kOhm	1% 0.25W
D.....30		50.04.0125	1N 4448	Si Diode	any	R....10	57.11.3152	1.5 kOhm	1% 0.25W
D.....31		50.04.0507	1N 5402	Si Diode 3A	any	R....11	57.11.3152	1.5 kOhm	1% 0.25W
D.....32		50.04.0507	1N 5402	Si Diode 3A	any	R....12	57.11.3102	1 kOhm	1% 0.25W
D.....33		50.04.0125	1N 4448	Si Diode	any	R....13	57.11.3105	1 MOhm	5% 0.25W
D.....34		50.04.0125	1N 4448	Si Diode	any	R....14	57.11.3563	56 kOhm	1% 0.25W
D.....35		50.04.0125	1N 4448	Si Diode	any	R....15	57.11.3181	180 Ohm	1% 0.25W
D.....36		50.04.0125	1N 4448	Si Diode	any	R....16	57.11.3332	3.3 kOhm	1% 0.25W
D.....37		50.04.0125	1N 4448	Si Diode	any	R....17	57.11.3102	1 kOhm	1% 0.25W
D.....38		50.04.0125	1N 4448	Si Diode	any	R....18	. . . 0	not used	voltage adjust on board
D.....39		50.04.0507	1N 5402	Si Diode 3A	any	R....19	. . . 0	not used	voltage adjust on 1.918.085, 2k]] 2k2
DV....1		50.04.1503	ZPD 7.5V	Si Z-Diode 1.3W	any	R....20	. . . 0	not used	1.918.079.00 NTC-Sensor on Trafo
DV....2		50.04.1503	ZPD 7.5V	Si Z-Diode 1.3W	any				
DV....3		. . . 0	not used						
DV....4		. . . 0	not used		03 R....21	57.99.0803	470 kOhm	10%, NTC	Sie.
DV....5		50.04.1106	ZPD 2.7V	Si Z-Diode 0.5W	any	R....22	57.11.3103	10 kOhm	1% 0.25W
DV....6		50.04.1106	ZPD 2.7V	Si Z-Diode 0.5W	any	R....23	57.11.3563	56 kOhm	1% 0.25W
DV....7		50.04.1106	ZPD 2.7V	Si Z-Diode 0.5W	any	R....24	57.11.3563	56 kOhm	1% 0.25W
DV....8		50.04.1106	ZPD 2.7V	Si Z-Diode 0.5W	any	R....25	57.11.3683	68 kOhm	1% 0.25W
					any	R....26	57.11.3103	10 kOhm	1% 0.25W
					any	R....27	57.11.3103	10 kOhm	1% 0.25W
IC....1		50.05.0286	LM 358P	Dual Op.Amp.	TI	R....28	57.11.3102	1 kOhm	1% 0.25W
IC....2		50.05.0286	LM 358P	Dual Op.Amp.	TI	R....29	57.11.3103	10 kOhm	1% 0.25W
IC....3		50.05.0286	LM 358P	Dual Op.Amp.	TI	R....30	57.11.3562	5.6 kOhm	1% 0.25W
IC....4		50.05.0286	LM 358P	Dual Op.Amp.	TI				
IC....5		50.05.0286	LM 358P	Dual Op.Amp.	TI				
IC....6		50.05.0286	LM 358P	Dual Op.Amp.	TI				
IC....7		50.05.0286	LM 358P	Dual Op.Amp.	TI				
IC....8		50.05.0286	LM 358P	Dual Op.Amp.	TI	R....31	57.11.3103	10 kOhm	1% 0.25W
IC....9		50.10.0106	TL 431C	Shunt-Regulator	TI	R....32	57.11.3102	1 kOhm	1% 0.25W
IC....10		50.10.0106	TL 431C	Shunt-Regulator	TI	R....33	57.11.3183	18 kOhm	1% 0.25W
					TI	R....34	57.11.3104	100 kOhm	1% 0.25W



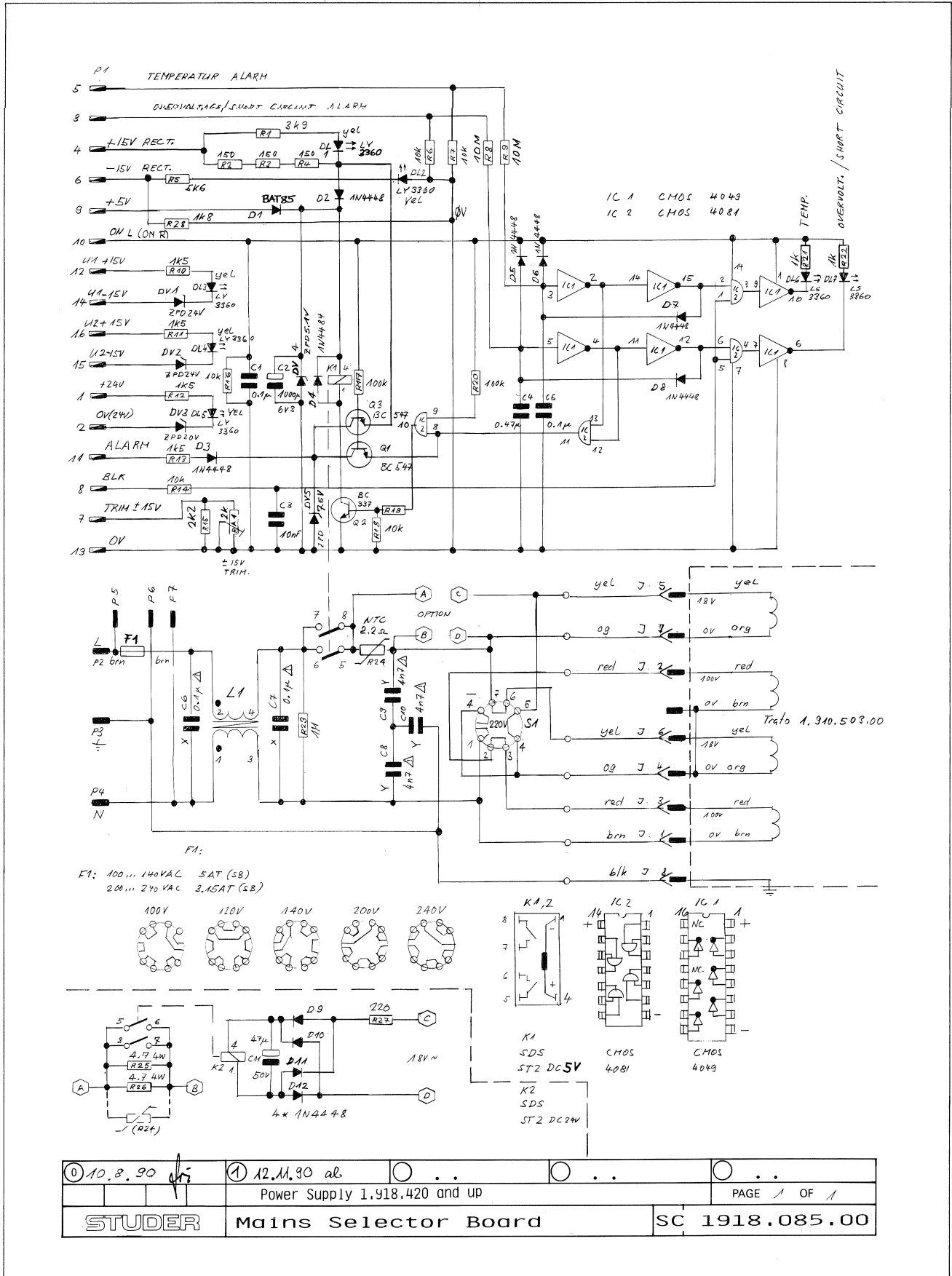
±15V STABILIZER BOARD

1.918.084.00

Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER	Ad	..POS.	..REF.No.	DESCRIPTION	MANUFACTURER
R....35	57.11.3104	100	kOhm	1% 0.25W					
R....36	57.11.3104	100	kOhm	1% 0.25W					
R....37	57.11.3104	100	kOhm	1% 0.25W					
R....38	57.56.2010	10	mOhm	3% 3 W	(03)	91/09/23	Philips NTC Resistor #57.99.0208 is no longer available. R21 is now a Siemens NTC Resistor #57.99.0803 and the leads are insulated with 2 pcs. PTFE-tube #65.99.0111, L=30 mm. (MP22 position). MP18 & MP19 positions are no longer used.		
R....39	57.11.3104	100	kOhm	1% 0.25W					
R....40	.	0	not used						
R....41	57.11.3129	1.2	Ohm	1% 0.25W					
R....42	57.11.3181	180	Ohm	1% 0.25W					
R....43	57.11.3103	10	kOhm	1% 0.25W	(04)	93/09/03	Current-Limiter set to appr. 9..12A (before 6...9A) R 48, 62, 87, 101 new 1k2		
R....44	57.11.3620	62	Ohm	1% 0.25W					
R....45	57.56.2010	10	mOhm	3% 3 W					
R....46	57.11.3332	3.3	kOhm	1% 0.25W					
R....47	57.11.3332	3.3	kOhm	1% 0.25W					
R....48	57.11.3102	1	kOhm	1% 0.25W					
R....48	57.11.3152	1.5	kOhm	1% 0.25W					
R....48	57.11.3122	1.2	kOhm	1% 0.25W					
R....49	57.11.3153	15	kOhm	1% 0.25W					
R....50	57.11.3103	10	kOhm	1% 0.25W					
R....51	57.11.3103	10	kOhm	1% 0.25W					
R....52	57.11.3103	10	kOhm	1% 0.25W					
R....53	57.11.3105	1	MOhm	5% 0.25W					
R....54	57.11.3102	1	kOhm	1% 0.25W					
R....55	.	0	not used						
R....56	57.11.3104	100	kOhm	1% 0.25W					
R....57	57.11.3332	3.3	kOhm	1% 0.25W					
R....58	.	0	not used						
R....59	.	0	not used						
R....60	57.11.3129	1.2	Ohm	1% 0.25W					
R....61	57.11.3181	180	Ohm	1% 0.25W					
R....62	57.11.3102	1	kOhm	1% 0.25W					
R....62	57.11.3152	1.5	kOhm	1% 0.25W					
R....62	57.11.3122	1.2	kOhm	1% 0.25W					
R....63	57.11.3332	3.3	kOhm	1% 0.25W					
R....64	57.11.3153	15	kOhm	1% 0.25W					
R....65	57.11.3153	15	kOhm	1% 0.25W					
R....66	57.11.3103	10	kOhm	1% 0.25W					
R....67	57.11.3620	62	Ohm	1% 0.25W					
R....68	57.56.2010	10	mOhm	3% 3 W					
R....69	57.11.3332	3.3	kOhm	1% 0.25W					
R....70	57.11.3153	15	kOhm	1% 0.25W					
R....71	57.11.3103	10	kOhm	1% 0.25W					
R....72	57.11.3103	10	kOhm	1% 0.25W					
R....73	57.11.3103	10	kOhm	1% 0.25W					
R....74	57.11.3104	100	kOhm	1% 0.25W					
R....75	57.11.3332	3.3	kOhm	1% 0.25W					
R....76	.	0	not used						
R....77	57.11.3102	1	kOhm	1% 0.25W					
R....78	.	0	not used						
R....79	.	0	not used						
R....80	57.11.3129	1.2	Ohm	1% 0.25W					
R....81	57.11.3181	180	Ohm	1% 0.25W					
R....82	57.11.3103	10	kOhm	1% 0.25W					
R....83	57.11.3620	62	Ohm	1% 0.25W					
R....84	57.56.2010	10	mOhm	3% 3 W					
R....85	57.11.3332	3.3	kOhm	1% 0.25W					
R....86	57.11.3332	3.3	kOhm	1% 0.25W					
R....87	57.11.3102	1	kOhm	1% 0.25W					
R....87	57.11.3152	1.5	kOhm	1% 0.25W					
R....87	57.11.3122	1.2	kOhm	1% 0.25W					
R....88	57.11.3153	15	kOhm	1% 0.25W					
R....89	57.11.3103	10	kOhm	1% 0.25W					
R....90	57.11.3103	10	kOhm	1% 0.25W					
R....91	57.11.3103	10	kOhm	1% 0.25W					
R....92	57.11.3105	1	MOhm	5% 0.25W					
R....93	57.11.3102	1	kOhm	1% 0.25W					
R....94	.	0	not used						
R....95	57.11.3104	100	kOhm	1% 0.25W					
R....96	57.11.3332	3.3	kOhm	1% 0.25W					
R....97	.	0	not used						
R....98	.	0	not used						
R....99	57.11.3129	1.2	Ohm	1% 0.25W					
R...100	57.11.3181	180	Ohm	1% 0.25W					
R...101	57.11.3102	1	kOhm	1% 0.25W					
R...101	57.11.3152	1.5	kOhm	1% 0.25W					
R...101	57.11.3122	1.2	kOhm	1% 0.25W					
R...102	57.11.3332	3.3	kOhm	1% 0.25W					
R...103	57.11.3153	15	kOhm	1% 0.25W					
R...104	57.11.3153	15	kOhm	1% 0.25W					
R...105	57.11.3620	62	Ohm	1% 0.25W					
R...106	57.11.3103	10	kOhm	1% 0.25W					
R...107	57.56.2010	10	mOhm	3% 3 W					
R...108	57.11.3332	3.3	kOhm	1% 0.25W					
R...109	57.11.3153	15	kOhm	1% 0.25W					
R...110	57.11.3103	10	kOhm	1% 0.25W					
R...111	57.11.3103	10	kOhm	1% 0.25W					
R...112	57.11.3103	10	kOhm	1% 0.25W					
R...113	57.11.3104	100	kOhm	1% 0.25W					
R...114	57.11.3332	3.3	kOhm	1% 0.25W					
R...115	.	0	not used						
R...116	.	0	not used						
R...117	57.11.3102	1	kOhm	1% 0.25W					
W....0	.	.	see MP 14						
(01)	91/01/16	Current-Limiter set to appr. 6...9A (before 12...15 A) R 48, 62, 87, 101 new 1k5							
(02)	91/08/05	Screws (MP 15) longer							

MAINS SELECTOR BOARD

1.918.085.00





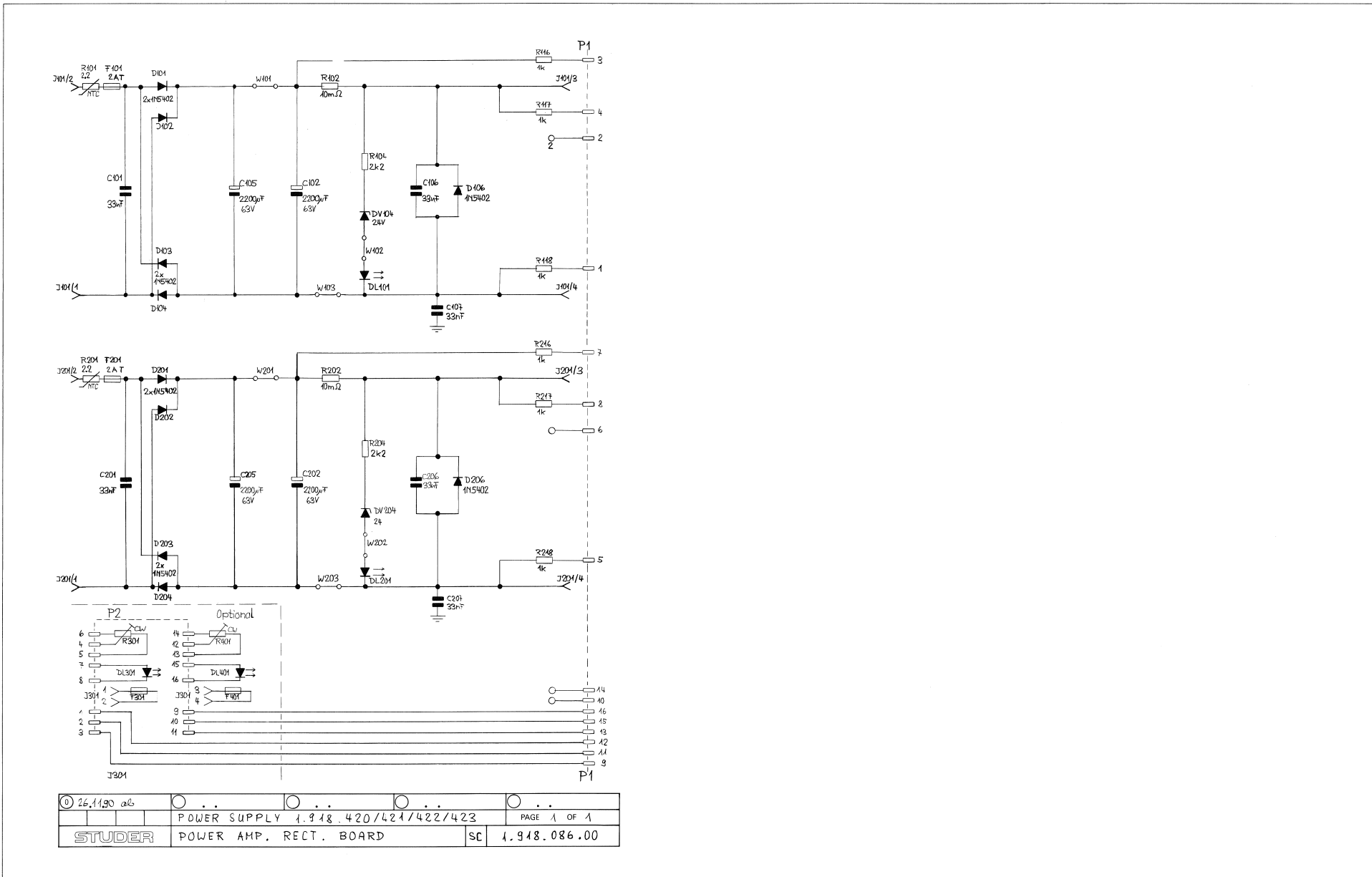
MAINS SELECTOR BOARD

1.918.085.00

Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
C.....1		59.06.0104	100 nF	PE	R....24		57.93.1229	2.2 Ohm	NTC
C.....2		59.25.1102	1000 uF	6,3V EL	02 R....25		. . . 0	not used	57.56.5479, 4.7 Ohm, 4 Watt, option
C.....3		59.06.0103	10 nF	PE	02 R....26		. . . 0	not used	57.56.5479, 4.7 Ohm, 4 Watt, option
C.....4		59.06.0474	470 nF	PE	02 R....27		. . . 0	not used	57.11.3221, 220 Ohm option
C.....5		59.06.0104	100 nF	PE	01 R....28		57.11.3182	1.8kOhm	
C.....6		59.14.3104	0,1uF	300VAC +/-20% X-2	Sie				
C.....7		59.14.3104	0,1uF	300VAC +/-20% X-2	Sie				
C.....8		59.14.0472	4,7nF	250VAC IEC 65 Y	Ri				
C.....9		59.14.0472	4,7nF	250VAC IEC 65 Y	Ri				
C.....10		59.14.0472	4,7nF	250VAC IEC 65 Y	Ri				
02 C....11		. . . 0	not used	59.22.8470, 47uF, 63V, EL	option				
D.....1		50.04.0125	1N4448	Schottky	any				
D.....2		50.04.0127	BAT 85		any				
D.....3		50.04.0125	1N4448		any				
D.....4		50.04.0125	1N4448		any				
D.....5		50.04.0125	1N4448		any				
D.....6		50.04.0125	1N4448		any				
D.....7		50.04.0125	1N4448		any				
D.....8		50.04.0125	1N4448		any				
02 D.....9		. . . 0	not used	50.04.0125, 1N4448	option				
02 D.....10		. . . 0	not used	50.04.0125, 1N4448	option				
02 D.....11		. . . 0	not used	50.04.0125, 1N4448	option				
02 D.....12		. . . 0	not used	50.04.0125, 1N4448	option				
DL....1		50.04.2130	LY3360	LED 3.18mm gb	Sie				
DL....2		50.04.2130	LY3360	LED 3.18mm gb	Sie				
DL....3		50.04.2130	LY3360	LED 3.18mm gb	Sie				
DL....4		50.04.2130	LY3360	LED 3.18mm gb	Sie				
DL....5		50.04.2130	LY3360	LED 3.18mm gb	Sie				
DL....6		50.04.2129	LS3360	LED 3.18mm rt	Sie				
DL....7		50.04.2129	LS3360	LED 3.18mm rt	Sie				
DV....1		50.04.1121	Z24 V	500 mW	any				
DV....2		50.04.1121	Z24 V	500 mW	any				
DV....3		50.04.1109	Z20 V	500 mW	any				
DV....4		50.04.1112	Z 5.1V	500 mW	any				
DV....5		50.04.1112	Z 5.1V	500 mW	any				
01 DV....5		50.04.1103	Z 7.5V	500 mW	any				
F.....1		51.01.0122	3.15 AT	Slow blow					
IC....1		50.07.0049	4049	CMOS hex inverting buffer	Ph				
IC....2		50.07.0081	4081	CMOS Quad 2-Input AND Gate	Ph				
K.....1		56.04.0181	6V	Power Supply Relais	SDS				
02 K.....1		56.04.0181	5V	Power Supply Relais	SDS				
02 K.....2		. . . 0	not used	56.04.0181, SDS-Relais 24V, ST2-24V	option				
L.....1		62.03.0105	1.8mH	I=5A	TOK				
MP....1		1.918.085.11	1 pcs	Print	St				
MP....2		1.918.085.93	1 pcs	Litzenliste	St				
MP....3		43.01.0108	1 pcs	ESE Warnschild					
02 MP....4		. . . 0	not used						
02 MP....5		53.03.0240	7 pcs	Led sockel					
02 MP....6		53.03.0106	1 pcs	Sicherungshalter					
02 MP....7		1.918.085.01	1 pcs	Sicherungshalteblech	St				
02 MP....8		1.918.085.02	1 pcs	Isolierabdeckung	St				
02 MP....9		1.918.085.04	1 pcs	Nr. Etiketle	St				
02 MP....10		1.010.058.22	4 pcs	Nietmutter M3*13mm	St				
02 MP....11		1.010.046.22	4 pcs	Nietmutter M3*14.5mm	St				
02 MP....12		21.01.2354	2 pcs	S-Schraube M3*6mm					
02 MP....13		21.99.0117	2 pcs	Z-Schraube M3*6mm Nylon					
P.....1		54.14.2072	16 pin	PCB connector side entry male					
P.....2		54.02.0335	6.3mm	Flat Pin Connector					
P.....3		54.02.0335	6.3mm	Flat Pin Connector					
P.....4		54.02.0335	6.3mm	Flat Pin Connector					
P.....5		54.02.0320	2.8mm	Flat Pin Connector					
P.....6		54.02.0320	2.8mm	Flat Pin Connector					
P.....7		54.02.0320	2.8mm	Flat Pin Connector					
Q.....1		50.03.0436	BC 547B	NPN	any				
Q.....2		50.03.0340	BC 337	NPN	any				
01 Q.....3		50.03.0436	BC 547B	NPN	any				
R....1		57.11.3392	3.9kOhm						
R....2		57.11.3151	150 Ohm						
R....3		57.11.3151	150 Ohm						
R....4		57.11.3151	150 Ohm						
R....5		57.11.3562	5.6kOhm						
R....6		57.11.3103	10 kOhm						
R....7		57.11.3103	10 kOhm						
R....8		57.11.3105	1 MOhm						
01 R....8		57.11.5106	10 MOhm						
R....9		57.11.3105	1 MOhm						
01 R....9		57.11.5106	10 MOhm						
R....10		57.11.3152	1.5kOhm						
R....11		57.11.3152	1.5kOhm						
R....12		57.11.3152	1.5kOhm						
R....13		57.11.3152	1.5kOhm						
R....14		57.11.3103	10 kOhm						
R....15		57.11.3222	2.2kOhm						
R....16		57.11.3103	10 kOhm						
R....17		57.11.3104	100 kOhm						
R....18		57.11.3103	10 kOhm						
R....19		57.11.3103	10 kOhm						
R....20		57.11.3104	100 kOhm						
R....21		57.11.3102	1 kOhm						
R....22		57.11.3102	1 kOhm						
R....23		57.11.3105	1 MOhm						

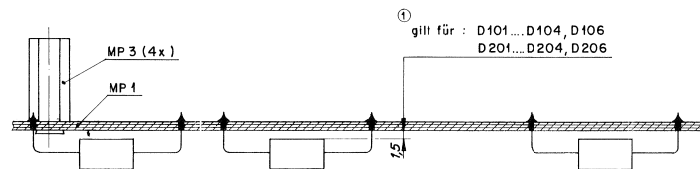
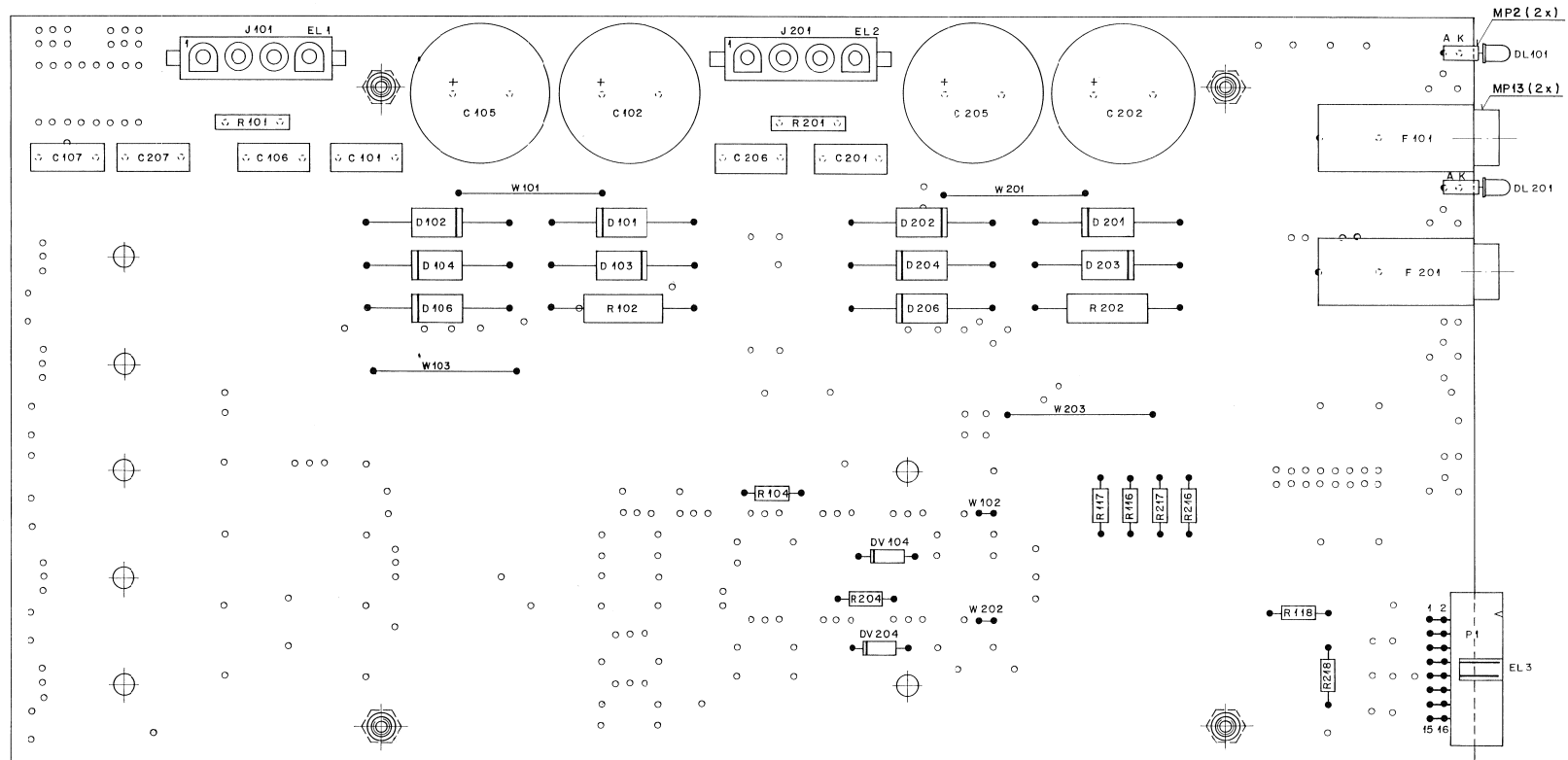
POWER AMP. RECT. BOARD

1.918.086.00



POWER AMP. RECT. BOARD

1.918.086.00



STUDER
REGENSDORF
ZÜRICH

POWER AMP.
RECT. BOARD

Version									
11.1.91	SK	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
2.10.90	AR	AR	AR	AR	AR	AR	AR	AR	AR
Zustimmung	Ges.	Ges.	Ges.	Ges.	Ges.	Ges.	Ges.	Ges.	Index
Kopie für									
Number	1.918.086-00								

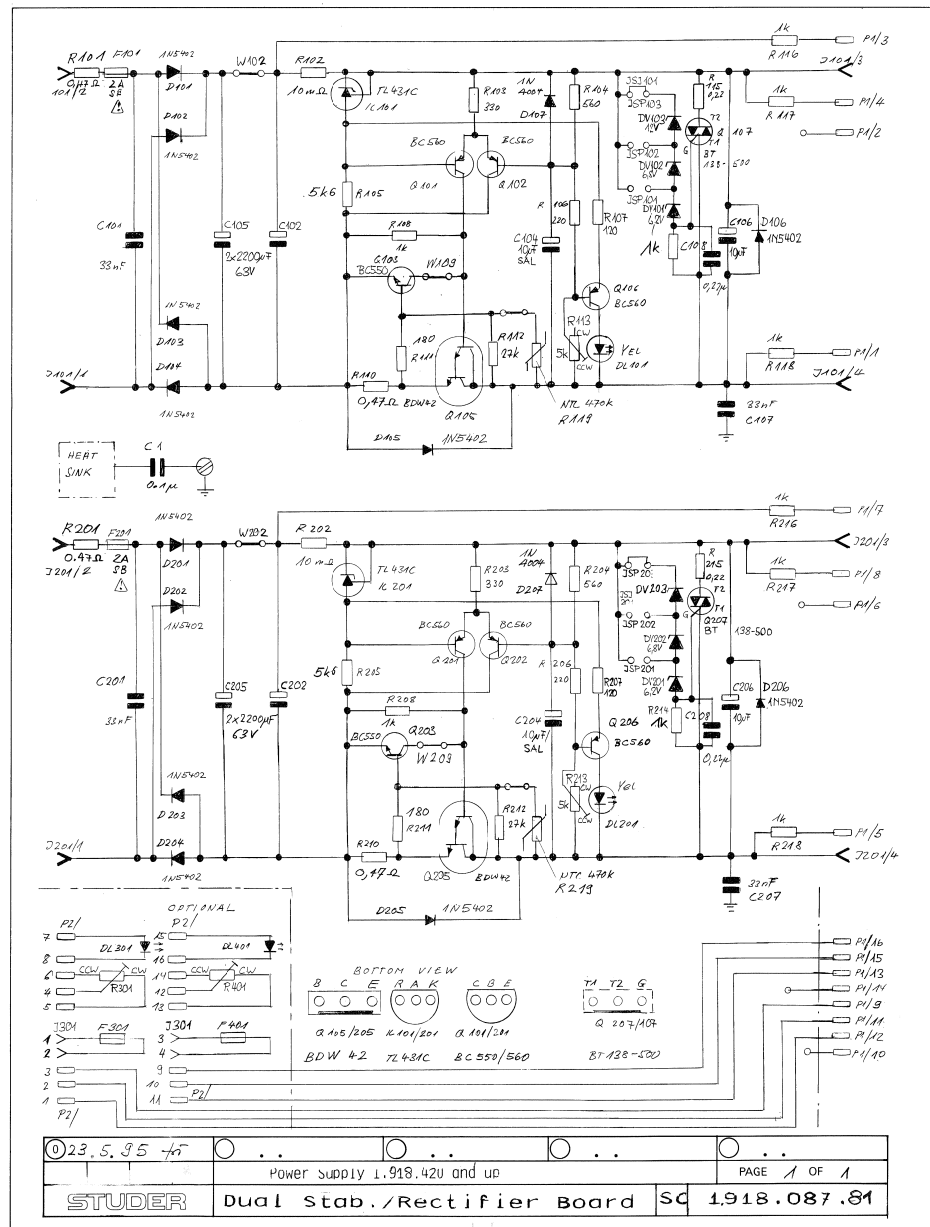
POWER AMP. RECT. BOARD

1.918.086.00

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
C....1	.	0	NOT USED		R...207	.	0	NOT USED	
C...101	59.31.8333	.033 uF	10%, 400V, PE		R...208	.	0	NOT USED	
C...102	59.29.5222	2200 uF	20%, 63 V, EL		R...209	.	0	NOT USED	
C...103	.	0	NOT USED		R...210	.	0	NOT USED	
C...104	.	0	NOT USED		R...211	.	0	NOT USED	
C...105	59.29.5222	2200 uF	20%, 63 V, EL		R...212	.	0	NOT USED	
C...106	59.31.8333	.033 uF	10%, 400V, PE		R...213	.	0	NOT USED	
C...107	59.31.8333	.033 uF	10%, 400V, PE		R...214	.	0	NOT USED	
C...201	59.31.8333	.033 uF	10%, 400V, PE		R...215	.	0	NOT USED	
C...202	59.29.5222	2200 uF	20%, 63 V, EL		R...216	57.11.3102	1 kOhm	10%, .5 W	
C...203	.	0	NOT USED		R...217	57.11.3102	1 kOhm	10%, .5 W	
C...204	.	0	NOT USED		R...218	57.11.3102	1 kOhm	10%, .5 W	
C...205	59.29.5222	2200 uF	20%, 63 V, EL		R...301	.	0	not used	58.05.0502, 5 kOhm 10%, .5 W, Option 1
C...206	59.31.8333	.033 uF	10%, 400V, PE		R...401	.	0	not used	58.05.0502, 5 kOhm 10%, .5 W, Option 1
C...207	59.31.8333	.033 uF	10%, 400V, PE		W...101	57.11.3000	0 Ohm	Wiring bridge	
D...101	50.04.0507	MR 502	1N 5402, 200 V, 3 A		W...102	1.010.329.64	2.5mm	Wiring bridge	
D...102	50.04.0507	MR 502	1N 5402, 200 V, 3 A		W...103	57.11.3000	0 Ohm	Wiring bridge	
D...103	50.04.0507	MR 502	1N 5402, 200 V, 3 A		W...201	57.11.3000	0 Ohm	Wiring bridge	
D...104	50.04.0507	MR 502	1N 5402, 200 V, 3 A		W...202	1.010.329.64	2.5mm	Wiring bridge	
D...105	.	0	NOT USED		W...203	57.11.3000	0 Ohm	Wiring bridge	
D...106	50.04.0507	MR 502	1N 5402,						
D...201	50.04.0507	MR 502	1N 5402,		Pos # 1..99	:	Global		
D...202	50.04.0507	MR 502	1N 5402,		101..199	:	for U 1		
D...203	50.04.0507	MR 502	1N 5402,		201..299	:	for U 2		
D...204	50.04.0507	MR 502	1N 5402,		301..499	:	for U 3, U 4 (Option 1)		
D...205	.	0	NOT USED						
D...206	50.04.0507	MR 502	1N 5402,						
DL..101	50.04.2130	LY 3360	yellow diff.						
DL..201	50.04.2130	LY 3360	yellow diff.						
DL..301	.	0	not used	Option 1					
DL..401	.	0	not used	Option 1					
DV..101	.	0	NOT USED						
DV..102	.	0	NOT USED						
DV..103	.	0	NOT USED						
DV..104	50.04.1121	24 V	5%, .40W, Z,						
DV..201	.	0	NOT USED						
DV..202	.	0	NOT USED						
DV..203	.	0	NOT USED						
DV..204	50.04.1121	24 V	5%, .40W, Z,						
F....0	.	.	Fuseholder see MP 13						
F...101	51.01.0120		T2.0A/ 250V, 5 * 20						
F...201	51.01.0120		T2.0A/ 250V, 5 * 20						
F...301	.	0	not used	Option 1					
F...401	.	0	not used	Option 1					
J...101	54.25.0004		Power-Conn., 4 POL 16 A	AMP					
J...201	54.25.0004		Power-Conn., 4 POL 16 A	AMP					
J...301	.	0	not used	Option 1					
MP....1	1.918.086.11		Power Amp.Rect. PCB	St					
MP....2	1.010.012.50	2 pcs	Diodenhalter						
MP....3	1.010.046.22	4 pcs	Nietmutter, M 3 * 14.5						
MP....4	.	0	NOT USED						
MP....5	.	0	NOT USED						
MP....6	.	0	NOT USED						
MP....7	.	0	NOT USED						
MP....8	.	0	NOT USED						
MP....9	.	0	NOT USED						
MP....10	.	0	NOT USED						
MP....11	.	0	NOT USED						
MP....12	.	0	NOT USED						
MP....13	53.03.0145	2 pcs	Sicherungshalter liegend 5*20						
MP....14	.	0	NOT USED						
MP....15	.	0	NOT USED						
MP....16	.	0	NOT USED						
MP....17	1.918.086.04		Nr.-Etikette 5 * 20						
MP....18	.	0	NOT USED						
P....1	54.14.2072	16 pin	Plug, SN, (Winkel), Diagnostic						
P....2	.	0	not used	Option 1					
R...101	57.93.1229	2.2 Ohm	NTC, Surge-suppressor						
R...102	57.56.2010	10 mOhm	5%, 3 W						
R...103	.	0	NOT USED						
R...104	57.11.3222	2.2 kOhm	10%, .5 W						
R...105	.	0	NOT USED						
R...106	.	0	NOT USED						
R...107	.	0	NOT USED						
R...108	.	0	NOT USED						
R...109	.	0	NOT USED						
R...110	.	0	NOT USED						
R...111	.	0	NOT USED						
R...112	.	0	NOT USED						
R...113	.	0	NOT USED						
R...114	.	0	NOT USED						
R...115	.	0	NOT USED						
R...116	57.11.3102	1 kOhm	10%, .5 W						
R...117	57.11.3102	1 kOhm	10%, .5 W						
R...118	57.11.3102	1 kOhm	10%, .5 W						
R...201	57.93.1229	2.2 Ohm	NTC, Surge-suppressor						
R...202	57.56.2010	10 mOhm	5%, 3 W						
R...203	.	0	NOT USED						
R...204	57.11.3222	2.2 kOhm	10%, .5 W						
R...205	.	0	NOT USED						
R...206	.	0	NOT USED						

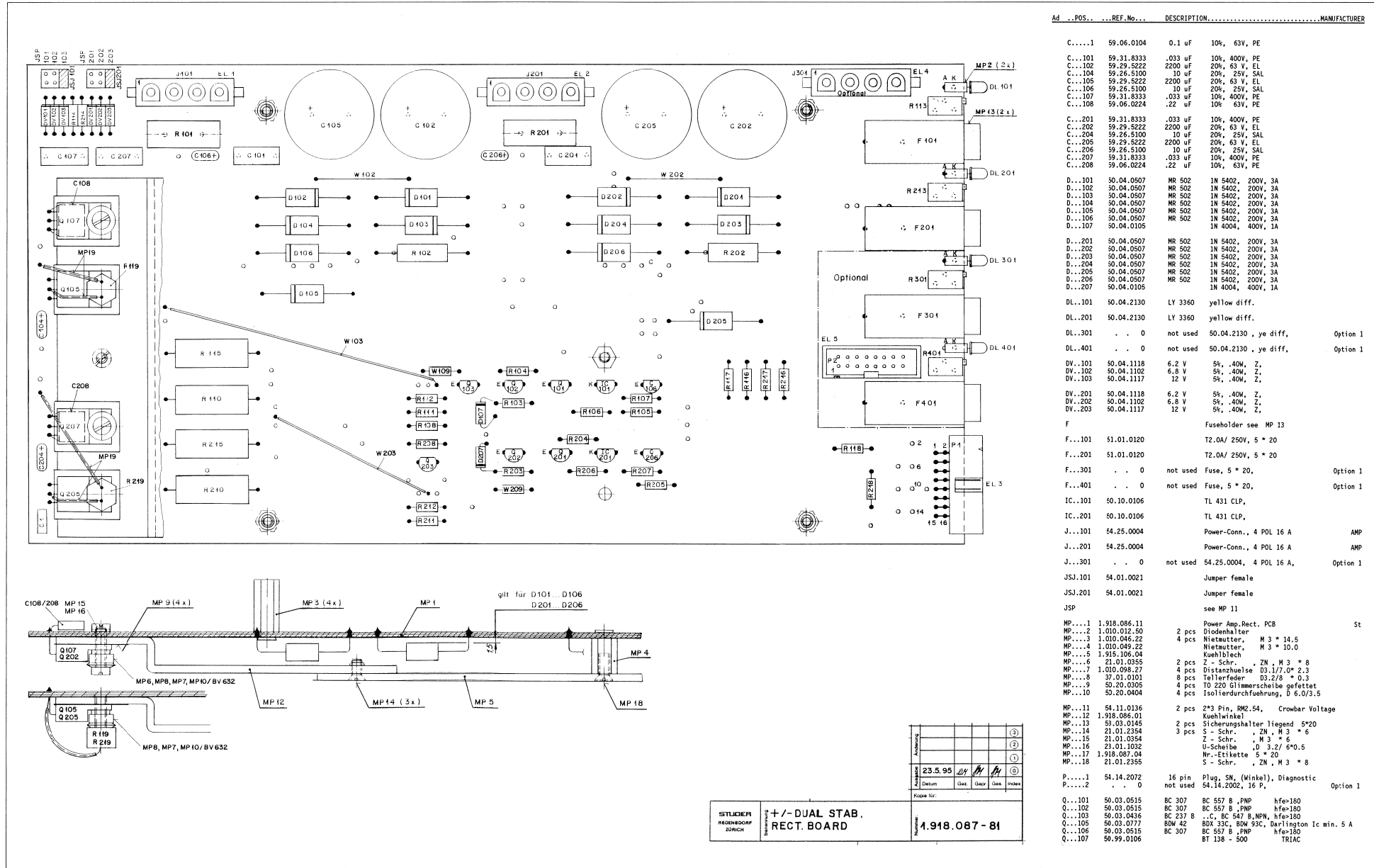
+/- DUAL STABILIZER RECTIFIER BOARD

1.918.087.81



+/- DUAL STABILIZER RECTIFIER BOARD

1.918.087.81



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C...	1	59.06.0104	0.1 uF 10%, 63V, PE	
C...	101	59.31.8333	.033 uF 10%, 400V, PE	
C...	102	59.29.5222	2200 uF 20%, 63 V, EL	
C...	104	59.26.5100	10 uF 20%, 25V, SAL	
C...	105	59.29.5222	2200 uF 20%, 63 V, EL	
C...	106	59.26.5100	10 uF 20%, 25V, SAL	
C...	107	59.31.8333	.033 uF 10%, 400V, PE	
C...	108	59.06.0224	.22 uF 10%, 63V, PE	
C...	201	59.31.8333	.033 uF 10%, 400V, PE	
C...	202	59.29.5222	2200 uF 20%, 63 V, EL	
C...	204	59.26.5100	10 uF 20%, 25V, SAL	
C...	205	59.29.5222	2200 uF 20%, 63 V, EL	
C...	206	59.26.5100	10 uF 20%, 25V, SAL	
C...	207	59.31.8333	.033 uF 10%, 400V, PE	
C...	208	59.06.0224	.22 uF 10%, 63V, PE	
D...	101	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	102	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	103	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	104	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	105	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	106	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	107	30.04.0105	MR 502 IN 4004, 400V, 1A	
D...	201	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	202	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	203	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	204	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	205	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	206	30.04.0507	MR 502 IN 5402, 200V, 3A	
D...	207	30.04.0105	MR 502 IN 4004, 400V, 1A	
DL...	101	30.04.2130	LY 3360 yellow diff.	
DL...	201	30.04.2130	LY 3360 yellow diff.	
DL...	301	0	not used 50.04.2130, ye diff.	Option 1
DL...	401	0	not used 50.04.2130, ye diff.	Option 1
DV...	101	50.04.1118	6.2 V 5%, 40W, Z	
DV...	102	50.04.1102	6.8 V 5%, 40W, Z	
DV...	103	50.04.1117	12 V 5%, 40W, Z	
DV...	201	50.04.1118	6.2 V 5%, 40W, Z	
DV...	202	50.04.1102	6.8 V 5%, 40W, Z	
DV...	203	50.04.1117	12 V 5%, 40W, Z	
F			Fuseholder see MP 13	
F...	101	51.01.0120	T2.0A/ 250V, 5 * 20	
F...	201	51.01.0120	T2.0A/ 250V, 5 * 20	
F...	301	0	not used Fuse, 5 * 20,	Option 1
F...	401	0	not used Fuse, 5 * 20,	Option 1
IC...	101	50.10.0106	TL 431 CLP,	
IC...	201	50.10.0106	TL 431 CLP,	
J...	101	54.25.0004	Power-Conn., 4 POL 16 A	AMP
J...	201	54.25.0004	Power-Conn., 4 POL 16 A	AMP
J...	301	0	not used 54.25.0004, 4 POL 16 A,	Option 1
JSJ...	101	54.01.0021	Jumper female	
JSJ...	201	54.01.0021	Jumper female	
JSP			see MP 11	
MP...	1	1.918.086.11	Power Amp.Rect. PCB	St
MP...	2	1.010.012.50	2 pcs Diodenhalter	
MP...	3	1.010.046.22	4 pcs Nietmutter, M 3 * 14,5	
MP...	4	1.010.049.22	Nietmutter, M 3 * 10,0	
MP...	5	1.915.106.04	Kuehlblech	
MP...	6	21.01.0355	2 pcs Z - Schr., ZN, M 3 * 8	
MP...	7	1.010.098.27	4 pcs Distanzhuebe D3.17/0* 2.3	
MP...	8	37.01.0101	8 pcs Tellerfeder D3.2/8 * 0.3	
MP...	9	50.20.0305	4 pcs T0 220 Glimmerscheibe gefettet	
MP...	10	50.20.0404	4 pcs Isolierdurchfuehrung, D 6.0/3.5	
MP...	11	54.11.0136	2 pcs 2*3 Pin, RM2.54, Crowbar Voltage	
MP...	12	1.918.086.01	Kuehlwinkel	
MP...	13	59.03.0145	2 pcs Sicherungshalter liegend 5*20	
MP...	14	21.01.2354	3 pcs S - Schr., ZN, M 3 * 6	
MP...	15	21.01.0354	Z - Schr., M 3 * 6	
MP...	16	23.01.1032	U-Schleibe D 3.2/ 6*0.5	
MP...	17	1.918.087.04	Nr.-Etikette 5 * 20	
MP...	18	21.01.2355	S - Schr., ZN, M 3 * 8	
P...	1	54.14.2072	16 pin Plug, SN, (Winkel), Diagnostic	
P...	2	0	not used 54.14.2002, 16 P,	Option 1
Q...	101	50.03.0515	BC 307 BC 557 B, PNP hfe>180	
Q...	102	50.03.0515	BC 307 BC 557 B, PNP hfe>180	
Q...	103	50.03.0436	BC 237 B, C, BC 547 B, NPN, hfe>180	
Q...	105	50.03.0777	BDW 42 BDW 33C, BDW 33C, Darlington Ic min. 5 A	
Q...	106	50.03.0515	BC 307 BC 557 B, PNP hfe>180	
Q...	107	50.99.0106	BT 138 - 500 TRIAC	

STUDER
REGENBOGEN
ZURICH

+/- DUAL STAB.
RECT. BOARD

1.918.087 - 81

+/- DUAL STABILIZER RECTIFIER BOARD

1.918.087.81

Ad . . . POS. REF.No. DESCRIPTION MANUFACTURER

Q...201	50.03.0515	BC 307	BC 557 B ,PNP	hfe>180
Q...202	50.03.0515	BC 307	BC 557 B ,PNP	hfe>180
Q...203	50.03.0436	BC 237 B	. . .C, BC 547 B,NPN,	hfe>180
Q...205	50.03.0777	BDW 42	BDX 33C, BDW 93C,	Darlington
Q...206	50.03.0515	BC 307	BC 557 B ,PNP	hfe>180
Q...207	50.99.0106		BT 138 - 500	TRIAC
R...101	57.56.5478	0,47	Ohm 10%, 4 W, WW	
R...102	57.56.2010	10	mOhm 5%, 3 W	
R...103	57.11.3331	330	Ohm 10%, .5 W	
R...104	57.11.3561	560	Ohm 10%, .5 W	
R...105	57.11.3562	5,6	kOhm 10%, .5 W	
R...106	57.11.3221	220	Ohm 10%, .5 W	
R...107	57.11.3121	120	Ohm 10%, .5 W	
R...108	57.11.3102	1	kOhm 10%, .5 W	
R...110	57.56.5478	.47	Ohm 10%, 4 W, WW	
R...111	57.11.3181	180	Ohm 10%, .5 W	
R...112	57.11.3273	27	kOhm 10%, .5 W	
R...113	58.05.0502	5	kOhm 10%, .5 W 22 turn, Trim U 1	
R...114	57.11.3102	1	kOhm 10%, .5 W	
R...115	57.56.5228	.22	Ohm 10%, 4 W, WW	
R...116	57.11.3102	1	kOhm 10%, .5 W	
R...117	57.11.3102	1	kOhm 10%, .5 W	
R...118	57.11.3102	1	kOhm 10%, .5 W	
R...119	57.99.0803	470	kOhm NTC Siemens	
R...201	57.56.5478	0,47	Ohm 10%, 4 W, WW	
R...202	57.56.2010	10	mOhm 5%, 3 W	
R...203	57.11.3331	330	Ohm 10%, .5 W	
R...204	57.11.3561	560	Ohm 10%, .5 W	
R...205	57.11.3562	5,6	kOhm 10%, .5 W	
R...206	57.11.3221	220	Ohm 10%, .5 W	
R...207	57.11.3121	120	Ohm 10%, .5 W	
R...208	57.11.3102	1	kOhm 10%, .5 W	
R...210	57.56.5478	0,47	Ohm 10%, 4 W, WW	
R...211	57.11.3181	180	Ohm 10%, .5 W	
R...212	57.11.3273	27	kOhm 10%, .5 W	
R...213	58.05.0502	5	kOhm 10%, .5 W 22 turn, Trim U 2	
R...214	57.11.3102	1	kOhm 10%, .5 W	
R...215	57.56.5228	.22	Ohm 10%, 4 W, WW	
R...216	57.11.3102	1	kOhm 10%, .5 W	
R...217	57.11.3102	1	kOhm 10%, .5 W	
R...218	57.11.3102	1	kOhm 10%, .5 W	
R...219	57.99.0803	470	kOhm NTC Siemens	
R...301	. . . 0	not used	58.05.0502, 5 kOhm 10%, .5 W, Option 1	
R...401	. . . 0	not used	58.05.0502, 5 kOhm 10%, .5 W, Option 1	
W...102	64.01.0108		0,8 mm wiring bridge	
W...109	57.11.3000		0 Ohm wiring bridge	
W...202	64.01.0108		0,8 mm wiring bridge	
W...209	57.11.3000		Ohm wiring bridge	

Pos # 1...99 : Global
 101..199 : for U 1
 201..299 : for U 2
 301..499 : for U 3, U 4 (Option 1)

-81 no auto switch off
 thermal fold back
 both stabilizer max. input voltage 45 V
 current ~ 1 ampere

Option 2
 max. 2 ampere current for 5V or 6V DC output:
 R 0,47 Ohm in parallel to R110 or R210 on solder side.
 R 10 kOhm in parallel to R112 or R212 on solder side.
 F 101 or F201 3.15 A SB

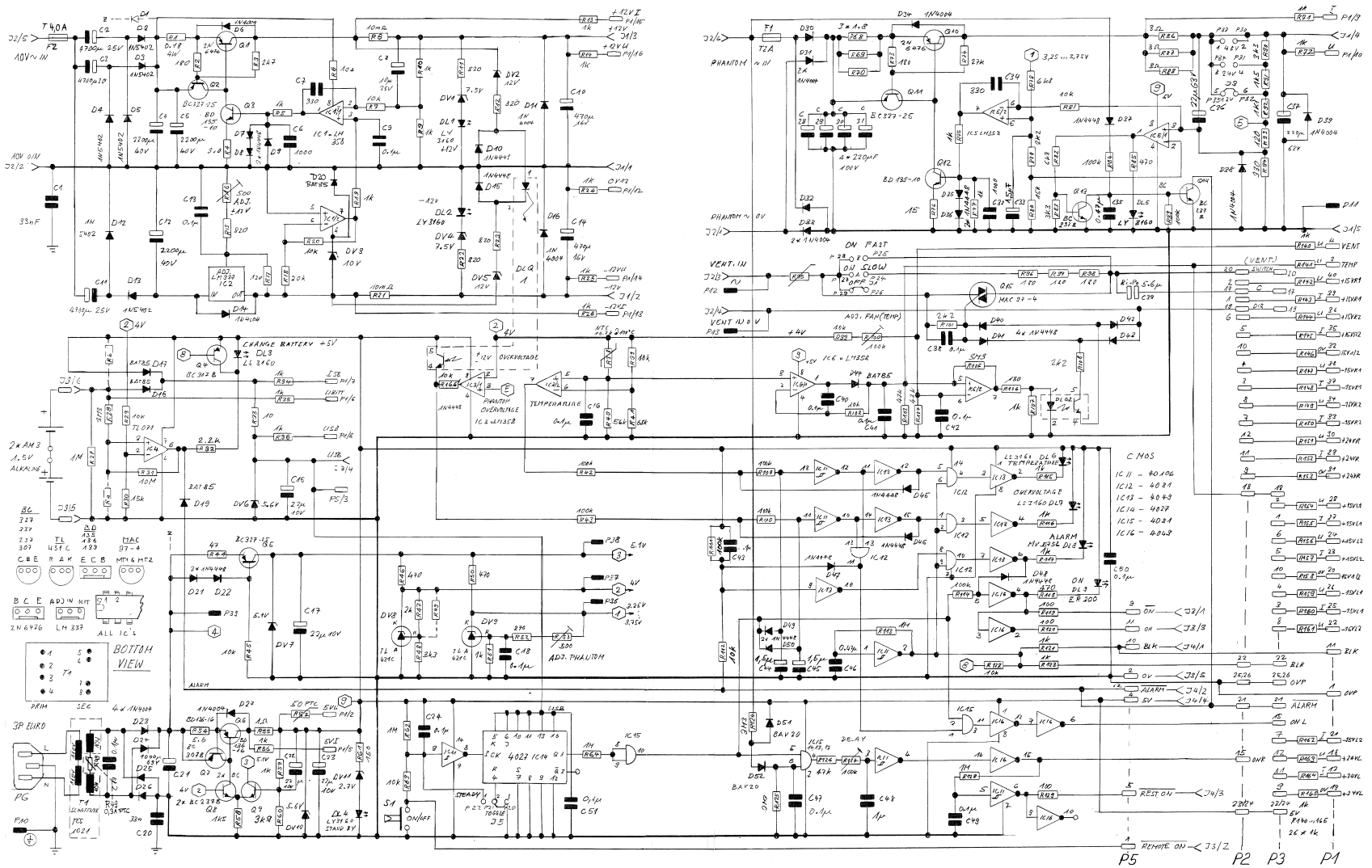
CE=Ceramic, CF=Carbon Film, EL=Electrolytic, MF=Metal Film,
 PE=Polyester, PP=Polypropylen, SAL=Solid Aluminium Lacquered
 PS=Polystyrol

MANUFACTURER: St=Studer

1.918.087.81 +/- DUAL STAB. RECT. BOARD FRI95/05/2300

PHANTOM S.B. ±12V BOARD

1.918.088.00

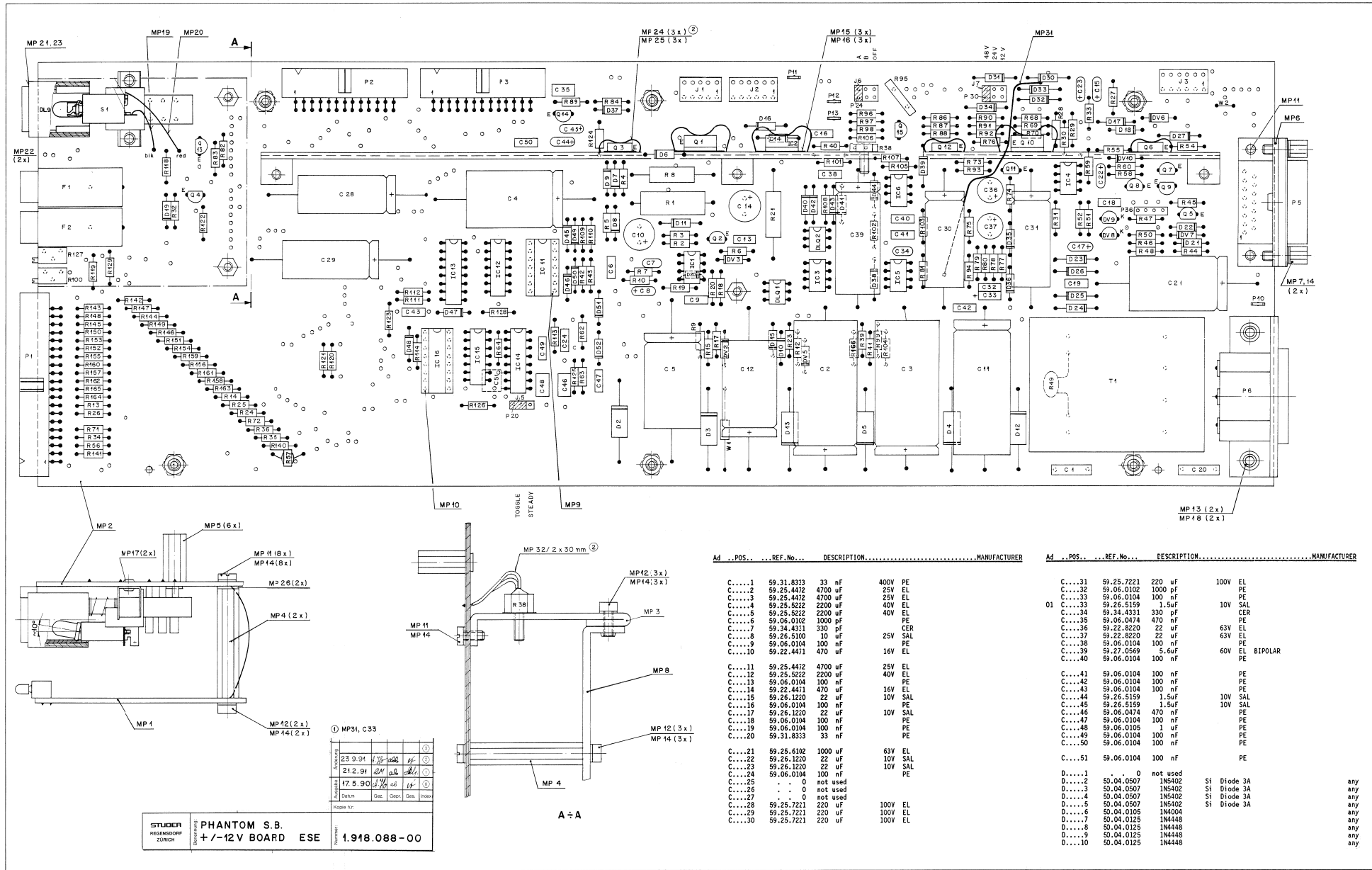


① 26.10.90	① 21.02.91 ab	Power Supply 1.918.420 and up	PAGE 1 OF 2
STUDER		Phantom, S.B., +/- 12V Board	SC 1918.088.00

① 26.10.90	① 24.02.91 ab	Power Supply 1.918.420 and up	PAGE 2 OF 2
STUDER		Phantom, S.B., +/- 12V Board	SC 1918.088.00

PHANTOM S.B. ±12V BOARD

1.918.088.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C...	1	59.31.8333	33 nF	400V PE	C...	31	59.25.7221	220 uF	100V EL
C...	2	59.25.4472	4700 uF	25V EL	C...	32	59.06.0102	1000 pF	PE
C...	3	59.25.4472	4700 uF	25V EL	C...	33	59.06.0104	100 nF	PE
C...	4	59.25.5222	2200 uF	40V EL	C...	34	59.26.5159	1.5uF	10V SAL
C...	5	59.25.5222	2200 uF	40V EL	C...	35	59.34.4331	330 pF	PE
C...	6	59.06.0102	1000 pF	PE	C...	36	59.06.0474	470 nF	PE
C...	7	59.34.4331	330 pF	PE	C...	37	59.22.8220	22 uF	63V EL
C...	8	59.06.0100	10 nF	25V SAL	C...	38	59.22.8220	22 uF	63V EL
C...	9	59.06.0104	100 nF	PE	C...	39	59.06.0104	100 nF	PE
C...	10	59.22.4471	470 uF	16V EL	C...	40	59.27.0569	5.6uF	60V PE BIPOLAR
C...	11	59.25.4472	4700 uF	25V EL	C...	41	59.06.0104	100 nF	PE
C...	12	59.25.5222	2200 uF	40V EL	C...	42	59.06.0104	100 nF	PE
C...	13	59.06.0104	100 nF	PE	C...	43	59.06.0104	100 nF	PE
C...	14	59.22.4471	470 uF	16V EL	C...	44	59.26.5159	1.5uF	10V SAL
C...	15	59.26.1220	22 uF	10V SAL	C...	45	59.26.5159	1.5uF	10V SAL
C...	16	59.06.0104	100 nF	PE	C...	46	59.06.0474	470 nF	PE
C...	17	59.26.1220	22 uF	10V SAL	C...	47	59.06.0104	100 nF	PE
C...	18	59.06.0104	100 nF	PE	C...	48	59.06.0105	1 uF	PE
C...	19	59.06.0104	100 nF	PE	C...	49	59.06.0104	100 nF	PE
C...	20	59.31.8333	33 nF	PE	C...	50	59.06.0104	100 nF	PE
C...	21	59.25.6102	1000 uF	63V EL	C...	51	59.06.0104	100 nF	PE
C...	22	59.26.1220	22 uF	10V SAL	D...	1	0	not used	
C...	23	59.26.1220	22 uF	10V SAL	D...	2	50.04.0507	1N5402	S1 Diode 3A any
C...	24	59.06.0104	100 nF	PE	D...	3	50.04.0507	1N5402	S1 Diode 3A any
C...	25	0	not used		D...	4	50.04.0507	1N5402	S1 Diode 3A any
C...	26	0	not used		D...	5	50.04.0507	1N5402	S1 Diode 3A any
C...	27	0	not used		D...	6	50.04.0105	1N4004	any
C...	28	59.25.7221	220 uF	100V EL	D...	7	50.04.0125	1N4448	any
C...	29	59.25.7221	220 uF	100V EL	D...	8	50.04.0125	1N4448	any
C...	30	59.25.7221	220 uF	100V EL	D...	9	50.04.0125	1N4448	any
					D...	10	50.04.0125	1N4448	any

PHANTOM S.B. ±12V BOARD



1.918.088.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER		
D....11		50.04.0105	1N4004	any	MP...1		1.918.082.00	1 pcs	Led Board	St	
D....12		50.04.0507	1N5402	any	MP...2		1.918.088.11	1 pcs	Phantom S.B. +/-12V PCB	St	
D....13		50.04.0507	1N5402	any	MP...3		1.918.088.01	1 pcs	Kuehlblech	St	
D....14		50.04.0105	1N4004	any	MP...4		1.010.027.27	3 pcs	Mutterbolzen M3*35	St	
D....15		50.04.0125	1N4448	any	MP...5		1.010.046.22	6 pcs	Nietmutter M3*14.5	St	
D....16		50.04.0105	1N4004	any	MP...6		1.963.001.22	1 pcs	Haltewinkel D 15-Pol	St	
D....17		50.04.0127	BAT 85	U=30V I=0.2A	any	MP...7	1.010.036.54	2 pcs	Verriegelungs-Gewindebolzen	St	
D....18		50.04.0127	BAT 85	U=30V I=0.2A	any	MP...8	1.918.088.02	1 pcs	Kuehlblecherweiterung	St	
D....19		50.04.0127	BAT 85	U=30V I=0.2A	any	MP...9	53.03.0167	1 pcs	IC socket 14 pin		
D....20		50.04.0127	BAT 85	U=30V I=0.2A	any	MP...10	53.03.0168	1 pcs	IC-socket 16 pin		
D....21		50.04.0125	1N4448	any	MP...11		21.13.0354	8 pcs	Z-Schraube M3*6 rostfrei		
D....22		50.04.0125	1N4448	any	MP...12		21.53.0355	6 pcs	Z-Schraube M3*8 IS		
D....23		50.04.0105	1N4004	any	MP...13		23.01.1032	2 pcs	U-Scheibe 3.2/6*0.5		
D....24		50.04.0105	1N4004	any	MP...14		24.16.1030	16 pcs	Rippenscheiben D 3.2/5.5		
D....25		50.04.0105	1N4004	any	MP...15		50.20.2004	3 pcs	Montageclip TO 220		
D....26		50.04.0105	1N4004	any	MP...16		50.20.0315	3 pcs	Glimmer TO 220		
D....27		50.04.0105	1N4004	any	MP...17		28.21.1350	2 pcs	Rohrniete 2,5*4		
D....28		0	not used		MP...18		28.21.2408	2 pcs	Rohrniete 3*6		
D....29		0	not used		MP...19		1.010.200.64	1 pcs	Litze schwarz		
D....30		50.04.0105	1N4004	any	MP...20		1.010.202.64	1 pcs	Litze rot		
D....31		50.04.0105	1N4004	any	MP...21		55.15.0101	1 pcs	Lampenhalter		
D....32		50.04.0105	1N4004	any	MP...22		53.03.0145	2 pcs	Fuseholder		
D....33		50.04.0105	1N4004	any	MP...23		55.15.0143	1 pcs	Tastenkнопf		
D....34		50.04.0105	1N4004	any	02 MP...24		50.20.2002	3 pcs	Montageclip TO 126		
D....35		50.04.0125	1N4448	any	MP...25		50.20.0314	3 pcs	Glimmer TO 126		
D....36		50.04.0125	1N4448	any	MP...26		1.010.013.23	2 pcs	U-Scheibe St D 3,1/ 6 *1		
D....37		50.04.0125	1N4448	any	MP...27		43.01.0108	1 pcs	ESE-Warnschild		
D....38		50.04.0105	1N4004	any	32 MP...28		0	not used			
D....39		50.04.0105	1N4004	any	MP...29		1.918.088.04	1 pcs	Nr-Schild		
D....40		50.04.0125	1N4448	any	MP...30		54.01.0020	7 pcs	PCB Connector P20..22, P36..39		
D....41		50.04.0125	1N4448	any	01 MP...31		64.01.0309	90 mm	Schalt draht iso, min D=0.6 mm		
D....42		50.04.0125	1N4448	any	02 MP...32		65.99.0111	2*30 mm	PTFE-Schlauch Spez. 0.89 * 0.152mm.		
D....43		50.04.0125	1N4448	any	any						
D....44		50.04.0127	BAT 85	U=30V I=0.2A	any	P....1	54.14.2075	2*20 Pol	PCB Flat-cabel connector	Ya	
D....45		50.04.0125	1N4448	any	any	P....2	54.14.2074	2*13 Pol	PCB Flat-cabel connector	Ya	
D....46		50.04.0125	1N4448	any	any	P....3	54.14.2074	2*13 Pol	PCB Flat-cabel connector	Ya	
D....47		50.04.0125	1N4448	any	any	P....4	0	not used			
D....48		50.04.0125	1N4448	any	any	P....5	54.13.0012	15 Pol	D-Type		
D....49		50.04.0125	1N4448	any	any	P....6	54.42.0020	3 Pol	Mains Connector		
D....50		50.04.0125	1N4448	any	any	P....7	0	not used			
D....51		50.04.0133	BAV 20	150V	any	P....8	0	not used			
D....52		50.04.0133	BAV 20	150V	any	P....9	0	not used			
D....52		50.04.0133	BAV 20	150V	any	P....10	54.02.0320	2.8mm	Flat Pin Connector		
DL....1			LY3360	LED 3.18mm gb	*LED PCB*	P....11	54.02.0320	2.8mm	Flat Pin Connector		
DL....2			LY3360	LED 3.18mm gb	*LED PCB*	P....12	54.02.0320	2.8mm	Flat Pin Connector		
DL....3			LY3360	LED 3.18mm rt	*LED PCB*	P....13	54.02.0320	2.8mm	Flat Pin Connector		
DL....4			LY3360	LED 3.18mm gb	*LED PCB*	P....14	0	not used			
DL....5			LY3360	LED 3.18mm gb	*LED PCB*	P....15	0	not used			
DL....6			LY3360	LED 3.18mm rt	*LED PCB*	P....16	0	not used			
DL....7			LY3360	LED 3.18mm rt	*LED PCB*	P....17	0	not used			
DL....8			MW5753	rt/dif 5.6mm	*LED PCB*	P....18	0	not used			
DL....9		50.04.2155	ER 300	rt/clear 5.6mm	(SCHALTER)	P....19	0	not used			
DL....9		50.04.2155	ER 300	rt/clear 5.6mm	(SCHALTER)	Sty					
DLQ...1		50.04.3200	CNY	17-2 DIL6		Sie					
DLQ...2		50.04.3200	CNY	17-2 DIL6		Sie					
DV....1			Z 7.5V	500 mW	*LED PCB*	P....23	0	not used			
DV....2		50.04.1117	Z12 V	500 mW		P....24	54.11.0136	2*3 Pol	PCB Connector	P24..29	
DV....3		50.04.1114	Z10 V	500 mW		any	P....30	54.11.0136	2*3 Pol	PCB Connector	P30..35
DV....4			Z 7.5V	500 mW	*LED PCB*	any	P....36	0	4 Pol	PCB Connector	P36..39, see MP 30
DV....5		50.04.1117	Z12 V	500 mW		Q....1	50.03.0345	2N 6476	PNP	RCA	
DV....6		50.04.1108	Z 5.6V	500 mW		Q....2	50.03.0351	BC 327-25	PNP	any	
DV....7		50.04.1112	Z 5.1V	500 mW		Q....3	50.03.0495	BD 135-16	NPN	Ph	
DV....8		50.10.0106	TL 431CLP	Shunt-Regulator		Q....4	50.03.0515	BC 307B	PNP	any	
DV....9		50.10.0106	TL 431CLP	Shunt-Regulator		Q....5	50.03.0351	BC 327-25	PNP	any	
DV....10		50.04.1108	Z 5.6V	500 mW		Q....6	50.03.0510	BD 136-16	PNP	Ph	
DV....11			Z 2.7V	500 mW	*LED PCB*	Q....7	50.03.0515	BC 307B	PNP	any	
DV....11			Z 2.7V	500 mW	*LED PCB*	Q....8	50.03.0436	BC 237B	NPN	any	
DV....11			Z 2.7V	500 mW	*LED PCB*	Q....9	50.03.0436	BC 237B	NPN	any	
DV....11			Z 2.7V	500 mW	*LED PCB*	Q....10	50.03.0345	2N 6476	PNP	RCA	
F....1		51.01.0120	2.0 A	traege/slow blow		Q....11	50.03.0351	BC 327-25	PNP	Ph	
F....2		51.01.0123	4.0 A	traege/slow blow		Q....12	50.03.0451	BD 139-10	NPN	any	
IC....1		50.05.0286	LM 358 P	dual op.amp.	TI	Q....13	50.03.0436	BC 237B	NPN	any	
IC....2		50.10.0105	LM 337KZ	voltage regulator -1.2..37V	NS	Q....14	50.03.0436	BC 237B	NPN	any	
IC....3		50.05.0286	LM 358 P	dual op.amp.	TI	Q....15	50.08.0001	MAC 97-4	Triac UAC=200V IAC=0.6A	any	
IC....4		50.09.0103	TL 071	single FET-op.amp.	TI					Mot	
IC....5		50.05.0286	LM 358 P	dual op.amp.	TI	R....1	57.56.4188	0.180hm	4 Watt 5%		
IC....6		50.05.0286	LM 358 P	dual op.amp.	TI	R....2	57.11.3181	180 Ohm			
IC....7		0	not used			R....3	57.11.3272	2.7kOhm			
IC....8		0	not used			R....4	57.11.3309	3.0 Ohm			
IC....9		0	not used			R....5	57.11.3102	1 kOhm			
IC....10		0	not used			R....6	57.19.0100	10 Ohm			
IC....11		50.07.0014	40106	CMOS Hex inv. Schmitt Trigger	Ph	R....7	57.11.3103	10 kOhm	Sicherungswid./safety R /I\		
IC....12		50.07.0081	4081	CMOS Quad 2-Input AND Gate	Ph	R....8	57.56.2010	10 mOhm	3 Watt		
IC....13		50.07.0049	4049	CMOS hex inverting buffer	Ph	R....9	57.11.3102	1 kOhm			
IC....14		50.07.0027	4027	CMOS Dual JK-flip-flop	Ph	R....10	57.11.3102	1 kOhm			
IC....15		50.07.0081	4081	CMOS Quad 2-Input AND Gate	Ph						
IC....16		50.07.0049	4049	CMOS hex inverting buffer	Ph	R....11	0	820 Ohm	*LED PCB*		
J....1		54.01.0288	5 Pol	Cis		R....12	57.11.3821	820 Ohm			
J....2		54.01.0216	6 Pol	Cis		R....13	57.11.3102	1 kOhm			
J....3		54.01.0216	6 Pol	Cis		R....14	57.11.3102	1 kOhm			
J....4		0	not used			R....15	57.11.3821	820 Ohm			
J....5		54.01.0021	Jumper	see also P20, ON-Switch toggle/steady		R....16	0	500 Ohm	22-turn poti *LED PCB* Adj. +/-12V		
J....6		54.01.0021	Jumper	see also P24, Venti steady/interm./off		R....17	57.11.3121	120 Ohm			
J....7		54.01.0021	Jumper	see also P30, Phantom 48/24/12V		R....18	57.11.3203	20 kOhm			
J....7		54.01.0021	Jumper	see also P30, Phantom 48/24/12V		R....19	57.11.3102	1 kOhm			
J....7		54.01.0021	Jumper	see also P30, Phantom 48/24/12V		R....20	57.11.3103	10 kOhm			



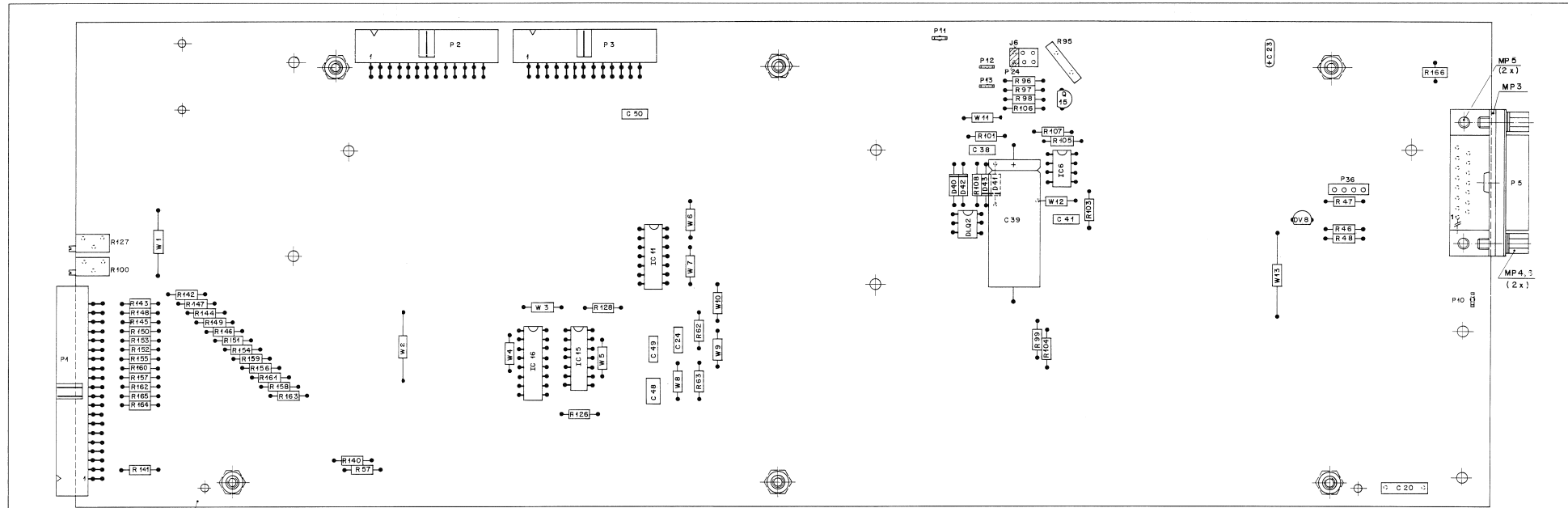
PHANTOM S.B. ±12V BOARD

1.918.088.00

Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
R....21		57.56.2010	10 mOhm 3 Watt		R...111		57.11.3104	100 kOhm	
R....22			820 Ohm		R...112		57.11.3103	10 kOhm	
R....23		57.11.3821	820 Ohm	*LED PCB*	R...113		57.11.3105	1.0MOhm	
R....24		57.11.3102	1 kOhm		R...114		57.11.3104	100 kOhm	
R....25		57.11.3102	1 kOhm		R...115			1 kOhm	*LED PCB*
R....26		57.11.3102	1 kOhm		R...116			1 kOhm	*LED PCB*
R....27		57.11.3105	1 MOhm		R...117			1 kOhm	*LED PCB*
R....28		57.11.5335	3.3MOhm		R...118		57.11.3471	470 Ohm	
R....29		57.11.3103	10 kOhm		R...119		57.11.3101	100 Ohm	
R....30		57.11.3153	15 kOhm		R...120		57.11.3101	100 Ohm	
R....31		57.11.5106	10 MOhm		R...121		57.11.3102	1 kOhm	
R....32		57.11.3222	2.2kOhm		R...122		57.11.3103	10 kOhm	
R....33		57.11.3100	10 Ohm		R...123		57.11.3102	1 kOhm	
R....34		57.11.3102	1 kOhm		R...124		57.11.5335	3.3MOhm	
R....35		57.11.3102	1 kOhm		R...125		57.11.5335	3.3MOhm	
R....36		57.11.3102	1 kOhm		R...126		57.11.3473	47 kOhm	
R....37		0	not used		R...127		58.05.0104	100 kOhm	22-turn poti ON-Delay
02 R....38		57.99.0803	470 kOhm	NTC, 10%	R...128		57.11.3105	1.0MOhm	
R....39		57.11.3103	10 kOhm		R...129		57.11.3101	100 Ohm	
R....40		57.11.3563	56 kOhm	Sie.	R...130		0	not used	
R....41		57.11.3683	68 kOhm		R...131		0	not used	
R....42		57.11.3104	100 kOhm		R...132		0	not used	
R....43		57.11.3104	100 kOhm		R...133		0	not used	
R....44		57.11.3470	47 Ohm		R...134		0	not used	
R....45		57.11.3103	10 kOhm		R...135		0	not used	
R....46		57.11.3471	470 Ohm		R...136		0	not used	
R....47		57.11.3202	2.0kOhm		R...137		0	not used	
R....48		57.11.3332	3.3kOhm		R...138		0	not used	
R....49		57.92.7012	0.3 A	Poly-PTC Ihold=0.3A	R...139		0	not used	
R....50		57.11.3471	470 Ohm		R...140		57.11.3102	1 kOhm	
R....51		57.11.3102	1 kOhm		R...141		57.11.3102	1 kOhm	
R....52		57.11.3271	270 Ohm		R...142		57.11.3102	1 kOhm	
R....53		500 Ohm	22-turn poti	*LED PCB* Adj. Phantom	R...143		57.11.3102	1 kOhm	
R....54		57.11.3569	5.6 Ohm		R...144		57.11.3102	1 kOhm	
R....55		57.11.3109	1.0 Ohm		R...145		57.11.3102	1 kOhm	
R....56		57.11.3102	1 kOhm		R...146		57.11.3102	1 kOhm	
R....57		57.99.0206	50 Ohm	PTC	R...147		57.11.3102	1 kOhm	
R....58		57.11.3152	1.5kOhm		R...148		57.11.3102	1 kOhm	
R....59		57.11.3102	1 kOhm		R...149		57.11.3102	1 kOhm	
R....60		57.11.3392	3.9kOhm		R...150		57.11.3102	1 kOhm	
R....61		150 Ohm	*LED PCB*		R...151		57.11.3102	1 kOhm	
R....62		57.11.3105	1.0MOhm		R...152		57.11.3102	1 kOhm	
R....63		57.11.3103	10 kOhm		R...153		57.11.3102	1 kOhm	
R....64		57.11.3105	1.0MOhm		R...154		57.11.3102	1 kOhm	
R....65		0	not used		R...155		57.11.3102	1 kOhm	
R....66		0	not used		R...156		57.11.3102	1 kOhm	
R....67		0	not used		R...157		57.11.3102	1 kOhm	
R....68		57.11.3189	1.8 Ohm		R...158		57.11.3102	1 kOhm	
R....69		57.11.3189	1.8 Ohm		R...159		57.11.3102	1 kOhm	
R....70		57.11.3189	1.8 Ohm		R...160		57.11.3102	1 kOhm	
R....71		57.11.3102	1 kOhm		R...161		57.11.3102	1 kOhm	
R....72		57.11.3102	1 kOhm		R...162		57.11.3102	1 kOhm	
R....73		57.11.3181	180 Ohm		R...163		57.11.3102	1 kOhm	
R....74		57.11.3273	27 kOhm		R...164		57.11.3102	1 kOhm	
R....75		57.11.3102	1 kOhm		R...165		57.11.3102	1 kOhm	
R....76		57.11.3150	15 Ohm		R...166		57.11.3103	10 kOhm	
R....77		57.11.3102	1 kOhm		S.....1		55.15.0032	Schadow 2*U Power-0H	
R....78		57.11.3682	6.8kOhm		T.....1		63.20.0101	Netztrafo	Sch
R....79		57.11.3222	2.2kOhm		W.....1		57.11.3000	0 Ohm wiring bridge	
R....80		57.11.3153	15 kOhm		W.....2		1.010.321.64	wire 5mm	
R....81		57.11.3103	10 kOhm		(01) 21.02.91		Better Phantom Performance		
R....82		57.11.3682	6.8kOhm		(02) 23.09.91		Philips NTC Resistor #57.99.0220 is no longer available. R38 is now a Siemens NTC Resistor #57.99.0803 and the leads are insulated with 2 pcs. PTFE-tube #65.99.0111, L=30 mm. (MP32 position). At the MP24 position, one pc. is removed from the board. The MP28 position is no longer used.		
R....83		57.11.3332	3.3kOhm		EL=Electrolytic, PE=Polyester, SAL=Solid Aluminium Lacquered				
R....84		57.11.3104	100 kOhm		MANUFACTURERS: GI=General Instruments, Mot=Motorola, NS=National Semi-conductors, RCA=Radio Corp. of America, Sch=Schaffner, Sie=Siemens, St=Studer, Sty=Stanley				
R....85		470 Ohm	*LED PCB*		TI=Texas Instruments, Ya=Yamaicht,				
R....86		57.11.3309	3.0 Ohm		1.918.088.00	PHANTOM S.B. +/-12V BOARD	AB90/10/2600		
R....87		57.11.3309	3.0 Ohm		1.918.088.00	PHANTOM S.B. +/-12V BOARD	AB91/02/2101		
R....88		57.11.3309	3.0 Ohm		1.918.088.00	PHANTOM S.B. +/-12V BOARD	AB91/09/2302		
R....89		57.11.3104	100 kOhm						
R....90		57.11.3332	3.3kOhm						
R....91		57.11.3152	1.5kOhm						
R....92		57.11.3112	1.1kOhm						
R....93		57.11.3121	120 Ohm						
R....94		57.11.3331	330 Ohm						
R....95		57.92.1221	5.6 Ohm	PTC					
R....96		57.11.3181	180 Ohm						
R....97		57.11.3181	180 Ohm						
R....98		57.11.3181	180 Ohm						
R....99		57.11.3103	10 kOhm						
R...100		58.05.0104	100 kOhm	22-turn poti Fan/Temperature					
R...101		57.11.3222	2.2kOhm						
R...102		57.11.3103	10 kOhm						
R...103		57.11.3473	47 kOhm						
R...104		57.11.3473	47 kOhm						
R...105		57.11.5335	3.3MOhm						
R...106		57.11.3181	180 Ohm						
R...107		57.11.3102	1 kOhm						
R...108		57.11.3222	2.2kOhm						
R...109		57.11.3104	100 kOhm						
R...110		57.11.3104	100 kOhm						

FEED THROUGH BOARD

1.918.089.00



Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C...	20	59.31.8333	33 nF	PE
C...	23	59.26.1220	22 uF	SAL
C...	24	59.06.0104	100 nF	PE
C...	38	59.06.0104	100 nF	PE
C...	39	59.27.0569	5.6uF	60V EL BIPOLAR
C...	41	59.06.0104	100 nF	PE
C...	48	59.06.0105	1 uF	PE
C...	49	59.06.0104	100 nF	PE
C...	50	59.06.0104	100 nF	PE
D...	40	50.04.0125	1M4448	any
D...	41	50.04.0125	1M4448	any
D...	42	50.04.0125	1M4448	any
D...	43	50.04.0125	1M4448	any
DLO...	2	50.04.3200	CNY 17-2 DIL6	Sie
DV...	8	50.04.0106	TL431CLP	Shunt-Regulator
IC...	6	50.05.0286	LM 358 P	LM 358 P dual FET-op.amp.
IC...	11	50.07.0014	40106	CMOS Hex inv. Schmitt trigger
IC...	15	50.07.0081	4081	CMOS Quad 2-Input AND Gate
IC...	16	50.07.0049	4049	CMOS hex inverting buffer
J...	6	54.01.0021	1 pcs	2 Pol Jumper
MP...	1	1.918.088.11	1 pcs	Phantom PCB
MP...	2	1.010.046.22	6 pcs	Wietnutter MP*14.5mm
MP...	3	1.963.001.22	1 pcs	Haltwinkel D 15-Pol
MP...	4	1.010.016.54	2 pcs	Verrriegelugs Gew. Bolzen
MP...	5	21.13.0354	2 pcs	Z-Schraube M3*5mm rostfrei
MP...	6	24.16.1030	4 pcs	Rippenscheibe M3
MP...	7	54.01.0020	4 pcs	Test-Connector see also P 36
MP...	8	43.01.0108	1 pcs	ESE Warnschild
P...	1	54.14.2075	1 pcs	2*20 Pin PCB Flat-cable connector
P...	2	54.14.2074	1 pcs	2*13 Pin PCB Flat-cable connector
P...	3	54.14.2074	1 pcs	2*13 Pin PCB Flat-cable connector
P...	5	54.13.0012	1 pcs	15 Pol D-Type connector
P...	10	54.02.0320	1 pcs	2.8mm Faston-connector Chassis
P...	11	54.02.0320	1 pcs	2.8mm Faston-connector 0 V
P...	12	54.02.0320	1 pcs	2.8mm Faston-connector AC-Input for Fan
P...	13	54.02.0320	1 pcs	2.8mm Faston-connector AC-Input for Fan
P...	24	54.11.0136	1 pcs	2* 3 Pin connector P24...P29

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
P...	36	0	4 Pin Test conn.	P36...P39, see MP 7
Q...	15	50.08.0001	MAC 97-4	Triac UAC=200V IAC=0.6A
R...	46	57.11.3471	470 Ohm	
R...	47	57.11.3202	2.0kOhm	
R...	48	57.11.3332	3.3kOhm	
R...	57	57.99.0206	50 Ohm	PTC
R...	62	57.11.3105	1 Mohm	
R...	63	57.11.3103	10 kohm	
R...	95	57.92.1221	5.6 Ohm	PTC
R...	96	57.11.3181	180 Ohm	
R...	97	57.11.3181	180 Ohm	
R...	98	57.11.3181	180 Ohm	
R...	99	57.11.3103	10 kohm	
R...	100	58.05.0104	100 kohm	22-turn poti
R...	101	57.11.3222	2.2kOhm	
R...	103	57.11.3473	47 kohm	
R...	104	57.11.3473	47 kohm	
R...	105	57.11.5335	3.3Mohm	
R...	106	57.11.3181	180 Ohm	
R...	107	57.11.3102	1 kohm	
R...	108	57.11.3222	2.2kOhm	
R...	126	57.11.3473	47 kohm	
R...	127	58.05.0104	100 kohm	22-turn poti
R...	128	57.11.3105	1 Mohm	
R...	140	57.11.3102	1 kohm	
R...	141	57.11.3102	1 kohm	
R...	142	57.11.3102	1 kohm	
R...	143	57.11.3102	1 kohm	
R...	144	57.11.3102	1 kohm	
R...	145	57.11.3102	1 kohm	
R...	146	57.11.3102	1 kohm	
R...	147	57.11.3102	1 kohm	
R...	148	57.11.3102	1 kohm	
R...	149	57.11.3102	1 kohm	
R...	150	57.11.3102	1 kohm	
R...	151	57.11.3102	1 kohm	
R...	152	57.11.3102	1 kohm	
R...	153	57.11.3102	1 kohm	

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
R...	154	57.11.3102	1 kohm	
R...	156	57.11.3102	1 kohm	
R...	157	57.11.3102	1 kohm	
R...	158	57.11.3102	1 kohm	
R...	159	57.11.3102	1 kohm	
R...	160	57.11.3102	1 kohm	
R...	161	57.11.3102	1 kohm	
R...	162	57.11.3102	1 kohm	
R...	163	57.11.3102	1 kohm	
R...	164	57.11.3102	1 kohm	
R...	165	57.11.3102	1 kohm	
R...	166	57.92.1121	15 Ohm	PTC
W...	1	57.11.3000	0 Ohm	Wiring bridge
W...	2	57.11.3000	0 Ohm	Wiring bridge
W...	3	57.11.3000	0 Ohm	Wiring bridge
W...	4	57.11.3000	0 Ohm	Wiring bridge
W...	5	57.11.3000	0 Ohm	Wiring bridge
W...	6	57.11.3000	0 Ohm	Wiring bridge
W...	7	57.11.3000	0 Ohm	Wiring bridge
W...	8	57.11.3000	0 Ohm	Wiring bridge
W...	9	57.11.3000	0 Ohm	Wiring bridge
W...	10	57.11.3000	0 Ohm	Wiring bridge
W...	11	57.11.3000	0 Ohm	Wiring bridge
W...	12	57.11.3000	0 Ohm	Wiring bridge
W...	13	57.11.3000	0 Ohm	Wiring bridge

EL=Electrolytic, PE=Polyester, SAL=Solid AluminiumLacquered

MANUFACTURER: CI=General Instruments, PH=Philips, NS=National, Samicom
 Sie=Siemens, St=Studer, TI=Texas Instrument, Ya=Yamaichi
 1.918.089.00 FEED THROUGH BOARD AB 90/11/1400

Section 9 Floppy Controller, HDLC - and HOST Processor

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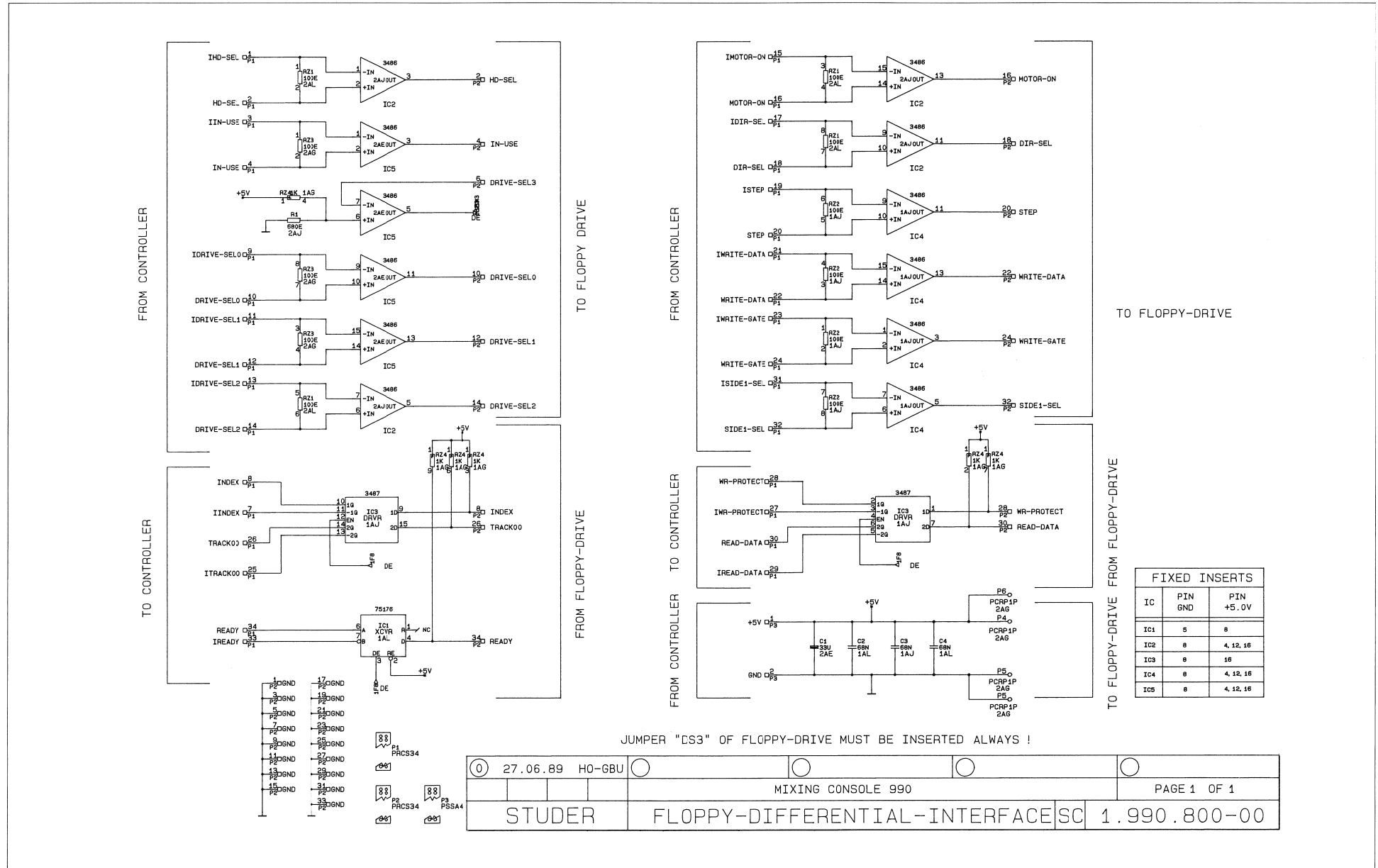
Floppy-Differential-Interface.....		1.990.800.00
Floppy Disk Unit		1.990.800.00
VME-Motherboard		1.990.920.00
System Panel.....		1.990.921.00
User Mother Board.....		1.990.922.00
VME Mother Board (MKII)		1.990.923.00
User Mother Board (MKII)		1.990.924.00
512K Sram-Module.....		1.990.931.00
CPU 68000/VME-Bus Drivers	1 of 12	1.990.932.21
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HDLC Controller/CPU + Supply	1 of 15	1.990.940.20
DMA.....	2 of 15	1.990.940.20
Power on/Reset/Clock	3 of 15	1.990.940.20
Address Decoder	4 of 15	1.990.940.20
DTACK Generator	5 of 15	1.990.940.20
System EPROM.....	6 of 15	1.990.940.20

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SRAM Socket	7 of 15.....	1.990.940.20
Interrupt Handling.....	8 of 15.....	1.990.940.20
Dual Port RAM.....	9 of 15.....	1.990.940.20
Dual Port RAM.....	10 of 15.....	1.990.940.20
High-Level Serial Comm. Controller	11 of 15.....	1.990.940.20
HDLC Master Driver	12 of 15.....	1.990.940.20
PIT	13 of 15.....	1.990.940.20
ACIA.....	14 of 15.....	1.990.940.20
Interrupt Generator.....	15 of 15.....	1.990.940.20
HDLC Controller.....		1.990.940.20
PLCC 44-Wrap Adapter		1.990.941.00
Arcnet Controller.....		1.990.945.00
HOST Processor MKII.....		1.990.950.20
HOST Adapter.....	1 of 4.....	1.990.951.00
HOST Adapter.....	2 of 4.....	1.990.951.00
HOST Adapter.....	3 of 4.....	1.990.951.00
HOST Adapter.....	4 of 4.....	1.990.951.00
HOST Piggy Back.....		1.990.952.00
Display Board.....		1.990.953.00
Disc Controller	1 of 4.....	1.990.955.20
Disc Controller	2 of 4.....	1.990.955.20
Disc Controller	3 of 4.....	1.990.955.20
Disc Controller	4 of 4.....	1.990.955.20
HDLC Controller.....		1.990.960.20
Arcnet Controller MKII		1.990.965.00
Time Code Interface	1 of 5.....	1.990.967.20
Time Code Interface	2 of 5.....	1.990.967.20
Time Code Interface	3 of 5.....	1.990.967.20
Time Code Interface	4 of 5.....	1.990.967.20
Time Code Interface	5 of 5.....	1.990.967.20

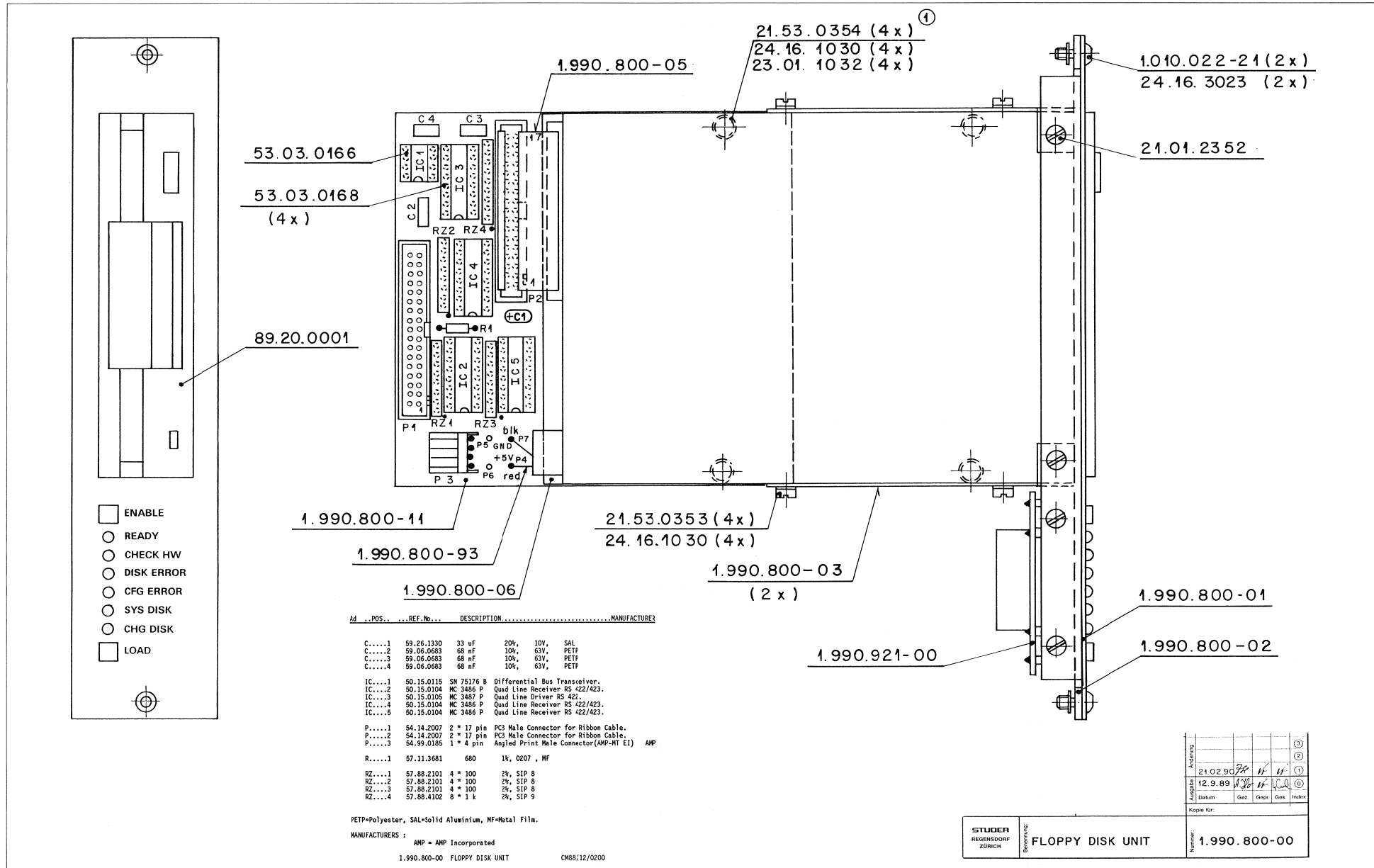
FLOPPY-DIFFERENTIAL-INTERFACE

1.990.800.00



FLOPPY DISK UNIT

1.990.800.00



- ENABLE
- READY
- CHECK HW
- DISK ERROR
- CFG ERROR
- SYS DISK
- CHG DISK
- LOAD

POS. REF. No. DESCRIPTION MANUFACTURER

C....1	59.26.1330	33 uF	20%	10V,	SAL
C....2	59.06.0683	68 nF	10%	63V,	PETP
C....3	59.06.0683	68 nF	10%	63V,	PETP
C....4	59.06.0683	68 nF	10%	63V,	PETP
IC....1	50.15.0115	SN 75176 B			Differential Bus Transceiver.
IC....2	50.15.0104	MC 3486 P			Quad Line Receiver RS 422/423.
IC....3	50.15.0105	MC 3487 P			Quad Line Driver RS 422.
IC....4	50.15.0104	MC 3486 P			Quad Line Receiver RS 422/423.
IC....5	50.15.0104	MC 3486 P			Quad Line Receiver RS 422/423.
P....1	54.14.2007	2 * 17 pin			PC3 Male Connector for Ribbon Cable.
P....2	54.14.2007	2 * 17 pin			PC3 Male Connector for Ribbon Cable.
P....3	54.99.0185	1 * 4 pin			Angled Print Male Connector(AMP-MT E1) AMP
R....1	57.11.3681	680	1%	0207 ,	MF
RZ....1	57.88.2101	4 * 100	2%	SIP 8	
RZ....2	57.88.2101	4 * 100	2%	SIP 8	
RZ....3	57.88.2101	4 * 100	2%	SIP 8	
RZ....4	57.88.4102	8 * 1 k	2%	SIP 9	

PETP=Polyester, SAL=Solid Aluminium, MF=Metal Film.

MANUFACTURERS :

AMP = AMP Incorporated

1.990.800-00 FLOPPY DISK UNIT

CM88/12/0200

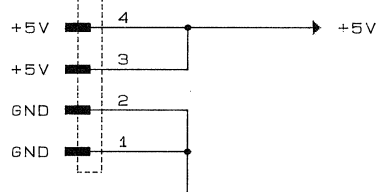
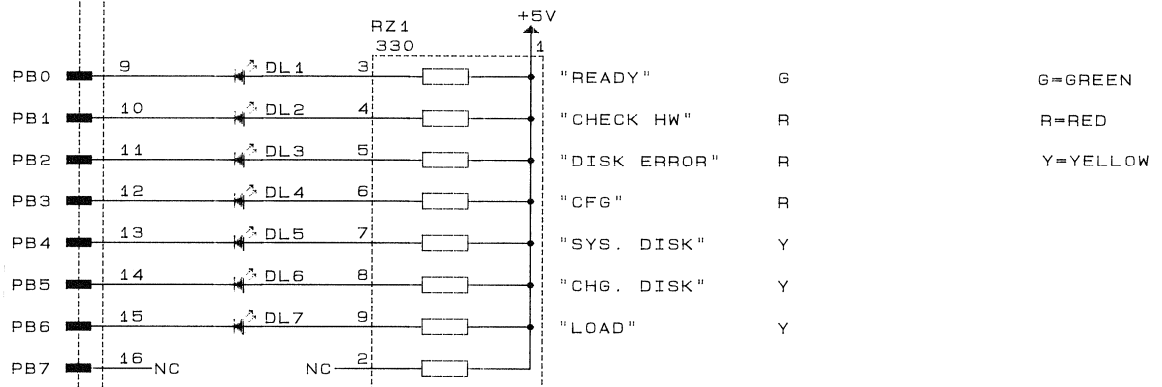
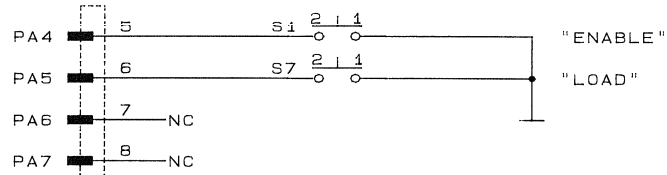
Number	Revision	Index
21.02.90	1	1
12.9.89	1	1

STUDER REGENSDORF ZÜRICH	Produkt FLOPPY DISK UNIT	Number 1.990.800-00
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SYSTEM PANEL

1.990.921.00

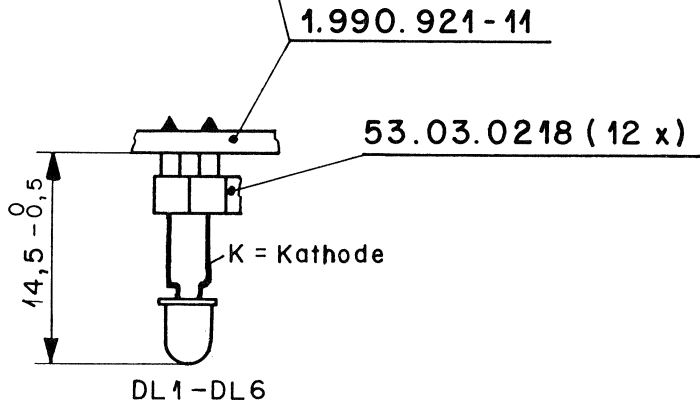
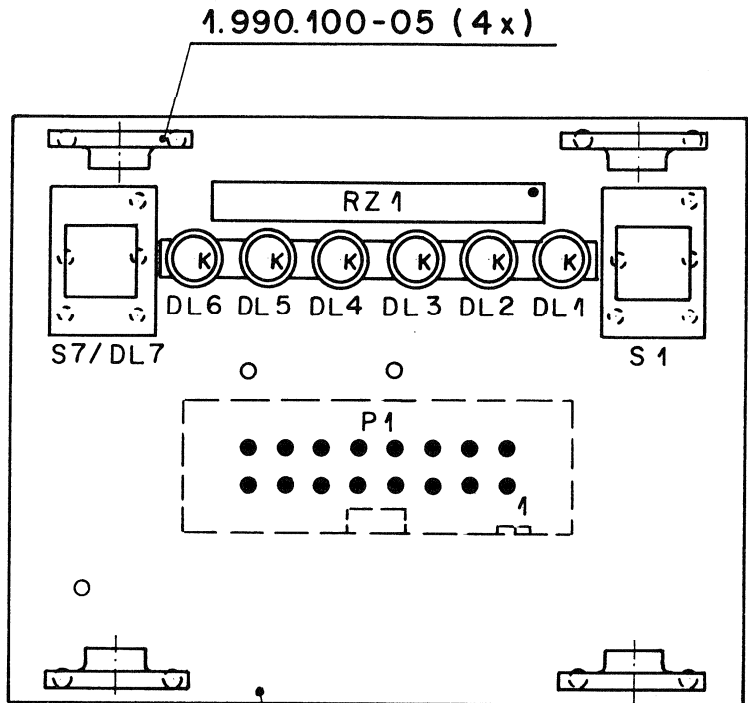
P1 (16 POL.)



8.6.89 RP/CHE				
MIXING CONSOLE 990			PAGE 1 OF 1	
STUDER	SYSTEM PANEL		SC	1.990.921.00

SYSTEM PANEL

1.990.921.00



Ad ..POS... REF.No... DESCRIPTION.....MANUFACTURER

Ad	POS	REF.No	DESCRIPTION	MANUFACTURER
DL....1	50.04.2131	LG 3360-K	LED, Diffused green	Sie
DL....2	50.04.2129	LS 3360-K	LED, Diffused red	Sie
DL....3	50.04.2129	LS 3360-K	LED, Diffused red	Sie
DL....4	50.04.2129	LS 3360-K	LED, Diffused red	Sie
DL....5	50.04.2130	LY 3360-K	LED, Diffused yellow	Sie
DL....6	50.04.2130	LY 3360-K	LED, Diffused yellow	Sie
DL....7	.	.	see Note	

P....1	54.14.2002	2 * 8 pins	Male PCB-Connector for Ribbon Cable	
RZ....1	57.88.4331	8 * 330	Resistor Network, 2%, SIP9	
S....1	55.15.0604	1 * A	Momentary Key Switch, wht. cap/yel. LED	ddm
S....7	55.15.0604	1 * A	Momentary Key Switch, wht. cap/yel. LED	ddm

Note: LED DL1 to DL6 are plugged into one row female header #53.03.0218 (1 * 12 pcs.)
LED DL7 is part of S7 device.

MANUFACTURERS :
ddm = Hopt + Schuler
Sie = Siemens

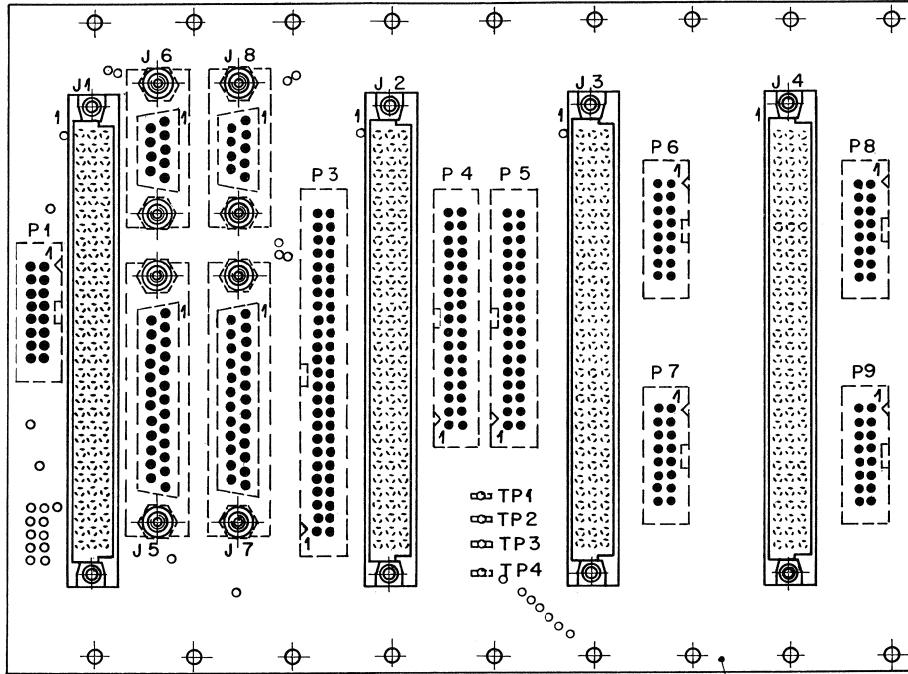
1.990.921-00 SYSTEM PANEL

CM89/07/0400

© 29.11.89				
STUDER RECHENUNGS ZÜRICH	SYSTEM PANEL	1.990.921-00		

USER MOTHER BOARD

1.990.922.00

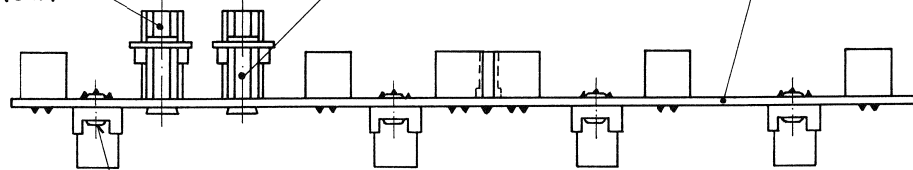


Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
J.....1	54.11.2024	3*32 pins	Straight Female Eurocard-Connector	
J.....2	54.11.2024	3*32 pins	Straight Female Eurocard-Connector	
J.....3	54.11.2024	3*32 pins	Straight Female Eurocard-Connector	
J.....4	54.11.2024	3*32 pins	Straight Female Eurocard-Connector	
J.....5	54.13.0023	25 pins	Straight PCB D-Type Female Connector	
J.....6	54.13.0021	9 pins	Straight PCB D-Type Female Connector	
J.....7	54.13.0023	25 pins	Straight PCB D-Type Female Connector	
J.....8	54.13.0021	9 pins	Straight PCB D-Type Female Connector	
P.....1	54.14.2002	2*8 pins	Straight PCB Male Connector for Ribbon Cable	
P.....2			Not tipped	
P.....3	54.14.2005	2*25 pins	Straight PCB Male Connector for Ribbon Cable	
P.....4	54.14.2007	2*17 pins	Straight PCB Male Connector for Ribbon Cable	
P.....5	54.14.2007	2*17 pins	Straight PCB Male Connector for Ribbon Cable	
P.....6	54.14.2002	2*8 pins	Straight PCB Male Connector for Ribbon Cable	
P.....7	54.14.2002	2*8 pins	Straight PCB Male Connector for Ribbon Cable	
P.....8	54.14.2002	2*8 pins	Straight PCB Male Connector for Ribbon Cable	
P.....9	54.14.2002	2*8 pins	Straight PCB Male Connector for Ribbon Cable	
TP....1	54.02.0320	2.8 * 0.8	Straight PCB Faston-Connector	
TP....2	54.02.0320	2.8 * 0.8	Straight PCB Faston-Connector	
TP....3	54.02.0320	2.8 * 0.8	Straight PCB Faston-Connector	
TP....4	54.02.0320	2.8 * 0.8	Straight PCB Faston-Connector	
1.990.922-00 PROCESSOR & DISC MOTHERBOARD RP89/05/2900				

1.010.035 - 54 (8 x)
24.16.1030 (8 x)

1.010.055 - 22 (8 x)

1.990.922-11



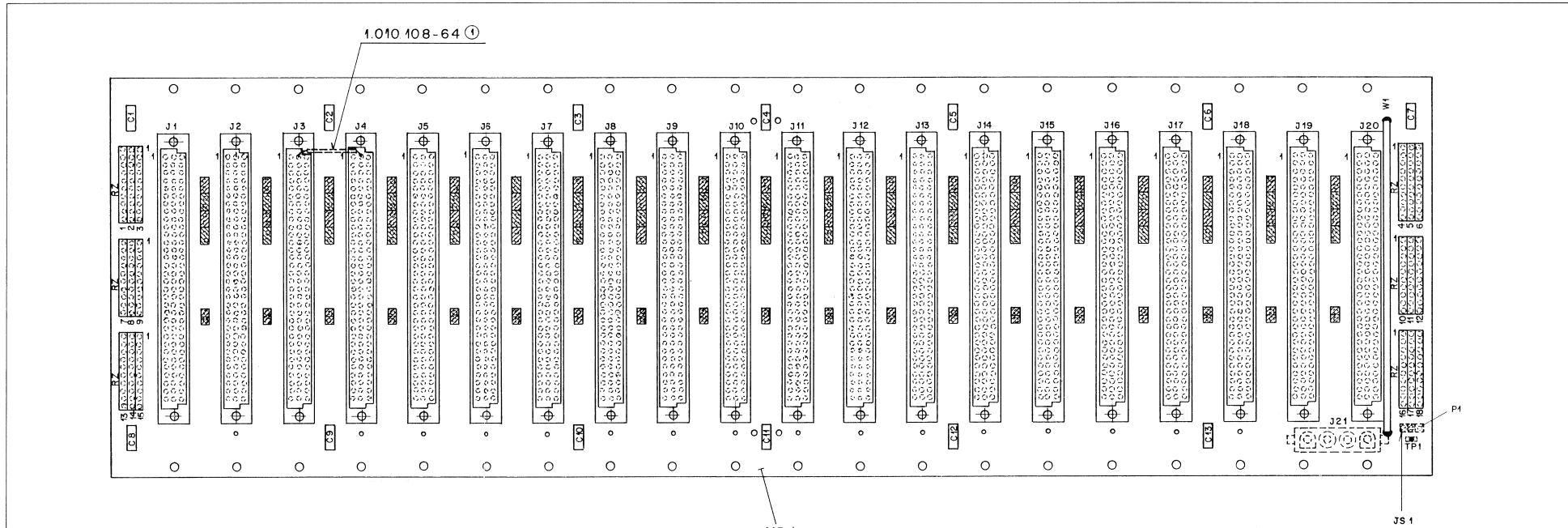
28.21.1380 (8 x)

Author					
Revision					
Date	8.3.90				
Drawn					
Checked					
Index					

STUDER REGENSDORF ZÜRICH	Benennung: USER MOTHER BOARD	Nummer: 1.990.922-00
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VME MOTHER BOARD (MKII)

1.990.923.00

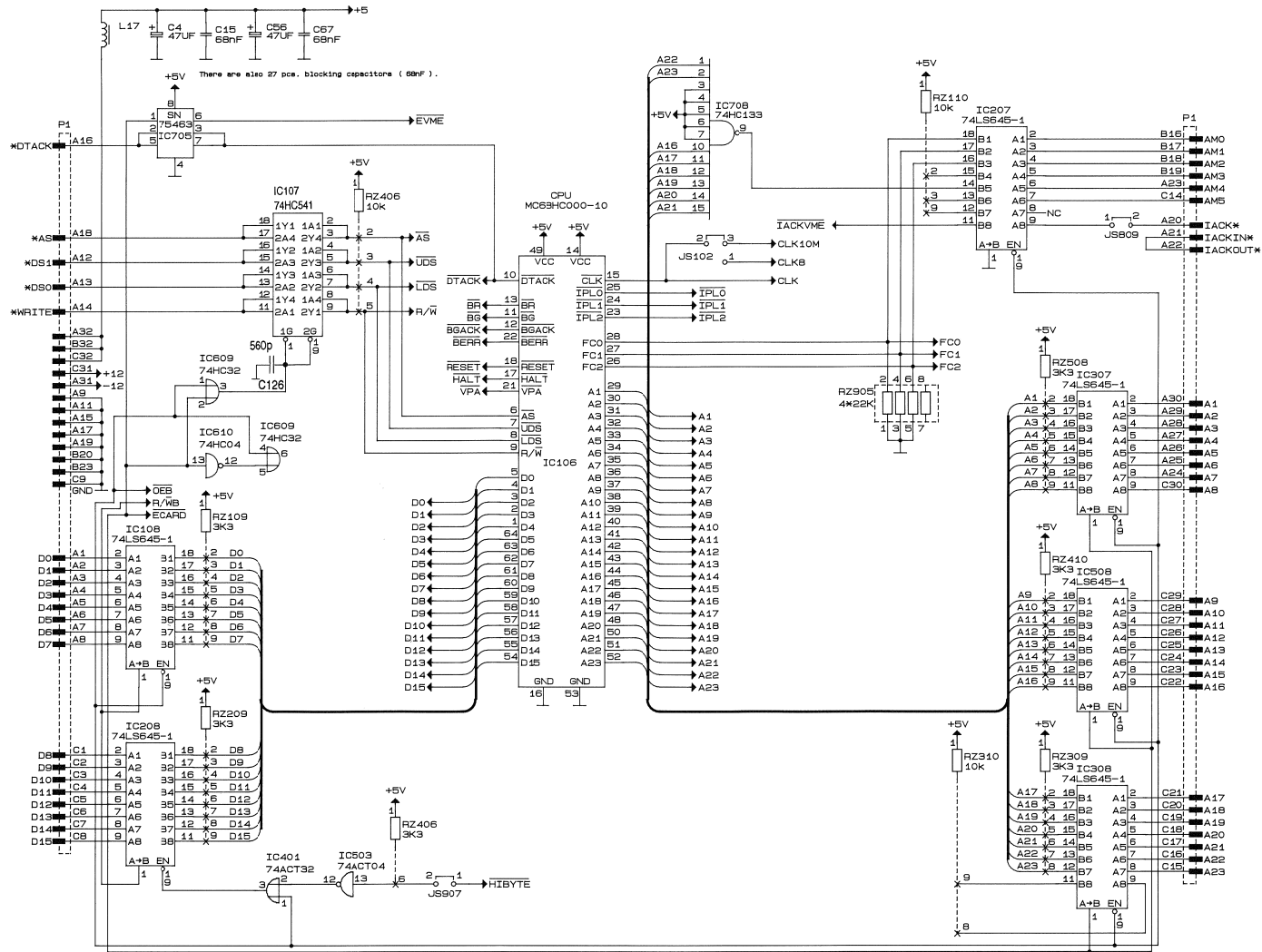


Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
C....1		59.06.0104	.1 U 10%, 63V, PETP		RZ...1	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....2		59.06.0104	.1 U 10%, 63V, PETP		RZ...2	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....3		59.06.0104	.1 U 10%, 63V, PETP		RZ...3	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....4		59.06.0104	.1 U 10%, 63V, PETP		RZ...4	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....5		59.06.0104	.1 U 10%, 63V, PETP		RZ...5	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....6		59.06.0104	.1 U 10%, 63V, PETP		RZ...6	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....7		59.06.0104	.1 U 10%, 63V, PETP		RZ...7	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....8		59.06.0104	.1 U 10%, 63V, PETP		RZ...8	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....9		59.06.0104	.1 U 10%, 63V, PETP		RZ...9	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....10		59.06.0104	.1 U 10%, 63V, PETP		RZ...10	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....11		59.06.0104	.1 U 10%, 63V, PETP		RZ...11	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....12		59.06.0104	.1 U 10%, 63V, PETP		RZ...12	57.80.4001	330/470	Network, 16%, 2%, SIP10	
C....13		59.06.0104	.1 U 10%, 63V, PETP		RZ...13	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....1		54.11.2011	EURO 3 * 32, TYP C, PRINT		RZ...14	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....2		54.11.2011	EURO 3 * 32, TYP C, PRINT		RZ...15	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....3		54.11.2011	EURO 3 * 32, TYP C, PRINT		RZ...16	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....4		54.11.2011	EURO 3 * 32, TYP C, PRINT		RZ...17	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....5		54.11.2011	EURO 3 * 32, TYP C, PRINT		RZ...18	57.80.4001	330/470	Network, 16%, 2%, SIP10	
J....6		54.11.2011	EURO 3 * 32, TYP C, PRINT		TP....1	54.02.0320	2.8 * 0.8	Straight PCB Faston-Connector	
J....7		54.11.2011	EURO 3 * 32, TYP C, PRINT		W....1	1.617.175.02		Ground Bridge	St
J....8		54.11.2011	EURO 3 * 32, TYP C, PRINT		Manufacturer: St = Studer				
J....9		54.11.2011	EURO 3 * 32, TYP C, PRINT		1.990.923.00 VME MOTHERBOARD MK2 HUB92/07/1500				
J....10		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....11		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....12		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....13		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....14		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....15		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....16		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....17		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....18		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....19		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....20		54.11.2011	EURO 3 * 32, TYP C, PRINT						
J....21		54.25.0004	1*4 pins PCB Female Power-Connector						
JS....1			0 not used Jumpers see MP3						
MP....1		1.617.175.12	VME MOTHER PCB						
MP....2		1.990.923.04	NR-ETIKETTE 5 * 20						
MP....3		54.01.0021	96 pcs Jumper						
MP....4		54.01.0020	193 pcs Pin						
P....1			0 not used Pins see MP4						

STUDER REGENSCHOPF ZÜRICH		Benennung: VME Mother Board MK II.		1.990.923-00	
Abgabedatum	11.9.92	Gez.	Re	15	③
Datum	15.7.92	Gez.	Re	15	①
Kopie für:					
Nummer					

CPU 68000 CPU / VME-BUS DRIVERS

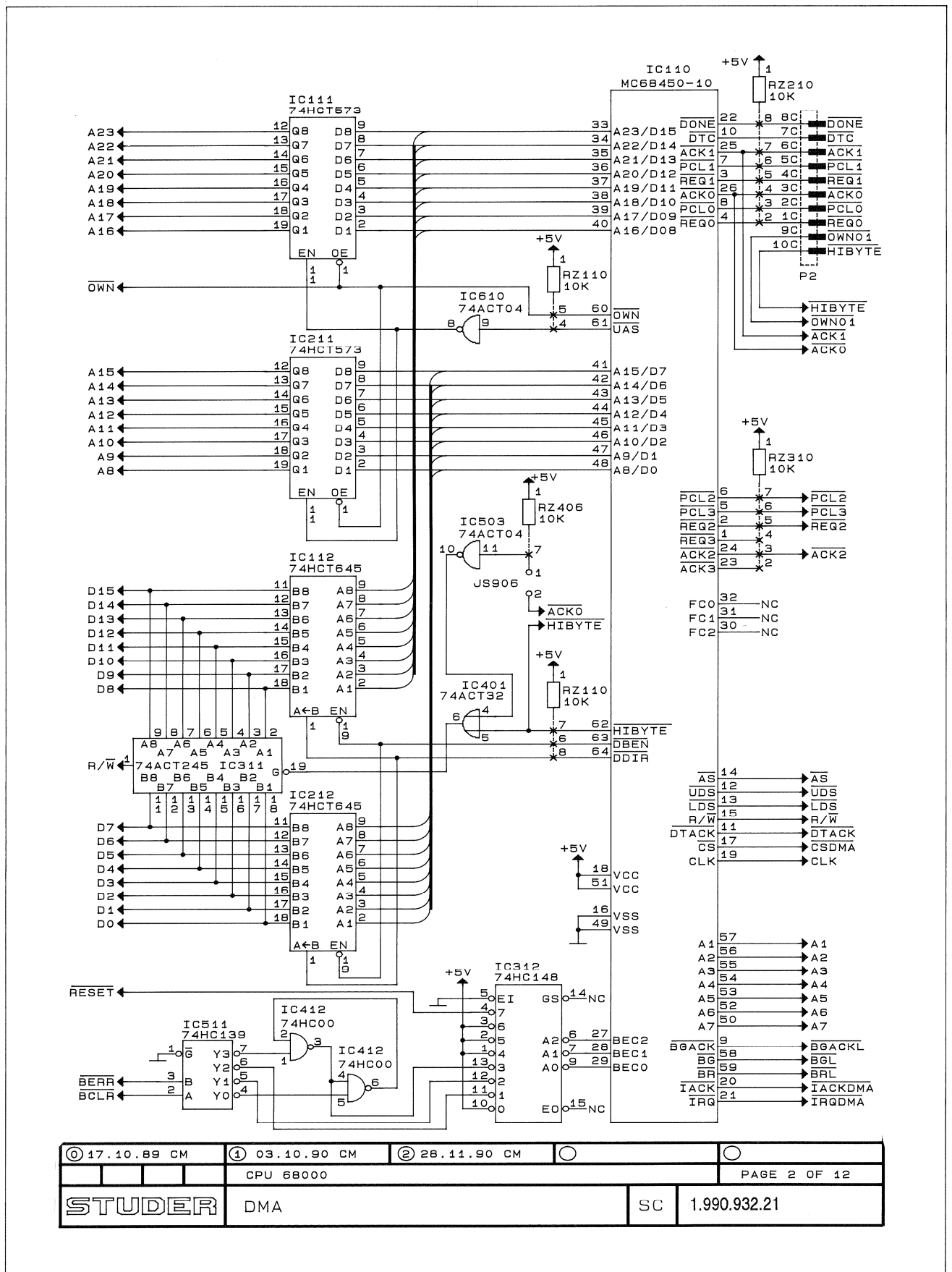
1.990.932.21



© 17.10.89 CM	① 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 1 OF 12	
STUDER		CPU/VME-BUS DRIVERS		SC 1.990.932.21

CPU 68000 DMA

1.990.932.21

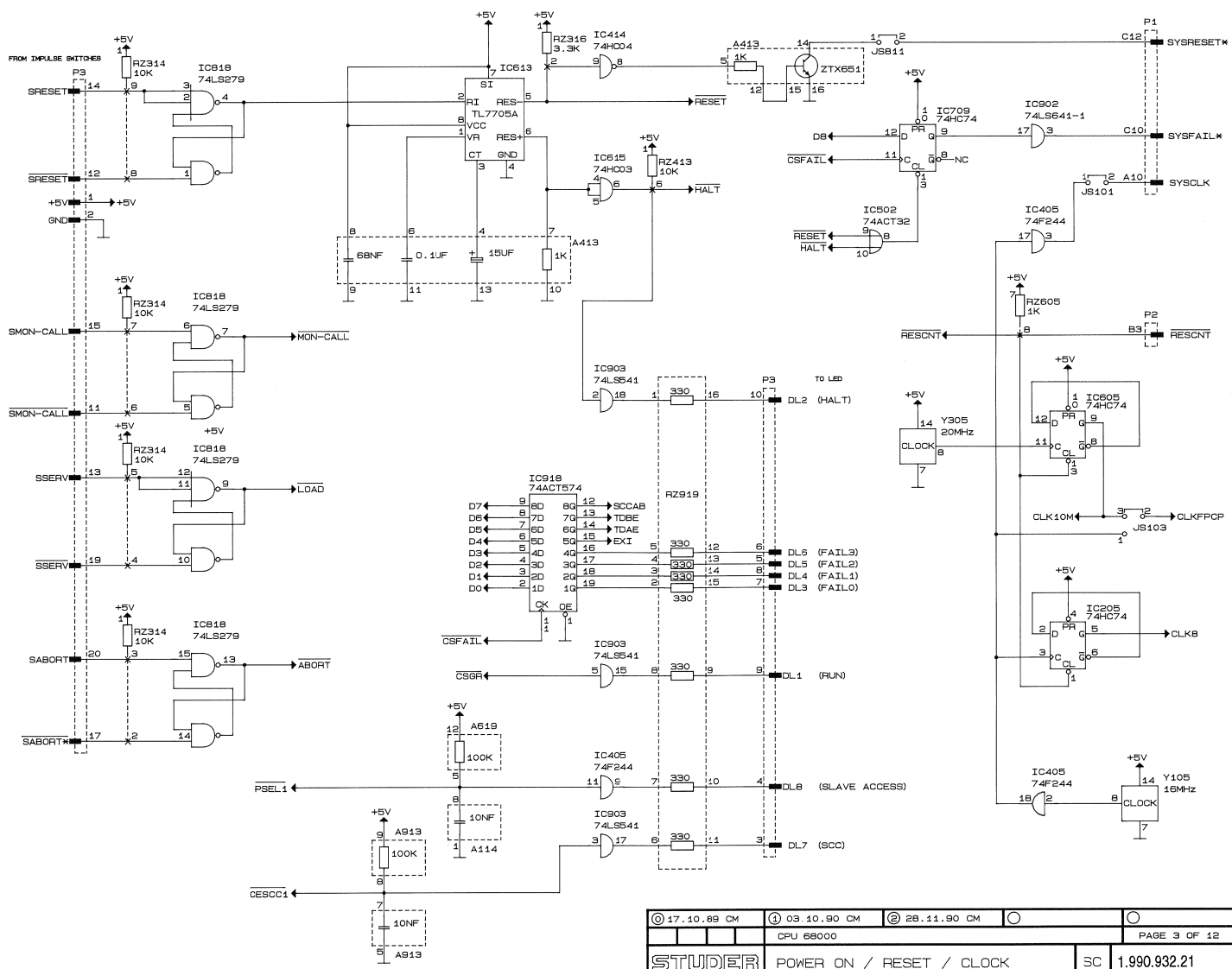


① 17.10.89 CM	④ 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000				PAGE 2 OF 12
STUDER DMA		SC	1.990.932.21	

CPU 68000 POWER ON / RESET / CLOCK



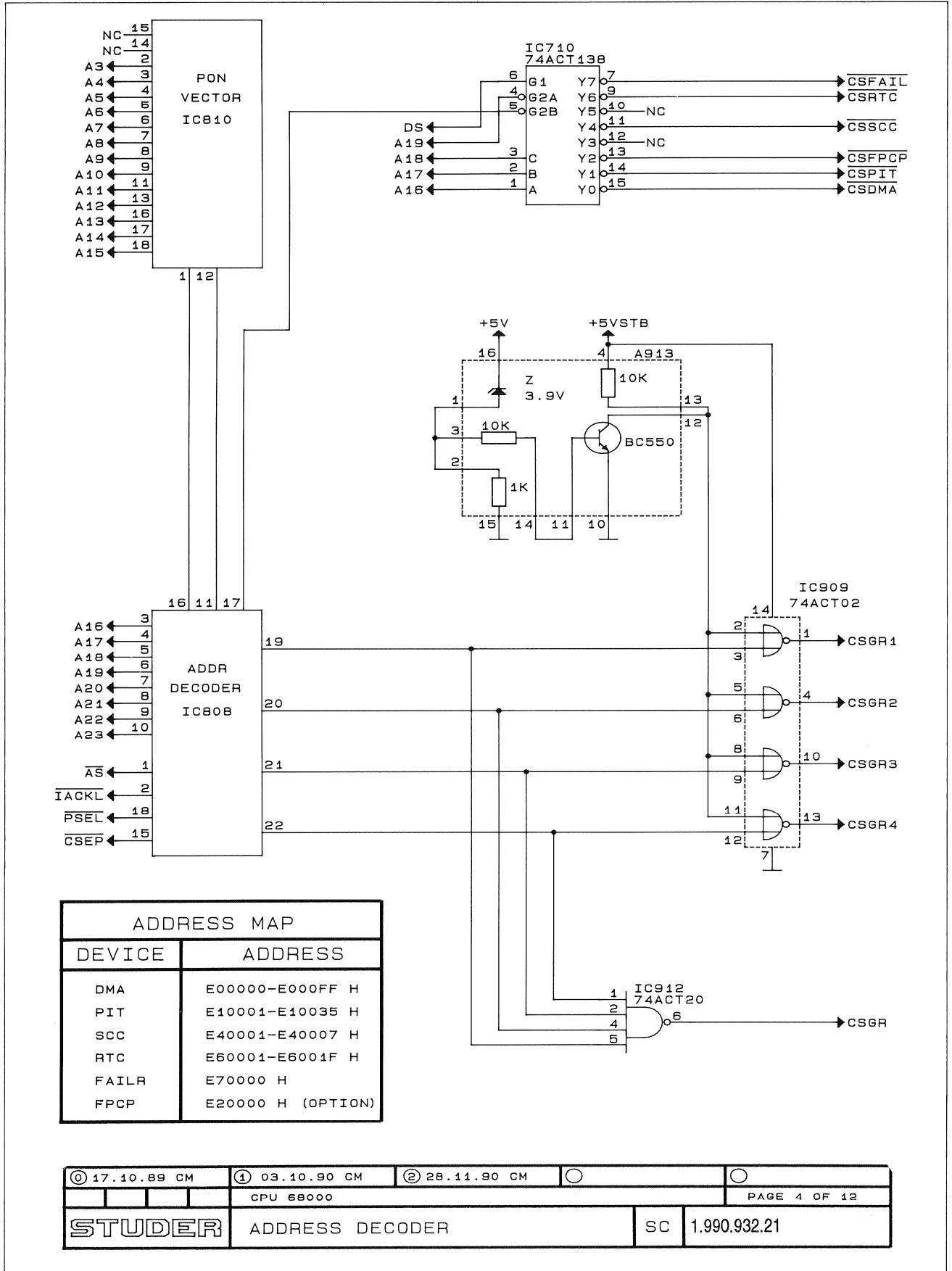
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① 17.10.89 CM	④ 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 3 OF 12	
STUDER POWER ON / RESET / CLOCK			SC	1.990.932.21

CPU 68000 ADDRESS DECODER

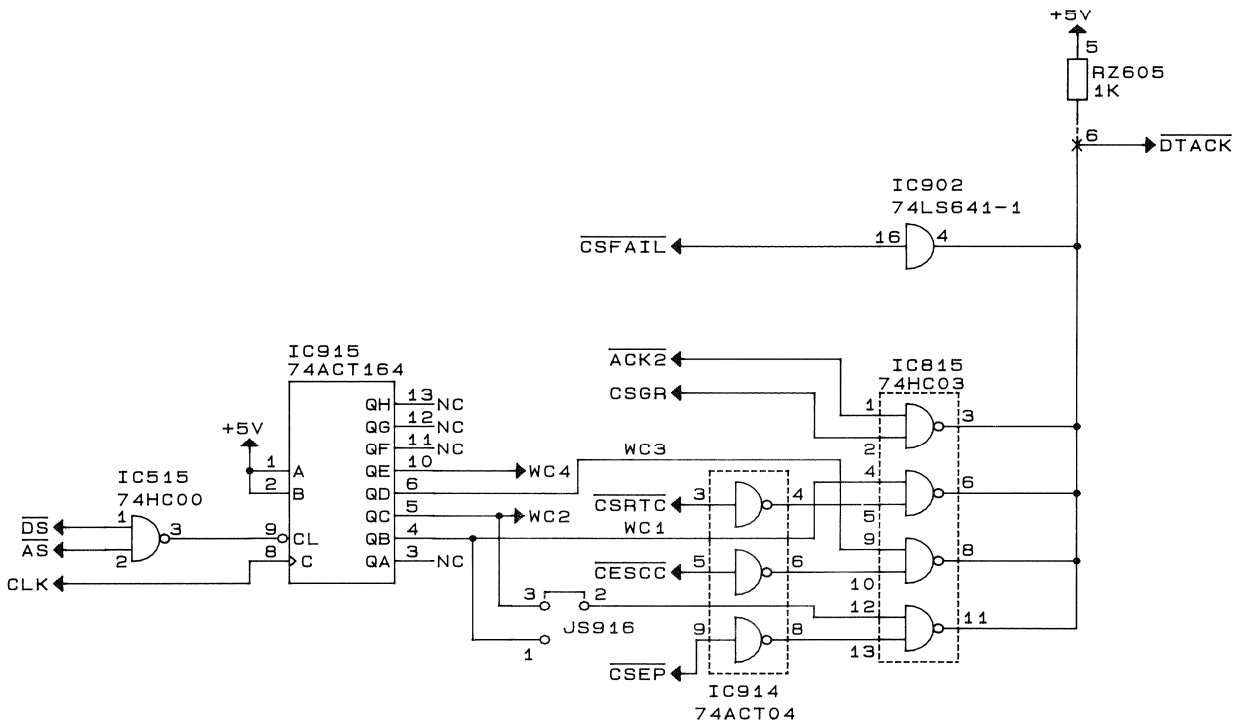
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CPU 68000 DTACK GENERATOR



1.990.932.21



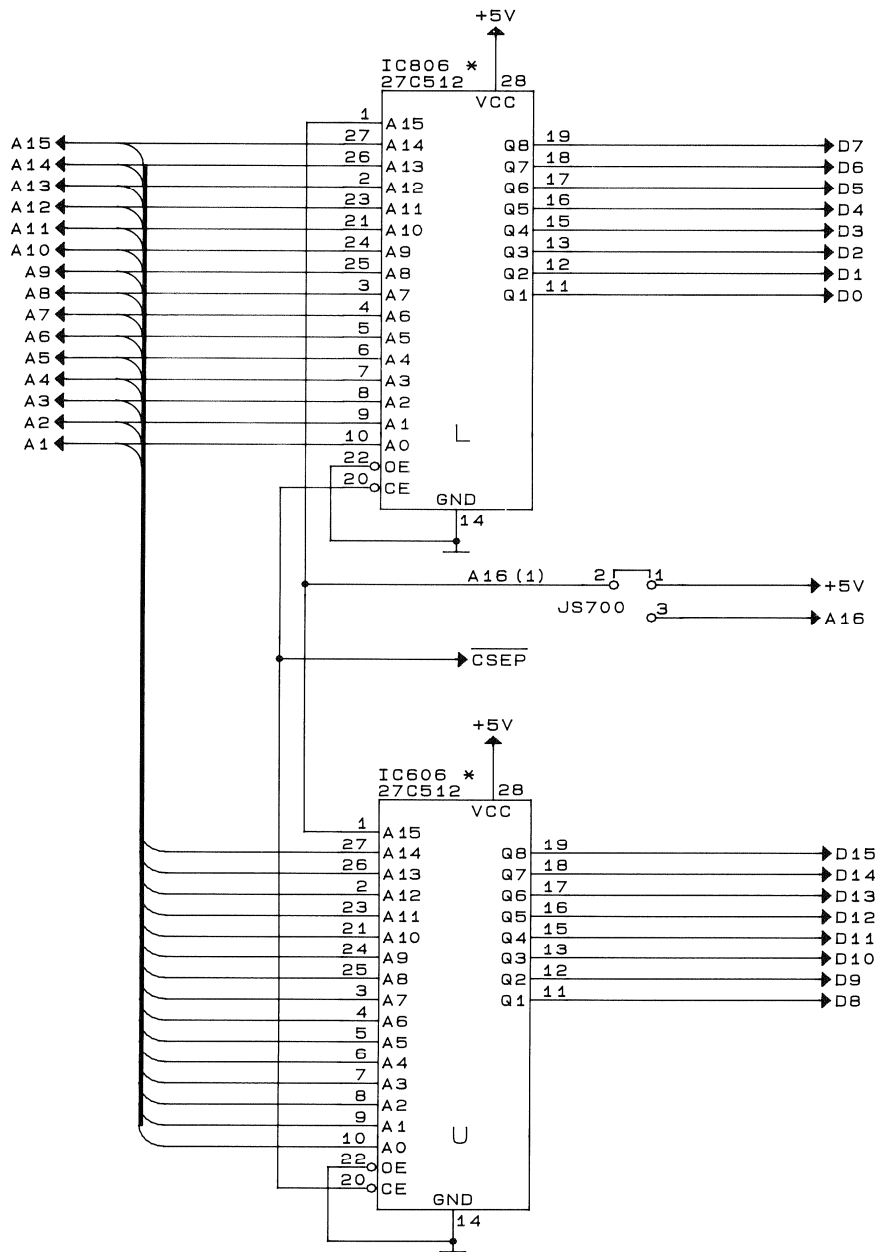
① 17.10.89 CM	④ 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 5 OF 12	
STUDER	DTACK GENERATOR	SC	1.990.932.21	

CPU 68000 SYSTEM EPROM



1.990.932.21

EPROM TACC < 250ns

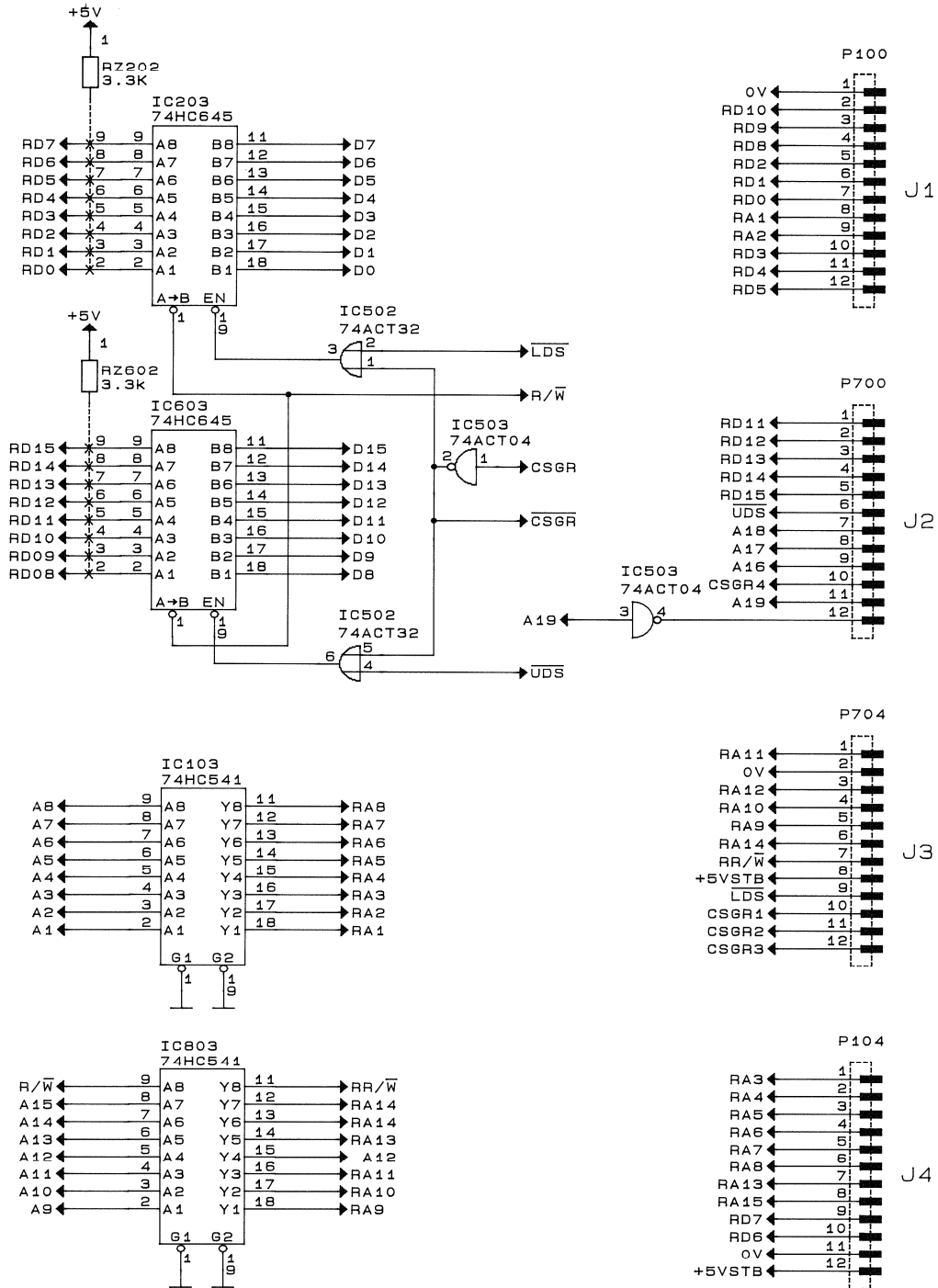


* see STUDER SW No.

① 17.10.89 CM	① 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 6 OF 12	
STUDER SYSTEM EPROM		SC	1.990.932.21	

CPU 68000 SRAM SOCKET

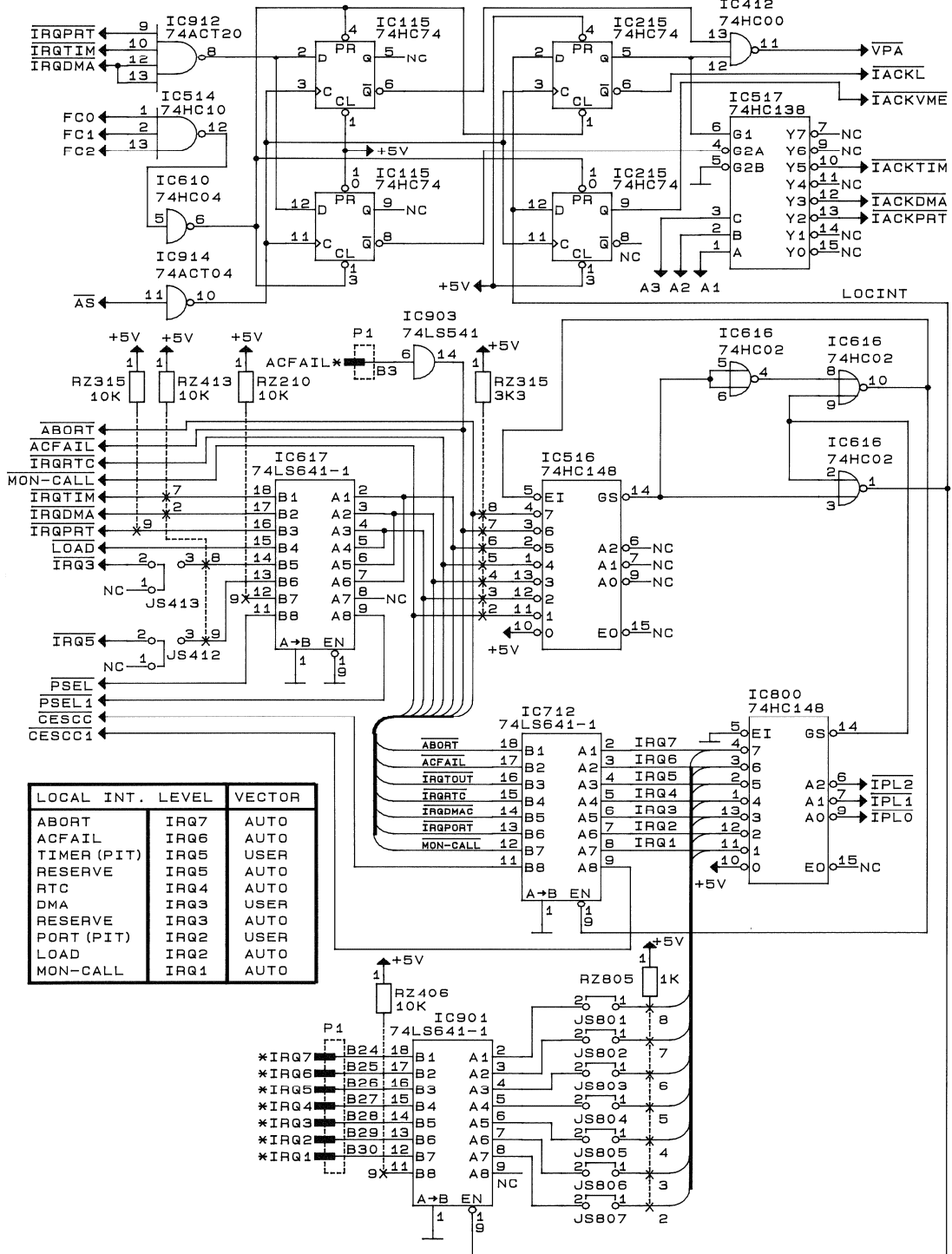
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© 17.10.89 CM	④ 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 7 OF 12	
STUDER SRAM SOCKET		SC	1.990.932.21	

CPU 68000 INTERRUPT HANDLING

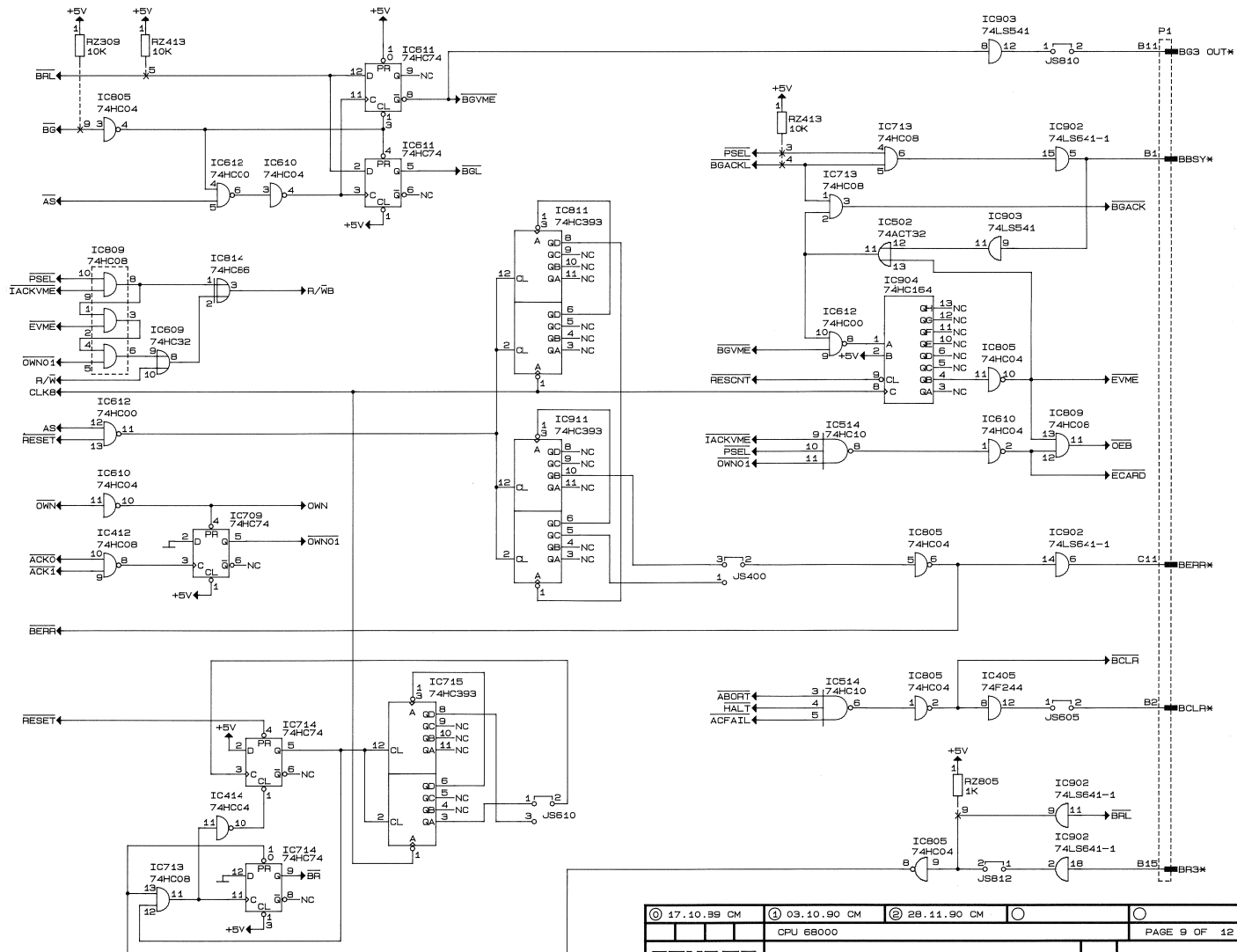
1.990.932.21



© 17.10.89 CM	① 03.10.90 CM	② 28.11.90 CM	○	○
CPU 68000			PAGE 8 OF 12	
STUDER	INTERRUPT HANDLING	SC	1.990.932.21	

CPU 68000 VME-BUS CONTROL / BUS-RELEASE

1.990.932.21

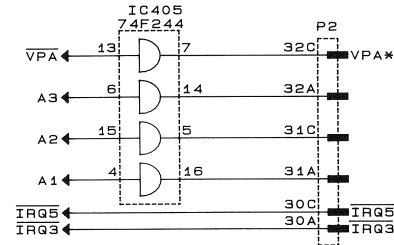


© 17.10.89 CM	© 03.10.90 CM	© 28.11.90 CM	○	○
CPU 68000				
PAGE 9 OF 12				
STUDER	VME-BUS CONTROL / BUS-RELEASE	SC	1.990.932.21	

CPU 68000 SUPPLY CONN. / FPCP SOCKET



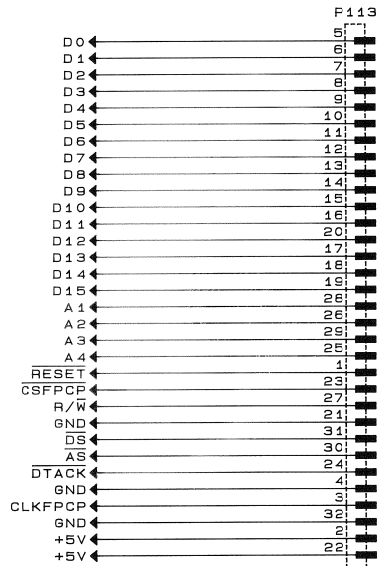
1.990.932.21



SUPPLY CONNECTIONS			
IC NO.	GND PIN	+12V PIN	-12V PIN
719	7	14	1

FIXED INPUT CONNECTIONS			
IC NO.	IC TYPE	to GND PIN	to +5V PIN
113	74ACT541	1.19	8.9
205	74HC74		10.11.12.13
401	74ACT32		9.10.12.13
405	74F244	1.19	
414	74HC04		1.3.5
503	74ACT04		9
511	74HC139		13.14.15
605	74HC74		1.2.3.4
615	74HC03		1.2
616	74HC02		11.12
713	74HC03		9.10
814	74HC85		4.5.12.13
819	MC3485		4.6.7.12
902	74LS641-1	1.19	12.13 (*)
903	74LS541	1.19	
914	74ACT04		13

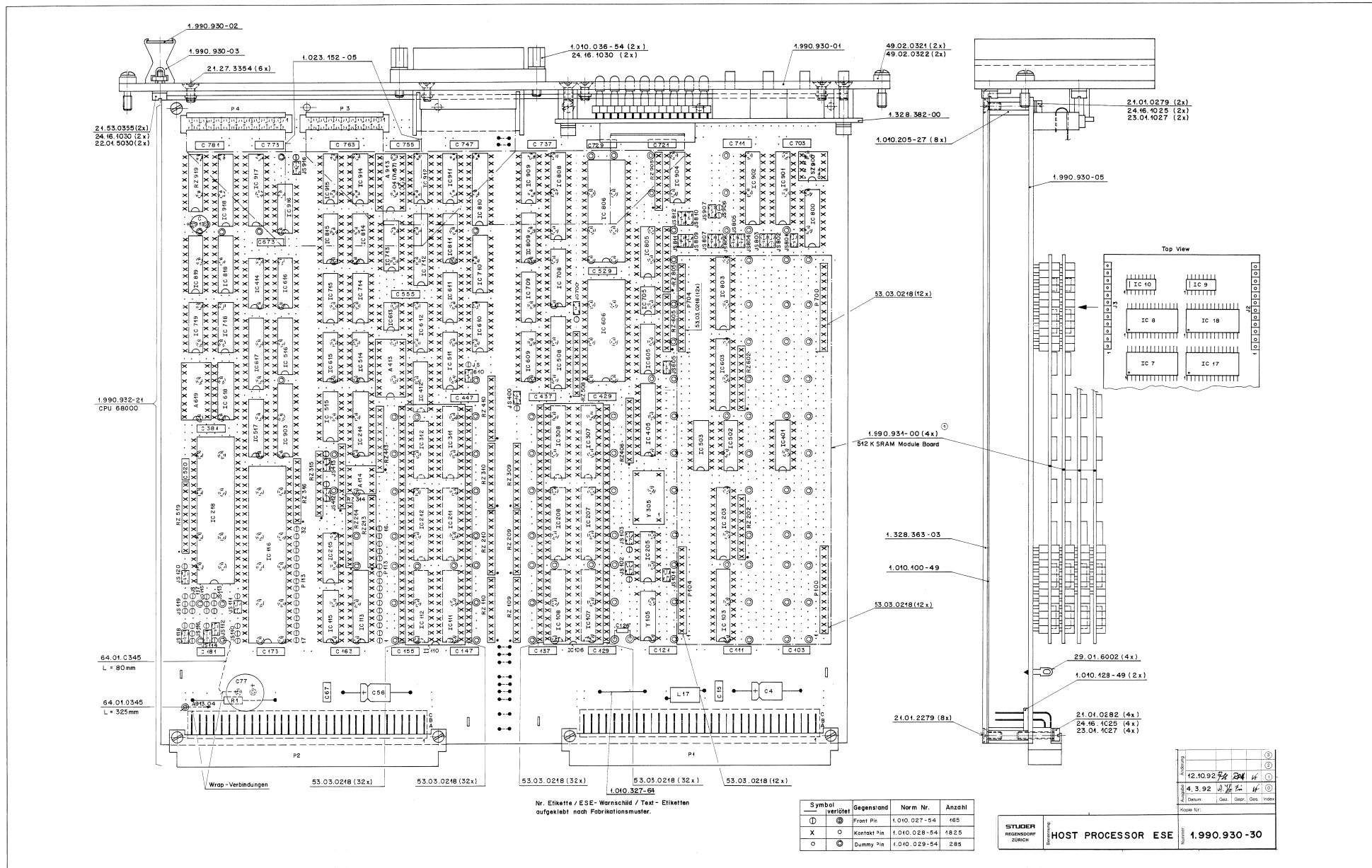
(*): connected to +5V thru R2605/02 (1K).



① 17.10.89 CM	② 03.10.90 CM	③ 28.11.90 CM	○	○
CPU 68000			PAGE 12 OF 12	
STUDER	SUPPLY CONN. / FPCP SOCKET	SC	1.990.932.21	

CPU 68000 HOST PROCESSOR

1.990.930.30





CPU 68000

1.990.932.21

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
A...	114	1.990.896.00	Assembly 930/940 STBY1	St	IC..	615	50.17.1003	74 HC 03 Quad 2-Input NAND Gate	Mot,NS,TI
A...	413	1.990.899.00	Assembly 930 RESET	St	IC..	616	50.17.1002	74 HC 02 Quad 2-Input NOR Gate	Mot,NS,TI
A...	619	1.990.898.00	Assembly 930 SCC	St	IC..	617	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
A...	913	1.990.897.00	Assembly 930/940 STBY2	St	IC..	618	50.15.0105	MC 3487 Quad Line Driver RS422	Mot,NS
C....	4	59.25.3470	47 uF 20%, 16V, EL		IC..	705	50.05.0203	SN 75463 Dual 2-Input OR Driver	NS,TI
C....	15	59.06.0683	68 nF 10%, 63V, PETP		IC..	706	50.17.1133	74 HC 133 13-Input NAND Gate	Mot,TI,NS,To
C....	56	59.25.3470	47 uF 20%, 16V, EL		IC..	707	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI
C....	67	59.06.0683	68 nF 10%, 63V, PETP		IC..	710	50.17.7138	74ACT 138 3-to-8 Line Decoder	RCA
C....	77	59.22.1104	0.1 F 20%, 5.5V, Gold		IC..	712	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
C...103		59.99.1200	68 nF 20%, 63V, PE		IC..	713	50.17.1008	74 HC 08 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA
C...111		59.99.1200	68 nF 20%, 63V, PE		IC..	714	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI
C...121		59.99.1200	68 nF 20%, 63V, PE		IC..	715	50.17.1393	74 HC 393 Dual Binary Counter	Mot,Ph,TI,NS,RCA
C...126		59.34.5561	560 pF 5%, 63V, CER		IC..	718	50.17.1008	74 HC 08 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA
C...129		59.99.1200	68 nF 20%, 63V, PE		IC..	719	50.15.0106	MC 1488 Quad Line Driver RS 232	Mot
C...137		59.99.1200	68 nF 20%, 63V, PE		IC..	800	50.17.1148	74 HC 148 8-to-3 Line Priority Encoder	SGS,TI,To
C...147		59.99.1200	68 nF 20%, 63V, PE		IC..	803	50.17.1541	74 HC 541 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA
C...155		59.99.1200	68 nF 20%, 63V, PE		IC..	805	50.17.1004	74 HC 04 Hex Inverter	Mot,Ph,TI,To,RCA
C...163		59.99.1200	68 nF 20%, 63V, PE		IC..	806		not tipped	St
C...173		59.99.1200	68 nF 20%, 63V, PE		IC..	808	1.990.995.20	GAL ADDR DECODER	St
C...181		59.99.1200	68 nF 20%, 63V, PE		IC..	809	50.17.1008	74 HC 08 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA
C...381		59.99.1200	68 nF 20%, 63V, PE		IC..	810	1.990.994.20	GAL PON VECTOR	St
C...429		59.99.1200	68 nF 20%, 63V, PE		IC..	811	50.17.1393	74 HC 393 Dual Binary Counter	Mot,Ph,TI,NS,RCA
C...437		59.99.1200	68 nF 20%, 63V, PE		IC..	814	50.17.1086	74 HC 86 Quad 2-Input EXOR Gate	Mot,Ph,TI,NS,RCA
C...447		59.99.1200	68 nF 20%, 63V, PE		IC..	815	50.17.1003	74 HC 03 Quad 2-Input NAND Gate	Mot,NS,TI
C...520		59.06.0103	10 nF 10%, 63V, PETP		IC..	818	50.06.0279	74 LS 279 Quad S-R Latch	Nat,TI
C...529		59.99.1200	68 nF 20%, 63V, PE		IC..	819	50.15.0104	MC 3486 Quad Line Receiver RS 422/423	Mot,NS
C...555		59.99.1200	68 nF 20%, 63V, PE		IC..	901	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
C...673		59.99.1200	68 nF 20%, 63V, PE		IC..	902	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
C...703		59.99.1200	68 nF 20%, 63V, PE		IC..	903	50.06.0541	74 LS 541 Octal Buffer/Line Driver	Mot,TI
C...711		59.99.1200	68 nF 20%, 63V, PE		IC..	904	50.17.1164	8 Bit S1/PO Shift Register	Mot,Ph,TI,NS,RCA
C...721		59.99.1200	68 nF 20%, 63V, PE		IC..	909	50.17.7002	74 ACT 02 Quad 2-Input NOR Gate	Fc,RCA
C...729		59.99.1200	68 nF 20%, 63V, PE		IC..	911	50.17.1393	74 HC 393 Dual Binary Counter	Mot,Ph,TI,NS,RCA
C...737		59.99.1200	68 nF 20%, 63V, PE		IC..	912	50.17.7020	74 ACT 20 Dual 4-Input NAND Gate	Fc,RCA
C...747		59.99.1200	68 nF 20%, 63V, PE		IC..	914	50.17.7004	74 ACT 04 Hex Inverter	Fc,RCA
C...755		59.99.1200	68 nF 20%, 63V, PE		IC..	915	50.17.7164	74ACT 164 8 Bit S1/PO Shift Register	Fc,RCA
C...763		59.99.1200	68 nF 20%, 63V, PE		IC..	916	50.17.1020	74 HC 20 Dual 4-Input NAND Gate	Fc,RCA
C...773		59.99.1200	68 nF 20%, 63V, PE		IC..	917	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
C...781		59.99.1200	68 nF 20%, 63V, PE		IC..	918	50.17.7574	74ACT 574 Octal D-Type Flip-Flop	Fc,RCA
C...919		59.22.3470	47 uF 20%, 10V, EL		JS..	101	54.01.0021	see note 1	
IC..103		50.17.1541	74 HC 541 Octal Bus Transceiver	Fc,RCA	JS..	102	54.01.0021	see note 2	
IC..106		50.16.0127	68 HC 000 16 Bit CPU 10 Mhz	Ph,Hi,Mot	JS..	103	54.01.0021	see note 2	
IC..107		50.21.0244	74 F 244 Octal Bus Line Driver	Fc,Sig	JS..	111	54.01.0021	see note 2	
IC..107		50.17.1541	74 HC541 Octal Bus Line Driver	Fc,Sig	JS..	112	54.01.0021	see note 2	
IC..108		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	JS..	113	54.01.0021	see note 2	
IC..110		50.16.0125	DMA 68450 Direct-Memory-Access Controller 10 Mhz	Hi,Mot	JS..	114	54.01.0021	see note 2	
IC..111		50.17.0573	74HCT 573 Octal D-Type Latch	Mot,Ph,TI,NS,RCA	JS..	115	54.01.0021	see note 2	
IC..112		50.17.0645	74HCT 645 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA	JS..	116	54.01.0021	see note 2	
IC..113		50.17.7541	74ACT 541 Octal Bus Transceiver	Fc,RCA	JS..	117	54.01.0021	see note 2	
IC..115		50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI	JS..	400	54.01.0021	see note 2	
IC..116		50.16.0150	PIT 68230 Parallel-Interface Timer 8 Mhz	Ph,To,Mot	JS..	412	54.01.0021	see note 2	
IC..203		50.17.1645	74 HC 645 3-St. Octal Bus Transceiver Noninv.	Fc,RCA	JS..	413	54.01.0021	see note 2	
IC..205		50.17.1074	74 HC 74 Dual D-Type FF w. Preset and Clear	Fc,RCA	JS..	605	54.01.0021	see note 1	
IC..207		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	JS..	610	54.01.0021	see note 2	
IC..208		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	JS..	700	54.01.0021	see note 2	
IC..211		50.17.0573	74HCT 573 Octal D-Type Latch	Mot,Ph,TI,NS,RCA	JS..	801	54.01.0021	see note 1	
IC..212		50.17.0645	74HCT 645 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA	JS..	802	54.01.0021	see note 1	
IC..214		50.16.0200	RTC 62421 Real Time Clock Module	Seiko Epson	JS..	803	54.01.0021	see note 1	
IC..215		50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI	JS..	804	54.01.0021	see note 1	
IC..218		50.16.0151	Z 85C30 Serial Communication Controller 10 Mhz	Zy	JS..	805	54.01.0021	see note 1	
IC..307		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	JS..	806	54.01.0021	see note 1	
IC..308		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	JS..	807	54.01.0021	see note 1	
IC..311		50.17.7245	74ACT 245 Octal Bus Transceiver	Fc,RCA	JS..	808	54.01.0021	see note 1	
IC..312		50.17.1148	74 HC 148 8-to-3 Line Priority Encoder	SGS,TI,To	JS..	810	54.01.0021	see note 1	
IC..401		50.17.7032	74 ACT 32 Quad 2-Input NOR Gate	Fc,RCA	JS..	811	54.01.0021	see note 1	
IC..405		50.21.0244	74 F 244 Octal Bus Line Driver	Fc,Sig	JS..	812	54.01.0021	see note 1	
IC..412		50.17.1000	74 HC 00 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA	JS..	906		see note 7	
IC..414		50.17.1004	74 HC 04 Hex Inverter	Mot,Ph,TI,To,RCA	JS..	907	54.01.0021	see note 1	
IC..502		50.17.7032	74 ACT 32 Quad 2-Input NOR Gate	Fc,RCA	JS..	916	54.01.0021	see note 2	
IC..503		50.17.7004	74 ACT 04 Hex Inverter	Fc,RCA	L....	17	62.01.0115	Wide-Band Choke	
IC..508		50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	P....	1	54.01.0354	3*32 pins Angled Wrap Male Eurocard-Connector	
IC..511		50.17.1139	74 HC 139 Dual 2-to-4 Line Decoder	Mot,Ph,TI,NS,RCA	P....	2	54.01.0354	3*32 pins Angled Wrap Male Eurocard-Connector	
IC..514		50.17.1010	74 HC 10 Triple 3-Input NAND Gate	Mot,Ph,TI,NS,RCA	P....	3		2*10 pins see note 3	
IC..515		50.17.1000	74 HC 00 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA	P....	4		2*13 pins see note 4	
IC..516		50.17.1148	74 HC 148 8-to-3 Line Priority Encoder	SGS,TI,To	P...100			1*12 pins see note 6	
IC..517		50.17.1138	74 HC 138 3-to-8 Line Decoder	Mot,Ph,TI,NS,RCA	P...104			1*12 pins see note 6	
IC..603		50.17.1645	74 HC 645 3-St. Octal Bus Transceiver Noninv.	Fc,RCA	P...113			2*16 pins see note 5	
IC..605		50.17.1074	74 HC 74 Dual D-Type FF w. Preset and Clear	Fc,RCA	P...700			1*12 pins see note 6	
IC..606			not tipped	St	P...704			1*12 pins see note 6	
IC..609		50.17.1032	74 HC 32 Quad 2-Input NOR Gate	Mot,Ph,TI,NS,RCA	R....	1	57.11.3101	100 Ohm Resistor, 0207, 1%, MF	
IC..610		50.17.1004	74 HC 04 Hex Inverter	Mot,Ph,TI,To,RCA	RZ..109		57.88.4332	3.3Kohm Network, 8*R, 2%, SIP9	
IC..611		50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI	RZ..110		57.88.4103	10 Kohm Network, 8*R, 2%, SIP9	
IC..612		50.17.1000	74 HC 00 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA					
IC..613		50.11.0122	TL 7705 Reset Generator	TI					



CPU 68000

1.990.932.21

Ad ..POS.. ..REF.No... DESCRIPTION.....MANUFACTURER

	RZ..202	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..209	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..210	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
01	RZ..213	57.80.4001	330/470	Network 16*R, 2%, SIP10
	RZ..214	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
	RZ..309	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..310	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
	RZ..314	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
02	RZ..315	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..316	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..406	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
	RZ..410	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..413	57.88.4103	10 Kohm	Network, 8*R, 2%, SIP9
	RZ..508	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..519	57.80.4001	330/470	Network 16*R, 2%, SIP10
	RZ..602	57.88.4332	3,3Kohm	Network, 8*R, 2%, SIP9
	RZ..605	57.88.2102	1 Kohm	Network, 4*R, 2%, SIP8
	RZ..805	57.88.4102	1 Kohm	Network, 8*R, 2%, SIP9
	RZ..905	57.88.2223	22 Kohm	Network, 4*R, 2%, SIP8
	RZ..919	57.88.3331	330 Ohm	Network, 8*R, 2%, DIL16
	SZ..900	55.01.0164	4 * A	DIL Switch
	Y...105	89.01.1800	16 MHz	Quarz Oscillator
	Y...305	89.01.1805	20 MHz	Quarz Oscillator

note 1: The jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 2 pcs. Front Pin (# 1.010.027.54).

note 2: The jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 2-of-3 pcs. Front Pin (# 1.010.027.54).

note 3: P3 consists of 2 * 10 pcs. Front Pin (# 1.010.027.54).

note 4: P4 consists of 2 * 13 pcs. Front Pin (# 1.010.027.54).

note 5: P113 consists of 2 * 16 pcs. Front Pin (# 1.010.027.54).

note 6: The SRAM-Module socket consists of 4 * 12 pcs. Socket Strips (# 53.03.0218).

note 7: The jumper consists of 2 pcs. Front Pin (# 1.010.027.54).

note 8: The jumper consists of 3 pcs. Front Pin (# 1.010.027.54).

Each one of devices IC 106 (68HC000) and IC 110 (DMA 68450) is plugged into 2 * 32 pcs. Socket Strips (# 53.03.0218).

Index (01) : Resistor 8 * 1K, SIP9, (# 57.88.4102) is replaced by resistor 8 * 10K, SIP9, (# 57.88.4103).

Index (02) : Resistor 8 * 10K, SIP9, (# 57.88.4103) is replaced by resistor 8 * 3.3K, SIP9, (# 57.88.4332).

Index (21) : IC 107 74F244 is replaced by 74HC541 and C 126, 560 pF added.

EL=Electrolytic, PETP=Polyester, PE=Polyaethylen, MF=Metal Film

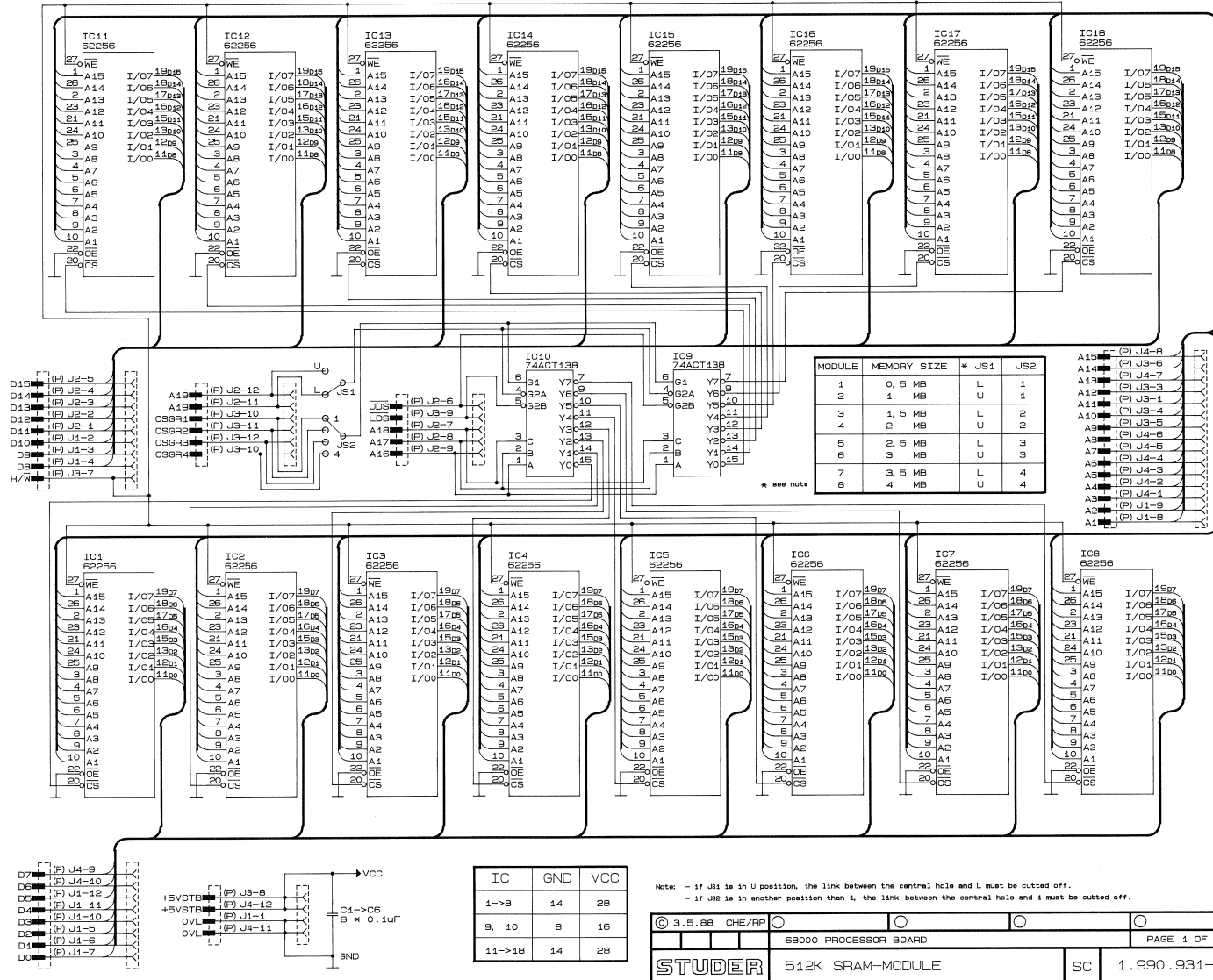
Manufacturers :

- Fc = + Fairchild (at present National Semiconductor)
- Hi = Hitachi
- Mot = Motorola
- NS = National Semiconductors
- Ph = Philips (incl. Valvo)
- RCA = Radio Corporation of America
- SGS = + SGS (at present SGS-Thomson Microelectronics)
- Sig = Signetics (Philips)
- St = Studer (-Revox; -International)
- TI = Texas Instruments
- To = Toshiba
- Zy = Zyllog

1.990.932.20	CPU 68000	CM90/11/2802
1.990.932.21	CPU 68000	CM92/04/0321

512K SRAM-MODULE

1.990.931.00



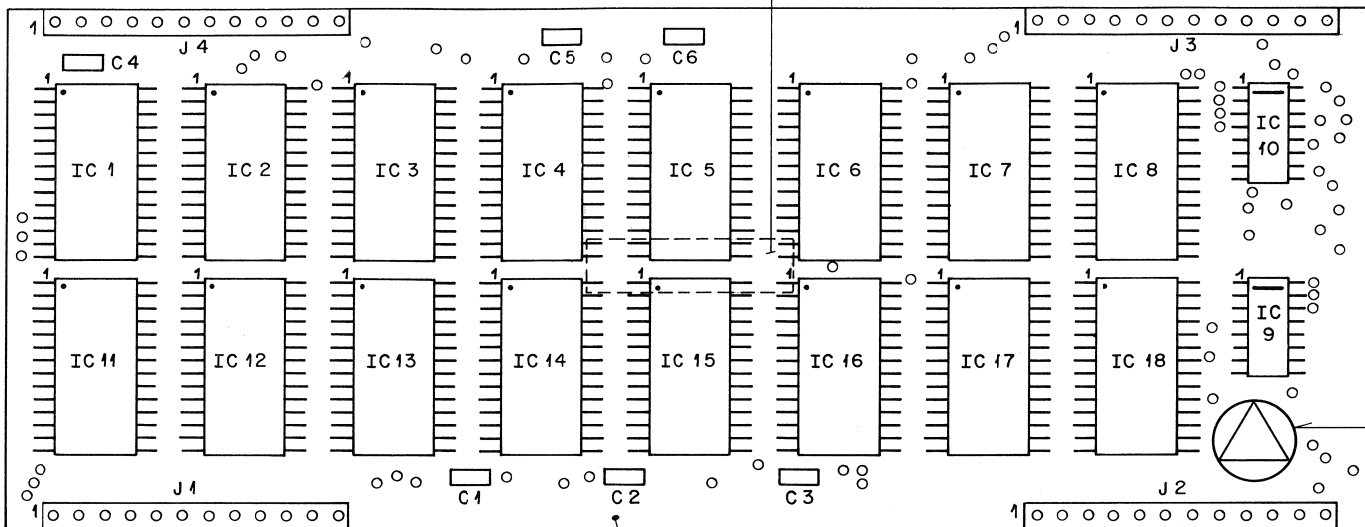
STUDER AUDIO CONSOLE 990

512K SRAM-MODULE BOARD

1.990.931.00



Nr. Schild 1.990.931-04



ESE Schild 43.01.0108

J1+J4 3mm zinnfrei

Ad . . . POS. . . . REF. No. . . . DESCRIPTION MANUFACTURER

Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
C....1	59.60.1104	100 n	10%, X7R, CER	
C....2	59.60.1104	100 n	10%, X7R, CER	
C....3	59.60.1104	100 n	10%, X7R, CER	
C....4	59.60.1104	100 n	10%, X7R, CER	
C....5	59.60.1104	100 n	10%, X7R, CER	
C....6	59.60.1104	100 n	10%, X7R, CER	
IC...1	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...2	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...3	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...4	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...5	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...6	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...7	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...8	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...9	50.62.6138	74 ACT138	SC 3-to-8 Line Decoder.	Ti, NS
IC...10	50.62.6138	74 ACT138	SC 3-to-8 Line Decoder.	Ti, NS
IC...11	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...12	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...13	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...14	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...15	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...16	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...17	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
IC...18	50.63.1503	62256	LFP-10 SRAM, 32 k * 8	Hi, To
J....1	.	.	SEE NOTE 1	
J....2	.	.	SEE NOTE 1	
J....3	.	.	SEE NOTE 1	
J....4	.	.	SEE NOTE 1	

NOTE 1 : J1 ... J4 : 12 PINS ASSEMBLY (SINGLE PIN PART NR. 53.03.0218)

CER=Ceramic.

MANUFACTURERS :
 Hi = Hitachi
 To = Toshiba
 Ti = Texas Instruments
 NS = National Semiconductor

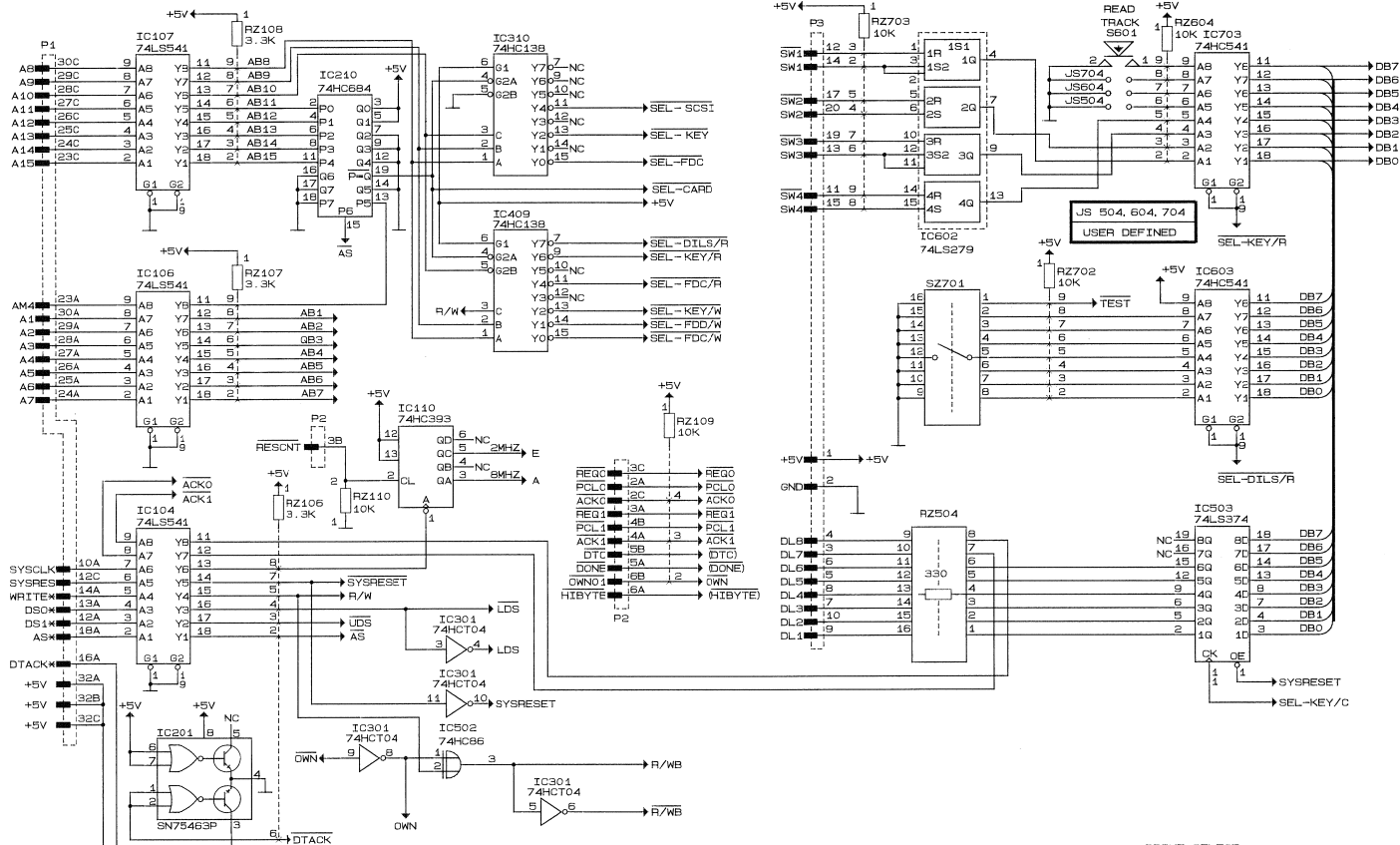
1.990.931-00 512K SRAM-MODULE RP88/05/0500

	512K SRAM-MODULE BOARD	ESE	1.990.931-00
	28 44 894 1/2		

SCSI & FLOPPY CONTROLLER



1.990.935.00



There are also 27 pcs. blocking capacitors (68nF)

DEVICE	ADDRESS	R/W
FDC	FF1B01H-FF1B07H	R/W
FDD	FF1901H	W
KEYB	FF1A01H	R/W
D.L.S	FF1B01H	R
SCSI	FF1C01H-FF1C0FH	R/W

#	ON	OFF	FUNCTION
1	TEST	NORMAL	FDC
2			NOT USED
3	SIDE 1	SIDE 0	READ TR
4	40TR	80TR	DRIVE 3
5	40TR	80TR	DRIVE 2
6	40TR	80TR	DRIVE 1
7	40TR	80TR	DRIVE 0
8	AUTO	BY KEY	LOAD

IC	TYP	↓
304	74HC20	9, 10, 12, 13
401	74HC32	1, 2, 4, 5, 9, 10
502	74HC86	4, 5, 9, 10, 12, 13
605	74HC00	1, 2

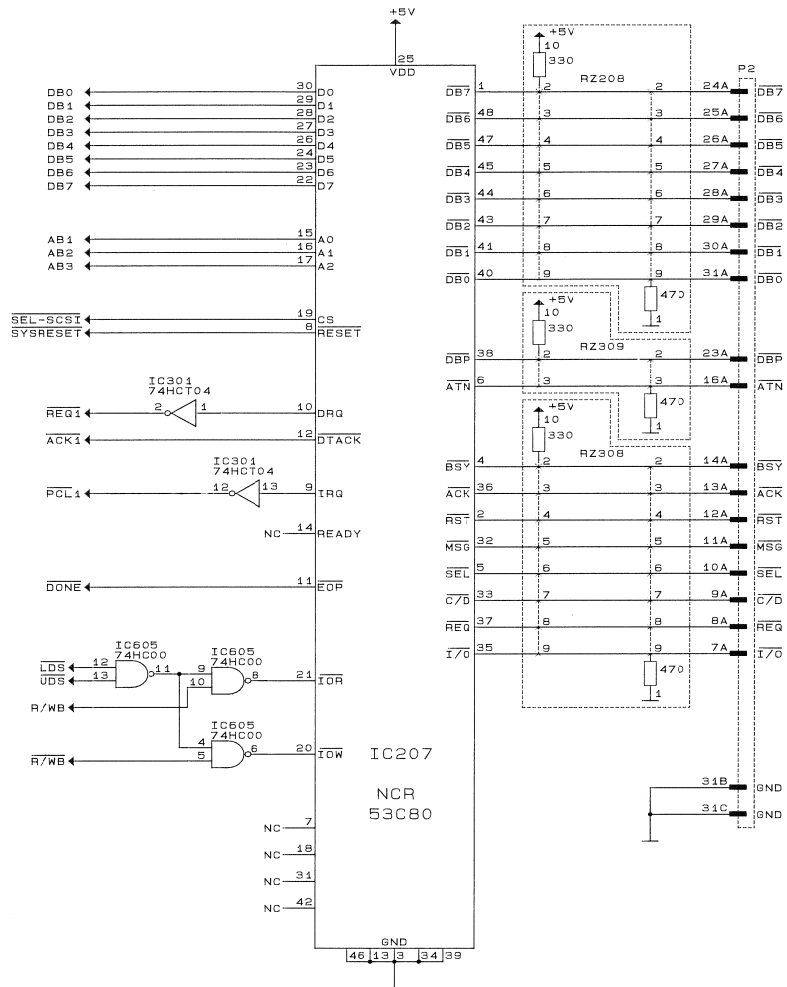
DRIVE SELECT

- SW1
- FORMAT
- LOAD
- SW2
- STORE
- RUN
- SW3
- SHIFT
- SW4

SCSI & FLOPPY CONTROLLER



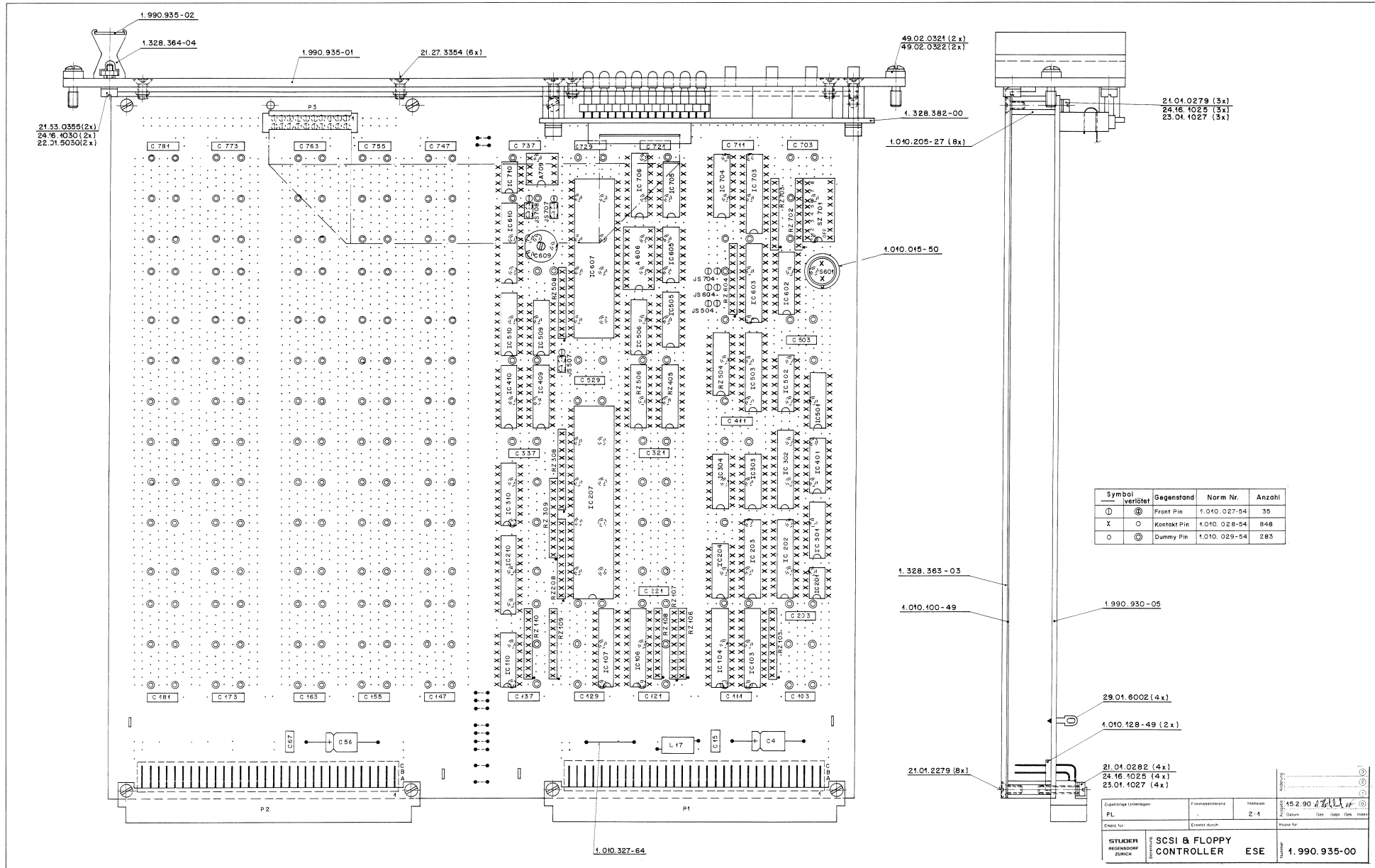
1.990.935.00



© 18.10.89 CM	MIXING CONSOLE 990	PAGE 3 OF 3
STUDER	SCSI & FLOPPY CONTROLLER	SC 1.990.935-00

SCSI & FLOPPY CONTROLLER ESE

1.990.935.00



Symbol	Verförfert	Gegenstand	Norm Nr.	Anzahl
⊕	⊗	Front Pin	1.010.027-54	35
X	○	Kontakt Pin	4.010.028-54	848
○	⊗	Dummy Pin	1.010.029-54	283

Zugabe/Entzug	Erweiterte/Entfallene	Material	15.2.90
PL		2.1	
Ersatz für		Ersetzt durch	
ISTUEBERRECHENGEBOHRZÜCKE		SCSI & FLOPPY CONTROLLER ESE	
		1.990.935-00	



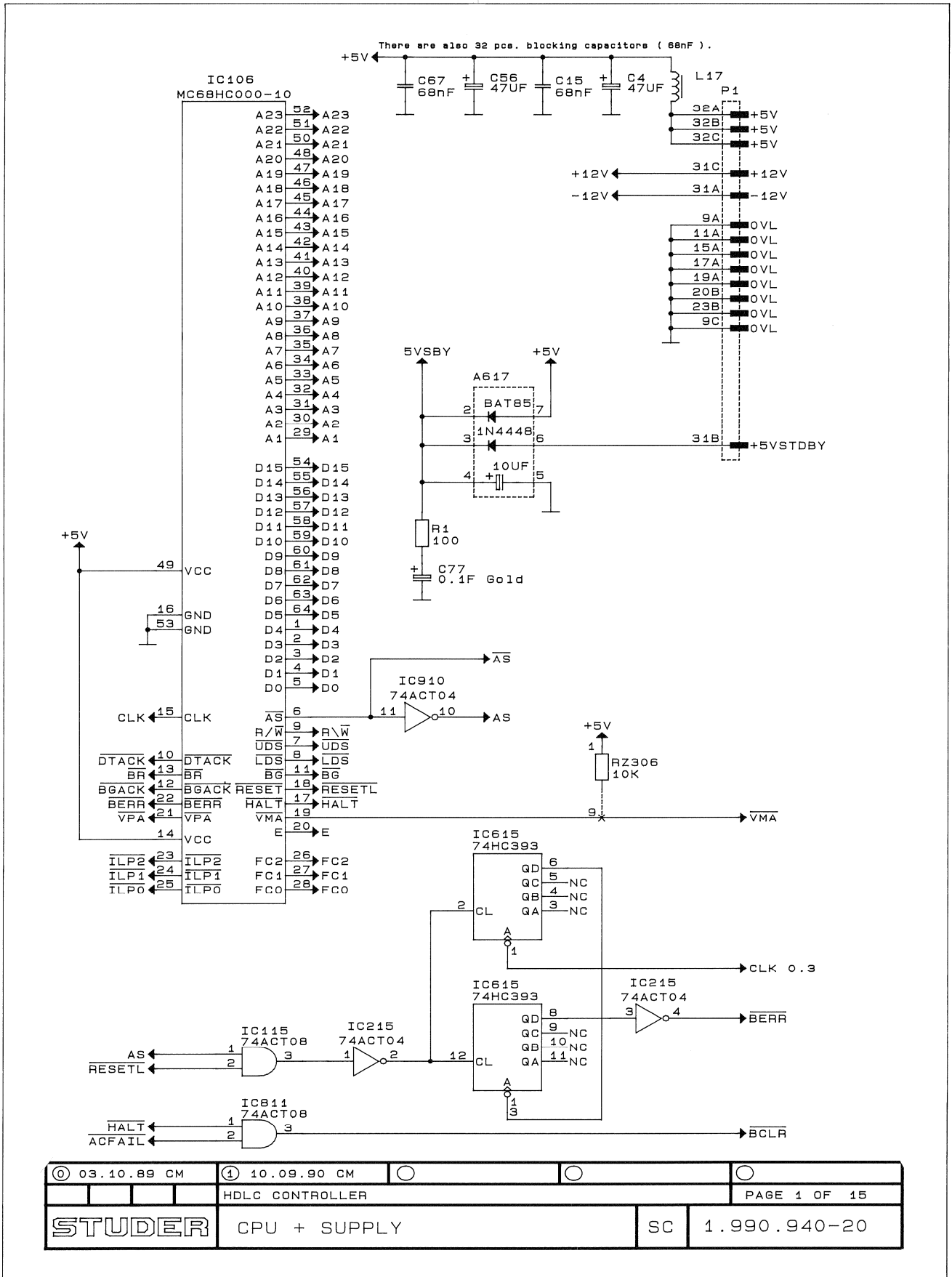
SCSI & FLOPPY CONTROLLER

1.990.935.00

Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
A...	606	1.328.391.00	ASSEMBLY 363-RPW/WPW						
A...	709	1.990.889.00	ASSEMBLY 935 PUMP		RZ..	208	57.80.4001	330/470 Resistor Network 2%	SIP10
C....	4	59.25.3470	47 u -20%, 16V, EL		RZ..	308	57.80.4001	330/470 Resistor Network 2%	SIP10
C....	15	59.06.0683	.068 u 10%, 63V, PETP		RZ..	309	57.80.4001	330/470 Resistor Network 2%	SIP10
C....	56	59.25.3470	47 u -20%, 16V, EL		RZ..	405	57.88.3331	330 Resistor Network 2%	DIL16
C....	67	59.06.0683	.068 u 10%, 63V, PETP		RZ..	504	57.88.4331	330 Resistor Network 2%	DIL16
C...103		59.99.1200	.068 u 20%, 63V, PE		RZ..	506	57.88.3101	100 Resistor Network 2%	DIL16
C...111		59.99.1200	.068 u 20%, 63V, PE		RZ..	508	57.88.4102	1 k Resistor Network 2%	SIP9
C...121		59.99.1200	.068 u 20%, 63V, PE		RZ..	604	57.88.4103	10 k Resistor Network 2%	SIP9
C...129		59.99.1200	.068 u 20%, 63V, PE		RZ..	702	57.88.4103	10 k Resistor Network 2%	SIP9
C...137		59.99.1200	.068 u 20%, 63V, PE		RZ..	703	57.88.4103	10 k Resistor Network 2%	SIP9
C...147		59.99.1200	.068 u 20%, 63V, PE		S...	601	55.03.0122	1 * A Momentary Switch	
C...155		59.99.1200	.068 u 20%, 63V, PE		SZ..	701	55.01.0168	8 * A DIL Switch	
C...163		59.99.1200	.068 u 20%, 63V, PE		note 1: The Jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 2 pcs. Front Pin (# 1.010.027.54).				
C...173		59.99.1200	.068 u 20%, 63V, PE		note 2: The Jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 2-of-3 pcs. Front Pin (# 1.010.027.54).				
C...181		59.99.1200	.068 u 20%, 63V, PE		note 3: P 3 consists of 2 * 10 pcs. Front Pin (# 1.010.027.54).				
C...203		59.99.1200	.068 u 20%, 63V, PE		Manufacturers: Mot=Motorola, NS=National Semiconductors, Ti=Texas Instruments, LDI=Logig Devices Inc., NCR=NCR Corporation, Sam=Samsung				
C...221		59.99.1200	.068 u 20%, 63V, PE		1.990.935-00 SCSI & FLOPPY CONTROLLER RP88/06/2300				
C...321		59.99.1200	.068 u 20%, 63V, PE		END				
C...337		59.99.1200	.068 u 20%, 63V, PE		+				
C...411		59.99.1200	.068 u 20%, 63V, PE						
C...503		59.99.1200	.068 u 20%, 63V, PE						
C...529		59.99.1200	.068 u 20%, 63V, PE						
C...609		59.18.0102	5.5-65 pF Trimmer						
C...703		59.99.1200	.068 u 20%, 63V, PE						
C...711		59.99.1200	.068 u 20%, 63V, PE						
C...721		59.99.1200	.068 u 20%, 63V, PE						
C...729		59.99.1200	.068 u 20%, 63V, PE						
C...737		59.99.1200	.068 u 20%, 63V, PE						
C...747		59.99.1200	.068 u 20%, 63V, PE						
C...755		59.99.1200	.068 u 20%, 63V, PE						
C...763		59.99.1200	.068 u 20%, 63V, PE						
C...773		59.99.1200	.068 u 20%, 63V, PE						
C...781		59.99.1200	.068 u 20%, 63V, PE						
IC..103		50.06.0645	74 LS 645 Octal BUS Transceiver NonInv.	MOT, TI					
IC..104		50.06.0541	74 LS 541 Octal Buffer/Line Driver	MOT, TI					
IC..106		50.06.0541	74 LS 541 Octal Buffer/Line Driver	MOT, TI					
IC..107		50.06.0541	74 LS 541 Octal Buffer/Line Driver	MOT, TI					
IC..110		50.17.1393	74 HC 393 Dual 4-stage Binary Ripple Counter	MOT, TI					
IC..201		50.05.0203	75463 Dual Driver oc. OR	MOT, TI					
IC..202		50.17.1573	74 HC 573 Octal D-Type Latch	MOT, TI					
IC..203		50.17.1574	74 HC 574 Octal D-Type FLIP-FLOP	MOT, TI					
IC..204		50.17.1002	74 HC 02 Quad 2-Input NOR Gate	MOT, TI					
IC..207		50.16.0700	MCR 53C80 SCSI BUS Controller	LDI, NCR, Sam					
IC..210		50.17.1684	74 HC 684 8 Bit Magnitude Comparator	MOT, TI					
IC..301		50.17.0004	74 HCT 04 Hex Inverter	MOT, TI					
IC..302		50.17.0573	74 HCT573 Octal D-Type FLIP-FLOP	MOT, TI					
IC..303		50.17.1004	74 HC 04 Hex Inverter	MOT, TI					
IC..304		50.17.1020	74 HC 20 Dual 4-Input NAND Gate	MOT, TI					
IC..310		50.17.1138	74 HC 138 3-to-8 Line Decoder	MOT, TI					
IC..401		50.17.1032	74 HC 32 Quad 2-Input OR Gate	MOT, TI					
IC..409		50.17.1138	74 HC 138 3-to-8 Line Decoder	MOT, TI					
IC..410		50.15.0105	MC 3487 Quad Line Driver RS422	MOT, TI					
IC..501		50.17.1003	74 HC 03 Quad 2-Input NAND Gate	MOT, TI					
IC..502		50.17.1086	74 HC 86 Quad 2-Input EXOR Gate	MOT, TI					
IC..503		50.06.0374	74 LS 374 Octal D-Type FLIP-FLOP	MOT, TI					
IC..505		50.17.1000	74 HC 00 Quad 2-Input NAND Gate	MOT, TI					
IC..506		50.17.1032	74 HC 32 Quad 2-Input OR Gate	MOT, TI					
IC..509		50.17.1004	74 HC 04 Hex Inverter	MOT, TI					
IC..510		50.15.0105	MC 3487 Quad Line Driver RS422	MOT, TI					
IC..602		50.06.0279	74 LS 279 Quad S-R Latches	MOT, TI					
IC..603		50.17.1541	74 HC 541 Octal Buffer/Line Driver	MOT, TI					
IC..605		50.17.1000	74 HC 00 Quad 2-Input NAND Gate	MOT, TI					
IC..607		50.16.0126	WD 2793 Floppy Disk Formatter/Controller	WD					
IC..610		50.06.0540	74 LS 540 Octal Buffer/Line Driver	MOT, TI					
IC..703		50.17.1541	74 HC 541 Octal Buffer/Line Driver	MOT, TI					
IC..704		50.15.0105	MC 3487 Quad Line Driver RS422	MOT, TI					
IC..705		50.17.1113	74 HC 113 Dual J-K FLIP-FLOP with Preset	MOT, TI					
IC..706		50.15.0104	MC 3486 Quad Line Receiver RS 422/423	MOT, TI					
IC..710		50.15.0115	75176 Differential BUS Transceiver	MOT, TI					
JS..504		.	.						
JS..507		.	.						
JS..604		.	.						
JS..704		.	.						
JS..707		.	.						
JS..708		.	.						
L....17		62.01.0115	Wide-Band Choke						
P....1		54.01.0354	3*32 pins Angled Wrap Male Eurocard Connector						
P....2		54.01.0354	3*32 pins Angled Wrap Male Eurocard Connector						
P....3		.	2*10 pins see note 3						
RZ..103		57.88.4332	3.3 k Resistor Network 2%	SIP9					
RZ..106		57.88.4332	3.3 k Resistor Network 2%	SIP9					
RZ..107		57.88.4332	3.3 k Resistor Network 2%	SIP9					
RZ..108		57.88.4332	3.3 k Resistor Network 2%	SIP9					
RZ..109		57.88.4103	10 k Resistor Network 2%	SIP9					
RZ..110		57.88.4103	10 k Resistor Network 2%	SIP9					

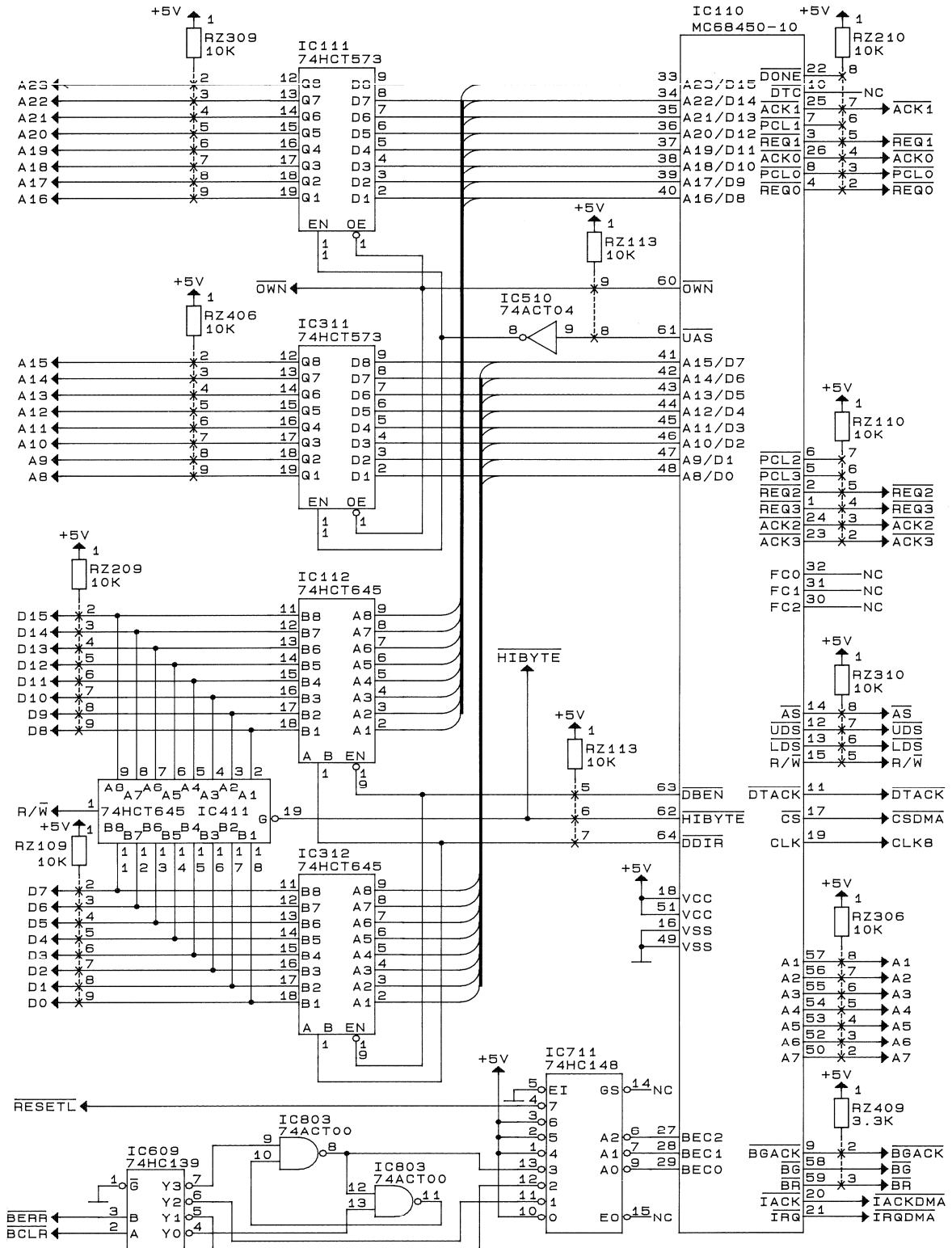
HDLC CONTROLLER CPU + SUPPLY

1.990.940.20



HDLC CONTROLLER DMA

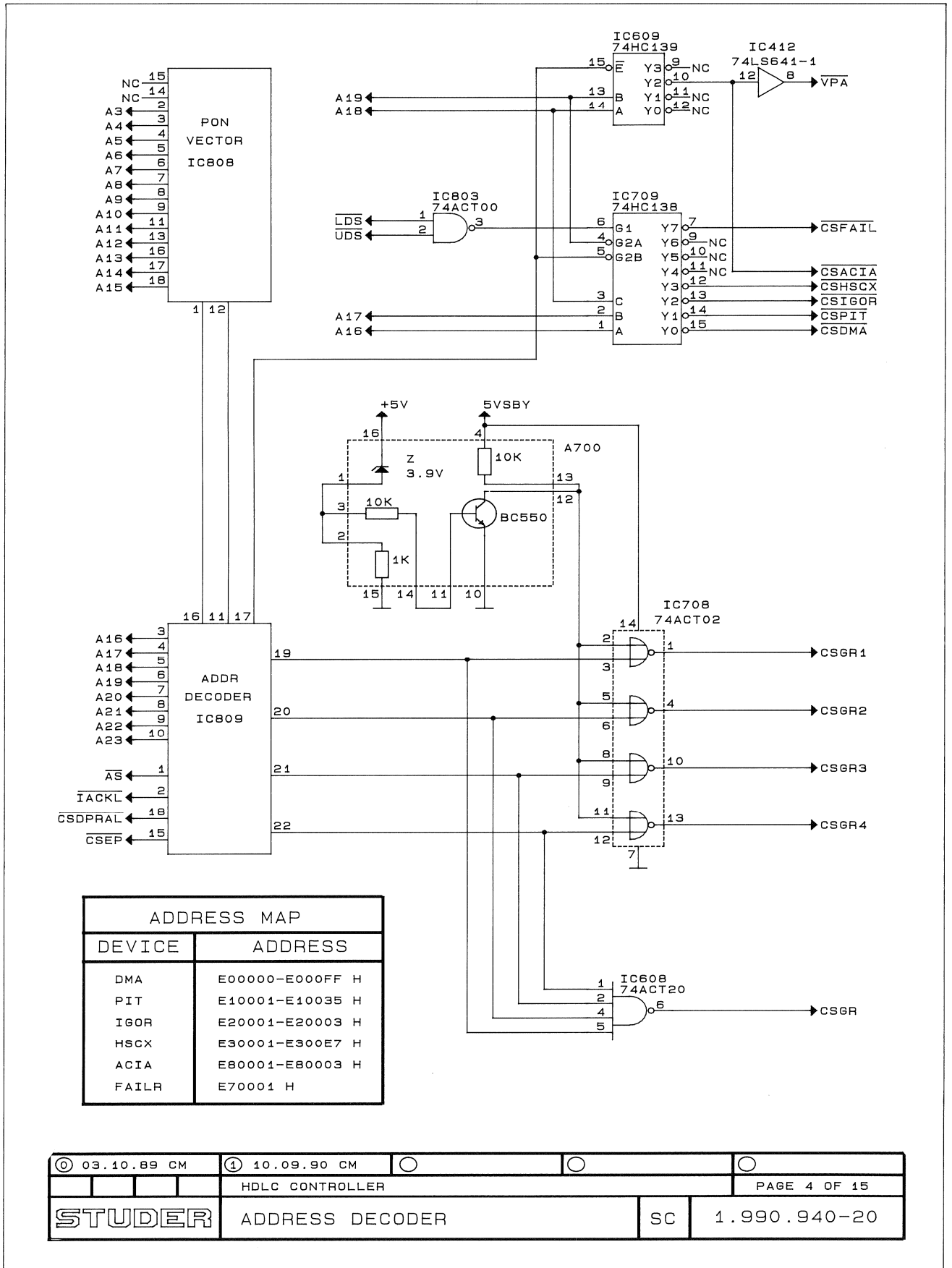
1.990.940.20



03.10.89 CM	10.09.90 CM			
HDLC CONTROLLER			PAGE 2 OF 15	
STUDER	DMA	SC	1.990.940-20	

HDLC CONTROLLER ADDRESS DECODER

1.990.940.20

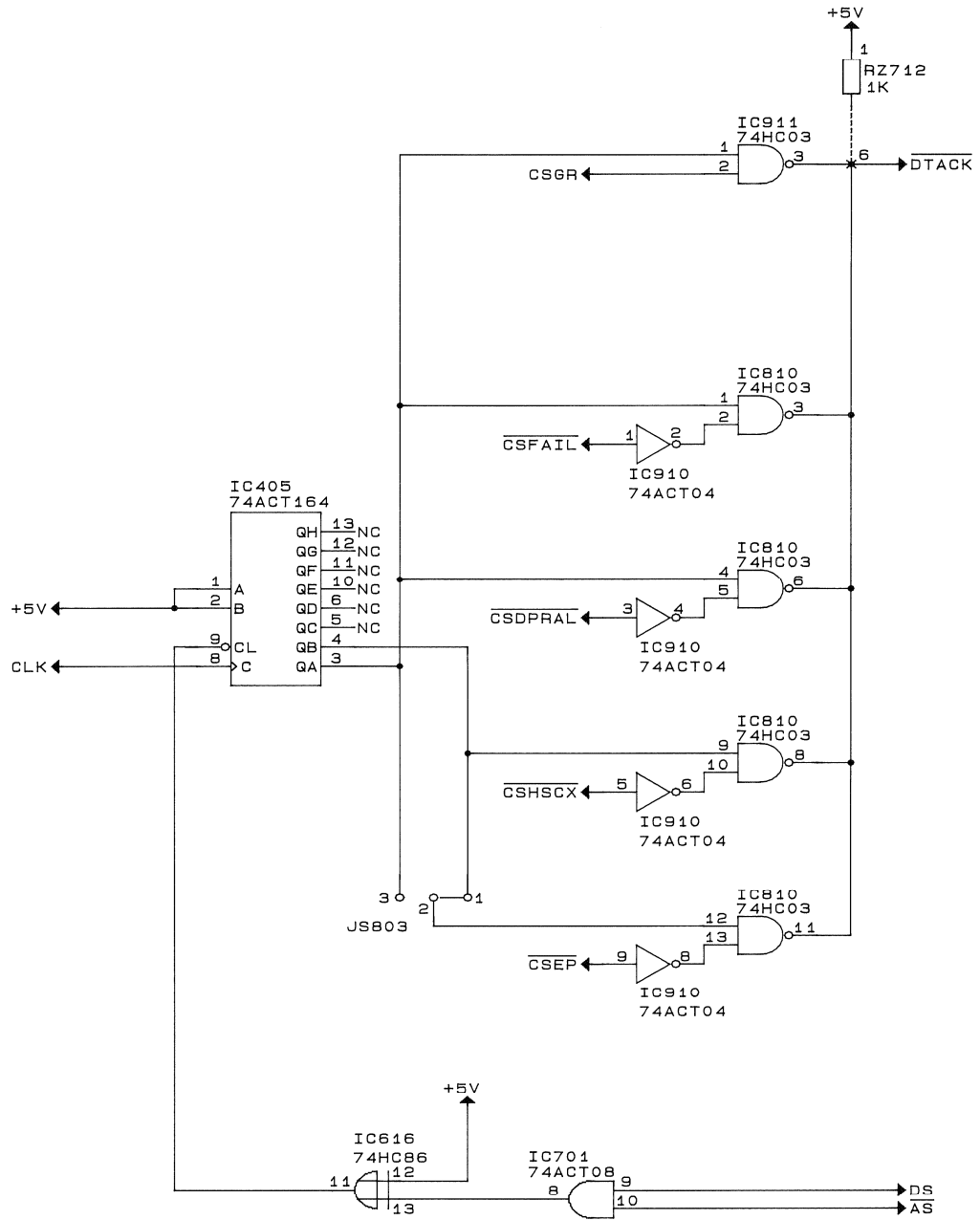


ADDRESS MAP	
DEVICE	ADDRESS
DMA	E00000-E000FF H
PIT	E10001-E10035 H
IGOR	E20001-E20003 H
HSCX	E30001-E300E7 H
ACIA	E80001-E80003 H
FAILR	E70001 H

HDLC CONTROLLER DTACK GENERATOR



1.990.940.20

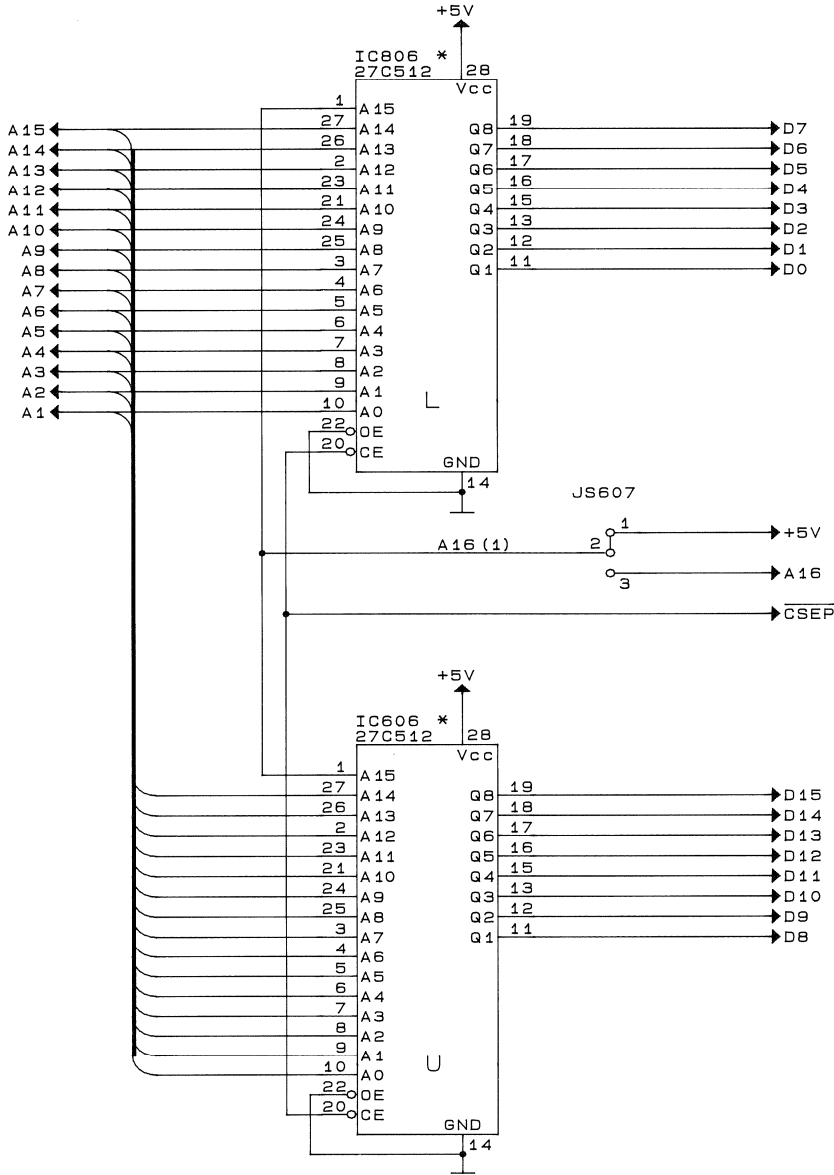


① 03.10.89 CM	③ 10.09.90 CM	○	○	○
HDLC CONTROLLER				PAGE 5 OF 15
STUDER		DTACK GENERATOR		SC 1.990.940-20

HDLC CONTROLLER SYSTEM EPROM



1.990.940.20



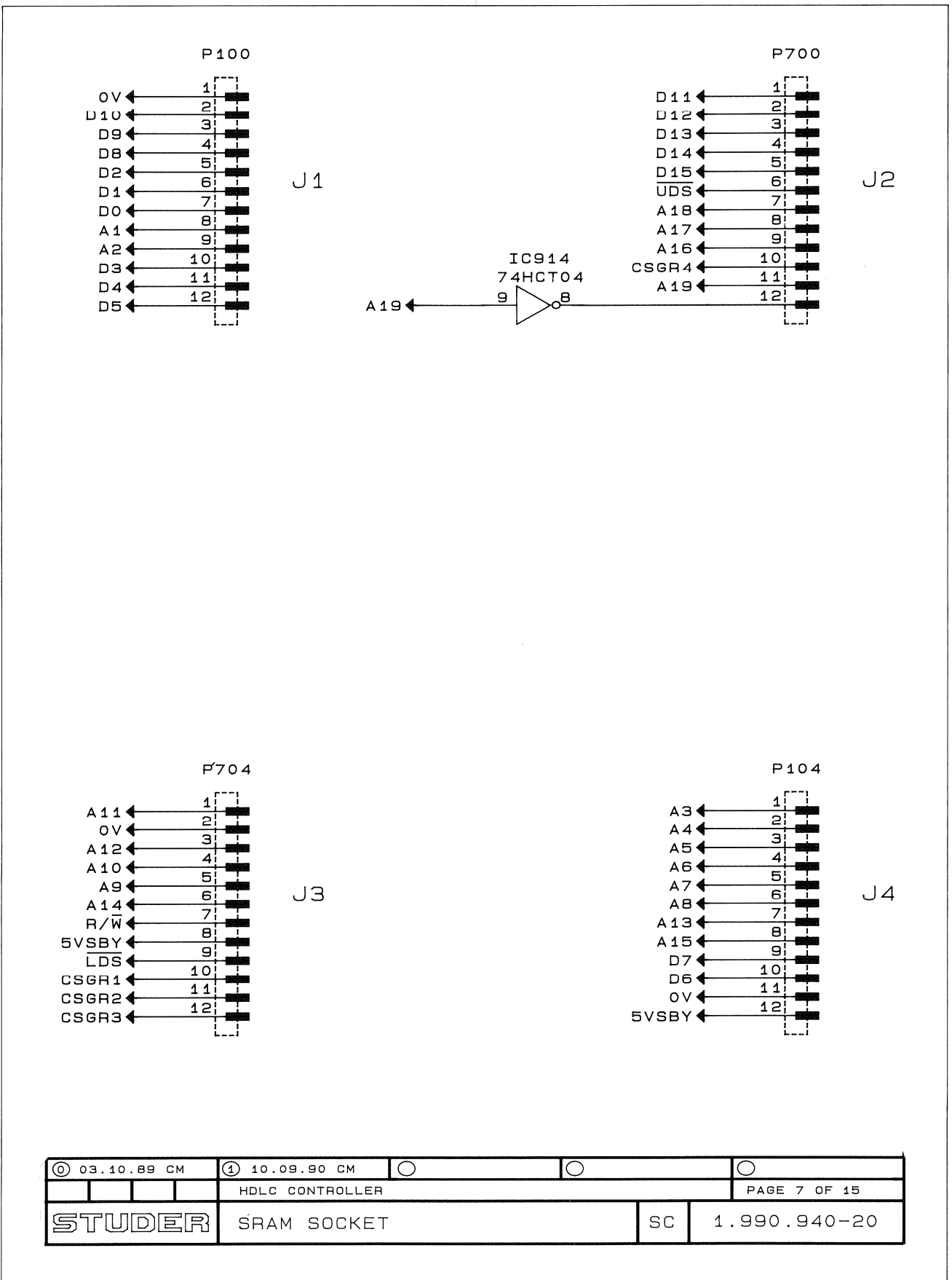
EPROM TACC ≤ 250NS

* see STUDER SW No.

© 03.10.89 CM	④ 10.09.90 CM	○	○	○
STUDER			SYSTEM EPROM	SC 1.990.940-20
HDLC CONTROLLER			PAGE 6 OF 15	

HDLC CONTROLLER SRAM SOCKET

1.990.940.20

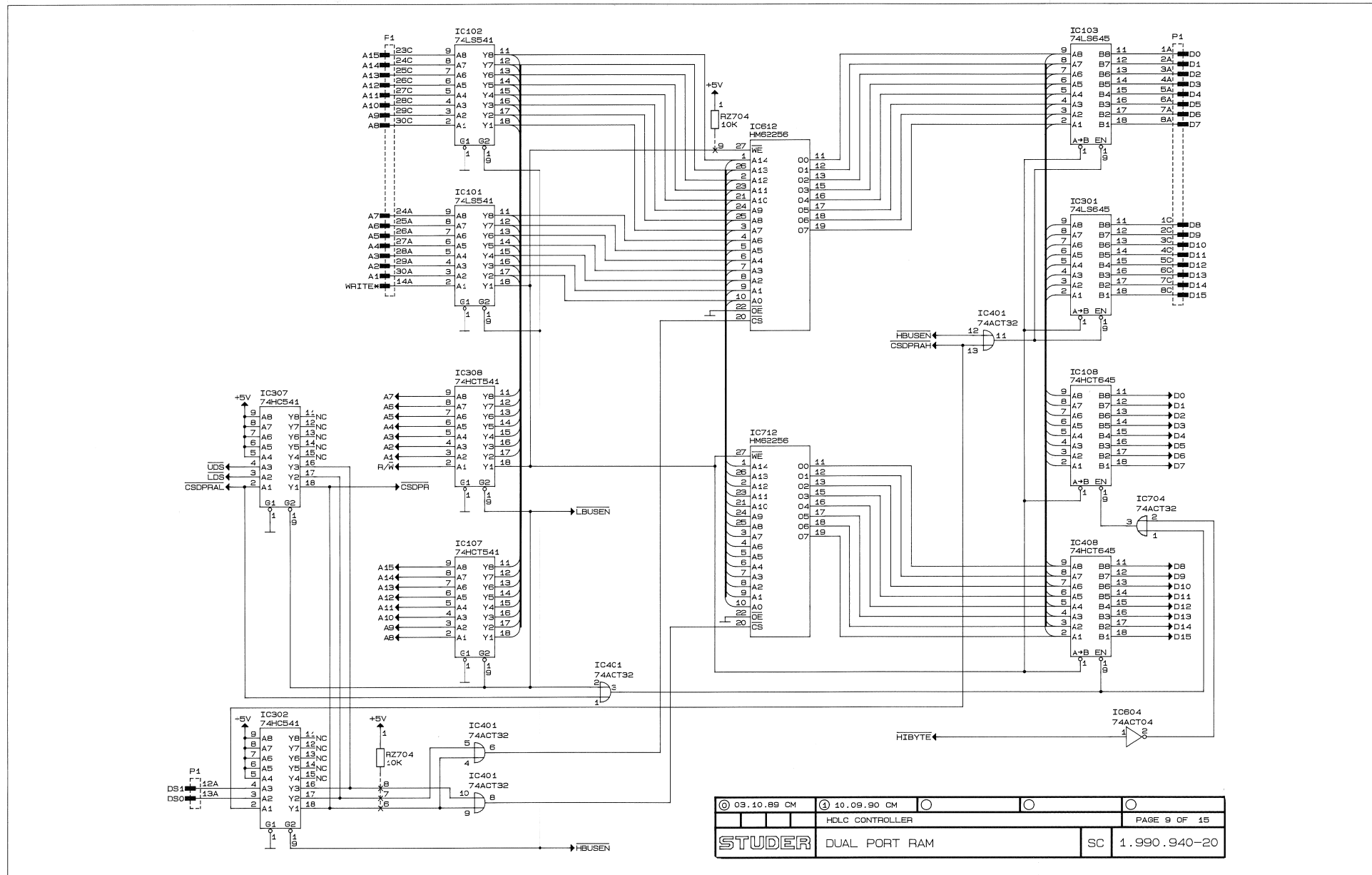


© 03.10.89 CM	④ 10.09.90 CM	○	○	○
HDLC CONTROLLER			PAGE 7 OF 15	
STUDER	SRAM SOCKET	SC	1.990.940-20	

HDLC CONTROLLER DUAL PORT RAM



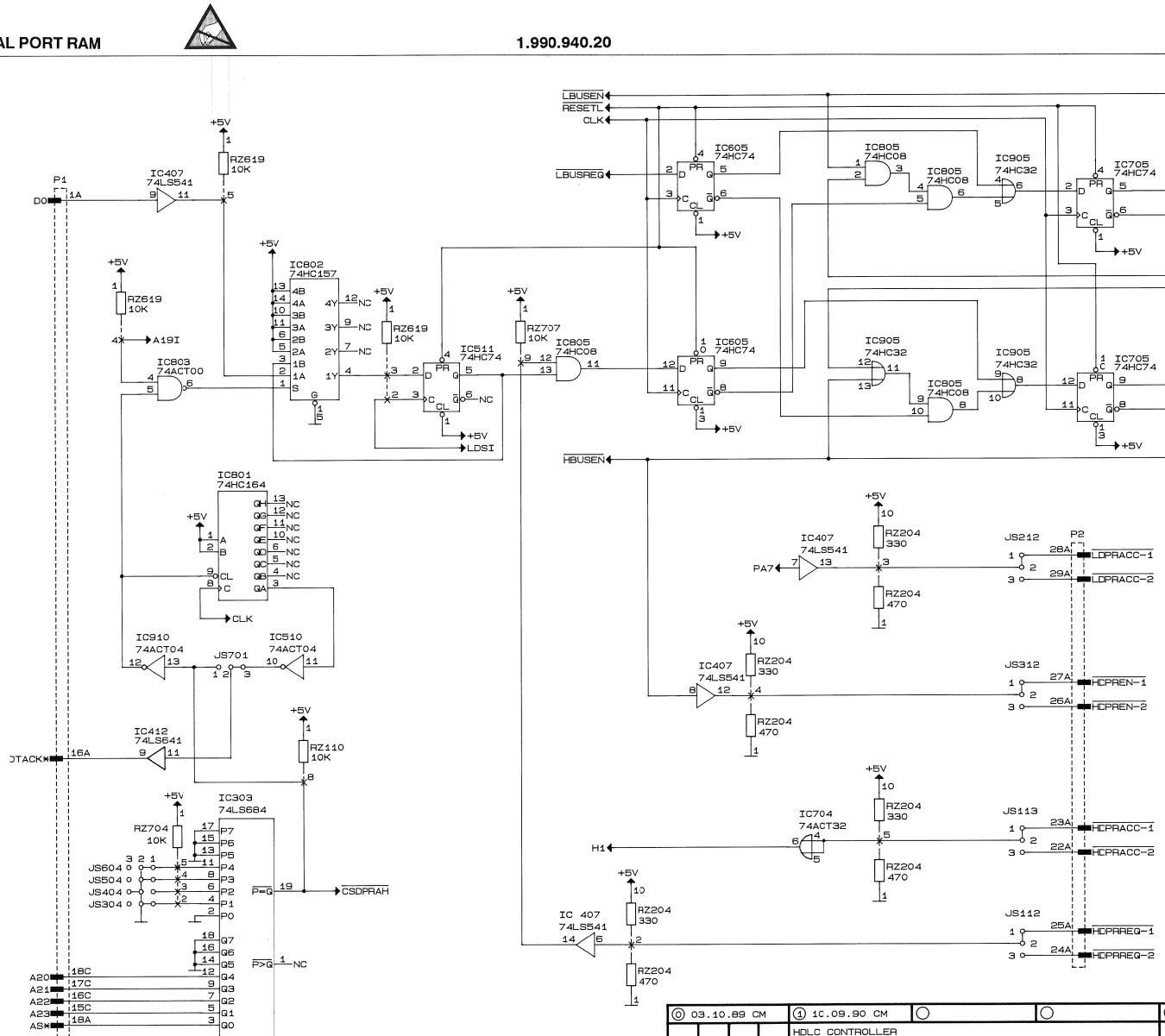
1.990.940.20



① 03.10.89 CM	② 10.09.90 CM	○	○	○
STUDER			HDLC CONTROLLER	
DUAL PORT RAM			SC	PAGE 9 OF 15
			1.990.940-20	

HDLC CONTROLLER DUAL PORT RAM

1.990.940.20

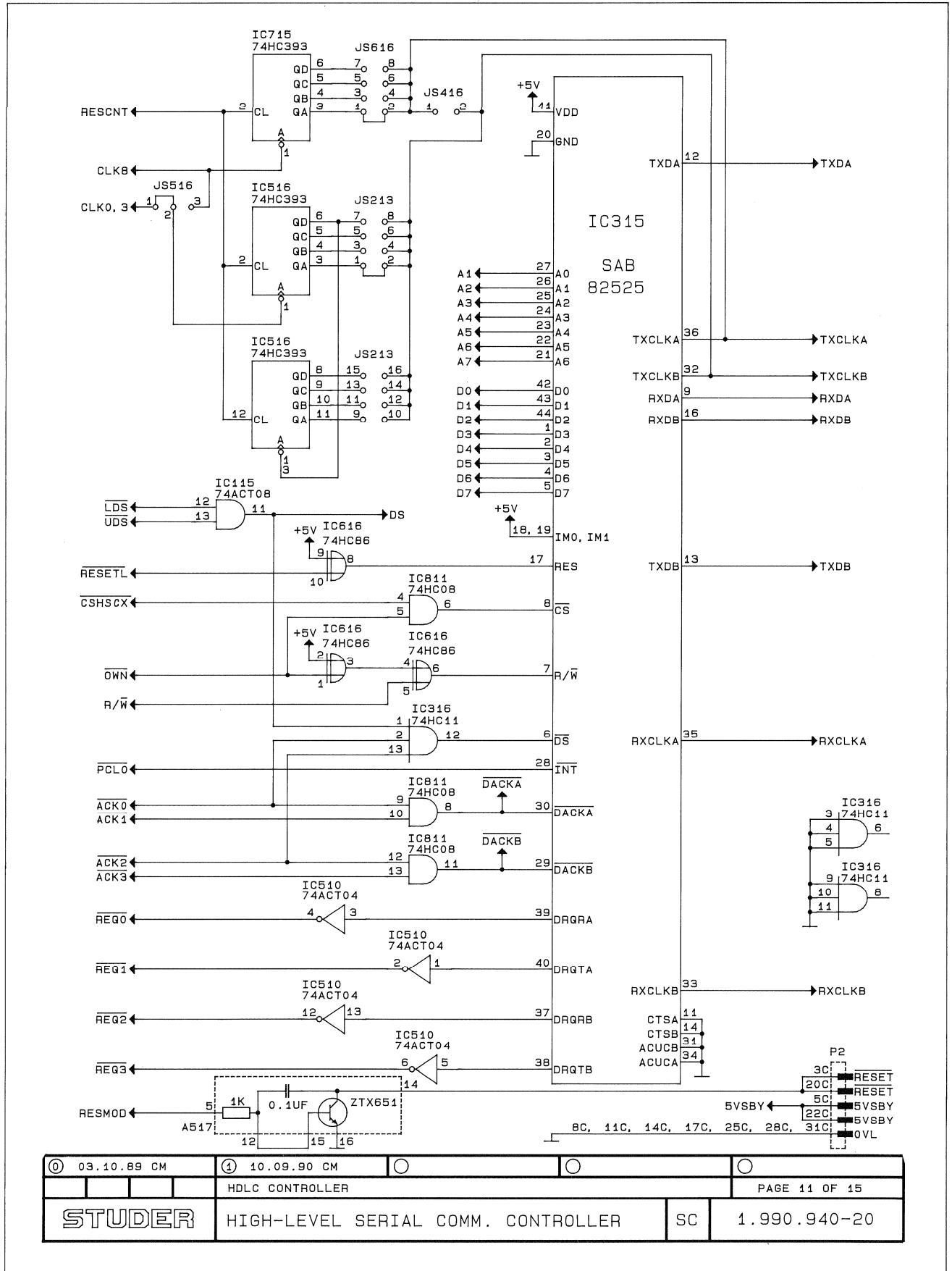


03.10.89 CM	1C.09.90 CM			
HDLC CONTROLLER				PAGE 10 OF 15
STUDER DUAL PORT RAM			SC	1.990.940-20

HDLC CONTROLLER HIGH-LEVEL SERIAL COMM. CONTROLLER



1.990.940.20

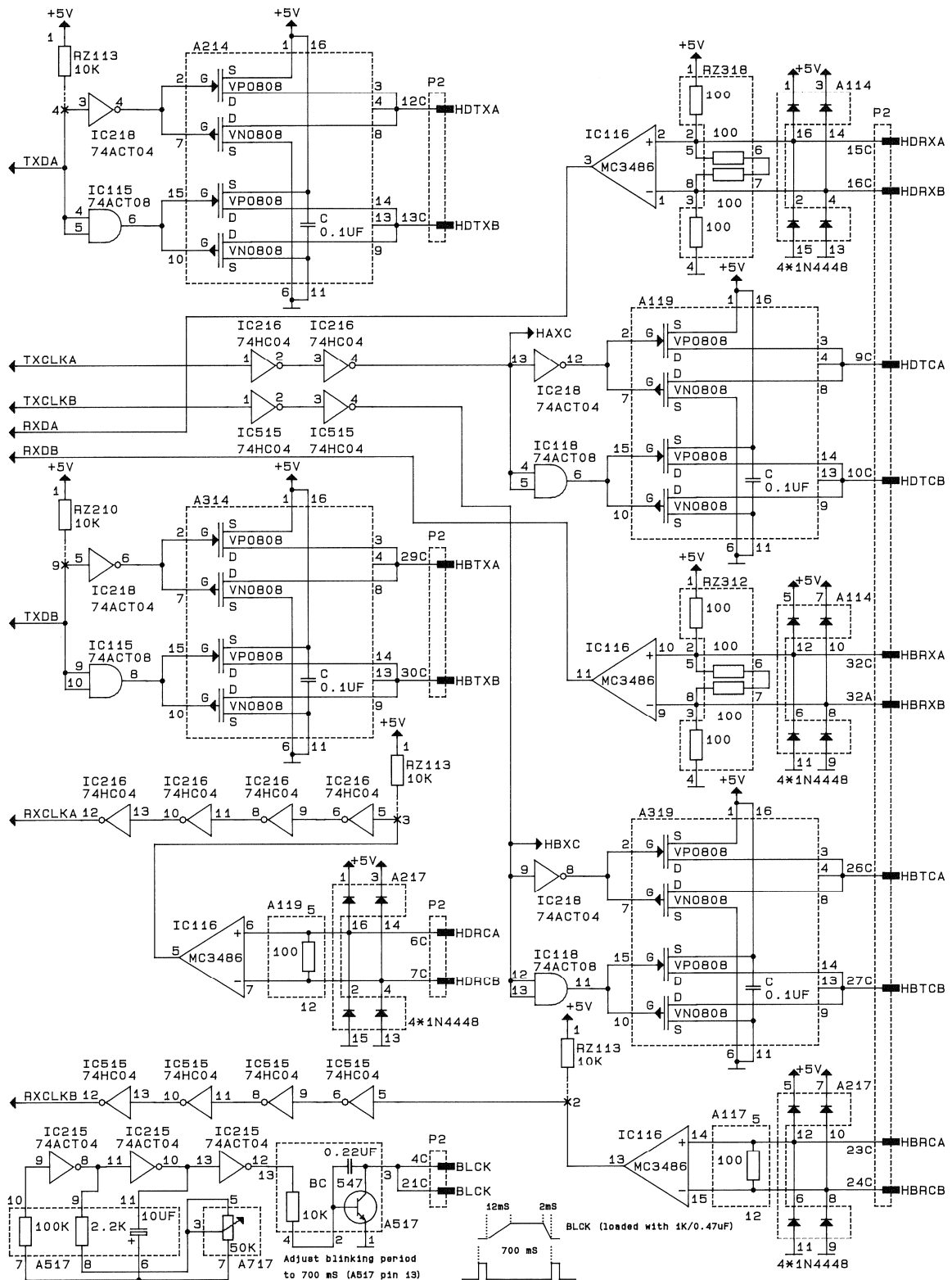


03.10.89 CM	10.09.90 CM			
HDLC CONTROLLER			PAGE 11 OF 15	
STUDER			HIGH-LEVEL SERIAL COMM. CONTROLLER	SC 1.990.940-20

HDLC CONTROLLER HDLC MASTER DRIVER



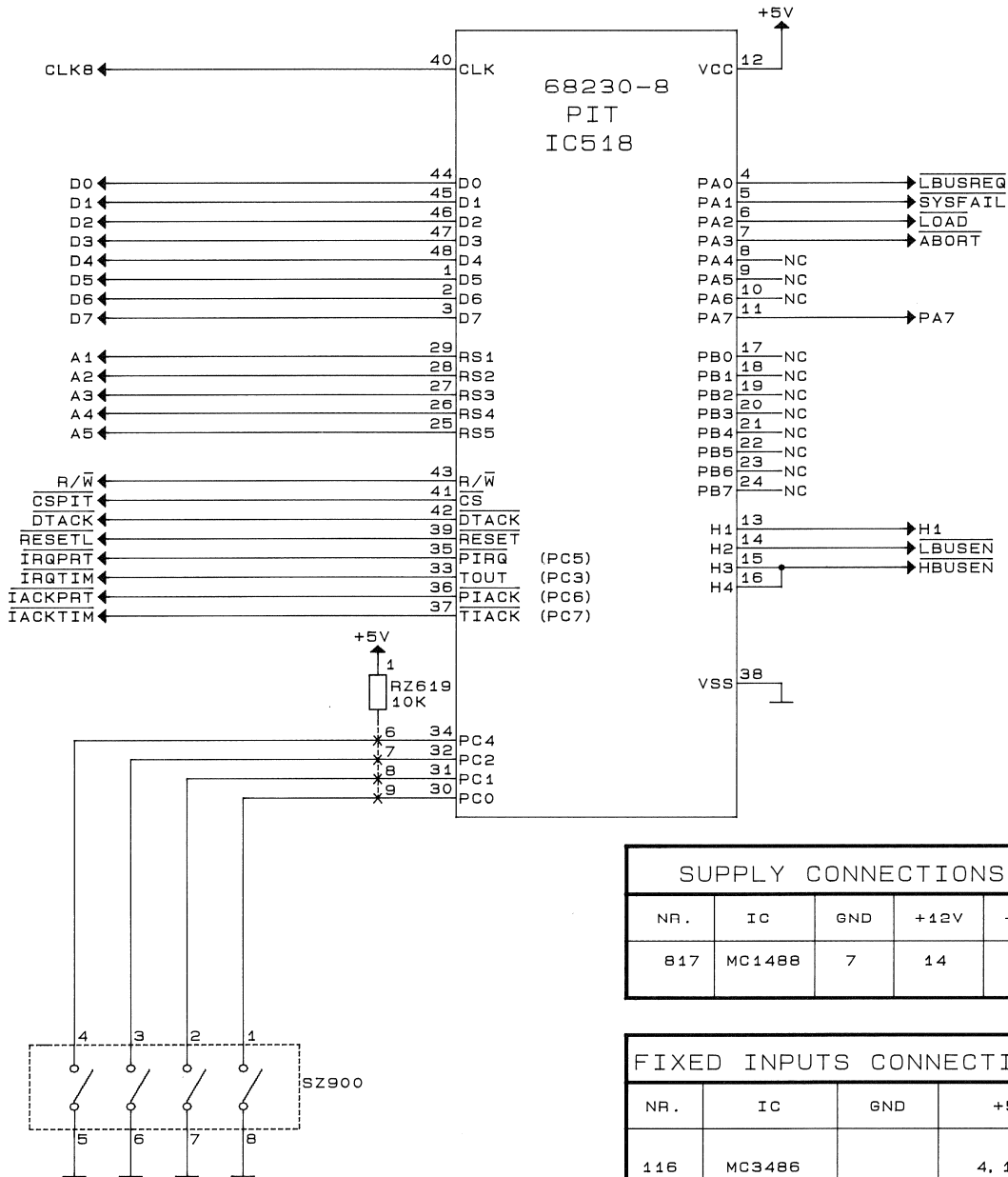
1.990.940.20



03.10.89 CM	10.09.90 CM			PAGE 12 OF 15
HDLC CONTROLLER				
STUDER HDLC MASTER DRIVER			SC	1.990.940-20

HDLC CONTROLLER PIT

1.990.940.20



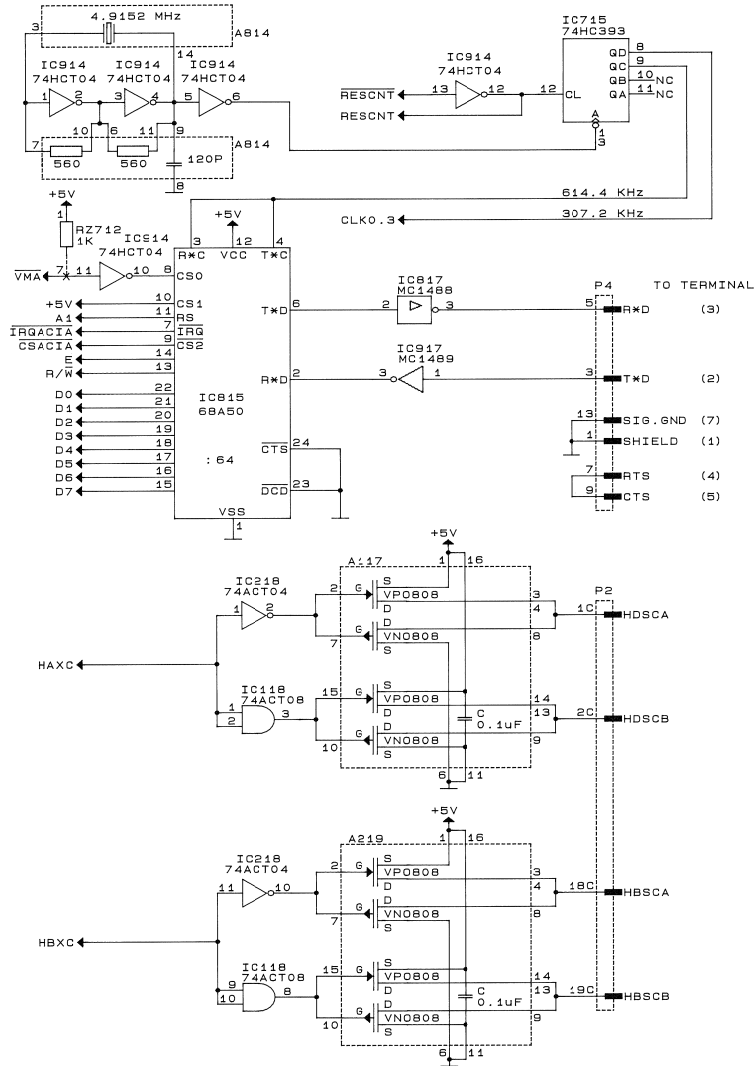
SUPPLY CONNECTIONS				
NR.	IC	GND	+12V	-12V
817	MC1488	7	14	1

FIXED INPUTS CONNECTIONS			
NR.	IC	GND	+5V
116	MC3486		4, 12
316	74HC11	3, 4, 5 9, 10, 11	
407	74LS541	1, 19	
412	74LS641-1	1, 19	
604	74ACT04		3, 5, 9, 11, 13
701	74ACT08		12, 13
704	74ACT32		9, 10, 12, 13
911	74HC03		9, 10, 12, 13

① 03.10.89 CM	① 10.09.90 CM	○	○	○
HDLC CONTROLLER			PAGE 13 OF 15	
STUDER PIT		SC	1.990.940-20	

HDLC CONTROLLER ACIA

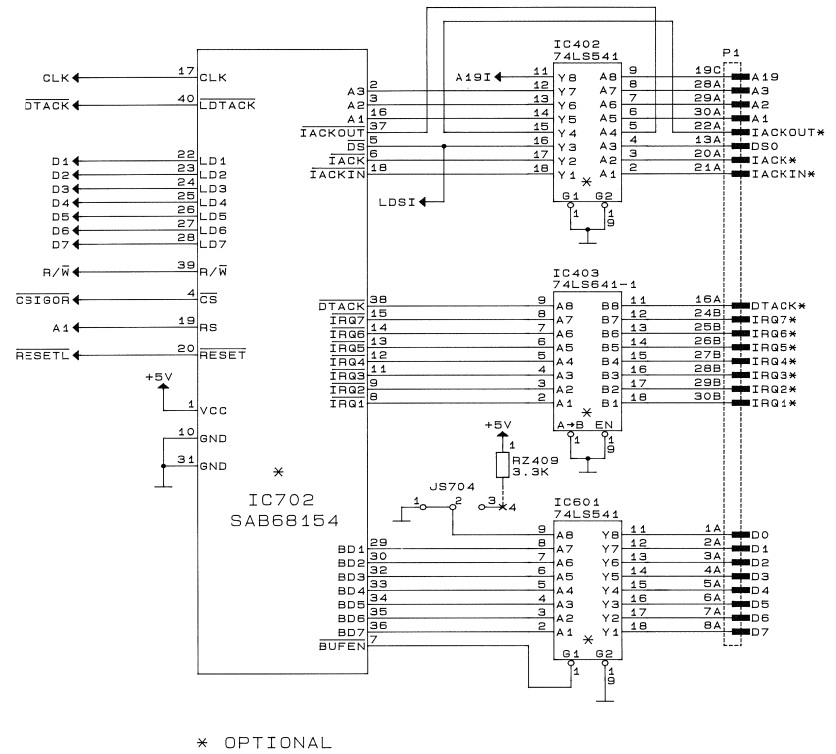
1.990.940.20



© 03.10.89 CM	① 10.09.90 CM	○	○
HDLC CONTROLLER			PAGE 14 OF 15
STUDER	ACIA	SC	1.990.940-20

HDLC CONTROLLER INTERRUPT GENERATOR

1.990.940.20



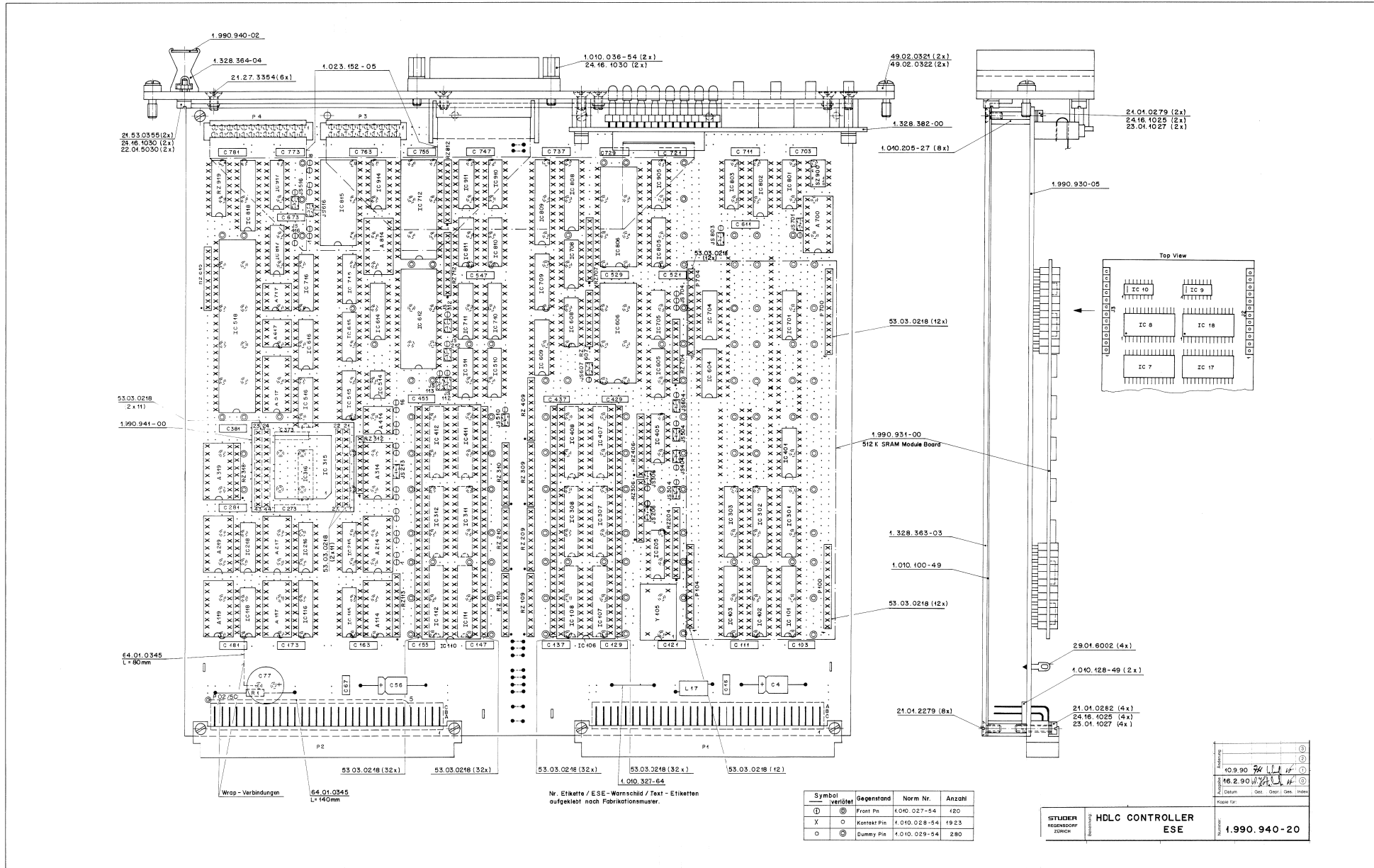
* OPTIONAL

© 03.10.89 CM	① 10.09.90 CM	○	○
HDLC CONTROLLER			PAGE 15 OF 15
STUDER	INTERRUPT GENERATOR	SC	1.990.940-20

HDLC CONTROLLER



1.990.940.20



Symbol	Verfögt	Gegenstand	Norm Nr.	Anzahl
⊕		Front Pin	1.010.027-54	420
X		Kontakt Pin	1.010.028-54	1923
○		Dummy Pin	1.010.029-54	280

STUDIER REGENSDORF ZÜRICH	HDLC CONTROLLER ESE
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10.990	16.290
Datum	Gez. Gepr. Gek. Index



HDLC CONTROLLER

1.990.940.20

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
A...	114	1.990.890.00	Assembly 940 CLPDIO	St	IC..	412	50.06.1641	74LS641-1 Octal Bus Transceiver	Sig,TI
A...	117	1.990.891.00	Assembly 940 PPFT	St	IC..	510	50.17.7004	74 ACT 04 Quad 2-Input NAND Gate	Fc,RCA
A...	119	1.990.891.00	Assembly 940 PPFT	St	IC..	511	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI
A...	214	1.990.891.00	Assembly 940 PPFT	St	IC..	514	50.11.0122	TL 7705 A Reset Generator	Ti
A...	217	1.990.890.00	Assembly 940 CLPDIO	St	IC..	515	50.17.1004	74 HC 04 Hex Inverter	Mot,Ph,TI,To,RCA
A...	219	1.990.891.00	Assembly 940 PPFT	St	IC..	516	50.17.1393	74 HC 393 Dual Binary Counter	Mot,Ph,TI,NS,RCA
A...	314	1.990.891.00	Assembly 940 PPFT	St	IC..	518	50.16.0150	68230 PIT Parallel-Interface Timer 8MHz	Ph,Mot,To
A...	319	1.990.891.00	Assembly 940 PPFT	St	IC..	601	50.06.0541	74 LS 541 not tipped	
A...	414	1.990.895.00	Assembly 940 RESET	St	IC..	604	50.17.7004	74 ACT 04 Hex Inverter	Fc,RCA
A...	517	1.990.893.00	Assembly 940 RESBLK	St	IC..	605	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI
A...	617	1.990.896.00	Assembly 930/940 STBY1	St	IC..	606	1.990.998.21	SW SET HDLC RESID. (UPPER) 26/90	St
A...	700	1.990.897.00	Assembly 930/940 STBY2	St	IC..	606	1.990.998.30	SW SET HDLC RESID. (UPPER) ..92	St
A...	717	1.990.892.00	Assembly 940 ADJBLK	St	IC..	608	50.17.7020	74 ACT 20 Dual 4-Input NAND Gate	Fc,RCA
A...	814	1.990.894.00	Assembly 940 ACTIACK	St	IC..	609	50.17.1139	74 HC 139 Dual 2 to 4 Line Decoder	Mot,Ph,TI,NS,RCA
AIC.120		1.990.931.00	SRAM 512k SRAM-Module Board	see note 1. St	IC..	701	50.17.7008	74 ACT 08 Quad 2-Input NAND Gate	Fc,RCA
C....	4	59.25.3470	47uF 20%, 16V, EL		IC..	702		SCB68154 not tipped	
C....	15	59.06.0683	68nF 10%, 63V, PETP		IC..	704	50.17.7032	74 ACT 32 Quad 2-Input NOR Gate	Fc,RCA
C....	56	59.25.3470	47uF 20%, 16V, EL		IC..	705	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Mot,Ph,TI
C....	67	59.06.0683	68nF 10%, 63V, PETP		IC..	708	50.17.7002	74 ACT 02 Quad 2-Input NOR Gate	Fc,RCA
C....	77	59.22.1104	0,1F 5,5V, Gold		IC..	709	50.17.1138	74 HC 138 3-to-8 Line Decoder	Fc,RCA
C...	103	59.99.1200	68nF 20%, 63V, PE		IC..	710	50.06.0279	74 LS 279 Quad S-R Latches	NS,TI
C...	111	59.99.1200	68nF 20%, 63V, PE		IC..	711	50.17.1148	74 HC 148 8-to-3 Line Priority Encoder	SGS,TI,To
C...	121	59.99.1200	68nF 20%, 63V, PE		IC..	712	50.14.1004	HM 62256 Static RAM 32k * 8 ; 120ns	Hi,To
C...	129	59.99.1200	68nF 20%, 63V, PE		IC..	715	50.17.1393	74 HC 393 8-to-3 Line Priority Encoder	SGS,TI,To
C...	137	59.99.1200	68nF 20%, 63V, PE		IC..	716	50.06.0156	74 LS 156 Dual Binary Counter	Mot,Ph,TI,NS,RCA
C...	147	59.99.1200	68nF 20%, 63V, PE		IC..	801	50.17.1164	74 HC 164 8 Bit SI/PO Shift Register	Mot,Ph
C...	155	59.99.1200	68nF 20%, 63V, PE		IC..	802	50.17.1157	74 HC 157 Quad 2 Channel Multiplexer	Mot,Ph
C...	163	59.99.1200	68nF 20%, 63V, PE		IC..	803	50.17.7000	74 ACT 00 Quad 2-Input NAND Gate	Fc,RCA
C...	173	59.99.1200	68nF 20%, 63V, PE		IC..	805	50.17.1008	74 HC 08 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA
C...	181	59.99.1200	68nF 20%, 63V, PE		IC..	806	1.990.998.21	SW SET HDLC RESID. (LOWER) 26/90	St
01 C...	273	59.99.1200	68nF 20%, 63V, PE		IC..	806	1.990.998.30	SW SET HDLC RESID. (LOWER) ..92	St
C...	281	59.99.1200	68nF 20%, 63V, PE		IC..	808	1.990.994.20	GAL PON VECTOR	St
01 C...	373	59.99.1200	68nF 20%, 63V, PE		IC..	809	1.990.995.20	GAL ADDR DECODER	St
C...	381	59.99.1200	68nF 20%, 63V, PE		IC..	810	50.17.1003	74 HC 03 Quad 2-Input NAND Gate	Mot,NS,TI
C...	429	59.99.1200	68nF 20%, 63V, PE		IC..	811	50.17.1008	74 HC 08 Quad 2-Input NAND Gate	Mot,Ph,TI,NS,RCA
C...	437	59.99.1200	68nF 20%, 63V, PE		IC..	815	50.16.0101	68A50 Async.-Comm.-Interface-Adapter	Mot
C...	455	59.99.1200	68nF 20%, 63V, PE		IC..	817	50.15.0106	MC 1488 Quad Line Driver RS232	Mot
C...	521	59.99.1200	68nF 20%, 63V, PE		IC..	818	50.17.7574	74ACT 574 Octal D-Type Flip-Flop	Fc,RCA
C...	529	59.99.1200	68nF 20%, 63V, PE		IC..	905	50.17.1032	74 HC 32 Quad 2-Input NOR Gate	Mot,Ph,TI,NS,RCA
C...	547	59.99.1200	68nF 20%, 63V, PE		IC..	910	50.17.7004	74 ACT 04 Quad 2-Input NAND Gate	Fc,RCA
C...	611	59.99.1200	68nF 20%, 63V, PE		IC..	911	50.17.1003	74 HC 03 Quad 2-Input NAND Gate	Mot,NS,TI
C...	673	59.99.1200	68nF 20%, 63V, PE		IC..	914	50.17.0004	74 HCT 04 Hex Inverter	Mot,Ph,TI,To,RCA
C...	703	59.99.1200	68nF 20%, 63V, PE		IC..	917	50.15.0116	MC 1489 Quad Line Receiver RS232	Mot
C...	711	59.99.1200	68nF 20%, 63V, PE		JS..	112	54.01.0021	see note 4.	
C...	721	59.99.1200	68nF 20%, 63V, PE		JS..	113	54.01.0021	see note 4.	
C...	729	59.99.1200	68nF 20%, 63V, PE		JS..	206	54.01.0021	see note 4.	
C...	737	59.99.1200	68nF 20%, 63V, PE		JS..	212	54.01.0021	see note 4.	
C...	747	59.99.1200	68nF 20%, 63V, PE		JS..	213	54.01.0021	see note 5.	
C...	755	59.99.1200	68nF 20%, 63V, PE		JS..	304	54.01.0021	see note 4.	
C...	763	59.99.1200	68nF 20%, 63V, PE		JS..	306	54.01.0021	see note 4.	
C...	773	59.99.1200	68nF 20%, 63V, PE		JS..	312	54.01.0021	see note 4.	
C...	781	59.99.1200	68nF 20%, 63V, PE		JS..	404	54.01.0021	see note 4.	
IC..	101	50.06.0541	74 LS 541 Octal Buffer/Line Driver	Mot,Ti	JS..	416	54.01.0021	see note 3.	
IC..	102	50.06.0541	74 LS 541 Octal Buffer/Line Driver	Mot,Ti	JS..	504	54.01.0021	see note 4.	
IC..	103	50.06.1645	74LS645-1 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA	JS..	510	54.01.0021	see note 4.	
IC..	106	50.16.0127	68 HC 000 16 Bit CPU 10 Mhz	Ph,Hi,Mot	JS..	516	54.01.0021	see note 4.	
01 IC..	107	50.17.0541	74HCT 541 Octal Buffer/Line Driver	Fc,RCA	JS..	510	54.01.0021	see note 4.	
01 IC..	108	50.17.0645	74HCT 645 Octal Bus Transceiver	Fc,RCA	JS..	604	54.01.0021	see note 4.	
IC..	110	50.16.0125	DMA 68450 Direct-Memory-Access Controller 10 Mhz	Hi,Mot	JS..	607	54.01.0021	see note 4.	
IC..	111	50.17.0573	74HCT 573 Octal D-Type Latch	Mot,Ph,TI,NS,RCA	JS..	616	54.01.0021	see note 6.	
IC..	112	50.17.0645	74HCT 645 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA	JS..	701	54.01.0021	see note 4.	
IC..	115	50.17.7008	74 ACT 08 Quad 2-Input AND Gate	Fc,RCA	JS..	704	54.01.0021	see note 3A.	
IC..	116	50.15.0104	MC 3486 Quad Line Receiver RS 422/423	Mot,TI	JS..	803	54.01.0021	see note 4.	
IC..	118	50.17.7008	74 ACT 08 Quad 2-Input AND Gate	Fc,RCA	JS..	804	54.01.0021	see note 4.	
IC..	205	50.17.1074	74 HC 74 Dual D-Type FF w/Preset & Clear	Fc,RCA	L....	17	62.01.0115	Wide-Band Choke	
IC..	215	50.17.7004	74 ACT 04 Quad 2-Input NAND Gate	Fc,RCA	P....	1	54.01.0354	3*32 pins Eurocard-Connector	
IC..	216	50.17.1004	74 HC 04 Hex Inverter	Mot,Ph,TI,To,RCA	P....	2	54.01.0354	3*32 pins Eurocard-Connector	
IC..	218	50.17.7004	74 ACT 04 Quad 2-Input NAND Gate	Fc,RCA	P....	3	.	2*10 pins see note 7.	
IC..	301	50.06.1645	74LS645-1 Octal Bus Transceiver	Nat,TI	P....	4	.	2*13 pins see note 8.	
IC..	302	50.17.1541	74 HC 541 Octal Buffer/Line Driver	Fc,RCA	P....	100	.	1*12 pins see note 1.	
IC..	303	50.06.0684	74 LS 684 8-Bit Magnitude Comparator	Mot,TI	P....	104	.	1*12 pins see note 1.	
IC..	307	50.17.1541	74 HC 541 Octal Buffer/Line Driver	Fc,RCA	P...700	.	.	1*12 pins see note 1.	
01 IC..	308	50.17.0541	74HCT 541 Octal Buffer/Line Driver	Fc,RCA	P...704	.	.	1*12 pins see note 1.	
IC..	311	50.17.0573	74HCT 573 Octal D-Type Latch	Mot,Ph,TI,NS,RCA	R....	1	57.11.3101	100 1%, 0207 , MF	
IC..	312	50.17.0645	74HCT 645 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA	RZ..	109	57.88.4103	8 * 10k 2%, SIP9	
IC..	315	50.63.0200	SAB82525N High-Level Ser. Com. Ctr.	see note 2 Sie	RZ..	110	57.88.4103	8 * 10k 2%, SIP9	
IC..	316	50.17.1011	74 HC 11 Triple 3-Input Positive AND Gate		RZ..	113	57.88.4103	8 * 10k 2%, SIP9	
IC..	401	50.17.7032	74 ACT 32 Quad 2-Input NOR Gate	Fc,RCA	RZ..	204	57.80.4001	8*330/470 2%, SIP10	
IC..	402	50.06.0541	74 LS 541 not tipped		RZ..	209	57.88.4103	8 * 10k 2%, SIP9	
IC..	403	50.06.1641	74LS641-1 not tipped		RZ..	210	57.88.4103	8 * 10k 2%, SIP9	
IC..	405	50.17.7164	74ACT 164 8 Bit SI/PO Shift Register	Fc,RCA					
IC..	407	50.06.0541	74 LS 541 Octal Buffer/Line Driver	Mot,TI					
01 IC..	408	50.17.0645	74HCT 645 Octal-Bus Transceiver	Fc,RCA					
IC..	411	50.17.0645	74HCT 645 Octal Bus Transceiver	Mot,Ph,TI,NS,RCA					



HDLC CONTROLLER

1.990.940.20

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
----	---------	------------	------------------	--------------

RZ.	.306	57.88.4103	8 * 10k	2%, SIP9
RZ.	.309	57.88.4103	8 * 10k	2%, SIP9
RZ.	.310	57.88.4103	8 * 10k	2%, SIP9
RZ.	.312	57.88.2101	4 * 100	2%, SIP8
RZ.	.318	57.88.2101	4 * 100	2%, SIP8

RZ.	.406	57.88.4103	8 * 10k	2%, SIP9
RZ.	.409	57.88.4332	8 * 3.3k	2%, SIP9

RZ.	.607	57.88.2103	4 * 10k	2%, SIP8
RZ.	.619	57.88.4103	8 * 10k	2%, SIP9

RZ.	.704	57.88.4103	8 * 10k	2%, SIP9
RZ.	.707	57.88.4103	8 * 10k	2%, SIP9
RZ.	.712	57.88.4102	8 * 1k	2%, SIP9

RZ.	.812	57.88.4103	8 * 10k	2%, SIP9
-----	------	------------	---------	----------

RZ.	.919	57.88.3331	8 * 330	2%, DIL16
-----	------	------------	---------	-----------

SZ.	.900	55.01.0164	4 * A	DIL Switch
-----	------	------------	-------	------------

Y...105 89.01.1805 20 Mhz Quartz Oscillator
Each one of devices IC106 (68HC000) and IC110 (DMA 68450) is plugged into 2 * 32 pcs. Socket Strips (# 53.03.0218).

Note 1: The 512k SRAM-Module Board is plugged into 4 sockets: P100; P104; P700; P704. Each socket consists of 1 * 12 pcs. Socket Strip # 53.03.0218.

Note 2: The device IC315 consists of 1 pc. SAB 82 525-N tipped on the PLCC 44-Wrap Adapter # 1.990.941-00. It is plugged into the HDLC Controller Board # 1.990.940-20 using 4 * 11 pcs. Socket Strip # 53.03.0218.

Note 3: The Jumper consists of 2 pcs. Front Pin (# 1.010.027.54).

Note 3A: The Jumper consists of 3 pcs. Front Pin (# 1.010.027.54).

Note 4: The Jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 2-of-3 pcs. Front Pin (# 1.010.027.54).

Note 5: The Jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 1-of-8 pairs (8 * 2 pcs.) Front Pin (# 1.010.027.54).

Note 6: The Jumper consists of 1 pc. Bridge Connector (# 54.01.0021) plugged into 1-of-4 pairs (4 * 2 pcs.) Front Pin (# 1.010.027.54).

Note 7: P3 consists of 2 * 10 pcs. Front Pin (# 1.010.027.54).

Note 8: P4 consists of 2 * 13 pcs. Front Pin (# 1.010.027.54).

Index (01) : - IC107, IC308, 74 HC 541, # 50.17.1541, are replaced by (10.09.90) 74 HCT 541, # 50.17.0541.
- IC108, IC408, 74 HC 645, # 50.17.1645, are replaced by 74 HCT 645, # 50.17.0645.
- C273, C373, 0.068uF, # 59.99.1200, and IC136, 74 HC 11, # 50.17.1011, are added to the board.

Suffix .21 : -IC606 & IC806 are programmed with the new software (03.06.91) # 1.990.998.21.

Suffix .30 : -IC606 & IC806 are programmed with the new software (04.03.92) # 1.990.998.30.

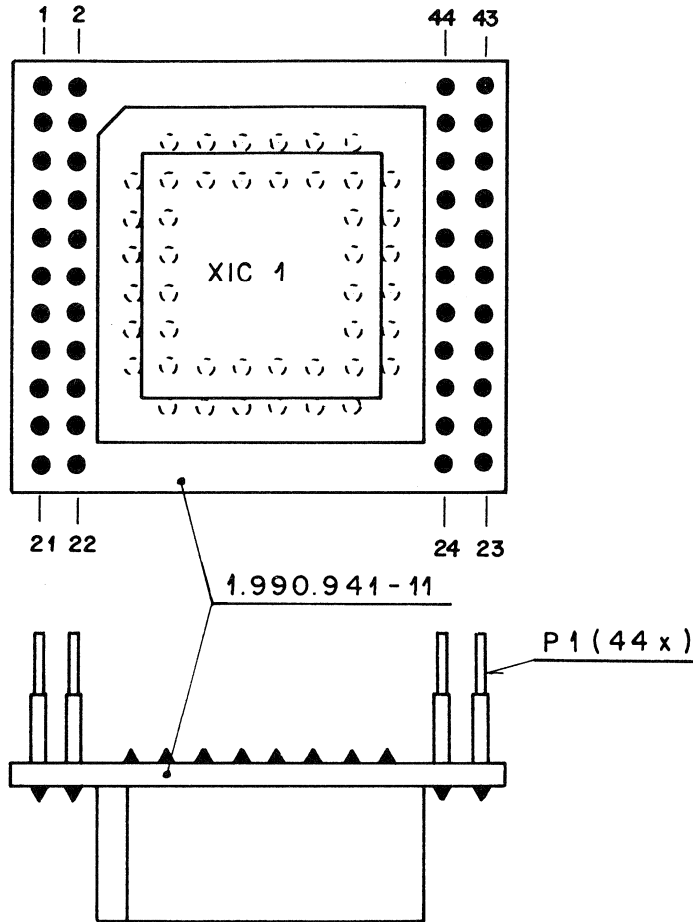
EL = Electrolytic, PEPT = Polyester, PE = Poliaethylen

Manufacturers: Fc = Fairchild
Hi = Hitachi
Mot = Motorola
NS = National Semiconductors
Ph = Phillips (incl. Valvo)
RCA = RCA Corporation
SGS = SGS Microelettronica spa
Sie = Siemens
Sig = Signetics
St = Studer
TI = Texas Instruments
To = Toshiba

1.990.940.20	HDLC CONTROLLER	CM90/09/1001
1.990.940.21	HDLC CONTROLLER	CM91/06/0321
1.990.940.30	HDLC CONTROLLER	CM92/04/0330

PLCC 44-WRAP ADAPTER

1.990.941.00



28.11.89 12.11.11 1.990.941-00 REGISDORF ZÜRICH	PLCC 44-WRAP ADAPTER	1.990.941-00
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Ad . .POS. . .REF.No. . .DESCRIPTION. . .MANUFACTURER

XIC...1 53.03.2244 IC-Socket PLCC 44 Pins
 P....1 53.03.0251 44 pins see note St

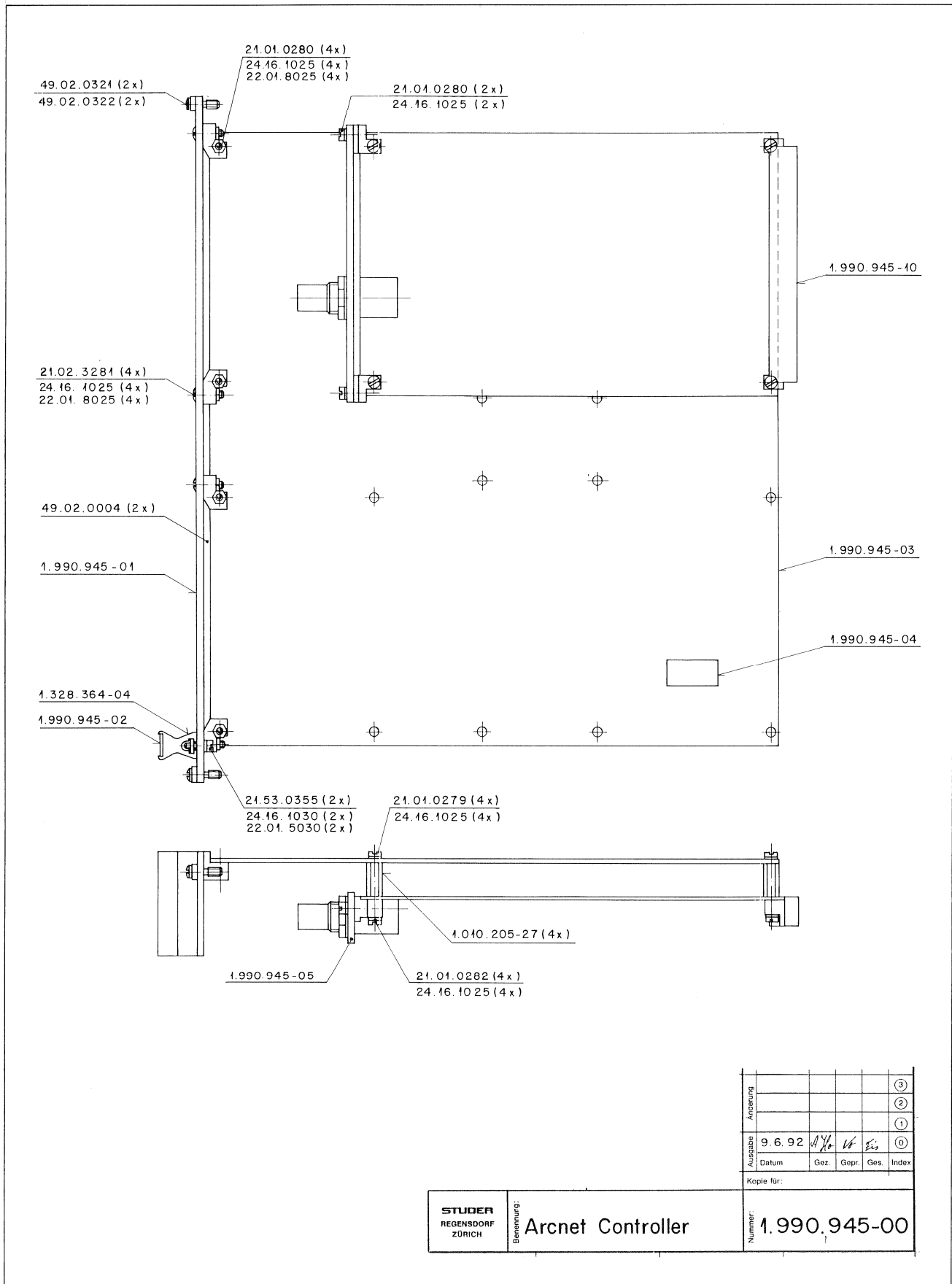
note: connector P1 consists of 44 pcs. one row contact-strip
 # 53.03.0251 (1 pin = 1 pc.).

MANUFACTURER : St=Studer

1.990.941-00 PLCC 44-WRAP ADAPTER DAW88/12/1200

ARCNET CONTROLLER

1.990.945.00

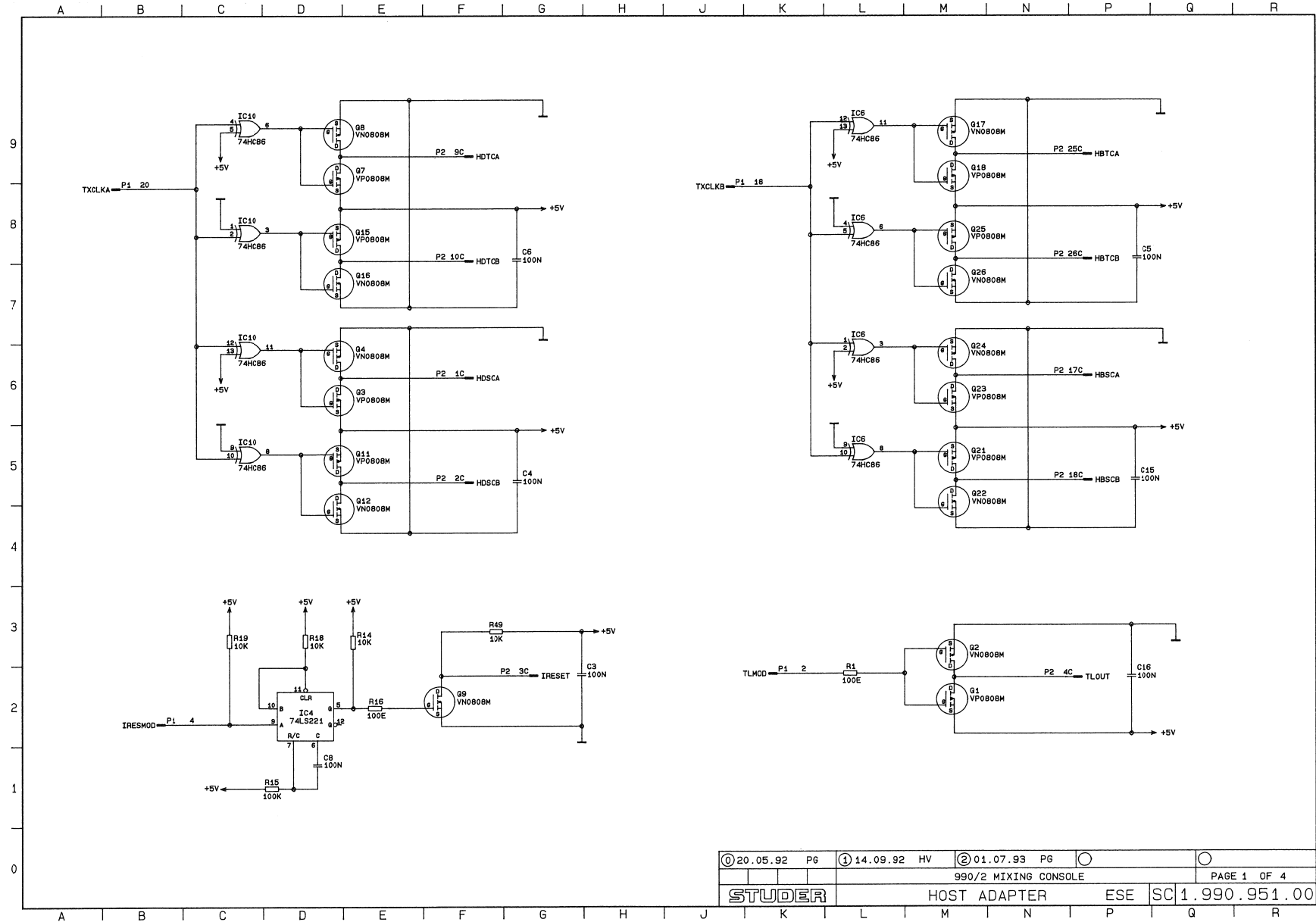


Ausgabe	Änderung					③
						②
						①
	Datum	9.6.92	<i>AK</i>	<i>VK</i>	<i>ES</i>	①
Kopie für:						

STUDER REGENSDORF ZÜRICH	Bezeichnung: Arcnet Controller	Nummer: 1.990.945-00

HOST ADAPTER

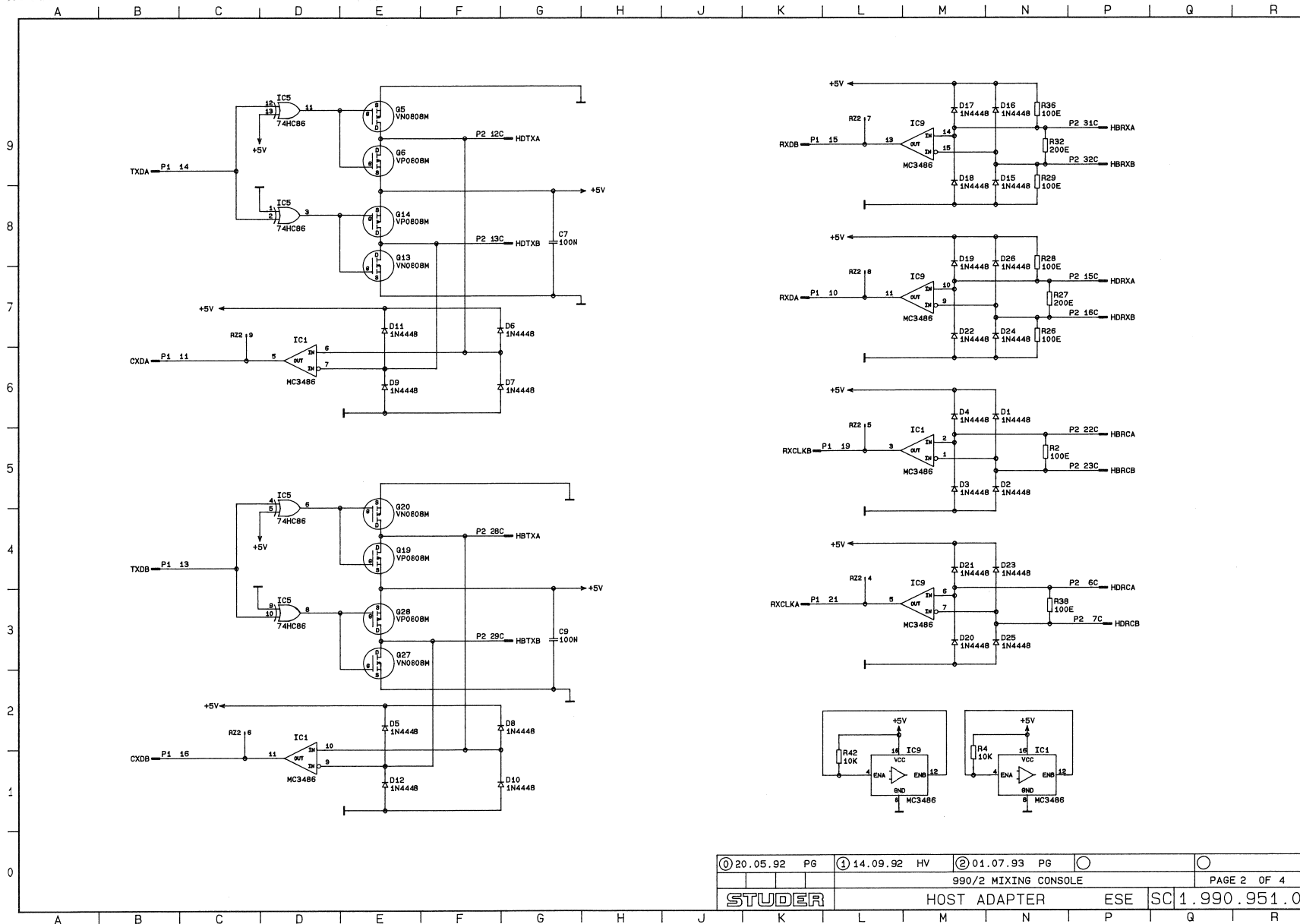
1.990.951.00



① 20.05.92 P6	① 14.09.92 HV	② 01.07.93 P6	○
990/2 MIXING CONSOLE			
PAGE 1 OF 4			
STUDER		HOST ADAPTER	ESE SC 1.990.951.00

HOST ADAPTER

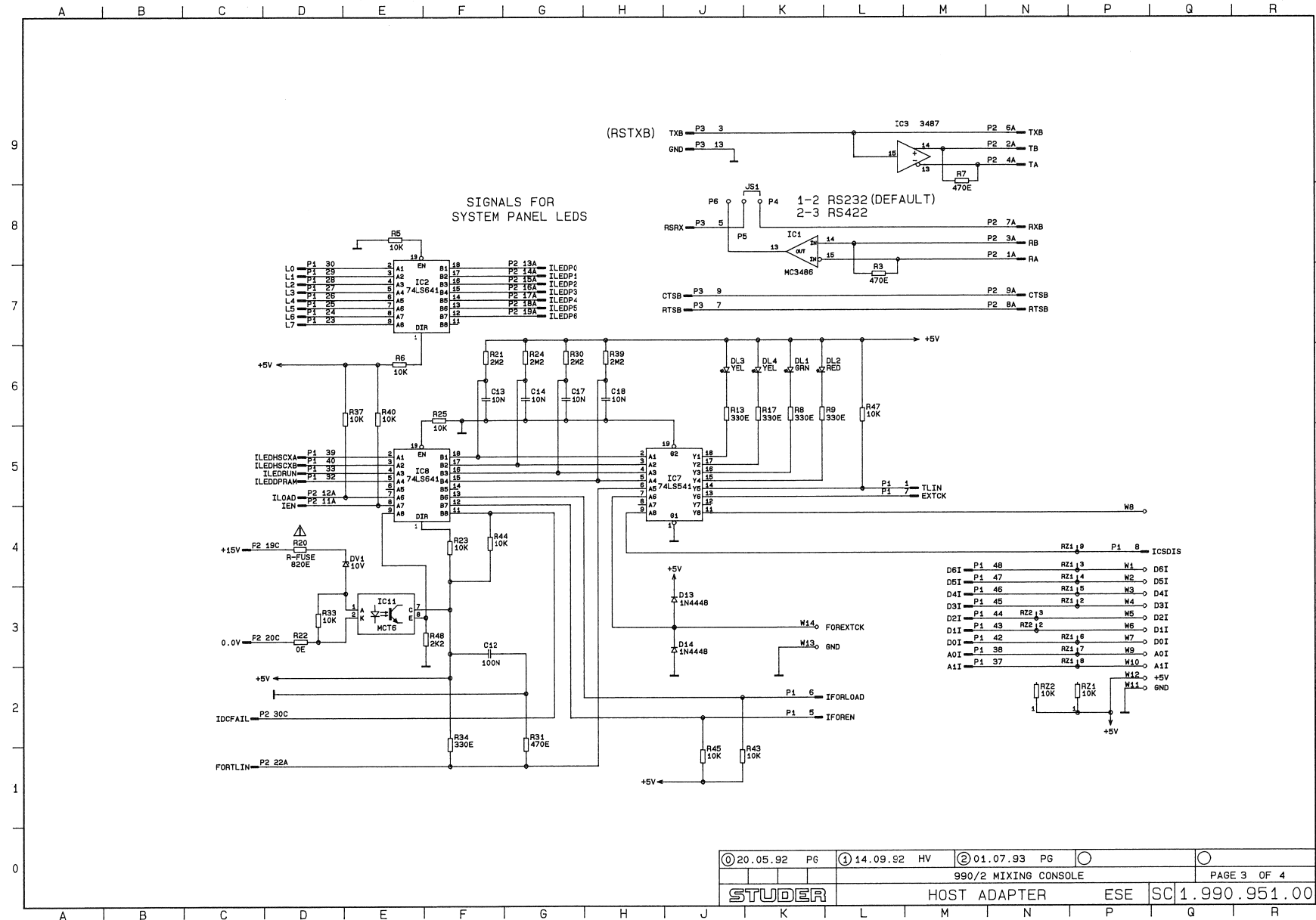
1.990.951.00



© 20.05.92 PG	① 14.09.92 HV	② 01.07.93 PG	○	○
990/2 MIXING CONSOLE				
STUDER		HOST ADAPTER	ESE	SC 1.990.951.00

HOST ADAPTER

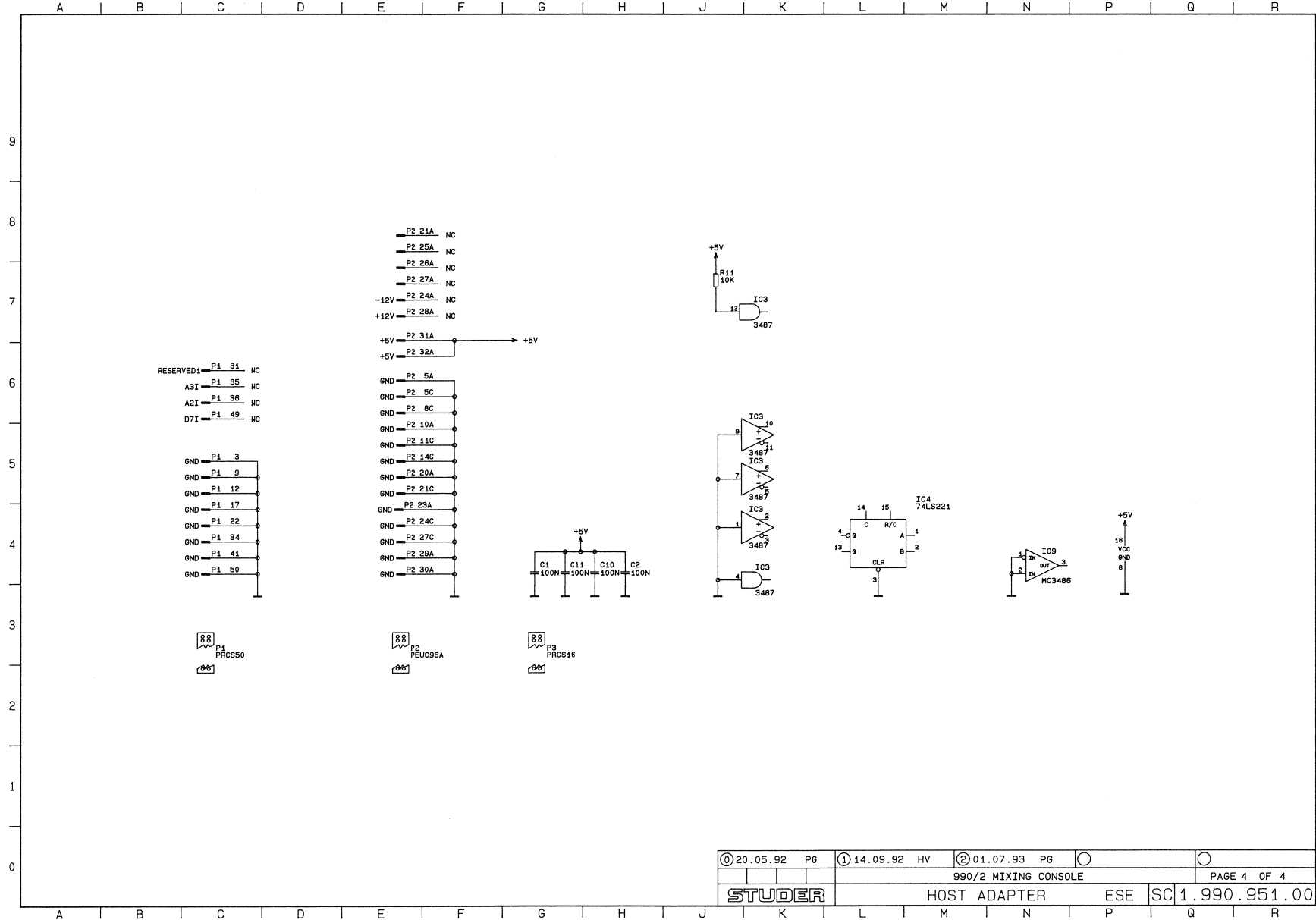
1.990.951.00



© 20.05.92 P6	① 14.09.92 HV	② 01.07.93 P6	○
990/2 MIXING CONSOLE			PAGE 3 OF 4
STUDER		HOST ADAPTER	ESE SC 1.990.951.00

HOST ADAPTER

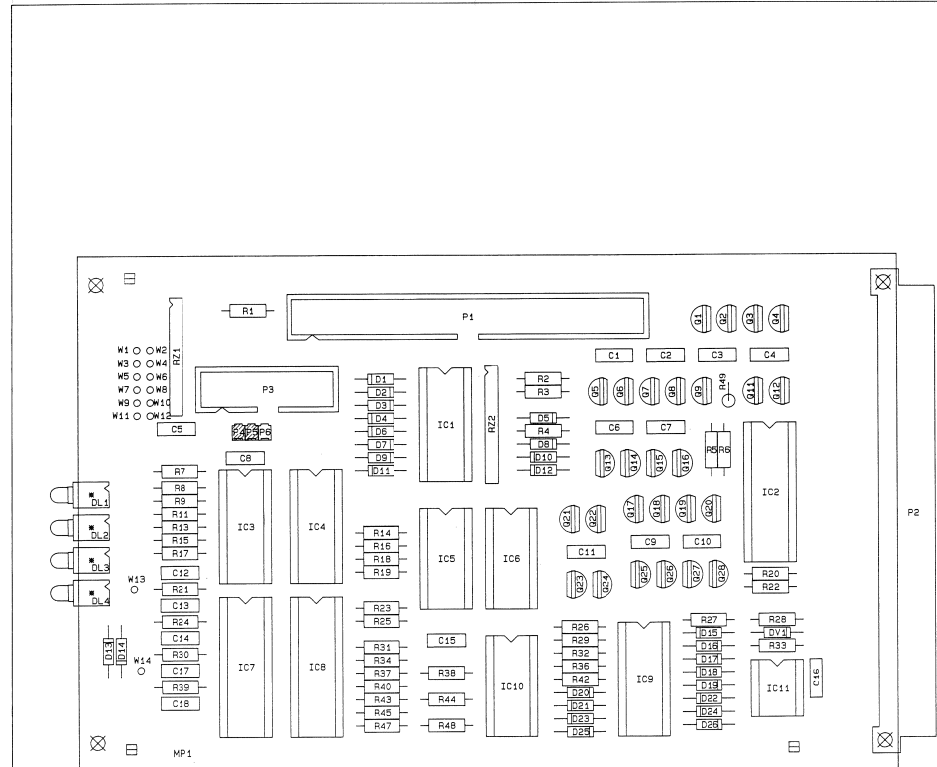
1.990.951.00



① 20.05.92 P6	① 14.09.92 HV	② 01.07.93 P6	○
990/2 MIXING CONSOLE			
STUDER		HOST ADAPTER	ESE SC 1.990.951.00

HOST ADAPTER

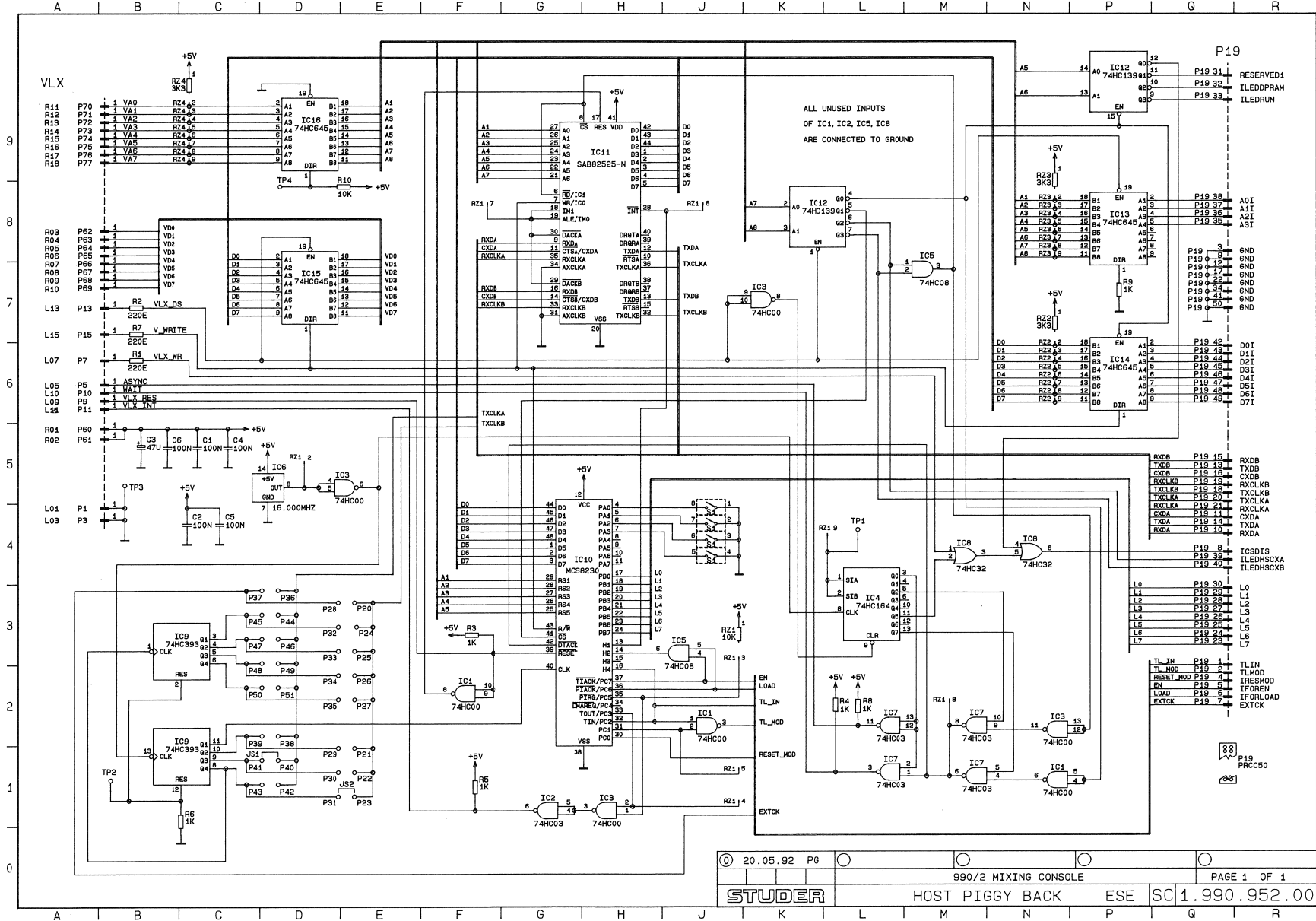
1.990.951.00



Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF. No.	DESCRIPTION	MANUFACTURER
C	1	59.06.0104	100n	10 %	63V	Q	23	50.03.1554	VPO808M
C	2	59.06.0104	100n	10 %	63V	Q	24	50.03.1505	VNO808M
C	3	59.06.0104	100n	10 %	63V	Q	25	50.03.1554	VPO808M
C	4	59.06.0104	100n	10 %	63V	Q	26	50.03.1505	VNO808M
C	5	59.06.0104	100n	10 %	63V	Q	27	50.03.1505	VNO808M
C	6	59.06.0104	100n	10 %	63V	Q	28	50.03.1554	VPO808M
C	7	59.06.0104	100n	10 %	63V	R	1	57.11.3101	100E
C	8	59.06.0104	100n	10 %	63V	R	2	57.11.3101	100E
C	9	59.06.0104	100n	10 %	63V	R	3	57.11.3471	470E
C	10	59.06.0104	100n	10 %	63V	R	4	57.11.3103	10K
C	11	59.06.0104	100n	10 %	63V	R	5	57.11.3103	10K
C	12	59.06.0104	100n	10 %	63V	R	6	57.11.3103	10K
C	13	59.06.0103	10n	10 %	63V	R	7	57.11.3471	470E
C	14	59.06.0103	10n	10 %	63V	R	8	57.11.3331	330E
C	15	59.06.0104	100n	10 %	63V	R	9	57.11.3331	330E
C	16	59.06.0104	100n	10 %	63V	R	11	57.11.3103	10K
C	17	59.06.0103	10n	10 %	63V	R	13	57.11.3331	330E
C	18	59.06.0103	10n	10 %	63V	R	14	57.11.3103	10K
D	1	50.04.0125	1M4448	DO35, RECTIFIER		R	15	57.11.3104	100K
D	2	50.04.0125	1M4448	DO35, RECTIFIER		R	16	57.11.3101	100E
D	3	50.04.0125	1M4448	DO35, RECTIFIER		R	17	57.11.3331	330E
D	4	50.04.0125	1M4448	DO35, RECTIFIER		R	18	57.11.3103	10K
D	5	50.04.0125	1M4448	DO35, RECTIFIER		R	19	57.11.3103	10K
D	6	50.04.0125	1M4448	DO35, RECTIFIER		R	20	57.19.0821	820E
D	7	50.04.0125	1M4448	DO35, RECTIFIER		R	21	57.11.5225	2M2
D	8	50.04.0125	1M4448	DO35, RECTIFIER		R	22	57.19.0821	820E
D	9	50.04.0125	1M4448	DO35, RECTIFIER		R	23	57.11.3000	10K
D	10	50.04.0125	1M4448	DO35, RECTIFIER		R	24	57.11.3103	10K
D	11	50.04.0125	1M4448	DO35, RECTIFIER		R	25	57.11.5225	2M2
D	12	50.04.0125	1M4448	DO35, RECTIFIER		R	26	57.11.3103	10K
D	13	50.04.0125	1M4448	DO35, RECTIFIER		R	27	57.11.3101	100E
D	14	50.04.0125	1M4448	DO35, RECTIFIER		R	28	57.11.3201	200E
D	15	50.04.0125	1M4448	DO35, RECTIFIER		R	29	57.11.3101	100E
D	16	50.04.0125	1M4448	DO35, RECTIFIER		R	30	57.11.3101	100E
D	17	50.04.0125	1M4448	DO35, RECTIFIER		R	31	57.11.5225	2M2
D	18	50.04.0125	1M4448	DO35, RECTIFIER		R	32	57.11.3471	470E
D	19	50.04.0125	1M4448	DO35, RECTIFIER		R	33	57.11.3201	200E
D	20	50.04.0125	1M4448	DO35, RECTIFIER		R	34	57.11.3103	10K
D	21	50.04.0125	1M4448	DO35, RECTIFIER		R	35	57.11.3331	330E
D	22	50.04.0125	1M4448	DO35, RECTIFIER		R	36	57.11.3101	100E
D	23	50.04.0125	1M4448	DO35, RECTIFIER		R	37	57.11.3103	10K
D	24	50.04.0125	1M4448	DO35, RECTIFIER		R	38	57.11.3101	100E
D	25	50.04.0125	1M4448	DO35, RECTIFIER		R	39	57.11.5225	2M2
D	26	50.04.0125	1M4448	DO35, RECTIFIER		R	40	57.11.3103	10K
DL	1	50.04.2751	GRN,	10MA		R	42	57.11.3103	10K
DL	2	50.04.2750	RED,	10MA		R	43	57.11.3103	10K
DL	3	50.04.2752	YEL,	10MA		R	44	57.11.3331	330E
DL	4	50.04.2752	YEL,	10MA		R	45	57.11.3103	10K
DL	5	50.04.2752	YEL,	10MA		R	46	57.11.3471	470E
DW	1	50.04.1119	15V	5 %	0.5W,	DO35,	ZENER		
DW	1	50.04.1114	10V	5 %	0.5W,	DO35,	ZENER		
IC	1	50.15.0104	MC3486	DI16,	QUAD LINE REC. RS422/423				
IC	2	50.06.1641	74LS641	DI20,	OCTAL BUS TRANSCIVER				
IC	3	50.15.0105	3487	DI16,	QUAD LINE DRIVER RS422				
IC	4	50.06.0221	74LS221	DI16,	QUAD MONOST. MULTIVIBRATOR				
IC	5	50.17.1086	74HC86	DI14,	QUAD 2-INPUT EXOR2 GATE				
IC	6	50.17.1086	74HC86	DI14,	QUAD 2-INPUT EXOR2 GATE				
IC	7	50.06.0541	74LS541	DI20,	OCTAL BUS BUFFER				
IC	8	50.06.1641	74LS641	DI20,	OCTAL BUS TRANSCIVER				
IC	9	50.15.0104	MC3486	DI16,	QUAD LINE REC. RS422/423				
IC	10	50.17.1086	74HC86	DI14,	QUAD 2-INPUT EXOR2 GATE				
IC	11	50.99.0111	MCT6	DI108,	OPTOCOUPLER				
J	1	54.01.0021	JUMPER						
MP	1	1.990.951.11	EMPTY PCB						
MP	2	43.01.0108	ESE STICKER						
MP	3	1.990.951.04	NUMBER ETIQUETTE						
P	1	54.14.2005	50-P	STR.,	MALE, RIBBON-CABLE-PLUG				
P	2	54.01.0358	96P	MALE,	ANGLE				
P	3	54.14.2002	16-P	STR.,	MALE, RIBBON-CABLE-PLUG				
P	4	54.01.0020	1-P	STR.,	MALE, P-STRIP AU 8MM				
P	5	54.01.0020	1-P	STR.,	MALE, P-STRIP AU 8MM				
P	6	54.01.0020	1-P	STR.,	MALE, P-STRIP AU 8MM				
Q	1	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	2	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	3	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	4	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	5	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	6	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	7	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	8	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	9	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	10	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	10	-	-	-	-	-	-	not used	
Q	11	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	12	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	13	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	14	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	15	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	16	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	17	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	18	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	19	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	20	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
Q	21	50.03.1554	VPO808M	PFET,	TO237,	MOS	80V		
Q	22	50.03.1505	VNO808M	NFET,	TO237,	MOS	80V		
R	1	57.11.3101	100E	1 %	0.3W,		MF		
R	2	57.11.3101	100E	1 %	0.3W,		MF		
R	3	57.11.3471	470E	1 %	0.3W,		MF		
R	4	57.11.3103	10K	1 %	0.3W,		MF		
R	5	57.11.3103	10K	1 %	0.3W,		MF		
R	6	57.11.3103	10K	1 %	0.3W,		MF		
R	7	57.11.3471	470E	1 %	0.3W,		MF		
R	8	57.11.3331	330E	1 %	0.3W,		MF		
R	9	57.11.3331	330E	1 %	0.3W,		MF		
R	11	57.11.3103	10K	1 %	0.3W,		MF		
R	13	57.11.3331	330E	1 %	0.3W,		MF		
R	14	57.11.3103	10K	1 %	0.3W,		MF		
R	15	57.11.3104	100K	1 %	0.3W,		MF		
R	16	57.11.3101	100E	1 %	0.3W,		MF		
R	17	57.11.3331	330E	1 %	0.3W,		MF		
R	18	57.11.3103	10K	1 %	0.3W,		MF		
R	19	57.11.3103	10K	1 %	0.3W,		MF		
R	20	57.19.0821	820E	5 %	0.3W,		R-FUSE	/1\	
R	21	57.11.5225	2M2	5 %	0.3W,		MF		
R	22	57.19.0821	820E	5 %	0.3W,		R-FUSE	/1\	
R	23	57.11.3103	10K	1 %	0.3W,		MF		
R	24	57.11.5225	2M2	5 %	0.3W,		MF		
R	25	57.11.3103	10K	1 %	0.3W,		MF		
R	26	57.11.3103	10K	1 %	0.3W,		MF		
R	27	57.11.3201	200E	1 %	0.3W,		MF		
R	28	57.11.3101	100E	1 %	0.3W,		MF		
R	29	57.11.3101	100E	1 %	0.3W,		MF		
R	30	57.11.5225	2M2	5 %	0.3W,		MF		
R	31	57.11.3471	470E	1 %	0.3W,		MF		
R	32	57.11.3201	200E	1 %	0.3W,		MF		
R	33	57.11.3103	10K	1 %	0.3W,		MF		
R	34	57.11.3331	330E						

HOST PIGGY BACK

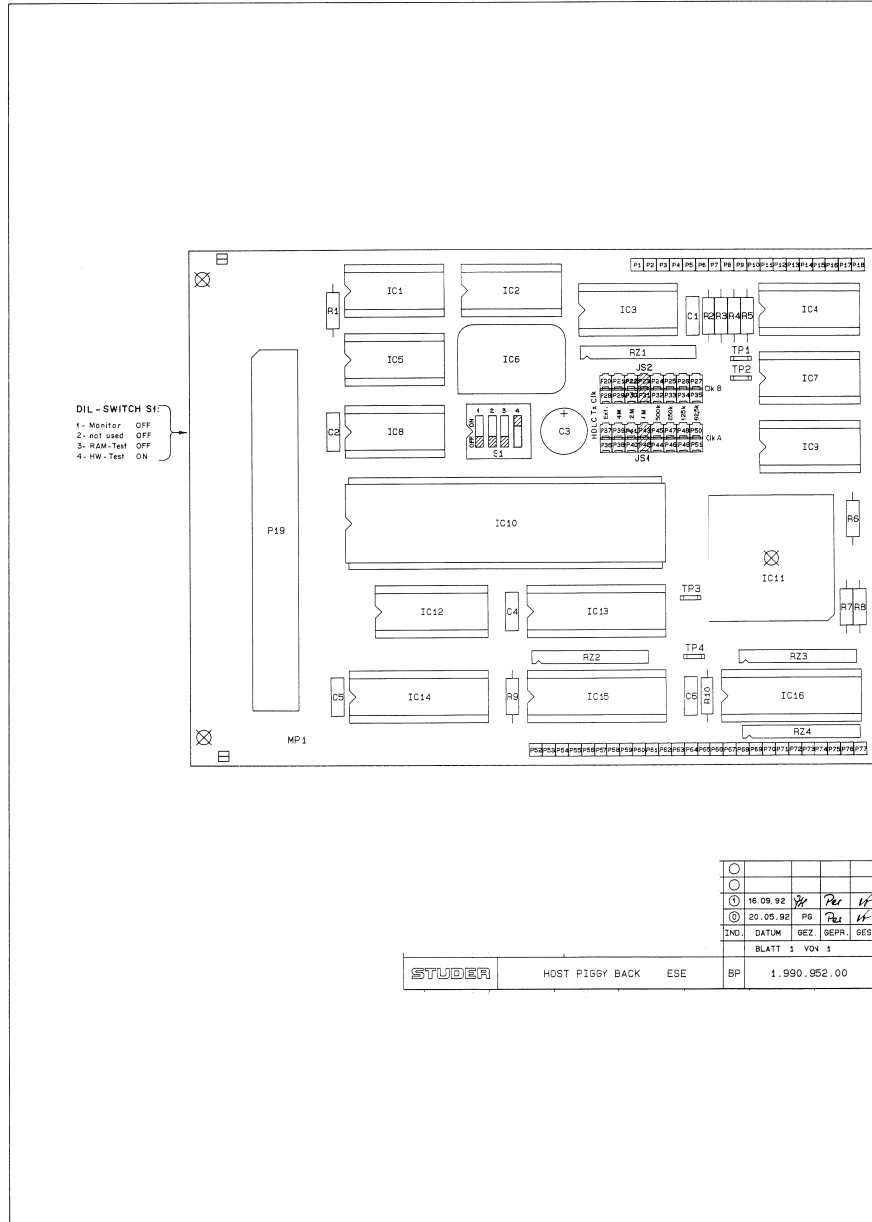
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HOST PIGGY BACK



1.990.952.00

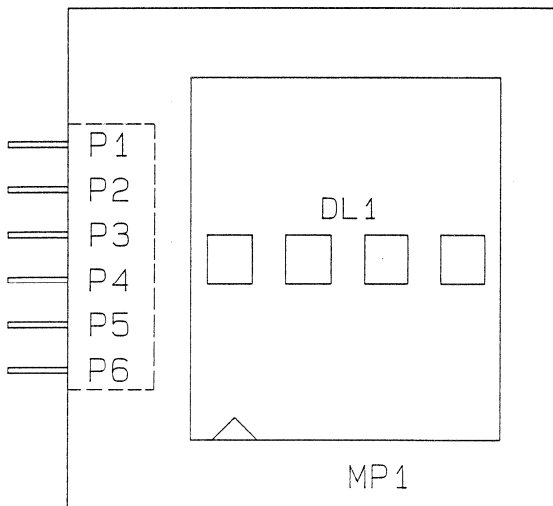
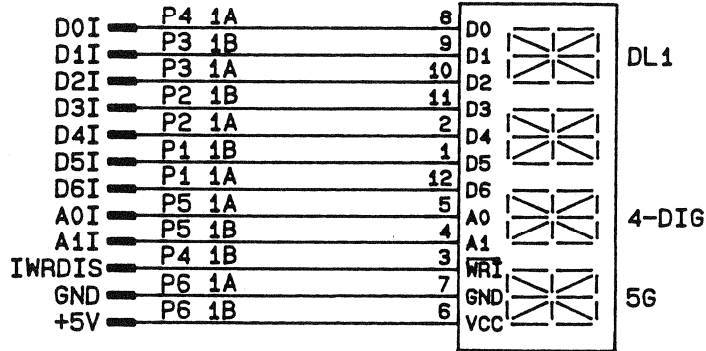


Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C...	1	59.06.0104	100n	10 %, 63V	P...	71	54.99.0360	1-P	STR., MALE, SOLDER PLUG
C...	2	59.06.0104	100n	10 %, 63V	P...	72	54.99.0360	1-P	STR., MALE, SOLDER PLUG
C...	3	59.22.4470	47u	20%50 %, 16V	P...	73	54.99.0360	1-P	STR., MALE, SOLDER PLUG
C...	4	59.06.0104	100n	10 %, 63V	P...	74	54.99.0360	1-P	STR., MALE, SOLDER PLUG
C...	5	59.06.0104	100n	10 %, 63V	P...	75	54.99.0360	1-P	STR., MALE, SOLDER PLUG
C...	6	59.06.0104	100n	10 %, 63V	P...	76	54.99.0360	1-P	STR., MALE, SOLDER PLUG
IC...	1	50.17.1000	74HC00	DIP14, QUAD 2-INPUT NAND GATE	P...	77	54.99.0360	1-P	STR., MALE, SOLDER PLUG
IC...	2	50.17.1003	74HC03	DIP14, QUAD 2-INPUT NAND GATE	R...	1	57.11.3221	220E	1 %, 0.6W, MF
IC...	3	50.17.1000	74HC00	DIP14, QUAD 2-INPUT NAND GATE	R...	2	57.11.3221	220E	1 %, 0.6W, MF
IC...	4	50.17.1164	74HC164	DIP14, 8BIT SI/PO SHIFT REGISTER	R...	3	57.11.3102	1k	1 %, 0.6W, MF
IC...	5	50.17.1008	74HC08	DIP14, QUAD 2-INPUT AND GATE	R...	4	57.11.3102	1k	1 %, 0.6W, MF
IC...	6	89.01.1800	16.000MHZ	Y-05C1	R...	5	57.11.3102	1k	1 %, 0.6W, MF
IC...	7	50.17.1003	74HC03	DIP14, QUAD 2-INPUT NAND GATE	R...	6	57.11.3102	1k	1 %, 0.6W, MF
IC...	8	50.17.1032	74HC32	DIP14, QUAD 2-INPUT OR GATE	R...	7	57.11.3221	220E	1 %, 0.6W, MF
IC...	9	50.17.1033	74HC393	DIP14, DUAL BINARY COUNTER	R...	8	57.11.3102	1k	1 %, 0.6W, MF
IC...	10	50.16.0150	MC68230-P8	DIP48, PARALLEL IF / TIMER	R...	9	57.11.3102	1k	1 %, 0.6W, MF
IC...	11	50.63.0200	SAB82525-N	PLCC44, HIGH LEVEL SER. COMM. CON	R...	10	57.11.3103	10k	1 %, 0.6W, MF
IC...	12	50.17.1139	74HC139	DIP16, DUAL 2 TO 4 LINE DECODER	RZ...	1	57.88.4103	10k	2 %, 0.125W, SIP09, 8 * 10K
IC...	13	50.17.1645	74HC645	DIP20, OCTAL BUS TRANSCIEVER	RZ...	2	57.88.4332	3k3	2 %, 0.125W, SIP09, 8 * 3K3
IC...	14	50.17.1645	74HC645	DIP20, OCTAL BUS TRANSCIEVER	RZ...	3	57.88.4332	3k3	2 %, 0.125W, SIP09, 8 * 3K3
IC...	15	50.17.1645	74HC645	DIP20, OCTAL BUS TRANSCIEVER	RZ...	4	57.88.4332	3k3	2 %, 0.125W, SIP09, 8 * 3K3
IC...	16	50.17.1645	74HC645	DIP20, OCTAL BUS TRANSCIEVER	S...	1	55.01.0164	4*a	100MA, 24V, DIL-SWITCH (4)
JS...	1	54.01.0021	JUMPER		TP...	1	54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8
JS...	2	54.01.0021	JUMPER		TP...	2	54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8
MP...	1	1.990.952.11	EMPTY PCB		TP...	3	54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8
MP...	2	43.01.0108	ESE STICKER		TP...	4	54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8
MP...	3	1.990.952.04	NUMBER ETIQUETTE		XIC...	1	53.03.0167	1-P	DIL14 SOCKET FOR IC1
P...	1	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	2	53.03.0167	1-P	DIL14 SOCKET FOR IC2
P...	2	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	3	53.03.0167	1-P	DIL14 SOCKET FOR IC3
P...	3	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	4	53.03.0167	1-P	DIL14 SOCKET FOR IC4
P...	4	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	5	53.03.0167	1-P	DIL14 SOCKET FOR IC5
P...	5	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	6	53.03.0167	1-P	DIL14 SOCKET FOR IC6
P...	6	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	7	53.03.0167	1-P	DIL14 SOCKET FOR IC7
P...	7	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	8	53.03.0167	1-P	DIL14 SOCKET FOR IC8
P...	8	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	9	53.03.0167	1-P	DIL14 SOCKET FOR IC9
P...	9	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	10	53.03.0218	1-P	DIL48 SOCKET FOR IC10 (48PCS)
P...	10	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	11	53.03.2244	1-P	PLCC44 SOCKET FOR IC11
P...	11	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	12	53.03.0168	1-P	DIL16 SOCKET FOR IC12
P...	12	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	13	53.03.0165	1-P	DIL20 SOCKET FOR IC13
P...	13	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	14	53.03.0165	1-P	DIL20 SOCKET FOR IC14
P...	14	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	15	53.03.0165	1-P	DIL20 SOCKET FOR IC15
P...	15	54.99.0360	1-P	STR., MALE, SOLDER PLUG	XIC...	16	53.03.0165	1-P	DIL20 SOCKET FOR IC16
P...	16	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	17	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	18	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	19	1.023.115.02	50-P	RIBBON-CABLE COMPLETE					
P...	20	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	21	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	22	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	23	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	24	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	25	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	26	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	27	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	28	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	29	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	30	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	31	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	32	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	33	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	34	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	35	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	36	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	37	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	38	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	39	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	40	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	41	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	42	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	43	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	44	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	45	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	46	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	47	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	48	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	49	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	50	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	51	54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...	52	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	53	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	54	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	55	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	56	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	57	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	58	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	59	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	60	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	61	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	62	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	63	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	64	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	65	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	66	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	67	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	68	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	69	54.99.0360	1-P	STR., MALE, SOLDER PLUG					
P...	70	54.99.0360	1-P	STR., MALE, SOLDER PLUG					

STUDER	HOST PIGGY BACK	ESE	BP	1.990.952.00
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DISPLAY BOARD

1.990.953.00

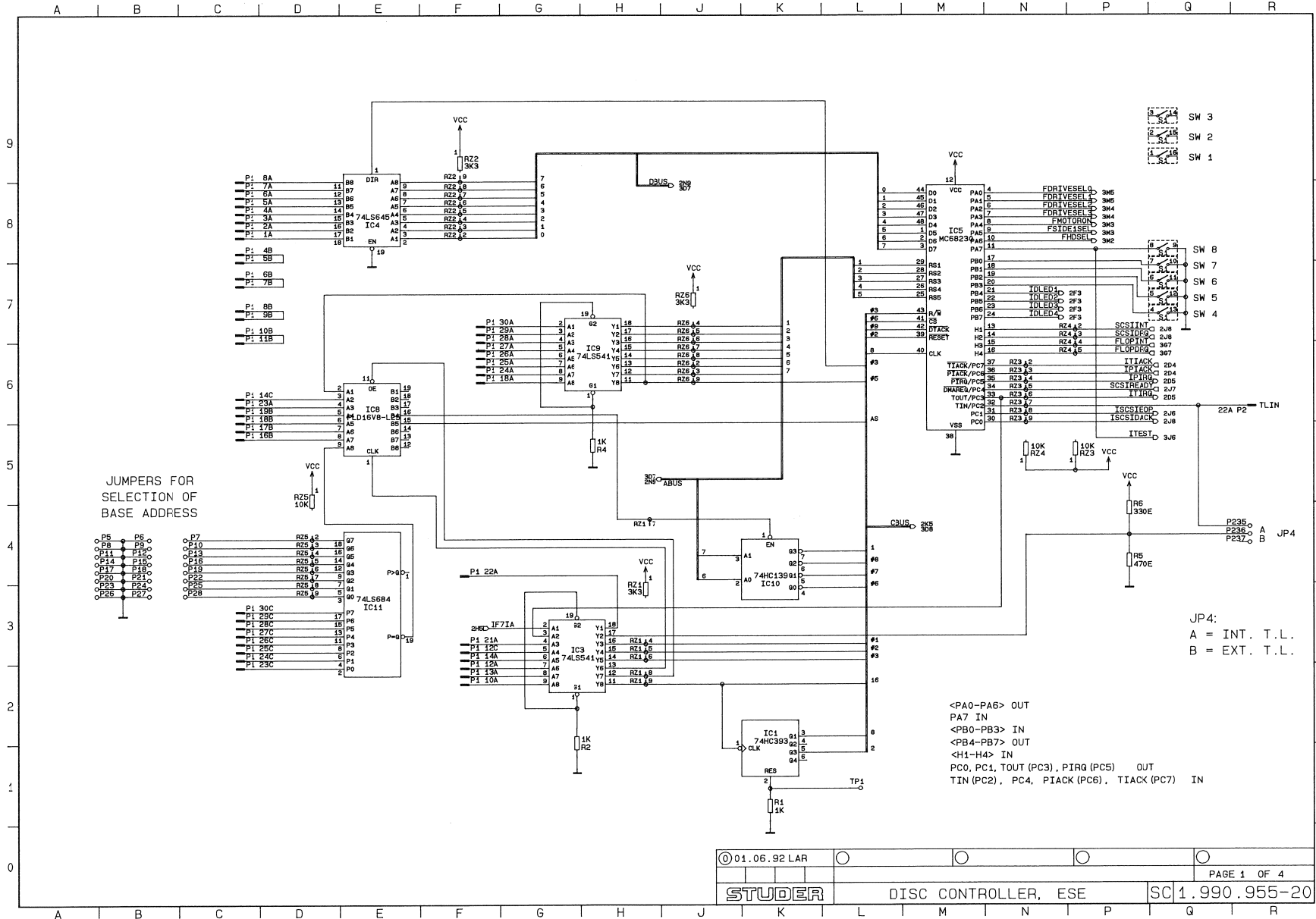


Ad	..POS..	..REF.No...	DESCRIPTION.....	MANUFACTURER
DL....1	73.01.0127		4-DIG 17-SEG, LED	
MP....1	1.990.953.11		Empty PCB	
MP....2	1.990.953.04		NR.-ETIKETTE 5 * 20	
P.....1	54.11.0130		2-P ANG., MALE, P-STRIP AU	
P.....2	54.11.0130		2-P ANG., MALE, P-STRIP AU	
P.....3	54.11.0130		2-P ANG., MALE, P-STRIP AU	
P.....4	54.11.0130		2-P ANG., MALE, P-STRIP AU	
P.....5	54.11.0130		2-P ANG., MALE, P-STRIP AU	
P.....6	54.11.0130		2-P ANG., MALE, P-STRIP AU	
			1.990.953-00 DISPLAY BOARD	MEL92/04/0700

© 07-04-92 PG				
990/2 MIXING CONSOLE			PAGE 1 OF 1	
STUDER	DISPLAY BOARD		SC	1.990.953.00

DISC CONTROLLER

1.990.955.20

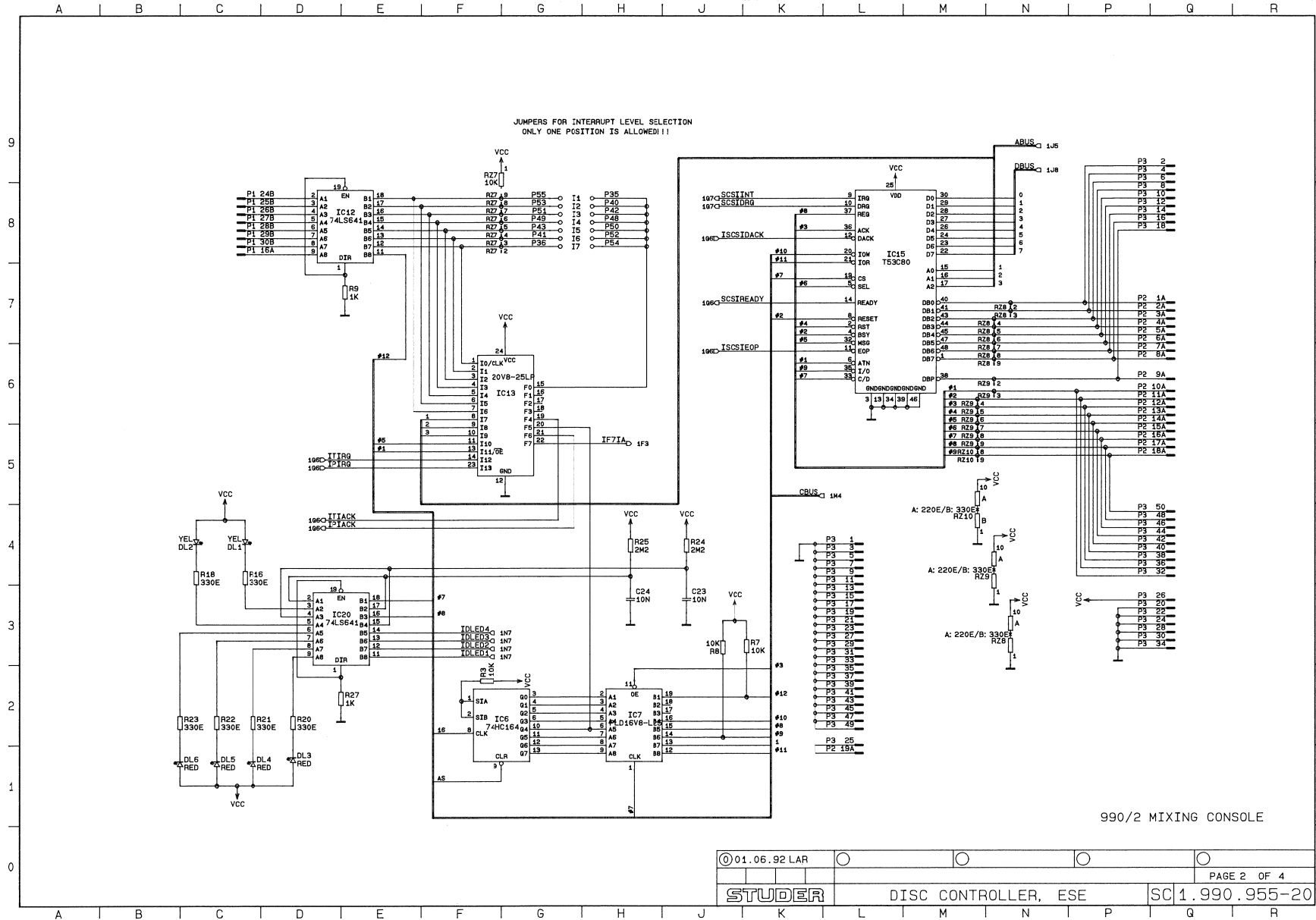


<PA0-PA6> OUT
 PA7 IN
 <PB0-PB3> IN
 <PB4-PB7> OUT
 <H1-H4> IN
 PC0, PC1, TOUT (PC3), PIRQ (PC5) OUT
 TIN (PC2), PC4, PIACK (PC6), TIACK (PC7) IN

JP4:
 A = INT. T.L.
 B = EXT. T.L.

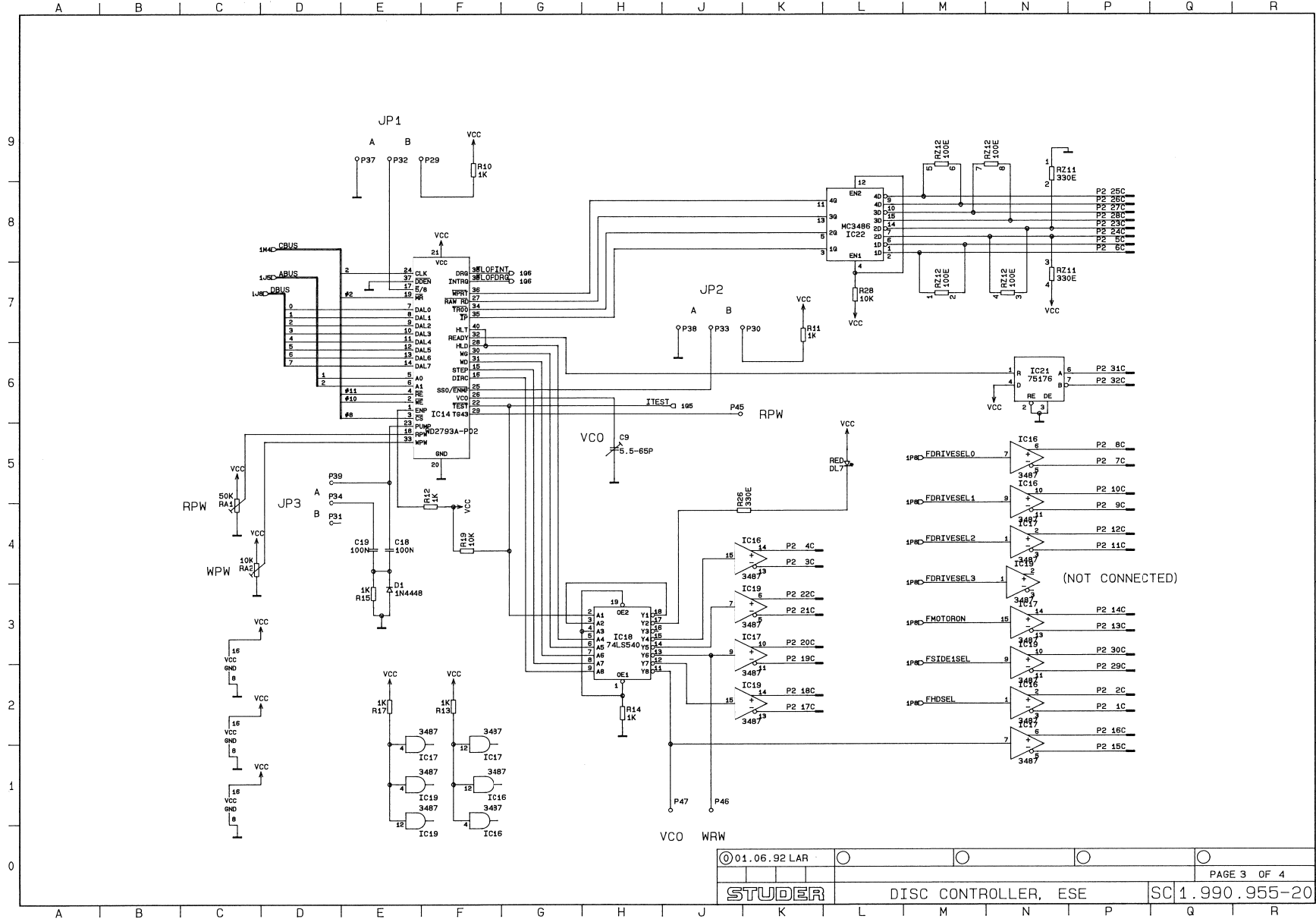
DISC CONTROLLER

1.990.955.20



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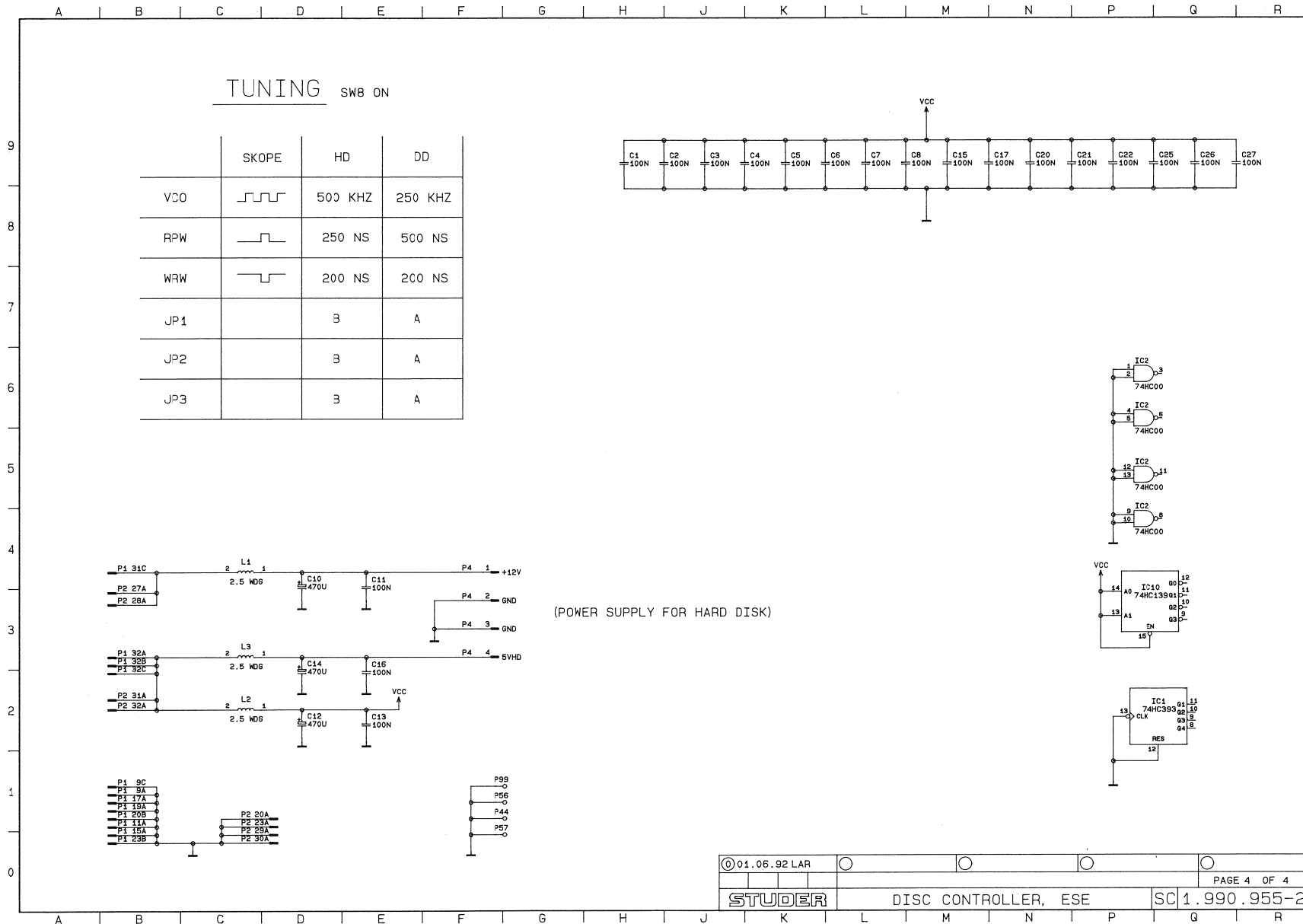
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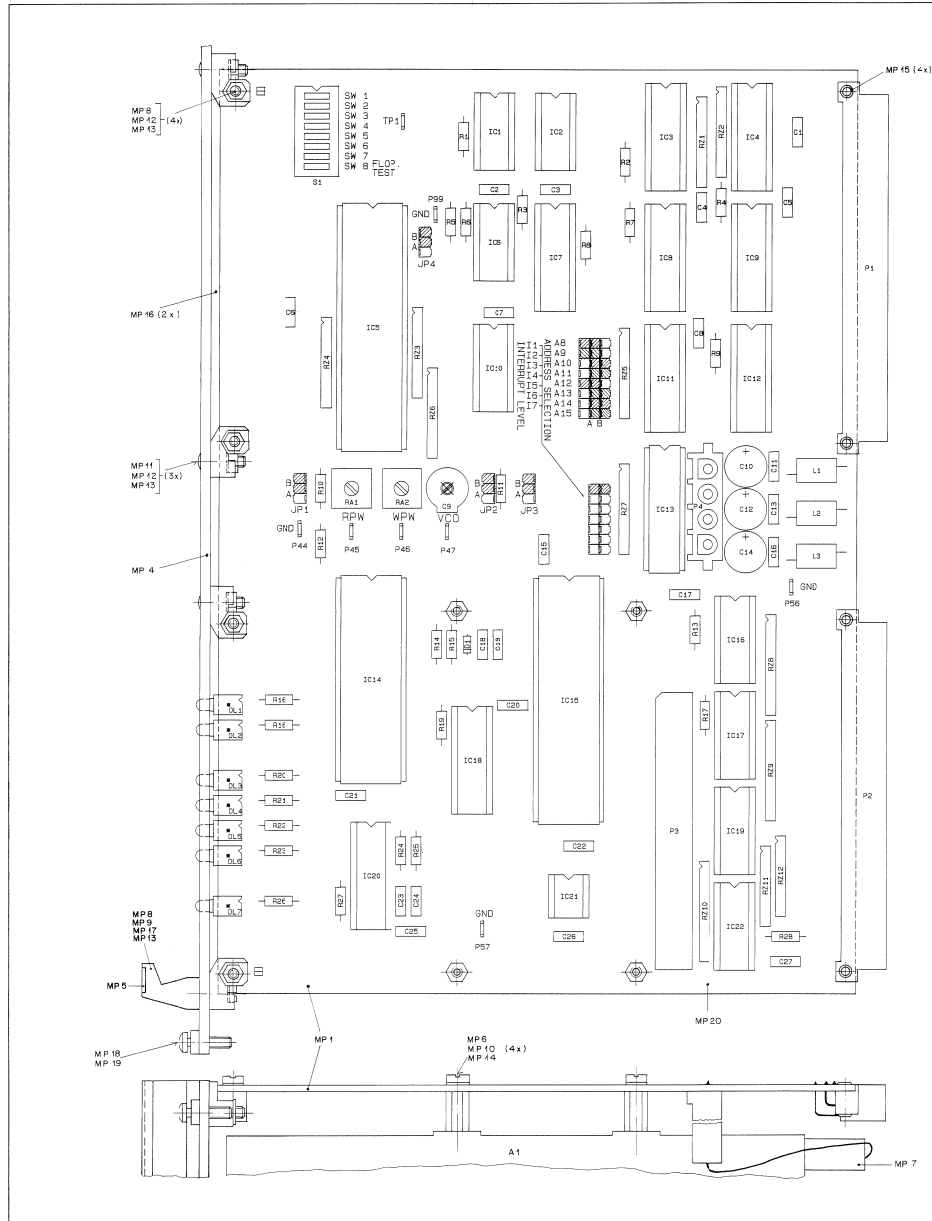


1.990.955.20



DISC CONTF

1.990.955.20



Ad	POS	REF. No	DESCRIPTION	MANUFACTURER
A1	89.20.0011	HARD DISK DRIVE 120 MB 3.5"	
C	....1	59.06.0104	100n 10 %	63V
C	....2	59.06.0104	100n 10 %	63V
C	....3	59.06.0104	100n 10 %	63V
C	....4	59.06.0104	100n 10 %	63V
C	....5	59.06.0104	100n 10 %	63V
C	....6	59.06.0104	100n 10 %	63V
C	....7	59.06.0104	100n 10 %	63V
C	....8	59.06.0104	100n 10 %	63V
C	....9	59.18.0102	5.5-65p C-TRIM	63V
C	....10	59.22.4471	470u -20/+50 %	16V
C	....11	59.06.0104	100n 10 %	63V
C	....12	59.22.4471	470u -20/+50 %	16V
C	....13	59.06.0104	100n 10 %	63V
C	....14	59.22.4471	470u -20/+50 %	16V
C	....15	59.06.0104	100n 10 %	63V
C	....16	59.06.0104	100n 10 %	63V
C	....17	59.06.0104	100n 10 %	63V
C	....18	59.06.0104	100n 10 %	63V
C	....19	59.06.0104	100n 10 %	63V
C	....20	59.06.0104	100n 10 %	63V
C	....21	59.06.0104	100n 10 %	63V
C	....22	59.06.0104	100n 10 %	63V
C	....23	59.06.0103	10n 10 %	63V
C	....24	59.06.0103	10n 10 %	63V
C	....25	59.06.0104	100n 10 %	63V
C	....26	59.06.0104	100n 10 %	63V
C	....27	59.06.0104	100n 10 %	63V
D	....1	50.04.0125	1N4448 DO35, RECTIFIER	
DL	....1	50.04.2752	YEL. 10MA	
DL	....2	50.04.2752	YEL. 10MA	
DL	....3	50.04.2750	RED. 10MA	
DL	....4	50.04.2750	RED. 10MA	
DL	....5	50.04.2750	RED. 10MA	
DL	....6	50.04.2750	RED. 10MA	
DL	....7	50.04.2750	RED. 10MA	
IC	....1	50.17.1393	74HC393 DIP14, DUAL BINARY COUNTER	
IC	....2	50.17.1000	74HC00 DIP14, QUAD 2-INPUT NAND GATE	
IC	....3	50.06.0541	74LS541 DIP20, OCTAL BUS TRANSCEIVER	
IC	....4	50.06.0645	74LS645 DIP20, OCTAL BUS TRANSCEIVER	
IC	....5	50.16.0150	MC68230-98 DIP40, PARALLEL 17-TIMER	
IC	....6	50.17.1164	74HC164 DIP14, 8BIT SI/PO SHIFT REGISTER	
IC	....7	50.18.0100	PLD16V8 DIP20, PROG. LOGIC DEVICE 8 IMP.	
IC	....8	50.18.0100	PLD16V8 DIP20, PROG. LOGIC DEVICE 8 IMP.	
IC	....9	50.06.0541	74LS541 DIP20, OCTAL BUS BUFFER	
IC	....10	50.17.1139	74HC139 DIP16, DUAL 2 TO 4 LINE DECODER	
IC	....11	50.06.0684	74LS684 DIP20, 8BIT MAGNITUDE COMPARATOR	
IC	....12	50.06.1641	74LS641 DIP20, OCTAL BUS TRANSCEIVER	
IC	....13	50.18.0101	20V8-25LP DIP24, GAL 12-IMP. 8-MACROCELLS	
IC	....14	50.16.0126	WD7931A-R02 DIP40, FLOPPY CONTROLLER	
IC	....15	50.16.0700	T53C80 DIP48, SCSI BUS CONTR. 15MBPS	
IC	....16	50.15.0105	3487 DIP16, QUAD LINE DRIVER RS422	
IC	....17	50.15.0105	3487 DIP16, QUAD LINE DRIVER RS422	
IC	....18	50.06.0540	74LS540 DIP20, OCTAL BUFFER INV	
IC	....19	50.15.0105	3487 DIP16, QUAD LINE DRIVER RS422	
IC	....20	50.06.1641	74LS641 DIP20, OCTAL BUS TRANSCEIVER	
IC	....21	50.15.0115	75176 DIP08, DIFF. BUS TRANSCEIVER	
IC	....22	50.15.0104	MC3486 DIP16, QUAD LINE REC. RS422/423	
JP	....1	54.01.0021	JUMPER	
JP	....2	54.01.0021	JUMPER	
JP	....3	54.01.0021	JUMPER	
JP	....4	54.01.0021	JUMPER	
JP	....5	54.01.0021	JUMPER	
JP	....6	54.01.0021	JUMPER	
JP	....7	54.01.0021	JUMPER	
JP	....8	54.01.0021	JUMPER	
JP	....9	54.01.0021	JUMPER	
JP	....10	54.01.0021	JUMPER	
JP	....11	54.01.0021	JUMPER	
JP	....12	54.01.0021	JUMPER	
JP	....13	54.01.0021	JUMPER	
L	....1	82.01.0115	2.5MD WIDEBAND CHOKE	
L	....2	82.01.0115	2.5MD WIDEBAND CHOKE	
L	....3	82.01.0115	2.5MD WIDEBAND CHOKE	
MP	....1	1.990.955.11	1 pcs DISK CONTROLLER PCB	
MP	....2	43.01.0108	1 pcs ESE-WARNSCHILD	
MP	....3	1.990.955.04	0 pcs STUDER-NR.-ETIKETTE 10 * 20	
MP	....4	1.990.955.01	1 pcs FRONTPLATTE DISK CONTR. MK2	
MP	....5	1.990.955.02	1 pcs GRIFFEINLAGE DISK CONTROLLER	
MP	....6	1.990.955.03	4 pcs GEWINDEBOLZEN	
MP	....7	1.990.955.93	1 pcs LITZENLISTE DISK CONTROLLER	
MP	....8	21.01.0260	5 pcs Z - SCHR. NI, N2.5 * 8	
MP	....9	21.01.0261	1 pcs Z - SCHR. NI, N2.5 * 10	
MP	....10	21.01.0354	4 pcs Z - SCHR. NI, N3 * 6	
MP	....11	21.02.3281	3 pcs LS - SCHR. NI, N2.5 * 10	
MP	....12	22.01.8025	7 pcs 6KT-MUTTER 0.8 D, M 2.5	
MP	....13	24.16.1025	8 pcs RIPPENSCHNEIBE D 2.7 / 5	
MP	....14	24.16.1030	4 pcs RIPPENSCHNEIBE D 3.2 / 5.5	
MP	....15	28.99.0119	4 pcs ROHRNIELE D 2.5" * 0.15" * 9	
MP	....16	49.02.0004	2 pcs LEITERPLATTENHALTER	
MP	....17	49.02.0007	1 pcs FRONTLATTENGRIFFF. L439.2 MM	
MP	....18	49.02.0321	2 pcs LZ-SCHR. M 3 * 11.3	
MP	....19	49.02.0322	2 pcs GEWINDE-BUCHSE M 3	
MP	....20	23.01.1027	4 pcs U-SCHNEIBE D 2.7 / 5 * 0.5	

STUDER DISK CONTROLLER MK II ESE 1.990.955-20



DISC CONTROLLER

1.990.955.20

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER	Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
P....1		54.01.0358	96-P	ANG., MALE, P-EU-C 3*32P	RZ....6		57.88.4332	3k3 2 1/2, 0.125W,	SIPO9, 8 * 3K3
P....2		54.01.0358	96-P	ANG., MALE, P-EU-C 3*32P	RZ....7		57.88.4103	10k 2 1/2, 0.125W,	SIPO9, 8 * 10K
P....3		1.023.115.01	50-P	RIBBON-CABLE COMPLETE	RZ....8		57.80.4005	220/330E 2 1/2, 0.10W,	SIPI0,COMMON VCC
P....4		54.25.0004	4-P	16A, FEM., J-AMP, VERTICAL	RZ....9		57.80.4005	220/330E 2 1/2, 0.10W,	SIPI0,COMMON VCC
P....5		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	RZ....10		57.80.4005	220/330E 2 1/2, 0.10W,	SIPI0,COMMON VCC
P....6		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	RZ...11		57.88.2331	330E 2 1/2, 0.125W,	SIPO8, 4 * 330E
P....7		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	RZ...12		57.88.2101	100E 2 1/2 SIPO8, 0.125W	
P....8		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	S....1		55.01.0168	8*a 100MA, 24V, DIL-SWITCH (8)	
P....9		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	TP...1		54.02.0320	1-P STR., MALE, FLATPIN 2.8*0.8	
P....10		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...1		53.03.0167	DIL14 SOCKET FOR IC1	
P....11		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...2		53.03.0167	DIL14 SOCKET FOR IC2	
P....12		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...3		53.03.0165	DIL20 SOCKET FOR IC3	
P....13		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...4		53.03.0165	DIL20 SOCKET FOR IC4	
P....14		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...5		53.03.0218	DIL48 SOCKET FOR IC5	*** 48PCS ***
P....15		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...6		53.03.0167	DIL14 SOCKET FOR IC6	
P....16		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...7		53.03.0165	DIL20 SOCKET FOR IC7	
P....17		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...8		53.03.0165	DIL20 SOCKET FOR IC8	
P....18		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...9		53.03.0165	DIL20 SOCKET FOR IC9	
P....19		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...10		53.03.0168	DIL16 SOCKET FOR IC10	
P....20		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...11		53.03.0165	DIL20 SOCKET FOR IC11	
P....21		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...12		53.03.0165	DIL20 SOCKET FOR IC12	
P....22		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...13		53.03.0182	DIL24 SOCKET FOR IC13	
P....23		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...14		53.03.0172	DIL40 SOCKET FOR IC14	
P....24		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...15		53.03.0218	DIL48 SOCKET FOR IC15	*** 48PCS ***
P....25		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...16		53.03.0168	DIL16 SOCKET FOR IC16	
P....26		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...17		53.03.0168	DIL16 SOCKET FOR IC17	
P....27		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...18		53.03.0165	DIL20 SOCKET FOR IC18	
P....28		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...19		53.03.0168	DIL16 SOCKET FOR IC19	
P....29		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...20		53.03.0165	DIL20 SOCKET FOR IC20	
P....30		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...21		53.03.0166	DIL08 SOCKET FOR IC21	
P....31		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XIC...22		53.03.0168	DIL16 SOCKET FOR IC22	
P....32		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XRZ...8		53.03.0218	DIL10 SOCKET FOR RZ8	*** 10PCS ***
P....33		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XRZ...9		53.03.0218	DIL10 SOCKET FOR RZ9	*** 10PCS ***
P....34		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM	XRZ...10		53.03.0218	DIL10 SOCKET FOR RZ10	*** 10PCS ***
P....35		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....36		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....37		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....38		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....39		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....40		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....41		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....42		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....43		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....44		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....45		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....46		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....47		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....48		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....49		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....50		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....51		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....52		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....53		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....54		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....55		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P....56		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....57		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P....99		54.02.0320	1-P	STR., MALE, FLATPIN 2.8*0.8					
P...235		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...236		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
P...237		54.01.0020	1-P	STR., MALE, P-STRIP AU 8MM					
R....1		57.11.3102	1k	1 1/2, 0.6W, MF					
R....2		57.11.3102	1k	1 1/2, 0.6W, MF					
R....3		57.11.3103	10k	1 1/2, 0.6W, MF					
R....4		57.11.3102	1k	1 1/2, 0.6W, MF					
R....5		57.11.3471	470E	1 1/2, 0.6W, MF					
R....6		57.11.3331	330E	1 1/2, 0.6W, MF					
R....7		57.11.3103	10k	1 1/2, 0.6W, MF					
R....8		57.11.3103	10k	1 1/2, 0.6W, MF					
R....9		57.11.3102	1k	1 1/2, 0.6W, MF					
R....10		57.11.3102	1k	1 1/2, 0.6W, MF					
R....11		57.11.3102	1k	1 1/2, 0.6W, MF					
R....12		57.11.3102	1k	1 1/2, 0.6W, MF					
R....13		57.11.3102	1k	1 1/2, 0.6W, MF					
R....14		57.11.3102	1k	1 1/2, 0.6W, MF					
R....15		57.11.3102	1k	1 1/2, 0.6W, MF					
R....16		57.11.3331	330E	1 1/2, 0.6W, MF					
R....17		57.11.3102	1k	1 1/2, 0.6W, MF					
R....18		57.11.3331	330E	1 1/2, 0.6W, MF					
R....19		57.11.3103	10k	1 1/2, 0.6W, MF					
R....20		57.11.3331	330E	1 1/2, 0.6W, MF					
R....21		57.11.3331	330E	1 1/2, 0.6W, MF					
R....22		57.11.3331	330E	1 1/2, 0.6W, MF					
R....23		57.11.3331	330E	1 1/2, 0.6W, MF					
R....24		57.11.5225	2M2	5 1/2, 0.4W, MF					
R....25		57.11.5225	2M2	5 1/2, 0.4W, MF					
R....26		57.11.3331	330E	1 1/2, 0.6W, MF					
R....27		57.11.3102	1k	1 1/2, 0.6W, MF					
R....28		57.11.3103	10k	1 1/2, 0.6W, MF					
RA....1		58.01.8503	50k	10 1/2, 0.5W, HOR. PGM					
RA....2		58.01.8103	10k	10 1/2, 0.5W, HOR. PGM					
RZ....1		57.88.4332	3k3	2 1/2, 0.125W, SIPO9, 8 * 3K3					
RZ....2		57.88.4332	3k3	2 1/2, 0.125W, SIPO9, 8 * 3K3					
RZ....3		57.88.4103	10k	2 1/2, 0.125W, SIPO9, 8 * 10K					
RZ....4		57.88.4103	10k	2 1/2, 0.125W, SIPO9, 8 * 10K					
RZ....5		57.88.4103	10k	2 1/2, 0.125W, SIPO9, 8 * 10K					

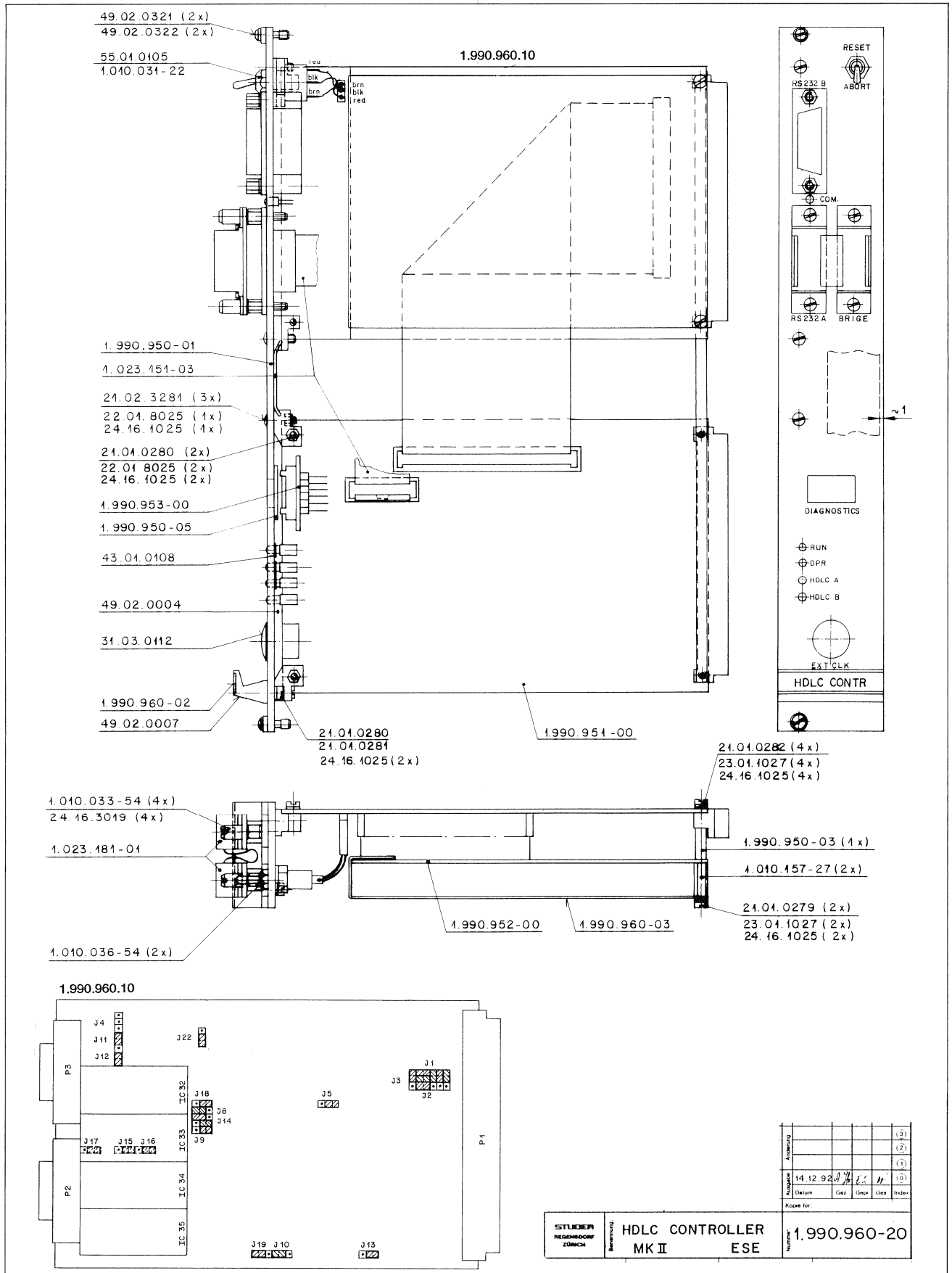
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1.990.991.20 (IC8)
1.990.992.20 (IC13)

1.990.955-20 DISC CONTROLLER MEL92/06/0100

HDLC CONTROLLER MKII

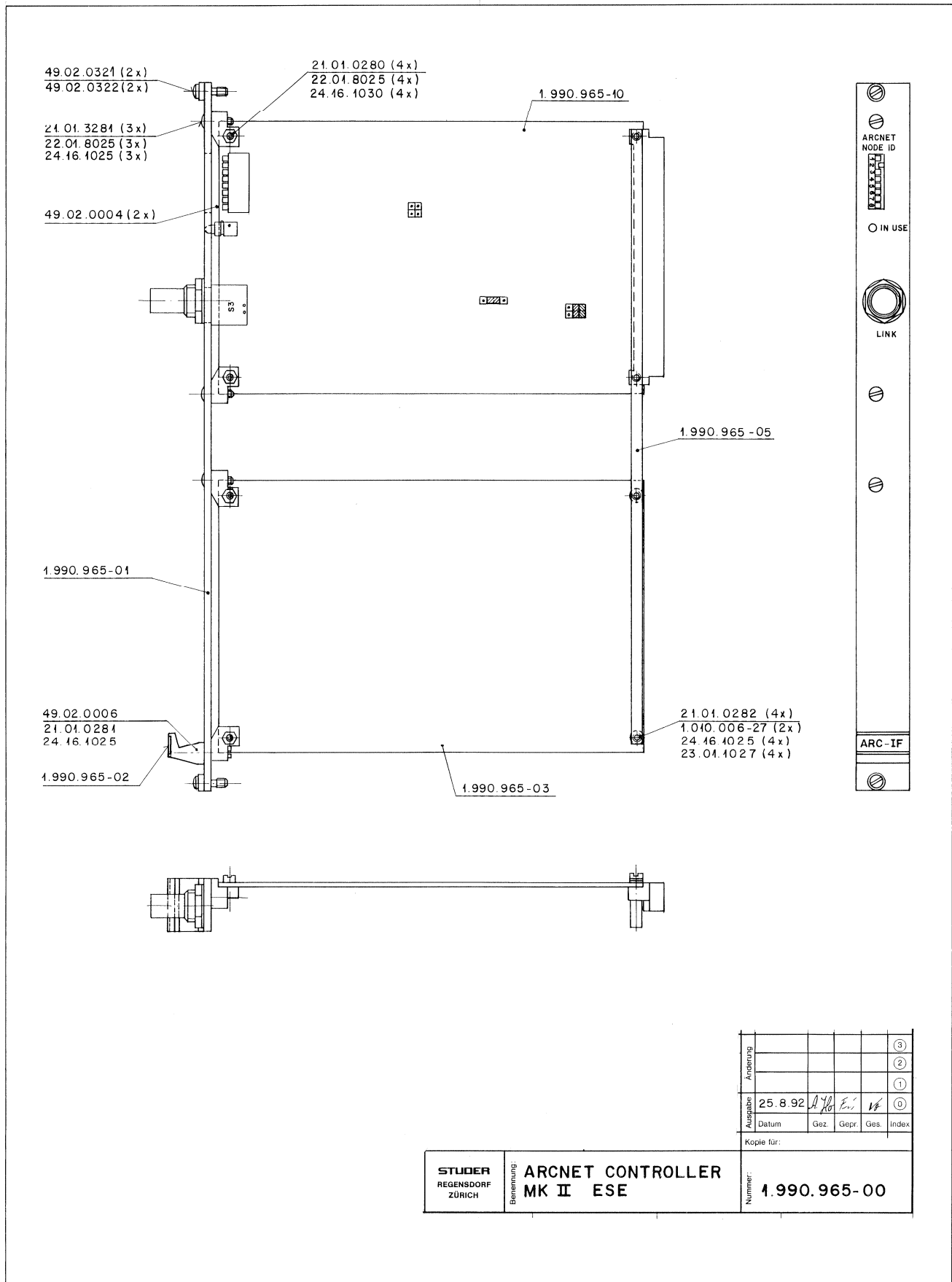


1.990.960.20



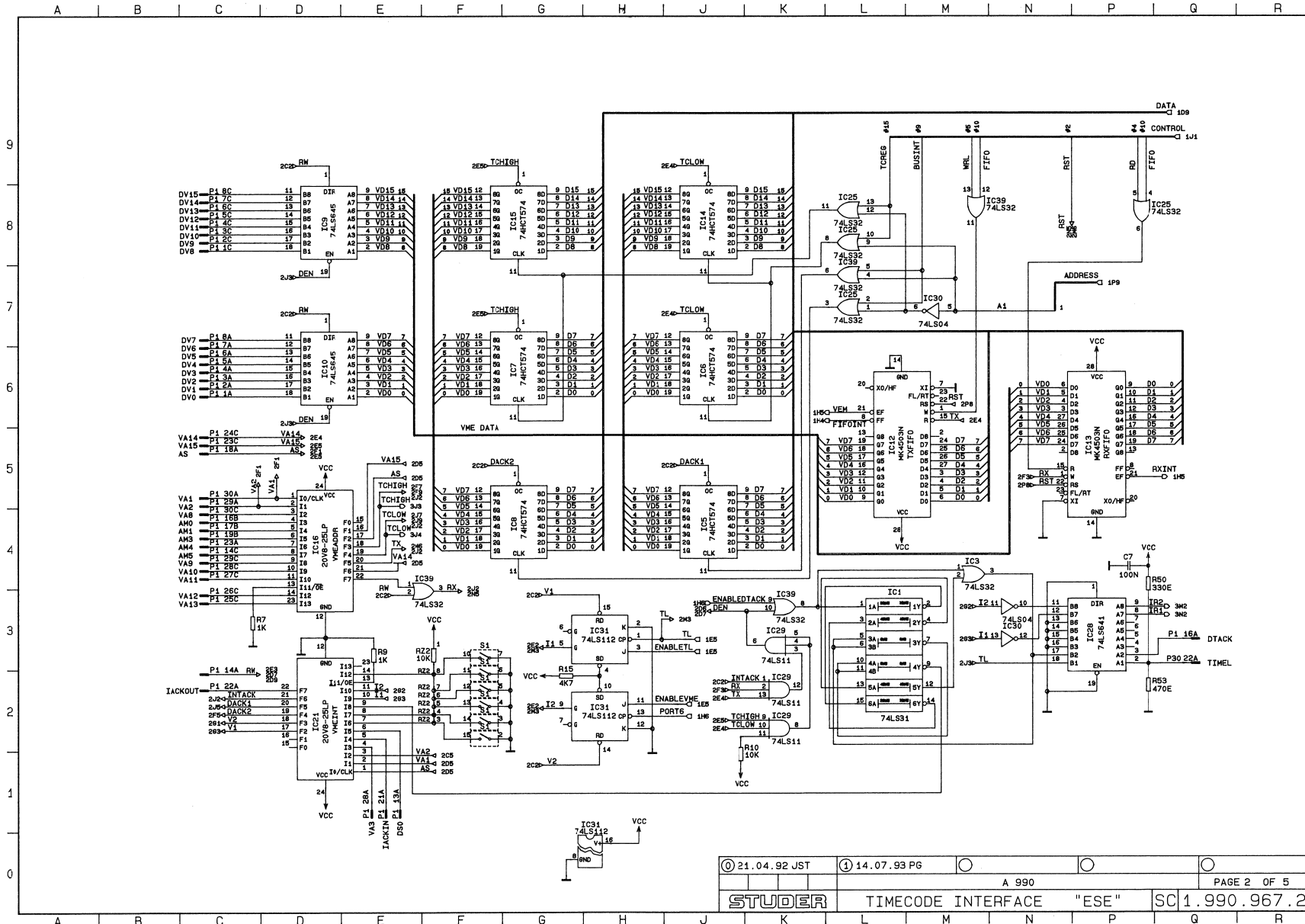
ARCNET CONTROLLER MKII

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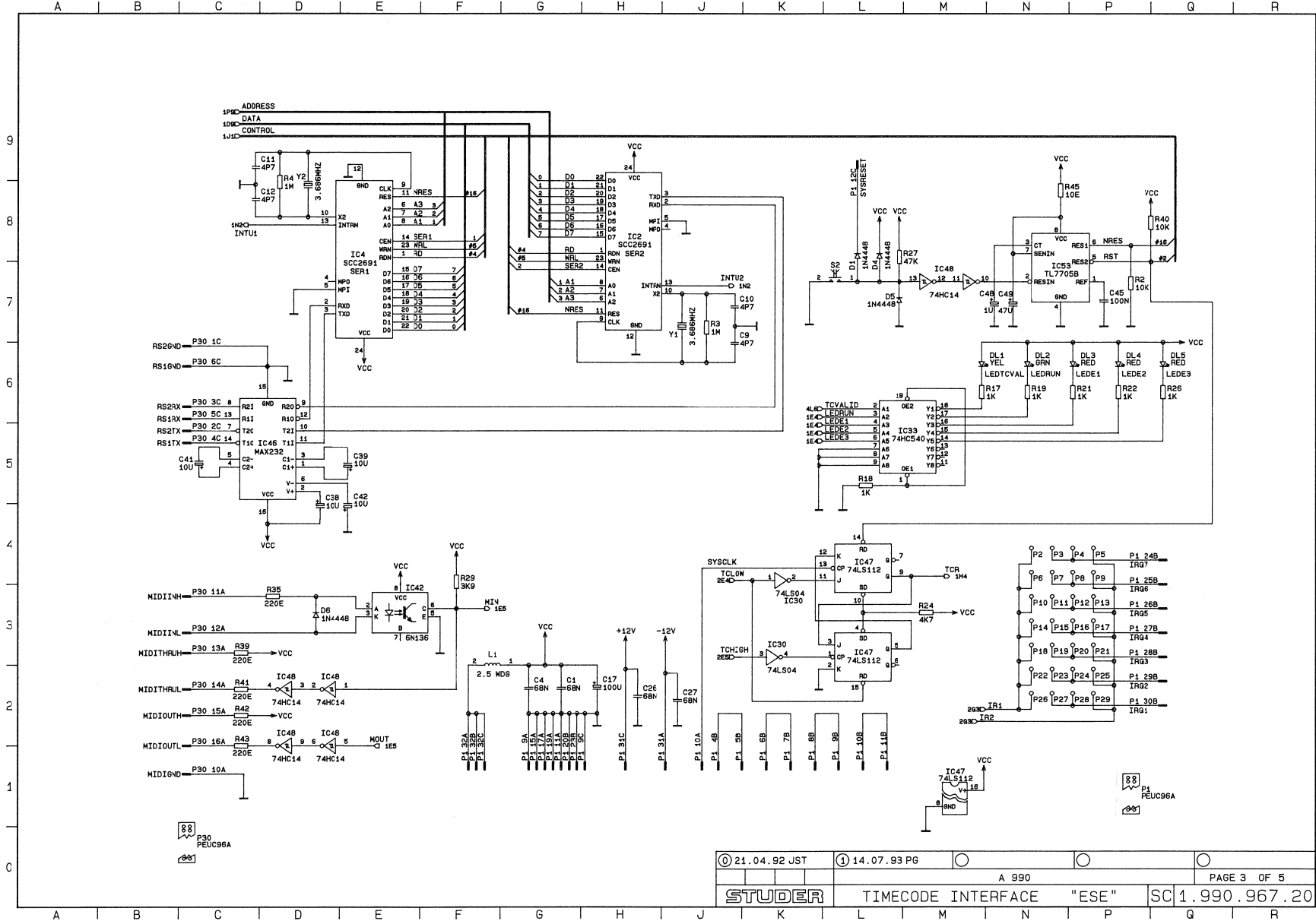
TIME CODE INTERFACE

1.990.967.20



TIME CODE INTERFACE

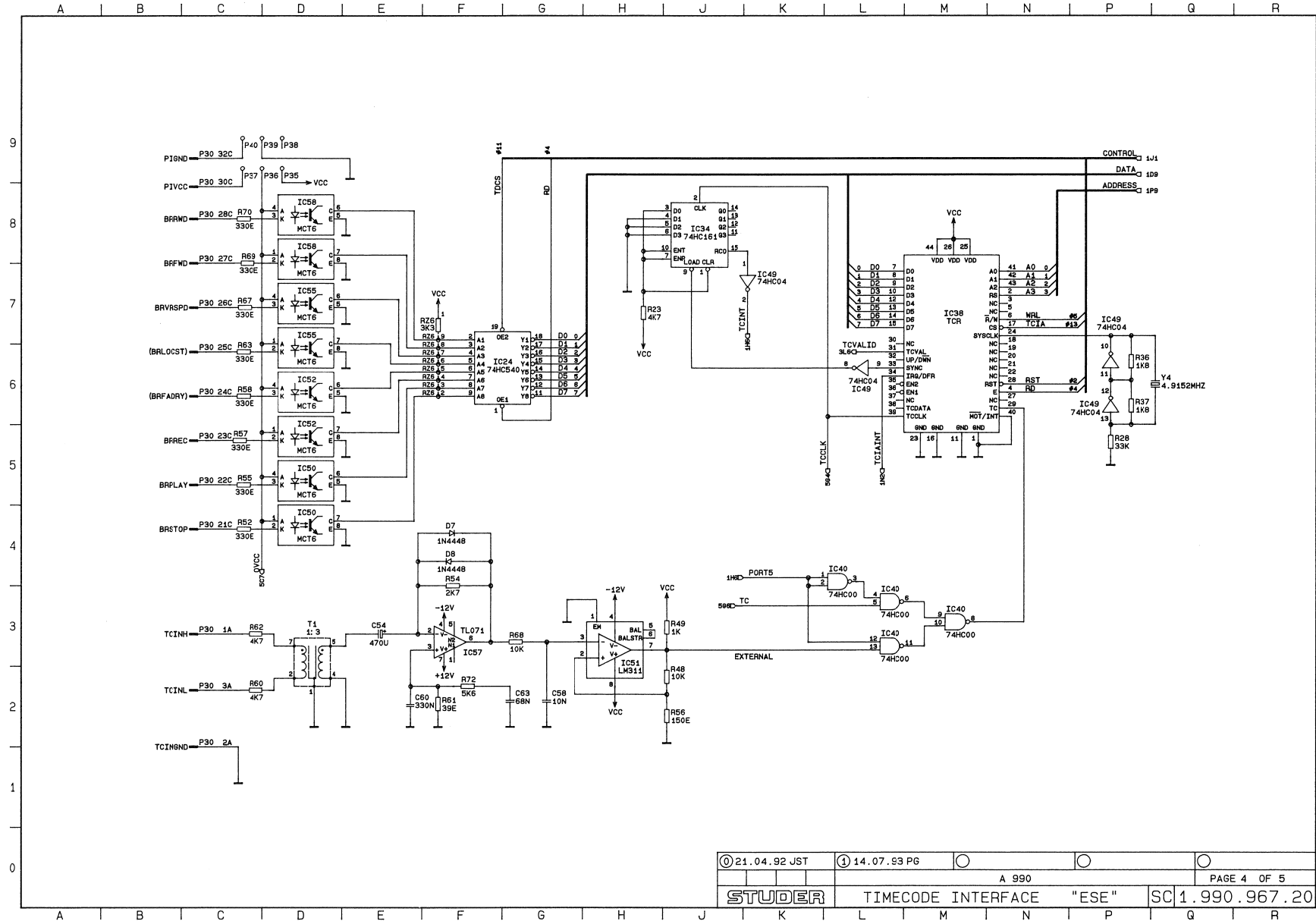
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① 21.04.92 JST	① 14.07.93 PG	○	○	○	○
STUDER			TIMECODE INTERFACE		"ESE"
			SC 1.990.967.20		PAGE 3 OF 5

TIME CODE INTERFACE

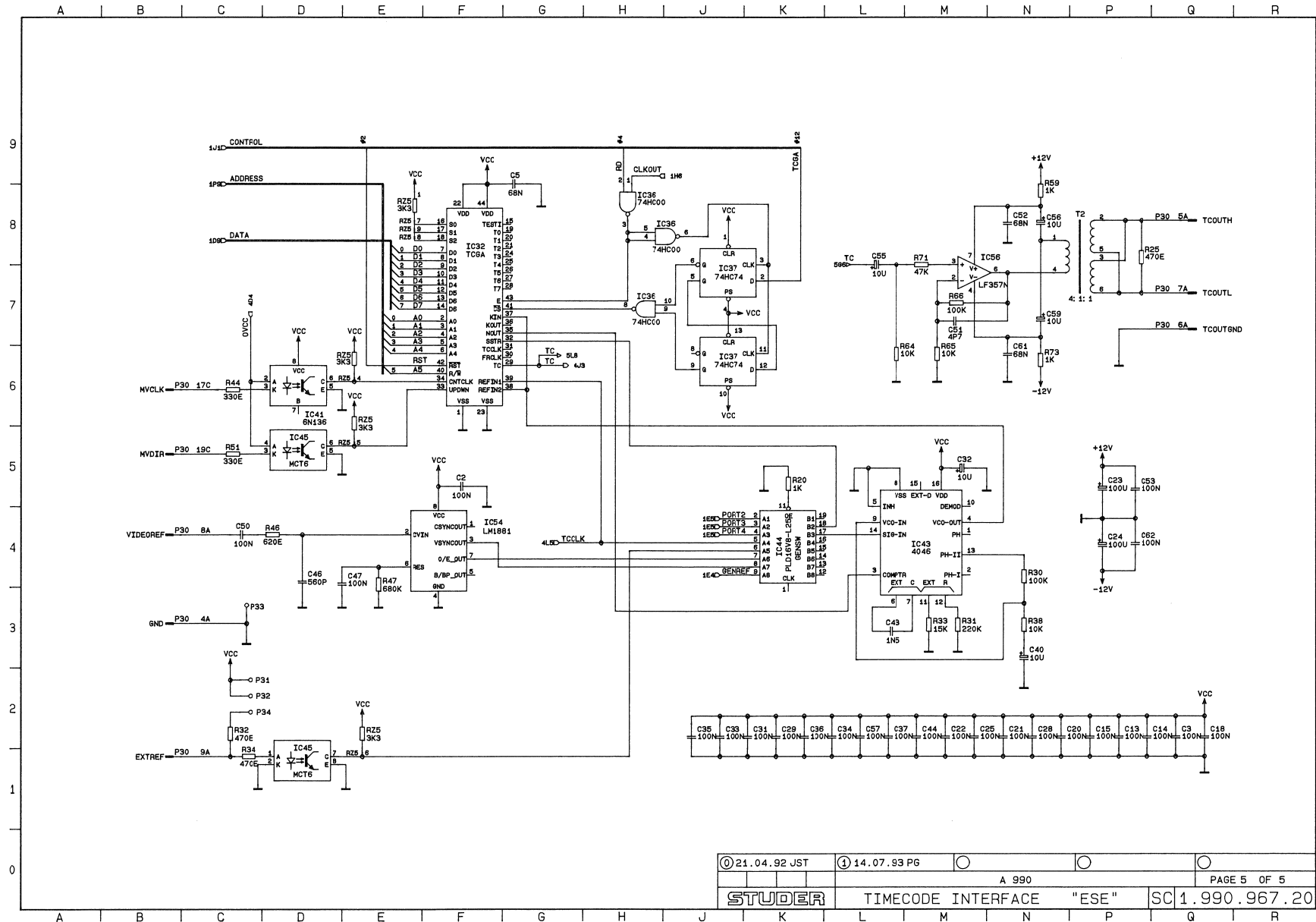
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① 21.04.92 JST	④ 14.07.93 PG	○	○	○
A 990				
STUDER			TIMECODE INTERFACE	"ESE"
			SC1.990.967.20	PAGE 4 OF 5

TIME CODE INTERFACE

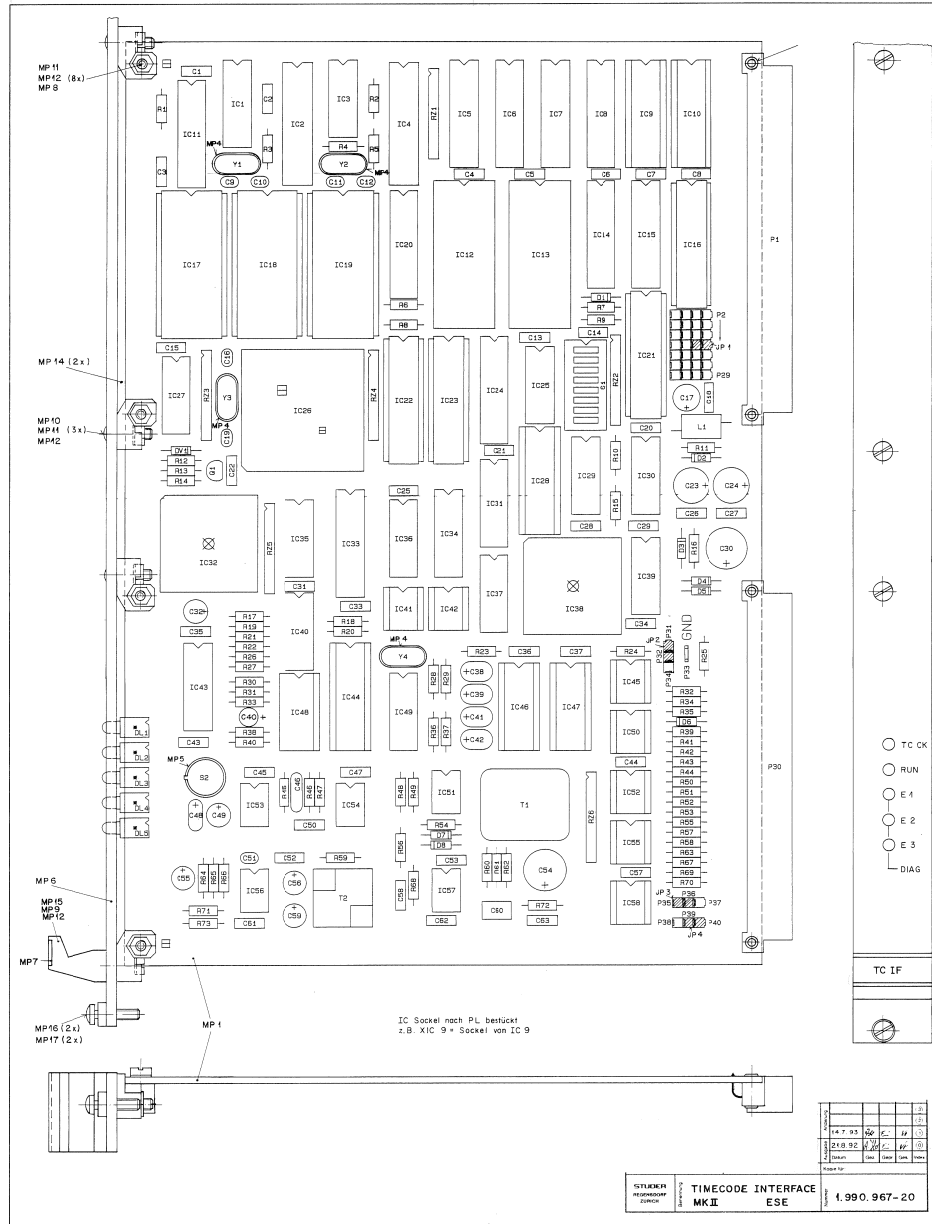
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① 21.04.92 JST	① 14.07.93 PG	○	○	○
A 990				
STUDER		TIMECODE INTERFACE		"ESE"
SC 1.990.967.20				PAGE 5 OF 5

TIME CODE INTERFACE

1.990.967.20



Idx	Pos.	Part No.	Qty.	Type/Val	Description	Idx	Pos.	Part No.	Qty.	Type/Val	Description
0	C 1	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 11	80.17.1573	74HC573	IC	... 74 HC 573 .. A
0	C 2	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 12	50.14.1801	MK4603N	IC	MK 4603 - 80 N .. A
0	C 3	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 13	50.14.1801	MK4603N	IC	MK 4603 - 80 N .. A
0	C 4	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 14	50.17.0574	74HC1574	IC	... 74 HCT574 .. A
0	C 5	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 15	50.17.0574	74HC1574	IC	... 74 HCT574 .. A
0	C 6	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 16	50.18.0101	20V8-25		GAL 20 V 8 - 25 LP
0	C 7	59.06.0104	100n	PETP, 63V, 10%, RM5						SOFTWARE 1.990.988.20	
0	C 8	59.06.0683	68n	PETP, 63V, 10%, RM5		1	IC 17	50.14.2201	27 256	OPROM 32k * 8	SW 1.990.981.20
0	C 9	59.34.0479	4p7	CER 63V, 5%, P100							
0	C 10	59.34.0479	4p7	CER 63V, 5%, P100		0	IC 18	50.14.1604	HM62256	IC	HM 62256 ALP-12 .. A
0	C 11	59.34.0479	4p7	CER 63V, 5%, P100		0	IC 19	50.14.1604	HM62256	IC	HM 62256 ALP-12 .. A
0	C 12	59.34.0479	4p7	CER 63V, 5%, P100		0	IC 20	80.17.1573	74HC573	IC	... 74 HC 573 .. A
0	C 13	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 21	50.18.0101	20V8-25		GAL 20 V 8 - 25 LP
0	C 14	59.06.0104	100n	PETP, 63V, 10%, RM5						SOFTWARE 1.990.988.20	
0	C 15	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 22	50.18.0101	20V8-25		GAL 20 V 8 - 25 LP
0	C 16	59.34.2330	33p	CER 63V, 5%, N150		0	IC 23	50.18.0101	20V8-25		GAL 20 V 8 - 25 LP
0	C 17	59.34.2330	33p	CER 63V, 5%, N150		0	IC 24	50.17.1640	74HC540	IC	... 74 HC 540 .. A
0	C 18	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 25	50.06.0032	74LS32	IC	SN 74 LS 32 N
0	C 19	59.34.2330	33p	CER 63V, 5%, N150		0	IC 26	50.03.0033	80C196		N 80 C 196 KB-16
0	C 20	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 27	50.17.1020	74HC20	IC	... 74 HC 20 .. A
0	C 21	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 28	50.06.1641	74LS841	IC	SN 74 LS 841-1N
0	C 22	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 29	50.06.0011	74LS11	IC	SN 74 LS 11 N
0	C 23	59.22.5101	100u	EL 25V, 20%, RM5		0	IC 30	50.06.0004	74LS04	IC	SN 74 LS 04 N
0	C 24	59.22.5101	100u	EL 25V, 20%, RM5		0	IC 31	50.06.0112	74LS112	IC	SN 74 LS 112 N
0	C 25	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 32	50.06.0030	TCGA		SMPTe Time-Code Generator
0	C 26	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 33	50.17.1540	74HC540	IC	... 74 HC 540 .. A
0	C 27	59.06.0683	68n	PETP, 63V, 10%, RM5		0	IC 34	50.17.1161	74HC161	IC	... 74 HC 161 .. A
0	C 28	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 35	50.17.1032	74HC32	IC	... 74 HC 32 .. A
0	C 29	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 36	50.17.1000	74HC00	IC	... 74 HC 00 .. A
1	C 30	not used	470u	EL 6.3V, 20%, RM5		0	IC 37	50.17.1074	74HC74	IC	... 74 HC 74 .. A
0	C 31	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 38	50.50.0020	TCR		SMPTe Time-Code Reader
0	C 32	59.22.6100	10u	EL 35V, 20%, RM5		0	IC 39	50.06.0032	74LS32	IC	SN 74 LS 32 N
0	C 33	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 40	50.17.1000	74HC00	IC	... 74 HC 00 .. A
0	C 34	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 41	50.04.2163	6N136		DLQ 6 N 136
0	C 35	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 42	50.04.2163	6N136		DLQ 6 N 136
0	C 36	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 43	50.07.0048	4048		IC ... 4048 .. A
0	C 37	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 44	50.16.0100	PLD16V8		16V 8 D - 25 LP
0	C 38	59.26.2100	10u	SAL, 20%, 16V		3	IC 45	50.09.0111	MCT6		DLQ ILD-74, MCT 6, TLP 504 A
0	C 39	59.26.2100	10u	SAL, 20%, 16V		0	IC 46	50.15.0120	MAX232		IC MAX 232 OPT
0	C 40	59.26.2100	10u	SAL, 20%, 16V		0	IC 47	50.06.0112	74LS112	IC	SN 74 LS 112 N
1	C 41	59.06.0152	1n5	PETP, 63V, 10%, RM5		0	IC 48	50.17.1074	74HC14	IC	... 74 HC 14 .. A
0	C 42	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 49	50.17.1004	74HC24	IC	... 74 HC 24 .. A
0	C 43	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 50	50.09.0111	MCT6		DLQ ILD-74, MCT 6, TLP 504 A
0	C 44	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 51	50.11.0114	LM311	IC	LM 311 N, LM 311 P
0	C 45	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 52	50.09.0111	MCT6		DLQ ILD-74, MCT 6, TLP 504 A
0	C 46	59.34.5561	560p	CER 63V, 5%, N1500		0	IC 53	50.11.0167	T17098	IC	TL 17706 BCP
0	C 47	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 54	50.11.0146	LM1881	IC	LM 1881
0	C 48	59.26.5109	1u	SAL, 20%, 25V		0	IC 55	50.09.0111	MCT6		DLQ ILD-74, MCT 6, TLP 504 A
0	C 49	59.22.3470	47u	EL 10V, 20%, RM5		0	IC 56	50.09.0102	LF357N		Op-Amp single, OCFET, DIP 8
0	C 50	59.06.0104	100n	PETP, 63V, 10%, RM5		0	IC 57	50.09.0103	TL071	IC	TL 071 CP .. A
0	C 51	59.34.0479	4p7	CER 63V, 5%, P100		0	IC 58	50.09.0111	MCT6		DLQ ILD-74, MCT 6, TLP 504 A
0	C 52	59.06.0683	68n	PETP, 63V, 10%, RM5		0	JP 1	not used	Jumper		0.63 * 0.63mm
0	C 53	59.06.0104	100n	PETP, 63V, 10%, RM5		0	JP 2	54.01.0021	Jumper		0.63 * 0.63mm
0	C 54	59.22.2471	470u	EL 6.3V, 20%, RM5		0	JP 3	54.01.0021	Jumper		0.63 * 0.63mm
0	C 55	59.22.6100	10u	EL 35V, 20%, RM5		0	JP 4	54.01.0021	Jumper		0.63 * 0.63mm
0	C 56	59.22.6100	10u	EL 35V, 20%, RM5		1	JP 5	not used	Jumper		0.63 * 0.63mm
0	C 57	59.06.0104	100n	PETP, 63V, 10%, RM5		0	L 1	62.01.0116	2.5Wwg		L BREITBAND-
0	C 58	59.06.0103	10n	PETP, 63V, 10%, RM5		0	MP 1	1.990.967.11	1 mp		TIMECODE INTERFACE MK2 PC3
0	C 59	59.22.6100	10u	EL 35V, 20%, RM5		0	MP 2	43.01.0108	1 mp		ESE-WARNschild
0	C 60	59.06.0334	330n	PETP, 63V, 10%, RM5		0	MP 3	1.990.967.04	0 mp		STUEBER-NR.-ETIKETTE 10 * 20
0	C 61	59.06.0683	68n	PETP, 63V, 10%, RM5		0	MP 4	80.01.1469	4 mp		QUAZZ-ISOBRILATTE
0	C 62	59.06.0104	100n	PETP, 63V, 10%, RM5		0	MP 5	1.010.015.50	1 mp		ISOLIER-SCHIEBE ZU T0 5
0	C 63	59.06.0683	68n	PETP, 63V, 10%, RM5		0	MP 6	1.990.967.01	1 mp		FRONTPLATTE TIMECODE INTERFACE
0	D 1	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 7	1.990.967.02	1 mp		GRIFFEINLAGE TIMECODE-IF
0	D 2	not used	1N4448	75V, 150mA, 4ns, DO-35		1	MP 8	21.01.0280	4 mp	M2.5*8	Z - Schraube Zn gp chr
0	D 3	not used	1N4448	75V, 150mA, 4ns, DO-35		0	MP 9	21.01.0281	1 mp	M2.5*10	Z - Schraube Zn gp chr
0	D 4	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 10	21.02.3281	3 mp	M2.5*10	LS-Schr. Schlit. NI
0	D 5	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 11	22.01.8026	7 mp	M2.5	6tk-Mutter 0.6d St Zn gp
0	D 6	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 12	24.18.1026	8 mp		RIPPENSCHIEBE D 2.7/ 5
0	D 7	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 13	28.69.0119	4 mp		ROHRNIETE D 2.5/0.15" 9
0	D 8	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 14	49.02.0004	2 mp		LEITERPLATTENHALTER
0	D 9	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 15	49.02.0006	1 mp		FRONTPLATTENGRIF, L=18.9 MM
0	D 10	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 16	48.02.0321	2 mp		LZ-SCHR. M 3 * 11.3
0	DV 1	50.04.1101	3V9	Zener, 6%, 0.5W, DO-35		0	MP 17	49.02.0322	2 mp		GEWINDE-BUCHE M 3
0	IC 1	50.06.0031	74LS31	IC SN 74 LS 31 N		0	P 1	54.01.0358	99p		EU-C 3 * 32
0	IC 2	50.16.0201	SCC2691	IC SCC 2691 AE 1 N 24	A	0	P 2	54.01.0020	1p		Pin 0.63*0.63
0	IC 3	50.06.0032	74LS32	IC SN 74 LS 32 N	A	0	P 3	54.01.0020	1p		Pin 0.63*0.63
0	IC 4	50.16.0201	SCC2691	IC SCC 2691 AE 1 N 24	A	0	P 4	54.01.0020	1p		Pin 0.63*0.63
0	IC 5	50.17.0574	74HC1574	IC ... 74 HCT574 .. A	A	0	P 5	54.01.0020	1p		Pin 0.63*0.63
0	IC 6	50.17.0574	74HC1574	IC ... 74 HCT574 .. A	A	0	P 6	54.01.0020	1p		Pin 0.63*0.63
0	IC 7	50.17.0574	74HC1574	IC ... 74 HCT574 .. A	A	0	P 7	54.01.0020	1p		Pin 0.63*0.63
0	IC 8	50.17.0574	74HC1574	IC ... 74 HCT574 .. A	A	0	P 8	54.01.0020	1p		Pin 0.63*0.63
0	IC 9	50.06.1646	74LS845	IC SN 74 LS 845-1N	A	0	P 9	54.01.0020	1p		Pin 0.63*0.63
0	IC 10	50.06.1646	74LS845	IC SN 74 LS 845-1N	A	0	P 10	54.01.0020	1p		Pin 0.63*0.63



TIME CODE INTERFACE

1.990.967.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	P 11	54.01.0020	1p		Pin 0.63*0.63	0	R 69	57.11.3102	1k0		MF, 1%, 0207
0	P 12	54.01.0020	1p		Pin 0.63*0.63	0	R 60	57.11.3472	4k7		MF, 1%, 0207
0	P 13	54.01.0020	1p		Pin 0.63*0.63	0	R 61	57.11.3390	39R		MF, 1%, 0207
0	P 14	54.01.0020	1p		Pin 0.63*0.63	0	R 62	57.11.3472	4k7		MF, 1%, 0207
0	P 15	54.01.0020	1p		Pin 0.63*0.63	0	R 63	57.11.3331	330R		MF, 1%, 0207
0	P 16	54.01.0020	1p		Pin 0.63*0.63	0	R 64	57.11.3103	10k		MF, 1%, 0207
0	P 17	54.01.0020	1p		Pin 0.63*0.63	0	R 65	57.11.3103	10k		MF, 1%, 0207
0	P 18	54.01.0020	1p		Pin 0.63*0.63	0	R 66	57.11.3104	100k		MF, 1%, 0207
0	P 19	54.01.0020	1p		Pin 0.63*0.63	0	R 67	57.11.3331	330R		MF, 1%, 0207
0	P 20	54.01.0020	1p		Pin 0.63*0.63	0	R 68	57.11.3103	10k		MF, 1%, 0207
0	P 21	54.01.0020	1p		Pin 0.63*0.63	0	R 69	57.11.3331	330R		MF, 1%, 0207
0	P 22	54.01.0020	1p		Pin 0.63*0.63	0	R 70	57.11.3331	330R		MF, 1%, 0207
0	P 23	54.01.0020	1p		Pin 0.63*0.63	0	R 71	57.11.3473	47k		MF, 1%, 0207
0	P 24	54.01.0020	1p		Pin 0.63*0.63	0	R 72	57.11.3562	5k6		MF, 1%, 0207
0	P 25	54.01.0020	1p		Pin 0.63*0.63	0	R 73	57.11.3102	1k0		MF, 1%, 0207
0	P 26	54.01.0020	1p		Pin 0.63*0.63						
0	P 27	54.01.0020	1p		Pin 0.63*0.63	0	RZ 1	57.88.4103	8*10k		2%, SIP 9
0	P 28	54.01.0020	1p		Pin 0.63*0.63	0	RZ 2	57.88.4103	8*10k		2%, SIP 9
0	P 29	54.01.0020	1p		Pin 0.63*0.63	0	RZ 3	57.88.4103	8*10k		2%, SIP 9
0	P 30	54.01.0358	96p		EU-C 3 * 32	0	RZ 4	57.88.4103	8*10k		2%, SIP 9
0	P 31	54.01.0020	1p		Pin 0.63*0.63	0	RZ 5	57.88.4332	8*3k3		2%, SIP 9
0	P 32	54.01.0020	1p		Pin 0.63*0.63	0	RZ 6	57.88.4332	8*3k3		2%, SIP 9
0	P 33	54.02.0320	1p		Flatpin, 2.8*0.8mm						
0	P 34	54.01.0020	1p		Pin 0.63*0.63	0	S 1	55.01.0168	8*a		SZ , 8*A, DIL
0	P 35	54.01.0020	1p		Pin 0.63*0.63	0	S 2	55.03.0122	1*a		S 1 TASTE, 1*A, PRINT,IMPULS
0	P 36	54.01.0020	1p		Pin 0.63*0.63						
0	P 37	54.01.0020	1p		Pin 0.63*0.63	0	T 1	1.022.409.00	1:3		SUMMEN-TRAFO 1:3
0	P 38	54.01.0020	1p		Pin 0.63*0.63	0	T 2	1.022.215.00	4:1:1		TIME CODE OUTPUT TRANSFORMER
0	P 39	54.01.0020	1p		Pin 0.63*0.63						
0	P 40	54.01.0020	1p		Pin 0.63*0.63						
0	Q 1	50.03.0497		BC337-40	BC 337-40						
0	R 1	57.11.3102	1k0		MF, 1%, 0207	0	XIC 9	53.03.0165	20p		DIL 0.3", lot, gerade
0	R 2	57.11.3103	10k		MF, 1%, 0207	0	XIC 10	53.03.0165	20p		DIL 0.3", lot, gerade
0	R 3	57.11.3105	1M0		MF, 1%, 0207	0	XIC 16	53.03.0182	24p		DIL 0.3", lot, gerade
0	R 4	57.11.3105	1M0		MF, 1%, 0207	0	XIC 17	53.03.0173	28p		DIL 0.6", lot, gerade
0	R 5	57.11.3102	1k0		MF, 1%, 0207	0	XIC 18	53.03.0173	28p		DIL 0.6", lot, gerade
0	R 6	57.11.3102	1k0		MF, 1%, 0207	0	XIC 19	53.03.0173	28p		DIL 0.6", lot, gerade
0	R 7	57.11.3102	1k0		MF, 1%, 0207	0	XIC 21	53.03.0182	24p		DIL 0.3", lot, gerade
0	R 8	57.11.3102	1k0		MF, 1%, 0207	0	XIC 22	53.03.0182	24p		DIL 0.3", lot, gerade
0	R 9	57.11.3102	1k0		MF, 1%, 0207	0	XIC 23	53.03.0182	24p		DIL 0.3", lot, gerade
0	R 10	57.11.3103	10k		MF, 1%, 0207	0	XIC 26	53.03.2268	PLCC88p		PLCC-Socket 68p
1	R 11	not used	1k0		MF, 1%, 0207	0	XIC 28	53.03.0165	20p		DIL 0.3", lot, gerade
0	R 12	57.11.3102	1k0		MF, 1%, 0207	0	XIC 32	53.03.2244	PLCC44p		PLCC-Socket 44p
0	R 13	57.11.3103	10k		MF, 1%, 0207	0	XIC 38	53.03.2244	PLCC44p		PLCC-Socket 44p
0	R 14	57.11.3104	100k		MF, 1%, 0207	0	XIC 41	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 15	57.11.3472	4k7		MF, 1%, 0207	0	XIC 42	53.03.0166	8p		DIL 0.3", lot, gerade
1	R 16	not used	100R		MF, 1%, 0207	0	XIC 44	53.03.0165	20p		DIL 0.3", lot, gerade
0	R 17	57.11.3102	1k0		MF, 1%, 0207	0	XIC 45	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 18	57.11.3102	1k0		MF, 1%, 0207	0	XIC 46	53.03.0168	16p		DIL 0.3", lot, gerade
0	R 19	57.11.3102	1k0		MF, 1%, 0207	0	XIC 47	53.03.0168	16p		DIL 0.3", lot, gerade
0	R 20	57.11.3102	1k0		MF, 1%, 0207	0	XIC 48	53.03.0167	14p		DIL 0.3", lot, gerade
0	R 21	57.11.3102	1k0		MF, 1%, 0207	0	XIC 50	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 22	57.11.3102	1k0		MF, 1%, 0207	0	XIC 52	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 23	57.11.3472	4k7		MF, 1%, 0207	0	XIC 55	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 24	57.11.3472	4k7		MF, 1%, 0207	0	XIC 58	53.03.0166	8p		DIL 0.3", lot, gerade
0	R 25	57.11.3471	470R		MF, 1%, 0207	0	Y 1	89.01.1002	3.686MHz		3.686 400 MHz, HC 18/U
0	R 26	57.11.3102	1k0		MF, 1%, 0207	0	Y 2	89.01.1002	3.686MHz		3.686 400 MHz, HC 18/U
0	R 27	57.11.3473	47k		MF, 1%, 0207	0	Y 3	89.01.1008	8.0000MHz		8.000 000 MHz, HC 18/U
0	R 28	57.11.3333	33k		MF, 1%, 0207	0	Y 4	89.01.0560	4.9152MHz		4.915 200 MHz,
0	R 29	57.11.3392	3k9		MF, 1%, 0207						
1	R 30	57.11.3104	100k		MF, 1%, 0207						
1	R 31	57.11.3224	220k		MF, 1%, 0207						
0	R 32	57.11.3471	470R		MF, 1%, 0207						
0	R 33	57.11.3153	15k		MF, 1%, 0207						
0	R 34	57.11.3471	470R		MF, 1%, 0207						
0	R 35	57.11.3221	220R		MF, 1%, 0207						
0	R 36	57.11.3182	1k8		MF, 1%, 0207						
0	R 37	57.11.3182	1k8		MF, 1%, 0207						
0	R 38	57.11.3103	10k		MF, 1%, 0207						
0	R 39	57.11.3221	220R		MF, 1%, 0207						
0	R 40	57.11.3103	10k		MF, 1%, 0207						
0	R 41	57.11.3221	220R		MF, 1%, 0207						
0	R 42	57.11.3221	220R		MF, 1%, 0207						
0	R 43	57.11.3221	220R		MF, 1%, 0207						
0	R 44	57.11.3331	330R		MF, 1%, 0207						
0	R 45	57.11.3100	10R		MF, 1%, 0207						
0	R 46	57.11.3621	620R		MF, 1%, 0207						
0	R 47	57.11.3684	680k		MF, 1%, 0207						
0	R 48	57.11.3103	10k		MF, 1%, 0207						
0	R 49	57.11.3102	1k0		MF, 1%, 0207						
0	R 50	57.11.3331	330R		MF, 1%, 0207						
0	R 51	57.11.3331	330R		MF, 1%, 0207						
0	R 52	57.11.3331	330R		MF, 1%, 0207						
0	R 53	57.11.3471	470R		MF, 1%, 0207						
0	R 54	57.11.3272	2k7		MF, 1%, 0207						
0	R 55	57.11.3331	330R		MF, 1%, 0207						
0	R 56	57.11.3151	150R		MF, 1%, 0207						
0	R 57	57.11.3331	330R		MF, 1%, 0207						
0	R 58	57.11.3331	330R		MF, 1%, 0207						

End of List

Comments
(01) 14. jul 96 FRI

Remark:
IC 16,17,22,23,44 are IC's without software

IC's with software:
(IC 16) 1.990.985.20: 1 pcs GAL 50.18.0101 / 20V8-25LP incl. software0
(IC 17) 1.990.981.20: 1 pcs EPR 50.14.2201 / 27C258-25 incl. software0
(IC 22) 1.990.987.20: 1 pcs GAL 50.18.0101 / 20V8-25LP incl. software0
(IC 23) 1.990.988.20: 1 pcs GAL 50.18.0101 / 20V8-25LP incl. software0
(IC 44) 1.990.989.20: 1 pcs GAL 50.18.0100 / PLD16V8 incl. software0

Section 10 Connection Boards

Table of Contents

39P Conn. Male Open 2A Board.....	1.992.140.00
39P Conn. Male Open 2B Board.....	1.992.141.00
39P Conn. Male Closed 2A Board	1.992.142.00
Power Connector Board 2A.....	1.992.144.00
Choke 100Hz Board 2A	1.992.145.00
RF-Filter/Conn. Board	1.992.146.00
Conn. Board Inp./In-L./Fad. 4A.....	1.992.150/151.00
Conn. Board	1.992.150/151.00
Connection Inp./In Line/Fader.....	1.992.150/151.00
Connection Board Inp./In-L./Fad. 4A	1.992.150.00
Connection Board Inp./Fader 4A	1.992.151.00
Connection Board Processor Unit 1A.....	1.992.153.00

39P CONN. MALE OPEN 2B BOARD

1.992.141.00

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER	
C....1		59.32.1221	220 pF	CER	
C....2		59.32.1221	220 pF	CER	
C....3		59.32.1221	220 pF	CER	
C....4		59.32.1221	220 pF	CER	
C....5		59.32.1221	220 pF	CER	
C....6		59.32.1221	220 pF	CER	
C....7		59.32.1221	220 pF	CER	
C....8		59.32.1221	220 pF	CER	
C....9		59.32.1221	220 pF	CER	
C....10		59.32.1221	220 pF	CER	
C....11		59.32.1221	220 pF	CER	
C....12		59.32.1221	220 pF	CER	
C....13		59.32.1221	220 pF	CER	
C....14		59.32.1221	220 pF	CER	
C....15		59.32.1221	220 pF	CER	
C....16		59.32.1221	220 pF	CER	
C....17		59.32.1221	220 pF	CER	
C....18		59.32.1221	220 pF	CER	
C....19		59.32.1221	220 pF	CER	
C....20		59.32.1221	220 pF	CER	
C....21		59.32.1221	220 pF	CER	
C....22		59.32.1221	220 pF	CER	
C....23		59.32.1221	220 pF	CER	
C....24		59.32.1221	220 pF	CER	
C....25		59.32.1221	220 pF	CER	
C....26		59.32.1221	220 pF	CER	
C....27		59.32.1221	220 pF	CER	
C....28		59.32.1221	220 pF	CER	
C....29		59.32.1221	220 pF	CER	
C....30		59.32.1221	220 pF	CER	
C....31		59.32.1221	220 pF	CER	
C....32		59.32.1221	220 pF	CER	
C....33		59.32.1221	220 pF	CER	
C....34		59.32.1221	220 pF	CER	
C....35		59.32.1221	220 pF	CER	
C....36		59.32.1221	220 pF	CER	
C....37		59.32.1221	220 pF	CER	
C....38		59.32.1221	220 pF	CER	
C....39		59.32.1221	220 pF	CER	
C....40		59.32.1221	220 pF	CER	
C....41		59.32.1221	220 pF	CER	
C....42		59.32.1221	220 pF	CER	
C....43		59.32.1221	220 pF	CER	
C....44		59.32.1221	220 pF	CER	
C....45		59.32.1221	220 pF	CER	
C....46		59.32.1221	220 pF	CER	
C....47		59.32.1221	220 pF	CER	
C....48		59.32.1221	220 pF	CER	
C....49		0	not used		
C....50		59.32.1102	1000 pF	CER	
C....51		0	not used		
C....52		0	not used		
C....53		0	not used		
C....54		0	not used		
MP....1	1.992.141.11	1	pcs	Print	St
MP....2	54.14.7020	2	pcs	Passstift	Sie
MP....3	54.14.7023	2	pcs	Passbüchse	Sie
MP....4	54.14.7022	2	pcs	Riegelwarne	Sie
MP....5	1.010.014.22	8	pcs	Nietmuttern	St
MP....5	1.010.014.22	12	pcs	Nietmuttern	St
MP....6	1.992.141.04	1	pcs	Nr.-Etikette	St
P...21	54.11.0135	2*3	Pin	PCB Male Connector	
P...22	54.11.0135	2*3	Pin	PCB Male Connector	
P...23	54.11.0135	2*3	Pin	PCB Male Connector	
P...24	54.11.0135	2*3	Pin	PCB Male Connector	
P...25	54.11.0135	2*3	Pin	PCB Male Connector	
P...26	54.11.0135	2*3	Pin	PCB Male Connector	
P...27	54.11.0135	2*3	Pin	PCB Male Connector	
P...28	54.11.0135	2*3	Pin	PCB Male Connector	
P...29	54.11.0135	2*3	Pin	PCB Male Connector	
P...30	54.11.0135	2*3	Pin	PCB Male Connector	
P...31	54.11.0136	2*3	Pin	PCB Male Connector	
P...32	54.11.0136	2*3	Pin	PCB Male Connector	
P...33	54.11.0136	2*3	Pin	PCB Male Connector	
P...34	54.11.0136	2*3	Pin	PCB Male Connector	
P...35	54.11.0136	2*3	Pin	PCB Male Connector	
P...36	54.11.0136	2*3	Pin	PCB Male Connector	
P...37	54.11.0136	2*3	Pin	PCB Male Connector	
P...38	54.11.0136	2*3	Pin	PCB Male Connector	
P...39	54.11.0136	2*3	Pin	PCB Male Connector	
P...40	54.11.0136	2*3	Pin	PCB Male Connector	
P...41	54.11.0136	2*3	Pin	PCB Male Connector	
P...42	54.11.0136	2*3	Pin	PCB Male Connector	
P...43	54.11.0136	2*3	Pin	PCB Male Connector	
P...44	54.11.0136	2*3	Pin	PCB Male Connector	
P...51	54.14.1023	39	Pin	Knife - Connector	Sie
P...52	54.14.1023	39	Pin	Knife - Connector	Sie

Tho=Thomson, To=Toshiba, TI=Texas Instrument, Ya=Yamachi

1.992.141.00 39P CONN.MALE OPEN 2B BOARD CE 90/01/2400

1.992.141.00 39P CONN.MALE OPEN 2B BOARD AB 90/10/1901

END

Anfertigung					
31.10.90	AW	AW	12		
46.1.90	128	128	12		
Gez.	Gepr.	Ges.	Inch		
Kopie für:					
STUDER REGISDRUPP ZÜRICH			39P CONN. MALE OPEN 2B BOARD		
Blatt: 1 Gesamt: 1			Nummer: 1.992.141-00		

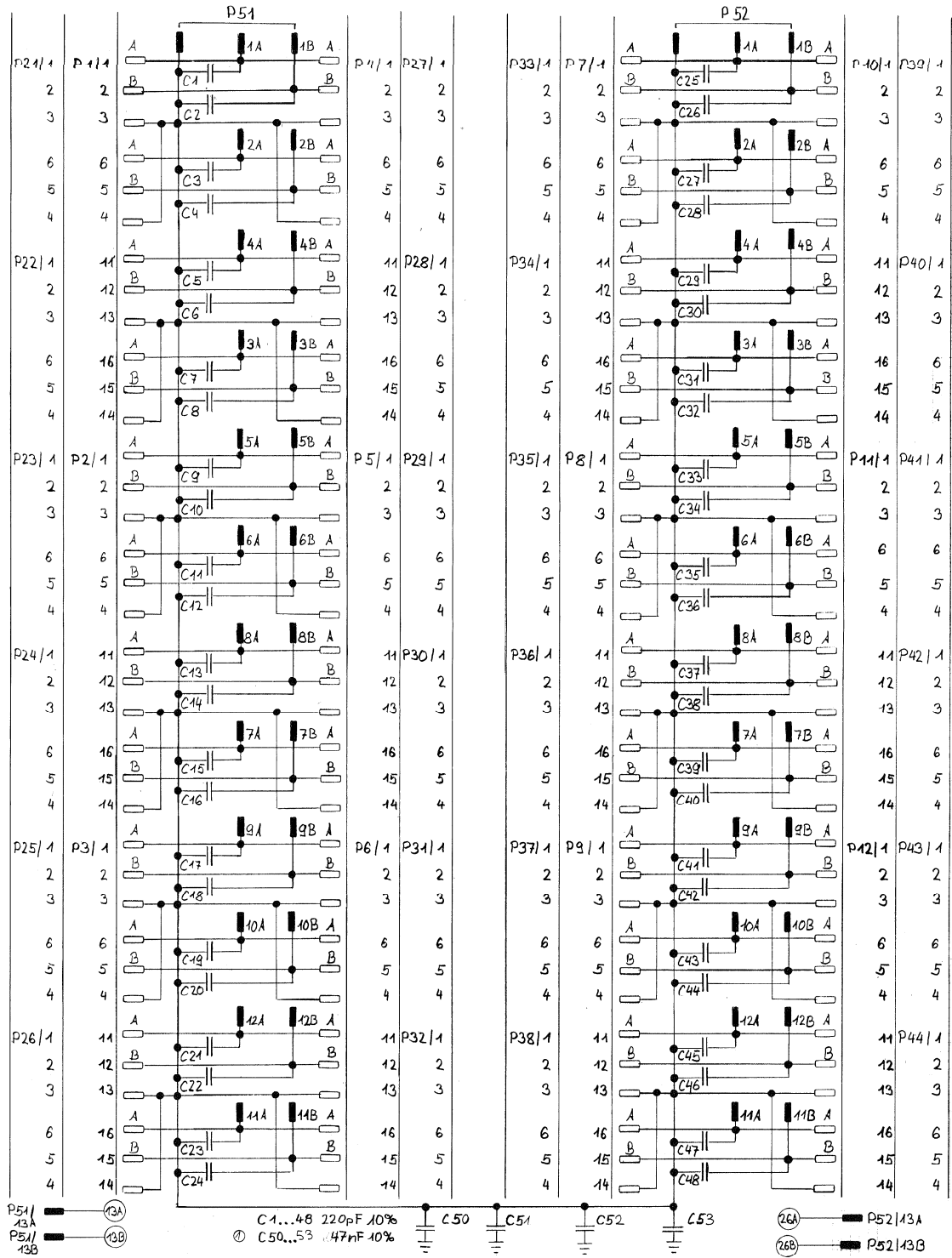
(01) 19.10.90 Better mechanical stability

CER=Ceramic

MANUFACTURER: Sie=Siemens, St=Studer, Six=Siliconix,

39P CONN. MALE CLOSED 2A BOARD

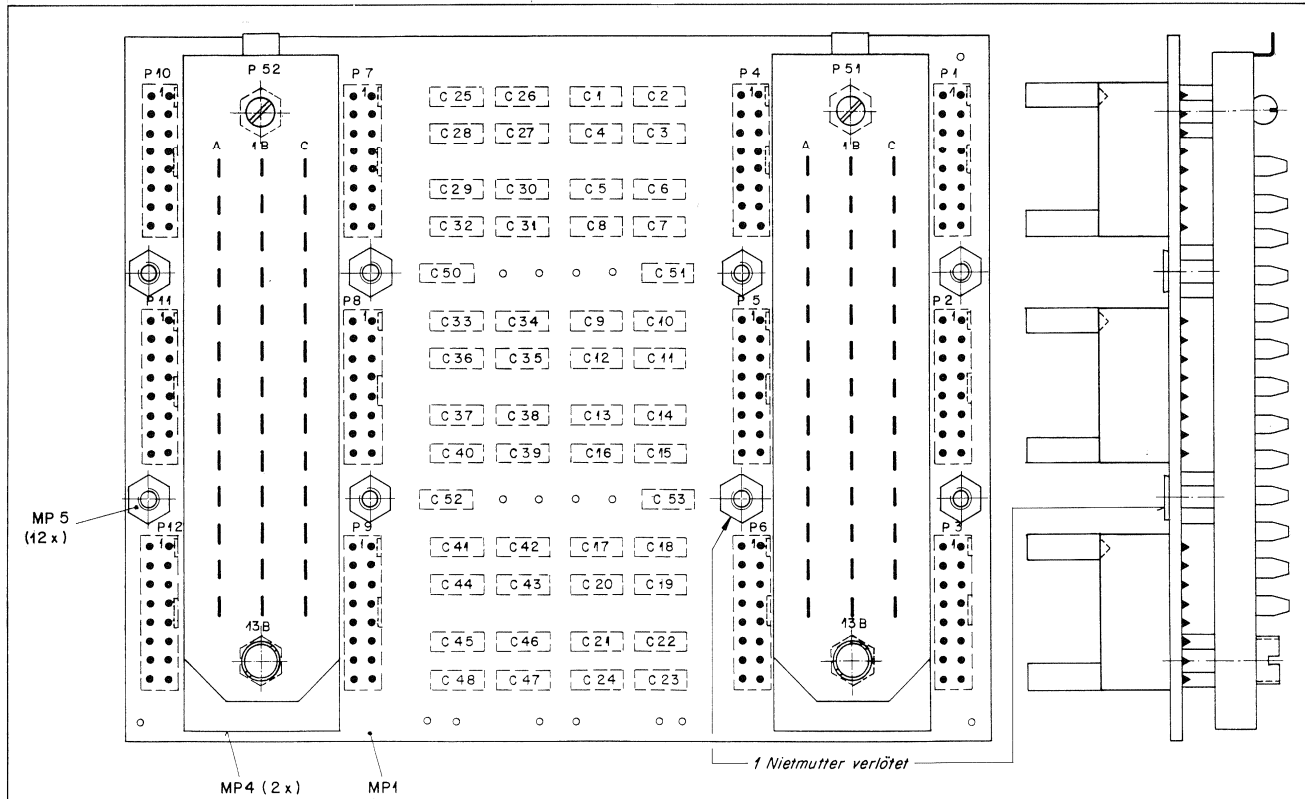
1.992.142.00



① 26.11.90 ab	① 14-5-91 <i>MM</i>	① . . .	① . . .	① . . .
STUDER			39 CONN. MALE CLOSED 2A BOARD	SC 1.992.142.00
				PAGE 1 OF 1

39P CONN. MALE CLOSED 2A BOARD

1.992.142.00



Ad . . POS. . . . REF.No. . . . DESCRIPTION MANUFACTURER

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1	59.32.1221	220 pF	CER	
C....2	59.32.1221	220 pF	CER	
C....3	59.32.1221	220 pF	CER	
C....4	59.32.1221	220 pF	CER	
C....5	59.32.1221	220 pF	CER	
C....6	59.32.1221	220 pF	CER	
C....7	59.32.1221	220 pF	CER	
C....8	59.32.1221	220 pF	CER	
C....9	59.32.1221	220 pF	CER	
C....10	59.32.1221	220 pF	CER	
C....11	59.32.1221	220 pF	CER	
C....12	59.32.1221	220 pF	CER	
C....13	59.32.1221	220 pF	CER	
C....14	59.32.1221	220 pF	CER	
C....15	59.32.1221	220 pF	CER	
C....16	59.32.1221	220 pF	CER	
C....17	59.32.1221	220 pF	CER	
C....18	59.32.1221	220 pF	CER	
C....19	59.32.1221	220 pF	CER	
C....20	59.32.1221	220 pF	CER	
C....21	59.32.1221	220 pF	CER	
C....22	59.32.1221	220 pF	CER	
C....23	59.32.1221	220 pF	CER	
C....24	59.32.1221	220 pF	CER	
C....25	59.32.1221	220 pF	CER	
C....26	59.32.1221	220 pF	CER	
C....27	59.32.1221	220 pF	CER	
C....28	59.32.1221	220 pF	CER	
C....29	59.32.1221	220 pF	CER	
C....30	59.32.1221	220 pF	CER	
C....31	59.32.1221	220 pF	CER	
C....32	59.32.1221	220 pF	CER	
C....33	59.32.1221	220 pF	CER	
C....34	59.32.1221	220 pF	CER	
C....35	59.32.1221	220 pF	CER	
C....36	59.32.1221	220 pF	CER	
C....37	59.32.1221	220 pF	CER	
C....38	59.32.1221	220 pF	CER	
C....39	59.32.1221	220 pF	CER	
C....40	59.32.1221	220 pF	CER	
C....41	59.32.1221	220 pF	CER	
C....42	59.32.1221	220 pF	CER	
C....43	59.32.1221	220 pF	CER	
C....44	59.32.1221	220 pF	CER	
C....45	59.32.1221	220 pF	CER	
C....46	59.32.1221	220 pF	CER	
C....47	59.32.1221	220 pF	CER	
C....48	59.32.1221	220 pF	CER	
C....49	59.32.1221	220 pF	CER	
C....50	59.32.1102	1000 pF	CER	
01 C....50	59.06.0473	47 nF	CER	
01 C....51	59.06.0473	47 nF	CER	

Angabe					(3)
14.5.91	DM	fr	Bl		(2)
27.11.90	TH	ab	lf		(1)
Datum	Gez.	Gepr.	Ces	Index	(0)
Kopie für					

STUDER REGENSDORF ZÜRICH	Bezeichnung 39 P CONN. MALE CLOSED 2A BOARD	Nummer 1.992.142-00
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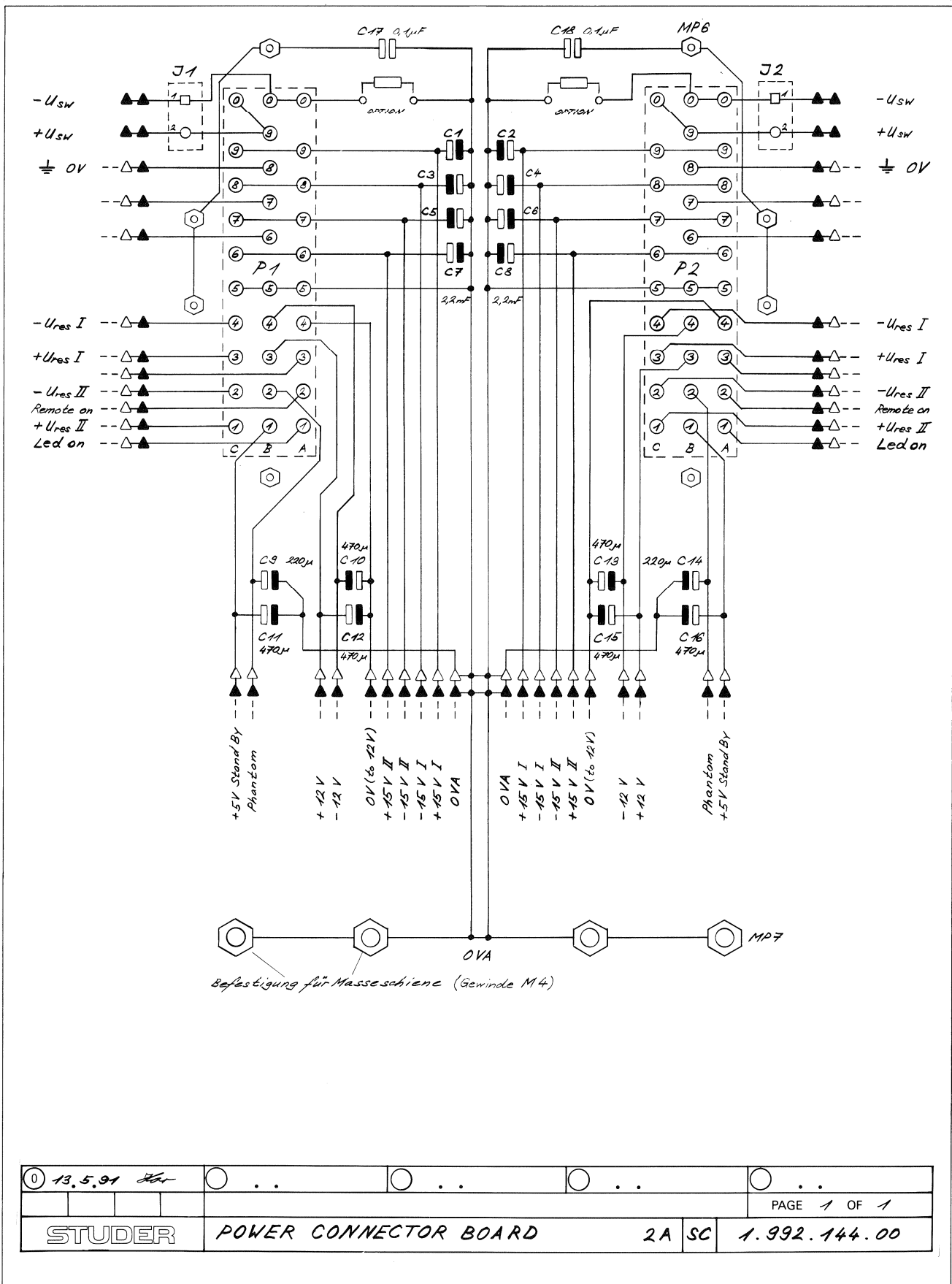
Ad . . POS. . . . REF.No. . . . DESCRIPTION MANUFACTURER

01 C....52	59.06.0473	47 nF		
01 C....53	59.06.0473	47 nF		
MP....1	1.992.142.11	1 pcs	Print	St
MP....2	54.14.7020	2 pcs	Passstift	Sie
MP....3	54.14.7023	2 pcs	Passbuchse	Sie
MP....4	54.14.7002	2 pcs	Riegelwanne	Sie
MP....5	1.010.014.22	12 pcs	Nietmuttern	St
MP....6	1.992.142.04	1 pcs	Nr.-Etikette	
P....1	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....2	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....3	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....4	. . . 0	not used		
P....5	. . . 0	not used		
P....6	. . . 0	not used		
P....7	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....8	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....9	54.14.2102	2*8 Pin	PCB Flat Cable Connector	
P....10	. . . 0	not used		
P....11	. . . 0	not used		
P....12	. . . 0	not used		
P....51	54.14.1023	39 Pin	Knife - Connector	Sie
P....52	54.14.1023	39 Pin	Knife - Connector	Sie

CER=Ceramic
 MANUFACTURER: Sie=Siemens, St=Studer
 1.992.142.00 39P CONN.MALE CLOSED 2A BOARD AB 90/11/2600
 1.992.142.00 39P CONN.MALE CLOSED 2A BOARD AB 91/05/1401

POWER CONNECTOR BOARD 2A

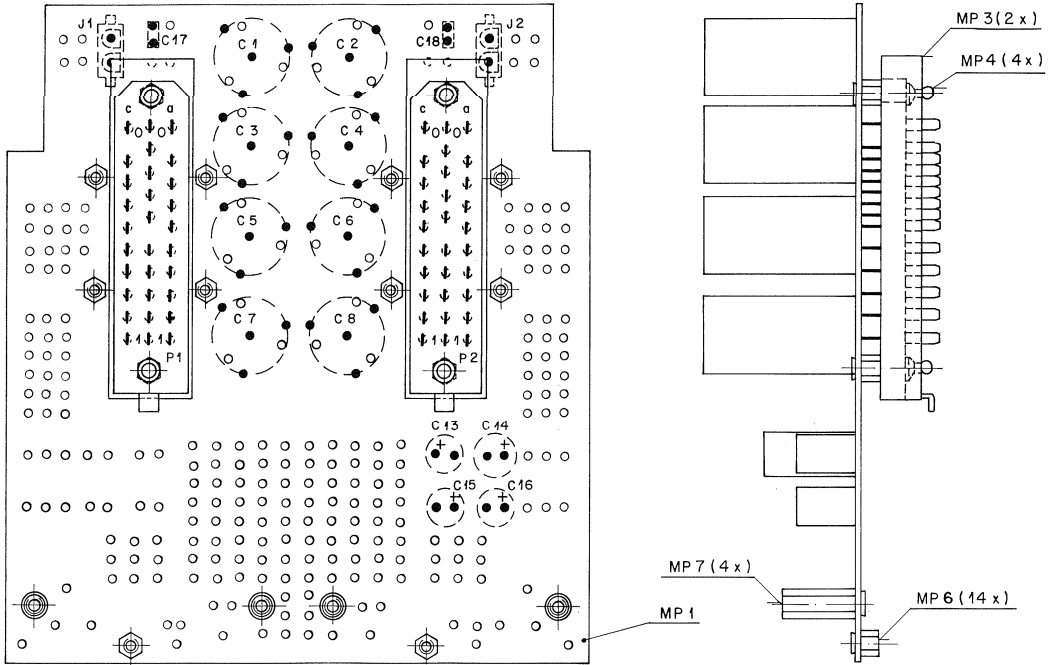
1.992.144.00



13.5.91	..	..	..	..
				PAGE 1 OF 1
STUDER	POWER CONNECTOR BOARD	2A SC	1.992.144.00	

POWER CONNECTOR BOARD 2A

1.992.144.00



3					
2					
1					
0	20.6.91				
	Datum	Grz	Grpr	Gas	Index

STUDER REGENSDORF ZÜRICH	Benennung	POWER CONNECTOR BOARD 2A	Number:	1.992.144-00
		Kopie für:		

Ad . . POS . . . REF.No . . . DESCRIPTION MANUFACTURER

C.....1	59.28.3222	2200 uF	-20%	25V	EL	any
C.....2	59.28.3222	2200 uF	-20%	25V	EL	any
C.....3	59.28.3222	2200 uF	-20%	25V	EL	any
C.....4	59.28.3222	2200 uF	-20%	25V	EL	any
C.....5	59.28.3222	2200 uF	-20%	25V	EL	any
C.....6	59.28.3222	2200 uF	-20%	25V	EL	any
C.....7	59.28.3222	2200 uF	-20%	25V	EL	any
C.....8	59.28.3222	2200 uF	-20%	25V	EL	any
C.....9	. . . 0				not used	
C.....10	. . . 0				not used	
C.....11	. . . 0				not used	
C.....12	. . . 0				not used	
C.....13	59.22.5471	470 uF	-20%	16V	EL	any
C.....14	59.22.8221	220 uF	-20%	63V	EL	any
C.....15	59.22.5471	470 uF	-20%	16V	EL	any
C.....16	59.22.5471	470 uF	-20%	16V	EL	any
C.....17	59.06.0104	0.1 uF	10%	63V	PE	any
C.....18	59.06.0104	0.1 uF	10%	63V	PE	any
J.....1	54.25.0002				J-Buchse 2 Pol 16A AMP	
J.....2	54.25.0002				J-Buchse 2 Pol 16A AMP	
MP.....1	1.992.144.11	1 pcs			POWER CONN. PCB	St
MP.....2	1.992.144.04	0 pcs			NR.-ETIKETTE 5 * 20	St
MP.....3	54.14.7002	2 pcs			Riegelwanne	
MP.....4	54.14.7020	4 pcs			Passstift	
MP.....6	1.010.014.22	14 pcs			Nietmutter M3 * 4,5	
MP.....7	1.010.062.22	4 pcs			Nietmutter M4 * 20	
P.....1	54.14.1022				P-Leiste 30 Pol Print	
P.....2	54.14.1022				P-Leiste 30 Pol Print	

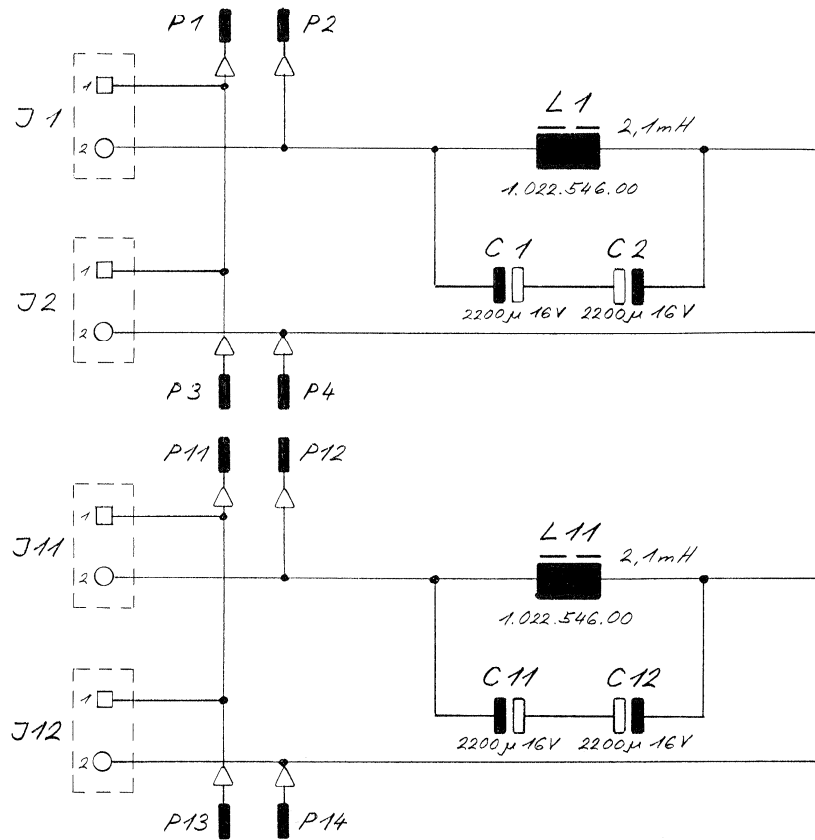
EL=Electrolytic, PE=Polyester

Manufacturer : St = Studer

1.992.144.00 POWER CONNECTOR BOARD 2A HOR91/05/1300

CHOKE 100 HZ BOARD 2A

1.992.145.00



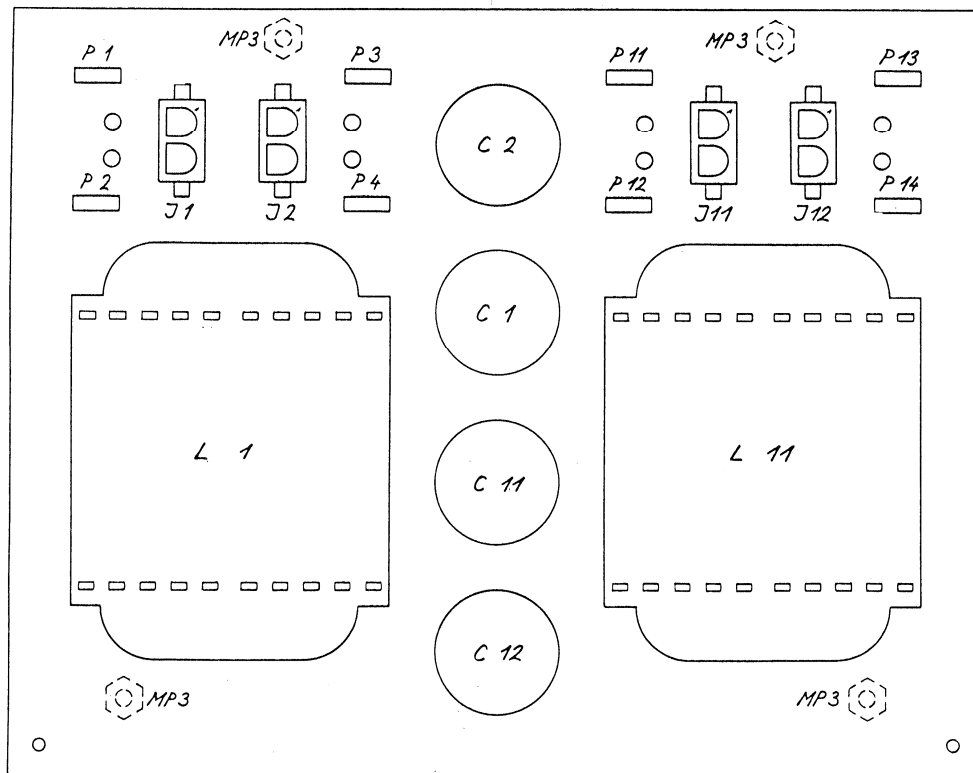
■ FASTON 6,3mm

△ HOLE Ø 2,5mm

① 21.5.91 <i>Hor</i>	○ . .	○ . .	○ . .	○ . .	PAGE 1 OF 1
STUDER	CHOKE 100 HZ BOARD	2A	1.992.145.00		

CHOKE 100 HZ BOARD 2A

1.992.145.00



Bemerkung: Muss von Hand gelötet werden oder freibleibende Lötäugen müssen vor dem Lötbad abgedeckt werden!

Ad	POS.	REF.No.	DESCRIPTION	MANUFACTURER
C....1		59.28.2222	2200 uF 20% 16V EL	any
C....2		59.28.2222	2200 uF 20% 16V EL	any
C....11		.	not used	(see note 1)
C....12		.	not used	(see note 1)
J....1		54.25.0002	J-Buchse 2 Pol 16A AMP	
J....2		54.25.0002	J-Buchse 2 Pol 16A AMP	
J....11		.	not used	(see note 1)
J....12		.	not used	(see note 1)
L....1		1.022.546.00	2.1 mH CHOKE COIL SU39A	St
L....11		.	not used	(see note 1)
MP....1		1.992.145.11	1 pcs CHOKE 100 HZ PCB	St
MP....2		1.992.145.04	0 pcs NR.-ETIKETTE 5 * 20	St
MP....3		1.010.054.22	4 pcs Nietmutter M3 * 30,5	
P....1		54.02.0335	FASTON 6,3mm	
P....2		54.02.0335	FASTON 6,3mm	
P....3		54.02.0335	FASTON 6,3mm	
P....4		54.02.0335	FASTON 6,3mm	
P....11		54.02.0335	FASTON 6,3mm	
P....12		54.02.0335	FASTON 6,3mm	
P....13		54.02.0335	FASTON 6,3mm	
P....14		54.02.0335	FASTON 6,3mm	

NOTE 1: Bei Bedarf kann die zweite Haelfte des Print mit Drossel, Kondensatoren und Anschlusssteckern bestueckt werden. Diese Bauteile muessen separat geordert werden.
Anlieferungsstelle: KS 610.75 (Hr. Saurenmann)

WICHTIG: Baugruppe muss entweder von Hand geloetet werden, oder alle nicht benuetzten Loetaugen muessen vor dem Loetbad abgedeckt werden!

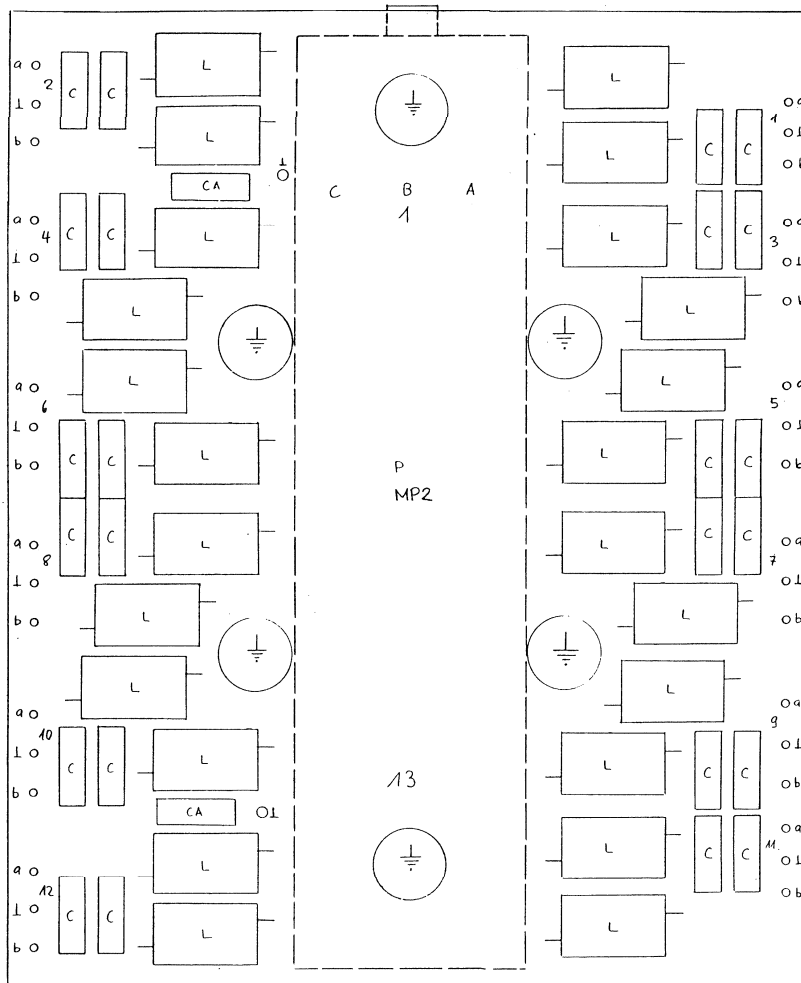
EL=Electrolytic

Manufacturer : St = Studer

1.992.145.00 CHOKE 100 HZ BOARD 2A HOR91/05/2400

RF-FILTER / CONN. BOARD

1.992.146.00



BV670
beachten

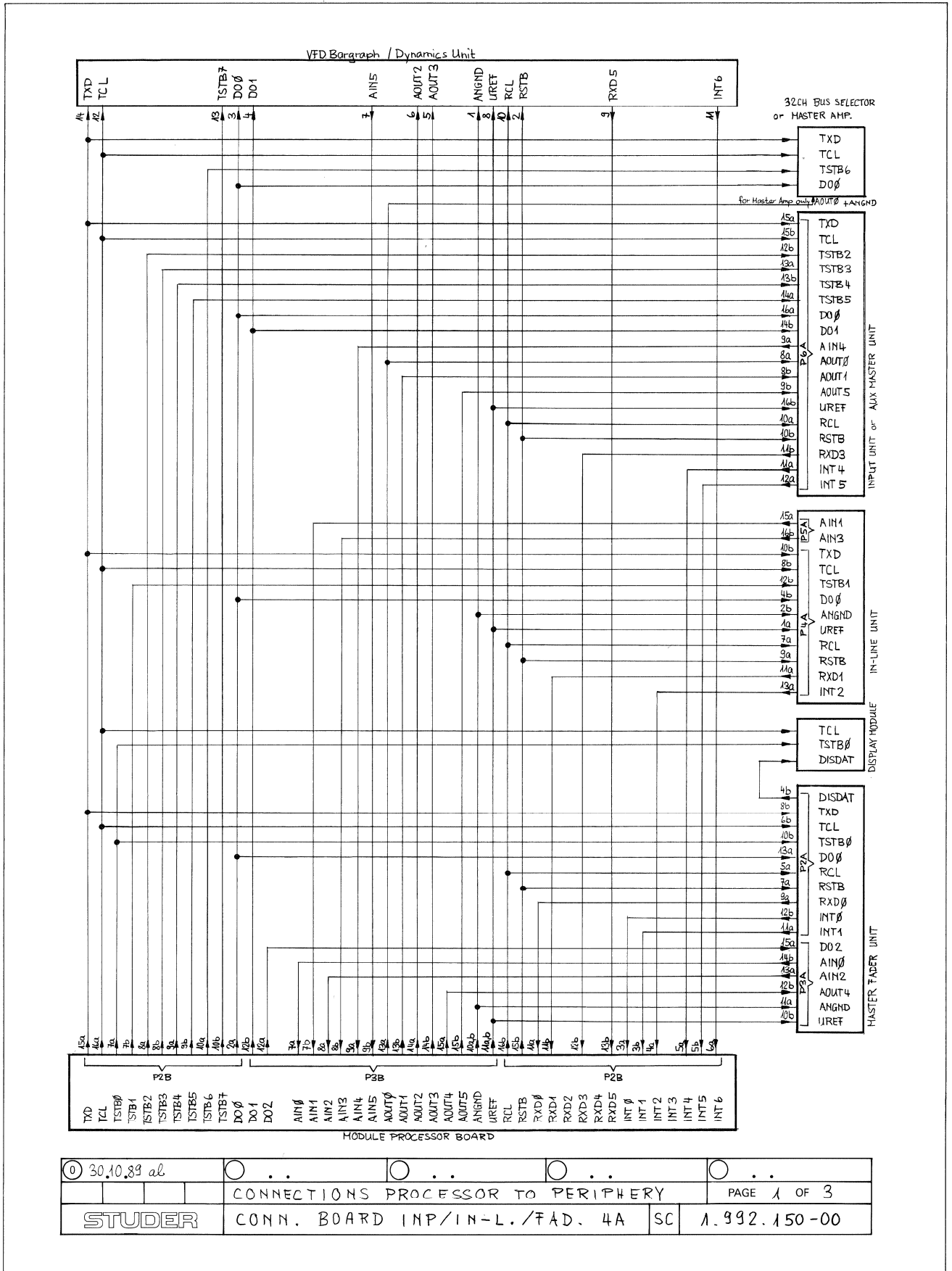
Ansicht Lötseite (Print-Nr): C, L / Bestückungsseite : Stecker, Nietmuttern
Nr - Etiketle aufgeklebt nach Fabrikationsmuster

L	62.01.0115	Breitbanddrossel	24 Stk
C	59.34.4221	220 pF	24 Stk
CA	59.06.0473	47 nF	2 Stk
P	54.14.1023	Leiste, 39 POL, Print	1 Stk
MP1	1.010.014.22	Nietmutter M3x4,5	6 Stk
MP2	54.14.7002	Riegelwanne	1 Stk
MP3	54.14.7020	Pass-Stift	1 Stk
MP4	54.14.7023	Pass-Buchse	1 Stk

© 29.4.91 my				
				PAGE OF
STUDER	RF-Filter/Conn. Board			1.992.146.00

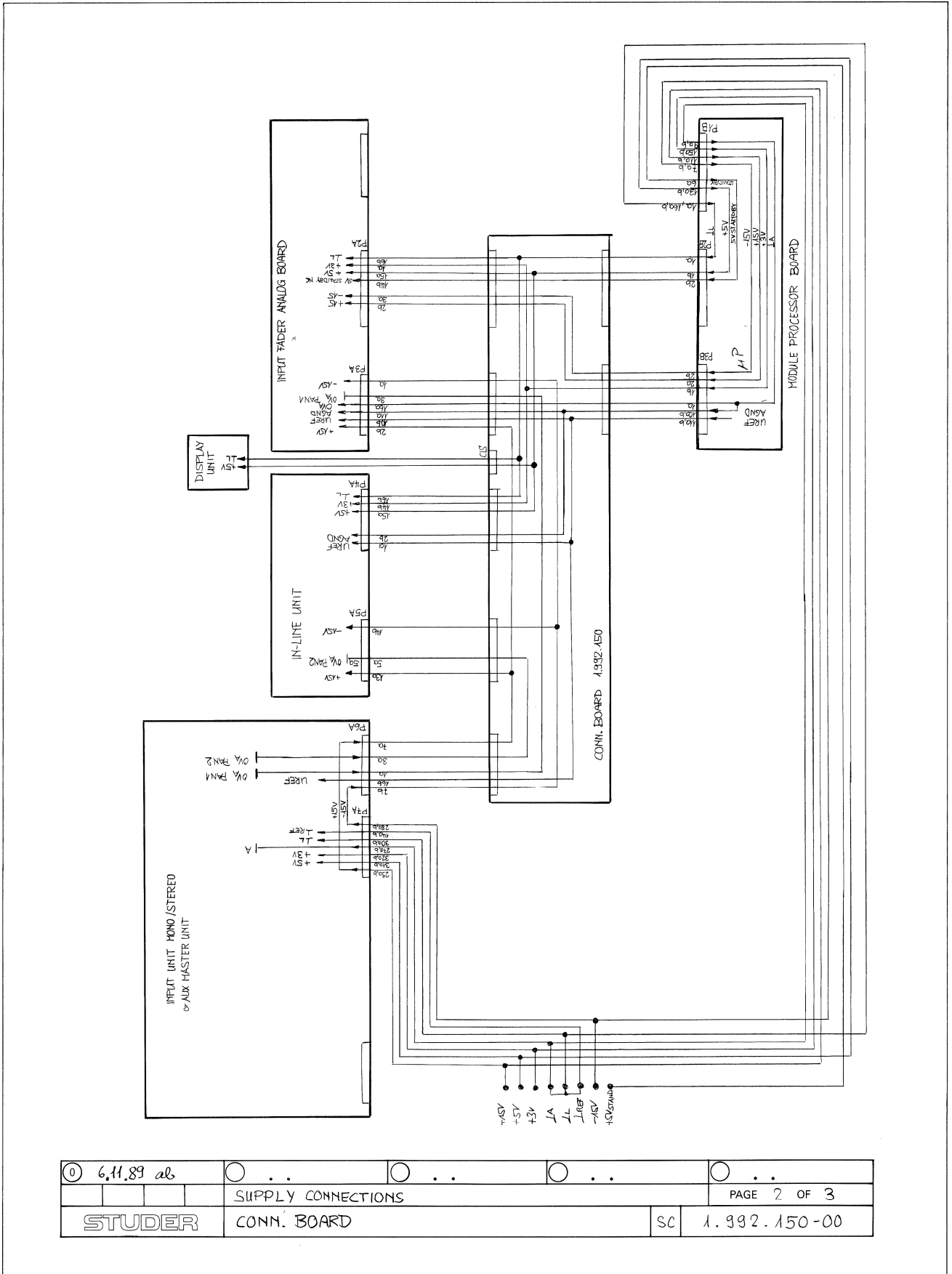
CONN. BOARD INP. / IN-L. / FAD. 4A

1.992.150.00/151.00



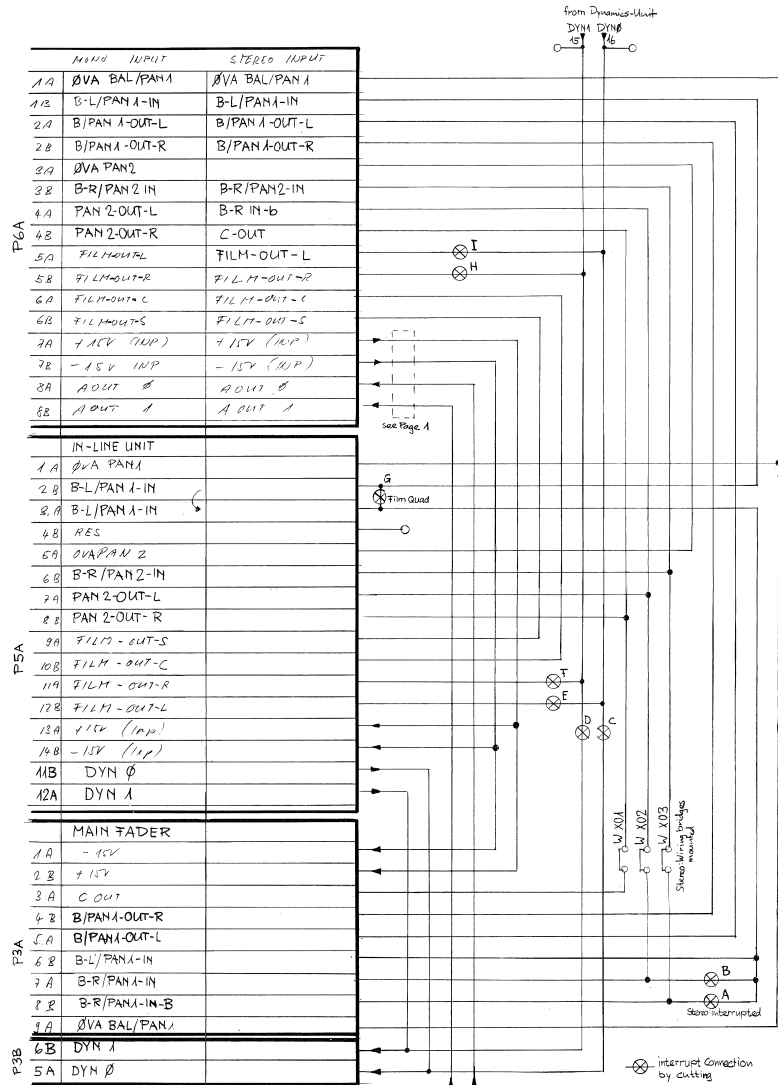
CONN. BOARD

1.992.150.00/151.00



CONNECTION INP. / IN LINE / FADER

1.992.150.00/151.00

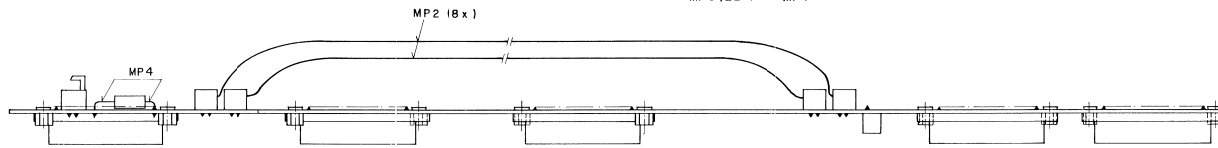
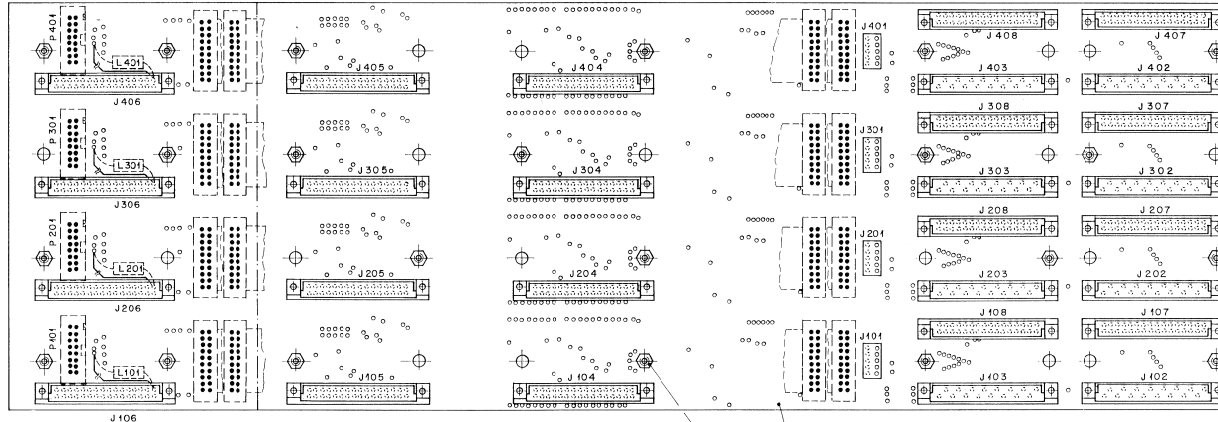


06.11.83 ac				
PART OF 1.992.150/151 AUDIO/ANALOG		PAGE 3 OF 3		
STUDER	CONNECTION INP. / In Line / Fader	SC	1.992.150-00	

CONN. BOARD INP. / IN-L. / FAD. 4A

1.992.150.00

① Leiterbahnen
auffrennen



① neu dazu L.101, L.201, L.301, L.401

STUDER REGENSDORF ZÜRICH	CONN. BOARD INP / IN-L. / FAD. 4A	Number: 1.992.150-00
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Änderung					
Datum	18.4.94	Gez.	HF	ab	①
Datum	17.11.89	Gez.	HF	ab	②
Kopie für:					

Ad .POS. .REF.No. .DESCRIPTION. .MANUFACTURER

J...101	54.01.0288	CIS female, 5 contacts to Display
J...102	54.11.2008	Euro, 2* 8 contacts P2A
J...103	54.11.2008	Euro, 2* 8 contacts P3A
J...104	54.11.2014	Euro, 2*16 contacts P4A
J...105	54.11.2014	Euro, 2*16 contacts P5A
J...106	54.11.2014	Euro, 2*16 contacts P6A
J...107	54.11.2014	Euro, 2*16 contacts P2B
J...108	54.11.2014	Euro, 2*16 contacts P3B
J...201	54.01.0288	CIS female, 5 contacts to Display
J...202	54.11.2008	Euro, 2* 8 contacts P2A
J...203	54.11.2008	Euro, 2* 8 contacts P3A
J...204	54.11.2014	Euro, 2*16 contacts P4A
J...205	54.11.2014	Euro, 2*16 contacts P5A
J...206	54.11.2014	Euro, 2*16 contacts P6A
J...207	54.11.2014	Euro, 2*16 contacts P2B
J...208	54.11.2014	Euro, 2*16 contacts P3B
J...301	54.01.0288	CIS female, 5 contacts to Display
J...302	54.11.2008	Euro, 2* 8 contacts P2A
J...303	54.11.2008	Euro, 2* 8 contacts P3A
J...304	54.11.2014	Euro, 2*16 contacts P4A
J...305	54.11.2014	Euro, 2*16 contacts P5A
J...306	54.11.2014	Euro, 2*16 contacts P6A
J...307	54.11.2014	Euro, 2*16 contacts P2B
J...308	54.11.2014	Euro, 2*16 contacts P3B
J...401	54.01.0288	CIS female, 5 contacts to Display
J...402	54.11.2008	Euro, 2* 8 contacts P2A
J...403	54.11.2008	Euro, 2* 8 contacts P3A
J...404	54.11.2014	Euro, 2*16 contacts P4A
J...405	54.11.2014	Euro, 2*16 contacts P5A
J...406	54.11.2014	Euro, 2*16 contacts P6A
J...407	54.11.2014	Euro, 2*16 contacts P2B
J...408	54.11.2014	Euro, 2*16 contacts P3B

01 L...101	42.01.0115	Wide band HF-Choke for UREF
01 L...201	42.01.0115	Wide band HF-Choke for UREF
01 L...301	42.01.0115	Wide band HF-Choke for UREF
01 L...401	42.01.0115	Wide band HF-Choke for UREF

MP...1	1.992.150.11	1 pcs	Print	St
MP...2	1.023.172.48	8 pcs	Flachkabel 20 pol, 0,48M	St
MP...3	1.010.034.22	22 pcs	Wickelmutter MP4, 5	
01 MP...4	65.03.0158	100 mm	Isolierschlauch	

P...101	54.14.2102	FB-Plug, 16 contacts to Meter Unit
P...102	0	not used 54142001 10 contacts IL-Bus
P...201	54.14.2102	FB-Plug, 16 contacts to Meter Unit
P...202	0	not used 54142001 10 contacts IL-Bus
P...301	54.14.2102	FB-Plug, 16 contacts to Meter Unit
P...302	0	not used 54142001 10 contacts IL-Bus
P...401	54.14.2102	FB-Plug, 16 contacts to Meter Unit
P...402	0	not used 54142001 10 contacts IL-Bus

W...101	0	not used	57113000	Wiring bridge for Stereo
W...102	0	not used	57113000	Wiring bridge for Stereo
W...103	0	not used	57113000	Wiring bridge for Stereo
W...201	0	not used	57113000	Wiring bridge for Stereo
W...202	0	not used	57113000	Wiring bridge for Stereo
W...203	0	not used	57113000	Wiring bridge for Stereo
W...301	0	not used	57113000	Wiring bridge for Stereo
W...302	0	not used	57113000	Wiring bridge for Stereo
W...303	0	not used	57113000	Wiring bridge for Stereo
W...401	0	not used	57113000	Wiring bridge for Stereo
W...402	0	not used	57113000	Wiring bridge for Stereo
W...403	0	not used	57113000	Wiring bridge for Stereo

MANUFACTURER: S=Studer

(01) 91/04/18 HF-Suppression on UREF ==> L101...L401, MP 4

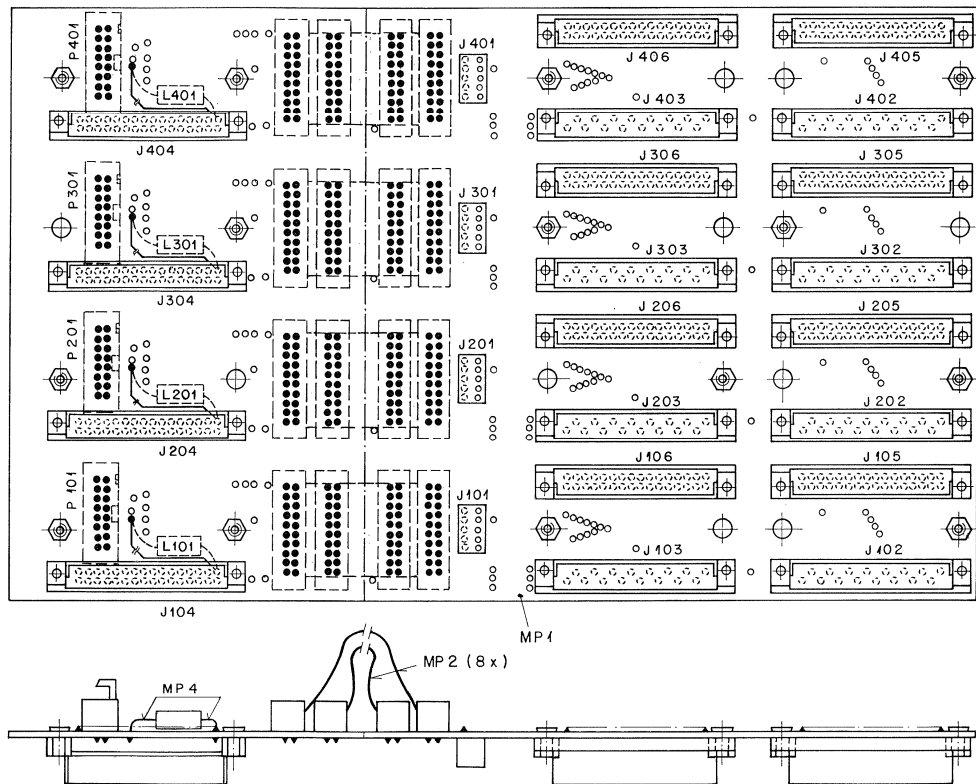
1.992.150.00 CONN. BOARD INP./IN-L./FAD. 4 AAB 89/11/1400

1.992.150.00 CONN. BOARD INP./IN-L./FAD. 4 AAB 91/04/1801

CONN. BOARD INP. / FADER 4A

1.992.151.00

① Leiterbahnen
auftrennen



① neu dazu L 101, L 201, L 301, L 401

Änderung									
18.4.91	JK	JK	JK	JK	JK	JK	JK	JK	JK
17.11.89	JK	JK	JK	JK	JK	JK	JK	JK	JK
Datum	Gez.	Gepr.	Ges.	Index					

Ad .POS. . . REF.No. . . DESCRIPTION MANUFACTURER

J...101	54.01.0288		CIS female, 5 contacts to Display	
J...102	54.11.2008		Euro, 2* 8 contacts P2A	
J...103	54.11.2008		Euro, 2* 8 contacts P3A	
J...104	54.11.2014		Euro, 2*16 contacts P6A	
J...105	54.11.2014		Euro, 2*16 contacts P2B	
J...106	54.11.2014		Euro, 2*16 contacts P3B	
J...201	54.01.0288		CIS female, 5 contacts to Display	
J...202	54.11.2008		Euro, 2* 8 contacts P2A	
J...203	54.11.2008		Euro, 2* 8 contacts P3A	
J...204	54.11.2014		Euro, 2*16 contacts P6A	
J...205	54.11.2014		Euro, 2*16 contacts P2B	
J...206	54.11.2014		Euro, 2*16 contacts P3B	
J...301	54.01.0288		CIS female, 5 contacts to Display	
J...302	54.11.2008		Euro, 2* 8 contacts P2A	
J...303	54.11.2008		Euro, 2* 8 contacts P3A	
J...304	54.11.2014		Euro, 2*16 contacts P6A	
J...305	54.11.2014		Euro, 2*16 contacts P2B	
J...306	54.11.2014		Euro, 2*16 contacts P3B	
J...401	54.01.0288		CIS female, 5 contacts to Display	
J...402	54.11.2008		Euro, 2* 8 contacts P2A	
J...403	54.11.2008		Euro, 2* 8 contacts P3A	
J...404	54.11.2014		Euro, 2*16 contacts P6A	
J...405	54.11.2014		Euro, 2*16 contacts P2B	
J...406	54.11.2014		Euro, 2*16 contacts P3B	
01 L...101	62.01.0115		Wide band HF-Choke for UREF	
01 L...201	62.01.0115		Wide band HF-Choke for UREF	
01 L...301	62.01.0115		Wide band HF-Choke for UREF	
01 L...401	62.01.0115		Wide band HF-Choke for UREF	
MP...1	1.992.151.11	1 pcs	Print	St
MP...2	1.023.172.48	8 pcs	Flachkabel 20 pol, 0,48M	St
MP...3	1.010.014.22	14 pcs	Nietmutter M3*4,5	
01 MP...4	65.03.0158	100 mm	Isolierschlauch	
P...101	54.14.2102		FB-Plug, 16 contacts to Meter Unit	
P...201	54.14.2102		FB-Plug, 16 contacts to Meter Unit	
P...301	54.14.2102		FB-Plug, 16 contacts to Meter Unit	
P...401	54.14.2102		FB-Plug, 16 contacts to Meter Unit	

STUDER REGENSDORF ZÜRICH	Benennung: CONN. BOARD INP. / FADER 4 A	Nummer: 1.992.151-00
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Ad	.POS.	. . . REF.No.	. . . DESCRIPTION MANUFACTURER
		W...201	. . 0 not used	57113000 Wiring bridge for Stereo
		W...202	. . 0 not used	57113000 Wiring bridge for Stereo
		W...203	. . 0 not used	57113000 Wiring bridge for Stereo
		W...301	. . 0 not used	57113000 Wiring bridge for Stereo
		W...302	. . 0 not used	57113000 Wiring bridge for Stereo
		W...303	. . 0 not used	57113000 Wiring bridge for Stereo
		W...401	. . 0 not used	57113000 Wiring bridge for Stereo
		W...402	. . 0 not used	57113000 Wiring bridge for Stereo
		W...403	. . 0 not used	57113000 Wiring bridge for Stereo

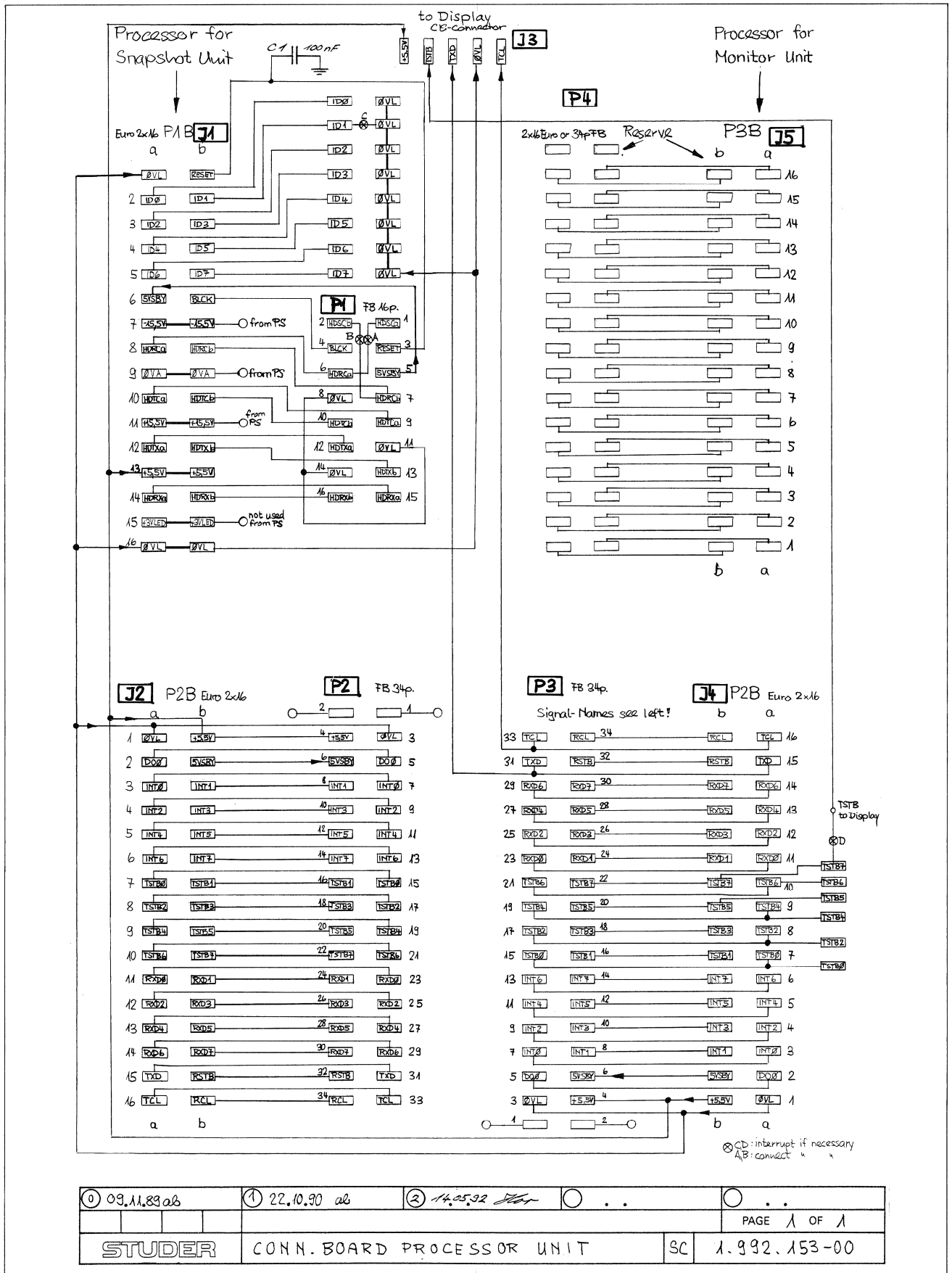
MANUFACTURER: St=Studer

(01) 91/04/18 HF-Suppression on UREF ==> L 101...L 401, MP 4

W...101	. . 0	not used	57113000 Wiring bridge for Stereo	1.992.151.00	CONN.BOARD INP./FADER 4A	AB 89/11/1400
W...102	. . 0	not used	57113000 Wiring bridge for Stereo	1.992.151.00	CONN.BOARD INP./FADER 4A	AB 91/04/1801
W...103	. . 0	not used	57113000 Wiring bridge for Stereo			

CONNECTION BOARD PROCESSOR UNIT 1A

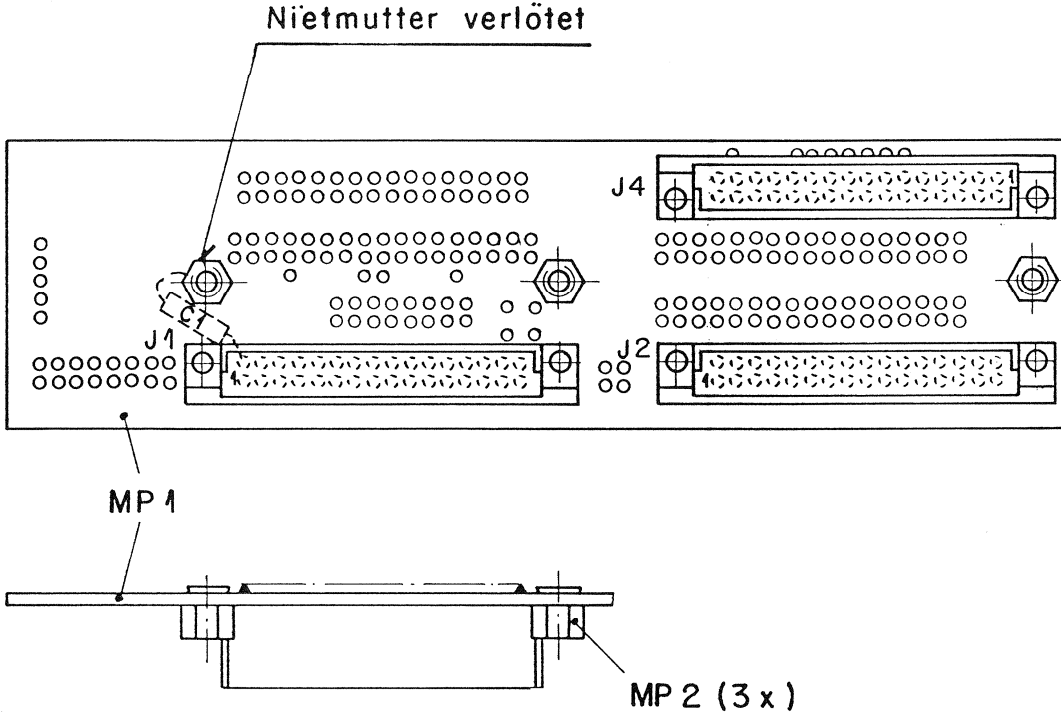
1.992.153.00



03.11.89 ab	22.10.90 ab	14.05.92 <i>for</i>	..	..
STUDER				CONN. BOARD PROCESSOR UNIT
			SC	PAGE 1 OF 1 1.992.153-00

CONNECTION BOARD PROCESSOR UNIT 1A

1.992.153.00



Änderung					③
					②
Ausgabe	14.5.92	<i>WZ</i>	<i>H. Z...</i>		①
Datum	1.2.90	<i>A. H. or W. Z...</i>	<i>W. Z...</i>		④

① C 1 neu dazu.

STUDER REGENSDORF ZÜRICH	Benennung:	CONN. BOARD PROCESSOR UNIT 1A	Nummer: 1.992.153-00
	Kopie für:		

Ad	.POS.	REF.No.	DESCRIPTION	MANUFACTURER
01	C.....1	59.03.2104	0.1 uF MPETP 10% 160/250V	
	J.....1	54.11.2014	2*16 Pin Euroconnector female (HDLC-Signals left)	
	J.....2	54.11.2014	2*16 Pin Euroconnector female (Serdat-Signals left)	
	J.....3	. . . 0	not used 54.01.0288 CIS female, 5 contacts (Display)	
	J.....4	54.11.2014	2*16 Pin Euroconnector female (Serdat-Signals right)	
	J.....5	. . . 0	not used 54.11.2014 Euroconnector (Analog right)	
	MP.....1	1.992.153.11	1 pcs Print	St
	MP.....2	1.010.014.22	3 pcs Nietmuttern M3*4.5mm	St
	P.....1	. . . 0	not used 54.14.5025 solder 16pin Conn.(HDLC-Signals)	
	P.....2	. . . 0	not used 54.14.5035 solder 34pin Conn.(Serdat-Sign.)	
	P.....3	. . . 0	not used 54.14.5035 solder 34pin Conn.(Serdat-Sign.)	
	P.....4	. . . 0	not used Reserved Spare	

(01) 14.05.92 Breakdown EMV-Test. Additional C 1 (100nF) between chassis and HDLC-resetline.

MANUFACTURER: St=Studer
 1.992.153.00 CONN.BOARD PROCESSOR UNIT 1A AB 90/01/0800
 1.992.153.00 CONN.BOARD PROCESSOR UNIT 1A AB 92/05/1401