STUDER
professional audio equipment

Studer OnAir 1000

Digital Broadcast Mixing Console, SW V4.0/4.03

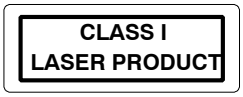
Operating and Service Instructions

Prepared and edited by
Studer Professional Audio GmbH
Technical Documentation
Althardstrasse 30
CH-8105 Regensdorf – Switzerland
http://www.studer.ch

Printed in Switzerland
Order no. 10.27.4892 (Ed. 0704)

Subject to change

A Safety Information

	To reduce the risk of electric shock, do not remove covers. No user-serviceable parts inside. Refer servicing to qualified service personnel (i.e., persons having appropriate technical training and experience necessary to be aware of hazards to which they are exposed in performing a repair action, and of measures to minimize the danger of themselves).
	This symbol alerts the user to the presence of un-insulated *dangerous voltage* within the equipment that may be of sufficient magnitude to constitute a risk of electric shock to a person.
	This symbol alerts the user to *important instructions* for operating and maintenance in this documentation.
 	Assemblies or sub-assemblies of this product can contain opto-electronic devices. As long as these devices comply with Class I of laser or LED products according to EN 60825-1:1994, they will not be expressly marked on the product. If a special design should be covered by a higher class of this standard, the device concerned will be marked directly on the assembly or sub-assembly in accordance with the above standard.

A1 First Aid

In Case of Electric Shock:

Separate the person as quickly as possible from the electric power source:

- By switching off the equipment,
- By unplugging or disconnecting the mains cable, or
- By pushing the person away from the power source, using dry, insulating material (such as wood or plastic).
- After having suffered 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 suffering an electric shock as well!***

If the Person is Unconscious:

- Lay the person down
- Turn him to one side
- Check the pulse
- Reanimate the person if respiration is poor
- *Call for a doctor immediately.*

B General Installation Instructions

Please consider besides these general instructions also any product-specific instructions in the “Installation” chapter of this manual.

B1 Unpacking

Check the equipment for any transport damage. If the unit is mechanically damaged, if liquids have been spilled or if objects have fallen into the unit, *it must not be connected to the AC power outlet, or it must be immediately disconnected by unplugging the power cable.* Repair must only be performed by trained personnel in accordance with the applicable regulations.

B2 Installation Site

Install the unit in a place where the following conditions are met:

- The temperature and the relative humidity of the environment must be within the specified limits during operation of the unit. Relevant values are the ones at the air inlets of the unit.
- Condensation must be avoided. If the unit is installed in a location with large variation of ambient temperature (e.g. in an OB-van), appropriate precautions must be taken before and after operation (for details on this subject, refer to Appendix 1).
- Unobstructed air flow is essential for proper operation. Air vents of the unit are a functional part of the design and must not be blocked in any way during operation (e.g. by objects placed upon them, placement of the unit on a soft surface, or installation of the unit within a rack or piece of furniture).
- The unit must not be heated up by external sources of heat radiation (sunlight, spot lights).

B3 Earthing and Power Supply

Earthing of units with mains supply (class I equipment) is performed via the protective earth (PE) conductor integrated in the mains cable. Units with battery operation (< 60 V, class III equipment) must be earthed separately.

Earthing the unit is one of the measures for protection against electrical shock hazard (dangerous body currents). Hazardous voltage may not only be caused by a defective power supply insulation, but may also be introduced by the connected audio or control cables.

If the unit is installed with one or several external connections, its earthing must be provided during operation as well as while the unit is not operated.

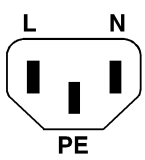
If the earthing connection can be interrupted, for example, by unplugging the mains plug of an external power supply unit, an additional, permanent earthing connection must be installed using the provided earth terminal.

Avoid ground loops (hum loops) by keeping the loop surface as small as possible (by consequently guiding the earth conductors in a narrow, parallel way), and reduce the noise current flowing through the loop by inserting an additional impedance (common-mode choke).

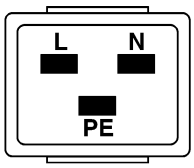
Class I Equipment (Mains Operation)

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.
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 (protection conforming to class I equipment) *must* be connected to a 3-pole AC power outlet so that the equipment cabinet is connected to the protective earth.
For information on mains cable strain relief please refer to Appendix 2.

Female Plugs (IEC320), Front-Side View:



IEC 320 / C13



IEC 320 / C19

European Standard (CENELEC)		North American Standard (NAS)
Brown	**L (Live)**	Black
Blue	**N (Neutral)**	White
Green/Yellow	**PE (Protective Earth)**	Green (or Green/Yellow)

Class III Equipment (Battery Operation up to 60 V_{DC})

Equipment of this protection class must be earthed using the provided earth terminal, if one or more external signals are connected to the unit (see explanation at the beginning of this paragraph).

B4 Electromagnetic Compatibility (EMC)

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

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

The unit has been tested and conforms to the EMC standards of the specified electromagnetic environment, as listed in the following declaration. The limits of these standards ensure protection of the environment and corresponding noise immunity of the equipment with appropriate probability. However, a professional installation and integration within the system are imperative prerequisites for operation without EMC problems.
For this purpose, the following measures must 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 EMC standards for the given environment.
- Use a system grounding concept that satisfies the safety requirements (class I equipment must be connected with a protective ground conduc-

tor) and 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 within the corresponding frequency range.
- Avoid ground 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 choke).
- Reduce electrostatic discharge (ESD) of persons by installing an appropriate floor covering (e.g. a carpet with permanent electrostatic filaments) and by keeping the relative humidity above 30%. Further measures (e.g. conducting floor) are usually unnecessary and only effective if used together with corresponding personal equipment.
- When using equipment with touch-sensitive operator controls, please take care that the surrounding building structure allows for sufficient capacitive coupling of the operator. This coupling can be improved by an additional, conducting surface in the operator's area, connected to the equipment housing (e.g. metal foil underneath the floor covering, carpet with conductive backing).

C Maintenance

All air vents and openings for operating elements (faders, rotary knobs) must be checked on a regular basis, and cleaned in case of dust accumulation. For cleaning, a soft paint-brush or a vacuum cleaner is recommended.
Cleaning the surfaces of the unit is performed with a soft, dry cloth or a soft brush.
Persistent contamination can be treated with a cloth that is slightly humidified with a mild cleaning solution (soap-suds).
For cleaning display windows, commercially available computer/TV screen cleaners are suited. Use only a slightly damp (never wet) cloth.
Never use any solvents for cleaning the exterior of the unit! Liquids must never be sprayed or poured on directly!
For equipment-specific maintenance information please refer to the corresponding chapter in the Operating and Service Instructions manuals.

D Electrostatic Discharge during Maintenance and Repair

Caution:

Observe the precautions for handling devices sensitive to electrostatic discharge!
Many semiconductor components are sensitive to electrostatic discharge (ESD). The life-span of assemblies containing such components 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.
- *When performing a repair by replacing complete assemblies, the removed assembly must be sent back to the supplier in the same packing*

material in which the replacement assembly was shipped. If this should not be the case, any claim for a possible refund will be null and void.

- 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 as well as all tools and electrically semi-conducting 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.

E Repair

Removal of housing parts, shields, etc. exposes energized parts. For this reason the following precautions must be observed:

- Maintenance may only be performed by trained personnel in accordance with the applicable regulations.
- The equipment must be switched off and disconnected from the AC power outlet before any housing parts are removed.
- Even if the equipment is disconnected from the power outlet, parts with hazardous charges (e.g. capacitors, picture tubes) must not be touched until they have been properly discharged. Do not touch hot components (power semiconductors, heat sinks, etc.) before they have cooled off.
- If maintenance is performed on a unit that is opened and switched on, no un-insulated circuit components and metallic semiconductor housings must be touched, neither with your bare hands nor with un-insulated tools.

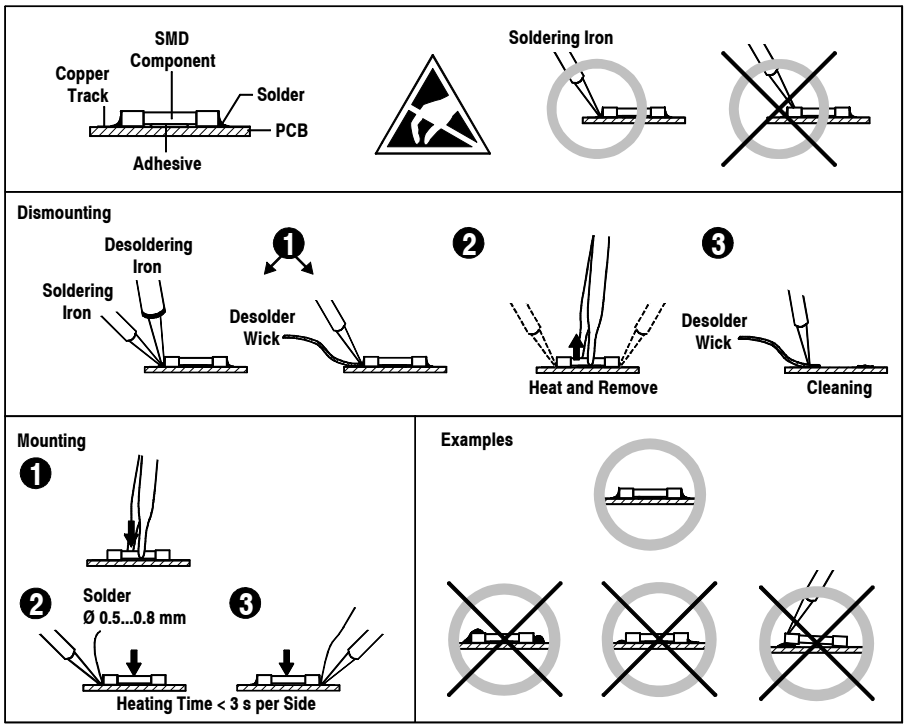
Certain components pose additional hazards:

- *Explosion hazard* from lithium batteries, electrolytic capacitors and power semiconductors (watch the component's polarity. Do not short battery terminals. Replace batteries only by the same type).
- *Implosion hazard* from evacuated display units.
- *Radiation hazard* from laser units (non-ionizing), picture tubes (ionizing).
- *Caustic effect* of display units (LCD) and components containing liquid electrolyte.

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

E1 SMD Components

Studer has no commercially available SMD components in stock for service purposes. For repair, the corresponding devices have to be purchased locally. The specifications of special components can be found in the service manual.
SMD components should only be replaced by skilled specialists using appropriate tools. No warranty claims will be accepted for circuit boards that have been damaged. Proper and improper SMD soldering joints are illustrated below.



F Disposal

Disposal of Packing Materials

The packing materials have been selected with environmental and disposal issues in mind. All packing material can be recycled. Recycling packing saves raw materials and reduces the volume of waste.
If you need to dispose of the transport packing materials, please try to use recyclable means.

Disposal of Used Equipment

Used equipment contains valuable raw materials as well as materials that must be disposed of professionally. Please return your used equipment via an authorized specialist dealer or via the public waste disposal system, ensuring any material that can be recycled is.
Please take care that your used equipment cannot be abused. To avoid abuse, delete sensitive data from any data storage media. After having disconnected your used equipment from the mains supply, make sure that the mains connector and the mains cable are made useless.

G Declarations of Conformity

G1 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.*

G2 CE Declaration of Conformity

We,
Studer Professional Audio GmbH,
CH-8105 Regensdorf,
declare under our sole responsibility that the product
Studer OnAir 1000, Digital Mixing Console,
(starting with serial no. 1000)
to which this declaration relates, according to following regulations of EU directives and amendments

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

is in conformity with the following standards or normative documents:

- Safety:
  EN 60950:2000 (Class I equipment)
- Safety of laser products:
  EN 60825-1:1994 + A11 + A2, EN60825-2:2000
- EMC:
  EN 55103-1/-2:1996, electromagnetic environments E2 and E4.

Regensdorf, December 18, 2000

B. Hochstrasser, President P. Fiala, Manager QA

Appendix 1: Air Temperature and Humidity

General

Normal operation of the unit or system is warranted under the following ambient conditions defined by *EN 60721-3-3, set IE32, value 3K3.*
This standard consists of an extensive catalogue of parameters, the most important of which are: ambient temperature +5...+40 °C, relative humidity 5...85% (i.e., no formation of condensation or ice); absolute humidity 1...25 g/m³; rate of temperature change < 0.5 °C/min. These parameters are dealt with in the following paragraphs.
Under these conditions the unit or system starts and works without any problem. Beyond these specifications, possible problems are described in the following paragraphs.

Ambient Temperature

Units and systems by Studer are generally designed for an ambient temperature range (i.e. temperature of the incoming air) of +5...+40 °C. When rack mounting the units, the intended air flow and herewith adequate cooling must be provided. The following facts must be considered:

- The admissible ambient temperature range for operation of the semiconductor components is 0 °C to +70 °C (commercial temperature range for operation).
- The air flow through the installation must provide that the outgoing air is always cooler than 70 °C.
- Average heat increase of the cooling air shall be about 20 K, allowing for an additional maximum 10 K increase at the hot components.
- In order to dissipate 1 kW with this admissible average heat increase, an air flow of 2.65 m³/min is required.

Example: A rack dissipating *P = 800 W* requires an air flow of *0.8 * 2.65 m³/min* which corresponds to *2.12 m³/min.*

- If the cooling function of the installation must be monitored (e.g. for fan failure or illumination with spot lamps), the outgoing air temperature must be measured directly above the modules at several places within the rack. The trigger temperature of the sensors should be 65 to 70 °C.

Frost and Dew

The unsealed system parts (connector areas and semiconductor pins) allow for a minute formation of ice or frost. However, formation of dew visible with the naked eye will already lead to malfunctions. In practice, reliable operation can be expected in a temperature range above –15 °C, if the following general rule is considered for putting the cold system into operation:
If the air within the system is cooled down, the relative humidity rises. If it reaches 100%, condensation will arise, usually in the boundary layer between the air and a cooler surface, together with formation of ice or dew at sensitive areas of the system (contacts, IC pins, etc.). Once internal condensation occurs, trouble-free operation cannot be guaranteed, independent of temperature.

Before putting into operation, the system must be checked for internal formation of condensation or ice. Only with a minute formation of ice, direct

evaporation (sublimation) may be expected; otherwise the system must be heated and dried while switched off.

A system without visible internal formation of ice or condensation should be heated up with its own heat dissipation, as homogeneously (and subsequently as slow) as possible; the ambient temperature should then always be lower than the one of the outgoing air.

If it is absolutely necessary to operate the cold system immediately within warm ambient air, this air must be dehydrated. In such a case, the absolute humidity must be so low that the relative humidity, related to the coldest system surface, always remains below 100%.

Ensure that the enclosed air is as dry as possible when powering off (i.e. before switching off in winter, aerate the room with cold, dry air, and remove humid objects as clothes from the room).

These relationships are visible from the following climatogram. For a controlled procedure, thermometer and hygrometer as well as a thermometer within the system will be required.

Example 1: An OB-van having an internal temperature of 20 °C and relative humidity of 40% is switched off in the evening. If temperature falls below +5 °C, dew or ice will be forming.

Example 2: An OB-van is heated up in the morning with air of 20 °C and a relative humidity of 40%. On all parts being cooler than +5 °C, dew or ice will be forming.

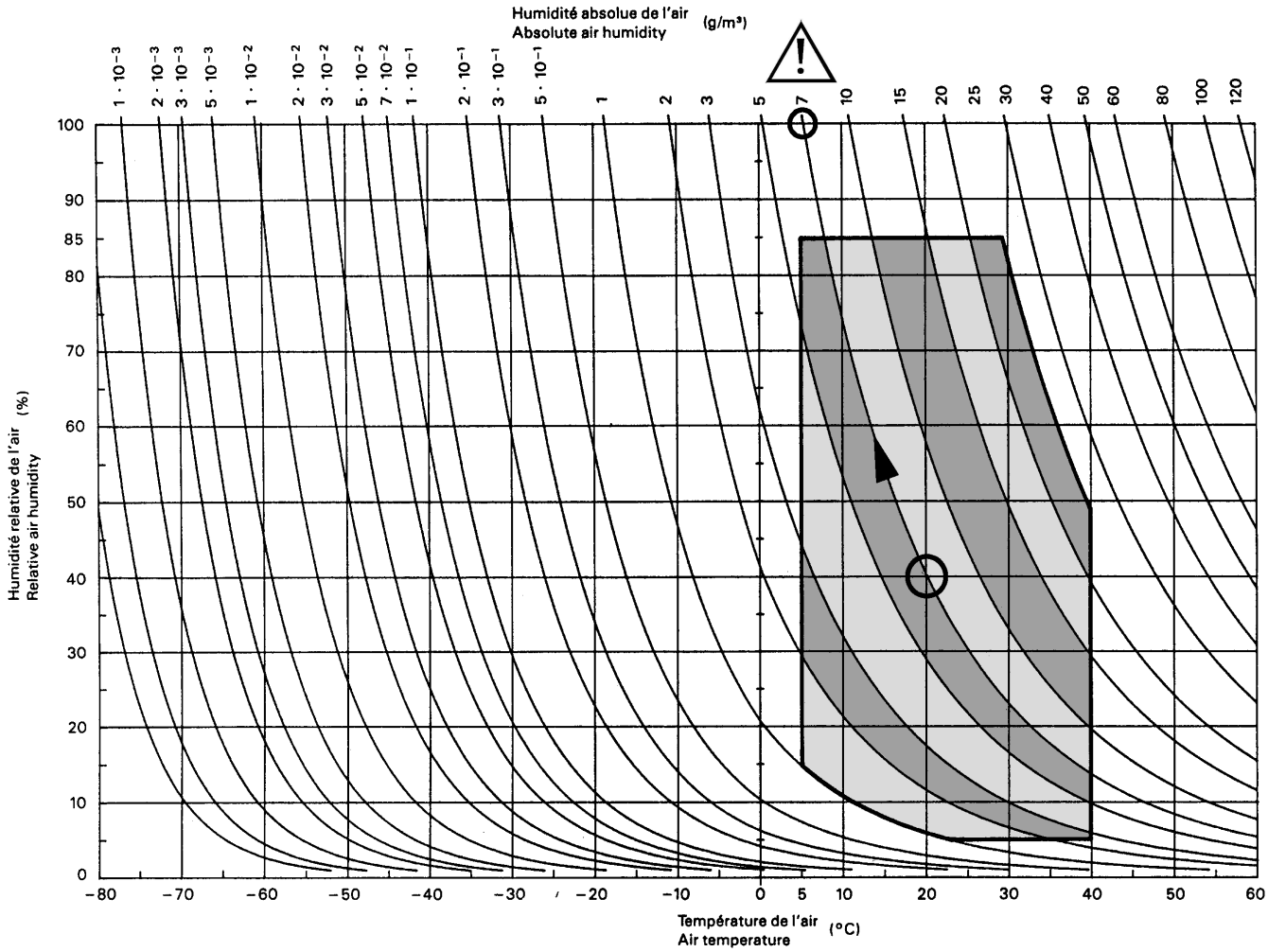


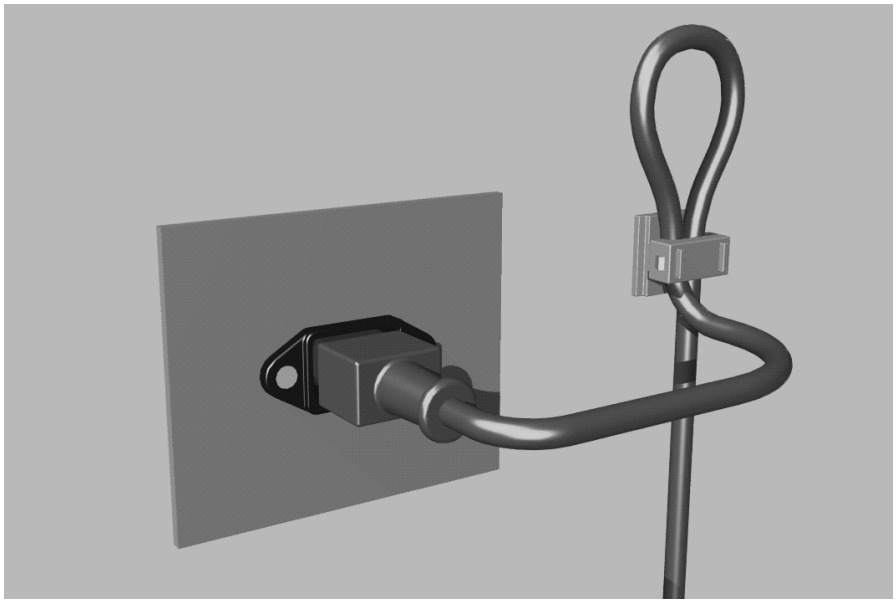
Figure B.3 – Climatogramme pour catégorie 3K3

Climatogram for class 3K3

721-3-3 © CEI:1994

Appendix 2: Mains Connector Strain Relief

For anchoring connectors without a mechanical lock (e.g. IEC mains connectors), we recommend the following arrangement:



Procedure: The cable clamp shipped with your unit is auto-adhesive. For mounting please follow the rules below:

- The surface to be adhered to must be clean, dry, and free from grease, oil, or other contaminants. Recommended application temperature range is +20...+40 °C.
- Remove the plastic protective backing from the rear side of the clamp and apply it firmly to the surface at the desired position. Allow as much time as possible for curing. The bond continues to develop for as long as 24 hours.
- For improved stability, the clamp should be fixed with a screw. For this purpose, a self-tapping screw and an M4 bolt and nut are included.
- Place the cable into the clamp as shown in the illustration above and firmly press down the internal top cover until the cable is fixed.

Appendix 3: Software License

Use of the software is subject to the Studer Professional Audio Software License Agreement set forth below. Using the software indicates your acceptance of this license agreement. If you do not accept these license terms, you are not authorized to use this software.

Under the condition and within the scope of the following Terms and Conditions, Studer Professional Audio GmbH (hereinafter "Studer") grants the right to use programs developed by Studer as well as those of third parties which have been installed by Studer on or within its products. References to the license programs shall be references to the newest release of a license program installed at the Customer's site.

Programs Covered by the Agreement

License Programs of Studer

The following Terms and Conditions grant the right to use all programs of Studer that are part of the System and/or its options at the time of its delivery to the Customer, as well as the installation software on the original data disk and the accompanying documentation ("License Material"). In this Agreement the word "Programs" shall have the meaning of programs and data written in machine code.

Using the software indicates your acceptance of this license agreement. If you do not accept these license terms, you are not authorized to use this software.

Programs of Third Parties

Programs of third parties are all programs which constitute part of the System and/or its options at the time of delivery to the Customer but have not been developed by Studer. The following conditions are applicable to programs of third parties:

- The right to use third parties' programs is governed by the License Agreement attached hereto (if applicable), which is an integral part of this Agreement. The Customer shall sign any and all License Agreements for all further programs of third parties installed on the system. The Customer shall be deemed to have received all License Agreements upon delivery of the system and/or its options.
- Studer shall accept no responsibility or liability for, and gives no warranties (express or implied) as to the programs of third parties. The Customer waives any and all claims versus Studer for any consequential damages, which might occur due to defects of these programs.

Right of Use

Principle

Studer grants the Customer the non-exclusive right to use the License Material in one copy on the system and/or its options as laid down by the Sales Agreement concluded between the parties and all Terms and Conditions which shall be deemed to form and be read and construed as part of the Sales Agreement. This right is assignable according to the "Assignability" paragraph hereinafter.

Customized Configurations

The Customer is not entitled to alter or develop further the License Material except within the expressly permitted configuration possibilities given by the software installed on the system or elsewhere. All altered programs, including but not limited to the products altered within the permitted configuration possibilities, are covered by this License Agreement.

Reverse Engineering

Reverse engineering is only permitted with the express consent of Studer. The consent of Studer can be obtained but is not limited to the case in which the interface-software can not be provided by Studer. In any case Studer has to be informed immediately upon complete or partial reverse engineering.

Copying the License Material

The Customer is entitled to make one copy of all or parts of the License Material as is necessary for the use according to this Agreement, namely for backup purposes. The Customer shall apply the copyright of Studer found on the License Material onto all copies made by him. Records shall be kept by the Customer regarding the amount of copies made and their place of keeping. The responsibility for the original program and all copies made lies with the Customer. Studer is entitled to check these records on first request. Copies not needed anymore have to be destroyed immediately.

Disclosure of License Material

The License Material is a business secret of Studer. The Customer shall not hand out or in any way give access to parts or the complete License Material to third parties nor to publish any part of the License Material without prior written consent of Studer. The Customer shall protect the License Material and any copies made according to the paragraph above by appropriate defense measures against unauthorized access. This obligation of non-disclosure is a perpetual obligation.
Third parties are entitled to have access to the License Material if they use the License Material at the Customer's site in compliance with this Agreement.
Under no circumstance are third parties entitled to have access to the installation software on the original data media. The Customer shall safeguard the original data media accordingly.

Assignability

The rights granted to the Customer according to this License Agreement shall only be assignable to a third party together with the transfer of the system and/or its options and after the prior written consent of Studer.

Rights to License Material

With the exception of the right of use granted by this License Agreement all proprietary rights to the License Material, especially the ownership and the intellectual property rights (such as but not limited to patents and copyright) remain with Studer even if alterations, customized changes or amendments have been made to the License Material.
Studer's proprietary rights are acknowledged by the Customer. The Customer shall undertake no infringements and make no claims of any patent, registered design, copyright, trade mark or trade name, or other intellectual property right.

Warranty, Disclaimer, and Liability

For all issues not covered herewithin, refer to the "General Terms and Conditions of Sales and Delivery" being part of the sales contract.

NEW FEATURES WITH SW V4.02/V4.03

1 Momentary/Latching Key Functions

1.1 PFL and Talkback Keys

Latching: If a PFL key or one of the talkback keys (N–1 A, N–1 B, AUX 1, AUX 2, or STUDIO) is pressed for less than 0.2 s, the function is now latching, and the key is illuminated. To release the function, an other short press of the key is required.
The same functionality applies for the F1...F5 keys if configured as additional talkback keys. *For this purpose, please refer to the "MONITOR EXPANDER page, Talkback Functions" paragraph below.*

Momentary: When pressing a PFL or TB key longer than 0.2 s, it acts as a momentary key, i.e., the function is automatically canceled upon releasing the key.

Basic information on this subject to be found in chapters: 3.1.4 / 6.1 / 6.3

1.2 Monitoring Keys

Mutually Releasing / Latching: If one of the Monitoring Selector keys is pressed for less than 0.2 s, the former monitoring source selection is canceled, and the new monitoring source selection becomes active. The selection is latching and the key is illuminated until any other Monitoring Selector key is pressed.

Mutually Releasing / Momentary: If one of the Monitoring Selector keys is pressed for longer than 0.2 s, it acts as a momentary key. The former monitoring source selection is canceled, and the new monitoring source selection becomes active. Upon releasing the key, the former monitoring source selection is reactivated.

Uhm... *This may sound a bit confusing, but in everyday use it is a very convenient feature – just give it a try!*

2 Talkback and PFL Signaling

2.1 Talkback Signaling from CR to Studio, and Vice Versa

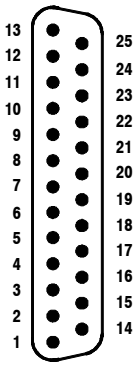
CR to Studio: When talkback from the control room (CR) to the studio is activated, pin 23 of the STUDIO MON CTRL connector is activated (i.e. pulled to ground). This pin was formerly labeled as "Spare OUT 1". Now it can be used for illuminating the CR lamp on an external talkback box.
Please refer to the pin assignment diagram and table on the next page.

Studio to CR: When talkback from the studio to the CR is activated (e.g. when using the external talkback box), the TALK BACK STUDIO key in the console's central section is illuminated.

Basic information on this subject to be found in chapters: 3.1.4 / 6.3 / 14.11

2.2 PFL Signaling

When a PFL key is activated, pin 11 of the STUDIO MON CTRL connector is activated (i.e. pulled to ground). This pin was formerly labeled as "Spare OUT 2".

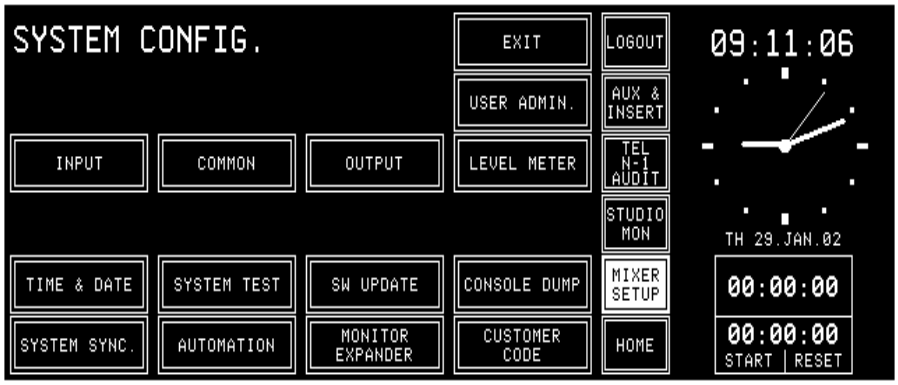


STUDIO MON CTRL (D-type, 25 pin, male):

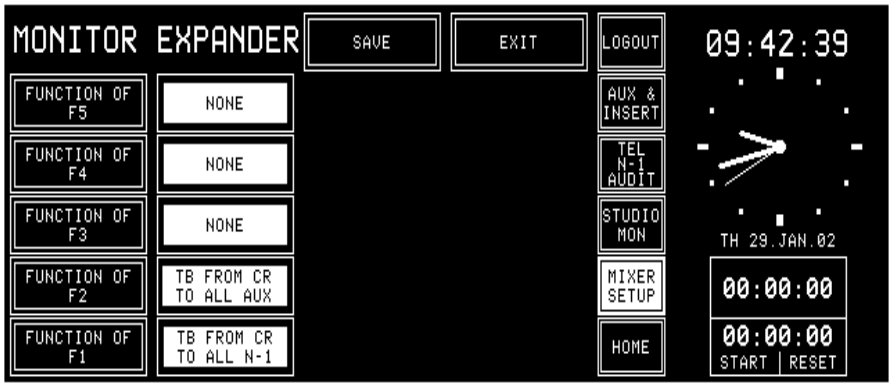
Pin	Signal	Pin	Signal	Pin	Signal
1	+5 V SUPPLY	10	Lamp EXTERN	19	Switch TB TO TEL2
2	COMMON	11	Lamp PFL SIGN.	20	Lamp PGM
3	Switch AUX1	12	n.c.	21	Lamp AUX2
4	Switch OFF AIR	13	GND	22	Lamp PFL
5	Switch EXTERN	14	+5 V SUPPLY	23	Lamp TB TO STUDIO
6	Switch TB TO TEL1	15	Switch PGM	24	Lamp STUDIO MIC ON
7	n.c.	16	Switch AUX2		
8	Lamp AUX1	17	Switch PFL	25	GND
9	Lamp OFF AIR	18	Switch TB TO CR		

3 MONITOR EXPANDER Page, Talkback Functions

The MONITOR EXPANDER page, possibly known from your experience with OnAir 2000M2 consoles, can now be opened on the OnAir 1000 consoles as well. For this purpose, the SYSTEM CONFIG. Page has an additional "MONITOR EXPANDER" button, as shown below:



When touching this button, the MONITOR EXPANDER page opens and allows to assign three different functions to any of the F1...F5 buttons:



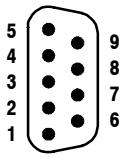
TB FROM CR TO ALL AUX, TO ALL N–1, or TO ALL (meaning all AUX and all N–1), or NONE (no function at all).

However, no Monitor Extension module can be installed in an OnAir 1000 console, which means that no other functions (as known from OnAir 2000M2 consoles) can be configured.

4 Additional REC Signaling Output

An additional REC signaling output has been provided on pin 9 of the SIGN. connector (formerly labeled as "Spare OUT") to extend the on-air signaling features.

SIGN. (D-type, 9 pin, male):



Pin	Signal	Pin	Signal
1	+5 V SUPPLY	6	COMMON
2	ON AIR IN –	7	Spare IN – or Ext. CR DIM IN – *
3	CR MIC OUT	8	STUDIO MIC OUT
4	PGM OUT	9	REC OUT
5	GND	**** depending on Customer Code setting***	

For the ON AIR INDICATION setting on the COMMON SETTINGS page, a fourth selection item (ΣPROGRAM/ΣREC) was created. Depending on this setting, the two signaling outputs are active according to the following table:

ON AIR INDICATION setting	PROGRAM output on-air	REC output on-air	SIGN output: Pin 4 (PGM OUT)	SIGN output: Pin 9 (REC OUT) *(new output)*
1) SPROGRAM AND SREC	0 1 0 1	0 0 1 1	0 1 1 1	0 1 1 1
2) SPROGRAM	0 1	x x	0 1	0 0
3) SREC	x x	0 1	0 0	0 1
4) SPROGRAM / SREC *(new setting)*	0 1 0 1	0 0 1 1	0 1 0 1	0 0 1 1

In other words:

- For the 1st setting, both signaling outputs are active whenever any audio signal is routed either to the program or the record output (or both).
- For the 2nd setting, only the PGM OUT signaling output is active while an audio signal is routed to the program output. An audio signal routed to the record output has no effect.
- For the 3rd setting, only the REC OUT signaling output is active while an audio signal is routed to the record output. An audio signal routed to the program output has no effect.
- For the 4th (new) setting, only the PGM OUT signaling output is active while an audio signal is routed to the program output, and only the REC OUT signaling output is active while an audio signal is routed to the record output. If audio signals are routed to both the program and the record outputs, both the PGM OUT and REC OUT signaling outputs are active.

Basic information on this subject to be found in chapter 11.2.2

5 Additional Customer Codes

Code 0x00000800: Used to disable dimming of the CR monitor speakers during talkback from the studio to the control room.

Code 0x00001000: Used to disable dimming of the studio monitor speakers during talkback from the control room to the studio.

Code 0x00002000: Used to swap the functions of the PFL and the OFF keys next to the faders, regardless whether they are used for the standard PFL and OFF functions, or whether other functions are configured for any of these keys.
Basic information on this subject to be found in chapter 9

Code 0x00004000: If this code is active, whenever a channel is activated by moving its fader up from its lower stop while it is switched ON (or the other way round, by switching the channel ON while its fader is positioned above the lower stop), this channel's Channel Control page pops up automatically and allows for immediate changes of the channel settings. This Channel Control page remains displayed until another channel is activated, or until another page is selected using one of the five buttons next to the clock dial.

Code 0x00008000: If this code is active, the status of the channel ON/OFF switch of channels currently not routed to the console surface will be saved in the flash memory when powering the console off. At power on, the ON or OFF status of these channels will automatically be re-established.
If this code is inactive, the channels not routed to the console surface will always be set to OFF at power on.

Basic information on Customer Code to be found in chapter 11.2.11

CONTENTS PART 1 – OPERATING INSTRUCTIONS

1 INTRODUCTION

The OnAir 1000 is a smart but yet powerful digital mixing console for "on-air" and small recording and editing studio applications. It has ten input channels, each with two physical inputs, and two master faders.

There are two different basic versions available:

- An analog-biased version with five analog stereo line and two digital input channels, and
- A digital-biased version with two analog stereo line and five digital input channels.

Both versions feature three mono microphone input channels with switchable high-pass filter and phantom power. Both versions can be ordered with double, redundant mains power supply. For more information on this subject, please refer to chapter 14.2.

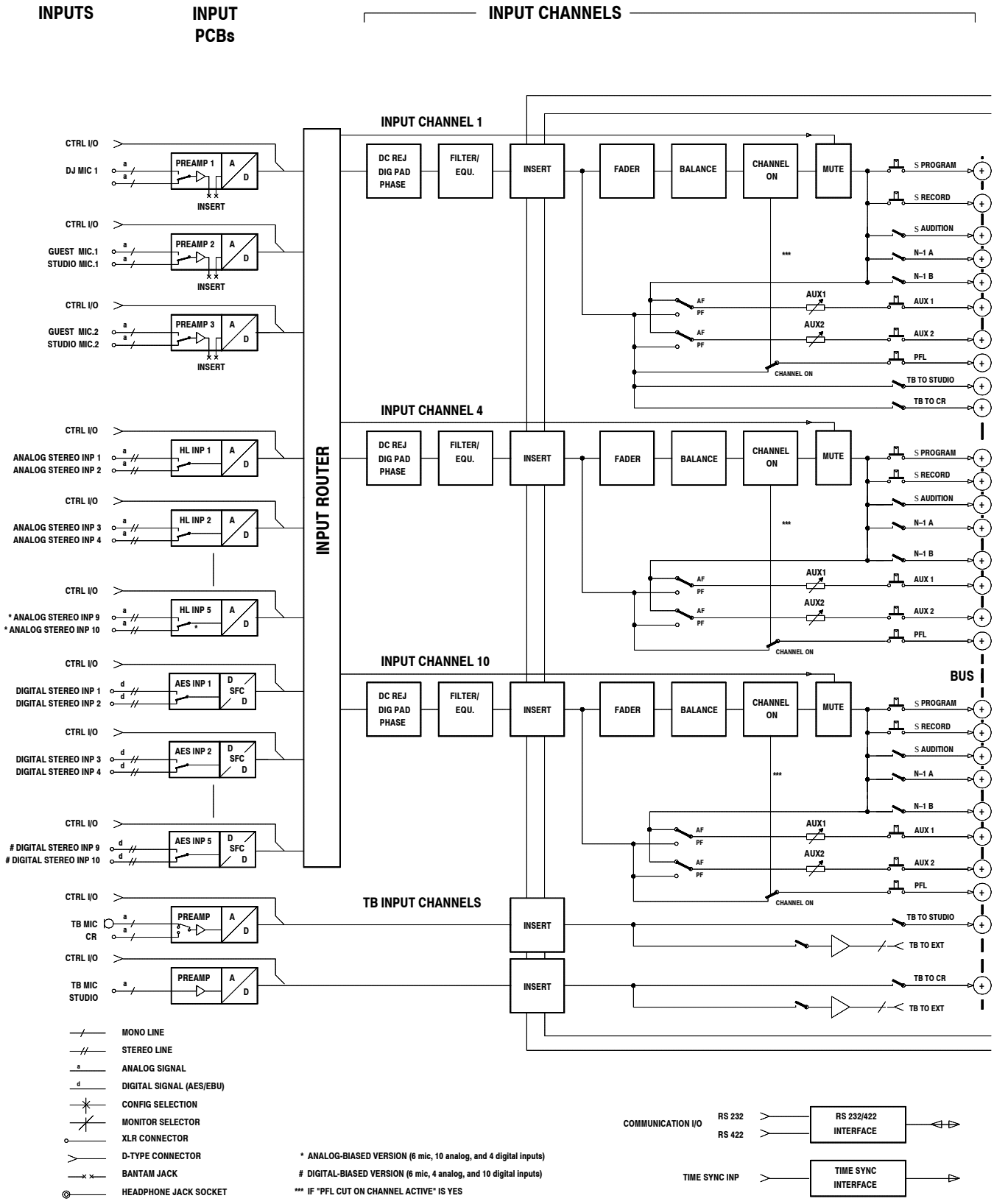
The OnAir 1000 can be integrated seamlessly with a broadcast automation system (CAB) like Studer's DigiMedia.

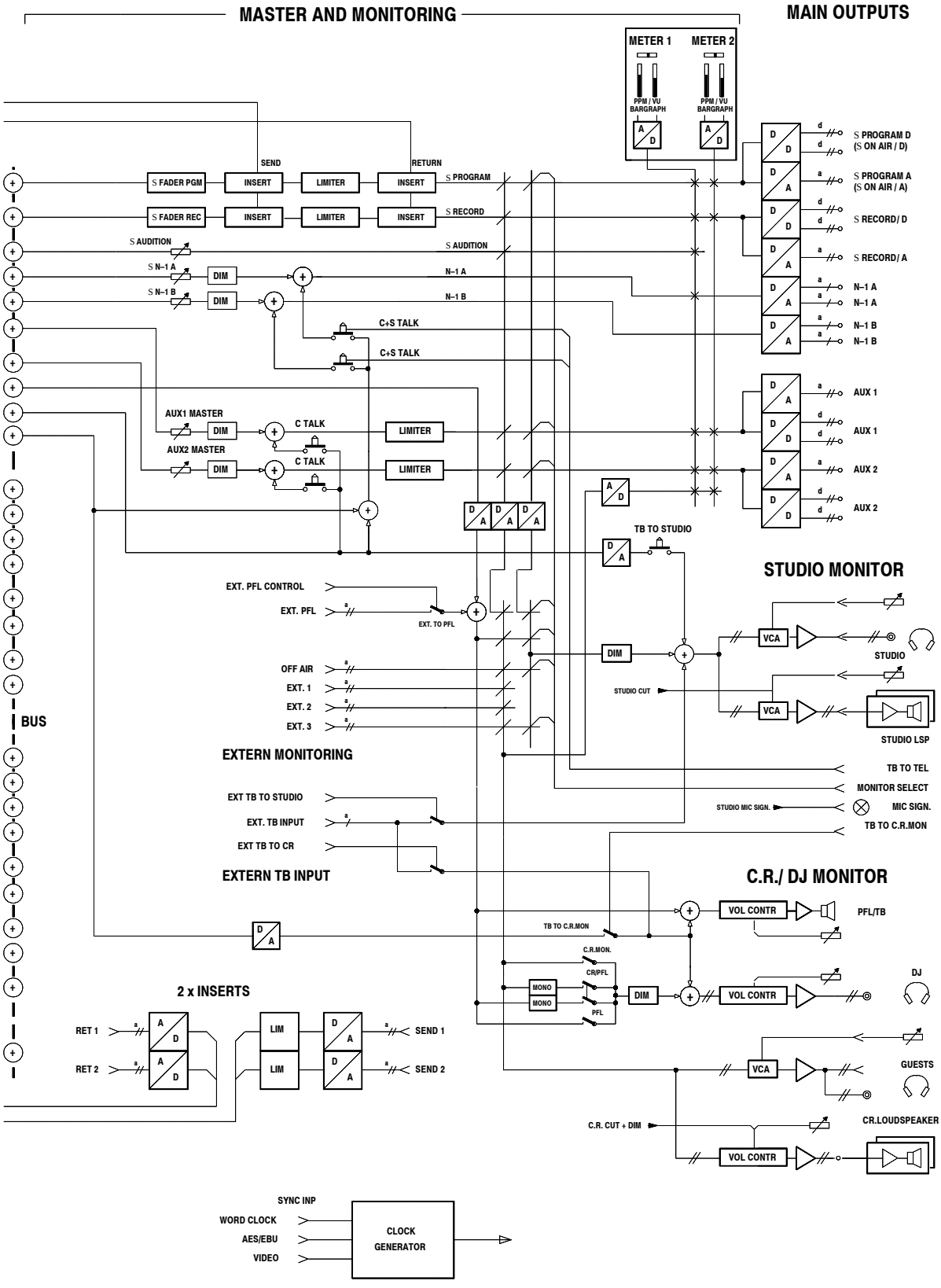
The OnAir 1000 is based on a touch-screen user interface. Only the most important functions have hardware control elements, making it very easy to use. It has everything integrated in a single, lightweight console and does not need any external racks or power supplies (except the Redundant Supply versions, refer to chapter 14.2).

Since it is fully digital, it can individually be adapted to the current user using snapshot automation. Extensive configuration possibilities allow the OnAir 1000 to be integrated into almost any broadcast studio environment.

For an overview, please refer to the OnAir 1000 block diagram located on the following two pages.

1.1 Block Diagram OnAir 1000, SW V4.0




MASTER AND MONITORING
MAIN OUTPUTS
METER 1
METER 2
PPM / VU BARGRAPH
SEND
RETURN
S FADER PGM
S FADER REC
INSERT
LIMITER
S PROGRAM
S RECORD
S AUDITION
S N–1 A
S N–1 B
DIM
N–1 A
N–1 B
C+S TALK
AUX1 MASTER
AUX2 MASTER
C TALK
S PROGRAM D (S ON AIR / D)
S PROGRAM A (S ON AIR / A)
S RECORD/ D
S RECORD/ A
AUX 1
AUX 2
TB TO STUDIO
STUDIO MONITOR
EXT. PFL CONTROL
EXT. PFL
EXT. TO PFL
OFF AIR
EXT. 1
EXT. 2
EXT. 3
VCA
STUDIO
STUDIO CUT
STUDIO LSP
BUS
EXTERN MONITORING
TB TO TEL
MONITOR SELECT
STUDIO MIC SIGN.
MIC SIGN.
TB TO C.R.MON
EXT TB TO STUDIO
EXT. TB INPUT
EXT TB TO CR
EXTERN TB INPUT
C.R./ DJ MONITOR
VOL CONTR
PFL/TB
C.R.MON.
CR/PFL
PFL
MONO
DJ
2 x INSERTS
RET 1
RET 2
LIM
SEND 1
SEND 2
GUESTS
C.R. CUT + DIM
CR.LOUDSPEAKER
SYNC INP
WORD CLOCK
AES/EBU
VIDEO
CLOCK GENERATOR

1.2 Definition of Terms

Terms used in this manual:

Inputs: The physical inputs of the input unit; all input units have mono or stereo inputs with A/B selection.
Analog inputs are equipped with 3-pin XLR connectors.
Digital inputs are equipped with AES/EBU inputs on XLR connectors, and S/PDIF inputs on Cinch/RCA and optical (TOSlink) connectors.

Input Unit: An input unit is a hardware assembly installed within the console. All input units contain two selectable mono or stereo inputs; all input signals to the input units are connected to the input connectors at the rear of the console.
Microphone input units have transformer-balanced mono inputs on XLRs, with selectable 48 V phantom supply and A/B selection.
Analog Line input units have two electronically balanced stereo inputs on XLRs, with A/B selection.
On Digital Line input units, there is a selection of AES/EBU inputs on XLR connectors, and S/PDIF inputs on Cinch/RCA and optical (TOSlink) connectors available.
Each (A or B) input of every input unit is equipped with general-purpose control inputs and outputs (GPIO) that can be used for fader start, mute, signaling, etc.; these control inputs and outputs are available on D-type connectors.

Input Channel: An input channel is the combination of all signal processing functions that can be assigned to a fader strip, as A/B input selection, gain, filter, EQ, pan/balance etc.; each input channel can be routed to any fader strip thanks to the input channel routing performed in the DSP section of the console.

Fader Strip: A fader strip contains the operating elements for an input channel, as a linear fader and a few keys and LEDs (e.g. ON, OFF, and PFL keys, and OVL and AUTO TAKEOVER LEDs).
As the number of operating elements is reduced to a minimum, the adjustment of some less often used input channel functions, as e.g. EQ setting, is performed on the center touch-screen and the rotary encoders located next to this screen.

2 GENERAL

2.1 Utilization for the Purpose Intended

The OnAir 1000 mixing console is intended for professional use.
It is presumed that the unit is operated only by trained personnel. Servicing is reserved to skilled technicians.

The electrical connections may be connected only to the voltages and signals designated in this manual.

2.2 First Steps

2.2.1 Unpacking and Inspection

Your new mixing console is shipped in a special packing that protects the unit against mechanical shock during transit. Care should be exercised when unpacking so that the surfaces do not get marred.
Verify that the content of the packing agrees with the items listed on the enclosed shipping list.
Check the condition of the equipment for signs of shipping damage. If there should be any complaints you should immediately notify the forwarding agent and your nearest Studer distributor.
Please retain the original packing material because it offers the best protection in case your equipment ever needs to be transported.

2.2.2 Installation

Primary Voltage: The power supply unit is auto-ranging; it can be used for mains voltages in a range of 100 to 240 V_{AC}, 50 to 60 Hz.

DC Operation: The console can be operated from a 24 V_{DC} source through the respective 24 V_{DC} connector provided on the rear panel.

For DC operation it is mandatory that a UL approved, external fuse is connected in series with one of the supply lines (T 10 A H 250 V UL/CSA).

The power switch next to the power inlet only switches the mains voltage; for DC operation, an external power switch has to be foreseen by the installer.

Dual (Redundant) Power Supply: For information on the Dual Power Supply versions refer to chapter 14.2.

General Precautions: Do not use the unit in conditions of excessive heat or cold, near any source of moisture, in excessively humid environments, or in positions where it is likely to be subjected to vibration or dust. The ambient temperature range for normal operation of the unit is +5...+40° C.

Unobstructed air flow is essential for proper operation. The air vents on the top and bottom of the unit are a functional part of the design and must not be blocked in any way (e.g. by a manual or a computer screen).

Cleaning: Do not use any liquids to clean the exterior of the unit. A soft, dry cloth or brush will usually do.

For cleaning the touch-screen display window, most of the commercially available window or computer/TV screen cleaners are suited. *Use only a slightly damp (never wet) cloth. Never use any solvent!*

Power Connection:

The attached female IEC 320/C13 mains cable socket has to be connected to an appropriate mains cable by a trained technician, respecting your local regulations. Refer to the "Installation, Operation, and Waste Disposal" chapter at the beginning of this manual.

In case of 24 V_{DC} operation, use an appropriate connection to the external DC supply unit or battery, equipped on one end with the attached 10-pole cable socket.

For DC operation it is mandatory that a UL approved, external fuse is connected in series with one of the supply lines (T 10 A H 250 V UL/CSA).

For pin assignment of the 24 V_{DC} connector please refer to chapter 14.1.

Please check your DC supply cable for correct polarity before connecting it to the console.

Earthing:

This equipment must be earthed, due to the mains input filter network being connected to the mains earth. Also in case of DC operation, earthing of the unit is mandatory.

Some consideration should be given to the earthing arrangement of the system, at the center of which is the console. The console chassis is earthed to the mains earth via the power supply and/or the dedicated earth connection bolt. Ground loops may occur where signal processing equipment, patched to the console, has its signal earth commoned to the equipment chassis.

2.2.3 Adjustments, Repair

Danger:

All internal adjustments as well as repair work on this product must be performed by trained technicians!

Replacing the Supply Unit:

The primary fuse is located within the power supply unit and cannot be changed. In case of failure, the complete supply unit must be replaced. Please contact your nearest Studer representative.

Fuse for DC Supply:

For DC operation there is a second fuse located on the PSU Sub Board (please refer to chapter 14.1 for details). In case of failure, this fuse must be replaced by a spare fuse of exactly the same type and value.

2.2.4 PC-Card

A standard OnAir 1000 mixing console is equipped with a PC-Card socket. Using the industry-standard SRAM PC-cards, the user can save important console information on a card. This information can then be used to restore the console to the same state at a later moment. Since the information stored on the card is DOS compatible, it is easily transferred to an IBM-compatible PC for data storage and backup.

Note: Although it is possible to format an SRAM card in a PC, the card must be re-formatted in the OnAir 1000; therefore, the write protect tab must be set to OFF when the card is used in the mixing console for the first time.

It is also possible for new software releases to be downloaded from an SRAM PC-card. This feature is only available for users in possession of the correct files. For more information on this subject, refer to chapter 12.

The mixing console PC-card support is restricted to 5 V, Type 1, SRAM memory cards with capacities of 64 kbytes to 32 Mbytes. Hot-swapping is supported, too.

2.3 Technical Specifications (subject to change without notice)

General

Level specs, digital, in dB_{FS}:	dB, referenced to full modulation (dB_{FS}, dB Full Scale)
Level specs, analog, in dBu:	0 dBu ≙ 0.775 V_{rms}
Level specs, analog, in dBu_{FS}:	Level in dBu for full modulation (≙ 0 dB_{FS})
Sampling rate:	48 kHz ±100 ppm (internally synchronized)
Headroom adjustable:	9 to 19 dB
Default setting:	9 dB
Output level:	15 dBu @ 0 dB_{FS}

All input faders set to their 0 dB position. External analog sources: Source impedance < 200 Ω. Frequency range: 20 Hz to 20 kHz, if not stated otherwise.

Microphone Input Units

Microphone input units have A/B-switchover and are equipped with a balancing transformer and XLR connectors. The signal is routed to an electronically balanced, analog insert point before the A/D-converter.

Input sensitivity	–60 to +20 dBu_{FS} (with 9 dB headroom: –69 to +11 dBu)
Gain setting	in steps of 1 dB
Phantom power, switchable	48 V
Frequency response	±0.5 dB
High-pass filter (12 dB/Octave)	–3 dB @ 75 Hz ±5 Hz, switchable
Input impedance	> 1 kΩ
Insert level	+15 dBu_{FS} (with 9 dB headroom: +6 dBu)
A/D converter	24 bit (Delta-Sigma, 64 × oversampling)
Dynamics	typ. 102 dB (unweighted)
THD+N	< –85 dB_{FS}, 20 Hz to 20 kHz, @ –1 dB_{FS}
THD+N	< –100 dB_{FS}, 20 Hz to 20 kHz, @ –30 dB_{FS}
Noise figure	typ. < 4 dB @ max. gain, bandwidth 20 kHz, R_s = 200 Ω
Common mode rejection	> 50 dB @ 15 kHz, > 75 dB @ 50 Hz

Line Level Input Units

Analog line level input units have A/B-switchover and are equipped with an electronically balanced input and XLR connectors.

Input sensitivity for 0 dB_{FS}	0 to +24 dBu_{FS} (with 9 dB headroom: –9 to +15 dBu)
Gain setting	in steps of 1 dB
Frequency response	±0.1 dB
Input impedance	> 10 kΩ
A/D converter	24 bit (Delta-Sigma, 64 × oversampling)
Dynamics	typ. 102 dB @ +15 dBu_{FS} (unweighted)
THD+N	< –94 dB_{FS}, 20 Hz to 20 kHz @ –1 dB_{FS}
THD+N	< –100 dB_{FS}, 20 Hz to 20 kHz @ –30 dB_{FS}
Common mode rejection	> 47 dB @ 50 Hz to 15 kHz

Digital InputUnits

Digital input units have A/B-switchover. AES/EBU (AES3-1992) and S/PDIF (IEC 958) formats are supported; XLR, Cinch/RCA, and TOSlink connectors are available.
All digital input units are equipped with a sampling frequency converter (SFC).

SFC resolution	20 Bit
Input sampling rate	30 to 54 kHz
THD+N	< –105 dB_{FS} @ 1 kHz, 0 dB_{FS}
Frequency response	±0.1 dB
Input impedance	110 Ω (XLR connectors); 75 Ω (Cinch/RCA connectors)

Analog Outputs

Analog outputs are transformer-balanced with XLR connectors.

Output level	+4 to +24 dBu @ R_L = 100 kΩ; +4 to +23 dBu @ R_L = 300 Ω
D/A converter	24 bit (Delta-Sigma, 128 × oversampling)
Dynamics	typ. 101 dB (unweighted)
THD+N	< –90 dB_{FS} @ 1 kHz, –1 dB_{FS}
Frequency response	±0.2 dB
Output impedance	< 40 Ω

Digital Outputs

Digital outputs are equipped with two independent outputs according to the AES/EBU standard (AES3-1992). On each of these outputs, the same signal is fed to two XLR sockets with individual buffers.

Output level	2 to 5 V
Output impedance	110 Ω

Equalizer

Treble control (High)	5 kHz/10 kHz: ±15 dB (depending on Customer Code setting; refer to 11.2.11)
Equalizer (Mid)	200 Hz to 10 kHz: ±15 dB
Bass control (Low)	200 Hz/400 Hz: ±15 dB

Crosstalk Attenuation

Between channels	> 90 dB
Input fader attenuation	> 100 dB

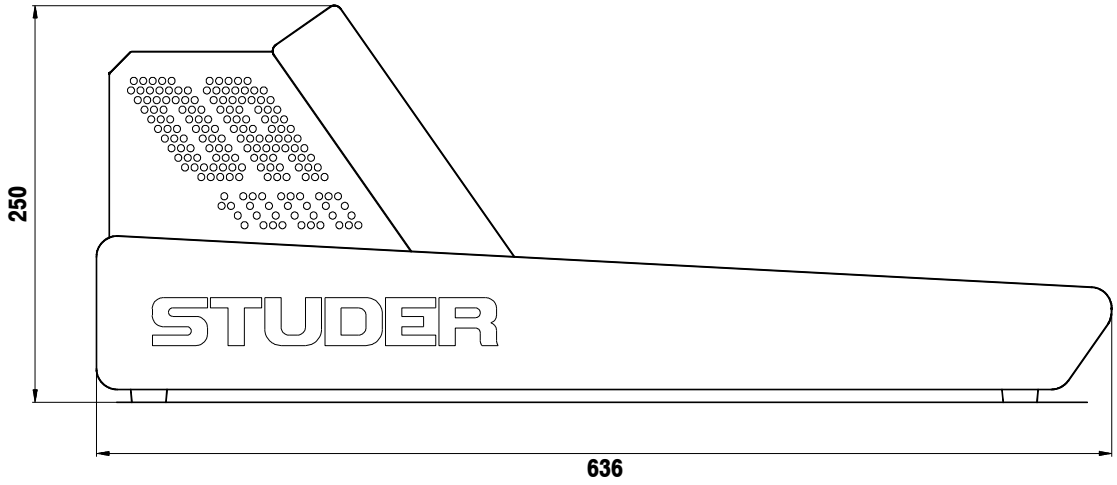
Power Supply

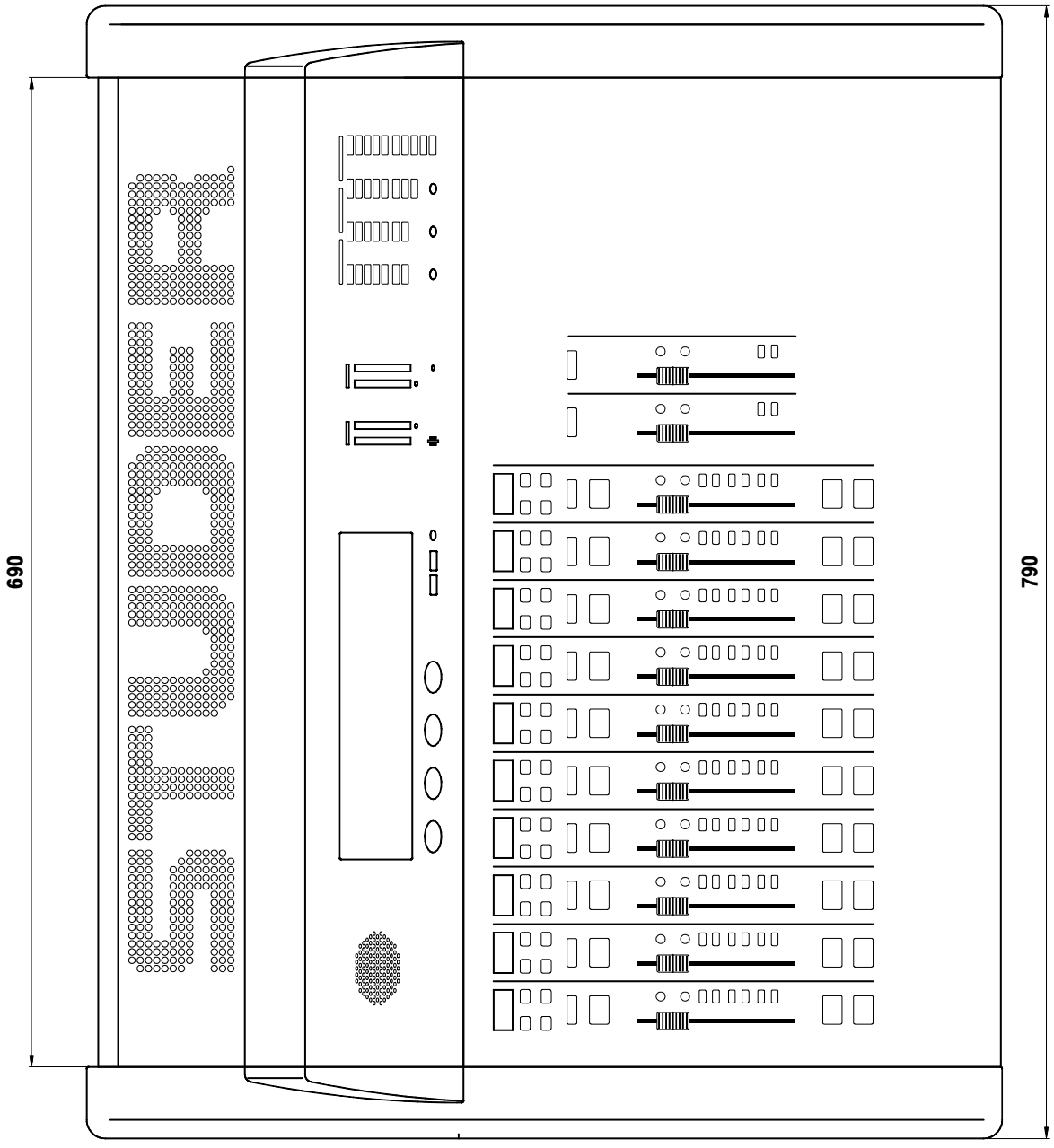
Redundant power supply available on request.

Mains voltage	100 to 240 V, 50/60 Hz (auto-ranging)
Power consumption	130 VA typ.
DC operation	24 V_{DC} +15/–10 %; typ. 5 A @ 24 V

Note: The abovementioned values are typical values; in an individual case, the values may differ. We reserve the right to make changes as technological progress may warrant.

Dimensions (in mm)



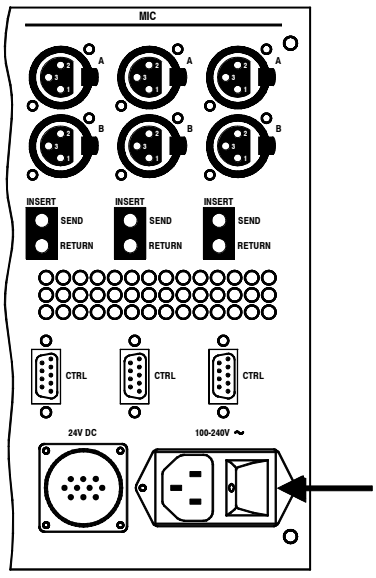


3 OPERATING CONCEPT

The normal operation of the console is as simple as possible. This has been achieved by reducing the number of operating elements to the minimum. Nevertheless, high flexibility has been achieved thanks to the use of touch-screen technology that just shows those operating elements needed at a certain time.
A linear fader and some keys (ON, OFF, PFL, SEL, EQ, A, B) are the only hardware operating elements within a fader strip. All other functions are available through the touch-screen user interface. To maintain a good console overview, several LEDs are provided, together with four-character channel label displays indicating the label for each channel. Pressing either one of the SEL or EQ keys assigns the touch-screen to this function for that specific channel. Parameters can now be entered via the four rotary encoders (e.g. equalizer parameters), or directly through the assigned touch-screen (e.g. EQ ON/OFF). This innovative user surface is called the "Touch'n'action" concept and is patented by Studer.
In broadcast applications many DJs and operators without a special technical education work on the same mixing console. Every DJ has his preferred console settings, mainly EQ parameters for his microphone. In the OnAir 1000, individual settings can be stored; by simply pressing a few keys, every operator can recall his particular, tailor-made setting and concentrate afterwards upon his essential task – presenting a radio program meeting the needs of the listeners.
Radio stations often use the same mixing console type for on-air and production. The "Snapshot" feature easily turns the production console into an on-air console within seconds, if required.
Thanks to the integrated input channel router, the user/administrator can place any input unit's signal to any fader strip on the console surface at his convenience. Through a straightforward representation of the available signals and faders on the screen, the input channel routing is easily done.

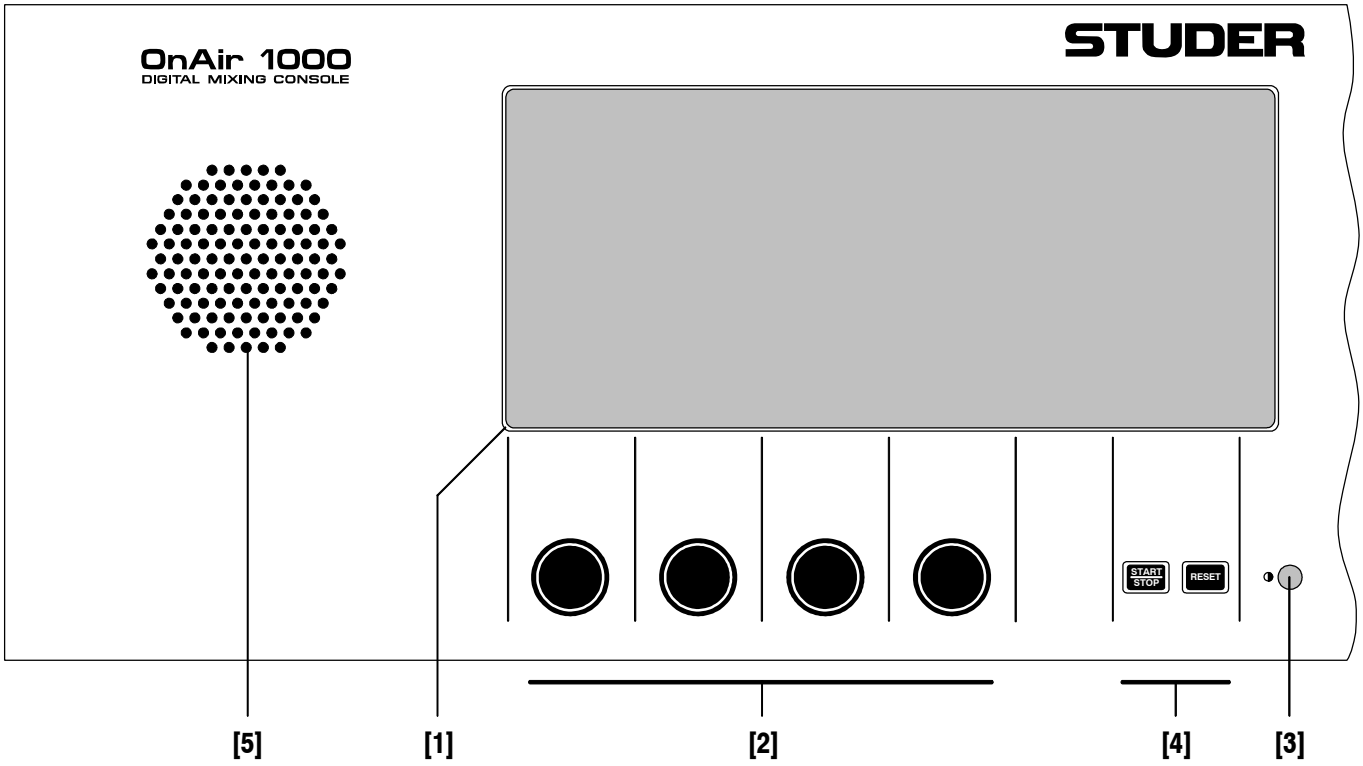
3.1 Operating Elements

3.1.1 Power Switch



For the two standard (single power supply) versions of the OnAir 1000 console, the mains power switch is located on the rear side of the console next to the power inlet.
In case of DC operation of the console using an external power supply or a battery, this power switch is without function; an external power switch has to be foreseen by the installer. Please refer to chapter 14.1 for details on DC operation.
Information on connection and operation of the two redundant power supply versions of the OnAir 1000 with their external power supply unit is given in chapter 14.2.

3.1.2 Touch-Screen Unit



[1] Touch-Screen The touch-screen display is used for parameter entries; it normally displays the current time and date in digital and analog formats, as well as the fader and the user stopwatches.

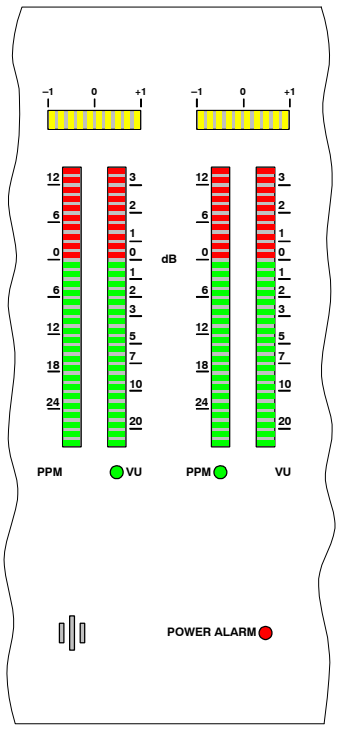
[2] Rotary Encoders Depending on the current status, the rotary encoders are used for parameter settings.

[3] Contrast Knob For setting the touch-screen display contrast, depending on the desired viewing angle and the ambient light conditions.

[4] User Stopwatch Control Keys to control the user stopwatch (lower). Refer to chapter 5.13.

[5] Loudspeaker For PFL and talkback signals.

3.1.3 Metering Section



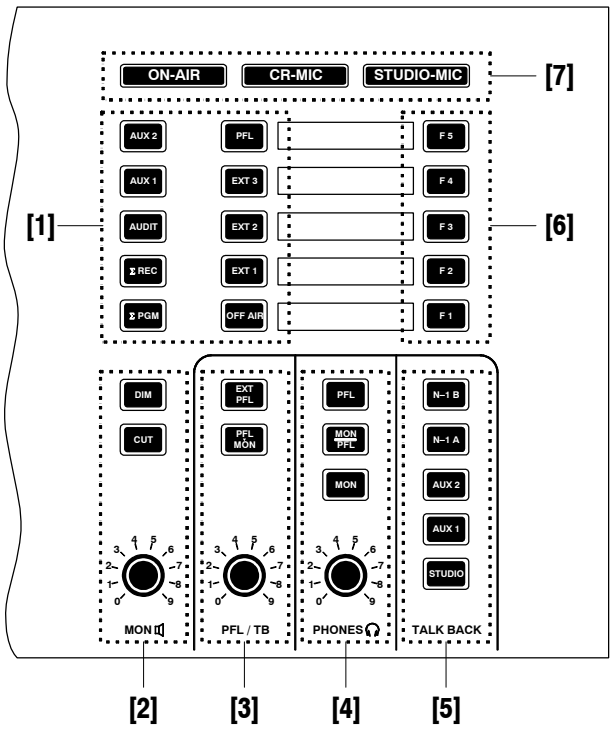
The OnAir 1000 mixing console is equipped with two dual 30-LED stereo level meters and one correlator meter for each of the level meters.
The meters can be set to simultaneously display either VU or PPM. Two LEDs below the respective scale indicate the selected mode (for mode setting, please refer to the OnAir 1000 Service Manual).
It is configurable for both meters which signal they display; the following sources can be selected in the configuration menu:

Meter 1	Meter 2	Source
X	X	CR MONITOR
X	X	PROGRAM
X	X	RECORD
X	X	AUX 1
X	X	AUX 2
X		AUDIT
X		N–1 A

For configuration details refer to chapter 11.2.4.

Below the meters an electret talkback microphone is integrated into the console that can be used as a talkback source. If desired, an external talkback microphone can be connected to the rear of the console (for details, refer to chapters 14.6 and 15.2).
If the console is powered by the mains voltage and an additional 24 V_{DC} supply is used for redundancy, or if the (optional) redundant power supply is used, the red POWER ALARM LED indicates a failure of one of the power supplies, allowing for timely repair without interruption of the continuity program.

3.1.4 Monitoring and Talkback Section



[1] Control Room (CR) Monitoring Selector

Ten mutually releasing keys for selecting the control room monitoring signal from the following sources:

AUX 2/AUX 1: Auxiliary, general purpose outputs;
AUDIT: Auxiliary, general purpose output with configurable inputs;
Σ REC: Recorder output;
Σ PGM: Program (on-air) output;
PFL: PFL (pre-fader listening);
EXT 3: External analog input signal;
EXT 2: External analog input signal;
EXT 1: External analog input signal;
OFF AIR: External analog input signal (e.g. tuner for off-air listening).

[2] CR Monitor Speaker Control

MON : Monitoring volume control.
DIM: If pressed, the monitor speaker level is reduced by 20 dB.
The DIM function is activated automatically if one of the TALK BACK keys is pressed. If "CR DIM WHEN AUDITION SEL" is set in the COMMON SETTINGS page (details: refer to chapter 11.2.2), the monitoring source is AUDIT, and the DJ microphone is on, the AUDIT level is not muted but reduced by 20 dB.
If DIM is active, the DIM key is illuminated.
CUT: If pressed, the monitor speakers are muted, and the CUT key is illuminated. As long as one of the CR or DJ microphones is on, the monitor speakers are automatically muted, and the CUT key is illuminated.

[3] PFL/TB

PFL/TB: Volume control for the built-in PFL/TB speaker.

EXT PFL: The EXT PFL input can be used as an external PFL input to the monitoring unit. If pressed, the key is illuminated, the external signal is routed to the PFL output, and the external PFL control output is active.

PFL>MON: If PFL is active on any channel, the PFL signal is routed to the main monitor speakers. If no PFL is selected, the monitoring signal is the stereo CR signal as selected. The PFL>MON key is illuminated if active.

[4] Headphones

PHONES : Headphones volume control. The headphones socket (6.3 mm TRS jack) is located below the hand rest on the left side of the console.
Three keys allow different monitoring modes:

PFL: PFL and TB signals are routed to the headphones.

MON/PFL: The left-channel headphones signal is the mono PFL signal, while the right-channel headphones signal is the mono CR signal as selected by the monitoring source selector [1]. If no PFL is selected, the headphones signal is the stereo CR signal as selected.

MON: The headphones signal is the same stereo signal as selected by the monitoring source selector [1]. It is, however, not affected by the DIM and CUT functions.

[5] Talkback

Selector for five talkback destinations:

N–1 B/N–1 A: Connection between the talkback microphone* in the control room and the corresponding clean-feed (N–1) output; this allows talking e.g. to the connected telephone hybrid(s) or communication lines.

AUX 2/AUX 1: Connection between the talkback microphone* in the control room and the AUX 2 or AUX 1 outputs.

STUDIO: Connection between the talkback microphone* in the control room and the studio speakers and headphones.
The built-in PFL/TB loudspeaker and/or the headphones are used for talkback listening in the control room.

***** If a console is equipped with an external talkback microphone, this microphone is used instead of the integrated talkback microphone.

[6] F1 to F5

Spare keys for future functions.

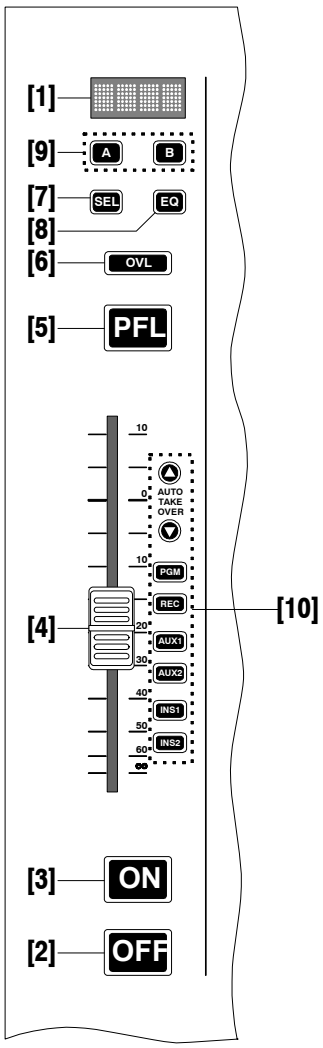
[7] Signaling Lamps

ON-AIR Is turned on by a control signal on the "SIGN." control connector on the monitoring part of the connector panel.

CR-MIC Is on if at least one microphone in the control room is routed to the program or to the record output (i.e. the corresponding output is selected, the input channel is ON, the input channel fader and the master fader are opened).

STUDIO-MIC Is on if at least one microphone in the studio is routed to the program or to the record output (i.e. the corresponding output is selected, the input channel is ON, the input channel fader and the master fader are opened).

3.1.5 Fader Section



[1] Channel Label Display

Four-character display, indicating the label of the input channel momentarily selected. The channel label can be set in the INPUT CONFIG. page; refer to chapter 11.2.1. When pressing the A or B key, the label will scroll by in full length.

[2] OFF (“key no. 3”)
[3] ON (“key no. 2”)

Keys for deactivating or activating an input channel. Can be reconfigured. For details please refer to chapters 8 and 14.3.

[4] Linear Fader

The audio path is fully digital, therefore the signal does not pass through the fader; stroke length is 100 mm. For details concerning fader start control please refer to chapters 8 and 14.3.

[5] PFL (“key no. 1”)

Key for activating/deactivating the PFL (pre-fader listening) function.

[6] OVL

Channel overload indicator.

[7] SEL

Multi-function key:

- For activating the Channel Control page on the touch-screen for this respective input channel. For details please refer to chapters 4.4 and 4.5.
- If the INPUT CONFIG. page is already displayed on the central touch-screen, pressing the SEL key in a fader strip selects the corresponding input channel for configuration.
- If the Mixer Setup page (SNAPSHOTS/MIC SETTING) is already displayed on the central touch-screen, pressing the SEL key in a microphone input fader strip selects the corresponding input channel for configuration.

[8] EQ

For activating the EQ/filter page on the touch-screen for this respective input channel. For details please refer to chapters 4.6 and 4.7.

[9] A, B

For selecting the physical inputs A or B of this input unit. Each time one of these keys is pressed (even if this physical input is currently active), the full-length label scrolls by in the four-character channel label display.

[10] LEDs AUTO TAKEOVER

Up/Down Arrow LEDs. After having modified the channel routing or during radio automation (CAB) operation, they indicate that the fader has to be moved upward/downward to match the physical and the logical positions.

PGM LED indicating that this input channel signal is routed to the Program output.

REC LED indicating that this input channel signal is routed to the Record output.

AUX1 LED indicating that this input channel signal is routed to the AUX1 output.

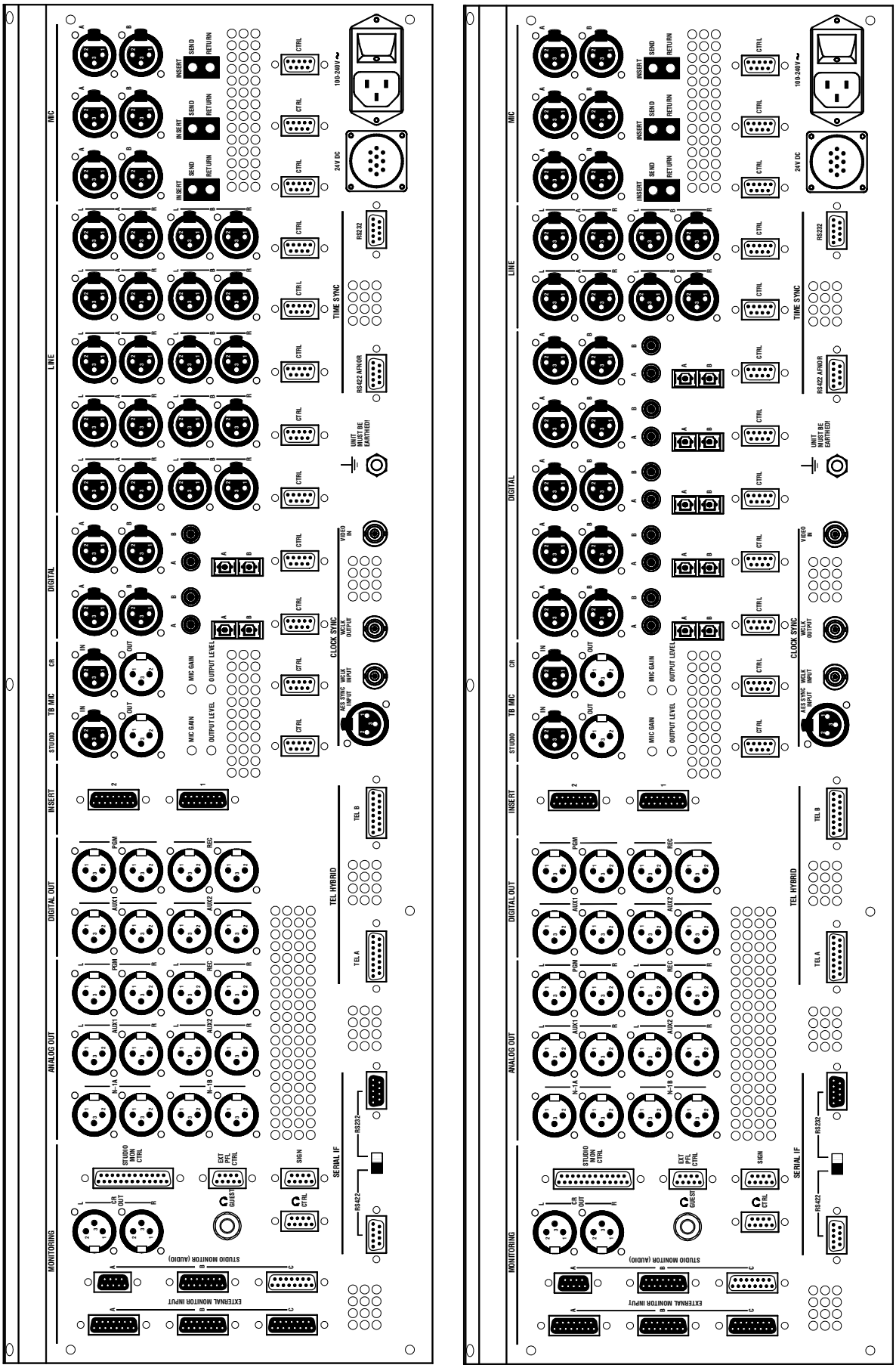
AUX2 LED indicating that this input channel signal is routed to the AUX 2 output.

INS1 LED indicating that this input channel signal is routed over the analog insert 1.

INS2 LED indicating that this input channel signal is routed over the analog insert 2.

3.2 Connector Panels

Analog-biased (left) and digitally-biased (right) versions



4 CHANNEL FUNCTIONS

The OnAir 1000 has ten input channel faders and two master faders on the surface. The input channel fader strips consist of a four-character channel label display, two input selector keys, a SEL key, an EQ key, an OVL overload indication, a PFL key, the fader, an ON and an OFF key. All keys are equipped with LED indicators. Six LEDs (PGM, REC, AUX1, AUX2, INS1, INS2) display the signal routing of this respective input channel. If the console is remote-controlled by a radio automation system (CAB), the two AUTO TAKEOVER arrow LEDs indicate in which direction the fader has to be moved in order to match the physical and the logical position of the fader.

Input Router: Through the integrated input router, the output signal of every individual input unit can be assigned to any input fader strip on the console surface (see chapter 5.8). The input channel parameters relate to the input unit and not to the fader strip. They will be re-routed when the input unit is assigned to another fader. Exception: The position of the two master faders is fixed and cannot be re-routed.

Access Permission: In the following chapters we assume that the user has access permission to all functions, unless otherwise noted. Access permission may be limited to some users by the administrator, causing that certain screen parts are hidden. Full access permission is in such a case only obtained when entering a password. For a description of how to set up the access permission, refer to chapter 10.

4.1 Keys

Channel Functions: 

The channel key functions are configurable; this configuration is valid for the whole console (and not per input channel). The different configuration possibilities are:

Configuration	Key 1 (“PFL”)	Key 2 (“ON”)	Key 3 (“OFF”)
1 (Default)	PFL	ON	OFF
2	PFL	ON/OFF	LOCATE
3	PFL	ON	LOCATE
4	PFL	ON/OFF	NEXT

For details on the key configuration refer to chapter 8.

A/B Input Keys: 

For microphone, analog line, and digital input units, the input keys A and B directly select one of the two physical input signals. The selected input is indicated by an LED integrated in the respective key, and the source name appears in the channel label display. If the input channel is active (i.e. input channel ON, fader open, and output selected), the input selection is disabled.
If the input channel is connected to an automation system, scrolling of the channel label display indicates that this input channel is “ON AIR”. For more details on this topic, please refer to chapter 9.

SEL Key: 

By pressing one of the SEL (select) keys, the Channel Control page is opened on the touch-screen. Parameters for this input channel can now easily be entered with the four rotary encoders and the touch-screen fields. The SEL key of the corresponding fader strip is illuminated.

EQ Key: EQ

The EQ key opens the EQ/filter page on the touch-screen, and the corresponding SEL key is illuminated, indicating that parameters of this input channel are displayed.
The EQ key is illuminated if the equalizer is on.
By observing if the EQ keys are illuminated, it can be determined at a glance in which input channels the equalizer settings are active.

4.2 Faders

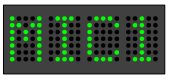
Since the audio path is fully digital, the signal does not pass through the faders. Therefore, linear-track mono faders are used. The stroke length is 100 mm. When opening the fader, fader start or signaling commands can be released, depending on the configuration (refer to chapter 8).

Master Faders: On the right-hand side of the input channel faders, a master fader for each the program and the record output is provided (refer to chapter 5.14). These two master faders can be enabled or disabled at the user's convenience.

4.3 LED Indicators

In each fader strip, LEDs display the actual routing of the signals. The selected physical input being (either A or B) is indicated by the illuminated A or B selector key, and the filtering of the signal by the equalizer function is indicated by the illuminated EQ key.
With all these displays, the operator has an immediate overview of the major console settings at a single glance.

Channel Label Display:



The four-character channel label display shows the name of the selected physical input. The channel label is entered in the Mixer Setup menu of the INPUT CONFIG. page, using a soft keyboard appearing on the touch-screen.

OVL (Overload): OVL

A red OVL indicator per fader strip signalizes an overload condition anywhere within the corresponding input channel's signal processing path.
Signals in the OnAir 1000 are processed with sufficient digital headroom through the entire signal processing chain. Besides, most outputs (PGM, REC, AUX1, AUX2, INSERT SEND1/2) are equipped with limiters in order to prevent overloads. All limiters are set to 0 dB_{FS} with fixed attack and release times.
Overload in an input channel is indicated if the signal level reaches 0 dB_{FS}. Due to the output limiters, normally distortions will be avoided even in case of an overload.

PGM / REC: PGM REC

The PGM and/or REC LEDs are on if the respective input channel's signal is routed to the PGM and/or the REC output(s). The output routing can be changed in the Channel Control page on the touch-screen that is opened by pressing the SEL key. The "ΣPROGRAM" and/or "ΣRECORD" touch-screen fields are highlighted if selected.

AUX1 / AUX2: AUX1 AUX2

The AUX1 and AUX2 LEDs are on if the respective input channel's signal is routed to the AUX output(s). The AUX settings can be changed in the Channel Control page on the touch-screen that is opened by pressing the SEL key. There, both auxiliaries can be independently set as "AF" (after-

fader), “PF” (pre-fader), “ON” or “OFF”. These touch-screen fields are highlighted if selected.

INS1 / INS2:

The INS1 or the INS2 LED is on if the respective input channel's signal is routed trough one of the analog inserts 1 or 2. The inserts are controlled in the AUX MASTER/INSERTS page on the touch-screen.

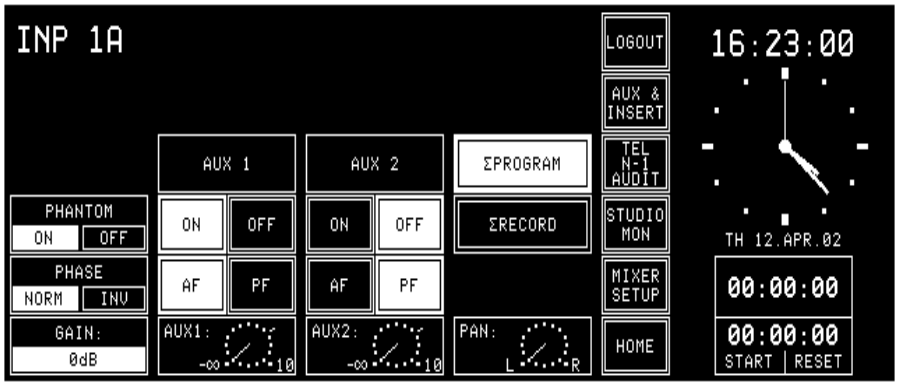
AUTO TAKEOVER Arrow LEDs:

After having modified the channel routing or during radio automation (CAB) operation, they indicate that the fader has to be moved upward/downward to match the physical and the logical positions.
If the console is used together with an automation system, the fader value can be set by the automation system via the “Monitora” protocol. In case the user would like to take-over the control of the signal with the fader, the AUTO TAKEOVER arrow LED(s) of the input channels being controlled by the automation system indicate in which direction the fader has to be moved to match its physical and its logical position. If the positions are matched, or if, by chance, the fader is in the exact position, both arrow LEDs remain illuminated as long as this input channel is on air.
If an input channel is currently on air, its label continuously scrolls by in the channel label display.

			
Channels *not* controlled by a CAB system	Audio level above the fader position – move fader *down*	Audio level below the fader position – move fader *up*	Audio level equal to the fader position

4.4 Channel Control Page, Microphone Input

The Channel Control page for a microphone input channel is opened by pressing the SEL key of a mic channel's fader strip.



PHANTOM Touching the “ON” part of the PHANTOM field turns the 48 V phantom power on; a touch on the “OFF” part of the field turns it off again. The status is indicated by highlighting the corresponding field.

PHASE The phase of the microphone signal is inverted by touching the “INV” part of the PHASE touch-screen field; “INV” is highlighted. Touching “NORM” de-activates the phase inversion.

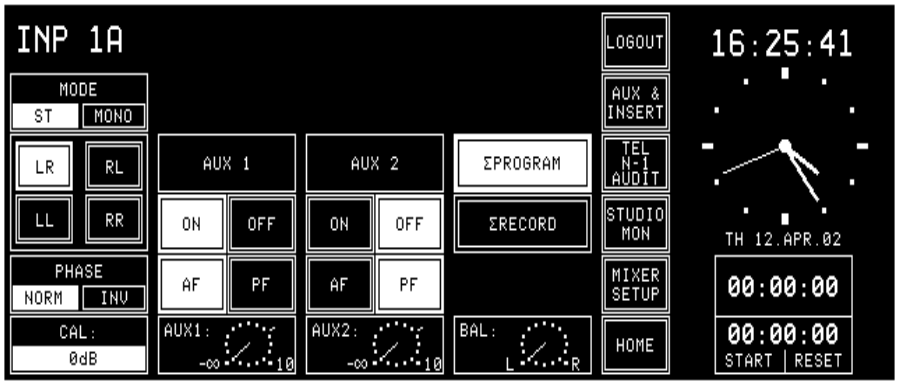
GAIN The microphone preamp's gain is set with the first rotary encoder (in a –5...+75 dB range); the adjusted value is indicated in the GAIN field.

AUX 1 / AUX 2 The AUX 1/2 ON and OFF touch-screen fields route the input channel signal to the corresponding auxiliary bus, if “ON” is selected (and highlighted).
The AF/PF touch-screen fields allow selection whether the signal is taken after- (AF) or pre-fader (PF). The current selections are highlighted.
The AUX levels (–∞ to +10 dB; 0 dB position is marked with a dash) are adjusted with the second and third rotary encoder. The settings are graphically displayed in the fields right above the rotary encoders.
The output routing of this particular input channel is performed with the “ΣPROGRAM” and “ΣRECORD” touch-screen fields.

PAN The fourth rotary encoder positions the source within the stereo image, the PAN (-ning) indicator shows the adjusted position.

4.5 Channel Control Page, Line Input

The Channel Control page for a line input channel is opened by pressing the SEL key of a digital or an analog line input channel's fader strip.



MODE Line level inputs have a MODE field defining whether the input is processed in "ST"(-ereo) or in "MONO" mode. In mono mode the stereo input signal from the input unit is added to a mono signal and attenuated by 3 dB.
Stereo signals are processed in the following modes:
LR: Normal stereo mode;
RL: Left/right stereo channels swapped;
LL: Left signal on both stereo channels;
RR: Right signal on both stereo channels.

PHASE The phase (*of the left input path only*) is inverted by touching the "INV" part of the PHASE touch-screen field; "INV" is highlighted. Touching "NORM" de-activates the phase inversion. Only in the "RR" case, the phase inversion takes place in the R input path.

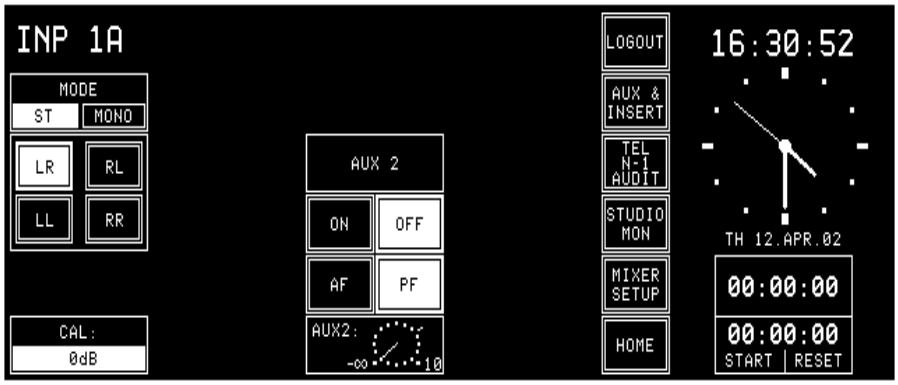
CAL In the CAL field, the gain deviation referred to nominal level setting is displayed; max. deviation: ±15 dB, adjustment with the first rotary encoder.

AUX 1 / AUX 2 The AUX 1/2 "ON" and "OFF" touch-screen fields route the input channel signal to the corresponding auxiliary bus, if "ON" is selected (and highlighted).
The "AF" / "PF" touch-screen fields allow selection whether the signal is tapped after- (AF) or pre-fader (PF). The current selections are highlighted.
The AUX levels (–∞ to +10 dB; 0 dB position is marked with a dash) are adjusted with the second and third rotary encoder. The settings are graphically displayed in the fields right above the rotary encoders.
The bus assignment is performed with the "ΣPROGRAM" and "ΣRECORD" touch-screen fields.

BAL The fourth rotary encoder adjusts the position of the stereo image, the BAL indicator shows the adjusted position.

Access Permission: Depending on the access permission (see chapter 10) of the user currently logged in, the functions not available to this user will not be displayed on the Channel Control page; an example is given below. This user cannot access the following parameters:

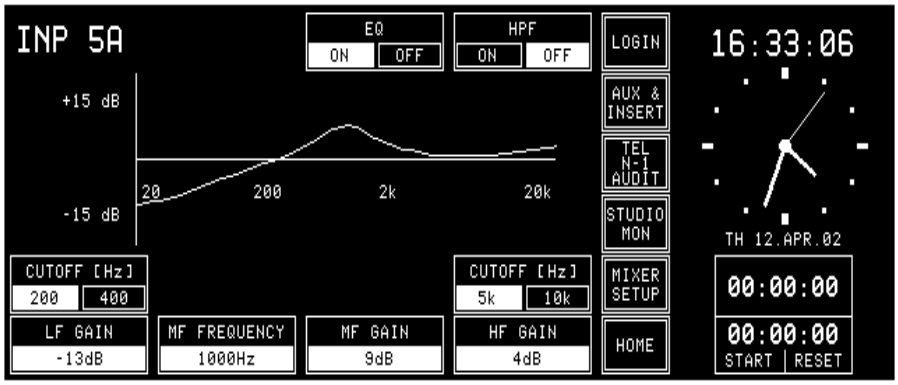
- PHASE
- AUX 1
- Output summing buses (ΣPROGRAM, ΣRECORD)
- PAN/BAL.



If the user has no access permission at all, the Channel Control page will not be displayed.

4.6 EQ/Filter Page, Microphone Input

The EQ/filter page for a microphone input channel is opened by pressing the EQ key of a microphone input channel's fader strip. If the user has no access permission to the EQ and filter parameters, the EQ/filter page will not be displayed.



HPF The HPF "ON" / "OFF" touch-screen field is a high-pass filter switch. The filter is part of the analog front end and is available on microphone input channels only. "ON" is highlighted if the filter is active.

EQ The EQ "ON" / "OFF" touch-screen fields activate or bypass the equalizer. If the equalizer is active (i.e. "ON"), the EQ key will be illuminated. If the EQ is bypassed (i.e. "OFF"), the preset frequency curve is displayed on the touch-screen nevertheless.
The four rotary encoders are the control elements for the equalizer. The low-frequency section is a shelving-type filter with two selectable turnover frequencies and variable boost/cut. The frequency is selected by the left-hand "CUTOFF" touch-screen fields, the gain is set with the first (left-most) rotary encoder. The second rotary encoder sets the frequency of the mid-frequency section which is a peaking-type filter. The third rotary encoder controls the mid-frequency boost/cut. The fourth (rightmost) rotary encoder controls the gain of the high-frequency section which again is a shelving-type filter with two selectable turnover frequencies. The right-hand "CUTOFF" touch-screen fields allow frequency selection of the high-frequency shelving filter.

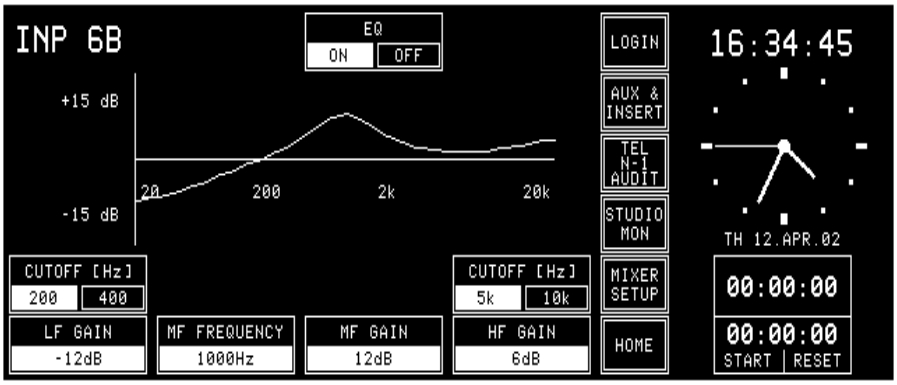
Note: The HF cutoff frequencies can be reduced by approx. one octave (resulting in an increased filter effect) when activating Customer Code 0x00000002; refer to chapter 11.2.11.

EQ Specs:

Filter	Mode	Frequency	Gain range	Comment
High-pass filter	HPF	–3 dB @ 80 Hz	ON/OFF	Analog, 12 dB/oct., mic input ch only
EQ low-frequency	Shelving	200 Hz/400 Hz	–15 dB...+15 dB, 1 dB steps	-
EQ mid-frequency	Peaking	200 Hz...10 kHz, 1/6 octave steps	–15 dB...+15 dB, 1 dB steps	Q = 0.7
EQ high-frequency	Shelving	5 kHz/10 kHz	–15 dB...+15 dB, 1 dB steps	see Customer Code (11.2.11)

4.7 EQ/Filter Page, Analog Line/Digital Input

The EQ/filter page for a line input channel is opened by pressing the EQ key of an analog or digital line input channel's fader strip. If the user has no access permission to the EQ parameters, the EQ/filter page will not be displayed at all.



The only difference between the analog line/digital and the microphone EQ/Filter pages is the missing HPF high-pass filter switch on analog line/digital input channels.

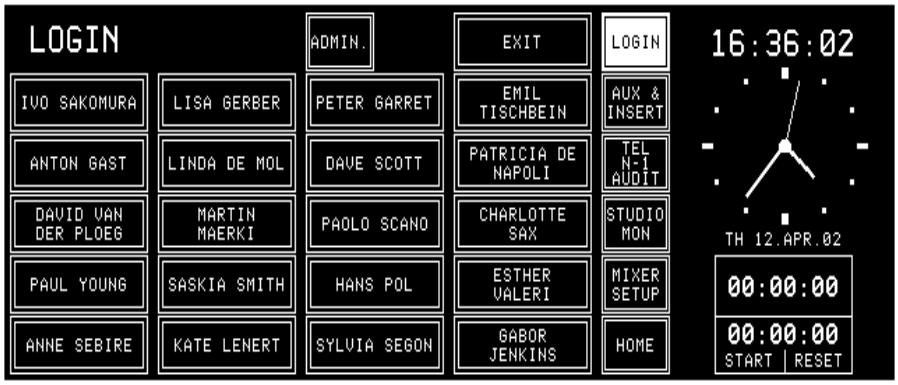
5 MASTER FUNCTIONS

Master functions are not input channel-related but global functions. These are audio functions (AUX master level, studio monitoring), non-audio functions (telephone hybrid control, clock, stopwatch), snapshot management, and system configuration.

Touching one of the LOGIN, AUX & INSERT, TEL, STUDIO MON, MIXER SETUP, or HOME–CHN ON/OFF fields will always lead to the corresponding page.

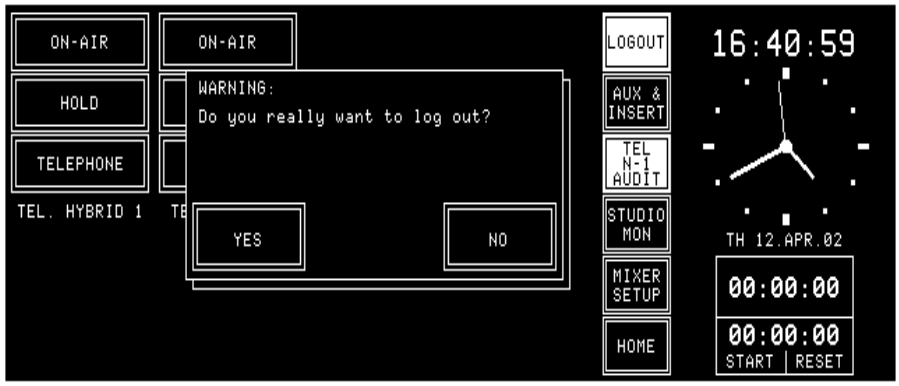
5.1 Login/Logout

The console always starts up in default user mode. If the user wants to work in his own environment, he must log-in. He has to touch the LOGIN field on the touch-screen. The LOGIN page will appear where the user can touch the field with his own name.



More information on the login procedure can be found in chapter 10.5.

After having logged in, the LOGIN field changes to LOGOUT; when the user leaves the console, this field must be used. After having touched LOGOUT, a dialog box appears, asking for confirmation. This is used as a protection against logging out inadvertently.

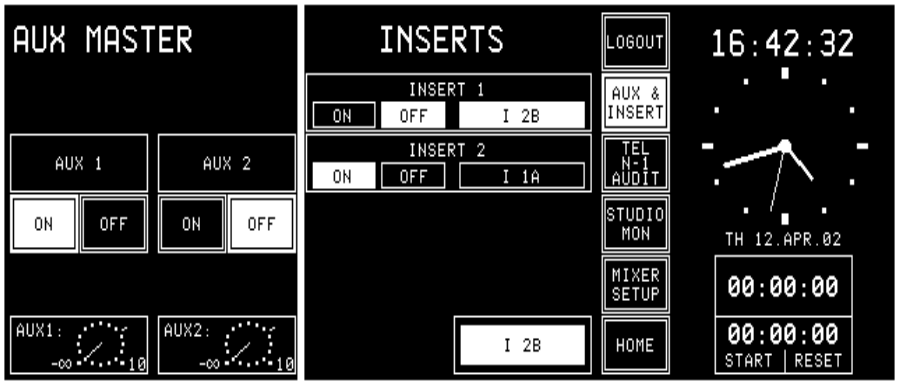


If a console is operated by one person only, the system administrator simply can enable all access rights for the default user. This is the way the user can control all console functions (except the administration functions) without having to log-in. A default user is always defined in the User ad-

ministration table, his name is DEFAULT USER. The access permissions of this user can be edited. His record cannot, however, be deleted, and no password can be defined for him.

5.2 AUX and Insert Control

The AUX MASTER/INSERTS page is entered by touching the AUX & INSERT field on the touch-screen.
If the user has no access permission for the AUX and/or insert parameters, there will appear a text next to AUX MASTER and/or INSERTS, telling the user that he cannot modify the parameters.



AUX MASTER: The two rotary encoders below the AUX 1 and AUX 2 gain indication symbols are used to adjust the desired level of the corresponding AUX master. The gain can be adjusted in a range of –∞ to +10 dB; the 0 dB position is marked with a dash.
ON/OFF selection of the AUX master buses is done by touching the corresponding fields on the screen. A highlighted background indicates the current status.
The AUX 1 and AUX 2 gain indication symbols are always displayed, even if no output unit is jumper-configured for AUX 1 and/or AUX 2.

INSERTS: On the same page, the insert points can be assigned. Assignment is possible to any of the following signals:

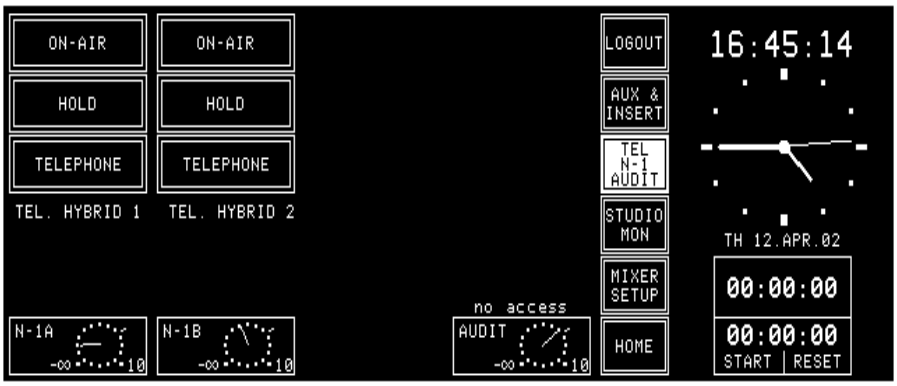
- CH1 to CH10,
- PROGRAM bus,
- RECORD bus,
- Talkback to Studio output,
- Talkback to Control Room (CR) output,
- NONE.

A signal can only be assigned to an insert while the insert is set to OFF, by touching the channel/bus label field of the insert box. The label field is highlighted. Then it can be changed with the rightmost rotary encoder. If the insert is set to ON, the channel/bus label field cannot be highlighted, and the insert assignment cannot be changed.
The insert send always follows the setting as displayed on the screen; it remains active while the insert is switched OFF. If the insert is switched ON, a switchover from the internal connection to the insert return is performed.

Each signal can be assigned to one insert only. If a signal is already assigned to an insert, it will not appear in the channel/bus label field during signal selection for another insert.
The insert is assigned per input unit and not per physical input, which means that the insert assignment is always valid for both physical inputs A and B of an input channel.
The insert assignment and the insert ON/OFF setting are included in snapshots.
The insert assignment is displayed in the corresponding fader strip by an illuminated INS LED for as long as the insert is active (ON).

5.3 N–1/Audition Bus and Telephone Hybrid Control

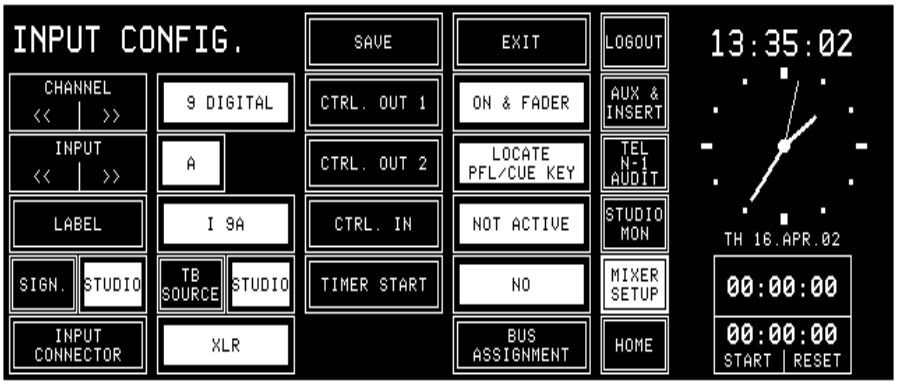
Two clean-feeds (N–1A, N–1B) are provided. The clean-feeds can be used as mono outputs to telephone hybrids, or as mono line outputs. The audition bus can either be used as a special stereo monitoring bus (for information on the special CUT and DIM conditions, please refer to chapter 11.2.2, “CR DIM WHEN AUDITION SELECTED”), or as a third, mono or stereo clean-feed.
If the user has no access permission for the clean-feed and/or audition bus parameters, there will appear a text next to the corresponding field, telling the user that he cannot modify the parameters.



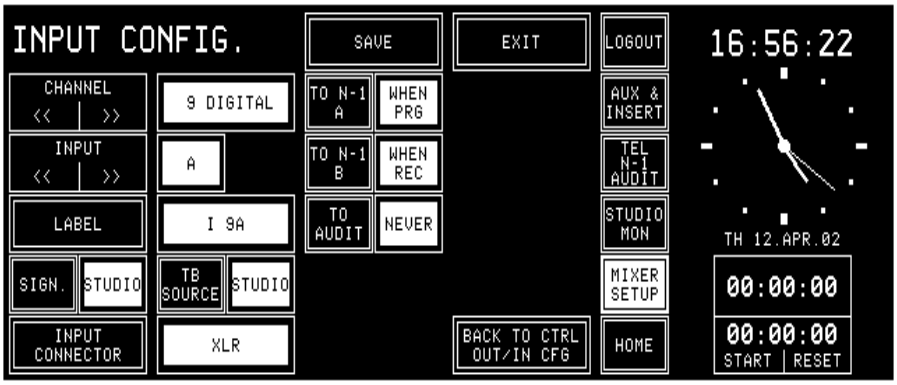
The clean-feeds as well as the audition bus have master level controls that can be accessed on the N–1/audition master and telephone hybrid page (opened by touching the TEL/N–1/AUDIT field). The output levels are controlled with the rotary encoders; the output gain range is –∞ to +10 dB, the 0 dB position is marked with a dash.

Two telephone hybrid interfaces to which the clean-feeds are fed can be controlled by the ON-AIR, HOLD, and TELEPHONE fields on this page. TELEPHONE switches the telephone line to the telephone. By touching HOLD, the telephone line is routed to the telephone hybrid interface. The return signal is connected, but the incoming signal is not fed to the console. Only when touching ON-AIR, both the incoming and the return signals are connected to the console.

5.3.1 N–1 and Audition Bus Routing



For bus routing, first open the INPUT CONFIG. page of the desired input channel (the example above shows the INPUT CONFIG. page of a digital input channel; for a mic input channel, the INPUT CONNECTOR field is not displayed, and for an analog line input channel, there will be the LEVEL and HEADROOM fields displayed instead).
When touching the BUS ASSIGNMENT field on this page, it changes as follows, allowing to select the N–1 A/B and audition bus routing:



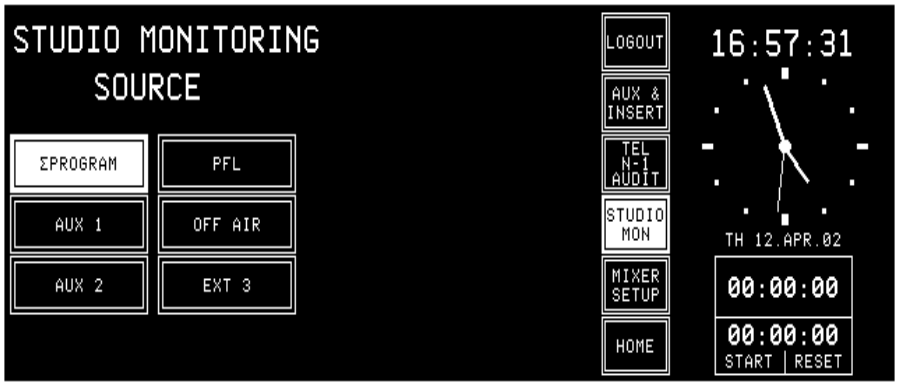
In the TO N–1 A, TO N–1 B, and TO AUDIT fields, the input signal is routed to the N–1A, N–1B, or audition bus, with the options given in the table below.

Setting	Meaning
NEVER	The input channel is never routed to N–1 or AUDIT
WHEN PG/REC	The input channel is routed to N–1 and/or AUDIT if the input channel is either assigned to the program or to the record bus
WHEN PRG	The input channel is routed to N–1 and/or AUDIT if the input channel is assigned to the program bus
WHEN REC	The input channel is routed to N–1 and/or AUDIT if the input channel is assigned to the record bus
ALWAYS	The input channel is always routed to N–1 and/or AUDIT, regardless of the bus assignment

The audition bus is similar to the N–1 buses, but it is a stereo bus that can be selected as a monitoring source in the control room.
Once the bus routing is completed, return to the INPUT CONFIG. page by touching the BACK TO CTRL OUT/IN CFG. field.
The N–1 A/B and the audition output levels are set using the rotary encoders on the TEL/N–1/AUDIT page, as described in chapter 5.3 above.

5.4 Studio Monitoring

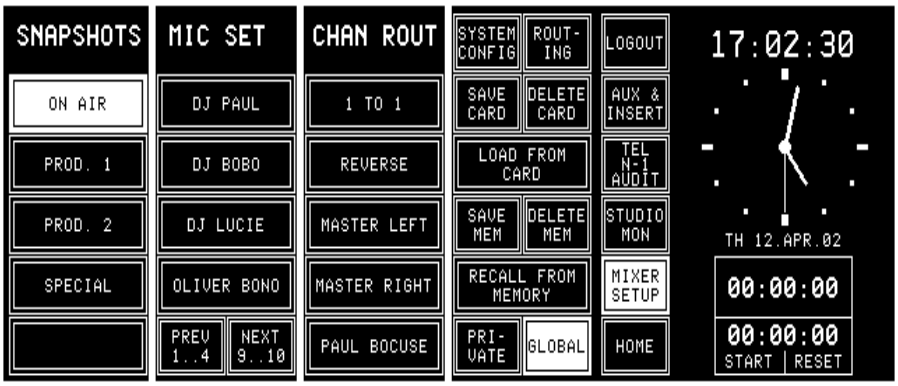
The STUDIO MONITORING SOURCE page is opened by touching the STUDIO MON field. This page allows selecting one of six signals to be routed to the studio monitoring loudspeakers and headphones. This selection can also be done via a pushbutton remote control from the studio (optional accessory “Studio Talkback Box” available). The field of the currently selected signal source is highlighted.
The signal selected with the EXT3 field is the same as the one selected with EXT3 on the CR monitor selector on the right hand side of the console; this signal is fed to the console via the 15-pin EXTERN MONITOR INPUT (B) connector at the rear of the console.



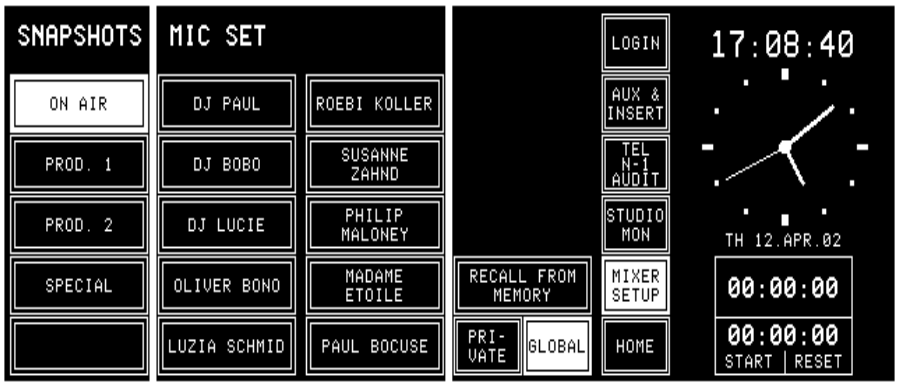
For a more detailed description of the monitoring system, see chapter 6.

5.5 Mixer Setup

The Mixer Setup page (SNAPSHOTS/MIC SET/CHAN ROUT) gives access to several function groups used for setting the general status of the console. These are: Global snapshots, private snapshots, global microphone (mic) settings, private microphone settings, global channel routings.



At the left of the Mixer Setup page there is the SNAPSHOTS area. The five fields allow snapshot selection.
Up to ten mic settings can be selected in the MIC SET area; either all of them are displayed, or – if the CHAN ROUT section is visible on this page as well – they are displayed in groups of four and can be browsed using the NEXT... and/or PREV... fields, as shown above.
Five global channel routings are accessible in the CHAN ROUT area. If no global channel routings should have been defined by the system administrator, the CHAN ROUT area is not displayed, as shown below.



The right part of the Mixer Setup page also provides the following command fields:

PRIVATE/GLOBAL: Users can select between private and global snapshots and mic settings.

SYSTEM CONFIG: This field leads to the second level of mixer setup functions. These are accessible only for users having the corresponding access right set in the user configuration. A new page is displayed, allowing to select from several groups of configuration parameters.

ROUTING: This field leads to the CHANNEL ROUTING. page. This page is only accessible for users having the corresponding access right set in the user configuration.

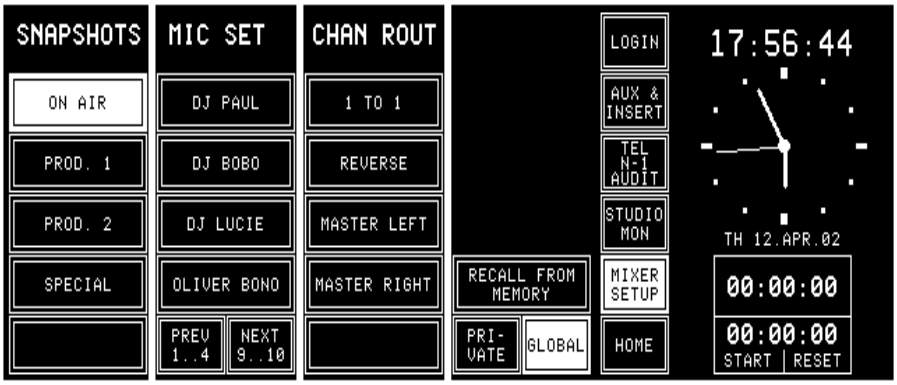
The use of snapshots, mic settings, and channel routings is described in the following chapters, followed by some information on user administration and the watch/stopwatch functions.

5.6 Snapshots

A snapshot is a copy of a momentary console setup. It contains all parameters (as input selection, input gain, phase, phantom power, balance or panorama setting, EQ settings, AUX settings, input channel ON/OFF, and insert assignment), except fader positions and PFL. A snapshot does *not* contain any parameters being part of the console configuration (input channel routing, channel labels, control signal functions, clean-feed bus assignment, level meter assignment, etc.).
Each user having a personal password can save up to four private snapshots (max. 20 users), and up to five global snapshots (available for every user) can be saved in the console's flash memory. More snapshots can be saved on a PC-Card (refer to chapter 5.9) and loaded from the card into the console's flash memory if required.
A name can be given to every snapshot which is displayed in the leftmost field column.

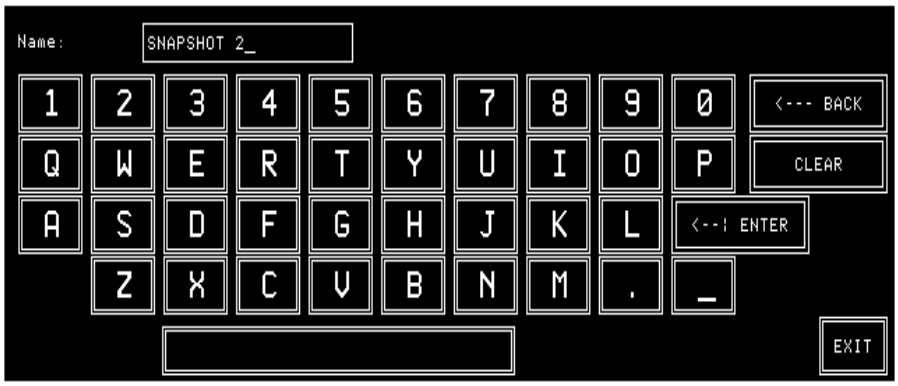
5.6.1 Recall a Snapshot from Memory

Select a snapshot by touching one of the name fields. The name of the selected snapshot is highlighted. When touching the RECALL FROM MEMORY field, the snapshot will immediately be recalled from the console's internal flash memory, except if the current input channel is active (switched to the program or the record bus); then the recall operation is delayed until the input channel is closed.
During execution of the snapshot RECALL function, the system compares the configuration parameters of each input channel with the configuration parameters saved together with the snapshot. If there is a mismatch, the snapshot will not be executed for this input channel.



5.6.2 Save a Snapshot to Memory

Saving a snapshot is done by touching a snapshot field, followed by SAVE MEM. The keyboard page appears where the snapshot name can be entered or edited (max. 20 characters). If the existing name is to be kept, just touch the <--¦ ENTER field.



CLEAR is used to clear the text field for entering a new name with the keyboard.
<--- BACK is used to delete one character to the left of the cursor.
EXIT is used to leave the keyboard page without saving the new name.
When touching <--¦ ENTER, the keyboard page is left and the snapshot data are saved.

Note: Global snapshots can be saved by the system administrator only. Logged-in users only can save their private snapshots.

5.6.3 Delete a Snapshot from Memory

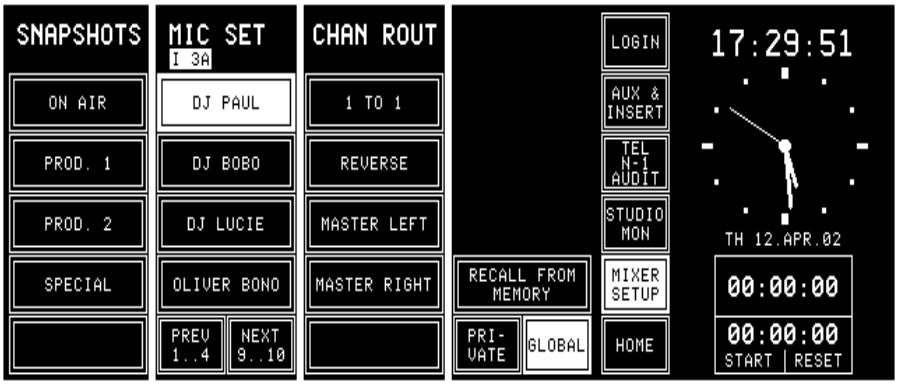
When saving a snapshot, the previously saved snapshot data are overwritten. A snapshot can be deleted, too, without overwriting it with new data.
For deleting a snapshot from the console's internal flash memory, the desired snapshot has to be selected. The selected field is highlighted. After touching the DELETE MEM field a dialog box appears. If it is confirmed, the snapshot will be permanently removed from the memory, and the name within the selected field is cleared.

5.7 Mic Settings

A mic (microphone) setting is a set of parameters (EQ, gain, phantom power) for a single microphone input channel. Thus, every DJ or announcer can store his preferred mic settings and recall them at any time. Up to four private mic settings for each user (max. 20 users), and up to ten global mic settings can be stored in the console's flash memory; additional mic settings can be stored on a PC-Card as well (refer to chapter 5.9).
If the CHAN ROUT section is also displayed on the Mixer Setup page, the global mic settings are displayed in groups of four. To display the other groups, use the NEXT... and/or PREV... fields below the MIC SET label fields.
Mic settings can be named, as the snapshots; these names are displayed on the corresponding touch field columns on the Mixer Setup page.

5.7.1 Recall a Mic Setting from Memory

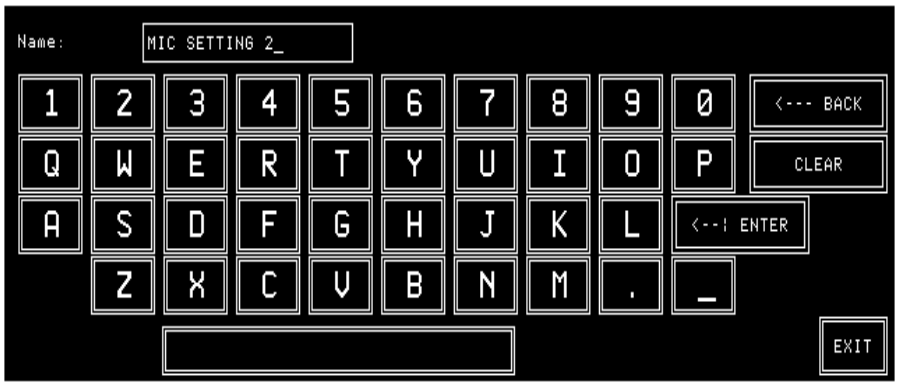
To recall a mic setting from the console's internal flash memory, first open the Mixer Setup page (SNAPSHOTS/MIC SET/CHAN ROUT) by touching MIXER SETUP, then select a microphone input channel by pressing the SEL key of the desired channel, then touch the desired MIC SETTING field. The name of the selected mic setting is highlighted.
Then touch the RECALL FROM MEMORY field. The selected input channel's parameters are immediately set to the values of the mic setting.
Selection of another type of input channel (line or digital) is treated as an error and will not be accepted by the system.



If the last modification was made on a microphone input channel, this channel is automatically selected and shown in the top line of the Mixer Setup page. To change the input selection, just touch the SEL key of the desired fader strip. The physical input being currently active (A or B) of this input channel is now selected and shown in the top line of the Mixer Setup page.

5.7.2 Save a Mic Setting to Memory

Creating a mic setting means saving a set of equalizer and gain parameters for a single microphone input channel under a given name into the console's internal flash memory. This is done by first selecting the microphone input channel to be stored, then touching a MIC SET field, followed by SAVE MEM. The keyboard page appears where the mic setting's name can be edited. Any MIC SET field (also one of these that have already been used and have a name assigned) can be selected. It will, however, be overwritten by the new mic setting.



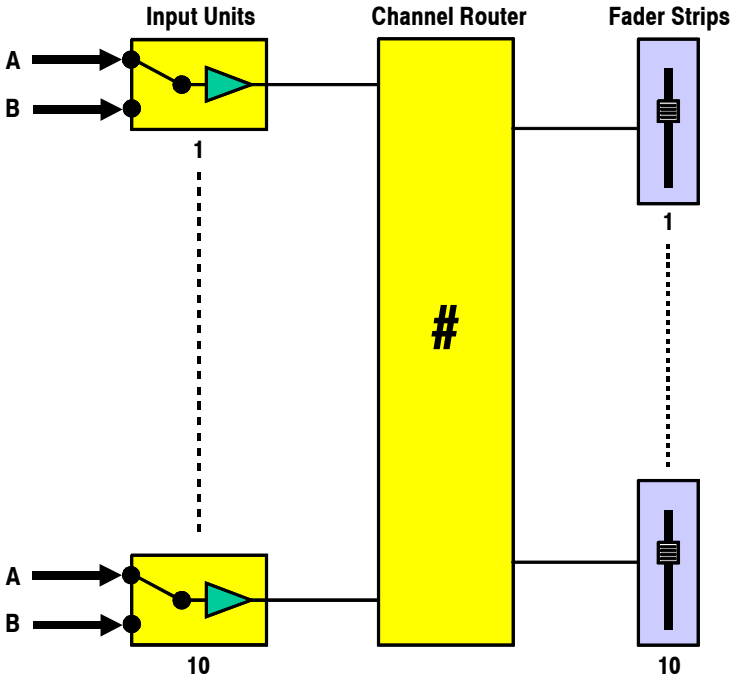
Now a new name can be generated, or the already present name can be overwritten or edited. When touching <--¦ ENTER, the mic setting data and its new name are saved.

5.7.3 Delete a Mic Setting from Memory

When saving a mic setting, the previously saved data are overwritten. A mic setting can be deleted, too, without overwriting it with new data.
For deleting a mic setting from the console's internal flash memory, the desired mic setting has to be selected. The selected field is highlighted. After touching the DELETE MEM field, a dialog box will appear. If it is confirmed, the mic setting will be permanently removed from the memory, and the text within the selected field is cleared.

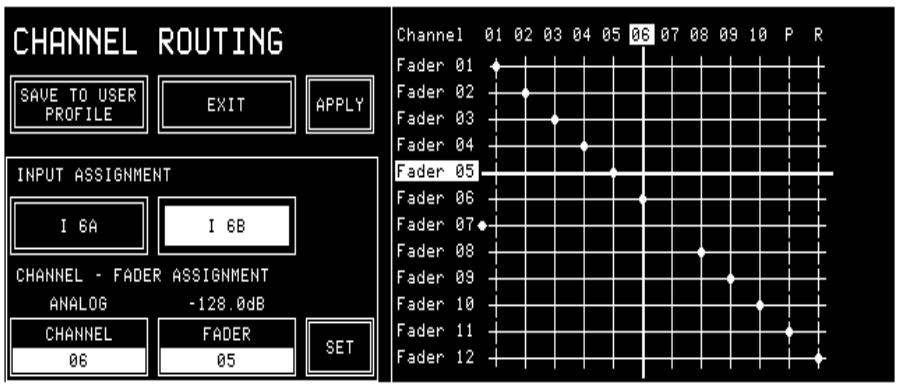
5.8 Routing

The OnAir 1000 features an input channel router that allows to route the output of any input unit (including the complete parameter set, as stereo mode, gain, filter, sends, bus assignment) to any fader strip. Please note that the two physical inputs A and B of the same input unit *cannot* be assigned to different fader strips, as the input selector switch is located before the preamplifier.
An input unit signal *cannot* be routed to more than one fader strip.



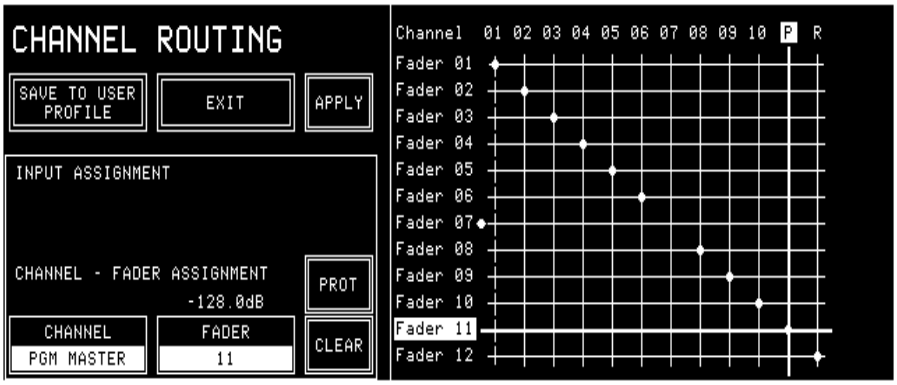
5.8.1 Channel Routing

The channel routing, i.e. the input unit-to-fader strip assignment, is accessed on the CHANNEL ROUTING page. There is only one user-specific channel routing per logged-in user available. Should the user have no access permission to the channel routing, this page is not displayed.



The right part of the CHANNEL ROUTING page displays a matrix with the corresponding number of faders and input channels. The current input unit-to-fader strip assignment is indicated by the crosspoints.

The program and record master fader assignment is fixed (PGM MASTER to fader no. 11, REC MASTER to fader no. 12). These two faders can be disabled (CLEAR) and re-enabled (SET), but not re-assigned to input channels. They are located at the far right of the grid ("P" and "R"). An example of this particular CHANNEL ROUTING page is shown below:



Making a Crosspoint

On the left part of the CHANNEL ROUTING page, the input unit-to-fader strip assignment is performed with the two left rotary encoders below the touch-screen. When turning these encoders, the highlighted horizontal and vertical lines are moved within the grid. The input channel and fader numbers are displayed above the two rotary encoders, as well as the type of the selected input unit (MIC/ANALOG/DIGITAL) and the position of the currently selected fader.

Above the input unit-to-fader strip assignment, the input labels are displayed.

The channel routing relates to the physical input. This means that, for example, input B can be selected; when loading this set-up later, input B with all its input parameters (as input gain, EQ settings, etc.) is automatically selected. These parameters are input-related and will be automatically re-routed when the input channel is assigned to a different fader.

When the desired crosspoint is found, touch the SET field. A dot appears at this crosspoint in the grid, indicating the established connection.

The fader to which this input channel had been assigned before is free now, and its dot jumps outside the grid to the left (fader 07 in the picture above). The same happens when the CLEAR field is touched after having selected a connection.

When all settings are done, touch the APPLY field. The new channel routing is loaded to the work memory. There are two ways to proceed now:

Temporary Routing

When touching the EXIT field, the page is left without saving, and the user can work with the new channel routing.

However, the new routing is not stored in the user's profile. When the user logs out, the temporary channel routing is lost, and his original channel routing will be loaded when logging in the next time.

Permanent Routing

To store the new channel routing within the user's profile, the SAVE TO USER PROFILE field has to be touched before exiting the page with EXIT.

Clearing a Crosspoint

When the CLEAR field is touched after having selected a connection, then this fader strip is free now, and its dot jumps outside the grid to the left.

Protected Connections

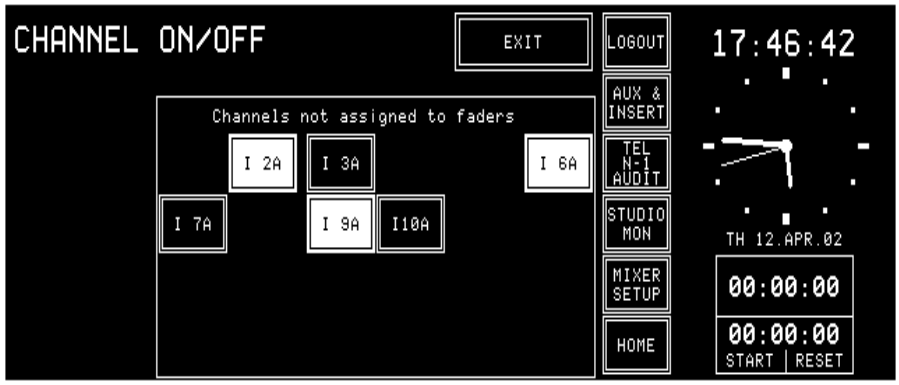
One or several connections can be protected by the administrator from being modified, even by users having access permission to the CHANNEL

ROUTING page. In such a case, a *dashed vertical line* is displayed for the corresponding input unit (channels 01, P, and R in the picture above).

Input Units not Connected to a Fader Strip

There are cases where the signals must be routed "to the background", i.e., it is possible for input channels to be active, but without operating elements on the console surface, e.g. if the user deliberately decides that some input channels must be in the background.
All input channels currently routed to the background can be displayed in the CHANNEL ON/OFF page; this page is selected by touching CHN ON/OFF in the HOME page.
When routing an input unit signal to the background, the audio path remains open, and the audio passes through the console with the fader level set at the moment of routing the signal to the background. This can be used, for example, for input channels being controlled in the background by a broadcast automation system (e.g. DigiMedia) using the serial port. External MUTE control for the input channel is still available.

Notes: This could be dangerous for a new user taking over the console, or for unexperienced users. Therefore being in the HOME page, the HOME field toggles to CHN ON/OFF. When touching this field, the CHANNEL ON/OFF page is opened (see below), displaying all input channels not assigned to fader strips (i.e., being in the background); the highlighted ones are open for audio signals ("ON"). Now, the user can switch any input channel ON or OFF on this page directly by touching the corresponding field on the screen.
When the PFL function is active at the moment of routing an input channel to the background, it is automatically switched off.



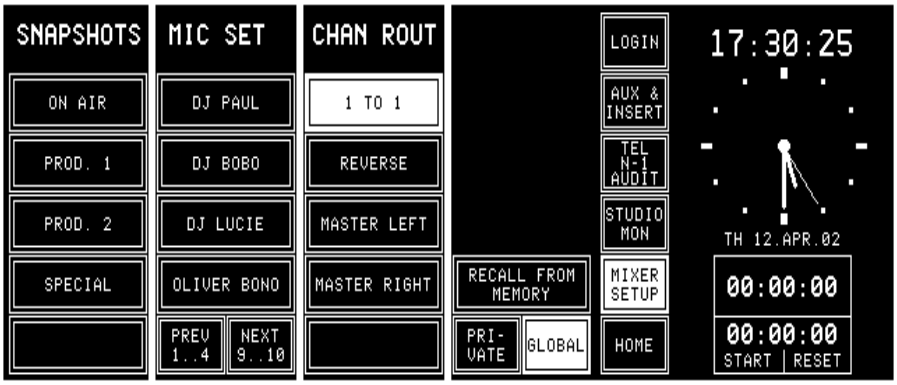
When powering the console off and on again, the input channels in the background are always set to OFF, to prevent audio from being played out unintentionally.

Auto Takeover When a new channel routing is loaded or when a user logs in, the input unit-to-fader strip assignment is modified. In this moment, the audio level of an input signal may not correspond to the physical position of the new fader. As the OnAir 1000 does not feature motorized faders, in such a case the Auto Takeover LEDs indicate in which direction the fader knob has to be moved to "catch" the audio level and to get the signal under control again.

5.8.2 Recall a Channel Routing from Memory

Automatical Recall: Every logged-in user has his own user channel routing that is loaded either automatically when logging-in, or manually. This is defined by customer code 0x00000200 (see chapter 11.2.11).
Usually it is easier to load the user-specific channel routing automatically at log-in; in some cases, however, the channel routing must not be changed (e.g. when the administrator makes some changes in a user domain).
When the console is switched on, the last channel routing (i.e. the one that was active before power off) is automatically loaded.

Manual Recall: A user can recall one of the five global channel routings or, when logged in, his own user channel routing at any time. This is done in the Mixer Setup page, either after selection of GLOBAL (up to five channel routings can be recalled by selecting one of them and touching RECALL FROM MEMORY), or PRIVATE (only one user channel routing can be recalled for logged-in users by selecting RECALL USER ROUTING).
When the console is switched on, the last channel routing (i.e. the one that was active before power off) is automatically loaded.



5.8.3 Save a Channel Routing to Memory

After having configured the channel routing as desired (see chapter 5.8.1), touch the APPLY field. The new channel routing is loaded to the work memory. When touching the EXIT field, the CHANNEL ROUTING page is left, and the user can work with the new channel routing. However, this routing is not yet stored in the user's profile. When the user logs out, the temporary channel routing is lost; if customer code 0x00000200 is set (see chapter 11.2.11), his original channel routing will be loaded when logging in the next time.
To store a modified channel routing within the user's profile, the SAVE TO USER PROFILE field has to be touched before exiting the page with EXIT.

Note: The system administrator can set and save his own user channel routing as described above.
For administrator setting and saving of global channel routings or user channel routings, please refer to chapter 5.8.5 and chapter 5.10.2.

5.8.4 Delete a Channel Routing from Memory (Administrator Only)

Previously stored channel routing data are overwritten when saving a channel routing, as described in chapter 5.8.3.
For the administrator, it is also possible to delete a global channel routing *without* overwriting it by new data. To do this, first the desired channel routing has to be selected. The selected field is highlighted. After touching the DELETE MEM field, a dialog box will appear. If it is confirmed, the channel routing will be permanently removed from the memory, and the text within the selected field is cleared.
For more information on deleting global channel routings please refer to chapter 5.10.2.

5.8.5 Channel Routing Administration

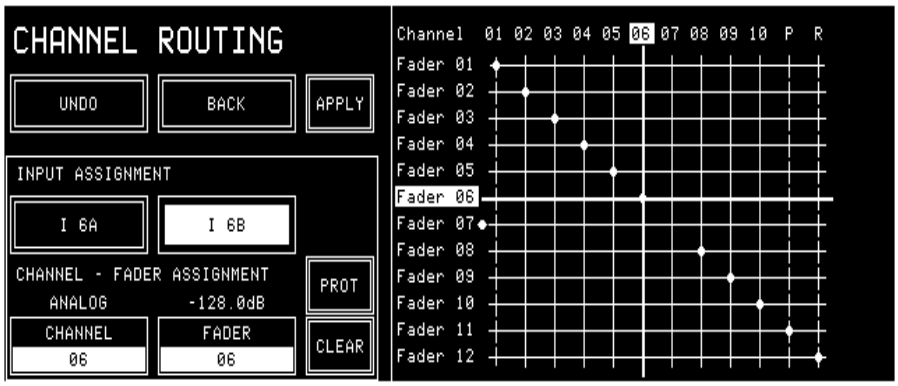
In addition to the user's own user channel routing, the administrator can save the current channel routing to one of the five globally-accessible channel routings. These can be recalled in the Mixer Setup page. The default and global channel routings can be saved or edited by the administrator; the default user's user routing can also be saved or edited by any user not logged-in (i.e. the default user), if access permission is given.

Channel Routings:

User Channel Routing The procedure for the system administrator changing a user's channel routing is described in chapter 5.10.2.

Global Channel Routings Five globally accessible channel routings can only be created by the administrator, allowing users to set-up the channel routing for specific transmissions, e.g. news broadcasts or sports events. Users do not have access to the global channel routings configuration. However, access permission given, a user could load a global channel routing, edit it, and store it in his own user profile.

Administrator Protection: The administrator can protect specific connections within the channel routing by selecting the desired cross-point with the horizontal and vertical lines, and then touching the PROT field. A protected connection is indicated by a dashed vertical line in the grid (see below); this connection cannot be changed by the users, even if they are allowed to change their channel routing. Only the administrator may UNPROT this connection again.



However, the user can change the input selection (A/B) of this input channel, if he has the INPUT SEL access permission.

5.9 Using PC-Cards

Snapshots, mic settings, and global channel routings can be saved to a PC-Card or loaded from the card into the console's flash memory. Using PC-Cards, parameter settings of a console can also be copied to an other console, provided that both have the same configuration.
A PC-Card with a capacity of 64 kB can hold about 20 snapshots.

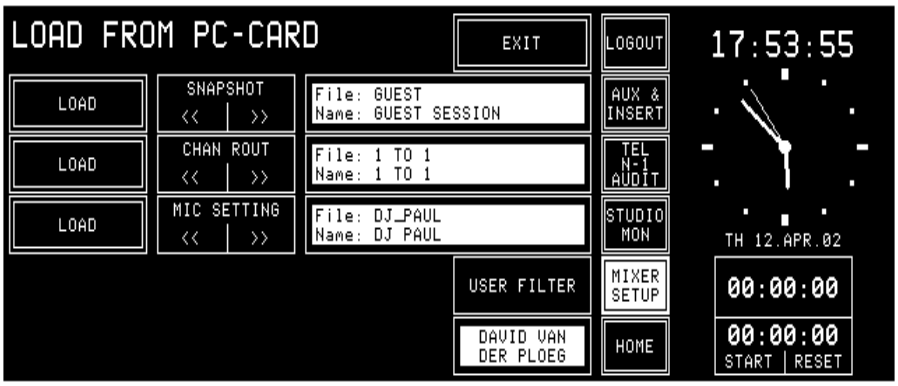
Notes: Using PC-Cards, it is also possible to exchange snapshot, mic setting, and/or channel routing data between OnAir 1000, OnAir 2000, and OnAir 2000M2 consoles. However, some restrictions must be considered if the consoles have different hardware configuration (e.g. number of channels, number of fader strips, different input unit types).
Only the administrator is allowed to load, save, and delete global channel routings from/to PC-Card.

File Name Extensions: The three-character DOS file name extensions on the PC-Card will be generated automatically. The relationship between the file name extension and the file content is shown in the following table.

Data type	File name extension
Global snapshot	.gss
Private snapshot	.pss
Global mic setting	.mis
Private mic setting	.mip
Global channel routing	.gfm

5.9.1 Load a Snapshot/Mic Setting/Channel Routing from PC-Card

To load a snapshot, a mic setting, or a global channel routing from a PC-Card, touch MIXER SETUP followed by LOAD FROM CARD. The page below will be displayed *(please note that the CHAN ROUT area is only displayed for the administrator).* The USER FILTER allows to select different user's data with the fourth rotary encoder.



Snapshots, mic settings, or a global channel routing can only be loaded as long as there is sufficient empty space available in the console's flash memory; if not, some of them must be deleted first. They can be selected for loading by scrolling with the corresponding << or >> fields, followed by LOAD. After having loaded a snapshot, a mic setting, or a channel routing, it is not automatically active, but it is available in the Mixer Setup page and must be recalled with RECALL FROM MEMORY, as described in chapters 5.6.1, and 5.7.1, or 5.8.2, respectively.

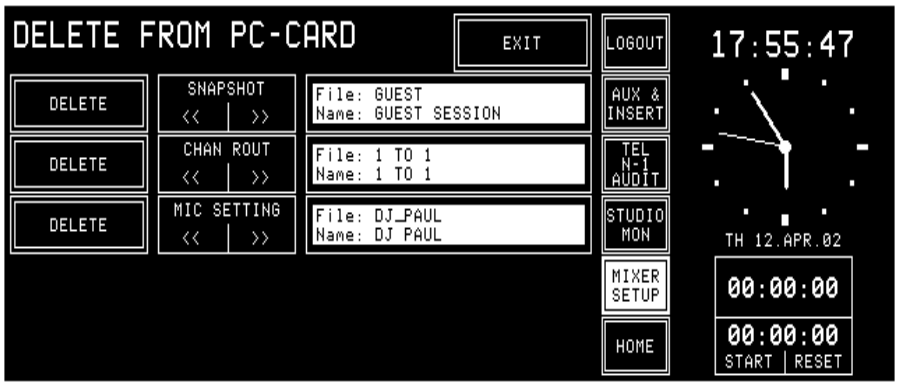
5.9.2 Save a Snapshot/Mic Setting/Channel Routing to PC-Card

To save a snapshot, a mic setting, or a channel routing to a PC-Card, first select a snapshot, a mic setting, or a channel routing in the Mixer Setup page. Then touch the SAVE CARD field. A keyboard appears for entering a file name (max. 8 characters, no dots, no spaces), as described in chapters 5.6.2, 5.7.2, and 5.8.3.
After confirmation with ENTER, the snapshot, the mic setting, or the channel routing is saved on the card.
If an empty file name is entered or if EXIT is touched, the action is cancelled without saving anything to the PC-Card.
Please note that only the administrator is allowed to save channel routings on the PC-Card.

Exceptions: If the file name already exists on the PC-Card, the action must be confirmed before the file is overwritten.
If a user tries to store a file under a file name that is already existing but has been given by an other user, the existing file will (after confirmation) be overwritten; it will no more be visible for the initial user.
If the card is full, a dialog box appears, telling that the file cannot be saved.

5.9.3 Delete a Snapshot/Mic Setting/Channel Routing from PC-Card

To delete a snapshot, a mic setting, or a channel routing from the PC-Card, DELETE CARD must be touched. The page below is displayed; *(please note that the CHAN ROUT area is only displayed for the administrator).*



A snapshot, a mic setting, or a channel routing can be selected for deleting by scrolling with the corresponding << or >> fields. The selected file and the snapshot, mic setting, or channel routing names contained in this file are displayed to the right of the << / >> fields. When touching DELETE, the console asks for confirmation. After confirmation, the file is deleted permanently. *Once deleted, the data cannot be recovered.*

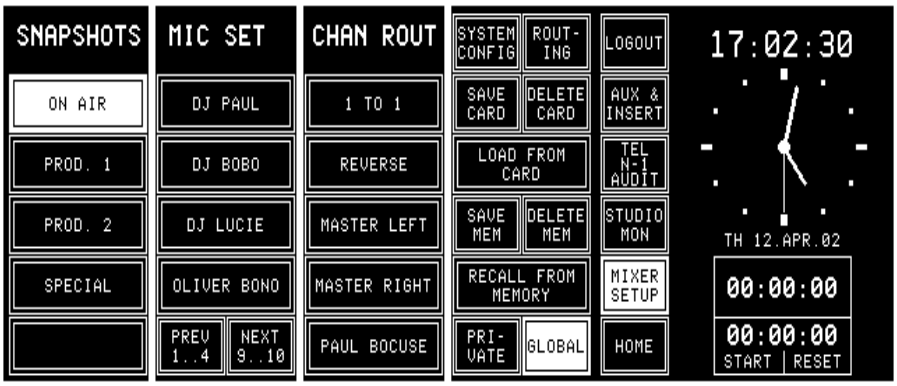
A user can only delete his own, private data from the card. The administrator, however, has access to all (global and private) files on the card. Depending on what selection the administrator has made in the Setup page, either only the global or only the private files are displayed for him.

The DELETE FROM PC-CARD page remains until either EXIT or one of the main menu fields is touched.

5.10 Administrator

5.10.1 Features

- The administrator has access to *all* private and global snapshots, mic settings, and channel routings.
- *The administrator has no private snapshots or mic settings, but one user channel routing.*



The administrator's Mixer Setup page is shown above. In this case all SAVE, DELETE, RECALL, and LOAD actions correspond to *global* snapshots, mic settings, and channel routings.
When the administrator touches the PRIVATE field and selects one of the users, he can modify the private settings of this user (see chapter 5.10.2).

Summary: The displayed private snapshots, private mic settings, and user channel routing depend on the user logged-in to the console; global snapshots, global mic settings, and global channel routings are the same for all users. When a user is not logged-in, i.e. he has not entered any password, he is automatically treated as the default user. The default user, too, has private settings; these will, however, not be password-protected, so they can be overwritten by any other user which is *not* logged-in to the console.
Global parameter settings can be recalled by any user, but modified by the system administrator only.

Access Rights:	Global Snapshots	Private Snapshots	Global Mic Settings	Private Mic Settings	Global Channel Routings	User Channel Routings
Administrator	read/write	read/write*	read/write	read/write*	read/write	read/write
Logged-in user, default user	read	read/write	read	read/write	read	read/write

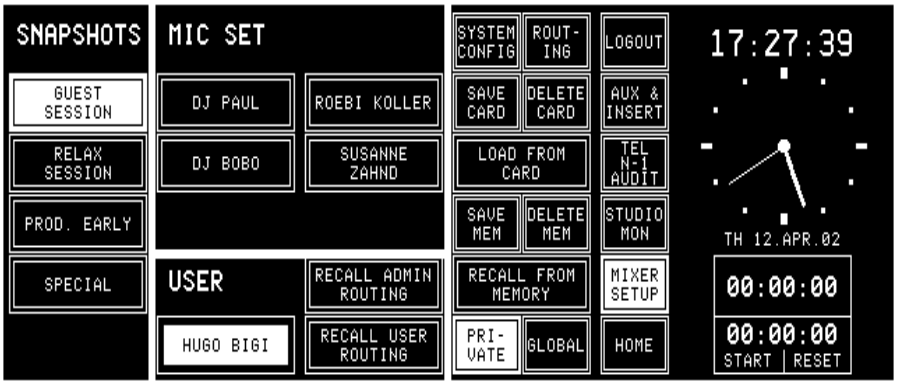
* The administrator can read and write the private snapshots and mic settings of any user, but he has no own snapshots or mic settings.

Number of Parameter Sets:			
Data Type	Number	Multiplied by	Total Data Records
Global snapshots	5	1	5
Global mic settings	10	1	10
Global channel routings	5	1	5
Private snapshots	4 per user	20	80
Private mic settings	4 per user	20	80
User channel routings	1 per user	22	22

5.10.2 Admin Selection of Snapshots/Mic Settings/Channel Routings

The system administrator can display and modify the private snapshot, mic setting, and channel routing data of any user.
This feature has been implemented in order to enable the setting of parameters in a private snapshot, mic setting, or channel routing to which the particular user has no access. All actions, such as RECALL FROM MEMORY, SAVE (to) MEM, DELETE (from) MEM, LOAD FROM CARD, SAVE (to) CARD, and DELETE (from) CARD, concern the selected user's data. No other actions on the console can be affected.

Snapshots and Mic Settings: After selecting PRIVATE in the Mixer Setup page, the second rotary encoder from the left (the one below the user's name label) allows to select the user's name. In this mode the system administrator can LOAD, RECALL, SAVE, or DELETE all the data being displayed.

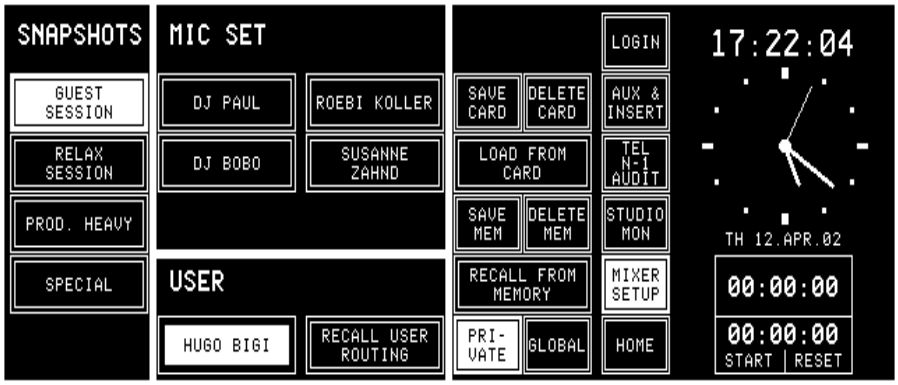


Channel Routing: With RECALL USER ROUTING, the system administrator can activate the user channel routing of the user selected with the rotary encoder. With RECALL ADMIN ROUTING he activates his own user channel routing.

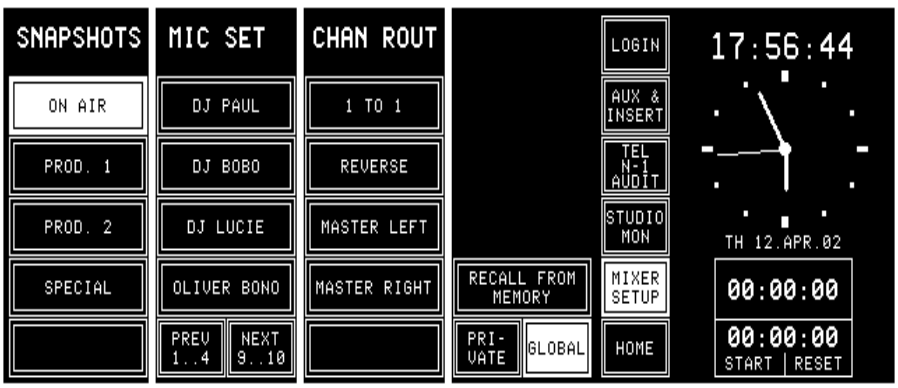
The procedure for changing a user's channel routing is as follows:
- Log-in as administrator,
- touch MIXER SETUP,
- SYSTEM CONFIG,
- USER ADMIN,
- select the desired user,
- touch EDIT,
- SET CHANNEL ROUTING,
- modify the channel routing,
- touch BACK,
- SAVE,
- EXIT.

5.10.3 Users with and without a Password

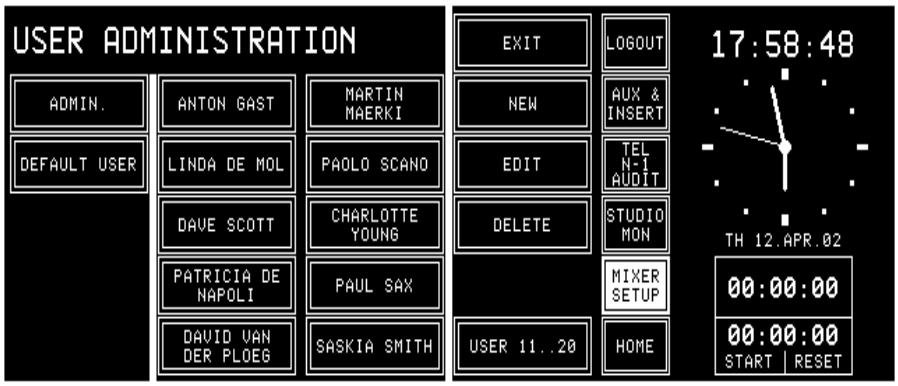
When a normal user enters the Mixer Setup page before logging-in (which means he is treated as the *default user*), he works with the default user's data. He can LOAD, RECALL, SAVE, or DELETE all of the default user's data in the console's memory or on the PC-Card. These data can, however, be used, saved, overwritten, or deleted by any other user who is not logged in.
The Mixer Setup page offers a PRIVATE field next to the GLOBAL field, allowing the user – after having logged-in – to access his own, protected private snapshots and mic settings.
A user can recall his user channel routing in the Mixer Setup page, after selection of PRIVATE (only one user channel routing can be recalled by selecting RECALL USER ROUTING); for more information on this subject please refer to chapter 5.8.2.
Should the user have access permission to the system configuration and/or channel routing, the corresponding SYSTEM CONF./ROUTING fields would be displayed here as well.



A user can decide to work with the global data although he is already logged-in. If the GLOBAL field is touched, the Mixer Setup page will look as shown below, where he can recall (but not modify) the global snapshots, mic settings, and channel routings; the CHAN ROUT area is suppressed if no global channel routings are available. Should the user have access permission to the system configuration and/or channel routing, the corresponding SYSTEM CONF./ROUTING fields would be displayed here as well.



5.11 User Administration



USER ADMINISTRATION is only accessible for the system administrator. Refer to chapter 10 for details on how to set up function access permission and new user accounts.

5.12 System Configuration

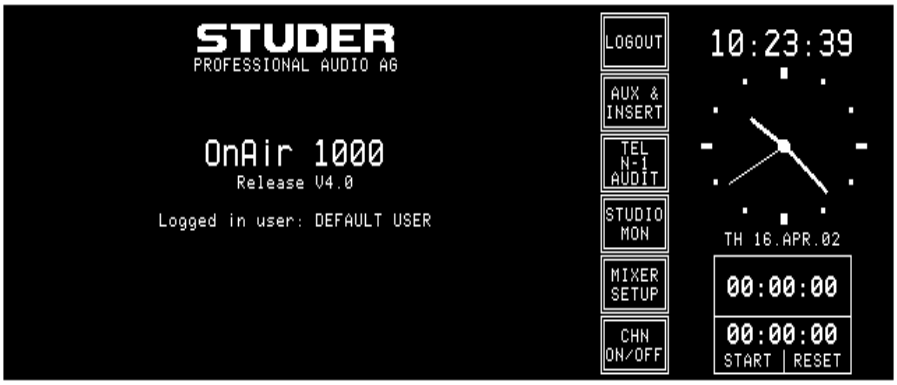
System configuration is a separate function group that can be accessed only by the system administrator or by users having access permission. It is separately described in detail (refer to chapter 11).

5.13 Watch and Stopwatch

The watch and stopwatch functions are displayed on the right-hand side of the touch-screen (except when the keyboard or routing pages are active).

The term “watch” refers to the time-of-day in analog and digital format, the day-of-week, and the date in an abbreviated format.
The term “stopwatch” refers to both the fader and the user stopwatches. The fader stopwatch measures the time the most recently used channel fader has been opened. The user stopwatch works like a normal stopwatch with START/STOP and RESET keys located directly below the touch-screen.

Below, the HOME page with the watch and stopwatch displays and functions is shown.



5.13.1 Watch

The watch gives a time, day-of-week, and date display. The default time reference is an internal, battery-buffered real-time clock (RTC). The RTC continues to run even when the console is switched off. Therefore it is unnecessary to set the watch at power-up. The RTC can also by synchronized by the time signal fed to the TimeSync input connector. If synchronization is established, the top right corner of the touch-screen shows a small “S” (Sync OK).
Changes to the internal time reference and the time and date formats can be made by the system administrator on the TIME page (MIXER SETUP, SYSTEM CONFIG., TIME). For details, refer to chapter 11.2.5.

Both time and date can be displayed in two formats, as shown below:

Time Format	Digital Time Indication
05:00:00 p.m.	12 hour time format
17:00:00	24 hour time format

Date Format	Example
DD.MMM.YY	MO 20.MAR.02
MMM-DD-YY	MO MAR-20-02

5.13.2 Fader Stopwatch

The upper one of the two stopwatches is called the fader stopwatch. It always restarts at 00:00:00 when a new audio channel is activated (e.g. channel ON, fader open, and output bus selected). In other words, it displays the elapsed time of the audio channel opened last.
This function can be enabled or disabled for any desired audio channel via the MIXER SETUP/SYSTEM CONFIG./INPUT menu, item TIMER START YES/NO.
The counter stops when the audio channel that started the stopwatch is switched OFF, or its fader is closed.

Note: If more than one audio channel has caused the fader stopwatch to restart, only the last audio channel's time is displayed.

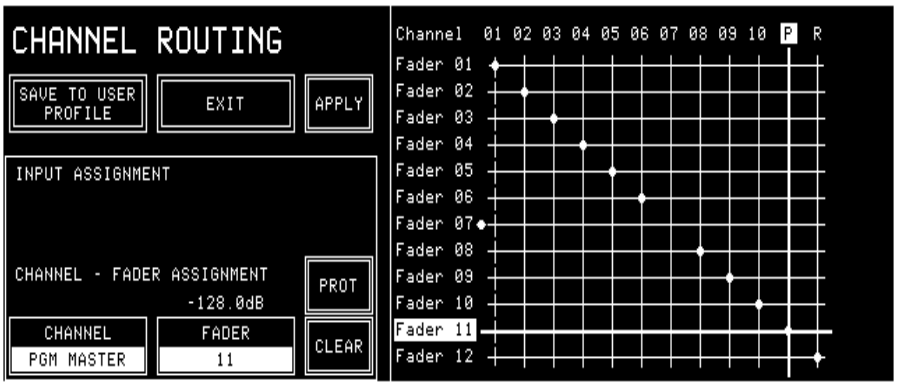
5.13.3 User Stopwatch

The user stopwatch is located just below the fader stopwatch. It is controlled by two keys on the console's surface located below the digits of the display. One key starts and stops the timer, the other resets the timer.

Key	Label	Description
START STOP	START	Start timer if stopped
	STOP	Stop timer if running
RESET	RESET	Reset timer regardless whether stopped or running

5.14 PGM and REC Master Faders

The console provides two master faders (PGM, fader no. 11, and REC, fader no. 12) located on the far right of the CHANNEL ROUTING page (“P” and “R”). Their assignment is fixed, they cannot be re-assigned to input channels.

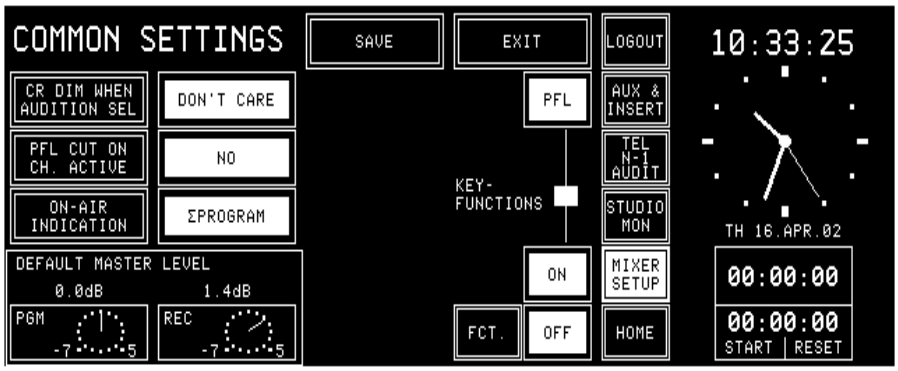


Specifications:

- In the audio path, the master faders are located before the insert points (also refer to the block diagram in chapter 1). If an insert is assigned to one of the master outputs, the corresponding IN1 or IN2 LED is on;
- No ON/OFF function is available for the master outputs;
- PFL function is not available;
- Overload indication is available;
- Master level can be controlled by Monitora extended commands;
- Signaling (ON-AIR, CR-MIC, and STUDIO-MIC) as well as CR/Studio CUT/DIM are logically linked to the master faders.

5.14.1 Fixed Master Levels

If only fixed levels of the PGM and/or REC master output signal(s) are required, it is possible to enter these levels in the DEFAULT MASTER LEVEL window on the COMMON SETTINGS page in a –7...+5 dB range. The fixed level for a master output becomes active when the corresponding master fader is disabled by selecting CLEAR in the CHANNEL ROUTING page. For re-enabling, the CLEAR field then changes to SET.



Important: *This setting directly affects the level of the main output signals. Please be careful when changing this parameter.*

6 MONITORING

6.1 Control Room Monitoring

The CR monitoring source selector has 10 keys to select one out of six internal and four analog external sources. The key of the selected source is illuminated.

Key	Source	Description
AUX 2	Auxiliary 2	General purpose output bus. AUX2 is illuminated if selected.
AUX 1	Auxiliary 1	General purpose output bus. AUX1 is illuminated if selected.
AUDIT	Audition	General purpose output bus. The input channels to the audition bus are configurable. AUDIT is illuminated if selected.
Σ REC	Record output	Output signal of the record master output. ΣREC is illuminated if selected.
Σ PGM	Program output (on-air)	Output signal of the on-air master output. ΣPGM is illuminated if selected.
PFL	PFL	PFL sum. PFL is illuminated if selected.
EXT 3	External 3	General purpose analog stereo input signal. EXT3 is illuminated if selected.
EXT 2	External 2	General purpose analog stereo input signal. EXT2 is illuminated if selected.
EXT 1	External 1	General purpose analog stereo input signal. EXT1 is illuminated if selected.
OFF AIR	Off-air	General purpose analog stereo input signal (e.g. tuner). OFF AIR is illuminated if selected.
F 5 F 4 F 3 F 2 F 1	Function keys F1 to F5	Spare keys for future functions.

Two additional keys are used to control the monitoring loudspeakers in the control room. The functions of these keys are described in the table below.

Key	Function	Description
DIM	–20 dB	The output level to the CR monitor loudspeakers is reduced by 20 dB. DIM is illuminated if selected.
CUT	Mute	The output to the CR monitor loudspeakers is muted. CUT is illuminated if selected.

A volume control knob (MON) is used to set the level sent to the CR monitor speakers.
As long as one of the microphones in the control room (DJ or guest microphone) is on, the monitor speakers are muted. In this case the CUT key is illuminated.

If the monitoring source is AUDIT (audition bus), the monitor speakers are either dimmed (DIM key illuminated), muted (CUT key illuminated), or not affected at all, according to the configuration (see chapter 11.2.2 for details).
If talkback is active, the level of the monitor speakers is dimmed by 20 dB and the DIM key is illuminated.

External CR DIM: Provided that the corresponding Customer Code has been activated, an additional control input signal on the "SIGN." connector allows to reduce the level of the CR monitor speakers by 20 dB (refer to chapters 11.2.11 and 14.11 for details).

The signal on the PFL bus is reproduced by the console's built-in speaker. The same speaker is used for talkback. The volume is adjusted with the PFL/TB potentiometer.

For monitoring purposes, a headphones connector is provided on the left side below the hand rest of the console. Three keys allow different monitoring modes, as described below:

Key	Function	Description
PFL	PFL	The headphones signal is the stereo PFL signal. PFL is illuminated if selected.
MON PFL	PFL/CR monitor	The left headphones signal is the mono PFL signal, while the right headphones signal is the mono CR signal as selected by the monitor source selector. If no PFL is selected, the headphones signal is the stereo CR signal as selected. MON/PFL is illuminated if selected.
MON	CR monitor	The headphones signal is the same stereo signals as selected by the source selector for the monitor speaker. MON is illuminated if selected.

The CUT and DIM keys have no effect on the headphones signal. The headphones output is not muted if one of the control room microphones is on. The incoming talkback signal from the studio is mixed to the headphones output. For improved intelligibility, the monitoring signal is attenuated by 20 dB.

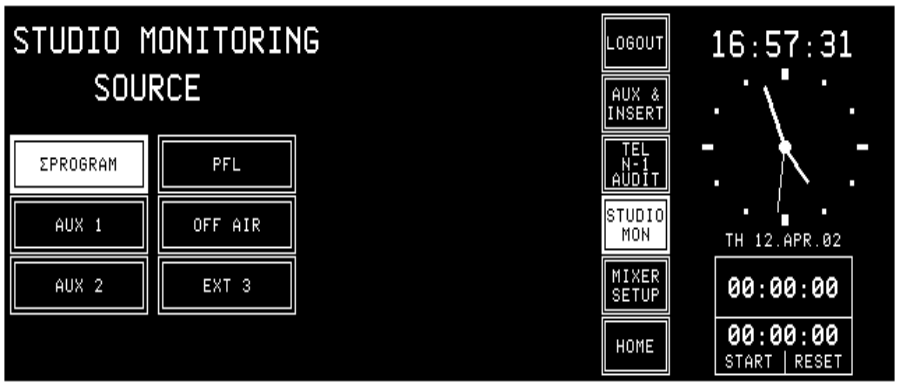
The PFL to MONITOR function feeds the PFL signal to the monitor loudspeakers, if PFL is selected on any channel. The normal monitoring signal is muted for as long as any PFL keys are active.

Key	Function	Description
PFL MON	PFL to MONITOR	The PFL signal is routed to the monitor speakers if PFL on any channel is active. If no PFL is selected, the monitoring signal is the stereo CR signal as selected. PFL > MON is illuminated if active.

A volume control knob (PHONES 🎧) adjusts the headphones listening level.

6.2 Studio Monitoring

The built-in studio monitoring functions are based on a touch-screen menu on the control screen. The STUDIO MONITORING SOURCE page allows one of six sources to be selected for routing to the studio speakers and headphones.



The table below lists the available sources.

Label	Function	Description
ΣPROGRAM	Program output (on-air)	Output signal to the transmitter. ΣPROGRAM is highlighted if selected.
AUX 1	Auxiliary output 1	General purpose output sum. AUX1 is highlighted if selected.
AUX 2	Auxiliary output 2	General purpose output sum. AUX2 is highlighted if selected.
PFL	Pre-fader listening output	PFL sum. PFL is highlighted if selected.
OFF AIR	External Off-air input	General purpose input signal, usually from receiver. OFF AIR is highlighted if selected.
EXT 3	External input	General purpose input signal. EXT 3 is highlighted if selected.

As soon as one of the fields is touched, the corresponding signal is routed to the studio, and the field is highlighted.

The monitoring source selection can be controlled from the studio via external pushbuttons thanks to the parallel interface. The monitor speaker and headphones levels can independently be controlled by two potentiometers located in the studio.
The studio monitoring speakers are muted if one of the studio microphones is on. The headphones are not muted in this case.

During talkback from the CR to the studio, the volume for the studio speakers is reduced by 20 dB. The talkback signal from the CR to the studio is not reduced and has therefore the normal listening level on both the studio monitor speakers and the studio monitor headphones.

6.3 Talkback

There is a choice among five talkback destinations from any control room (CR) microphone. A key is assigned for each destination as can be seen in the table below.

Key	Function	Description
N–1 B	TB to Telephone 2	The connection between DJ mic and Clean-feed B (N–1B, e.g. telephone 2) is established for as long as this key is pressed.
N–1 A	TB to Telephone 1	The connection between DJ mic and Clean-feed A (N–1A, e.g. telephone 1) is established for as long as this key is pressed.
AUX 2	TB to Auxiliary 2	The connection between DJ mic and Auxiliary 2 is established for as long as this key is pressed.
AUX 1	TB to Auxiliary 1	The connection between DJ mic and Auxiliary 1 is established for as long as this key is pressed.
STUDIO	TB to Studio	The connection between DJ mic and the Studio is established for as long as this key is pressed.

Any microphone in the control room, including the integrated TB microphone, can be the CR microphone, if “TB SOURCE” is set to “CR” in the INPUT CONFIG. page.

The console’s built-in PFL/TB loudspeaker and the headphones are used for talkback listening in the CR, while in the studio the monitoring speakers and the headphones are used.

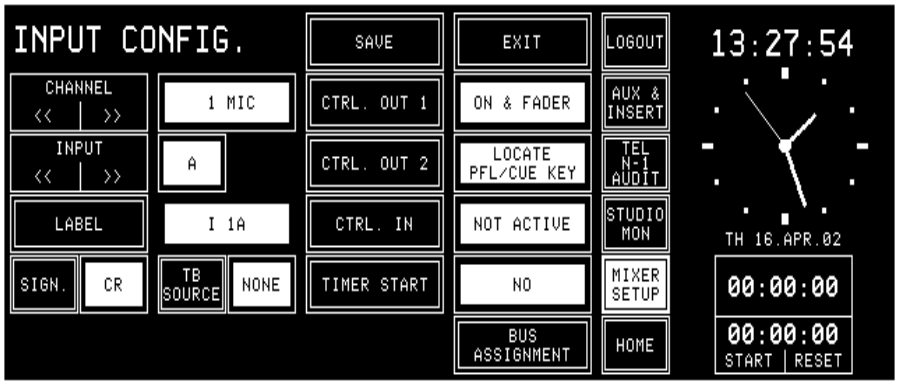
The parallel studio interface on the “STUDIO MON CTRL” connector allows the connection of three pushbuttons for talkback target selection. The possible targets are: CR, Clean-feed 1 (N–1 A/TEL1), and Clean-feed 2 (N–1 B/TEL2). For talkback from the studio, the studio microphones are used (“TB SOURCE” is set to “STUDIO”).

An additional, electronically balanced talkback line input on the “STUDIO MONITOR (AUDIO) B” connector as well as additional talkback to CR and to studio control inputs (on the “EXT PFL CTRL” connector) are provided.

Please refer to the pin assignment tables and the connection diagrams in chapter 14.11.

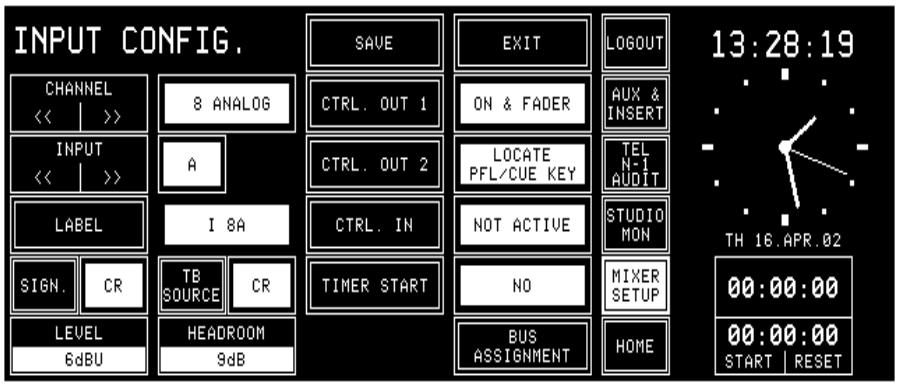
6.3.1 Talkback Settings

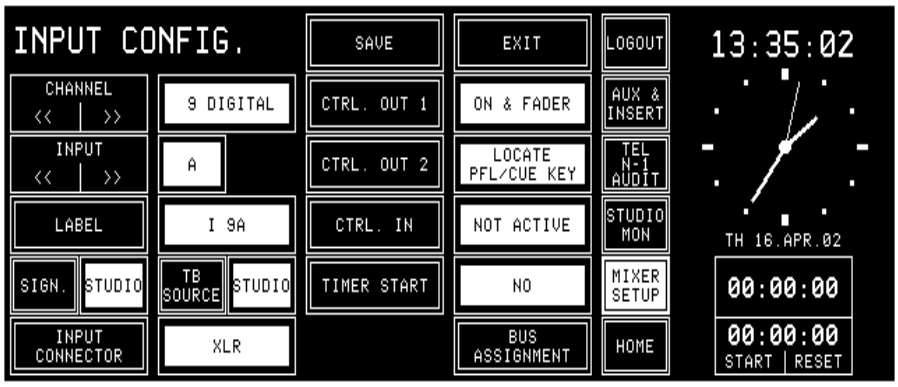
Signaling and talkback can be configured independently. The “SIGN.” setting in the INPUT CONFIG. page is used only for signaling (red light) and monitoring (cut and dim).
The “TB SOURCE” parameter in the INPUT CONFIG. page sets the assignment of the talkback source, i.e. the input channel to the TB bus (NONE, from CR, or from Studio).



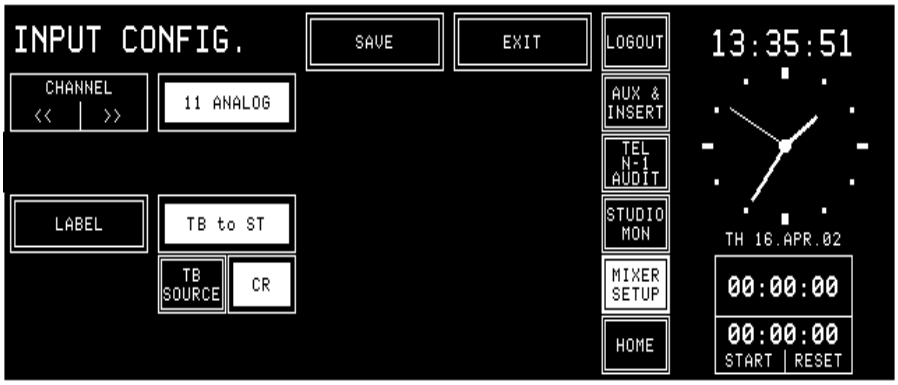
During talkback from the Studio, the studio speakers are dimmed only if at least one input channel is configured as “SIGN.” = STUDIO *and* “TB SOURCE” = STUDIO. The same applies for talkback from the control room.

Note: Configuration of talkback and signaling is also possible for analog line or digital input channels as well as for a TB mic input channel, as shown by the following screenshots.





For deactivating the internal TB microphone and activating the external TB mic inputs, the INPUT CONFIG. page for the channels 11 and 12 is used:



6.4 External PFL

The OnAir 1000 provides an external PFL audio input. If the EXT PFL key is pressed, the key is illuminated, and the signal at the EXT PFL input (EXTERNAL MONITOR INPUT A connector) is routed to the PFL bus. A control output is activated if EXT PFL is active. In addition, the EXT PFL function can be activated by a dedicated control input on the EXT PFL CTRL connector (refer to chapter 14.11).
With this feature, the OnAir 1000 is well-suited for the integration with a broadcast automation (CAB, computer-assisted broadcasting) system. These systems need a separate PFL input that can be activated by the CAB system itself.

Key	Function	Description
EXT PFL	External PFL	Switches the EXT PFL OUT control output on and off, and routes the EXT PFL audio input signal to the PFL bus. The key is illuminated if active, or if a control signal is applied to the EXT PFL input.

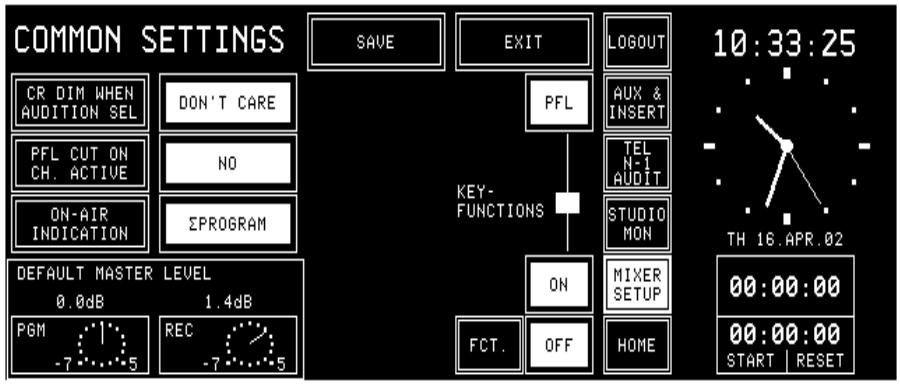
7 SIGNALING

For control room and studio, signaling is provided by means of open-collector outputs (9-pin D-type connector “SIGN.” on the rear of the console; for connection details, refer to chapter 14.11).
One output is available for each of the following statuses:

- Control Room microphone is on-air,
- Studio microphone is on-air, and
- Any signal from the console is on-air (i.e., a fader is open, this channel's ON key is active, its signal is routed to the PROGRAM and/or the RECORD bus, and, if configured, the corresponding master fader is open).

The CR-MIC and STUDIO-MIC indicators in the monitoring section of the console are illuminated when the corresponding control output is active.

SIGN. Output	Active if:
CR MIC OUT	At least one input channel of a CR or DJ microphone is active (channel ON, fader open, assigned to program or record bus, corresponding master fader open).
STUDIO MIC OUT	At least one input channel of a studio microphone is active (channel ON, fader open, assigned to program or record bus, corresponding master fader open).
PGM OUT	Depending on ON-AIR INDICATION condition selected in the COMMON SETTINGS page: • ΣPROGRAM AND ΣRECORD – at least one input channel is active (channel ON, fader open, assigned to program or record bus, corresponding master fader open). • ΣPROGRAM – at least one input channel is active (channel ON, fader open, assigned to program bus, PGM master fader open). • ΣRECORD – at least one input channel is active (channel ON, fader open, assigned to record bus, REC master fader open).



The ON AIR INDICATION condition for the PGM OUT control signal can be set in the COMMON SETTINGS page (reached by touching MIXER SETUP followed by COMMON), if access permission is available.

An additional ON AIR IN opto-coupler input on the SIGN. connector can be used for illuminating the ON-AIR indicator in the monitoring section of the console.

Note: For information on the DEFAULT MASTER LEVEL window on the COMMON SETTINGS page, please refer to chapter 5.14.1.

8 MACHINE CONTROL

The OnAir 1000 provides different control inputs and outputs. These can be used e.g. for switching an input channel on and off, or for starting, stopping, and cueing of the connected source unit (as CD/cartridge/MD players, tape recorders, or a CAB system). The control inputs and outputs are input channel-related and are re-assigned together with the input channel signal to the respective fader strip if the channel routing is changed.

Each audio input holds two control outputs and one control input on D-type connectors. The signals are:

- CTRL OUT 1 (normally used for fader start, but configurable for other functions; see chapter 8.2.1)
- CTRL OUT 2 (configurable functions see chapter 8.2.2)
- CTRL IN (configurable functions see chapter 8.3.1)

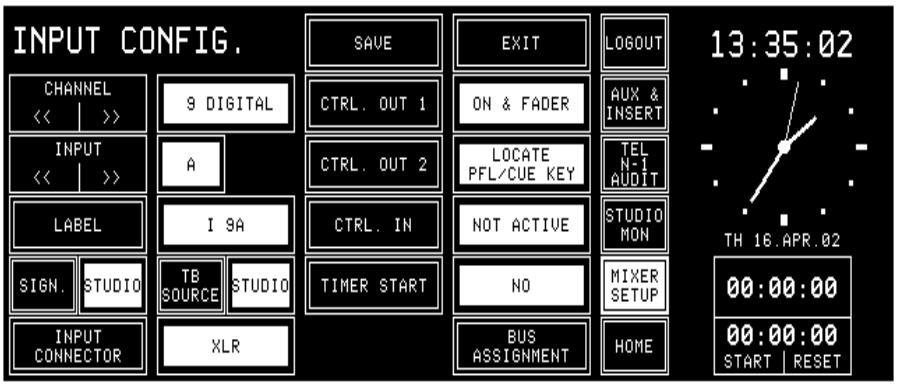
The status of the output signals depends on the control elements of the fader strip (keys 1 to 3, fader, input selection, channel routing, and output bus assignment), as well as on the console configuration.

Each input channel has two physical audio inputs, each of them with own control input and two control outputs, allowing to control every external source separately.

8.1 Keys and LEDs

Key 1/LED 1

The first key (labeled “PFL”) is always used to activate/deactivate the PFL function; if active, LED 1 is illuminated.
The PFL function can affect the CTRL OUT1 and/or CTRL OUT2 control signals, depending on the configuration. This configuration is performed in the center part of the INPUT CONFIG. page and is identical for all types of input units.

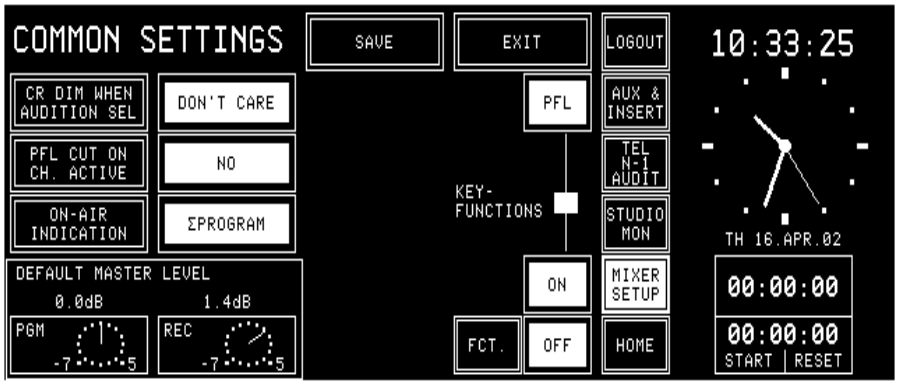


Key 2/LED 2

The second key (labeled “ON”) is used either to switch the input channel ON or to toggle the input channel ON/OFF, depending on the configuration of key 3. This function affects the CTRL OUT1 control signal. LED 2 always indicates the input channel's ON/OFF status.

Key 3/LED 3

The functionality of the third key (labeled “OFF”) depends on the console configuration. It can act as channel OFF key or trigger a LOCATE function. The key 3 functionality is set in the COMMON SETTINGS page:



Console configuration (valid for all channels):	
Key 3 (“OFF”) function	**Key 2 (“ON”) function**
(Channel) OFF	(Channel) ON
LOCATE	(Channel) ON/OFF
LOCATE	(Channel) ON *

Channel ON/OFF affects the CTRL OUT1 control signal of the selected input channel, and the LOCATE function defines the status of the CTRL OUT2 control signal of the selected input channel.

* To protect a channel from being switched off inadvertently, the OFF function can be disabled. This setting is performed in the COMMON SETTINGS page; *it is valid for all channels of the console simultaneously*.

Note: If this setting is selected, no input channel can be switched off by pressing a key – therefore, either closing the fader must do, or an external pushbutton per input channel has to be added. For this purpose, a CTRL IN control input per input channel is provided; please refer to chapter 8.3.1. Select the option “CTRL. IN – EXT. ON/OFF” in the INPUT CONFIG. page.

LED 3 is illuminated if an external device indicates ready status using the CTRL IN input signal of the selected input channel, or if the CAB system indicates “ready for playback” via the serial interface (“Monitora” protocol, refer to chapter 9).

8.2 Control Outputs

8.2.1 CTRL OUT1

This open-collector output is normally used to start external devices, such as CD players or a CAB system, to play the next track. On the INPUT CONFIG. page (see chapter 8.1), other functions can be assigned individually for each audio input.

Input configuration (for each channel individually):	
CTRL OUT1 mode	**CTRL OUT1 signal**
NOT ACTIVE	Output always open (inactive).
PFL/ON & FADER	Active if either PFL key is pressed (independent of fader position), or if ON key is pressed and fader is open (fader start function, causing the source to be started as well when PFL key is pressed).
ON & FADER	Active if ON key is pressed and fader is open (standard fader start function).
ON LAMP	Active if input channel is ON; used as acknowledgement if the input channel is remotely controlled.

8.2.2 CTRL OUT2

This open-collector output can be used to re-park an external device, such as a CD player, after cueing, or for signaling, or as an acknowledgement for ON status. It can be configured individually for each input in the INPUT CONFIG. page (see chapter 8.1).

Input configuration (for each channel individually):	
CTRL OUT2 mode	**CTRL OUT2 signal**
NOT ACTIVE	Output always open (inactive).
LOCATE KEY	Active if key 3 (“OFF”, configured as LOCATE key) is pressed while the channel is closed (fader closed or channel OFF). Using this function, a source that has been pre-listened before can be reset to the start point.
PREVIEW	Active as long as key 1 (“PFL”) is pressed while the channel is closed (fader closed or channel OFF). Using this function, a source can be started for pre-listening.
LOCATE PFL KEY	Active for approx. 0.3 s when key 1 (“PFL”) is switched off while the channel is closed (fader closed or channel OFF). Using this function, a source can be given a locate command to return to the start point.
LOCATE PFL / LOC KEY	Combination of the LOCATE KEY and LOCATE PFL KEY functions: • Output is active for approx. 0.3 s when key 1 (“PFL”) is switched off while the input channel is closed (fader closed or channel OFF). Using this function, a source can be given a locate command to return to the start point. • Output is active if key 3 (“OFF”, configured as LOCATE key) is pressed while the input channel is closed (fader closed or channel OFF). Using this function, a source that has been pre-listened before can be reset to the start point.
ATTENTION	Active as long as key 3 (“OFF”, configured as LOCATE key) is pressed; can be used for “ready” signaling.
ON LAMP	Active if input channel is ON; used as acknowledgement if the channel is remotely controlled.
FADER STOP_PULSE	Generates a fader start pulse (approx. 0.2 s) at CTRL OUT 1 and a fader stop pulse (approx. 0.3 s) at CTRL OUT 2, but only if CTRL OUT 1 is configured as ON & FADER or PFL/ON & FADER.

8.3 Control Inputs

8.3.1 CTRL IN

A CTRL IN control input is available for each audio input channel. This input channel's function can be selected in the INPUT CONFIG. page (see chapter 8.1).

Input configuration (for each channel individually):	
CTRL IN mode	**CTRL IN signal**
NOT ACTIVE	No function (input signal is ignored)
READY	Key 3 (“OFF”) is illuminated as long as CTRL IN is active
EXT. MUTE	Input channel is muted as long as CTRL IN is active (e.g. cough key)
EXT. ON/OFF	Toggles the channel ON/OFF; used e.g. for ON/OFF button on speaker’s desk, or for remote control through CAB system

Note: An optional, external control interface (1.942.803.xx) can be used for the following functions of a single input channel:

- Electrical isolation between CTRL OUT and the connected source (relay with make contact);
- Conversion from the continuous fader start signal to electrically isolated start and stop pulses;
- Remote control of an input channel using separate ON and OFF keys, logically linked with the ON LAMP signal. The ON and OFF keys in the console remain functional;
- Remote control of an input channel through a CAB system sending a continuous control signal as long as an input channel must be on, logically linked with the ON LAMP signal. The external command is overridden by the ON and OFF keys in the console.

Additional information on this interface can be found in the circuit diagrams chapter of the OnAir 1000 Service Manual.

8.3.2 EXT PFL Input

An external PFL control input is available on the “EXT PFL CTRL” connector at the rear of the console (refer to chapter 14.11). It allows e.g. to open the EXT PFL pre-listening audio path by a CAB system.

8.4 CTRL OUT1/2 & CTRL IN Application Examples

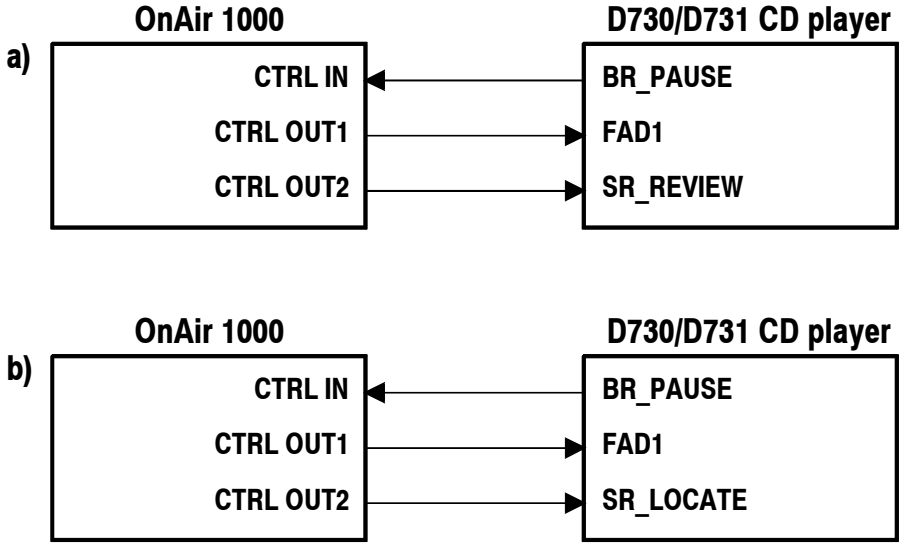
Application	Configuration CTRL OUT1; *see Note 4*	Configuration CTRL OUT2; *see Note 4*	Configuration of key 3 ("OFF"/LOCATE); *see Note 4*	Connection(s) OnAir 1000 –> controlled source (e.g. CD player, cart/tape recorder
Fader start/stop with: Fader open/close, or channel ON/OFF	ON & FADER	—	—	CTRL OUT1 –> remote control input "fader start"
Fader start/stop with: Fader open/close, or channel ON/OFF, or PFL ON/OFF	PFL / ON & FADER	—	—	CTRL OUT1 –> remote control input "fader start"
Review function of Studer D730/D731: pre-listening with PFL and subsequent locate to the last cue address. Afterwards: PLAY with fader start; ***see Notes 1 and 2***	ON & FADER	PREVIEW	—	CTRL OUT2 –> Studer D730/ D731, remote control input "SR_REVIEW"; ***see fig. a)***
Pre-listening with PFL and subsequent locate to the start; console sends an 0.2 s locate pulse on CTRL OUT2. Afterwards: PLAY with fader start; ***see Note 1***	PFL / ON & FADER	LOCATE PFL KEY	—	CTRL OUT1 –> remote control input "fader start", CTRL OUT2 –> remote control input "locate"; ***see fig. b)***
Manual locate to the start, using OFF/LOCATE key 3; ***see Note 1***	—	LOCATE KEY	LOCATE	CTRL OUT2 –> remote control input "locate"; ***see fig. b)***
Pre-listening with PFL and subsequent locate to the start. Manual locate also available; ***see Note 1***	PFL / ON & FADER	LOCATE PFL / LOC KEY	LOCATE	CTRL OUT1 –> remote control input "fader start"; CTRL OUT2 –> remote control input "locate"; ***see fig. b)***
Fader start pulse and fader stop pulse (on different control outputs)	ON & FADER or PFL / ON & FADER	FADER STOP PULSE	—	CTRL OUT1 –> fader start pulse, CTRL OUT2 –> fader stop pulse; used for any remote control input using pulses instead of a static signal
Control of any external signal with key 3 ("OFF")	—	ATTENTION	LOCATE	CTRL OUT2 –> any control input
Reflects the ON lamp status to CTRL OUT1	ON LAMP	—	—	CTRL OUT1 –> any control input
Reflects the ON lamp status to CTRL OUT2	—	ON LAMP	—	CTRL OUT2 –> any control input

Note 1: Function is available only if the corresponding console channel is ***not*** active; "channel active" = fader open ***and*** channel ON ***and*** channel assigned to PGM or REC bus.

Note 2: D730/D731 configuration checksum example, suited for this function: **4050631164470**. For more information on this subject, please refer to the D730/D731 operating instructions manual, order no. 10.27.1672

Note 3: Combination of different applications is possible if allowed by the CTRL OUT1/2 wiring.

Note 4: *DO NOT change the settings while any of the control output signals is active!*



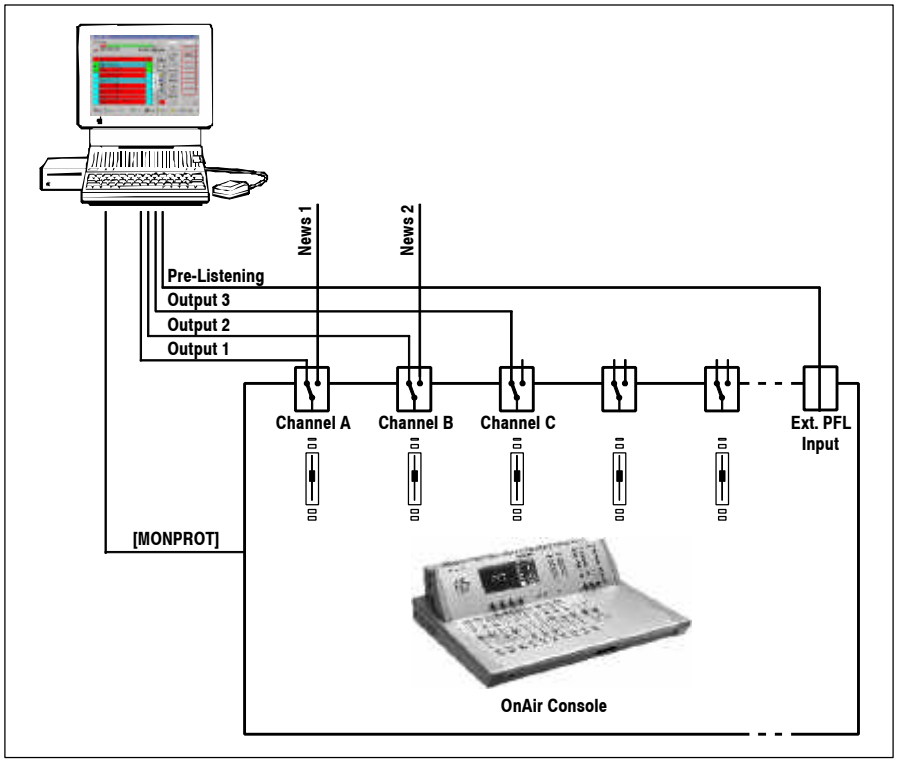
9 AUTOMATION

9.1 Introduction

The OnAir 1000 supports external CAB (computer-assisted broadcasting) systems. A serial interface (RS232/RS422) is used for communication with the CAB system.

Studer DigiMedia: Information on how to connect and operate the OnAir 1000 mixing console with a DigiMedia CAB system is given in the current DigiMedia operating instructions.
The serial interface protocol is based on the "Schnittstellen-Spezifikationen Regiepult" of DSA (Digitale Steuerungs- und Automationstechnik, Thomas Volgmann) furthermore called [MONPROT], which was defined by VCS and Siemens.
The implementation in the OnAir 1000 is a subset of [MONPROT].
For detailed information on the telegrams implemented in the OnAir 1000, please refer to the "Communication Protocol for Broadcast Automation" document [BCACOM] (available on request).

9.2 Features of the OnAir 1000 CAB Support

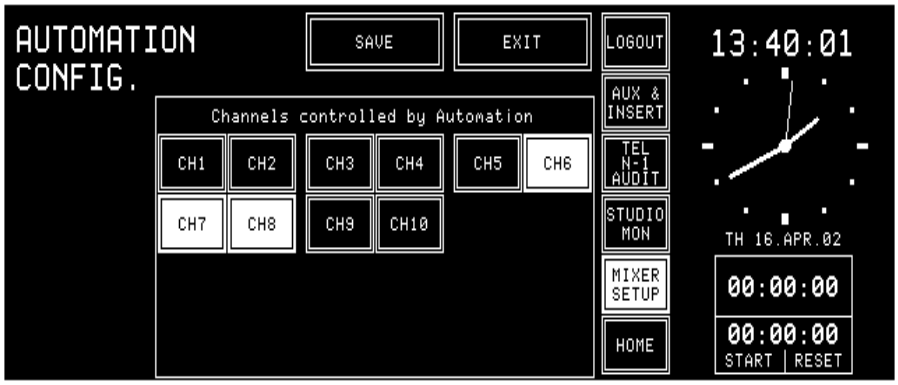


- Serial interface: Serial RS232/RS422 standard communication interface based on [MONPROT].
- 2 x 12 character text display per channel.
- Music and speech output:
  The CAB can control the output assignment (program/record bus) of the currently selected input of a channel.

9.3 Application Handling

9.3.1 Configuration for Automation Control

Input channels must be assigned to the automation system in the console configuration in order to be controlled by an external CAB system. AUTOMATION CONFIG. is reached from the SYSTEM CONFIG. page:



The AUTOMATION CONFIG. page allows each input channel to be assigned to the CAB system.
Please note that these channels' labels *must* be named “DIGI 1” through “DIGI 3”. Normally three input channels are used with the CAB system; a fourth “DIGI 4” input channel is possible, but unusual.

9.3.2 Communication Time-Out

If no valid telegram is received from the CAB within approx. 30 seconds, the OnAir 1000 assumes that the communication is interrupted.

In this case it stops sending telegrams and the following actions are performed:
- All input channels are deselected;
- A warning: “Communication to Broadcast Automation lost!” is displayed.

After the next or first telegram from the CAB, communication will be re-established.
The information: “Communication to Broadcast Automation established!” is generated.

9.3.3 Output Selection

The CAB is able to control the output assignment (program/record bus) of the currently selected input of any input channel. This allows, for instance, to route speech to the program output, and music to the record output.

9.3.4 Start a New Title from Schedule

In automation mode, the CAB can start a new title automatically (it is also possible to start new titles manually; then, the operator opens the fader while the input channel is already switched ON, or switches the desired channel ON while the fader is already open).

Automatic New Title Start: The CAB can control the console automatically. This automatic mode must be activated from within the CAB and can, for example, be used for controlling a program during the night without any assistance.
If the CAB runs in automatic mode, it starts playback of the source and opens the appropriate input channel with the pre-defined level and fade-in time. This will send a new audio level to the DSP, and switch the input channel ON in any case.
If a take ends, the CAB performs a cross-fade on its audio card, the selected channels on the console remain open.

If the CAB changes the audio level, the channel changes into *auto takeover mode*. This means that the audio level (i.e. actual DSP level) and the fader level (i.e. physical position of the fader knob) differ for more than a specified auto takeover window. If the fader is moved now, nothing will change until the physical position of the fader knob is within the auto takeover window. Then the auto takeover mode is left.

Auto takeover mode is indicated in the fader strip by the two AUTO TAKEOVER arrow LEDs. The operator can recognize the direction in which he has to move the fader in order to leave auto takeover mode and take control of the signal level. If the physical position of the fader is brought within the auto takeover window or if it accidentally is situated within the window, both arrow LEDs will be illuminated.

			
Channels *not* controlled by a CAB system	Audio level above the fader position – move fader *down*	Audio level below the fader position – move fader *up*	Audio level equal to the fader position

9.3.5 Indication of the Currently Playing Input Line

As the OnAir 1000 is not equipped with motor faders, a clear indication of the channel currently “playing” is necessary.

Under the following conditions the respective channel label is in continous scrolling mode, indicating “ON-AIR” if:

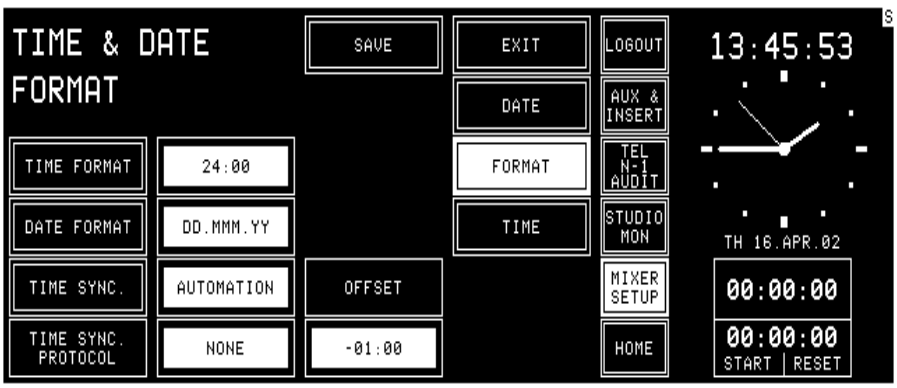
- Fader (audio level) is open;
- The channel is switched ON;
- The channel is assigned to program and/or record bus (as defined in the Common Settings page);
- The channel is selected by the CAB (SOURCE_SELECTION).

9.3.6 Pre-Listening

When starting the pre-listening function in the CAB system by clicking on the LISTEN button on the CAB screen, followed by selecting a title, the CAB system immediately sends the desired title over the fourth channel of its audio card. At the same time, it opens the external PFL input, so that the desired title is audible in the console's PFL loudspeaker.

9.3.7 Time Synchronization

The CAB is able to set the console's internal clock (time and date) if TIME SYNC. is set to AUTOMATION in the TIME & DATE FORMAT page; refer to chapter 11.2.5.



10 USER MODES

10.1 Purpose of User Modes

The console is used in different studios with different working practice and different personnel structure. A large part of users in broadcast studios is not technically oriented. A mixing console meeting their requirements must be simple to use, reliable and free of "unnecessary" controls and displays. Setting of a wider range of console parameters, saving of console settings (snapshots), and modifications of the console configuration have to be left for technically more competent users (studio technicians, chief engineer). It is also necessary to protect parts of system data and give the permission to change them only to a restricted number of users. In order to satisfy these needs, the OnAir 1000 console supports individual user access rights.

Three classes of users are defined for the OnAir 1000; these are:

Default User:
- No password required;
- Private snapshots and mic settings;
- User channel routing;
- Function access rights according to the configuration.

Normal User:
- Password-protected;
- Private snapshots and mic settings;
- User channel routing;
- Function access rights according to the configuration.

System Administrator:
- Password-protected;
- User channel routing;
- Unlimited access rights to all functions;
- Defines new users;
- Defines access rights for all users;
- Stores global snapshots, global mic settings, and global channel routings.
- Stores private snapshots, private mic settings, and user channel routings for all users.

The table in chapter 10.2 shows the functions to which access is configurable in the OnAir 1000.

10.2 Access to Configurable Functions of the Console

Function Description	Default User	Normal User	Adminis-trator
Loglist management			
Accept an entry (delete entry from list)	configurable	configurable	accessible
View the log list	accessible	accessible	accessible
Aux Master			
Inserts on AUX page	configurable	configurable	accessible
Aux 1 and 2 parameters	configurable	configurable	accessible
AUDIT master			
AUDIT level on TEL N–1 AUDIT page	configurable	configurable	accessible
N–1 master			
N–1A/N–1B levels on TEL N–1 AUDIT page	configurable	configurable	accessible
Channel input parameters			
Aux 1 parameters: Set channel input as AF for Aux 1 Set channel input as PF for Aux 1 Add channel input to Aux 1 Remove channel input from Aux 1 Aux 1 level	configurable	configurable	accessible
Aux 2 parameters: Set channel input as AF for Aux 2 Set channel input as PF for Aux 2 Add channel input to Aux 2 Remove channel input from Aux 2 Aux 2 level	configurable	configurable	accessible
Phase parameters: Set phase to invert Set phase to normal	configurable	configurable	accessible
Phantom parameters: Set phantom to ON Set phantom to OFF	configurable	configurable	accessible
Stereo mode parameters: Set channel to stereo mode Set channel to mono mode Set stereo mode to LR Set stereo mode to LL Set stereo mode to RL Set stereo mode to RR	configurable	configurable	accessible
Gain/cal parameters:	configurable	configurable	accessible
Pan/balance parameters:	configurable	configurable	accessible
Sum selection: Add/remove chn to/from ON-AIR bus Add/remove chn to/from RECORD bus	configurable	configurable	accessible

Function Description	Default User	Normal User	Adminis-trator
EQ parameters: Switch EQ for this channel input on Switch EQ for this channel input off Set EQ high shelving corner freq. to low Set EQ high shelving corner freq. to high Switch high-pass filter off Switch high-pass filter on Set EQ low shelving corner freq. to low Set EQ low shelving corner freq. to high Switch phantom power off Switch phantom power on Set the low filter gain Set the peak filter corner frequency Set the peak filter gain Set the high filter gain	configurable	configurable	accessible
Channel common parameters			
Input selection	configurable	configurable	accessible
All other parameters	accessible	accessible	accessible
Mixer setup			
Delete selected global snapshot/mic setting/ channel routing	–	–	accessible
Create global snapshot/mic setting/ channel routing	–	–	accessible
Recall global snapshot/mic setting/ channel routing	accessible	accessible	accessible
Delete selected private snapshot/mic setting	accessible*	accessible*	accessible
Create private snapshot/mic setting	accessible*	accessible*	accessible
Recall private snapshot/mic setting	accessible*	accessible*	accessible
Recall user channel routing	accessible*	accessible*	accessible
Channel routings			
Enter channel routing page	configurable	configurable	accessible
User administration			
Enter user administration	–	–	accessible
System configuration			
Display system configuration page	configurable	configurable	accessible
*** accessible for a user = his own data only**			

10.3 User Administration

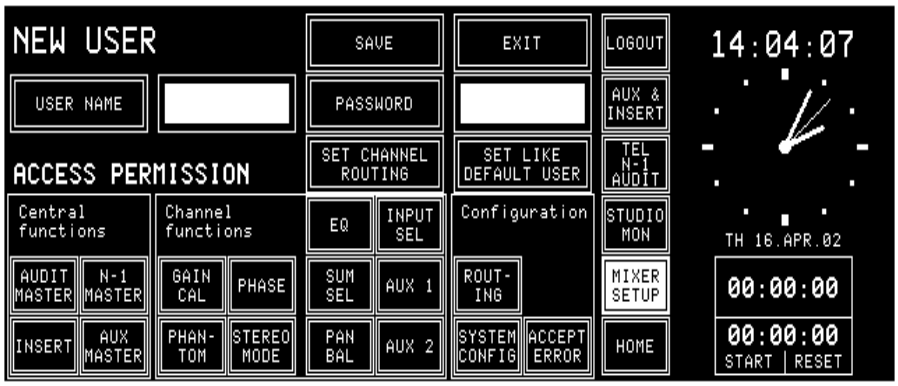
The described access permission allows different functionality ranges to important console functions for each user. By assigning an appropriate access permission to each user, it is possible to fit the OnAir 1000 console to very different working environments.
This user administration is done with the help of a User Administration table that is part of the console configuration. This table can be edited by the system administrator only.
The users supposed to use the console with basic functionality do not need an account. To adjust the console to differently trained staff, it is possible to change the access permissions of the default user.
A user who wants to store his own, private data (snapshots, mic settings and/or channel routing) must have an account containing his name, his access permission table, and an optional password.

The USER ADMINISTRATION page can only be opened by the system administrator, by touching USER ADMIN in the SYSTEM CONFIG. page. Ten users will be listed. With the USER 11..20 field, the administrator can list the remaining users. When the second block of users is displayed, the USER 11..20 field changes to USER 1..10.

10.4 Administration Functions

By the system administrator, a user record can be created (NEW), changed (EDIT), or deleted (DELETE).

Create User Record: To create a new user record, touch NEW in the USER ADMINISTRATION page. The NEW USER page appears with empty input fields:

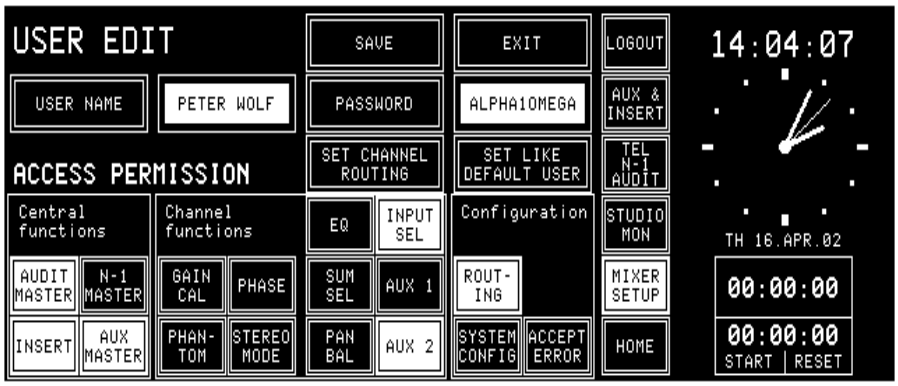


The USER NAME and PASSWORD fields are filled in, using the keyboard page. The maximum length of the password is 22 characters. The user name may consist of up to 20 characters. If the new user is not accepted (e.g. because the user name already exists), an error message tells the system administrator that the new user will not be registered. A user name can be entered without a password, too.

Access permission is configured by touching the corresponding function fields on the NEW USER page. With SET LIKE DEFAULT USER, the access permission setting and the channel routing of the default user are copied to the user currently being edited and can subsequently be edited again. The new user record is stored with SAVE.

Two users are already predefined: The default user and the administrator. Both can only be edited, *but not created or deleted.*

Change User Record: A user record is selected by touching the appropriate name field in the USER ADMINISTRATION page, followed by EDIT. The USER EDIT page, containing the user's individual data, appears.

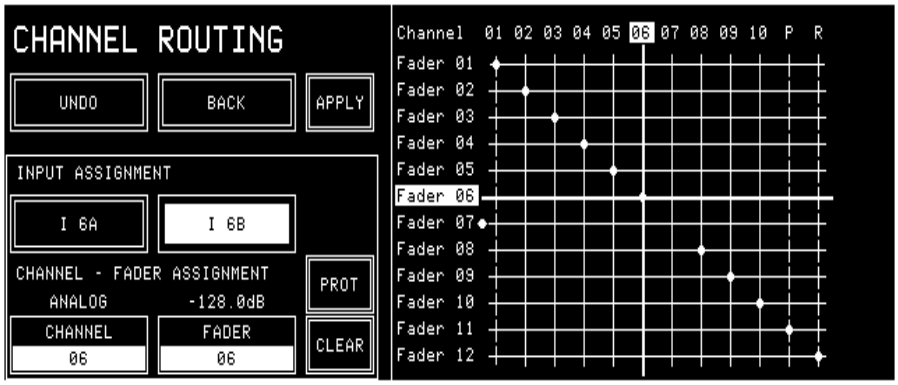


The data can be edited in the same way as described above, except that the user name is displayed but cannot be modified. The only way to rename a user while preserving his snapshots, mic settings, and channel routings is to save them to a PC-card, delete the user, create a new one with the de-

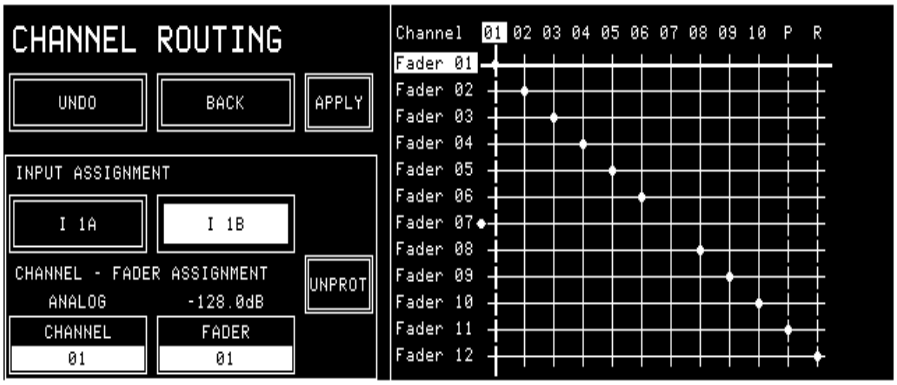
sired name, and then reload the snapshots, mic settings, and channel routing from the card. After touching SAVE, the old record is replaced by the new one. This procedure has to be performed this way in order to avoid name conflicts in the console's memory and on the PC-card.

When editing the default user, the USER EDIT page looks similar, except that no password field is displayed.
When editing the administrator, the USER EDIT page neither displays the access permission fields nor the USER NAME field, but the password field is enabled.

Set User Channel Routing: The system administrator can define the user channel routing (surface definition) for every user by touching the SET CHANNEL ROUTING field in the USER EDIT page. In addition, the administrator can allow a user to change his own channel routing.
When the SET CHANNEL ROUTING field is touched, the CHANNEL ROUTING page appears and displays this specific user's channel routing. Instead of the SAVE TO USER PROFILE field, a BACK field is displayed, leading back to the USER EDIT page.



The system administrator can protect specific connections within the channel routing by selecting the desired cross-point with the horizontal and vertical lines, and then touching the PROT(ect) field. A protected connection is indicated by a dashed vertical line in the grid (see below); this connection cannot be changed by the user, even if he might be allowed to change his channel routing. Only the administrator can UNPROT(ect) this connection again. However, the user can change the input selection (A/B) of this input unit, if he has the INPUT SEL access right.

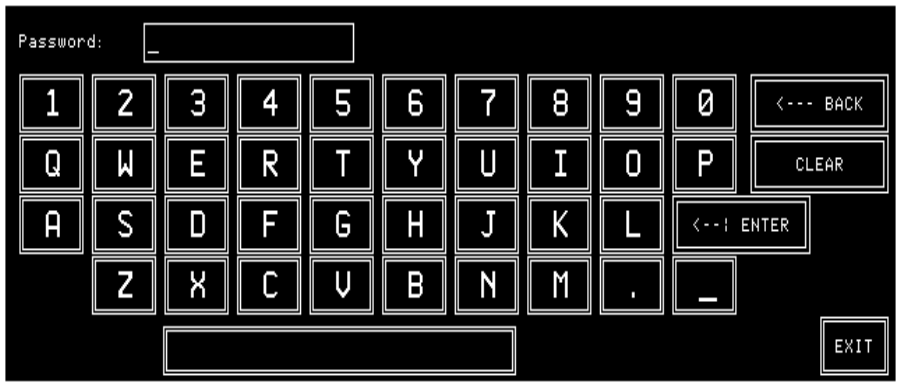


Delete User Record: To delete a user record from the user administration table, a record must be selected by touching the desired name field. A dialog box appears; if deleting the user is confirmed there, the selected user is permanently removed from the memory, and the user record disappears from the USER ADMINISTRATION page.
The default user and the administrator can be edited only, but not deleted.

10.5 Log-in Procedure and Defaults

The console always starts up in default user mode. The default user's access permission is activated automatically when a user logs out. If the corresponding customer code is activated (refer to chapter 11.2.11), the default user's channel routing is also recalled automatically.
If the user is a registered user, and if he wants to work in his own, private environment, he must log-in. After touching the LOGIN field, the LOGIN page will appear where the user can touch the field with his own name.

If a password is defined for this user, he has to enter it on the keyboard page.



If the password is correct, the system automatically returns to the page on which the user touched the LOGIN field. If the password is not valid, a dialog box will appear on the LOGIN page telling the user that the password was not correct. The user can leave the LOGIN page via the EXIT field which brings him back to the previous page.

If no password is defined for a user, the system does not show the keyboard page after a touch on a name field in the LOGIN page. The system directly jumps back to the page where the LOGIN field was touched. As

the system does not check for a password in this case, this user's private data are not protected, and any other user can access them.

If a console is operated by one person only, the system administrator simply has to enable all access rights for the default user. This is the way the user can control all console functions (except the user administration functions) without having to log-in.

A default user is always defined in the user administration table. His name is DEFAULT USER. The access permission of this user can be edited, but the record cannot be deleted, and no login code can be defined for this user.

11 CONFIGURATION

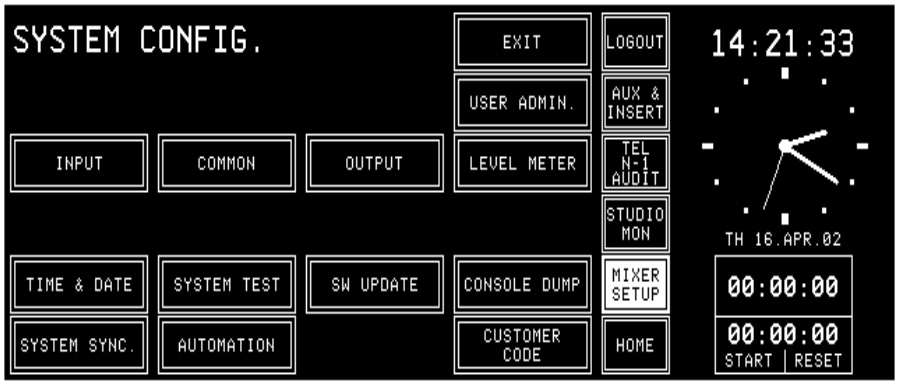
In order to meet the requirements for different studio environments, the OnAir 1000 is highly configurable.
A configuration is “static”, which means that it cannot be changed during normal operation. Although snapshots rely on a certain configuration, the configuration data are not stored together with the snapshots. Therefore, snapshots cannot change the console configuration.

11.1 Configuration Handling

System configuration can be changed by the system administrator, or by any user with access right to the SYSTEM CONFIG. page. System configuration includes data for:
- Channel labels
- Control signal modes
- Nominal input levels
- Level meter assignment, etc.

An OnAir 1000 configuration can be stored on a PC-Card, or loaded from the PC-Card into the console.

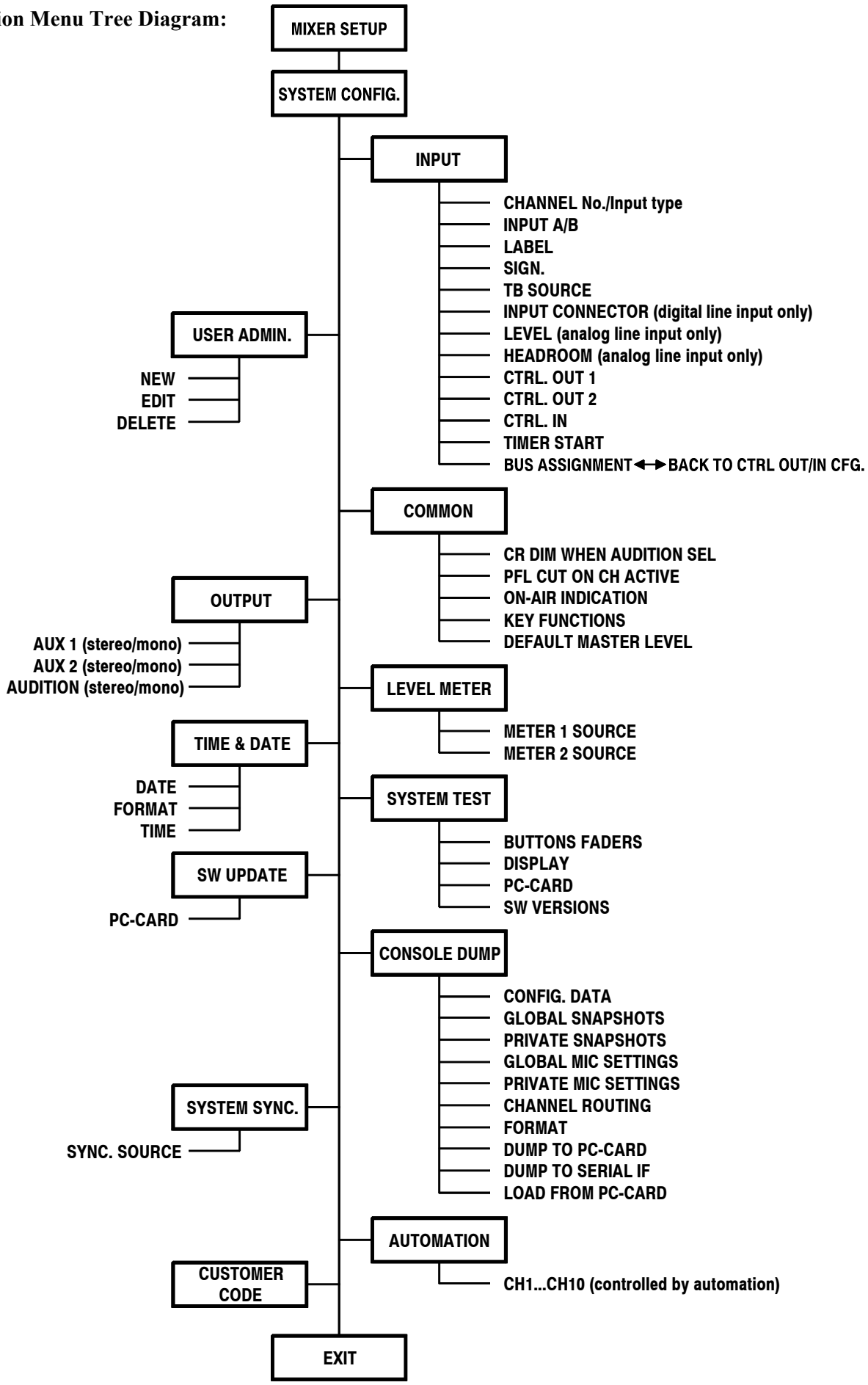
11.2 Configuration Procedure



The console configuration can be changed in the SYSTEM CONFIG. page. This page can only be reached from the Mixer Setup page by an operator with system administrator permission.

The configuration parameters are subdivided in groups. Each group is edited on a separate page accessed from the SYSTEM CONFIG. page.

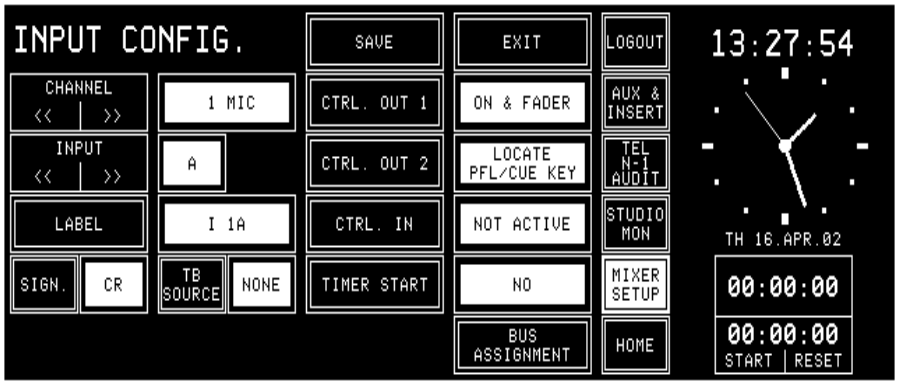
Configuration Menu Tree Diagram:



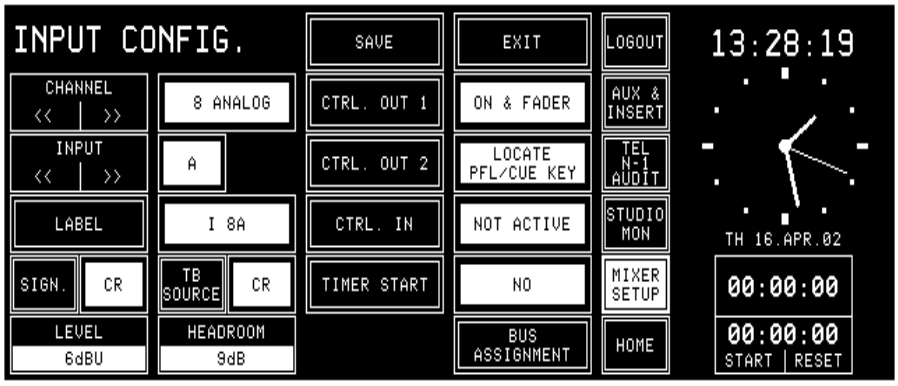
11.2.1 Input

There are three slightly different INPUT CONFIG. pages for editing input configurations, depending on the type of input unit. The pages for microphone, analog line, and digital line input channels are shown below.

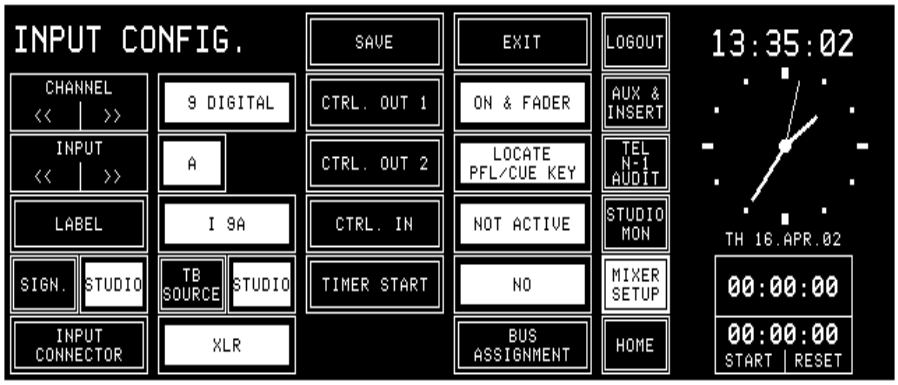
Microphone Input Channel



Analog Line Input Channel



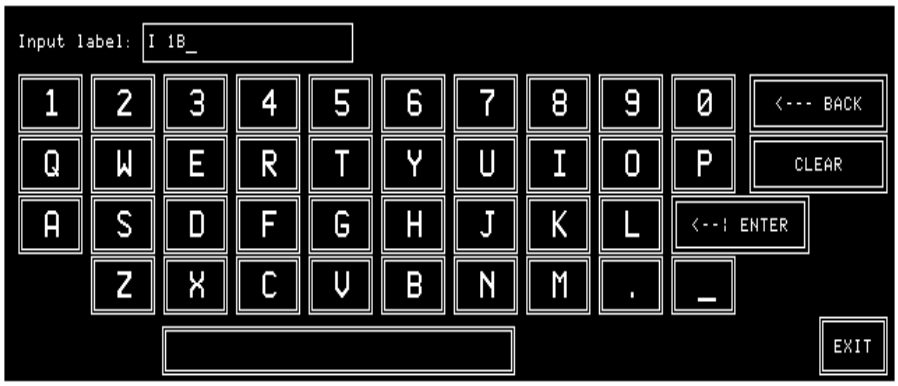
Digital Input Channel



Channel and input are selected with the CHANNEL and INPUT forward (>>) and backward (<<) fields. Channel and input can also be selected by pressing the SEL key of a channel. The display will show the current configuration data for the selected input and channel. To change a parameter, the corresponding field must be touched; it will change to the next possible value. Consecutive touching toggles through the available options.

Exceptions: Touching the LABEL field will open the keyboard page where an input label can be edited. The values in the LEVEL and HEADROOM fields (analog line input channels only) can be adjusted with the rotary encoders next to these fields. Touching BUS ASSIGNMENT opens the BUS ASSIGNMENT page where the routing to the N–1 and to the AUDIT buses is performed.

LABEL The LABEL field is used for giving a name to a channel. Touching this field, the keyboard page opens.



The channel label display in the fader strip can display labels with up to four characters (upper case only). The whole name scrolls by in the display as long as the respective input selector key A or B is pressed, or after a new name has been saved. During scrolling, three dots are displayed between the end of the name and its next start for clarity.
If a name is longer than four characters, only the first two and the last two characters are displayed, so a little care has to be taken when generating the names. The following table illustrates some possibilities:

Name	Channel display label
ABC 12	AB12
ABC 1234	AB34
MIC1	MIC1
CD02	CD02

When completed, touch <--¦ ENTER followed by SAVE to keep the changes, or EXIT to cancel without changes.

SIGN. / TB SOURCE SIGN. is used for signaling (red light) and monitoring (cut and dim), the available options are NONE, CR, and STUDIO.
The TB SOURCE parameter in the INPUT CONFIG. page sets the assignment of the input channel to the TB bus (NONE, from CR, or from STUDIO).
During talkback from the studio, the studio speakers are dimmed only if at least one input is configured as SIGN. = STUDIO *and* TB SOURCE = STUDIO. *The same applies for talkback from the control room.*

INPUT CONNECTOR *(for digital input units only)*
Each (A and B) input of a digital input unit has three different input connectors (XLR, Cinch/RCA, and optical/TOSlink). This option selects independently for the A and the B inputs which connector is used.

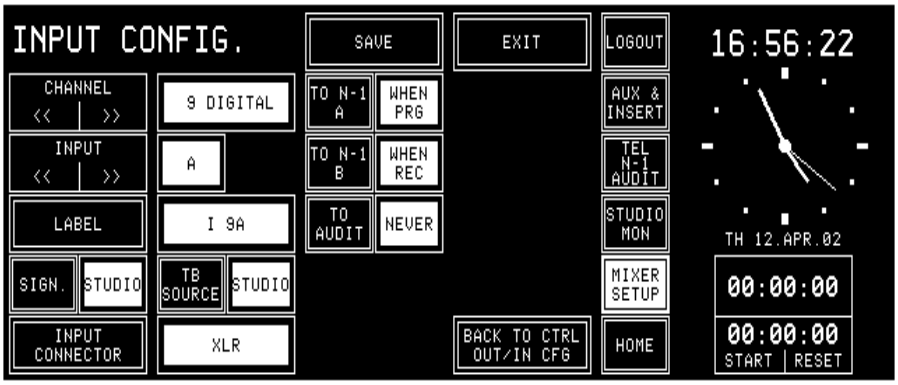
LEVEL *(for analog line input units only)*
"Level" is the nominal studio level expressed in dBu.

HEADROOM *(for analog line input units only)*
"Headroom" is the difference between the A/D converter's clipping level and the nominal studio level.
Example: An input with a level setting of +6 dBu and a headroom setting of 9 dB will accept a +15 dBu signal before the A/D converter comes into overload.

CTRL. OUT 1/2 Please refer to chapter 8 for details on this subject.

CTRL. IN Please refer to chapter 8 for details on this subject.

BUS ASSIGNMENT When touching the BUS ASSIGNMENT field, the display changes as follows, allowing to select the N–1 and the audition bus assignments:



The TO... fields allow routing the input signal to the corresponding N–1 (A...B) or to the Audition bus. The Audition bus is similar to the N–1 buses, but it is a stereo bus that can be selected as a monitoring source in the control room.
N–1 and Audition bus assignment is related to the input signal and is re-routed with the input signal when the input unit assignment is changed.

N–1/AUDIT Configuration:

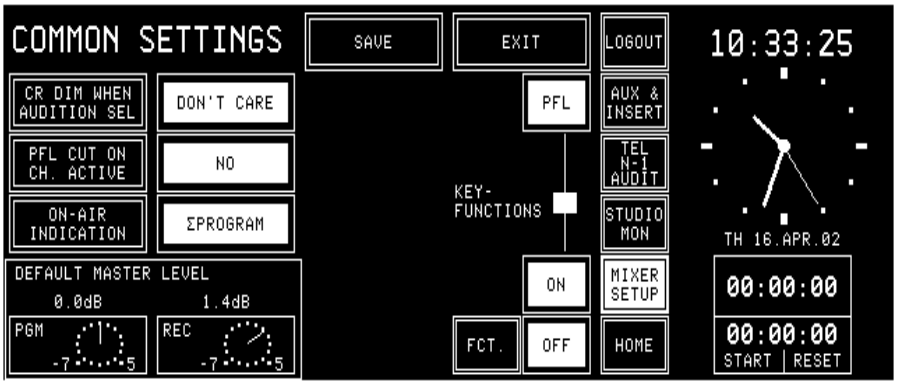
Setting	Meaning
NEVER	The input channel is never routed to N–1 or AUDIT
WHEN PG/REC	The input channel is routed to N–1 and/or AUDIT if the channel is either assigned to the program or to the record bus
WHEN PGM	The input channel is routed to N–1 and/or AUDIT if the channel is assigned to the program bus
WHEN REC	The input channel is routed to N–1 and/or AUDIT if the channel is assigned to the record bus
ALWAYS	The input channel is always routed to N–1 and/or AUDIT, regardless of the bus assignment

Notes: The output levels of the N–1 and the Audition bus are controlled on the TEL/N–1/AUDIT page using the rotary encoders. For details, please refer to chapter 5.3.1.
When touching BACK TO CTRL OUT/IN CFG, the display switches back from the bus assignment option to the standard INPUT CONFIG. page.

TIMER START If TIMER START is set to YES, the fader stop watch will be started/reset by the corresponding fader, if the input channel is ON and the fader is opened. TIMER START is related to the input signal and will be re-routed when the input unit assignment is changed.

SAVE / EXIT The Input Configuration must be saved for each input channel. If the user switches to a different input channel, a dialog box will call his attention to the fact that the changes will be cancelled if he does not save the current Input Configuration. The program remains in the Input Configuration page when saving a channel. Once a change has been saved, it will not be cancelled when leaving the Input configuration page with EXIT.

11.2.2 Common Settings



The COMMON SETTINGS page contains the following configuration possibilities:

CR DIM WHEN AUDITION SEL When the Audition bus is selected as a CR monitoring source, and a CR microphone input channel is ON, the CR monitor speaker level will be attenuated (DIM), muted (CUT), or nothing happens at all (DON'T CARE).

PFL CUT ON CH. ACTIVE If YES is selected, the signal of a channel is taken off the PFL bus when the channel is ON, although the PFL function is active (the PFL function remains active).

ON AIR INDICATION Three possibilities are available: ΣPROGRAM, ΣRECORD, or ΣPROGRAM AND ΣRECORD.
The ON-AIR signaling is only active if at least one channel is ON, if this channel's fader is open, and if this channel is assigned to the selected bus (ΣPROGRAM, ΣRECORD, or either of them).
In automation operation, ON-AIR is continuously scrolling in the channel label of the input channel selected by the automation system. FADER-STATUS is ON-AIR if the input channel is assigned to the selected bus (ΣPROGRAM, ΣRECORD, or either of them).

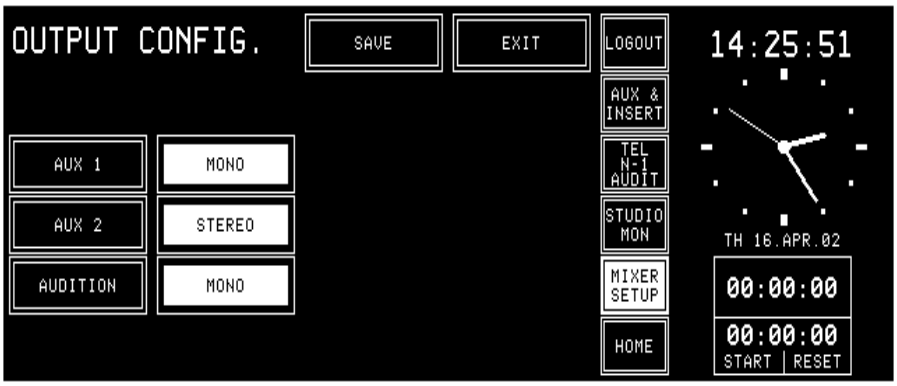
KEY FUNCTIONS Functions of the channel keys labeled ON and OFF.
The ON key either switches the input channel ON or has an ON/OFF toggle function, depending on the function selected for the OFF key.
If the OFF function is selected for the OFF key, the input channel is switched off by pressing this key; if LOCATE is selected, the ON function automatically changes to a channel ON/OFF toggle function (also refer to chapters 8.2 and 8.3).

DEFAULT MASTER LEVEL: The level of the PGM and REC master outputs can be biased in a range of –7 to +5 dB using the two rotary encoders below the corresponding fields. This setting is only valid if no fader strips are assigned to the ΣPGM and/or ΣREC outputs; please note that this setting must be done with care, as it directly affects the level of the main outputs.

Note: The MASTER FADER ASSIGNMENT function for PGM and REC master outputs that was available on this page in earlier software versions has been moved. Activation and deactivation of the PGM and REC master faders is performed on the CHANNEL ROUTINGS page now; please refer to chapter 5.14.

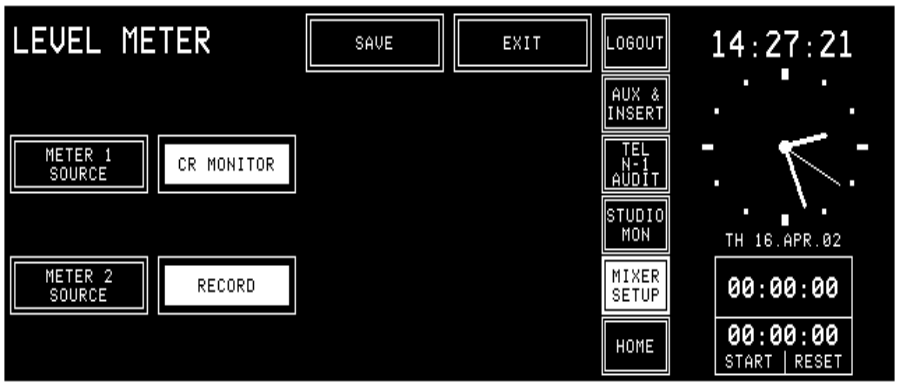
11.2.3 Output

On the OUTPUT CONFIG. page, the types of the output signals on the AUX 1, AUX 2, and AUDITION buses can be set.



11.2.4 Level Meter

The LEVEL METER configuration page defines the signal sources for the level meters no. 1 and no. 2. The sources for the phase correlators always are the same as the ones selected for the respective level meter.



Available signal sources:

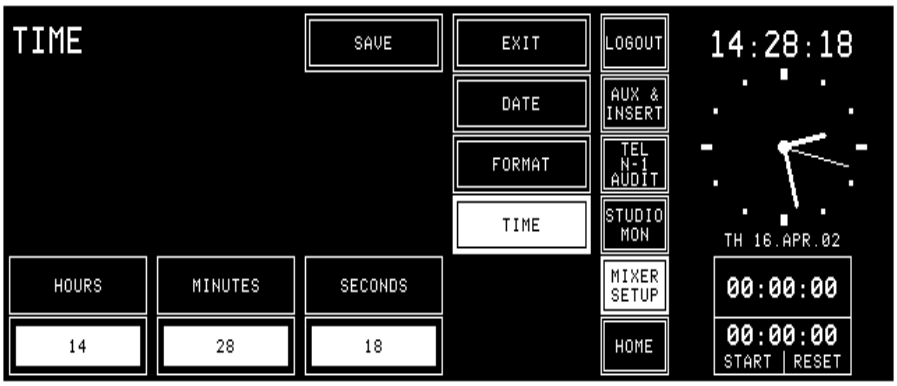
METER 1 SOURCE CR MONITOR, PROGRAM, RECORD, AUX 1, AUX 2, AUDIT, N–1 A.

METER 2 SOURCE CR MONITOR, PROGRAM, RECORD, AUX 1, AUX 2.

11.2.5 Time and Date

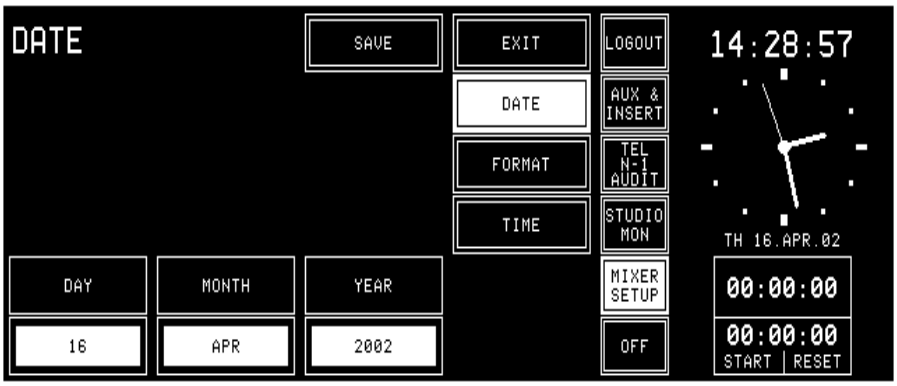
The watch gives a time, day-of-week, and date display. The standard time reference is an internal battery-buffered real-time clock (RTC). The RTC continues to run even when the console is switched off. Therefore it is unnecessary to set the watch at power-up.
The RTC may also be synchronized by a time signal on the Time Sync input or by a broadcast automation system (CAB). If time synchronization is established, the top right corner of the center screen shows an “S”.
Changes to the time or date settings are made on the TIME page. Access permission to the SYSTEM CONFIG. page is required.
From the HOME page, this page is found by selecting MIXER SETUP, followed by SYSTEM CONFIG., TIME & DATE, and TIME.

An example of the TIME page is given below:



The hours, minutes, and seconds are adjusted with three of the rotary encoders located next to the corresponding fields. By touching “SAVE”, the parameters are updated. If they are invalid, the parameter changes are ignored.

The DATE page is shown below. This page is displayed by touching the “DATE” field on either the TIME or the FORMAT page.



The day, month, and year is adjusted with three of the rotary encoders located next to the corresponding fields. By touching “SAVE”, the parameters are updated. If they are invalid, the parameter changes are ignored.

The watch configuration is done in the TIME & DATE FORMAT page. This page is displayed after touching the "FORMAT" field on either the TIME or the DATE page.

Both time and date can be displayed in two formats (select with TIME FORMAT or DATE FORMAT, respectively), as shown below:

Time Format	Digital Time Indication
05:00:00 p.m.	12 hour time format
17:00:00	24 hour time format

Date Format	Example
DD.MMM.YY	MO 20.MAR.02
MMM-DD-YY	MO MAR-20-02

TIME SYNC. defines the means to set and maintain time and date. The following settings are available:

Time Sync	Sync Reference	Date Setting	Time Setting
INTERNAL	Internal quartz	By user	By user
TIME SYNC. UNIT	Internal quartz, periodically updated by the external time reference signal	By user, periodically reset by ext. time reference signal (century never overwritten by ext. ref.)	By user, periodically reset by the external time reference signal
AUTOMATION	Internal quartz, periodically updated by automation time reference	By user, periodically reset by automation time reference	By user, periodically reset by automation time reference

The Time Sync input can process different time reference signal formats, the current format is selected with a DIP switch on the Time Sync interface. The setting of this switch is displayed in hexadecimal in the TIME SYNC. PROTOCOL field for easy verification. For details please refer to chapter 15.8.

The time zone offset can always be set, regardless whether it makes sense to set an offset in conjunction with the time sync source or not.

Offset	Watch Function
–12:00 to +12:00 (resolution: 1 h)	Compensates the sync time by the given offset before setting (synchronizing) the internal watch.

11.2.6 System Test

More information on this subject can be found in chapter 13.3.

11.2.7 Software Update

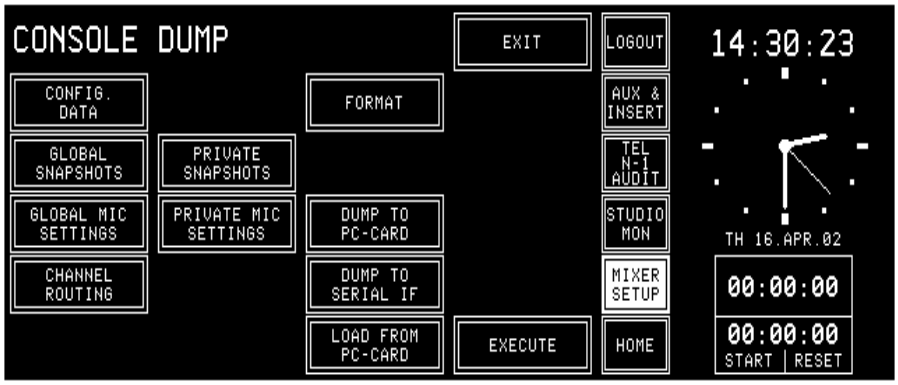
More information on this subject can be found in chapter 12.2.

11.2.8 Console Dump

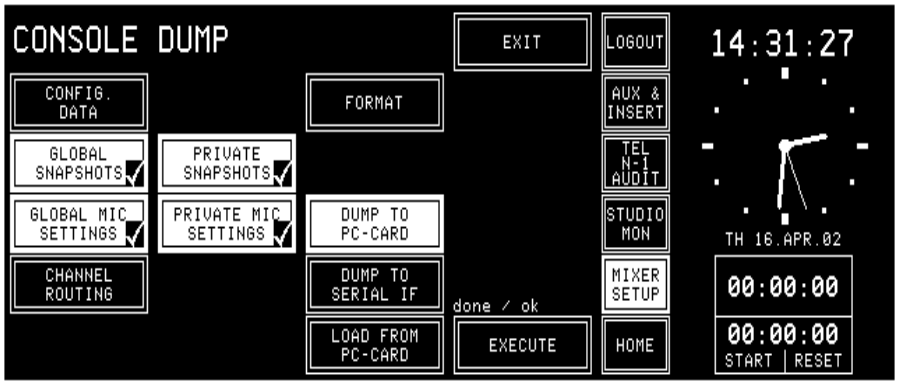
A “console dump” consists of configuration data (CONFIG. DATA), snapshots (global and private), mic settings (global and private), and channel routings.

Formatting the PC-Card

Before dumping any data, the PC-Card has to be formatted. This is done in the console's PC-Card slot. Touch FORMAT followed by EXECUTE. A dialog box appears where the user can confirm the formatting (i.e. erasing the card completely). While formatting, the EXECUTE field flashes.



The CONSOLE DUMP page allows the user to save mixer setup data on a PC-Card, to send them to the serial port, or to load mixer setup data from a PC-Card. This feature can be used for back-up purposes, for copying data from one console to another, or for diagnostics. A PC-Card can contain one console dump only. It is possible to dump or to load the mixer setup data completely or partially only. The selection is done with the CONFIG. DATA, GLOBAL and PRIVATE SNAPSHOTS, GLOBAL and PRIVATE MIC SETS, and CHANNEL ROUTING fields. The function can then be selected with the fields in the center of the page and will be started by touching the EXECUTE field.



A checkmark appears in the corresponding field when done, and “done / ok” is displayed after the selected operation(s) have been successfully completed, as shown above (or “done / error” if there is a problem).

When loading data from the PC-Card, the console data will be overwritten. Therefore this procedure has to be confirmed in a dialog box.
The EXIT field returns to the SYSTEM CONFIG. page.

A Configuration is loaded into the console by selecting CONFIG. DATA, LOAD FROM PC-CARD, and EXECUTE. An error message is displayed if the configuration cannot be loaded completely (e.g. Channel Type Mismatch).

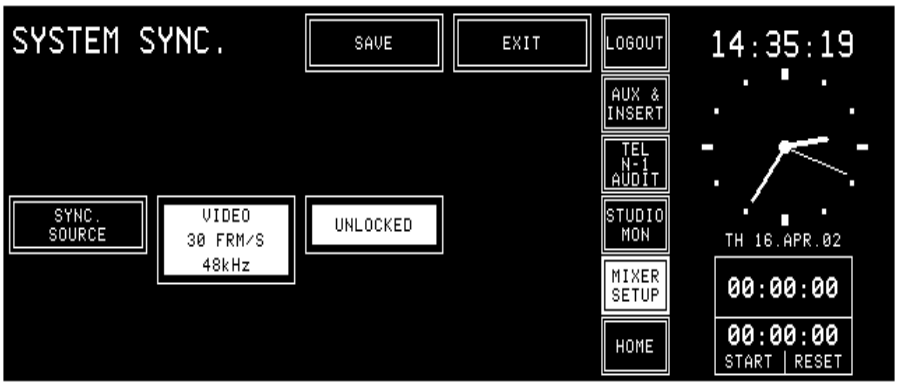
Snapshots are loaded into the console by selecting GLOBAL (or PRIVATE) SNAPSHOTS, LOAD FROM PC-CARD, and EXECUTE. Snapshots existing in the console will be overwritten.

Mic Settings are loaded into the console by selecting GLOBAL (or PRIVATE) MIC SETS, LOAD FROM PC-CARD, and EXECUTE. Mic settings already existing in the console will be overwritten.

Channel Routings are loaded into the console by selecting CHANNEL ROUTING, LOAD FROM PC-CARD, and EXECUTE. Channel routings already existing in the console will be overwritten.

11.2.9 System Synchronization

On this page the system synchronization is configured. The synchronization source can be internal or external; for an external source, the sync signal type must be defined.



Possible sync modes:

Sync source	Sampling rate
INTERNAL 48 kHz	48 kHz ±100 ppm default, or 48 kHz, precision adjustable on clock sync IF; adjustment range approx. ±1000 ppm
WORDCLOCK 32/44.1/48 kHz	32/44.1/48 kHz
AES/EBU 32/44.1/48 kHz	32/44.1/48 kHz
VIDEO 25 FRM/S 48 kHz	48 kHz
VIDEO 30 FRM/S 48 kHz	48 kHz
VIDEO 29.97 FRM/S 47.952 kHz	47.952... kHz
VIDEO 29.97 FRM/S 48 kHz	48 kHz

Note: The OnAir 1000 is designed to run at a sampling rate of 48 kHz. Due to this fact, filter parameters are accurate at 48 kHz only. If the console is synchronized to 44.1 kHz, the actual center and turnover frequencies of the EQ are lower by 8.125 %; if the clock frequency is 32 kHz, the frequencies will be lower by approx. 33.3 %.

If the console is synchronized to an external signal, a message box is displayed if synchronization is lost; a “Missing External Clock” warning is added to the error list.
If the console was synchronized to either WORDCLOCK or AES/EBU and a “no sync” condition is detected, the console automatically selects the INTERNAL mode; however, the external clock selection in the SYSTEM SYNC page is not changed. As soon as a valid external clock signal is available, the console will be re-synchronized.
If synchronization to a video source is lost, only a message box is displayed. The sync source remains in VIDEO mode.

If the Clock Sync interface is removed, sync source selection changes to INTERNAL mode, and no other sync source can be selected.

11.2.10 Automation

More information on this subject can be found in chapter 9.

11.2.11 Customer Code

There is a possibility to activate optional, customer-specific functions. For this purpose, a feature called Customer Code is used. *Please note that the customer codes are displayed and entered in hexadecimal.*

Code 0x00000000 **Default Setting**

Code 0x00000002 **High Shelving Filter Modification**
When selected, the turnover frequency of the high-shelving filter is reduced by approx. one octave, resulting in increased filter effect. For more information on EQ and filters, please refer to chapters 4.6 and 4.7.

Code 0x00000004 **External CR DIM Function**
The spare control input on the Monitoring Module ("SIGN." connector P4, 9-pin D-type) can be used as CR DIM control input. If activated by an external control signal, the CR monitor speakers are attenuated by 20 dB.
Please refer to the pin assignment table and connection diagram in chapter 14.11.

Code 0x00000008 **MONITORA: SAS_INPUTROUTING**
Allows to ask for the SAS_INPUTROUTING, even if no SOURCE was selected for that fader.

Code 0x00000010 **MONITORA: SET_FADER_LEVEL**
If the broadcast automation system sets a level (SET_FADER_LEVEL) to 0 dB and the current physical position of the corresponding fader is between +4.5 dB and –4.5 dB, then the channel's level is set according to the physical fader position instead of 0 dB.
This avoids the console to enter the Auto Takeover mode.
Note: *Not implemented for the SET_FADER_LEVEL_ONLY command.*

Code 0x00000040 **Longer Reverb Time**
Increases the delay for the switching from CR Cut or CR Dim to CHANNEL ON, or from CHANNEL OFF to CR UnCut or CR UnDim from 40...50 ms to 160...170 ms.
This delay is used to avoid acoustical feedback noise from the CR monitor speakers to a microphone channel being opened (CHANNEL ON), when the control room has an unusually long reverb time.

Code 0x00000080 **Faders 0 dB on Top**
For applications where the 0 dB point of the faders is desired to be at the fader's upper end position, this code can be used. It shifts the DSP gain setting with respect to the mechanical fader position by –10 dB.

Code 0x00000100 **Fader Start and Stop Pulse**
When CTRL OUT1 mode is set to "ON & FADER" in the INPUT CONFIG. page (refer to chapter 8.2), 200 ms pulses are generated instead of a static signal at the CTRL OUT1 output when the status is activated (fader open and input channel ON) and when it is de-activated (fader closed and input channel OFF).

Note: *There is a second possibility to generate start and stop pulses without activating this customer code; using this feature, however, different outputs are used for the two pulses. For this purpose, set CTRL OUT1 mode to "ON & FADER", and CTRL OUT2 mode to "STOP PULSE" in the INPUT CONFIG. page (refer to chapter 8.2).*

Code 0x00000200 **Automatic Channel Routing**
When activated, the user's own channel routing is automatically activated during log-in. Otherwise, the channel routing has to be manually loaded after having logged-in.

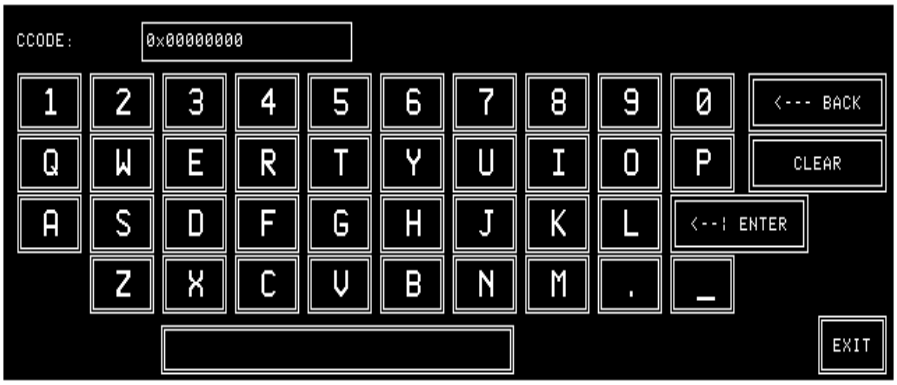
Code 0x00000400 **Higher Attenuation of Sum Signal During Talkback**
Allows to attenuate the "N" content of the N–1 signal by a further 10 dB, improving the intelligibility of the TB voice.

Customer Code Combinations:

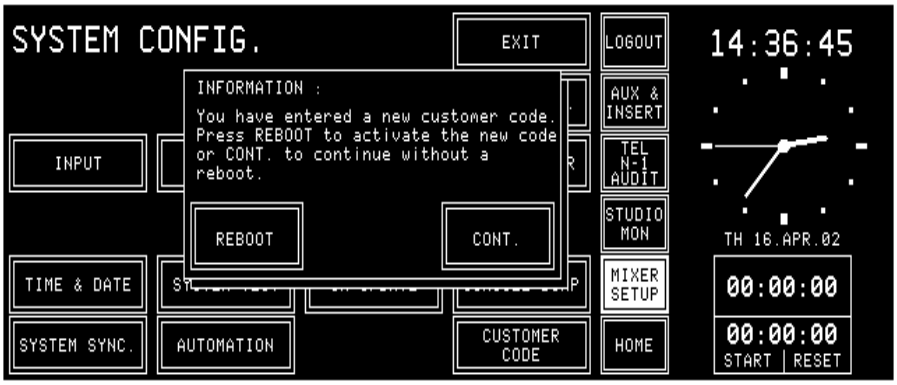
If more than one of the Customer Code functions are desired, the corresponding codes can be accumulated by just adding the code numbers. *Please note that the customer codes are displayed and entered in hexadecimal.*
For activating both the 0x00000004 and 0x00000008 codes, enter a customer code sum of 0x0000000C.

Customer Code Setting:

After touching CUSTOMER CODE on the SYSTEM CONFIG. page, the keyboard page appears where the new code can be entered.



After confirmation with ENTER, the following dialog box appears. Now, you can either re-boot the system (REBOOT) which is necessary for the new code to become active, or continue (CONT.), then the code modification becomes active at the next power up of the console:



12 SW UPDATE

12.1 Software Structure

The OnAir 1000 software consists of the following packages:
- CPU software
- DSP software
- Peripheral modules and surface control software.

12.1.1 CPU Software Package

Boot Software

The boot software part is installed in an EPROM and consists of:
- Hardware initialization
- Elementary hardware tests
- Start-up (or loading) of the application.

Application Software

The application part of the software package covers the remaining console functions. Program and data (current status, snapshots, configuration...) remain stored in memory after power-off, so that neither program nor data have to be loaded during normal operation. This is achieved by using a Flash memory.
The application software is loaded at the first start-up of the console (in the factory), and afterwards due to new releases and upgrades only. Program and data are installed in a Flash memory.
The application software is loaded from PC-Cards. For this purpose, read-only cards can be used.

12.1.2 DSP Software Package

The DSP software package is treated the same way as the CPU software package (application software).

12.1.3 Important Information for Software Update to V4.0

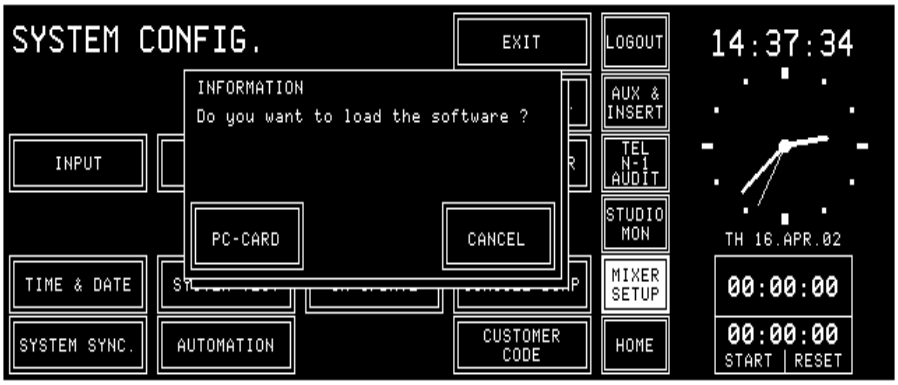
Software V4.0 requires compatible Control Front Board I firmware.
If software V4.0 is loaded without the corresponding firmware, the console will be blocked and cannot be used. In this case, either the former main software has to be re-loaded, the new Control Front Board I firmware must be installed, or the Control Front Board has to be replaced.

Studer will not take any responsibility nor accept warranty claims for not following this procedure.

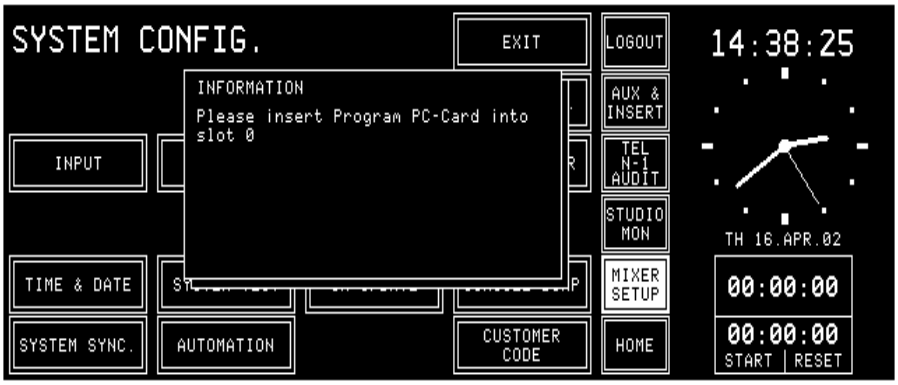
Please make sure that the console data are backed-up prior to any modification as the internal data structure is different. Note the current customer code setting (refer to chapter 11.2.11).

12.2 SW Update Procedure

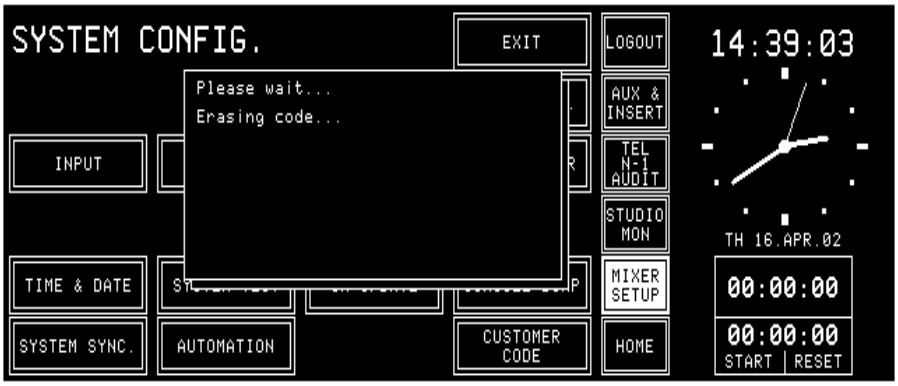
After touching the SW UPDATE field in the SYSTEM CONFIG. page, a dialog box appears, where the user can decide whether he wants to load the software (PC-CARD), or whether he wants to stop the software update procedure (CANCEL).



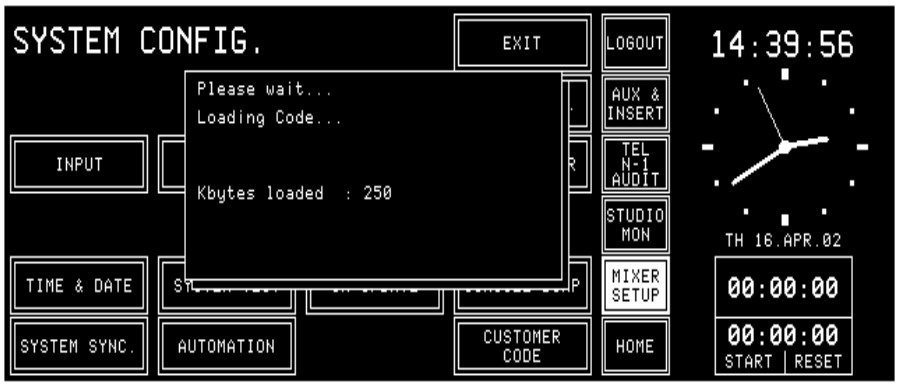
When canceling the software update, the program returns to the SYSTEM CONFIG. page. After touching the PC-CARD button in the dialog box, the next dialog box appears.



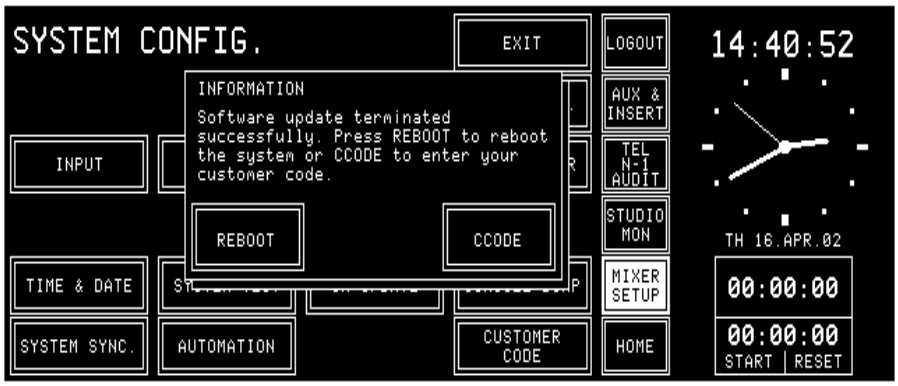
As soon as the software has detected a PC-Card in the card slot, the card is checked. If the PC-Card contains valid code, the software download procedure starts. In a first step, the previous program of the console is erased.



Then the new software is copied from the PC-Card into the console's Flash EPROM. This will take several minutes.

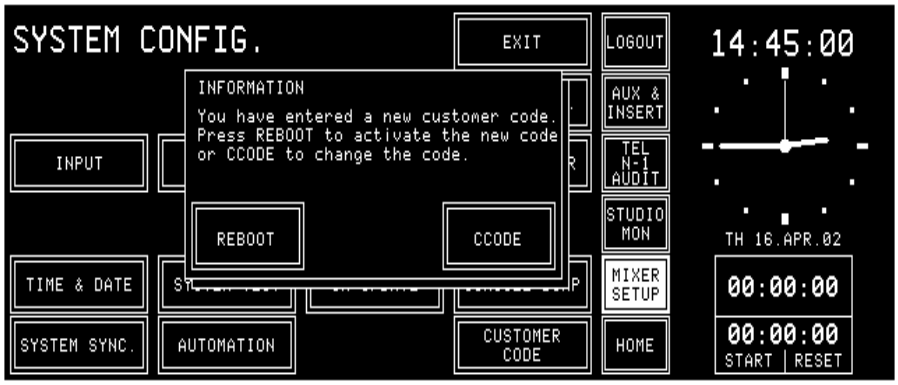


Finally the last dialog box appears. The system can now be re-booted (REBOOT) with the new software, or, if required and available, an optional customer code (CCODE) can be entered.



Any customer code (see chapter 11.2.11) will be reset to the default value (0x00000000) when updating the system software. This means that if your system had a customer code before, you need to re-enter it in order to have the particular features again.

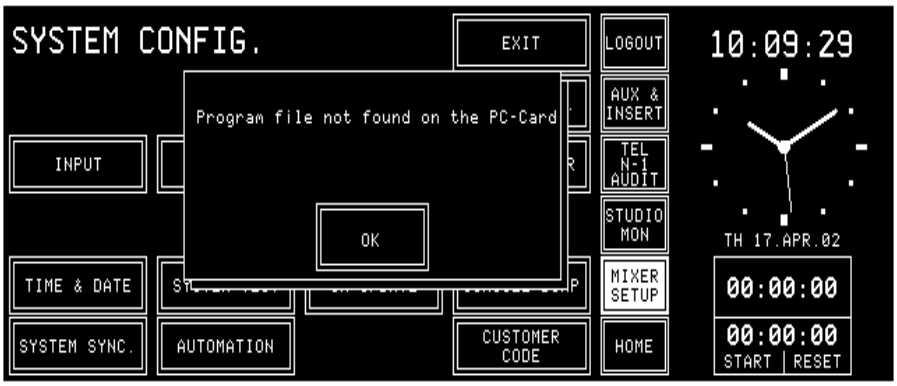
After confirmation with ENTER, the following dialog box appears. Now, you can either re-boot the system (REBOOT) or touch CCODE to change the customer code:



12.2.1 Error Handling

If the software update is interrupted by any reason, the system has to be rebooted. Afterwards, a message box appears with the message that the system software must be updated.

Should the PC-Card not contain valid code, the following dialog box appears. Insert a PC-Card with a valid software version; the download will then be restarted. If the download cannot be terminated correctly, the console can be used no more.



13 SYSTEM DIAGNOSTICS AND ERROR HANDLING

The OnAir 1000 error system concept consists of three topics:

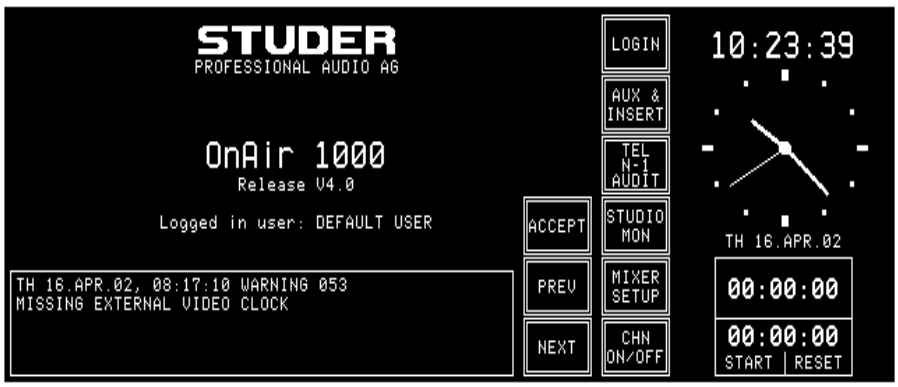
Diagnostics and Error Handling The system diagnostics software works completely in the background. The user takes notice of the diagnostics only in case of an irregularity. The system diagnostics consists of finding out the console's hardware configuration and detecting discrepancies to the system configuration. It also effects a hardware performance check during power-up. The error handling describes indications and actions on occurrence of errors and irregular behavior of the console detected by the system diagnostics software.

Failure of Restricted Functions Most of the OnAir 1000's functions do not have any restriction. However, there exist several functions that are restricted in some situations, e.g. loading a snapshot into a console the input channel types of which do not match the ones of the snapshot (Mic/Line input channels). The behavior of the console in case of restrictions is defined at the place where the function is described. The way the user is told about failures is defined globally in the following.

System Tests They are executed on the service engineer's demand to run some specific performance controls, e.g. to check the function of touch fields and faders. The console is switched to a special test mode for this purpose.

13.1 Error, Warning, and Information Messages

A message field in the HOME page is used by the system diagnostics software to indicate any messages.



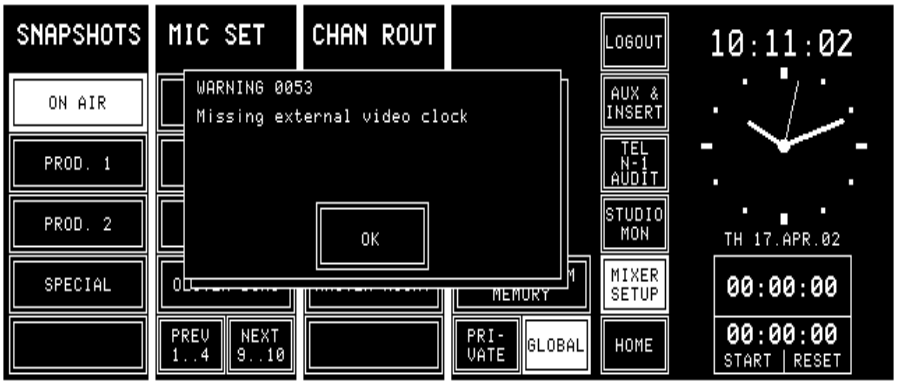
There are three types of messages: *Errors*, *Warnings*, and *Information*.

Errors are serious problems detected by the diagnostics software. Error messages are generated if a problem prevents the console from normal operation. In case of an error, the error handler cannot solve the problem.

Warnings are given to the user if the action required by the occurrence of a problem automatically changes any settings of the console so that operation is no longer the same.

Information An information-type message is used by the system diagnostics telling the user that an action required by any conflict automatically changes console settings, but the console can at least be operated as it could before.

As more than one system message can occur at the same time, the diagnostics software manages a Log List containing one entry for each system message, completed by time and date of occurrence. If the Log List contains more than one entry, the PREV and NEXT fields appear on the touch-screen. This allows scrolling through different messages.
The Log List will be lost on power-down.
Warning and information messages can be acknowledged by the user, provided he has got access permission. This causes the diagnostics software to remove the message from the Log List.
Some entries in the Log List need to be indicated to the user immediately on their occurrence. A dialog box does this, regardless of the page currently selected on the touch-screen.



System diagnostics is performed during power-up as well as during operation. For more information see chapters 13.1.1 and 13.2.

13.1.1 System Diagnostics

Hardware Performance Check On power-up the diagnostics software executes some hardware device checks which may result in conflicts.

Communication Check On power-up the diagnostics software tries to establish communication to other microprocessors. If communication fails, an error message is displayed.

Configuration Check On power-up the diagnostics software finds out the current physical hardware configuration. Any difference to the hardware configuration before the last power-down results in a warning or information.

Diagnostics and Error Handling – System Configuration Detection				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
000	Information	no	no	Module for Channels [n] - [m] installed!
001	Information	yes	no	Module for Channels [n] - [m] added!
002	Warning	yes	no	Module for Channels [n] - [m] removed!
003	Information	no	no	Central Module installed!
004	Information	no	no	Central Module added!
005	Error	yes	yes	No communication to Central Module!
006	Information	no	no	Input Module for Channel [n] installed!
007	Information	yes	no	Input Module for Channel [n] added!
008	Warning	yes	no	Input Module for Channel [n] removed!
009	Information	yes	no	Channel [n] Input Type changed to Mic Input!
010	Information	yes	no	Channel [n] Input Type changed to Analog Line Input!
011	Information	yes	no	Channel [n] Input Type changed to Digital Line Input!
012	Information	yes	no	Channel [n] Input Selector changed to A/B!
013	Information	yes	no	Channel [n] Input Selector changed to 1/2/3/4/5/6!
014	Information	no	no	Digital Output Module for [output] installed!
015	Information	yes	no	Digital Output Module for [output] added!
016	Warning	yes	no	Digital Output Module for [output] removed!
017	Information	yes	no	Insert [n/m] Input Type changed to Analog Line Input!
018	Information	yes	no	Insert [n/m] Input Type changed to Digital Line Input!
019	Information	no	no	Monitoring Module installed!
020	Information	yes	no	Monitoring Module added!
021	Error	yes	yes	No communication to Monitoring Module!
022	Information	no	no	Time Sync Module installed!
023	Information	yes	no	Time Sync Module added!
024	Warning	yes	no	Time Sync Module removed!
025	Information	no	no	Insert [n/m] Module installed!
026	Information	yes	no	Insert [n/m] Module added!
027	Warning	yes	no	Insert [n/m] Module removed!
028	Information	no	no	Sync Module installed!
029	Information	yes	no	Sync Module added!
030	Warning	yes	no	Sync Module removed - Now Running on 48 kHz internal Clock Reference!
031	Information	no	no	Telephone Hybrid Control Module installed!
032	Information	yes	no	Telephone Hybrid Control Module added!
033	Warning	yes	no	Telephone Hybrid Control Module removed!
034	Information	no	no	Channel DSP for Channel [m/n] installed!
035	Information	yes	no	Channel DSP for Channel [m/n] added!
036	Warning	yes	yes	No communication to Channel DSP for Channel [m/n]!
038	Information	yes	no	Number of Channels increased to [n]!
039	Warning	yes	no	Number of Channels decreased to [n]!
043	Information	no	no	Sum DSP installed!
044	Warning	yes	yes	No communication to Sum DSP!
045	Information	no	no	Insert DSP installed!
046	Warning	yes	yes	No communication to Insert DSP!
047	Information	no	no	Aux DSP installed!
048	Warning	yes	yes	No communication to Aux DSP!
049	Information	yes	no	Channel Front Board type is OnAir 1000!
050	Information	yes	no	Channel Front Board type is OnAir 1000!
156	Information	yes	no	Number of Faders increased to [n]! *(n in hexadecimal)*
157	Information	yes	no	Number of Faders decreased to [n]! *(n in hexadecimal)*
158	Information	yes	no	Channel Routing reset to 1:1 mapping, since the number of Channels has been changed!
159	Information	yes	no	Channel Routing reset to 1:1 mapping, since the number of Faders has been changed!

Diagnostics and Error Handling – Hardware Performance				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
051	Warning	yes	yes	Watch RTC Failure! - RTC Device Missing - Device Faulty - Battery Low
052	Warning	yes	no	Missing External Clock - Now Running on 48 kHz internal Clock Reference!
053	Warning	yes	no	Missing External Video Clock

Diagnostics and Error Handling – Flash Checksum Tests				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
054	Warning	yes	yes	Flash verification - All Snapshots, Mic Settings and Channel Routings lost due to software version mismatch!
055	Warning	yes	yes	Flash verification - Customer Configuration corrupted!
056	Warning	yes	yes	Flash Verification - Console Configuration corrupted!
057	Warning	yes	yes	Flash Verification - Current Console State corrupted!
058	Warning	yes	yes	Flash Verification - Snapshot Block Checksum Verification Failure! [n] of [m] Global Snapshots loaded.
059	Warning	yes	yes	Flash Verification - Mic Setting Block Checksum Verification Failure! [n] of [m] Global Mic Settings loaded.
072	Warning	yes	yes	Flash verification - Channel Routing Block Checksum Verification failure! [n] of [m] channel routings loaded.

Diagnostics and Error Handling – PC-Card Battery Tests				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
060	Information	yes	yes	PC-Card Slot [%] – Card battery low. Replace battery immediately!
061	Warning	yes	yes	PC-Card Slot [%] – Card battery dead. Replace battery immediately!

Diagnostics and Error Handling – Flash Checksum Tests				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
062	Warning	yes	yes	Flash verification – Snapshot Block Checksum Verification failure! [n] of [m] Private Snapshots loaded.
063	Warning	yes	yes	Flash verification – Snapshot Block Checksum Verification failure! [n] of [m] Private Mic Settings loaded.

Configurator				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
064	Information	yes	yes	Load Configuration Failure due to channel type mismatch! Channel [n] input parameters not reconfigured.
065	Information	yes	yes	Load Configuration Failure due to missing Channel Data in Configuration File! Channel [n] - [m] not reconfigured.
066	Information	yes	yes	Load Configuration Failure due to missing Input Data in Configuration File! Channel [n] Input 3 - 6 not reconfigured.
067	Information	yes	yes	Restore Configuration Failure due to channel type mismatch! Channel [n] not restored during EXIT.
068	Information	yes	yes	Restore Configuration Failure due to number of channels mismatch! Channel [n] - [m] not restored during EXIT.
069	Information	yes	yes	Restore Configuration Failure due to number of inputs mismatch! Channel [n] Input 3 - 6 not restored during EXIT.
073	Information	yes	yes	Input Selection for Channel [n] not activated, since the number of Inputs is 2 instead 6!
074	Information	yes	yes	New Channel Routing not activated, since the number of Channels or the number of Fader strips doesn't match the current configuration!
075	Information	yes	yes	Global Channel Routing not activated, since the number of Channels or the number of Fader strips doesn't match the current configuration!

Snapshot Controller				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
080	Information	yes	yes	Snapshot Recall not completed due to missing Input Data in Snapshot! Channel [n] Input 3 - 6 not recalled.
081	Information	yes	yes	Snapshot Recall not possible due to corrupted Snapshot Data!
096	Information	yes	yes	All Global Channel Routings used. - Only [n] of [m] Global Channel Routings loaded!
097	Information	yes	yes	All Global Snapshots used.- Only [n] of [m] Global Snapshots loaded!
098	Information	yes	yes	All Private Snapshots used.- Only [n] of [m] Private Snapshots loaded!
099	Information	yes	yes	Snapshot Recall Failure due to channel type mismatch! Channel [n] not recalled.
100	Information	yes	yes	Snapshot Recall not completed due to missing Channel Data in Snapshot! Channel [n] - [m] not recalled.
101	Information	yes	yes	All Global Mic Settings used.- Only [n] of [m] Global Mic Settings loaded!
102	Information	yes	yes	Mic Setting not created - Input must be of type microphone!
103	Information	yes	yes	Mic Setting not recalled - Input must be of type microphone!

Snapshot Controller (cont.)				
104	Information	yes	yes	Mic Setting not recalled due to corrupted Mic Setting Data!
105	Information	yes	yes	Snapshot not loaded because user [%s] (owner of the Snapshot) is not defined on this mixing console!
106	Information	yes	yes	Mic Setting not loaded because user [%s] (owner of the Mic Setting) is not defined on this mixing console!
107	Information	yes	yes	All Private Mic Settings used.- Only [n] of [m] Private Mic Settings loaded!
108	Information	yes	yes	Recall not possible as selected Snapshot is not defined!
109	Information	yes	yes	Recall not possible as selected Mic Setting is not defined!
110	Information	yes	yes	Snapshot recall failure - channel [n] not available for insert assignment! Insert [m] not recalled.

PC-Card Controller				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
113	Information	yes	yes	PC-Card Slot [%] - Empty!
114	Information	yes	yes	PC-Card Slot [%] - Card not supported!
115	Information	yes	yes	PC-Card Slot [%] - Card not formatted!
116	Information	yes	yes	PC-Card Slot [%] - File not found!
117	Information	yes	yes	PC-Card Slot [%] - Card already formatted!
118	Information	yes	yes	PC-Card Slot [%] - Card write protected!
119	Information	yes	yes	PC-Card Slot [%] - Please wait, formatting in progress!
120	Information	yes	yes	PC-Card Slot [%] - Card formatted!
121	Information	yes	yes	PC-Card Slot [%] - Card write error, IFX errorcode = [n]
122	Information	yes	yes	PC-Card Slot [%] - Card read error, IFX errorcode = [n]
123	Information	yes	yes	PC-Card Slot [%] - Volume not mounted, no IFX workspace.
124	Information	yes	yes	PC-Card Slot [%] - Volume not mounted, bad BIOS Parameter Block.
127	Information	yes	yes	PC-Card Slot [%] - File Empty!
128	Information	yes	yes	PC-Card Slot [%] - Snapshot Block Checksum Failure! [n] of [m] Snapshots loaded.
129	Information	yes	yes	PC-Card Slot [%] - Mic Setting Block Checksum Failure! [n] of [m] Mic Settings loaded.
130	Information	yes	yes	PC-Card Slot [%] - Configuration Checksum Failure! Configuration not loaded.
131	Information	yes	yes	PC-Card Slot [%] - Snapshot Block Software Version mismatch!
132	Information	yes	yes	PC-Card Slot [%] - Mic Setting Block Software Version mismatch!
133	Information	yes	yes	PC-Card Slot [%] - Configuration Software Version mismatch!
134	Information	yes	yes	PC-Card Slot [%] – SW Update Prolib Version mismatch! SW not loaded.
136	Information	yes	yes	PC-Card slot [%] - Channel Routing Block Checksum failure! [n] of [m] Channel Routings loaded.
137	Information	yes	yes	PC-Card slot [%] - Channel Routing Block software version mismatch!
138	Information	yes	yes	PC-Card slot [%] - SW update central Module firmware incompatibility! Software not loaded.

Flash Programming				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
144	Error	yes	yes	Flash: Sector is protected. AMD error code = [n]
145	Error	yes	yes	Flash: Programming failure. Addr = [adr], prevData = [x], newData = [y], AMD error code = [n]
146	Error	yes	yes	Flash: Erase failure. AMD error code = [n]
147	Error	yes	yes	Flash: Odd address invalid with word access
148	Error	yes	yes	Flash: Memory access failed at address = [adr]
149	Error	yes	yes	Flash: AMD error code = [n]

User Interface				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
176	Information	yes	no	Due to insufficient memory the first 10 messages have been removed from the loglist

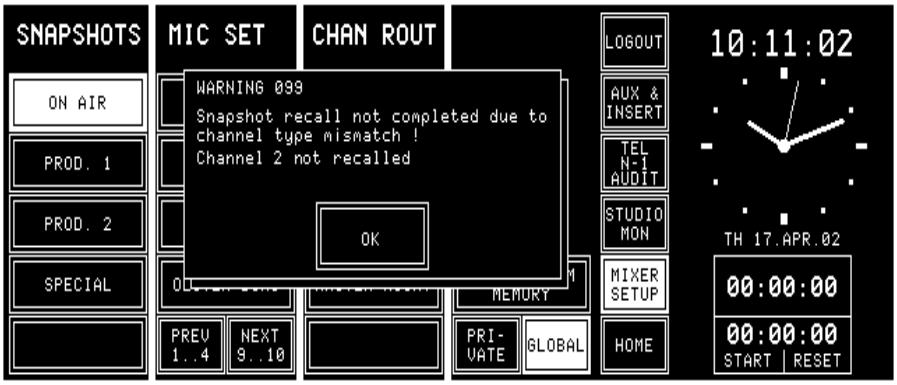
Automation Interface				
Error ID	**Type**	**Indication**	**Diag. Box**	**Error Text (Conflict)**
192	Warning	yes	no	Communication to Broadcast Automation lost!
193	Information	yes	no	Communication to Broadcast Automation established!

13.2 Indication on Failure of Restricted Functions

Usually, there is no indication of any error or warning if the execution of functions is prohibited in case of restrictions, because the user immediately notices whether the desired function is performed correctly. Nevertheless, some warnings need to be indicated to the user as a feedback, e.g. if a complete console dump fails because of a write-protected memory card.
The means to indicate to the user a failure during function execution is a dialog box appearing always at the same position on the touch-screen. It displays a system message and will disappear when the user acknowledges the message by touching the "OK" field in the box.
Each of these system messages is also entered to the Log List. To be removed from the Log List, it has to be acknowledged by the user.

To prevent from annoying the user with lots of warning and error message dialog boxes, they are generated only where it is not possible to notice function execution failure. In these cases an error message is generated if the function execution fails completely. A warning is given to the user if a function might be executed partially only.

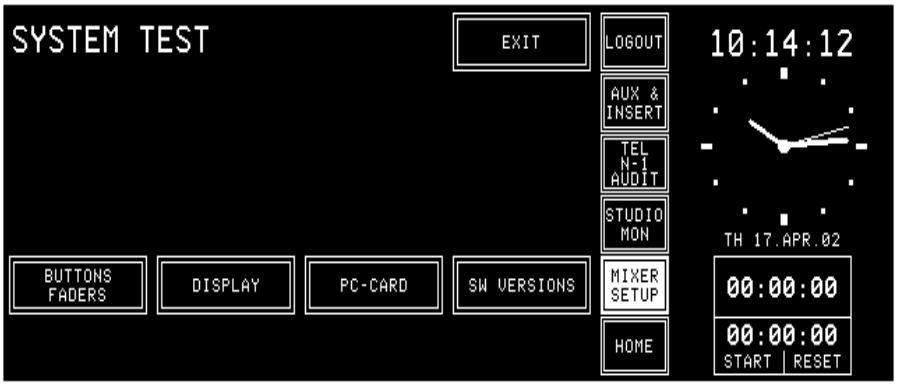
Example: The snapshot recall function could not set all channels due to different input channel types:



The user has to acknowledge the dialog box before any other action on the touch-screen will be accepted. Touching configuration keys, e.g. SEL or EQ, which would lead to a different page on the touch-screen, will also be ignored as long as the dialog box has not been acknowledged.

13.3 System Test

The system test can be activated by touching the SYSTEM TEST field on the SYSTEM CONFIG. page. The SYSTEM TEST selection page appears on the touch-screen:

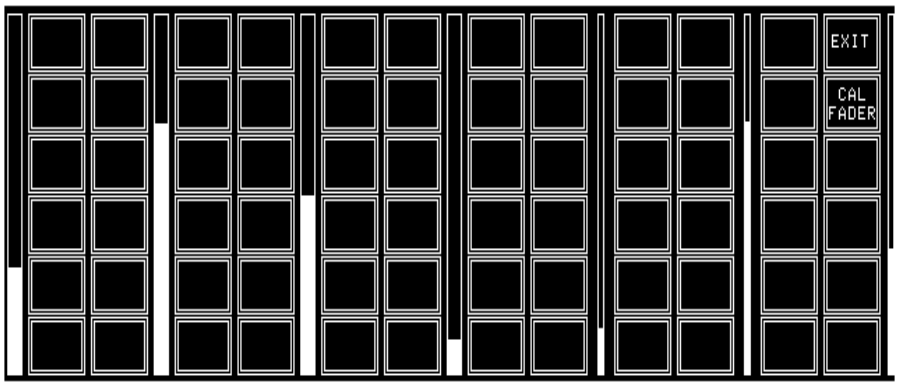


13.3.1 Buttons/Faders Test

Selecting the BUTTONS/FADERS test brings the console into a mode where the controls of the console can be checked. To return to the SYSTEM TEST selection page, the EXIT field has to be touched.

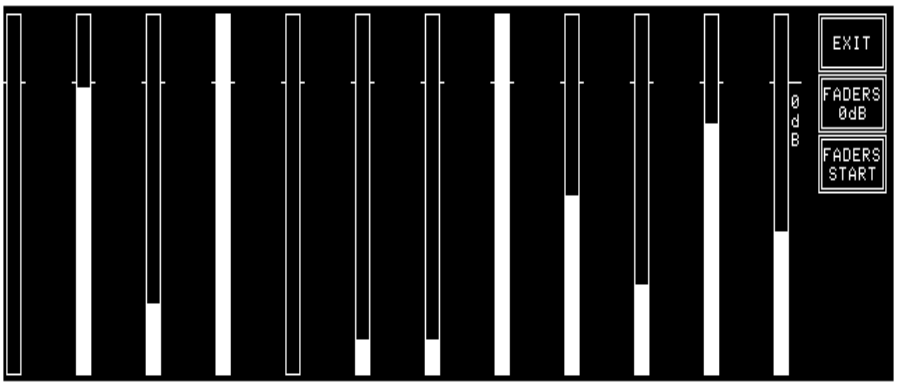
Keys and Lamps Test: If one of the keys OFF, ON, PFL, SEL, EQ, A, or B is pressed, it is illuminated. To check the LEDs next to the fader and the OVL LED, move the fader knob from its lowest position up to the highest position. All LEDs will be on consecutively.

Touch-Screen Test: If a field is touched on the touch-screen, it is highlighted.



Rotary Encoders Test: If a rotary encoder is turned clockwise, the bar graph next to it encoder increases. The three narrow bar graphs in the right-hand part of the screen are used for the MON, PFL/TB, and PHONES knobs. The full length of the bar graph corresponds to a complete turn of the rotary encoder.

Fader Calibration: Touching the CAL FADER field brings up the CAL FADER page which allows checking and calibrating the faders:



For each fader, a bargraph indicates the current fader position. There are two calibration possibilities: The 0 dB point, and the fader start trigger point.

Fader 0 dB Point: *(always required)*

- Move all faders not to be calibrated to their –20 dB position (this position is ignored during calibration).
- Move the fader(s) to be calibrated to their physical 0 dB position.
- Touch FADERS 0dB.

Fader Start Trigger Point: The fader start trigger point must be calibrated only in case of problems with the fader start control output signal, i.e. if fader start is active even if the fader is completely closed.

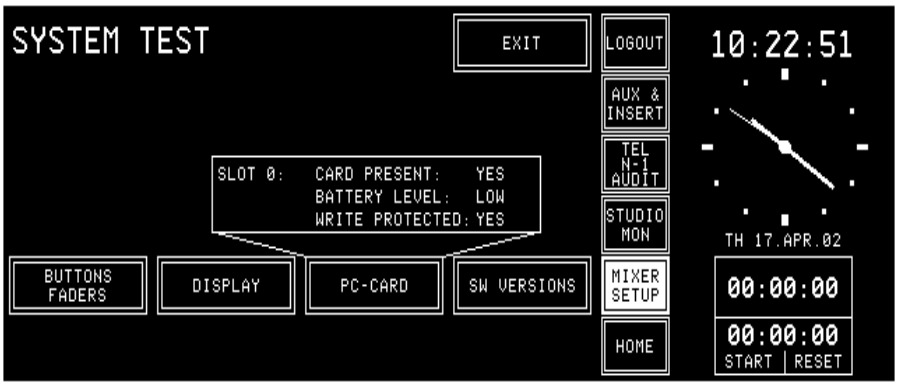
- Move all faders not to be calibrated to their –20 dB position (this position is ignored during calibration).
- Move the fader(s) to be calibrated, starting from the lower end, and set them to a position about 2 to 3 mm above the lower end. This will be the point where the fader start output gets active after calibration.
- Touch FADERS START.

Exit: To return to the system test selection page, the EXIT field has to be touched.

13.3.2 Display Test

Selecting DISPLAY generates a test pattern on the touch-screen allowing to check for faulty LCD pixels. This mode remains on until the screen is touched again.

13.3.3 PC-Card Test

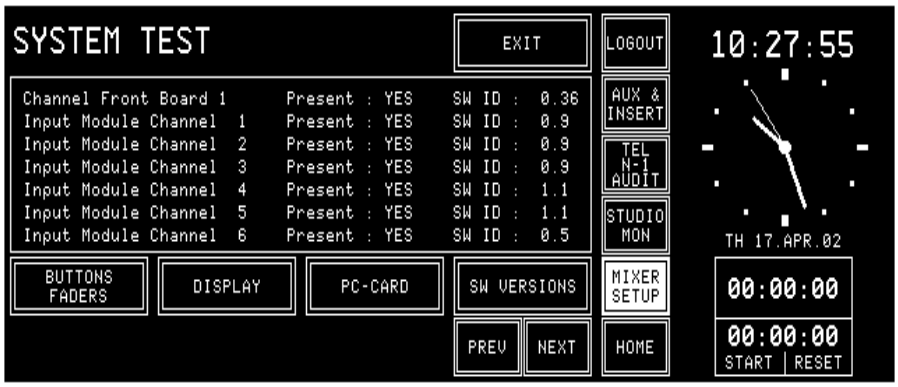


Two types of PC-Cards are used with the console:
- Program card, used for software upgrade
- Data card, used for storing and recalling console configuration, snapshot data, and mic settings

When having touched PC-CARD, the inserted PC-Card is checked for battery voltage and write protection.

13.3.4 SW Versions Display

When having touched SW VERSIONS, the current software versions are displayed for every processor in the system.



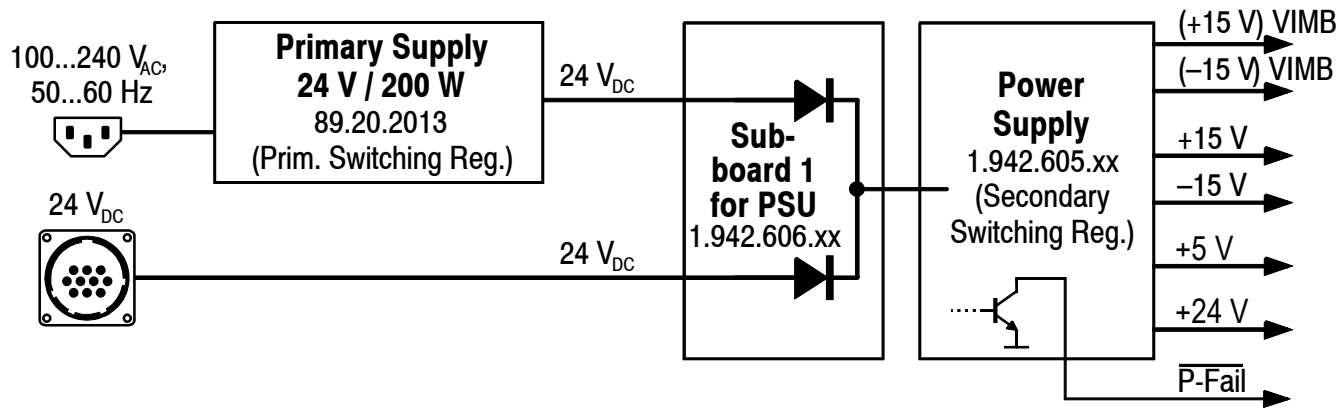
With the PREV and NEXT fields, all available pages can be browsed.

14 WIRING AND HARDWARE INFORMATION

14.1 DC Supply

The power supply is made of a primary switching power supply unit, delivering a 24 V_{DC} voltage to the secondary Power Supply that converts this voltage to the required ±15 V, +5 V, and +24 V.
On the Primary Supply Unit (89.20.2013) the mains voltage selection is performed automatically. It is short-circuit proof. The fuse, however, is soldered into the circuit and *must not* be replaced in the field. In case of a failure, the complete power supply unit must be replaced.
The secondary Power Supply (1.942.605.xx) generates all the voltages required, except the +48 V phantom power; this voltage is generated on the Controller Board.
Power consumption of an OnAir 1000 console is about 125 VA.

The OnAir 1000 can be powered by the mains voltage (100...240 V_{AC}) as well as by an external 24 V_{DC} voltage (connector labeled "24V DC"). For redundancy, these two power sources can also be connected to the console simultaneously.



Internal/External Fuses

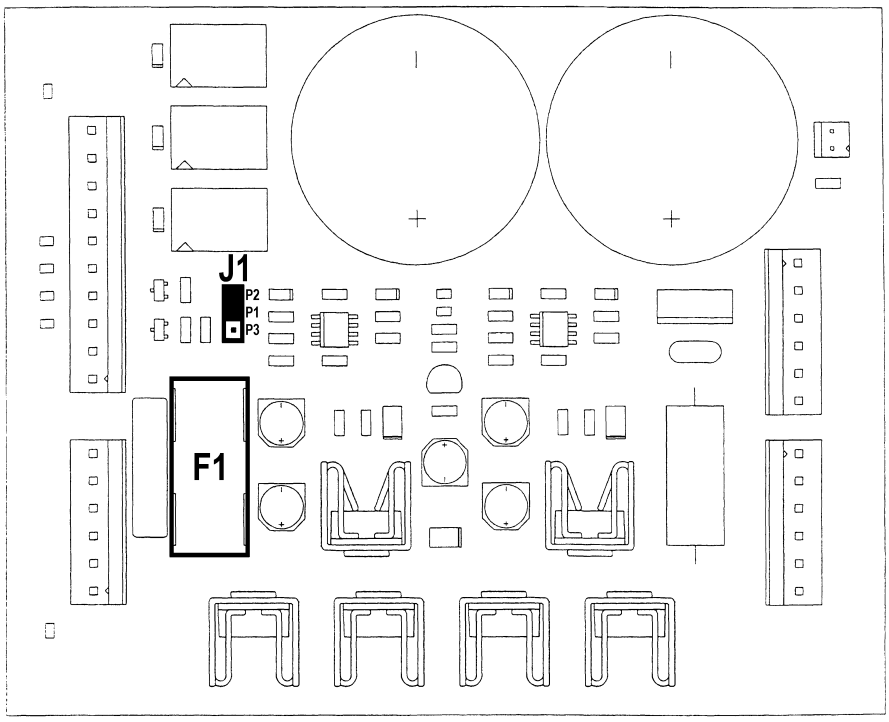
For DC operation there is a fuse (F1: T 8.0 A H 250 V UL/CSA) located on the PSU sub board (see component layout diagram below). In case of failure, this fuse must be replaced by a spare fuse of exactly the same type and value.

Please note that for DC operation, an additional, external fuse is required for cable and connector protection (T 10 A H 250 V UL/CSA)!

Wiring

If using the 10pin 24 V_{DC} connector, all +24 V pins (no. 1...3) and the GND pins no. 8...10 have to be used in parallel.
Depending on the power supply mode, wire bridges have to be inserted into the 10pin cable socket for correct processing of the power alarm output's voltage thresholds. Refer to the following table:

Supply mode	Bridge(s) from pin no. to pin no.
100...240 V_{AC} only	No bridge required
24 V_{DC} only	6-7 *and* 5-7
100...240 V_{AC} *and* 24 V_{DC}	6-7



Alarm Output

Power alarm is triggered if the internal or external supply voltage drops below 23.0 V; then the POWER ALARM LED on the front panel is illuminated, and a power alarm signal is output on pin 4 of the DC supply connector.

The power alarm signal is a relay contact (max. 40 V/200 mA). Its behaviour depends on jumper J1 on the PSU sub board (see component layout diagram on the previous page); either pin 4 is normally floating and pulled to GND if alarm is active (P1 and P2 connected, default factory setting), or pin 4 is normally pulled to GND and becomes floating if alarm is active (P1 and P3 connected).

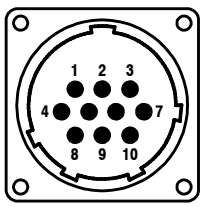
Should the supply voltage drop below 21.6 V, the console automatically shuts down after having stored all relevant data.

For correct start of the console a supply voltage of min. 22.0 V is required.

Pin Assignment:

24 V DC connector (10pin, male)

Matching female connector: Hirose JR21PK-10S, order no. 54.20.2010

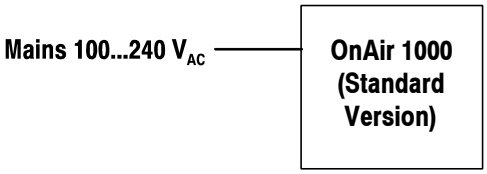


Pin	Signal
1	+22...28 V_{DC}
2	+22...28 V_{DC}
3	+22...28 V_{DC}
4	Power alarm output (see “Alarm Output” above)
5	Power supply select 2 (see “Wiring” above)
6	Power supply select 1 (see “Wiring” above)
7	GND
8	GND
9	GND
10	GND

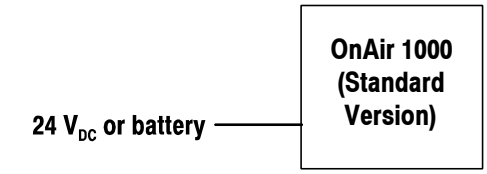
14.2 Redundant Power Supply

Redundant Supply Versions: There exist four basic versions of the OnAir 1000 Digital Mixing Console: Analog- and digitally-biased versions both are available with standard mains and/or 24 V_{DC} supply, as well as with dual, redundant 24 V_{DC} supply together with a separate, external 19" dual supply unit.

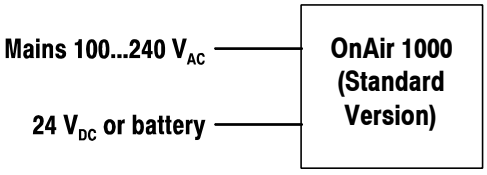
a – Mains voltage operation only, *no redundancy*:



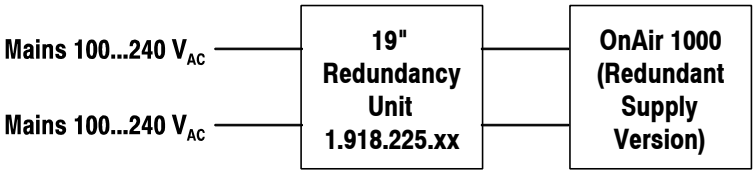
b – 24 V_{DC} operation, *no redundancy*:



c – Mains and 24 V_{DC} operation, *semi-redundant (only primary power supply doubled)*:



d – *Fully redundant version* with ext. 19" unit

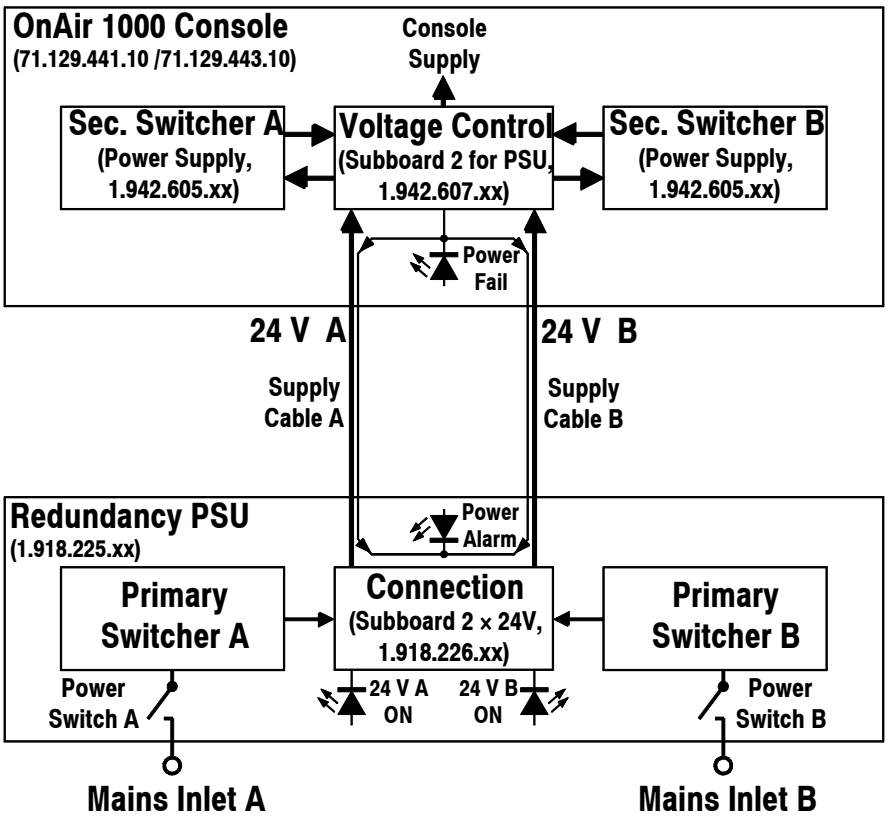


The diagram above shows the different possibilities with the standard versions (a...c) and the dual-supply redundant version (d).

The fully redundant version includes two complete and identical power supply paths, with separate mains inlets (preferably connected to two dif-

ferent phases of the mains), two mains switches, two primary power supplies, two separate DC cables to the console, and two separate secondary DC-DC converters within the console.
The primary AC/DC converters are contained in an external 19" rack mount case. On the front panel two mains switches are fitted, together with LED indicators for both 24 V voltages and an eventual power alarm. On the rear side two connectors are available for the mains inlet, and two connectors where the supply cables to the console can be attached. The 19" case is equipped with a very low noise fan.

The OnAir 1000 versions with fully redundant power supplies use the existing 24 V_{DC} connector at the rear panel for one of the supply cables. In place of the mains inlet connector of the standard versions there is a second 24 V_{DC} connector for the second cable. The cable harness and the decoupling PCB inside the console are different from the ones of the standard versions, too.



The OnAir 1000 consoles with fully redundant power supply are delivered under two different order numbers (see below) and come complete with the 19" Redundancy PSU. However, the cables have to be ordered separately, depending on the required cable length (two cables required per console).

Internal Fuses

There are *two* fuses (T 8.0 A H 250 V UL/CSA) located on the Sub Board 2 (1.942.607.xx) within the console. In case of failure, these fuses must be replaced by spare fuses of exactly the same type and value.

Alarm Output

Power alarm is triggered if one of the external supply voltages drops below 23.0 V or if one of the internal supply voltages fails. The "POWER FAIL" LED on the console is illuminated; in addition, the power alarm signal is

output on pin4 of both DC supply connectors of the console, illuminating the ”POWER ALARM” LED on the front panel of the Redundancy PSU.
The power alarm output is a relay contact (max. 40 V/200 mA). Its behaviour depends on jumper J1 on the PSU sub board.
Pin4 is normally floating, and pulled to GND if alarm is active (P8 and P9 connected, default factory setting), or pin4 is normally pulled to GND and becomes floating if alarm is active (P7 and P8 connected).

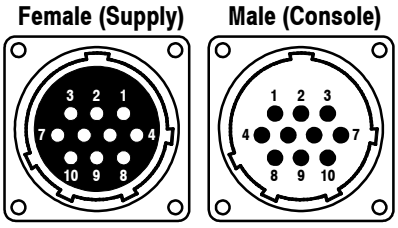
Note: *It is recommended to leave the jumper setting as it is. If it is changed, the POWER ALARM LED on the front panel of the 19” supply unit will be illuminated if everything is alright, and vice versa.*

Power-Down

Should the supply voltage drop below 21.6 V, the console automatically shuts down after having stored all relevant data.
A supply voltage of min. 22.0 V is required for correct start and operation of the console.

Pin Assignment

“**24 V A” and “24 V B” connectors** on the supply unit (10pin, female)
“**24 V A” and “24 V B” connectors** on the console (10pin, male).



Pin	Signal
1	+22...28 V_{DC}
2	+22...28 V_{DC}
3	+22...28 V_{DC}
4	Power alarm output (see “Alarm Output” above)
5	not used
6	PSS1, Power supply select 1 (see “Single Supply for Redundant Version” below)
7	GND
8	GND
9	GND
10	GND

Mating cable connectors: 54.20.2010 (female), 1.918.210.01 (male).

Single Supply for Red. Version: *If only <u>one</u> 24 V_{DC} supply should be connected to an OnAir 1000 Redundant Supply Version, this supply <u>must</u> be connected to the console’s “24 V A” connector. In such a case, a bridge from pin6 (PSS1) to pin7 (GND) must be inserted in the female 10pin 24 V_{DC} connector. It is recommended to insert this bridge in a second 10pin connector plugged to the console’s “24 V B” connector.*
Even if there is only one 24 VDC supply, the secondary switchers are still doubled for redundancy.

Ordering Information

OnAir 1000 Analog-biased version, for red. supply 71.129.441.10
OnAir 1000 Digitally-biased version, for red. supply 71.129.443.10

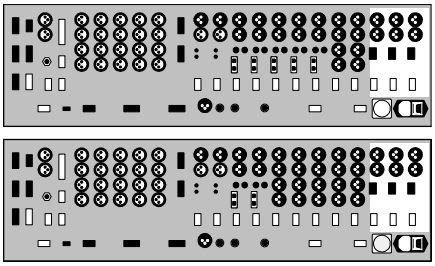
24 V_{DC} connection cable, 2 m *(1 pce.)*..... 1.925.230.00
24 V_{DC} connection cable, 5 m *(1 pce.)*..... 1.925.231.00
24 V_{DC} connection cable, 7 m *(1 pce.)*..... 1.925.232.00
24 V_{DC} connection cable, 10 m *(1 pce.)*..... 1.925.233.00

Note: Cables must be ordered separately *(2 pcs. needed)*

Redundancy PSU, 19” rack-mount external supply unit
(included in the OnAir 1000 Red. Supply versions) 1.918.225.00

OnAir 1000 Analog-biased version, standard supply..... 71.129.440.10
OnAir 1000 Digitally-biased version, standard supply 71.129.442.10

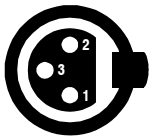
14.3 Mic Input



Each microphone input unit features two inputs and A/B switchover. Inputs A and B are transformer-balanced mono microphone inputs. The maximum input level is such that also mono line level signals can be processed if required.
The analog path has an insert point right after the preamplifier stage. Both the insert send and return signals are electronically balanced. The nominal send and return levels are +6 dBu, with 9 dB headroom for 0 dB_{FS}.

Pin Assignments:

MIC inputs A/B (XLR, 3pin, female):

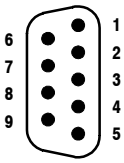


Pin	Signal
1	Chassis
2	Input +
3	Input –

INSERT connectors (Bantam jacks):

Pin	Signal
T	Signal +
R	Signal –
S	Chassis

CTRL connector (D-type, 9pin, male):



Pin	Signal	Pin	Signal
1	CTRL OUT 1A	6	COMMON
2	+5 V SUPPLY	7	CTRL OUT 2B
3	CTRL OUT 2A	8	CTRL IN B
4	CTRL IN A	9	GND
5	CTRL OUT 1B		

Two control outputs (CTRL OUT xA/B) are available for each individual input, which can be used to start and/or cue external devices such as CD players, R-DAT units, or a radio automation system, or for red light signaling. The control signals can be triggered by various functions and depend on the selected fader start mode (INPUT CONFIG. page). For details please refer to chapter 8.

For CTRL OUT 1A/B, four operating modes are available:

NOT ACTIVE Output is always open.

ON & FADER Output is closed (i.e. pulled to GND) if ON key is pressed *and* fader is open.

PFL/ON & FADER Output is closed if *either* PFL is active (independent of the fader position), *or* ON key is pressed *and* fader is open.

ON LAMP Output is closed while the ON lamp is illuminated.

For CTRL OUT 2A/B, seven operating modes are available:

NOT ACTIVE Output is always open.

LOCATE KEY Output is closed (i.e. pulled to GND) if the OFF key is pressed and the input channel is active.

PREVIEW Output is closed if the PFL key is active and the PREVIEW function has been activated; the input channel must be switched off.

LOCATE PFL KEY Output produces a pulse if the PFL key is deactivated (LOCATE function is activated).

ATTENTION Output is closed as long as the OFF key is pressed, independent of whether the input channel is open or closed.

ON LAMP Output is closed while the ON lamp is illuminated.

LOCATE PFL/LOC KEY Combination of the LOCATE KEY and LOCATE PFL KEY functions. For details, please refer to chapter 8.

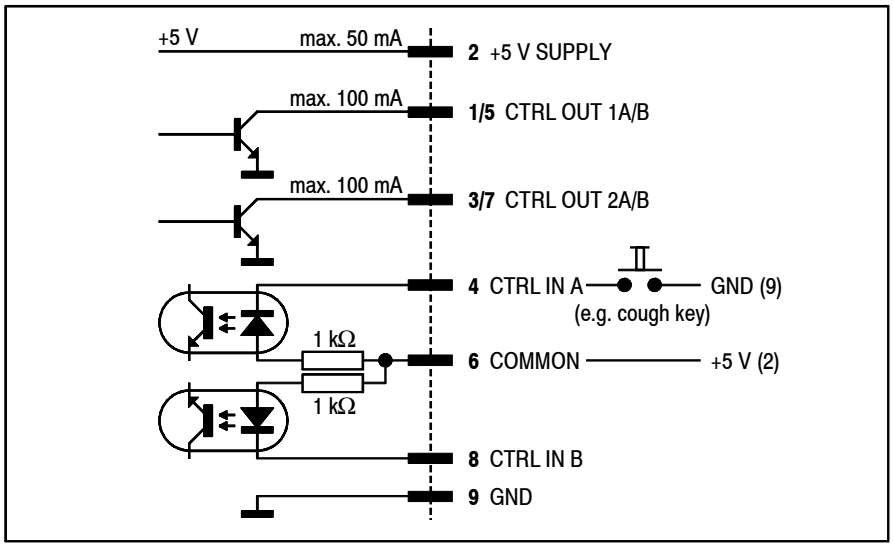
The CTRL IN A/B can be used for muting the input channel, for remote control of the ON/OFF key or for entering ready status. Four operating modes are available:

NOT ACTIVE Input is inactive.

READY Acknowledgement of a ready signal.

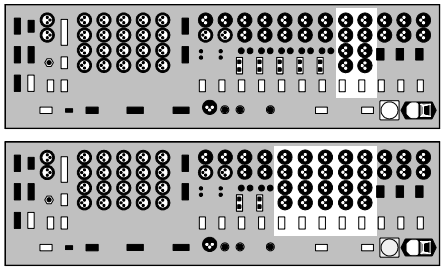
EXT. MUTE Channel is muted (e.g. cough key).

EXT. ON/OFF External ON/OFF switchover.



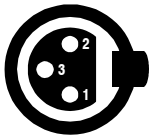
Notes: "COMMON" can be wired either to "+5 V SUPPLY" or to an external power supply (max. +15 V_{DC}). An active low control signal is connected between "CTRL IN A" or "CTRL IN B" and "GND". The inputs are opto-coupler inputs with internal 1 kΩ current limiting resistors.
All outputs are open-collector outputs. Small loads, such as LEDs, opto-couplers, or relays can be driven directly. Maximum current per open-collector output must *not* exceed 100 mA.
The "+5 V" output can supply up to 50 mA for opto-couplers or relays.
The sum of all "+5 V" outputs for all input CTRL connectors of the whole console must not exceed 300 mA!

14.4 Analog Line Input



Each analog line input unit has an input selector for two stereo input sources (A and B). Both inputs A and B are electronically balanced and are equivalent.

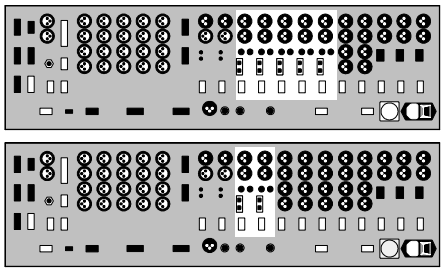
Pin Assignments: **LINE inputs A/B** (XLR, 3pin, female):



Pin	Signal
1	Chassis
2	Input +
3	Input –

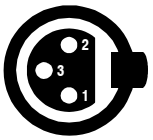
CTRL connector (D-type, 9pin, male): Please refer to chapter 14.3 for details.

14.5 Digital Input



Each digital input unit has an input selector for two digital signals A and B. Each of the inputs has all connectors (XLR, Cinch/RCA, TOSlink) required for supporting the AES/EBU and S/PDIF standards.
The most important C-bits (Professional, Audio, Emphasis, Sampling rate, Stereo) are read on the interface and transferred to the host controller. Audio and Emphasis bits are processed. The digital source needs not to be synchronized to the console since all digital input channels are equipped with a 20-bit sampling frequency converter (SFC).

Pin Assignments: **AES/EBU inputs A/B** (3pin, female):



Pin	Signal
1	Chassis
2	Input +
3	Input –

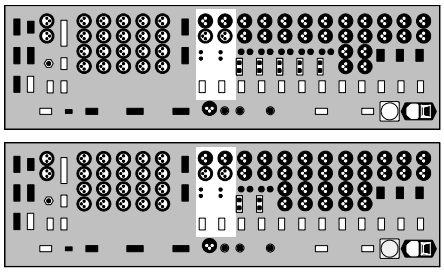
S/PDIF connectors A/B (Cinch/RCA):

Pin	Signal
Inner	Input
Outer	GND

Optical connectors A/B (TOSlink): For optical-fibre cables.

CTRL connector (D-type, 9pin, male): Please refer to chapter 14.3 for details.

14.6 TB Mic Input



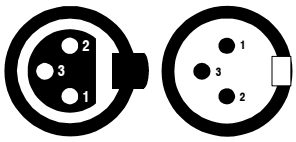
The TB Mic input units are used for connecting internal and/or external talkback microphones. In the standard configuration, the OnAir 1000 features an internal electret talkback microphone internally connected to the "CR" TB Mic input unit. The second, "Studio" TB Mic input unit can be used for talkback from the studio. If ever wished, the user can disconnect the internal microphone and connect an external CR talkback microphone to the "CR" TB Mic input unit; input selection is performed by means of an on-board jumper. A transformer-balanced XLR input with jumper-selectable 48 V phantom power is provided. The balanced input is available on a 3pin AMP connector on the PCB as well. The input gain is set with a jumper (LO/HI) and is adjustable with a rear-panel trimmer potentiometer. An on-board limiter protects the output from an accidental overload.

The analog TB outputs are transformer-balanced. They are fed to XLR connectors at the rear panel and to AMP connectors on the PCBs; unbalanced AMP outputs are available on the PCBs. The levels of the balanced outputs are adjusted with rear-panel trimmer potentiometers.

The analog TB outputs must be activated by external control signals or by wire bridges in dummy plugs on the CTRL connectors (connect pins 2-6 and 4-9).

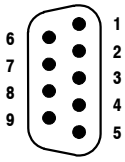
Pin Assignments:

TB MIC IN/OUT (XLR, 3pin, female/male)



Pin	Signal
1	Chassis
2	Input +/Output +
3	Input –/Output –

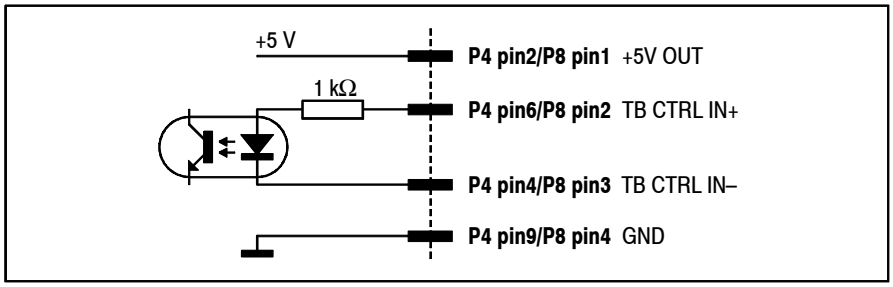
CTRL connector P4 (D-type, 9pin, male), P8 (on PCB AMP, 4pin, male)



P4, pin	P8, pin	Signal	P4, pin	P8, pin	Signal
1	-	n.c.	6	2	TB CTRL IN +
2	1	+5 V OUT	7	-	n.c.
3	-	n.c.	8	-	n.c.
4	3	TB CTRL IN –	9	4	GND
5	-	n.c.			

Control Input:

If a control signal is applied to "TB CTRL IN+" and "TB CTRL IN–", the EXT TB MIC OUTPUT is activated.



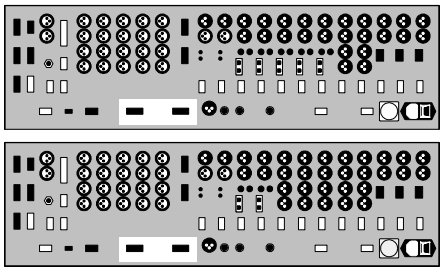
Notes:

"TB CTRL IN +" can be wired either to "+5 V OUT" or to an external supply (max. +15 V_{DC}). An active low control signal is connected between "TB CTRL IN – " and "GND". The input is an opto-coupler input with an

internal 1 kΩ current limiting resistor. The "+5 V OUT" output can supply up to 50 mA. *The sum of all "+5 V" outputs for all input CTRL connectors of the whole console must not exceed 300 mA.*

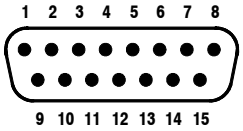
External TB Mic: The TB Mic input units are equipped with a balanced mic input (XLR, 3pin, female) for the connection of external microphones. Selection of internal/external TB mic is done with a jumper on the PCBs (see chapter 15.2).

14.7 Telephone Hybrid Interface

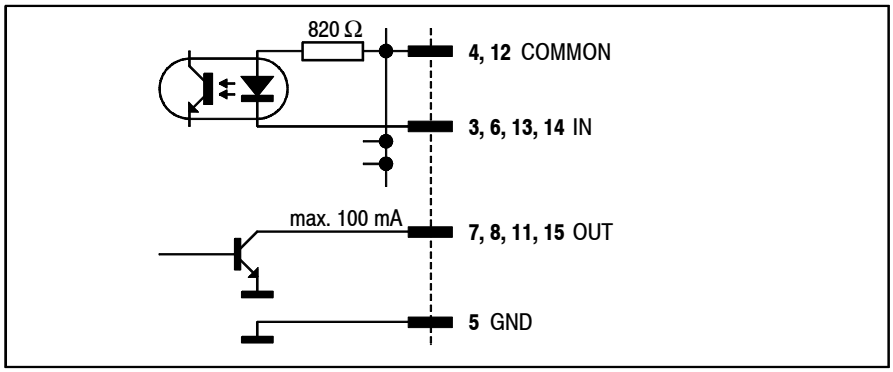


The telephone hybrid interface is used to control two external telephone hybrid units from the console.

Pin Assignment: **TEL HYBRID A/B** (D-type, 15pin, male):

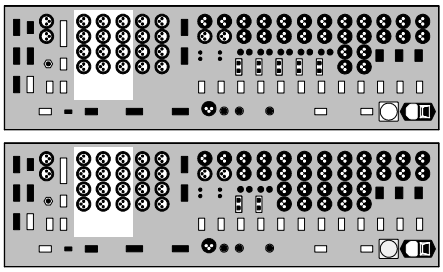


Pin	Signal	Pin	Signal	Pin	Signal
1	n.c.	6	Hold IN	11	Spare OUT
2	n.c.	7	Studio OUT	12	COMMON
3	Spare IN	8	Tel OUT	13	Tel IN
4	COMMON	9	n.c.	14	Studio IN
5	GND	10	n.c.	15	Hold OUT



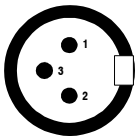
The inputs are opto-coupler inputs with internal 820 Ω current limiting resistors.
All outputs are open-collector outputs. Small loads, such as LEDs, opto-couplers, or relays can be driven directly. *Maximum current per open-collector output must not exceed 100 mA.*

14.8 Analog Output



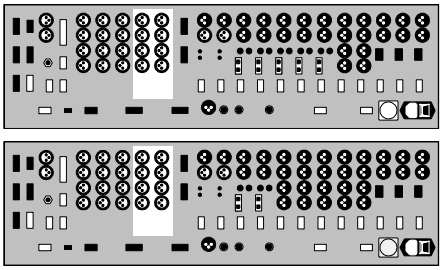
The analog output units provide a transformer-balanced, dual stereo or mono output signal (selectable with a jumper). Output signal selection is performed on the PCB by means of jumpers; refer to chapter 15.4.
In mono mode, the output signals of the stereo DAC are added in the analog domain to increase the converters' dynamic range. Therefore, if the DAC input signal is a stereo signal, the resulting mono output level is increased by 3 dB referred to the stereo output, and if the DAC input signal is a mono signal, the resulting mono output level is increased by 6 dB. For compensation of these level differences, the output level can be adjusted with trimmer potentiometers located on the PCB; refer to chapter 15.4 for component location.

Pin Assignment: **ANALOG OUT A/B** (XLR, 3pin, male):



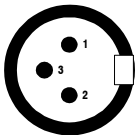
Pin	Signal
1	Chassis
2	Output +
3	Output –

14.9 Digital Output



Each digital output unit delivers two independent AES/EBU output signals. The most important C-bits (Professional, Audio, Emphasis, Sampling rate, Stereo) are set by the host controller. The output sampling rate is that of the console (i.e., usually 48 kHz).
A pair of XLR connectors with separate signal drivers are provided for each of the two AES/EBU output signals.
Output signal selection is performed on the PCB by means of jumpers; refer to chapter 15.5.

Pin Assignment: **DIGITAL OUT A/B** (XLR, 3pin, male):

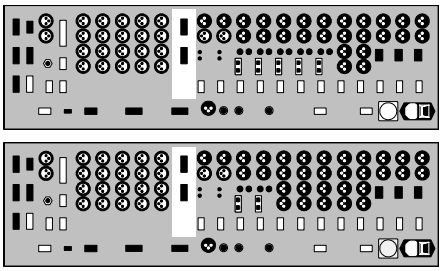


Pin	Signal
1	Chassis
2	Output +
3	Output –

C-Bits: The abovementioned C-bits are set as follows:

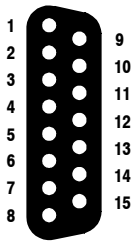
Professional:	PRO
Audio:	AUDIO
Emphasis:	NO EMPHASIS
Stereo:	depending on output configuration
Sampling rate:	According to the internal sampling rate measurement.

14.10 Analog Insert



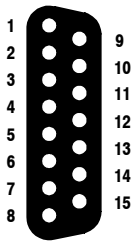
There are two analog, electronically balanced stereo insert sends and returns (1 and 2) that can be assigned to any of the input channels, or to the program or the record bus.
Selection of the input channel to be assigned to the insert is performed on the AUX MASTER/INSERT page by means of the fourth rotary encoder. Selection is possible only if the corresponding insert is set to OFF (i.e., the return signal is not routed to the output).
The insert send is always active; the return, however, is only active if the ON field of the corresponding insert (on the AUX MASTER/INSERT page) is activated.
The sends are equipped with an internal limiter located before the D/A converter to avoid overloads. Nominal insert level is +6 dBu with 9 dB headroom (i.e. maximum level is +15 dBu for 0 dB_{FS}).

Pin Assignment: **INSERT 2** (upper; D-type, 15pin, female):



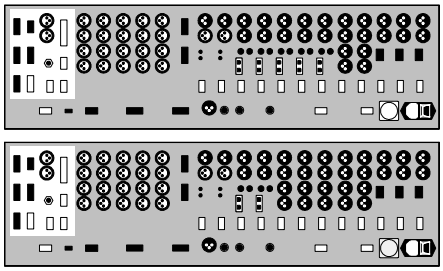
Pin	Signal
1	Return 2 right +
2	Chassis
3	Send 2 right –
4	n.c.
5	Return 2 left +
6	Chassis
7	Send 2 left –
8	n.c.
9	Return 2 right –
10	Chassis
11	Send 2 right +
12	n.c.
13	Return 2 left –
14	Chassis
15	Send 2 left +

INSERT 1 (lower; D-type, 15pin, female):



Pin	Signal
1	Return 1 right +
2	Chassis
3	Send 1 right –
4	n.c.
5	Return 1 left +
6	Chassis
7	Send 1 left –
8	n.c.
9	Return 1 right –
10	Chassis
11	Send 1 right +
12	n.c.
13	Return 1 left –
14	Chassis
15	Send 1 left +

14.11 Monitoring



The monitoring section is a (mainly analog) monitoring unit. It has five external analog inputs in addition to the console's internal buses. It provides analog output signals for headphones and loudspeakers in the control room as well as in the studio.
For details refer to the block diagram in chapter 1, which is an overview over the complete signal processing functionality.

The parallel "STUDIO MON CTRL" interface (25pin D-Type, male) allows the construction of a studio monitoring unit. Signals on this interface:
- 6 × monitor source selector in (opto-coupler inputs)
- 3 × talkback destination in (opto-coupler inputs)
- 6 × source selector feedback out (open collector outputs)

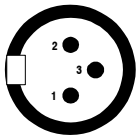
The monitor sources and the talkback destinations are described in chapter 6, "Monitoring".

One of the external analog inputs on the monitoring section is used as a PFL input provided for a CAB (radio automation) system.
For this purpose, the following control signals are available:
- 1 × External PFL IN (opto-coupler input)
- 1 × External PFL OUT (open-collector output)

The "EXT PFL CTRL" D-Type connector (9pin, male) is used for the control signals from and to a CAB system. If "External PFL IN" is activated, the "EXT PFL" audio signal on the "EXTERN MONITOR INPUT" connector is routed to the PFL bus.
When pressing the "EXT PFL" key in the monitoring section, the "External PFL OUT" control signal on the "EXT PFL CTRL" connector is active, and the "EXT PFL" audio signal on the "EXTERN MONITOR INPUT" connector is routed to the PFL bus as well.

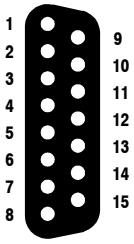
Pin Assignments:

CR OUT L/R (XLR, 3pin, male):



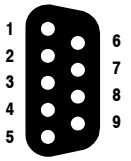
Pin	Signal
1	Chassis
2	Output +
3	Output –

EXTERN MONITOR INPUT A/B/C (15pin D-type, female):



Pin	Connector A (upper) Signal	Connector B (mid) Signal	Connector C (lower) Signal
1	EXT PFL right +	EXT3 right +	EXT2 right +
2	Chassis	Chassis	Chassis
3	EXT PFL left –	EXT3 left –	EXT2 left –
4	n.c.	n.c.	n.c.
5	n.c.	OFF AIR right +	EXT1 right +
6	Chassis	Chassis	Chassis
7	n.c.	OFF AIR left –	EXT1 left –
8	n.c.	n.c.	n.c.
9	EXT PFL right –	EXT3 right –	EXT2 right –
10	Chassis	Chassis	Chassis
11	EXT PFL left +	EXT3 left +	EXT2 left +
12	n.c.	n.c.	n.c.
13	n.c.	OFF AIR right –	EXT1 right –
14	Chassis	Chassis	Chassis
15	n.c.	OFF AIR left +	EXT1 left +

STUDIO MONITOR (AUDIO) A (volume control, 9pin D-type, female):

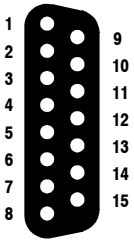


Pin	Signal
1	GND
2	Speakers volume pot, wiper ***(note 1)***
3	n.c.
4	Phones volume pot, wiper ***(note 1)***
5	GND
6	+5 V ***(note 2)***
7	Chassis
8	Chassis
9	+5 V ***(note 2)***

Note 1: *10 kW lin. volume control potentiometers connected between +5 V and GND. Volume is maximum if wiper voltage is +5 V.*

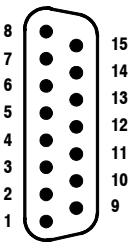
Note 2: *100 W series resistors provided internally for short-circuit protection.*

STUDIO MONITOR (AUDIO) B (talkback in, 15pin D-type, female):



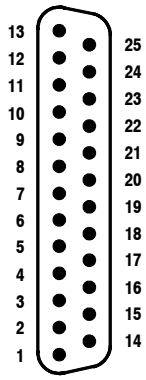
Pin	Signal
1	Ext. TB in +
2	Chassis
3	n.c.
4	n.c.
5	n.c.
6	Chassis
7	n.c.
8	n.c.
9	Ext. TB in –
10	Chassis
11	n.c.
12	n.c.
13	n.c.
14	Chassis
15	n.c.

STUDIO MONITOR (AUDIO) C (15pin D-type, male):

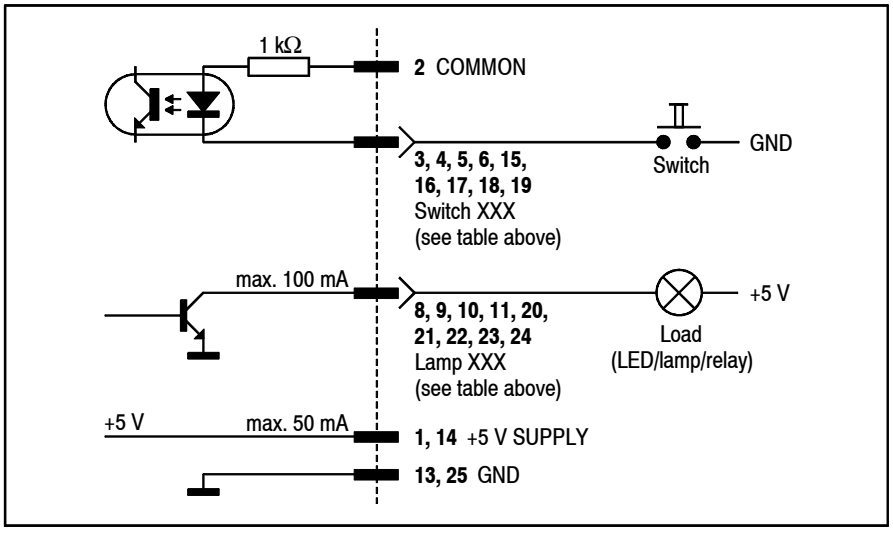


Pin	Signal
1	Phones right
2	Chassis
3	GND
4	n.c.
5	Loudspeaker right +
6	Chassis
7	Loudspeaker left –
8	n.c.
9	GND
10	Chassis
11	Phones left
12	n.c.
13	Loudspeaker right –
14	Chassis
15	Loudspeaker left +

STUDIO MON CTRL (D-type, 25 pin, male):

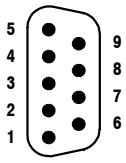


Pin	Signal	Pin	Signal	Pin	Signal
1	+5 V SUPPLY	10	Lamp EXTERN	19	Switch TB TO TEL2
2	COMMON	11	Lamp Spare2	20	Lamp PGM
3	Switch AUX1	12	n.c.	21	Lamp AUX2
4	Switch OFF AIR	13	GND	22	Lamp PFL
5	Switch EXTERN	14	+5 V SUPPLY	23	Lamp Spare1
6	Switch TB TO TEL1	15	Switch PGM	24	Lamp STUDIO MIC ON
7	n.c.	16	Switch AUX2		
8	Lamp AUX1	17	Switch PFL	25	GND
9	Lamp OFF AIR	18	Switch TB TO CR		

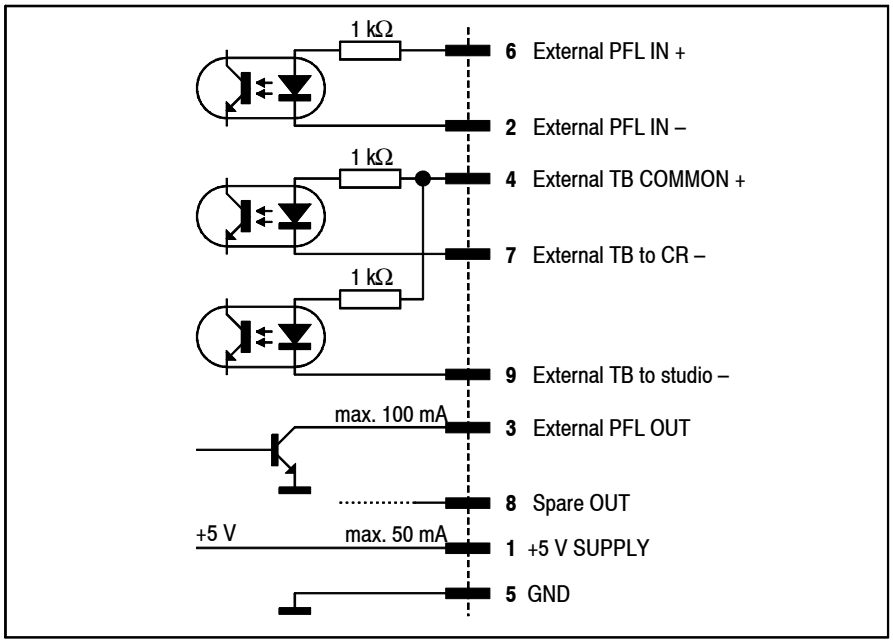


Notes: "COMMON" can be connected either to "+5 V SUPPLY" or to an external power supply (max. +15 V_{DC}). Active-low control signals are connected between "Switch XXX" and "GND". The Switch inputs are opto-coupler inputs with an internal 1 kΩ current limiting resistor each.
The "Lamp XXX" outputs are open-collector outputs; small loads, such as LEDs, opto-couplers, or relays, can be driven directly. *The current must not exceed 100 mA per output.*
The "+5 V" supply current for LEDs or relays must not exceed 50 mA in total.

EXT PFL CTRL (D-type, 9 pin, male):

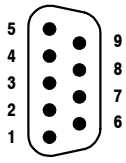


Pin	Signal	Pin	Signal
1	+5 V SUPPLY	6	External PFL IN +
2	External PFL IN –	7	External TB to CR –
3	External PFL OUT	8	Spare OUT
4	External TB COMMON +	9	External TB to Studio –
5	GND		

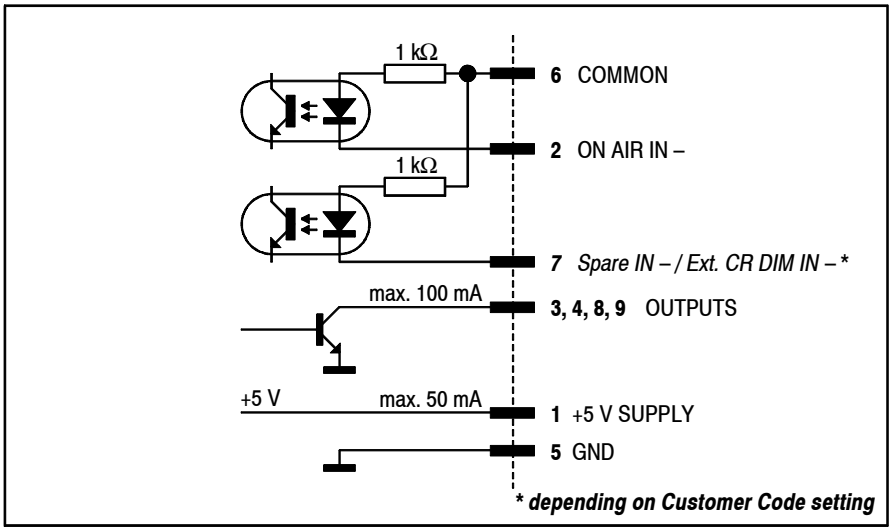


Notes: "External PFL IN +" and/or "External TB COMMON" can be connected either to "+5 V SUPPLY" or to an external power supply (max. +15 V_{DC}).
A pushbutton or an active-low control signal from a radio automation system is connected between the "–" control inputs and "GND". The inputs are opto-coupler inputs with internal 1 kΩ current limiting resistors.
The "External PFL OUT" output is an open-collector output; a small load, such as an LED, an opto-coupler, or a relay can be driven directly. *The current must not exceed 100 mA.*
The "+5 V" supply current for LEDs, opto-couplers, or relays must not exceed 50 mA in total.

SIGN. (D-type, 9 pin, male):



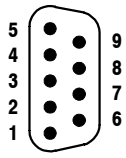
Pin	Signal	Pin	Signal
1	+5 V SUPPLY	6	COMMON
2	ON AIR IN –	7	Spare IN – or Ext. CR DIM IN – *
3	CR MIC OUT	8	STUDIO MIC OUT
4	PGM OUT	9	Spare OUT
5	GND	*** depending on Customer Code setting**	



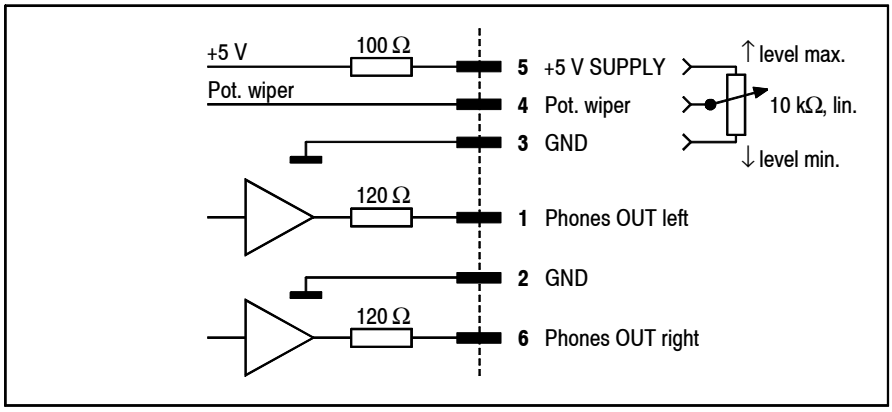
The “ON AIR IN – ” signal turns on the “ON AIR” lamp on the console's monitoring section.
The “CR MIC OUT” output is active if any microphone in the control room is on (i.e. fader open, ON pushbutton active, signal routed to the PROGRAM or RECORD bus).
The “STUDIO MIC OUT” output is active if any microphone in the studio is on (i.e. fader open, ON pushbutton active, signal routed to the PROGRAM or RECORD bus).
The “PGM OUT” output is active if any input channel is on (i.e. fader open, ON pushbutton active, signal routed to the PROGRAM or RECORD bus).
If set with the Customer Code (refer to chapter 11.2.11), an external control signal at the “Ext. CR DIM IN – ” input reduces (dims) the level of the CR monitor speakers by 20 dB.

Notes: “COMMON” can be connected either to “+5 V SUPPLY” or to an external power supply (max. +15 V_{DC}). Active-low control signals are connected between the control inputs and “GND”. The inputs are opto-coupler inputs with internal 1 kΩ current limiting resistors.
The outputs are open-collectors; small loads, such as LEDs, opto-couplers, or relays can be driven directly. *The current must not exceed 100 mA per output.*
The “+5 V” supply current must not exceed 50 mA.

🎧 **CTRL** (D-type, 9 pin, male):
This connector provides all the signals required for a guest headphone. The "Phones OUT" signal is the same as the one on the GUEST jack socket on the same PCB.

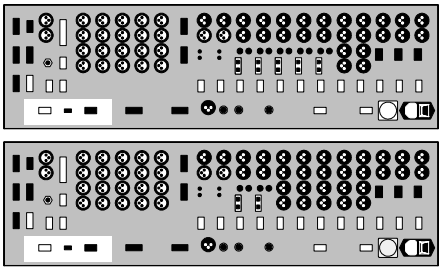


Pin	Signal	Pin	Signal
1	Phones OUT left	6	Phones OUT right
2	GND	7	n.c.
3	GND	8	n.c.
4	Potentiometer wiper	9	n.c.
5	+5 V SUPPLY		



Notes: A linear 10 kΩ volume control potentiometer can be connected between "+5 V SUPPLY" and "GND". The volume is maximum if the wiper voltage is at +5 V.
The signal on pins 1 and 6 is the same as the one on the GUEST headphones jack socket.

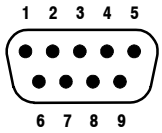
14.12 Serial Interface



The serial interface provides a serial communication link according to either RS232 or RS422 specification (switch-selectable). It is used for the connection to and communication with a computer-assisted broadcasting system (CAB); for details on CAB systems refer to chapter 9.

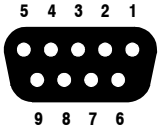
Pin Assignments:

RS422 (D-type, 9 pin, male):



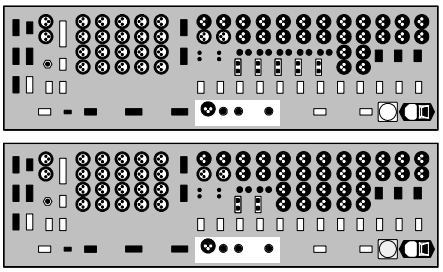
Pin	Signal	Pin	Signal
1	GND	6	n.c.
2	RX + (PC to console)	7	RX – (PC to console)
3	TX – (console to PC)	8	TX + (console to PC)
4	n.c.	9	n.c.
5	n.c.	TX: transmit; RX: receive	

RS232 (D-type, 9 pin, female):



Pin	Signal	Pin	Signal
1	DCD ***(Note 1)***	6	DSR ***(Note 1)***
2	TX (console to PC)	7	RTS ***(Note 2)***
3	RX (PC to console)	8	CTS ***(Note 2)***
4	DTR ***(Note 1)***	9	n.c.
5	GND	TX: transmit; RX: receive	
Note 1: DCD, DTR, and DSR are connected internally ***Note 2:*** RTS and CTS are connected internally			

14.13 Clock Sync Interface



The clock sync interface allows the console to be synchronized to external clock sources. Synchronizing to the following external signals is provided:
AES/EBU: 32 kHz, 44.1 kHz, 48 kHz;
Word Clock: 32 kHz, 44.1 kHz, 48 kHz;
Video Sync: 25 frames/s, 29.97 frames/s, 30 frames/s.
Termination is jumper-selectable, refer to chapter 15.7.
If synchronized to video sync, the sampling rate is either 48 kHz or, for 29.97 fr/s, 47.952 kHz.
If no valid external clock signal is available, the console runs from its own internal 48 kHz clock reference.

Pin Assignments:

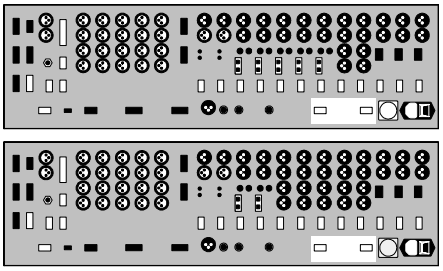
AES SYNC INPUT (3pin, female):

Pin	Signal
1	Chassis
2	Input +
3	Input –

WCLK INPUT, WCLK OUTPUT, VIDEO IN (BNC, 75 Ω):

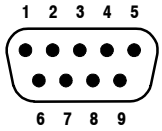
Pin	Signal
Inner	Input
Outer	GND

14.14 Time Sync Interface

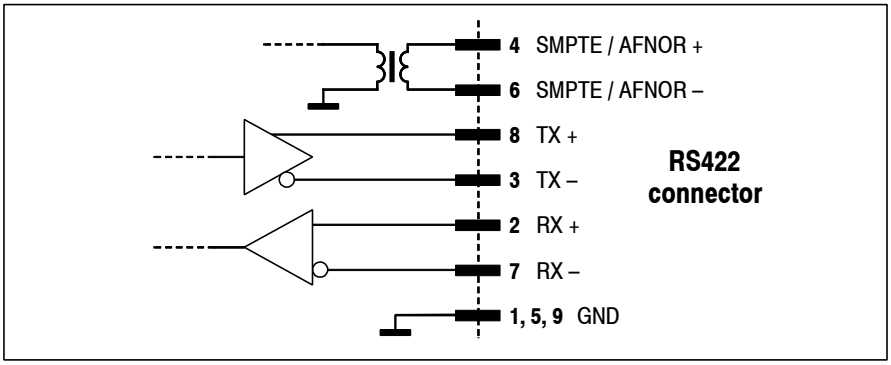


With the time sync interface, the console's internal clock can be synchronized to an external time reference signal, such as a DCF77 or GPS receiver, or a Mobatime clock providing a serial output signal. The current software supports AFNOR and Seiko protocols, as well as SMPTE biphase timecode (Leitch).
For either of these time reference units (except AFNOR and SMPTE) the connector labeled RS232 is used. For AFNOR and SMPTE signals, a transformer-balanced input is available on the RS422 connector. Please note that the configuration (chapter 11.2.5) and the DIP switch and jumper setting (chapter 15.8) depend on the type of reference signal being used.

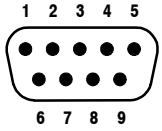
Pin Assignments: **RS422** (D-type, 9 pin, male):



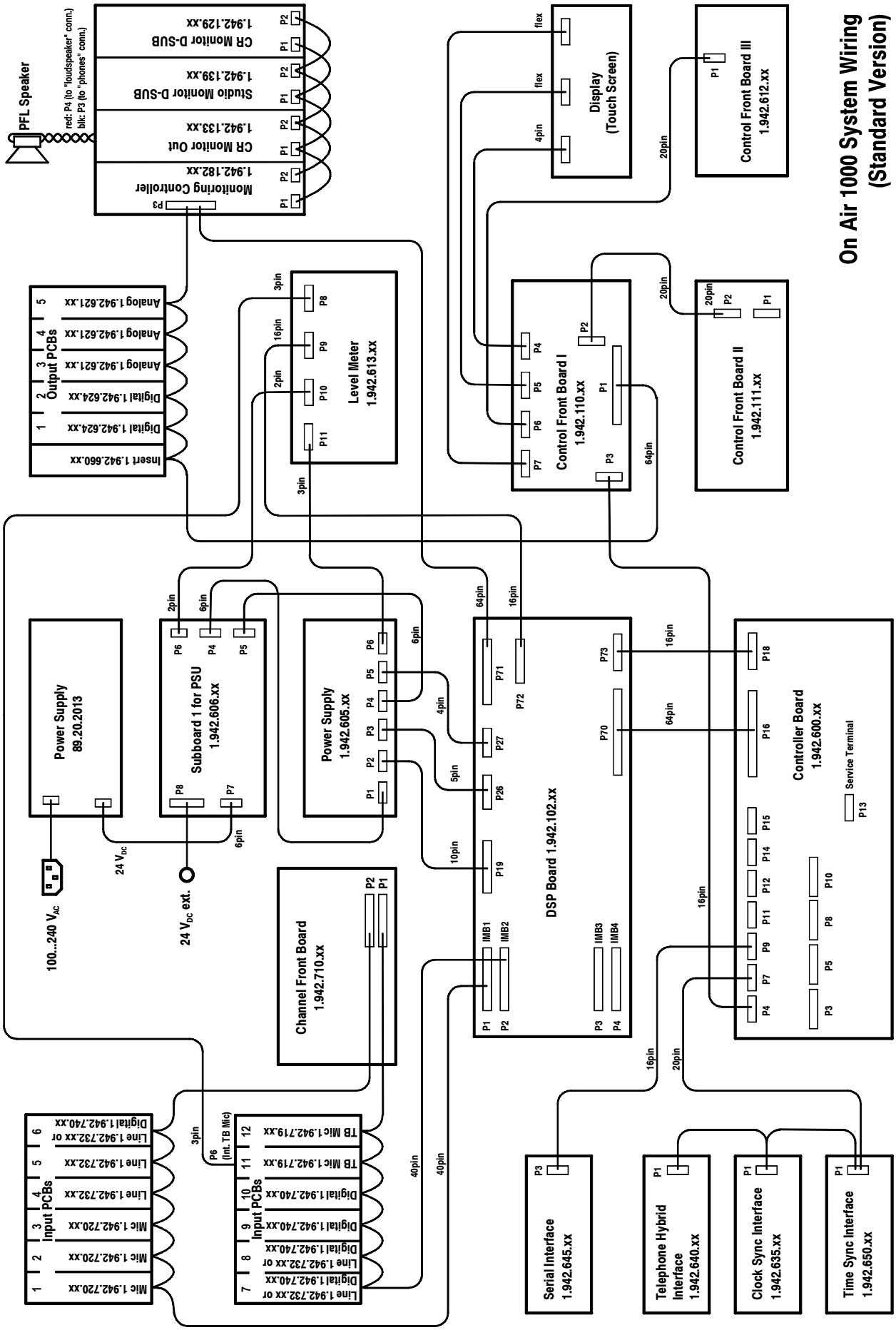
Pin	Signal	Pin	Signal
1	GND	6	SMPTE/AFNOR –
2	RX + (unit to console)	7	RX – (unit to console)
3	TX – (console to unit)	8	TX + (console to unit)
4	SMPTE/AFNOR +	9	GND
5	GND	TX: transmit; RX: receive	

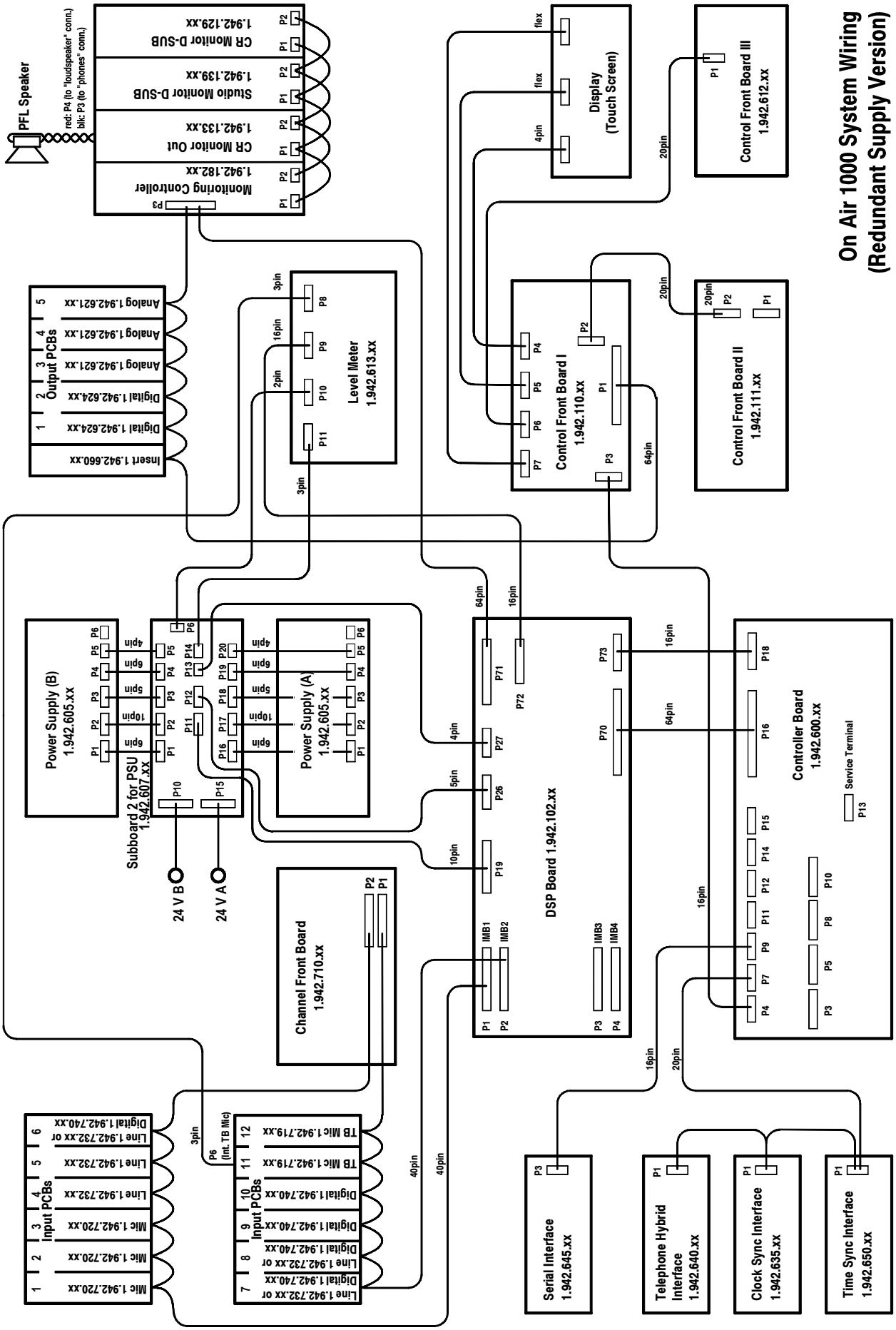


RS232 (D-type, 9 pin, male):



Pin	Signal	Pin	Signal
1	+12 V ***(Note 1)***	6	+12 V ***(Note 1)***
2	RX (unit to console)	7	–12 V ***(Note 1)***
3	TX (console to unit)	8	–12 V ***(Note 1)***
4	+12 V ***(Note 1)***	9	n.c.
5	GND	TX: transmit; RX: receive	
Note 1: These voltages are available if jumpers 12-13 and 10-11 are inserted. These outputs are very high-Z and must not be used, except for the specified DCF77 and MOBA receivers only!			


On Air 1000 System Wiring
(Standard Version)
PFL Speaker
red: P4 (to "loudspeaker" conn.)
blk: P3 (to "phones" conn.)
Monitoring Controller 1.942.182.xx
CR Monitor Out 1.942.133.xx
Studio Monitor D-SUB 1.942.139.xx
CR Monitor D-SUB 1.942.129.xx
Display (Touch Screen)
Control Front Board III 1.942.612.xx
Control Front Board I 1.942.110.xx
Control Front Board II 1.942.111.xx
Level Meter 1.942.613.xx
Insert 1.942.660.xx
Digital 1.942.624.xx
Digital 1.942.624.xx
Analog 1.942.621.xx
Analog 1.942.621.xx
Analog 1.942.621.xx
Output PCBs
Power Supply 89.20.2013
Subboard 1 for PSU 1.942.606.xx
Power Supply 1.942.605.xx
DSP Board 1.942.102.xx
Controller Board 1.942.600.xx
Service Terminal
Channel Front Board 1.942.710.xx
100...240 VAC
24 VDC
24 VDC ext.
Mic 1.942.720.xx
Mic 1.942.720.xx
Line 1.942.732.xx
Line 1.942.732.xx
Mic 1.942.720.xx
Line 1.942.732.xx or Digital 1.942.740.xx
Input PCBs
Digital 1.942.740.xx
Digital 1.942.740.xx
Digital 1.942.740.xx
Digital 1.942.740.xx
TB Mic 1.942.719.xx
TB Mic 1.942.719.xx
Line 1.942.732.xx or Digital 1.942.740.xx
Input PCBs
Serial Interface 1.942.645.xx
Telephone Hybrid Interface 1.942.640.xx
Clock Sync Interface 1.942.635.xx
Time Sync Interface 1.942.650.xx

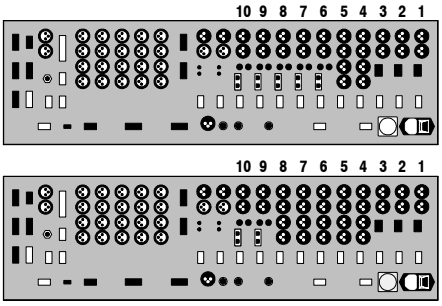

On Air 1000 System Wiring
(Redundant Supply Version)
PFL Speaker
red: P4 (to "loudspeaker" conn.)
blk: P3 (to "phones" conn.)
Monitoring Controller 1.942.182.xx
CR Monitor Out 1.942.133.xx
Studio Monitor D-SUB 1.942.139.xx
CR Monitor D-SUB 1.942.129.xx
Display (Touch Screen)
Control Front Board III 1.942.612.xx
Control Front Board I 1.942.110.xx
Control Front Board II 1.942.111.xx
Level Meter 1.942.613.xx
Output PCBs
Analog 1.942.621.xx
Digital 1.942.624.xx
Insert 1.942.660.xx
Power Supply (B) 1.942.605.xx
Power Supply (A) 1.942.605.xx
Subboard 2 for PSU 1.942.607.xx
24 V B
24 V A
DSP Board 1.942.102.xx
Controller Board 1.942.600.xx
Service Terminal
Channel Front Board 1.942.710.xx
Input PCBs
Mic 1.942.720.xx
Line 1.942.732.xx
Digital 1.942.740.xx
TB Mic 1.942.719.xx
Serial Interface 1.942.645.xx
Telephone Hybrid Interface 1.942.640.xx
Clock Sync Interface 1.942.635.xx
Time Sync Interface 1.942.650.xx

15 DIP SWITCHES AND JUMPERS

The DIP switch and jumper positions are printed on the PCBs, except for the TB Mic input unit and the Analog Output unit; for these two assemblies, drawings have been included in the following chapters for component location.

15.1 Input Units

Input Unit Position:



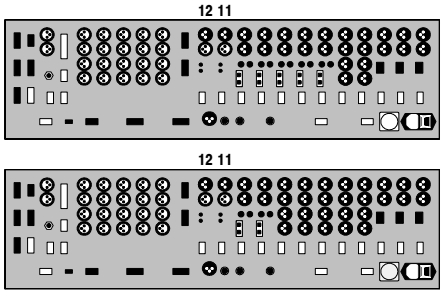
Correct assignment of the input unit position relative to the input channel is mandatory. For this purpose, every input unit needs to be addressed. On the Mic, Line, and Digital input units, this address is set with a DIP switch. On the Talkback Mic input units, however, the address is set with a jumper (refer to chapter 15.2).

When replacing one of the input units, please make sure that the address setting corresponds to the following table:

Unit Position:		DIP Switch no.: 1	2	3	4	5	6	7	8
1 (Mic In 1)	**7** (Line In 4/Dig. In 2)*	OFF	ON	ON	ON	ON	ON	ON	OFF
2 (Mic In 2)	**8** (Line In 5/Dig. In 3)*	ON	OFF	ON	ON	ON	ON	ON	OFF
3 (Mic In 3)	**9** (Dig. In 1/Dig. In 4)*	OFF	OFF	ON	ON	ON	ON	ON	OFF
4 (Line In 1)	**10** (Dig. In 2/Dig. In 5)*	ON	ON	OFF	ON	ON	ON	ON	OFF
5 (Line In 2)		OFF	ON	OFF	ON	ON	ON	ON	OFF
6 (Line In 3/Dig. In 1)*		ON	OFF	OFF	ON	ON	ON	ON	OFF
* depending on basic console version									

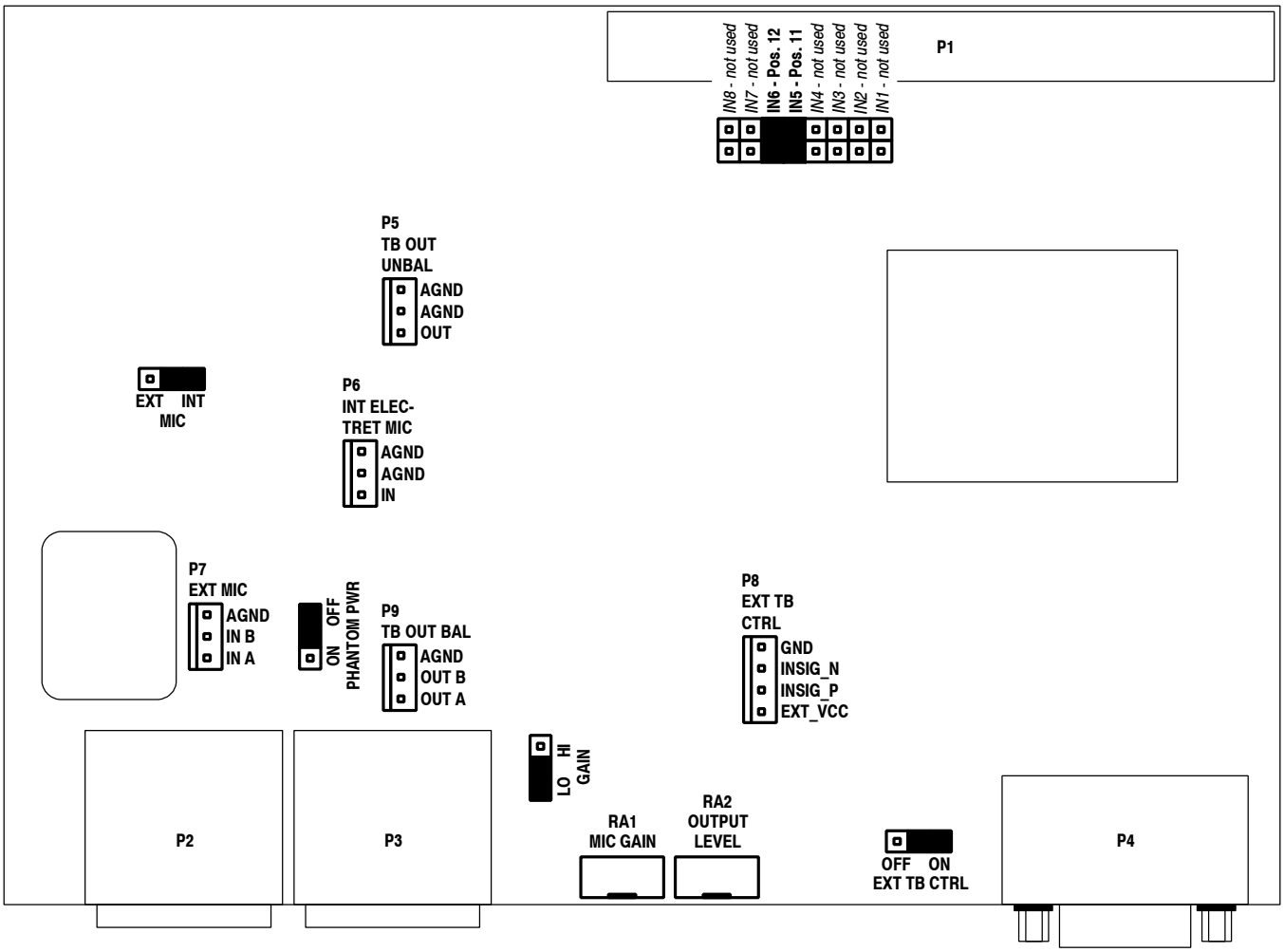
15.2 TB Mic Input Units

Input Unit Position:



On the Talkback Mic input units, the position is set with a jumper:

Unit Position:	Jumper Position:
11 (TB Mic Input CR)	IN 5
12 (TB Mic Input Studio)	IN 6



Jumper Setting:

MIC INT/EXT Input selection – either internal, unbalanced microphone (i.e. the built-in electret TB mic with fixed supply voltage), connected to P6, or external, balanced microphone with switchable phantom power, connected to P2 or to P7. *Factory setting for pos. 11: INT MIC; for pos. 12: EXT MIC.*

PHANTOM PWR ON/OFF Selection of 48 V phantom power for the balanced mic input (P2 or P7). *Factory setting: PHANTOM PWR OFF.*

GAIN HI/LO For the internal standard electret TB mic, the LO position (nominal input level: –60 dBu) is used. In HI position, the mic input gain is increased by 20 dB, i.e. nominal input level –80 dBu. *Factory setting: GAIN LO.*

Jumper Setting (cont.):

EXT. TB CTRL ON/OFF Activates or deactivates the external TB control input on P4 or P8. *Factory setting: EXT. TB CTRL ON.*

IN1...8 Address selection. *Factory setting for position 11, TB Mic Input "CR" (i.e., the built-in electret TB mic): IN5; for position 12, TB Mic Input "Studio": IN6.* These jumper positions must not be modified.

On-Board Connectors:

P6 Internal electret TB mic input (unbalanced, with fixed supply voltage)

P7 External, transformer-balanced mic input (parallel to XLR connector P2)

P5 Unbalanced TB output

P9 Transformer-balanced TB output (parallel to XLR connector P3)

P8 External TB control input (parallel to D-type connector P4).

Adjustments:

RA1 MIC GAIN; the factory setting is performed for the built-in electret TB mic. The integrated limiter just starts limiting at input levels above –60 dBu (GAIN jumper in LO position).

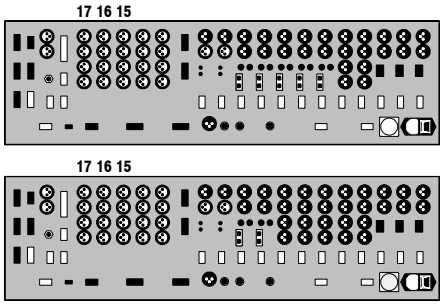
RA2 OUTPUT LEVEL; the factory setting corresponds to the customer-specified line level (adjustment range –10...+14 dBu).

15.3 Telephone Hybrid Interface

The address on the Telephone Hybrid interface must *always* be set according to the following table:

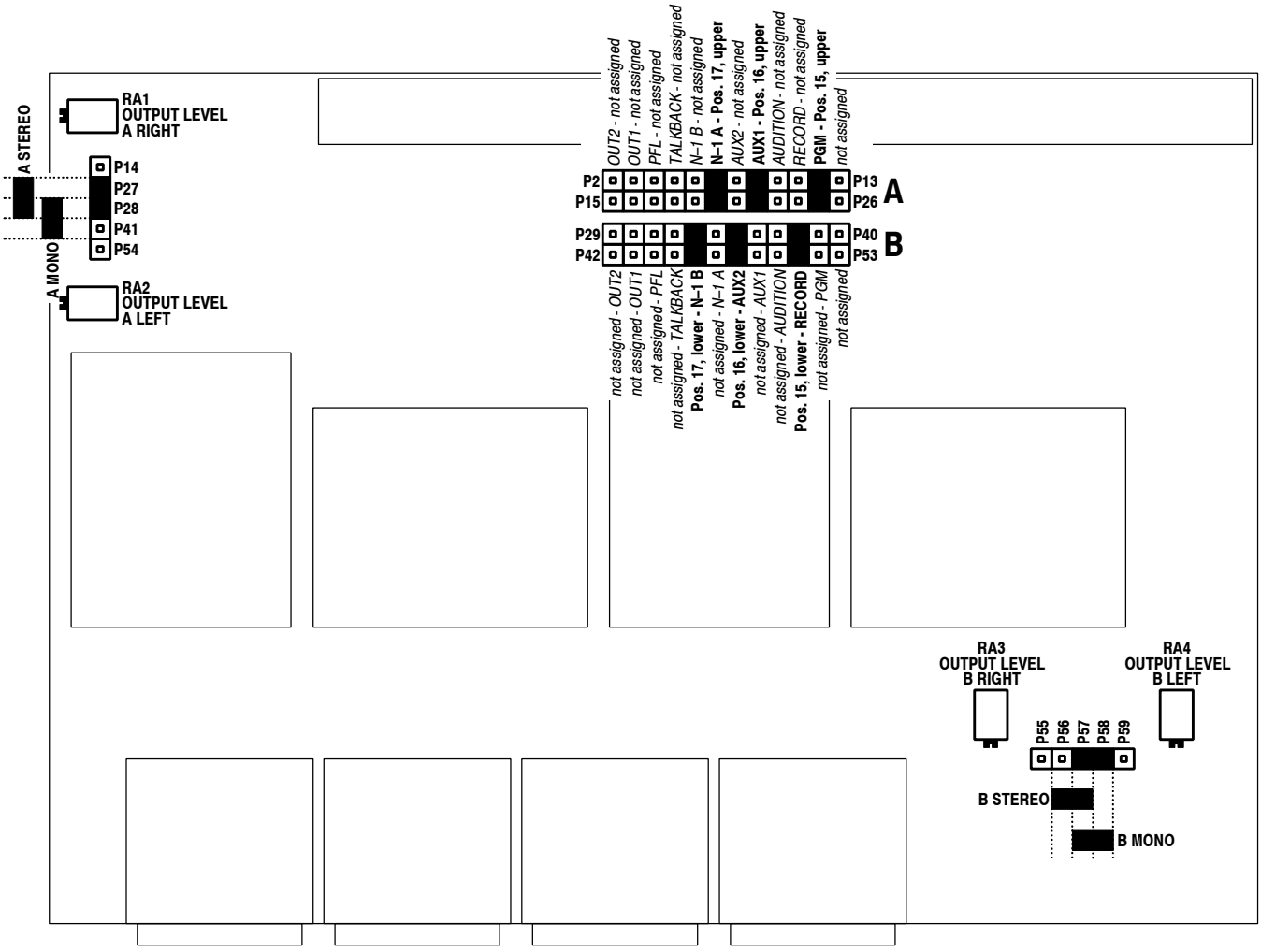
DIP Switch no.:							
1	2	3	4	5	6	7	8
OFF	OFF	ON	ON	ON	ON	ON	OFF

15.4 Analog Output Units

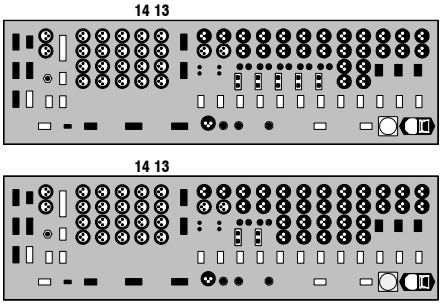


The Analog Output units have jumpers for mono/stereo selection and for selecting the desired output signal, individually for each of the outputs A and B.

The output level is set with trimmer potentiometers, separate by outputs A/B and by left/right channels.



15.5 Digital Output Units



The Digital Output units have two DIP switches (marked A and B on the PCB) for selection of the desired output signal for each of the two independent outputs. Selection is done according to the following table:

Output Signal and Unit Position	DIP Switch no.: 1	2	3	4	5	6	7	8
PROGRAM (PGM, ON-AIR) **(pos. 13, upper – factory set)**	ON	OFF	OFF	ON	ON	ON	ON	OFF
RECORD (REC) **(pos. 13, lower – factory set)**	OFF	OFF	OFF	ON	ON	ON	ON	OFF
AUDITION (AUD) *(not assigned)*	ON	ON	ON	OFF	ON	ON	ON	OFF
N–1 A *(not assigned)*	OFF	ON	ON	OFF	ON	ON	ON	OFF
N–1 B *(not assigned)*	ON	OFF	ON	OFF	ON	ON	ON	OFF
AUX 1 **(pos. 14, upper – factory set)**	OFF	OFF	ON	OFF	ON	ON	ON	OFF
AUX 2 **(pos. 14, lower – factory set)**	ON	ON	OFF	OFF	ON	ON	ON	OFF

15.6 Insert Unit

The address on the Insert unit must *always* be set according to the following table:

DIP Switch no.: 1	2	3	4	5	6	7	8
ON	ON	OFF	ON	ON	ON	ON	OFF

15.7 Clock Sync Interface

If P7 and P8 are connected with a jumper, the 75 Ω termination of the VIDEO IN input is active. If this jumper is removed, the input is terminated with 110 Ω.

15.8 Time Sync Interface

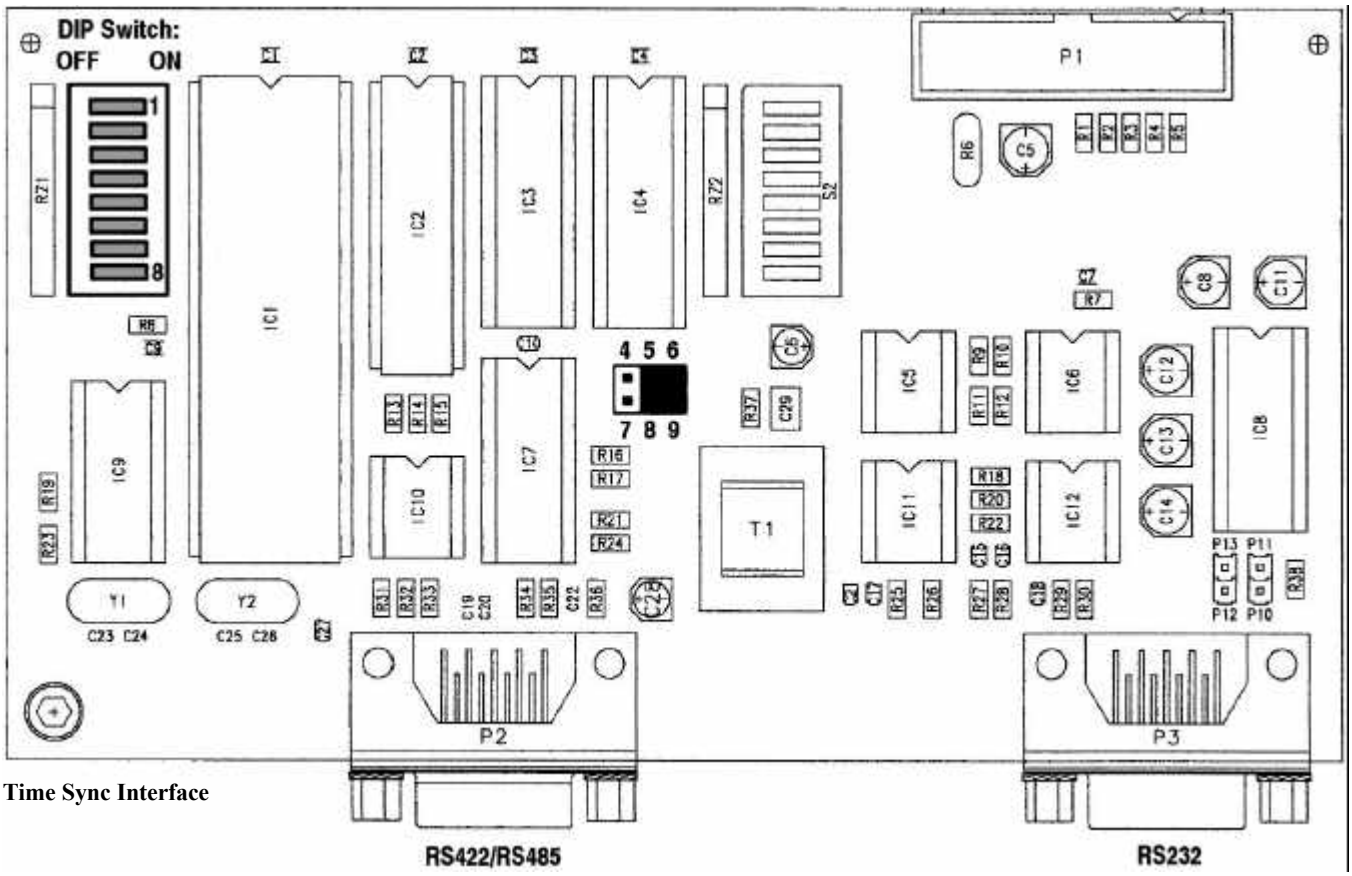
DIP Switch The external time reference signal for the Time Sync interface is selected with a DIP switch. The DIP switch setting is displayed in hexadecimal on the TIME & DATE FORMAT page (TIME SYNC. PROTOCOL field) for easy verification.

Time source	Hex Display	DIP switch no.: 1	2	3	4	5	6	7	8
NONE	NONE	ON	ON	ON	ON	ON	ON	ON	ON*
AFNOR NFS87-500	1	OFF	ON	ON	ON	ON	ON	ON	ON*
DCF77 (expert mouse clock)	2	ON	OFF	ON	ON	ON	ON	ON	ON*
MOBATIME (IF482; 9600 baud)	3	OFF	OFF	ON	ON	ON	ON	ON	ON*
GPS (NMEA 0183 V1.5, V2.0; 4800 baud)	4	ON	ON	OFF	ON	ON	ON	ON	ON*
SEIKO serial clock (RS485; 2400 baud)	5	OFF	ON	OFF	ON	ON	ON	ON	ON*
RCC 8000A (9600 baud)	6	ON	OFF	OFF	ON	ON	ON	ON	ON*
HOPF 6021 telegram (9600 baud)	7	OFF	OFF	OFF	ON	ON	ON	ON	ON*
VORTEX 482D (9600 baud), opt. "0"	8	ON	ON	ON	OFF	ON	ON	ON	ON*
LEITCH CSD-5300 (300 baud) (SMPTE bi-phase TC)	9	OFF	ON	ON	OFF	ON	ON	ON	ON*
SMPTE bi-phase input (LEITCH format)	A	ON	OFF	ON	OFF	ON	ON	ON	ON*
SEIKO QC-7CF2	B	OFF	OFF	ON	OFF	ON	ON	ON	ON*
SIPRONIKA SAT520 protocol (9600, 7E2)	C	ON	ON	OFF	OFF	ON	ON	ON	ON*
GORGY ASCII format (2400 baud)	D	OFF	ON	OFF	OFF	ON	ON	ON	ON*
Reserved for future use		all remaining combinations							
		* Standard setting: ON This switch can be set to OFF in order to mask out the validity bits in some data formats (e.g. it is possible to use Mobatime data from a Mobatime clock that has no DCF reception and thus sends "M" instead of "A")							

Jumper Setting

IF type	Jumper setting	Used for:
RS232	8-9, 5-6	DCF77, Hopf, MOBA, RCC8000A, Seiko
RS422/RS485	7-8, 4-5	GPS, Leitch (SMPTE TC), AFNOR
Supply (high-Z)	10-11, 12-13	***DCF77 or MOBA only!***

Note: For DIP switch and jumper locations refer to the drawing on the next page.



Time Sync Interface

15.9 Monitoring Controller PCB

On the Monitoring Controller PCB, *all* DIP switches must be set to their OFF position.

15.10 Level Meter PCB

For information on jumper setting and level meter calibration, please refer to the OnAir 1000 Service Manual.

15.11 PSU Sub Board

Jumper Setting: The power alarm signal (pin4 of the 10pin 24 V_{DC} connector) is a relay contact (max. 40 V/200 mA). Its behaviour depends on jumper J1 on the PSU sub board (see component layout diagram in chapter 14.1); either the output pin is normally floating and pulled to GND if alarm is active (P1 and P2 connected, default factory setting), or it is normally pulled to GND and becomes floating if alarm is active (P1 and P3 connected).
Please note that wire bridges have to be inserted into the 10pin cable socket for correct processing of the power alarm output's voltage thresholds. Refer to chapter 14.1.

15.12 DSP PCB

Jumper Setting: On the DSP PCB, only the "CFG1" jumper must be inserted. *Do not change this setting.*

15.13 Control Front Board I

DIP Switches: On the Control Front Board I, *all* DIP switches must be set to their OFF position.

16 INDEX

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

R

S

T

U

V

W

Y

Z...

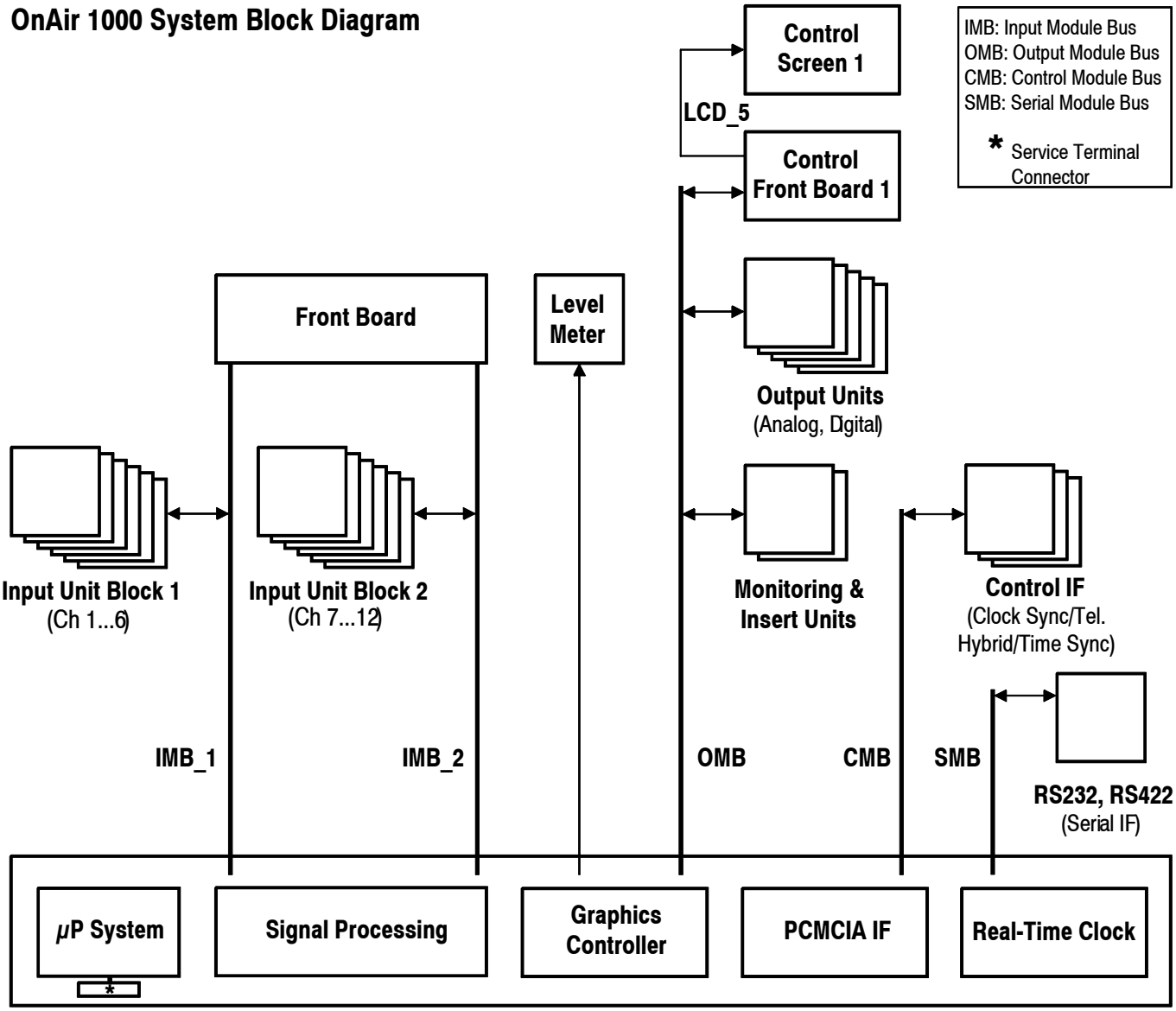
CONTENTS PART 2 – SERVICE INSTRUCTIONS

1 FEATURES

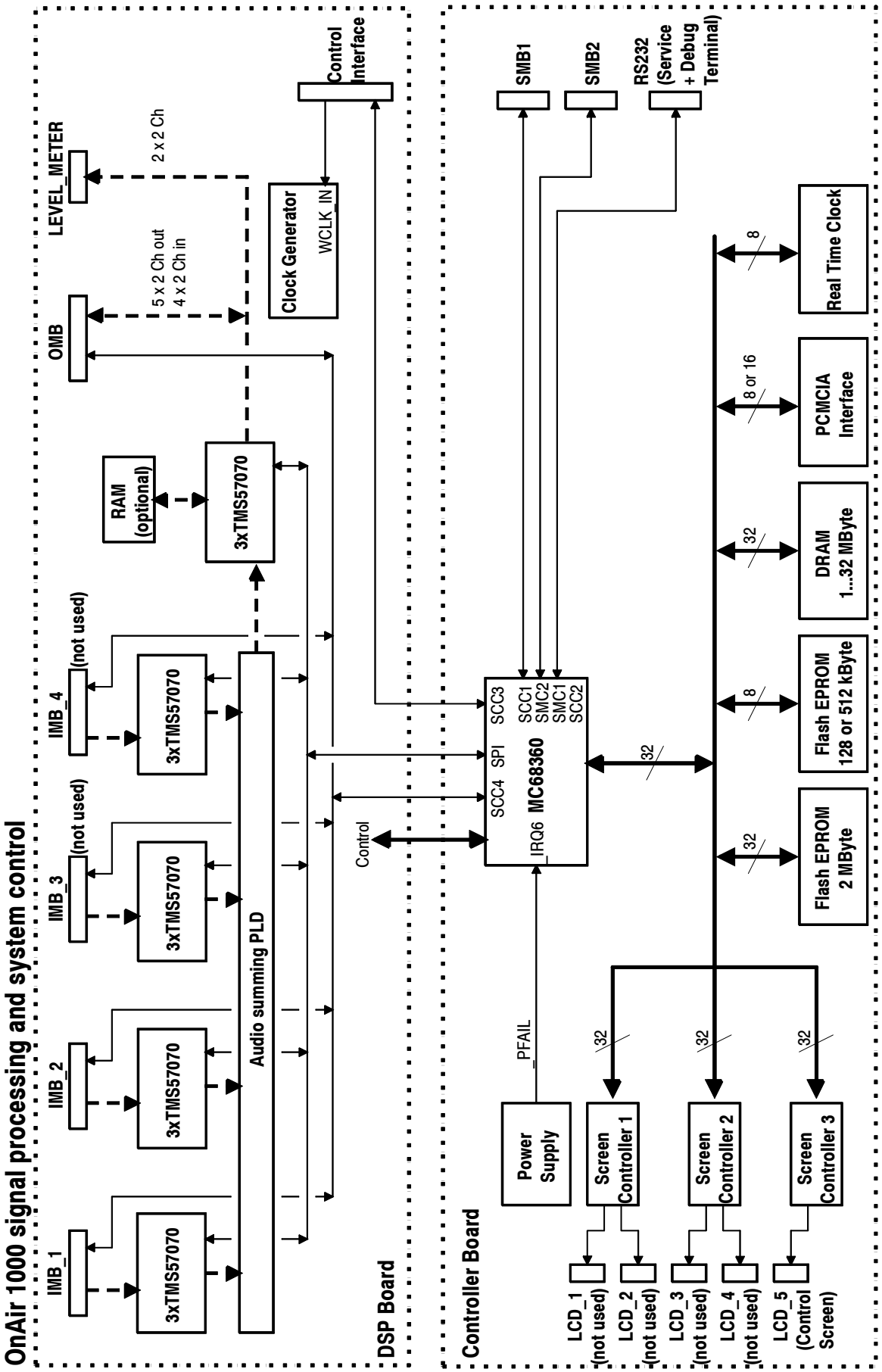
- Fully digital mixing console
- Touch-screen based user interface (“Touch’n’action”)
- 10 input + 2 master channels
- Integrated input router (for input unit-to-fader strip assignment)
- Flexible configuration
- Snapshots
- PC-Cards for snapshots, configuration, and software update
- Modular interfacing
- Compact, no external racks required
- Low power consumption
- Excellent price/performance ratio

1.1 System Architecture

OnAir 1000 System Block Diagram



1.2 Signal Processing



Signal processing is based on 24-bit DSPs (Texas Instruments TMS57070). The input channels are processed by six DSP chips (i.e. two stereo channels per DSP). The summing bus is a PLD (programmable logic device) design and can handle up to 32 bit. The resulting sums are further processed by three additional DSPs.

A serial communication link between the host controller and the DSPs downloads the algorithms at the startup and sets new parameters during operation.

1.3 Audio Buses

PGM: Main output bus, stereo or mono, analog and/or digital
REC: Main output bus, stereo or mono, analog and/or digital
AUX 1: Auxiliary output, stereo or mono, analog and/or digital
AUX 2: Auxiliary output, stereo or mono, analog and/or digital
N–1 A: Clean-feed output, mono, analog and/or digital
N–1 B: Clean-feed output, mono, analog and/or digital
AUDITION: Audition output (clean-feed), stereo or mono, analog and/or digital.

Internal buses:
PFL: Pre-fader listening bus, stereo
TB: Talkback from control room, talkback from studio.

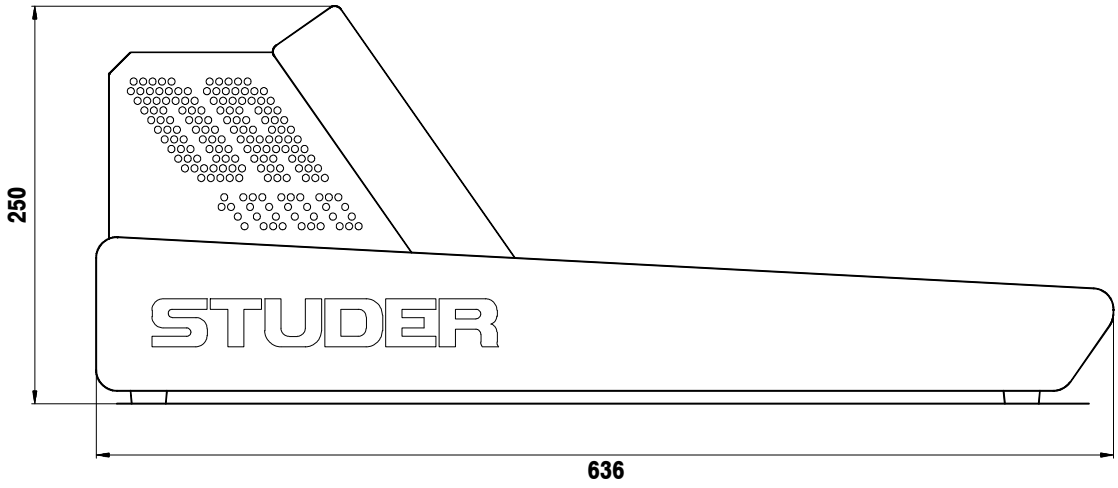
1.4 Host Controller

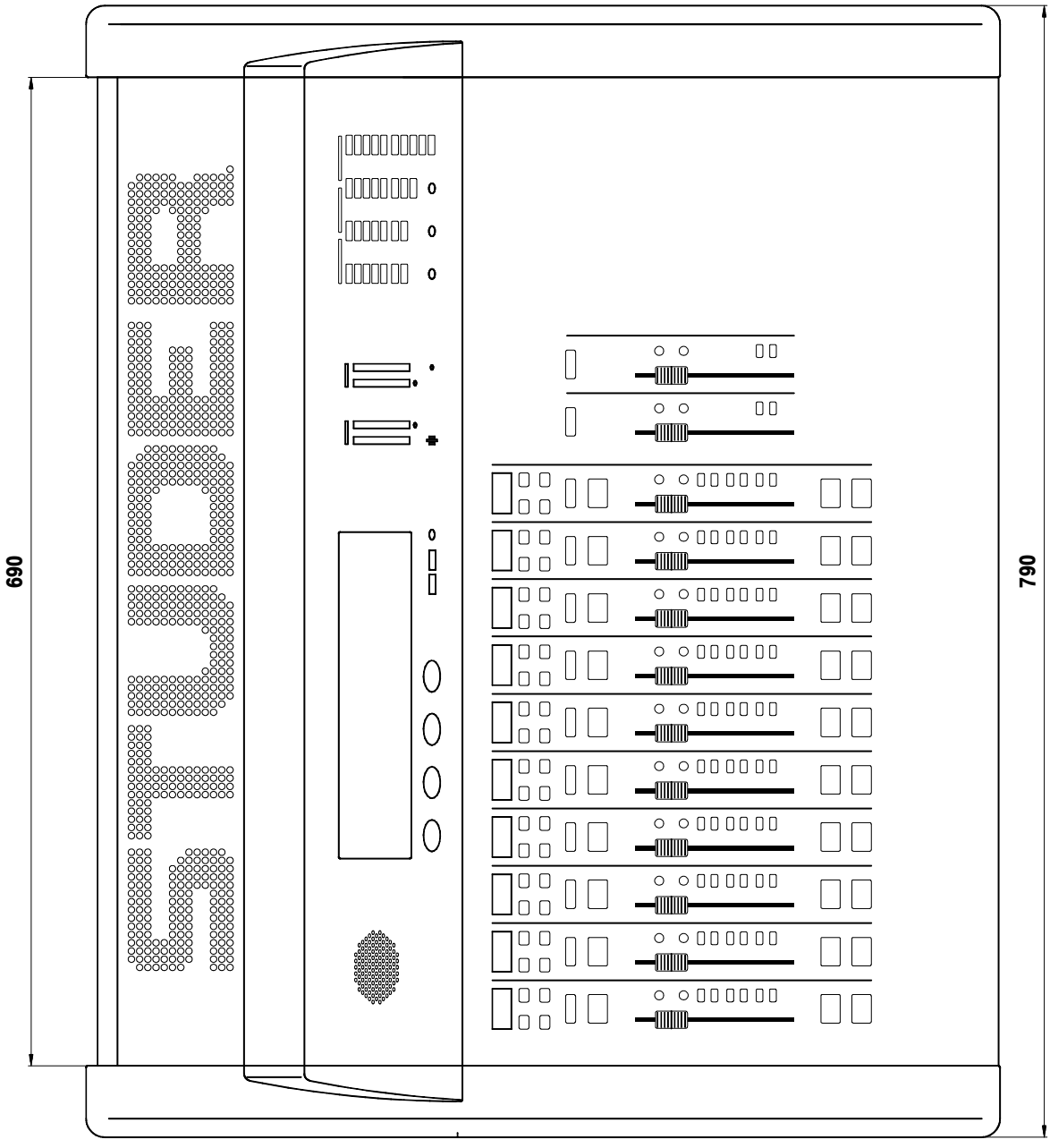
The host controller is a Motorola MC68360 running at 25 MHz. The tasks performed by the controller are:

- SW download to the DSPs
- SW download to the graphics controller
- Communication with the user surface
- Communication with DSPs
- Communication with modules
- Logic functions
- Graphics
- System test and error handling
- Flash EPROM handling

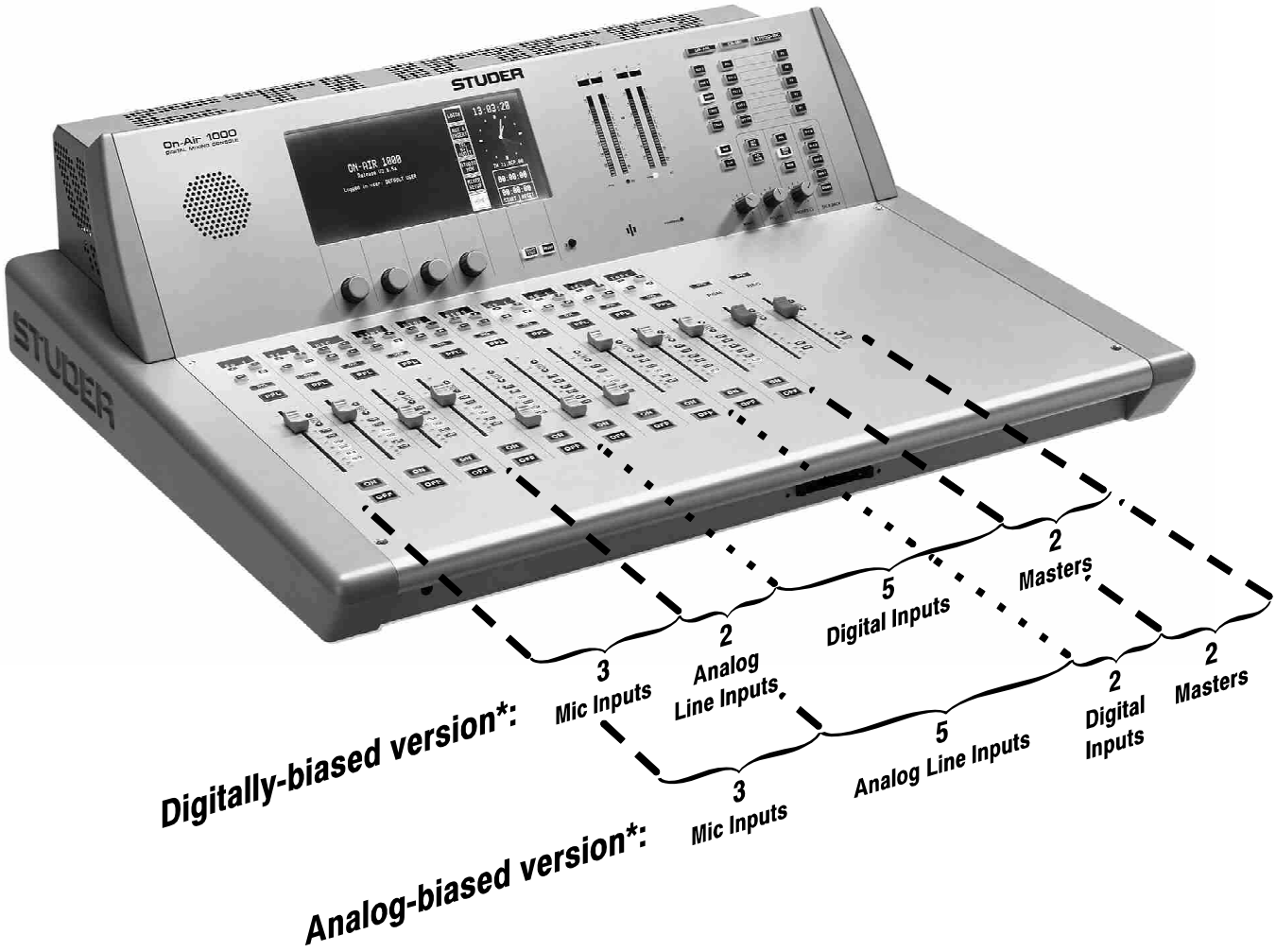
The software is based on a VRTX real-time operating system. VRTX was originally designed for industrial applications and is very reliable. The complete application is written in the “C” programming language.

2 HARDWARE





2.1 Input Units



*** Please note that the input channel-to-fader strip assignment as illustrated above applies only for SW versions before V4.0; for SW V4.0 and later, this applies as well, as long as no fader re-routing has been performed (i.e. for the factory-set default 1:1 routing).**

The two basic versions of the Studer OnAir 1000 console are equipped with the following input units:

Channel No.	Digitally-biased version:	Analog-biased version:
1	Mic Input Unit 1.942.720.xx	Mic Input Unit 1.942.720.xx
2	Mic Input Unit 1.942.720.xx	Mic Input Unit 1.942.720.xx
3	Mic Input Unit 1.942.720.xx	Mic Input Unit 1.942.720.xx
4	Line Input Unit 1.942.732.xx	Line Input Unit 1.942.732.xx
5	Line Input Unit 1.942.732.xx	Line Input Unit 1.942.732.xx
6	Digital Input Unit 1.942.740.xx	Line Input Unit 1.942.732.xx
7	Digital Input Unit 1.942.740.xx	Line Input Unit 1.942.732.xx
8	Digital Input Unit 1.942.740.xx	Line Input Unit 1.942.732.xx
9	Digital Input Unit 1.942.740.xx	Digital Input Unit 1.942.740.xx
10	Digital Input Unit 1.942.740.xx	Digital Input Unit 1.942.740.xx

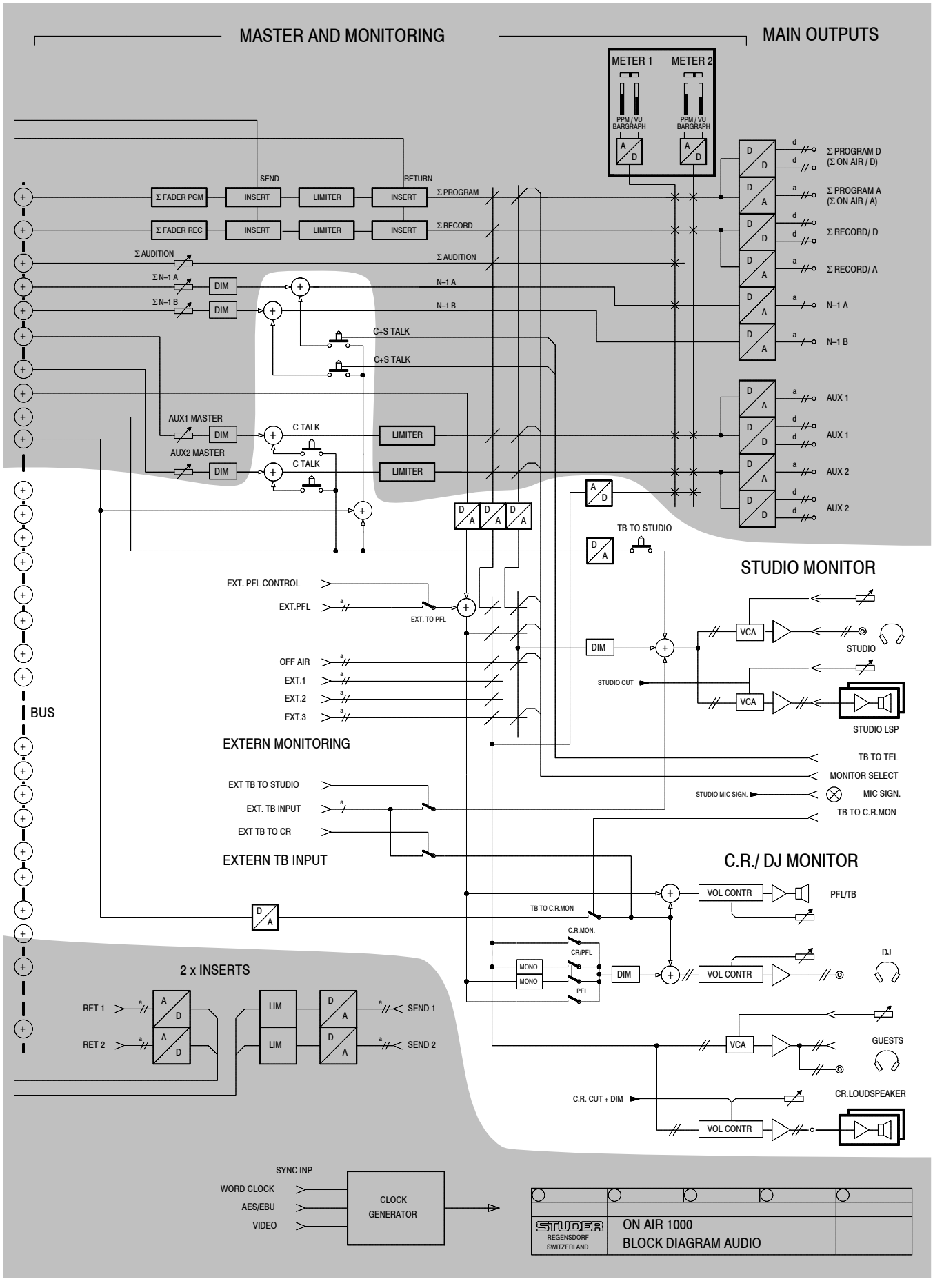
All inputs have A/B switchover.
For details on input units, please refer to the OnAir 1000 Operating Manual, chapters 14.3 to 14.6.

2.2 Output Units

All Studer OnAir 1000 consoles are equipped with the following output units:
2 × Digital Output Units 1.942.624.xx, and
3 × Dual Analog Output Units 1.942.621.xx (transformer-balanced).
For details on output units, please refer to the OnAir 1000 Operating Manual, chapters 14.8 and 14.9.

2.3 Monitoring

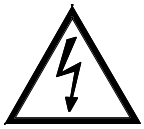
The monitoring section includes monitoring functions for control room (CR) and studio. Audio and control signals are handled by this section. The CR monitoring functions are controlled from the user surface. The studio monitoring functions can be controlled either from the user surface (source selection) or from an optional, simple studio monitor unit ("TB box", 1.924.555.xx).
For details on the monitoring section, please refer to the block diagram on the following page and to the OnAir 1000 Operating Manual, chapter 14.11.


MASTER AND MONITORING
MAIN OUTPUTS
METER 1
METER 2
PPM / VU BARGRAPH
SEND
RETURN
Σ FADER PGM
Σ FADER REC
INSERT
LIMITER
Σ PROGRAM
Σ RECORD
Σ AUDITION
Σ N–1 A
Σ N–1 B
DIM
N–1 A
N–1 B
C+S TALK
AUX1 MASTER
AUX2 MASTER
C TALK
Σ PROGRAM D (Σ ON AIR / D)
Σ PROGRAM A (Σ ON AIR / A)
Σ RECORD/ D
Σ RECORD/ A
AUX 1
AUX 2
TB TO STUDIO
STUDIO MONITOR
EXT. PFL CONTROL
EXT.PFL
EXT. TO PFL
VCA
STUDIO
STUDIO CUT
STUDIO LSP
OFF AIR
EXT.1
EXT.2
EXT.3
EXTERN MONITORING
TB TO TEL
MONITOR SELECT
STUDIO MIC SIGN.
MIC SIGN.
TB TO C.R.MON
EXT TB TO STUDIO
EXT. TB INPUT
EXT TB TO CR
EXTERN TB INPUT
C.R./ DJ MONITOR
VOL CONTR
PFL/TB
C.R.MON.
CR/PFL
MONO
PFL
DJ
GUESTS
C.R. CUT + DIM
CR.LOUDSPEAKER
BUS
2 x INSERTS
RET 1
RET 2
LIM
SEND 1
SEND 2
SYNC INP
WORD CLOCK
AES/EBU
VIDEO
CLOCK GENERATOR
STUDER REGENSDORF SWITZERLAND
ON AIR 1000
BLOCK DIAGRAM AUDIO

2.4 Touch Screen

The LC display has a resolution of 640 × 200 pixels. A cold-cathode fluorescent lamp (CFL) provides the back light, having a typical lifetime (50% brightness) of 10'000 to 15'000 hours (meaning about 13 to 20 months of continuous operation). CFL replacement is very easy, and spare parts are available.

Caution!



The CFL supply voltage is about 400...600 V. Switch the console OFF before opening it!

A touch matrix with 12 × 6 active fields is mounted on the LCD. The touch switches are pressure sensitive and can only switch if a certain force is applied. Therefore the touch matrix function is not influenced by contamination (as fingerprints etc.).

The touch-screen surface consists of a PET foil. *Never use any solvents such as acetone to clean the surface.* Most glass or PC monitor cleaners do a good job.

2.5 User Surface

On the channel sections there is only one PCB (Front Board 1.942.710.xx) which reads all the keys and faders.

The center section consists of three PCBs:

- Control Front Board I (1.942.610.xx) is the controller for the center section. It is mounted behind the LCD and reads the touch matrix, the rotary encoders, as well as all keys and the potentiometers of the monitoring control section.
- Control Front Board II (1.942.111.xx) is the PCB with the control elements for the monitoring (volume controls, keys).
- Control Front Board III (1.942.612.xx) carries the rotary encoders.

2.6 Signal Processing and System Control

The DSP Board (1.942.102.xx) performs the audio functions for the console. All input units are connected to this board via the ribbon cable connectors labeled IMB-1 and IMB-2 (IMB = Input Module Bus). Each IMB consists of an entire six-channel section (6 input units).

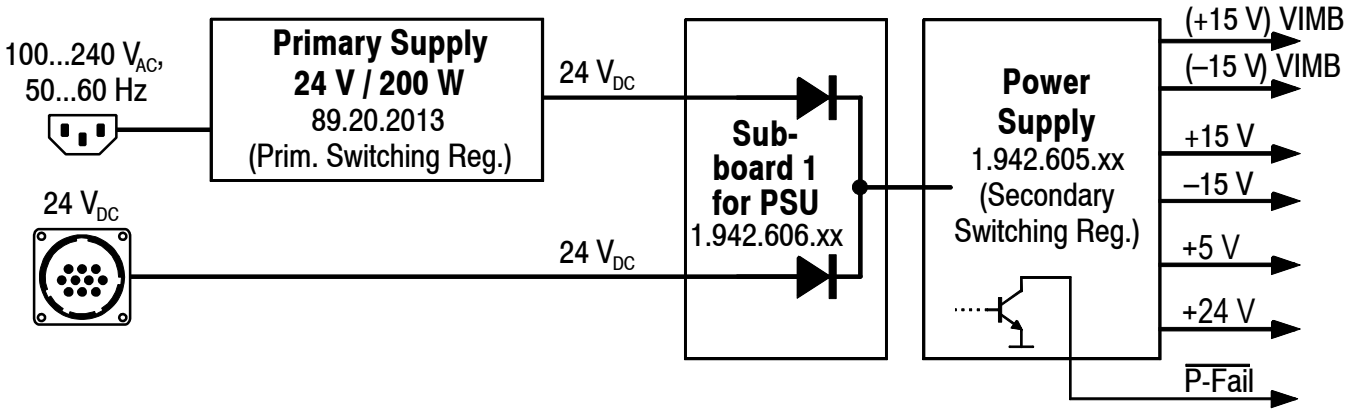
The output units are connected to the Output Module Bus (OMB). All output units, the monitoring section, and the Control Front Board I are connected to the OMB.

For more details refer to the block diagram in the Operating Manual, chapter 1.

2.7 Standard Power Supply Versions

The power supply is made of a primary switching power supply unit, delivering a 24 V_{DC} voltage to the secondary Power Supply that converts this voltage to the required ±15 V, +5 V, and +24 V.
On the Primary Supply unit (89.20.2013) the mains voltage selection is performed automatically. It is short-circuit proof. The fuse, however, is soldered into the circuit and *must not* be replaced in the field. In case of a failure, the complete power supply unit must be replaced.
The secondary Power Supply (1.942.605.xx) generates all the voltages required, except the +48 V phantom power; this voltage is generated on the Controller Board.
Power consumption of an OnAir 1000 console is about 125 VA.

The OnAir 1000 can be powered by the mains voltage (100...240 V_{AC}) as well as by an external 24 V_{DC} voltage (connector labeled "24V DC"). For redundancy, these two power sources can also be connected to the console simultaneously.



Internal/External Fuses

For DC operation there is a fuse (F1: T 8.0 A H 250 V UL/CSA) located on the PSU sub board (see component layout diagram on the next page). In case of failure, this fuse must be replaced by a spare fuse of exactly the same type and value.

Please note that for DC operation, an additional, external fuse is required for cable and connector protection (T 10 A H 250 V UL/CSA)!

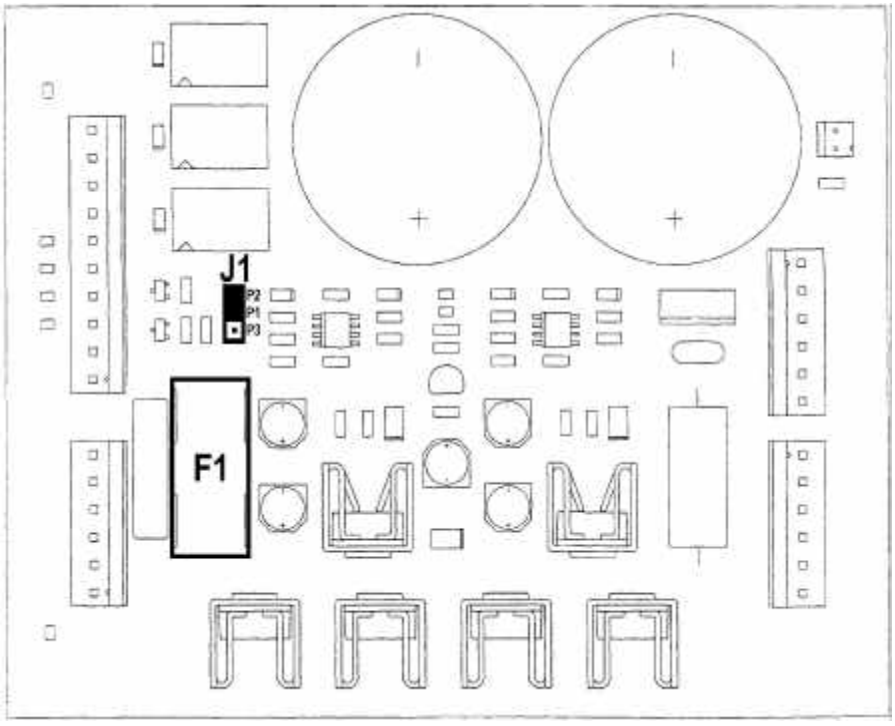
Wiring

If using the 10pin 24 V_{DC} connector, all +24 V pins (no. 1...3) and the GND pins no. 8...10 have to be used in parallel.
Depending on the power supply mode, wire bridges have to be inserted into the 10pin cable socket for correct processing of the power alarm output's voltage thresholds. Refer to the following table:

Supply mode	Bridge(s) from pin no. to pin no.
100...240 V_{AC} only	No bridge required
24 V_{DC} only	6-7 *and* 5-7
100...240 V_{AC} *and* 24 V_{DC}	6-7

Earthing

This unit must be earthed, due to the mains input filter network being connected to the mains earth. Also in case of DC operation, earthing of the unit is mandatory. Refer to chapter 2.2.2 of the OnAir 1000 Operating Manual for details.



Alarm Output

Power alarm is triggered if the internal or external supply voltage drops below 23.0 V; then the POWER ALARM LED on the front panel is illuminated, and a power alarm signal is output on pin 4 of the DC supply connector.

The power alarm signal is a relay contact (max. 40 V/200 mA). Its behaviour depends on jumper J1 on the PSU sub board (see component layout diagram above); either pin 4 is normally floating and pulled to GND if alarm is active (P1 and P2 connected, default factory setting), or pin 4 is normally pulled to GND and becomes floating if alarm is active (P1 and P3 connected).

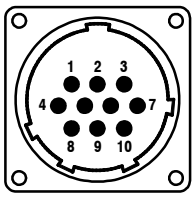
Should the supply voltage drop below 21.6 V, the console automatically shuts down after having stored all relevant data.

For correct start of the console a supply voltage of min. 22.0 V is required.

Pin Assignment

24 V DC connector (10pin, male)

Matching female connector: Hirose JR21PK-10S, order no. 54.20.2010

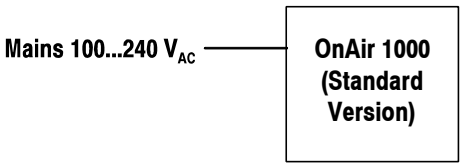


Pin	Signal
1	+22...28 V_{DC}
2	+22...28 V_{DC}
3	+22...28 V_{DC}
4	Power alarm output (see “Alarm Output” above)
5	Power supply select 2 (see “Wiring” above)
6	Power supply select 1 (see “Wiring” above)
7	GND
8	GND
9	GND
10	GND

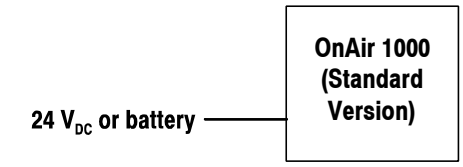
2.8 Redundant (Dual) Power Supply Versions

There exist four basic versions of the OnAir 1000 Digital Mixing Console: Analog- and digitally-biased versions both are available with standard mains and/or 24 V_{DC} supply, as well as with dual, redundant 24 V_{DC} supply together with a separate, external 19" dual supply unit.

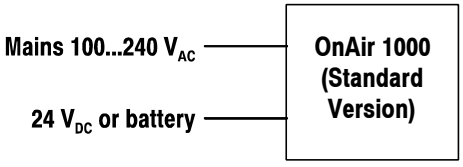
a – Mains voltage operation only, *no redundancy*:



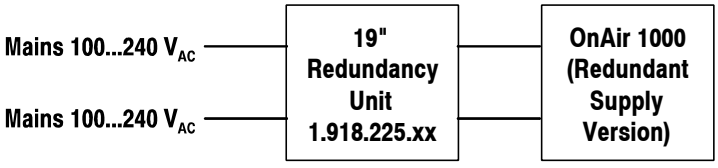
b – 24 V_{DC} operation, *no redundancy*:



c – Mains and 24 V_{DC} operation, *semi-redundant (only primary power supply doubled)*:



d – *Fully redundant version* with ext. 19" unit

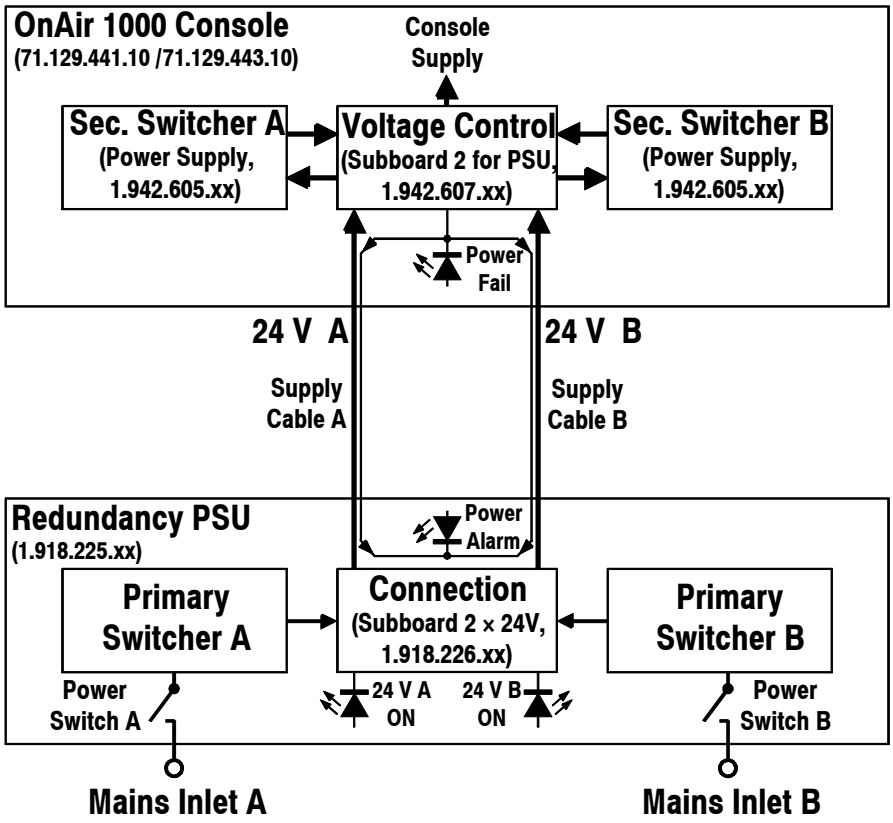


The diagram above shows the different possibilities with the standard versions (a...c) and the dual-supply redundant version (d).

The fully redundant version includes two complete and identical power supply paths, with separate mains inlets (preferably connected to two

different phases of the mains), two mains switches, two primary power supplies, two separate DC cables to the console, and two separate secondary DC-DC converters within the console.
The primary AC/DC converters are contained in an external 19" rack mount case. On the front panel two mains switches are fitted, together with LED indicators for both 24 V voltages and an eventual power alarm. On the rear side two connectors are available for the mains inlet, and two connectors where the supply cables to the console can be attached. The 19" case is equipped with a very low noise fan.

The OnAir 1000 versions with fully redundant power supplies use the existing 24 V_{DC} connector at the rear panel for one of the supply cables. In place of the mains inlet connector of the standard versions there is a second 24 V_{DC} connector for the second cable. The cable harness and the decoupling PCB inside the console are different from the ones of the standard versions, too.



The OnAir 1000 consoles with fully redundant power supply are delivered under two different order numbers (see below) and come complete with the 19" Redundancy PSU. However, the cables have to be ordered separately, depending on the required cable length (two cables required per console).

Internal Fuses

There are *two* fuses (T 8.0 A H 250 V UL/CSA) located on the Sub Board 2 (1.942.607.xx) within the console. In case of failure, these fuses must be replaced by spare fuses of exactly the same type and value.

Alarm Output

Power alarm is triggered if one of the external supply voltages drops below 23.0 V or if one of the internal supply voltages fails. The "POWER FAIL" LED on the console is illuminated; in addition, the power alarm signal is

output on pin4 of both DC supply connectors of the console, illuminating the "POWER ALARM" LED on the front panel of the Redundancy PSU.
The power alarm output is a relay contact (max. 40 V/200 mA). Its behaviour depends on jumper J1 on the PSU sub board (see component layout diagram in the circuit diagrams chapter).
Pin4 is normally floating, and pulled to GND if alarm is active (P8 and P9 connected, default factory setting), or pin4 is normally pulled to GND and becomes floating if alarm is active (P7 and P8 connected).

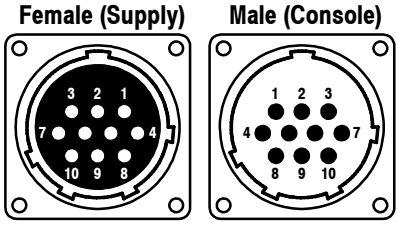
Note: *It is recommended to leave the jumper setting as it is. If it is changed, the POWER ALARM LED on the front panel of the 19" supply unit will be illuminated if everything is alright, and vice versa.*

Power-Down

Should the supply voltage drop below 21.6 V, the console automatically shuts down after having stored all relevant data.
A supply voltage of min. 22.0 V is required for correct start and operation of the console.

Pin Assignment

"**24 V A" and "24 V B" connectors** on the supply unit (10pin, female)
"**24 V A" and "24 V B" connectors** on the console (10pin, male).



Pin	Signal
1	+22...28 V_{DC}
2	+22...28 V_{DC}
3	+22...28 V_{DC}
4	Power alarm output (see "Alarm Output" above)
5	not used
6	PSS1, Power supply select 1 (see "Single Supply for Redundant Version" below)
7	GND
8	GND
9	GND
10	GND

Mating cable connectors: 54.20.2010 (female), 1.918.210.01 (male).

Single Supply for Red. Version

If only <u>one</u> 24 V_{DC} supply should be connected to an OnAir 1000 Redundant Supply Version, this supply <u>must</u> be connected to the console's "24 V A" connector. In such a case, a bridge from pin6 (PSS1) to pin7 (GND) must be inserted in the female 10pin 24 V_{DC} connector. It is recommended to insert this bridge in a second 10pin connector plugged to the console's "24 V B" connector.
Even if there is only one 24 VDC supply, the secondary switchers are still doubled for redundancy.

Ordering Information

OnAir 1000 Analog-biased version, for redundant supply 71.129.441.10
OnAir 1000 Digitally-biased version, for redundant supply... 71.129.443.10

24 V_{DC} connection cable, 2 m *(1 pce.)* 1.925.230.00
24 V_{DC} connection cable, 5 m *(1 pce.)* 1.925.231.00
24 V_{DC} connection cable, 7 m *(1 pce.)* 1.925.232.00
24 V_{DC} connection cable, 10 m *(1 pce.)* 1.925.233.00

Note: Cables must be ordered separately *(2 pcs. needed)*

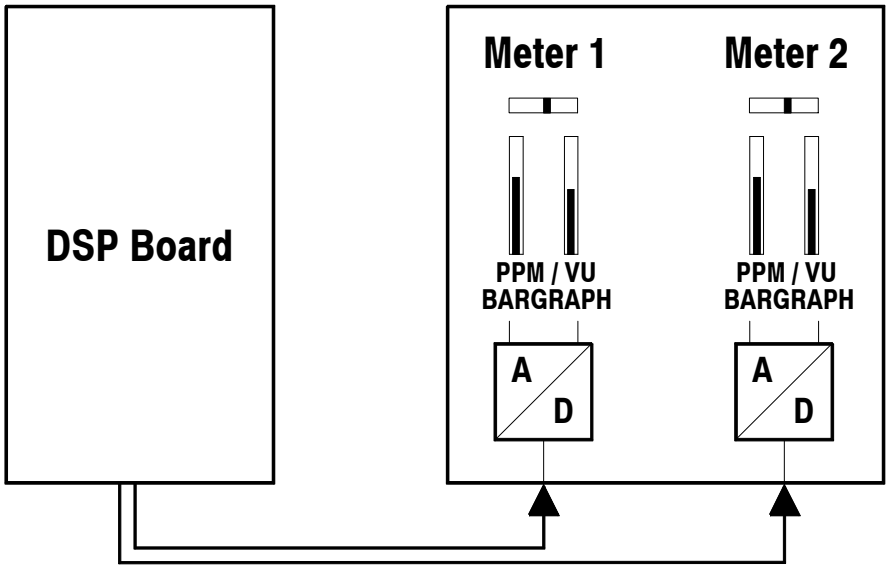
Redundancy PSU, 19" rack-mount external supply unit
(included in the OnAir 1000 Redundant Supply versions)..... 1.918.225.00

OnAir 1000 Analog-biased version, standard supply 71.129.440.10
OnAir 1000 Digitally-biased version, standard supply..... 71.129.442.10

2.9 Level Meters

Since the audio signals delivered from the DSP Board have an internal, so-called “left-justified” format, an interface is required for connecting the meters. This interface is integrated on the Level Meter Board (1.942.613.xx) and provides conversion to analog format for two stereo channels. The Level Meter Board consists of two parts arranged as a “sandwich”.

Note: Within the OnAir 1000 System, it is not possible to install level meters other than the standard Level Meter Board 1.942.613.xx mentioned above. If required, external level meters can of course be connected using the signals at the rear-panel outputs.



For meter alignment and PPM/VU switchover, please refer to chapter 4.3.3

3 CONFIGURATION

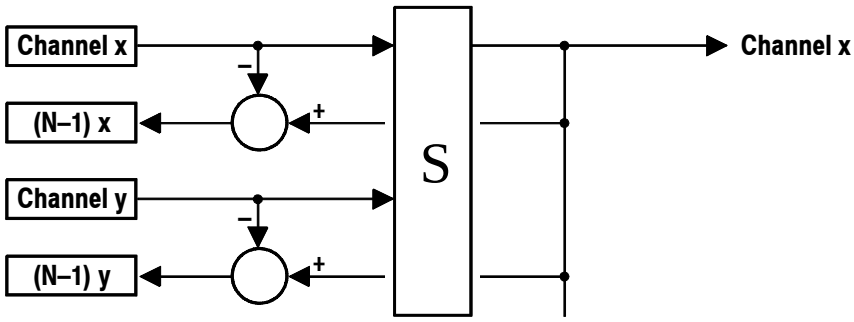
3.1 Software Configuration

The software configuration defines the functionality of the console. SW configuration is described in chapter 11 of the OnAir 1000 Operating Manual.

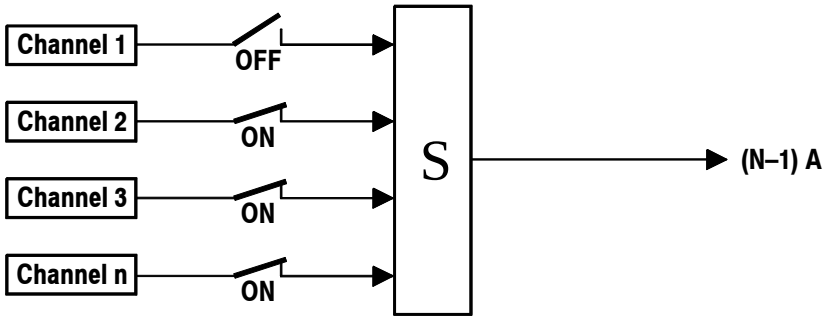
3.1.1 N–1 Configuration

Unlike in analog mixing consoles (where the N–1 signal is derived from the output sum by subtracting a channel signal), the N–1 are separate buses in the OnAir 1000.

N–1 in Analog Mixing Consoles:



N–1 in Digital Mixing Consoles:



The OnAir 1000 has two N–1 buses (N–1 A, N–1 B), both are mono buses. If a certain channel shall be routed to an N–1 bus, the corresponding field in the INPUT CONFIG. page must be defined (refer to chapter 11.2.1 of the OnAir 1000 Operating Manual). Talkback to both N–1 buses is possible from the control room and from the studio.

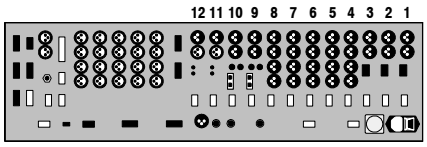
3.1.2 Audition Configuration

The audition bus is similar to the N–1 buses. Configuration is identical. Talkback to the audition bus is not allowed, but it can be selected as a monitoring source in the control room. Therefore it can be used like an N–1 bus where all CR microphones are inhibited. If Audition is selected as the monitoring source, the microphones can be open while the loudspeakers are on, allowing to work without headphones.
The audition bus is a stereo bus, and it can be used as a stereo or mono N–1 bus if talkback is not required.

3.2 Hardware Configuration

The hardware needs correct addressing to allow communication between the software and the installed PCBs. At power-on the software checks if the hardware configuration has changed since the last power-off. In case of a failure (or a configuration mismatch), an information message is displayed to inform the user on the failure (or changes).
For details on hardware configuration, also refer to chapter 15 of the OnAir 1000 Operating Manual.

3.2.1 Input Unit Configuration



All input units are software-controlled and need an individual address setting. On the Mic, Line, and Digital Input Units (i.e., positions 1...10), a DIP switch is used for the PCB addressing. In case of the Talkback Mic Input Units (on positions 11 and 12), the address is set with a jumper. *These addresses are correctly set in the factory. Address setting is required only when replacing a PCB – in this case, just set the DIP switch(es) and/or jumper(s) on the new PCB exactly as on the removed PCB.*

Address setting reference:

PCB Position:		DIP Switch no.: 1	2	3	4	5	6	7	8
1 (Mic In 1)	**7** (Line In 4/Dig. In 2)*	OFF	ON	ON	ON	ON	ON	ON	OFF
2 (Mic In 2)	**8** (Line In 5/Dig. In 3)*	ON	OFF	ON	ON	ON	ON	ON	OFF
3 (Mic In 3)	**9** (Dig. In 1/Dig. In 4)*	OFF	OFF	ON	ON	ON	ON	ON	OFF
4 (Line In 1)	**10** (Dig. In 2/Dig. In 5)*	ON	ON	OFF	ON	ON	ON	ON	OFF
5 (Line In 2)		OFF	ON	OFF	ON	ON	ON	ON	OFF
6 (Line In 3/Dig. In 1)*		ON	OFF	OFF	ON	ON	ON	ON	OFF
* depending on basic console version									

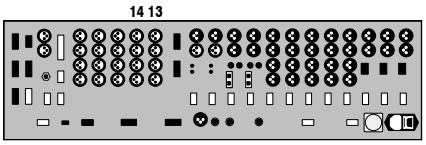
Talkback Mic Input:

PCB Position:	Jumper Position:
11 (TB Mic Input CR)	IN 5
12 (TB Mic Input Studio)	IN 6

For details, refer to chapters 15.1 and 15.2 of the OnAir 1000 Operating Manual. For a drawing of the TB Mic Input Unit, please refer to chapter 4.3.4.

3.2.2 Output Unit Configuration

Digital Output Units

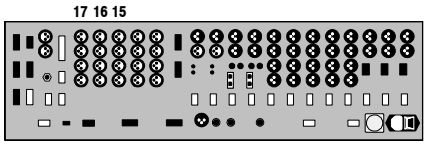


The Digital Output Units (on positions 13 and 14) have two independent digital outputs conforming to the AES3-1992 standard. Each of these has two parallel output drivers. Since the digital output units are software-controlled, two DIP switches (marked A and B on the PCB) are used for selection of the desired output signal. For details, please refer to the table below.

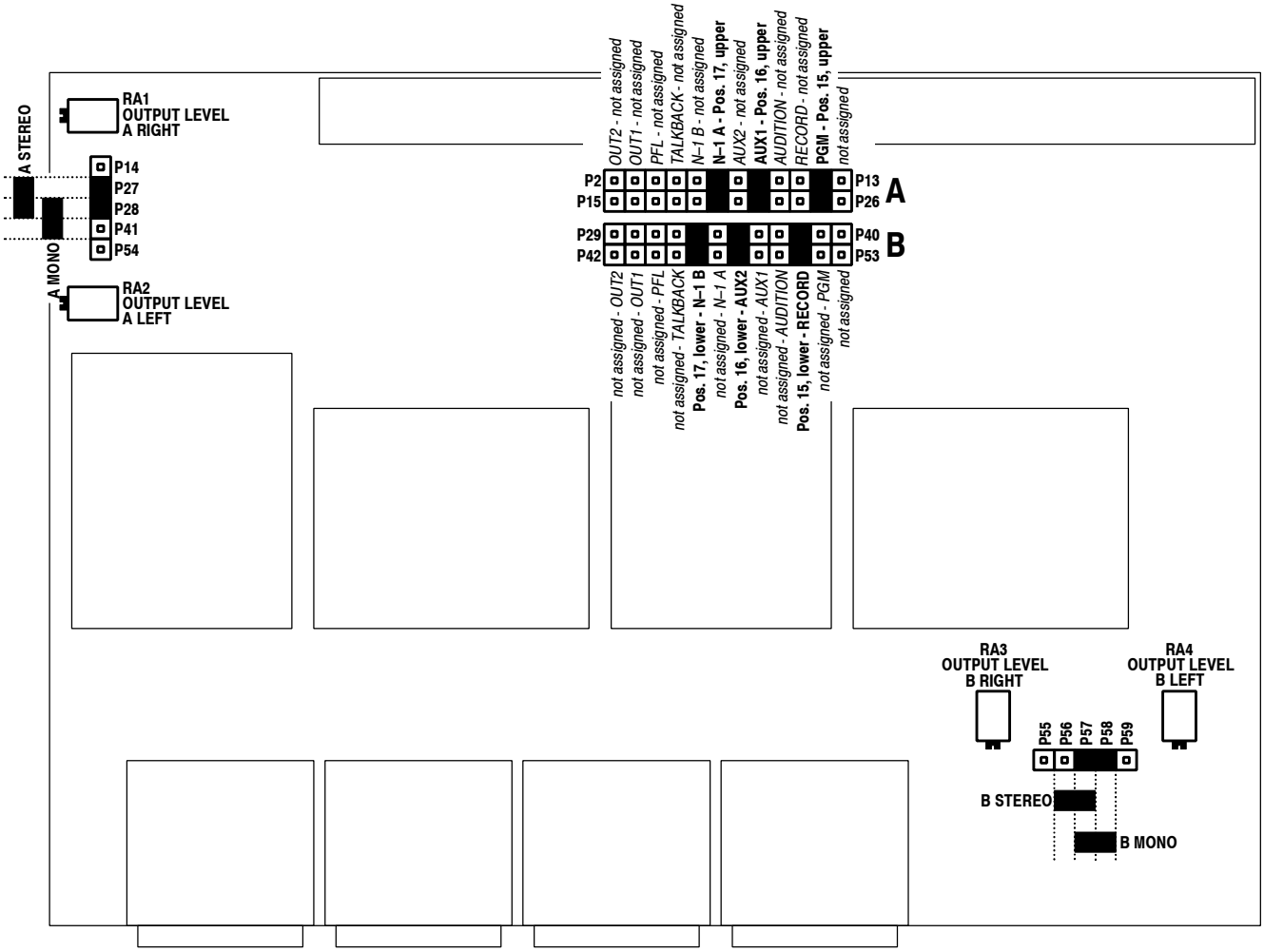
Output Signal and PCB Position	DIP Switch no.: 1	2	3	4	5	6	7	8
PROGRAM (PGM, ON-AIR) **(pos. 13, upper)**	ON	OFF	OFF	ON	ON	ON	ON	OFF
RECORD (REC) **(pos. 13, lower)**	OFF	OFF	OFF	ON	ON	ON	ON	OFF
AUDITION (AUD) *(not assigned)*	ON	ON	ON	OFF	ON	ON	ON	OFF
N–1 A *(not assigned)*	OFF	ON	ON	OFF	ON	ON	ON	OFF
N–1 B *(not assigned)*	ON	OFF	ON	OFF	ON	ON	ON	OFF
AUX 1 **(pos. 14, upper)**	OFF	OFF	ON	OFF	ON	ON	ON	OFF
AUX 2 **(pos. 14, lower)**	ON	ON	OFF	OFF	ON	ON	ON	OFF

Output selection according to the table is correctly set in the factory. It is required only when replacing a PCB – in this case, just set the DIP switch(es) on the new PCB exactly as they are set on the removed PCB.

Analog Output Units



The Analog Output Units (on positions 15...17) have a row of jumper pins for mono/stereo selection and for selecting the desired output signal, individually for each of the outputs A and B. Due to the high component count on the PCB, it was impossible to label the jumper pins; for details, please refer to the illustration below.



Output selection according to the illustration is correctly set in the factory. It is required only when replacing a PCB – in this case, just set the jumpers on the new PCB exactly as they are set on the removed PCB.

3.2.3 DSP Board

On the DSP PCB, the jumper labeled CFG1 must *always*, the jumper labeled CFG0 must *never* be inserted. *Do not change this setting.*

3.2.4 Level Meter Board

Changeover between VU, PPM, and fast PPM operation is done directly on the Level Meter Board; the default factory setting is PPM.
For this changeover, several jumpers must be changed simultaneously, together with adjusting trimmer potentiometers. Please refer to chapter 4.3.3, Level Meters, for adjustment and changeover.

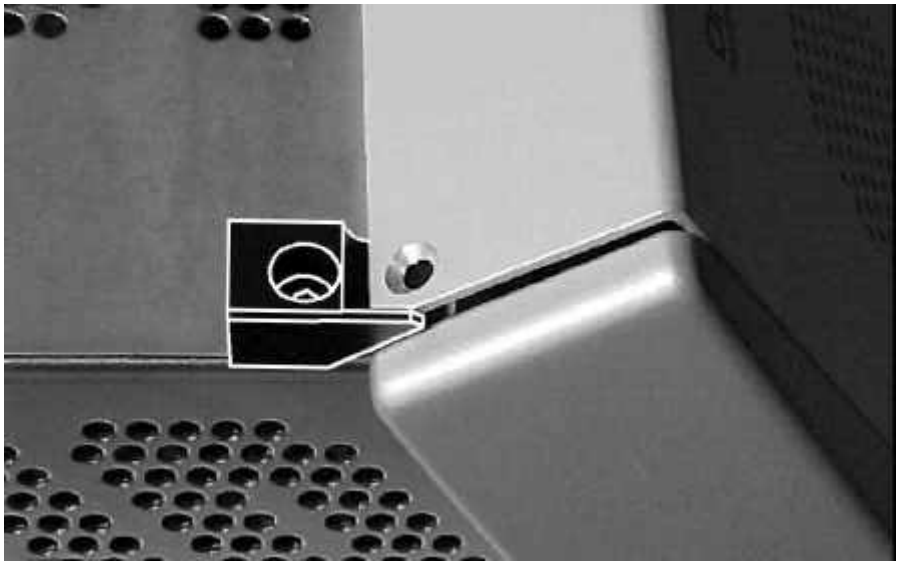
4 SERVICE

Important: Before opening the console for service purposes, make sure to back-up all *snapshots, mic settings,* and *configuration data* on a PC-Card. Please refer to chapter 11.2.8 of the Operating Instructions, “Console Dump”.

Required Tools:

- Allen screwdrivers no. 2 and 2.5, Torx screwdriver no. 7, Hex socket key no. 5.5
- Digital audio signal generator, or CD player with digital output (AES/EBU, or S/PDIF coax/optical) and test CD (sine-wave, 400 Hz, with following levels: –3 dB_{FS}, –5.5 dB_{FS}, –9 dB_{FS} [in-phase and out-of-phase, i.e., one channel inverted], –32 dB_{FS}, –33 dB_{FS}, –42 dB_{FS}; and 1 kHz/–9 dB_{FS} sine-wave bursts [10 ms on, 1.7 s off]).
  If neither a digital audio signal generator nor a test CD should be available, contact Studer Product Support (www.studer.ch).
- Analog audio level meter with balanced input (e.g. AudioPrecision System One, System Two, or Portable One; Neutrik A2)
- Digital voltmeter (e.g. Fluke 23, order no. 10.337.077.00)
- 2-channel oscilloscope (with aligned 10:1 probes)
- Front cover pivot adapters order no. 1.942.500.49
- Extension flat cable for OMB (64 pin) order no. 1.942.500.26
- Extension flat cable for IMB (40 pin) order no. 1.942.500.27

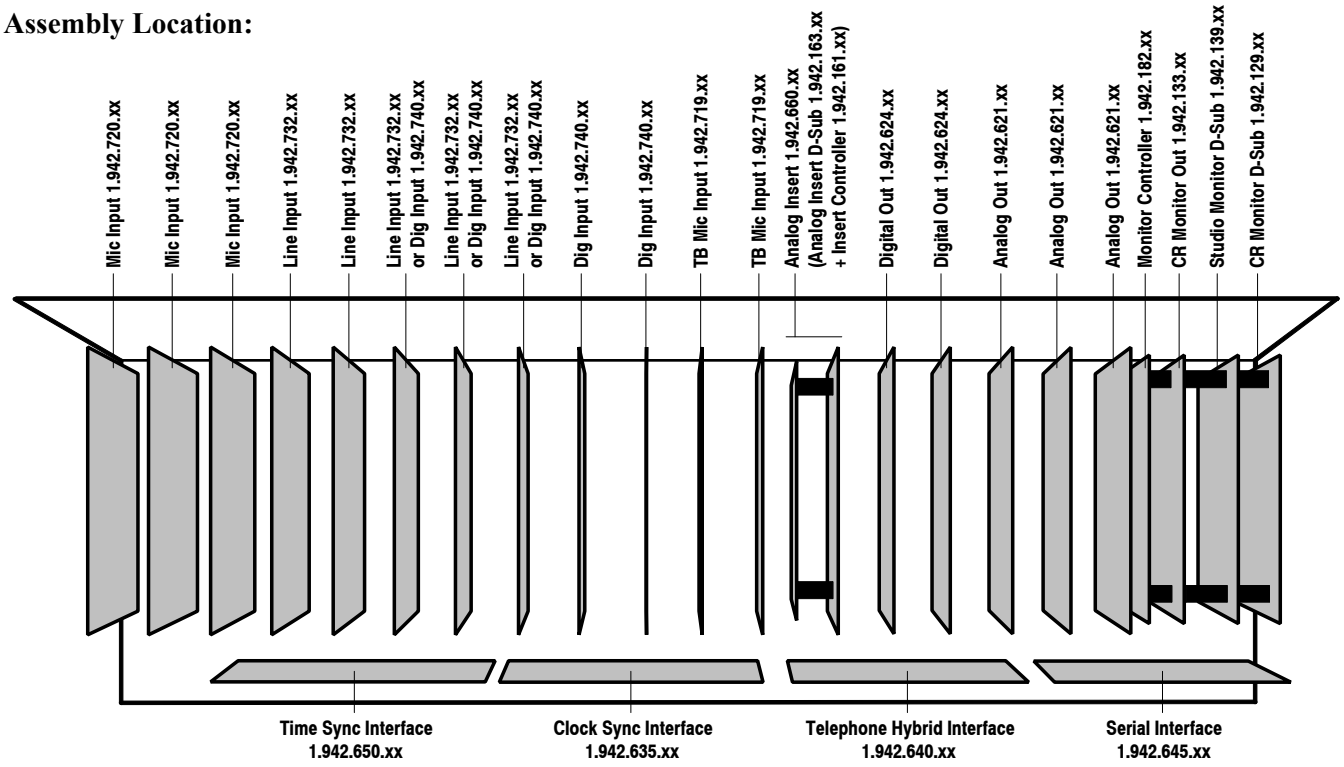
4.1 Opening the Console



- Switch the console off.
- Unscrew the screws of the front cover (2 each at the left and right edges, 3 at the upper edge of the front panel; Allen screwdriver no. 2.5).
- Unscrew the two oval-head screws on top of the rear cover (Allen screwdriver no. 2.5); install the two pivot adapters (1.942.500.49) and fix them with the oval-head screws, as shown above. The pivot adapters protect your unit from scratches.
- *For the following step, please ask a second person for help in order to avoid scratches on your console.*
- Carefully lift the front cover and set it up in a vertical position; the pivot adapters protect the cover from slipping away towards the rear.

4.2 Removing and Inserting Assemblies

Assembly Location:



4.2.1 Input and Output Assemblies

Removal:

- Open the console, as described in chapter 4.1.
- Unplug all connectors to the assemblies mounted on the front cover and put the front cover aside.
- Now the input and output assemblies can be accessed. These assemblies are mounted to the rear panel of the console and interconnected via multi-pin flat cables (Input Module Bus, IMB / Output Module Bus, OMB).
- Unlock and unplug the multipin connector of the PCB to be removed as well as the ones of the assemblies at the right and at the left of the PCB concerned.
- Unscrew the screws of the PCB to be removed at the rear panel – depending on the type of PCB, Torx screwdriver no. 7 and/or Hex Socket key no. 5.5 and/or Allen screwdriver no. 2.
- Now the PCB can be carefully removed.

Installation:

Note: Spare assemblies come pre-aligned, so usually no alignment is necessary – unless the levels at the analog outputs of your console are different from the standard setting. In such a case, set the output levels according to your requirements. Setting the output levels must be done with the output assemblies removed from the console, so this is now a good moment to perform this setting – refer to chapter 4.3.2.

- *Correct setting of jumpers and/or DIP switches is important for correct function of the console. For details, refer to chapter 15 of the Operating Instructions. When replacing an PCB, copy the jumper and DIP switch positions from the old PCB to the new one.*

- Installation of a PCB is performed in reverse order of its removal: Insert the PCB into the console, fasten it with the corresponding screws, connect the daisy-chain cable, and lock the multipin connectors.
- After having re-installed the front cover with all the connections, perform a function check of your console. If your console must be operated with an input or output unit missing, a message appears on the center touch-screen. Acknowledge by touching the ACCEPT field.

4.2.2 Interface Assemblies

This paragraph deals with the removal and installation of the interface assemblies, i.e. the ones mounted horizontally at the bottom of the rear panel (Serial IF, Telephone Hybrid IF, Clock Sync IF, and Time Sync IF).
Yes, you're perfectly right, this is a kind of gourmet menu, for advanced service engineers with steady hands and ultra-stable nerves only. All others please keep out for their own health and happiness!

Removal:

- Open the console, as described in chapter 4.1.
- Unplug all connectors to the assemblies mounted on the front cover and put the front cover aside.
- Remove the rear panel: Unscrew 2 Allen screws no. 2.5 on its top, 2 on its upper rear side, and 4 on its lower rear side.
- Now the complete rear panel can be removed. Do this very carefully, possibly with the help of a second person, in order to avoid scratches on your console. The length of the internal wiring is sufficient to put down the rear panel on the table with the connectors facing downwards.
- Unlock and unplug the multipin connector of the PCB to be removed.
- Unscrew the screws of the PCB to be removed at the rear panel – depending on the type of PCB, Torx screwdriver no. 7 and/or Hex socket key no. 5.5 and/or Allen screwdriver no. 2.
- Now the PCB can be removed.

Installation:

- *Correct setting of jumpers and/or DIP switches is important for correct function of the console. For details, refer to chapter 15 of the Operating Instructions. When replacing an PCB, copy the jumper and DIP switch positions from the old PCB to the new one.*
- Installation of an PCB is performed in reverse order of its removal. Insert the PCB into the console, fasten it with the corresponding screws, connect the flat cable, lock the multipin connector, and reinstall the rear panel.
- After having re-installed the front cover with all the connections, perform a function check of your console. If your console must be operated with an input or output unit missing, a message appears on the center touch-screen. Acknowledge by touching the ACCEPT field.

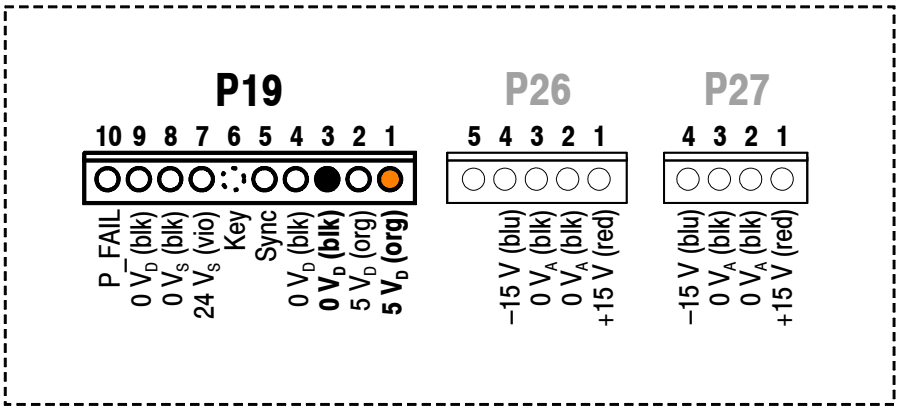
4.3 Alignment

4.3.1 Power Supply 1.942.605.xx

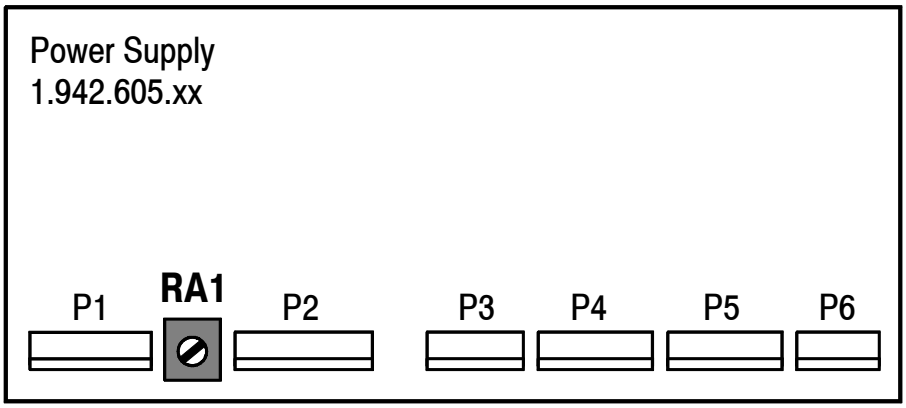
The +5 V_D (digital) is the only voltage that can be aligned.

Procedure:

Measure the +5 V_D supply between pins 1 and 3 of P19 on the DSP board.



Set the measured voltage to exactly **+5.2 V** with RA1 on the Power Supply Board 1.942.605.xx, as shown below:



4.3.2 Analog Outputs 1.942.621.xx

Initial Setup: Perform the fader 0 dB point alignment for all faders, according to chapter 13.3.1 of the OnAir 1000 Operating Manual.
Touch the MIXER SETUP field on the touch-screen, followed by SYSTEM CONFIG and INPUT. The INPUT CONFIG. page will appear. Adjust all analog line level inputs to your specified nominal level and headroom (default factory values: nominal level +6 dBu, headroom 9 dB).

Input Signal: *If using an analog signal generator:* Feed an analog 400 Hz signal with your specified nominal level to both (L and R) inputs of an analog line input unit (e.g. CH4). Select the corresponding input of this channel by pressing the A or B key in the channel strip.
If using a digital signal generator: Feed a digital 400 Hz stereo audio signal of 400 Hz to a digital input unit (e.g. CH9). The generator must provide a digital output level of "–(your headroom) dB_{FS}" (i.e., if your headroom setting is 11 dB, the generator must be set to –11 dB_{FS}). Select the correct input connector on the INPUT CONFIG. page (XLR, RCA, or TOS). Select the corresponding input of this channel by pressing the A or B key in the channel strip.
If using a test CD: If no test generator should be available, a CD player with an appropriate test CD and connected to a digital input does a good job as well. If your test CD should provide different levels, refer to the examples in the following table for setting the output level:

Test CD level (1 kHz sine-wave):	0 dB_{FS}	–3 dB_{FS}	–6 dB_{FS}	**–9 dB_{FS}**	–10 dB_{FS}	–12 dB_{FS}	–20 dB_{FS}
Output level @ 9 dB headroom:	+15 dBu	+12 dBu	+9 dBu	**+6 dBu**	+5 dBu	+3 dBu	–5 dBu

For Consoles with Serial No. 1282 and above:

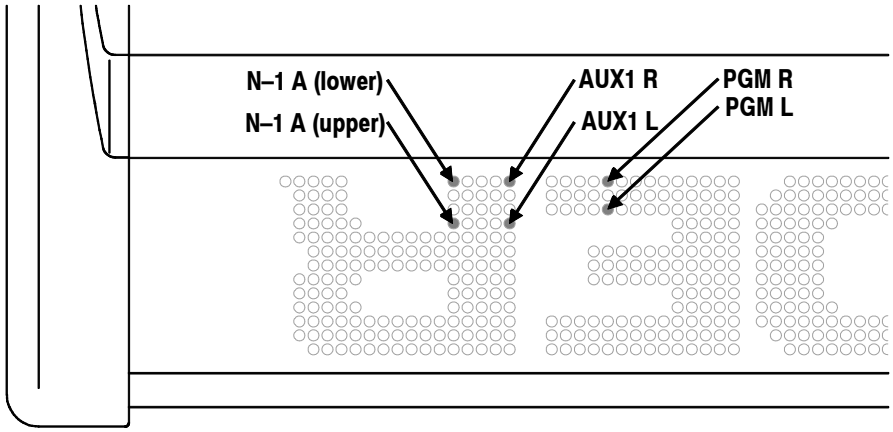
For the most recent console versions, no removal of the Analog Output Units is required for the output level adjustment. The trimmer potentiometers are accessible through the air vent holes in the upper and rear covers, as shown in the illustrations below. *Please note that some of the air vent holes are not perfectly in-line with the trimmer potentiometers, so it is recommended to watch through the other holes when inserting the alignment tool. It is absolutely necessary to use an insulated alignment tool in order to avoid damage by short-circuits.*

- First, perform the steps "Initial Setup" and "Input Signal" at the beginning of this chapter.
- Select the Channel Control page (e.g. "I 9A"): Touch HOME and press the SEL key of the corresponding channel. Perform the following settings on the Channel Control page:
  MODE: ST (stereo), LR (normal stereo mode)
  PHASE: NORM
  CAL: 0 dB
  Routing:
  - To the PGM and REC outputs; the ΣPROGRAM and ΣRECORD touch-screen fields must be highlighted.
  - To the AUX outputs: Activate the ON and PF touch-screen fields for both AUX 1 and AUX 2 outputs. Set the AUX 1 and AUX 2 gain to 0 dB. This position is marked with a dash.

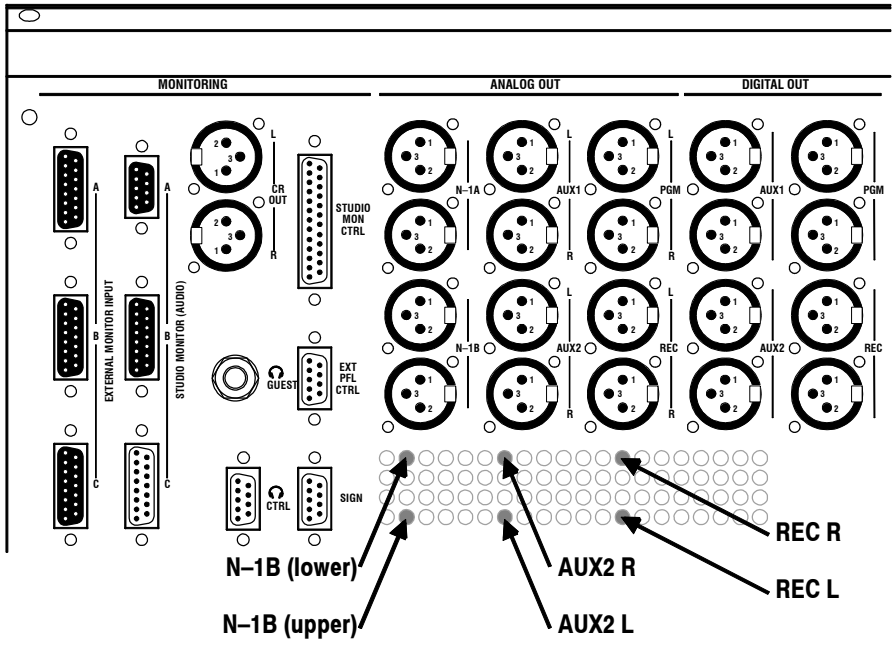
  BAL: center position.

- AUX master setting:
  - Select the AUX MASTER/INSERT page by touching the AUX & INSERT field. Activate the ON touch-screen fields for both AUX 1 and AUX 2 masters. Set the AUX 1 and AUX 2 gain to 0 dB. This position is marked with a dash.
  - Select the OUTPUT CONFIG. page by touching MIXER SETUP followed by OUTPUT. Select STEREO for both AUX 1 and AUX 2.
- N–1 setting:
  - Select the INPUT CONFIG. page of the corresponding input channel by touching MIXER SETUP followed by INPUT. Then touch the BUS ASSIGNMENT field. Select ALWAYS for both N–1 A and B.
  - Touch TEL/N–1/AUDIT. On the appearing page, set the N–1 A and B gain to 0 dB. This position is marked with a dash.
- Switch the equalizer off by pressing the EQ key if it is illuminated.
- Switch the corresponding channel ON, and set its channel fader as well as the PGM and REC faders to their 0 dB position.
- Connect an analog audio level meter to one of the output connectors.
- Align for a reading of your desired *nominal level (default factory setting: +6 dBu)* on the audio level meter; refer to the illustrations. *Due to the mono mixing matrix of the N–1 outputs, the level measured on these outputs is 1.5 dB above nominal level.*

Console Top View:



Console Rear View:



- Repeat this procedure for each of the four output connectors of each of the three Analog Output Units.

Notes: Please consider that maximum undistorted level of the analog outputs is +23 dBu (@ 0 dB_{FS}) into a 300 Ω load. When setting the output levels, do not exceed a value of +14 dBu (with an input signal of –9 dB_{FS}), considering the standard headroom margin of 9 dB.
Once finished, don't forget to re-establish the console settings as they were before the alignment procedure.

For Consoles with Serial No. 1281 and below:

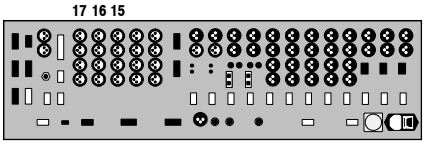
- Select the Channel Control page (e.g. "I 9A"): Touch HOME and press the SEL key of the corresponding channel. Perform the following settings on the Channel Control page:
  MODE: ST (stereo), LR (normal stereo mode)
  PHASE: NORM
  CAL: 0 dB
  Routing: to the PGM and REC outputs; the ΣPROGRAM and ΣRECORD touch-screen fields must be highlighted.
  BAL: center position.
- Switch the equalizer off by pressing the EQ key if it is illuminated.
- Switch the console off.
- Open the console according to chapter 4.1, but leave the front cover connected so that the console remains operative.
- Remove the Analog Output Unit to be aligned (refer to chapter 4.2.1) and re-connect it to connector P71 of the DSP board using the 64pin extension cable 1.942.500.26. Reconnect the daisy-chain flat cable of the Output Module Bus to the extension cable. Now the Analog Output Unit can be placed in front of the console on an insulating sheet, e.g. a piece of cardboard. Put down the console front cover, but don't fix it with its screws.
- Set the jumpers of the Analog Output Unit temporarily to RECORD (for the lower/"B" output connectors) and to PGM (for the upper/"A" output connectors), select STEREO for both outputs A and B; refer to the illustration on the following page.
- Switch the console on again.
- Switch the corresponding channel ON, and set its channel fader as well as the PGM and REC faders to their 0 dB position.
- Connect an analog audio level meter to one of the PCB's output connectors.
- Align for a reading of your desired *nominal level (default factory setting: +6 dBu)* on the audio level meter; select the corresponding trimmer potentiometer according to the table below.

Output:	Align with:
PGM/A, right	RA1
PGM/A, left	RA2
REC/B, right	RA3
REC/B, left	RA4

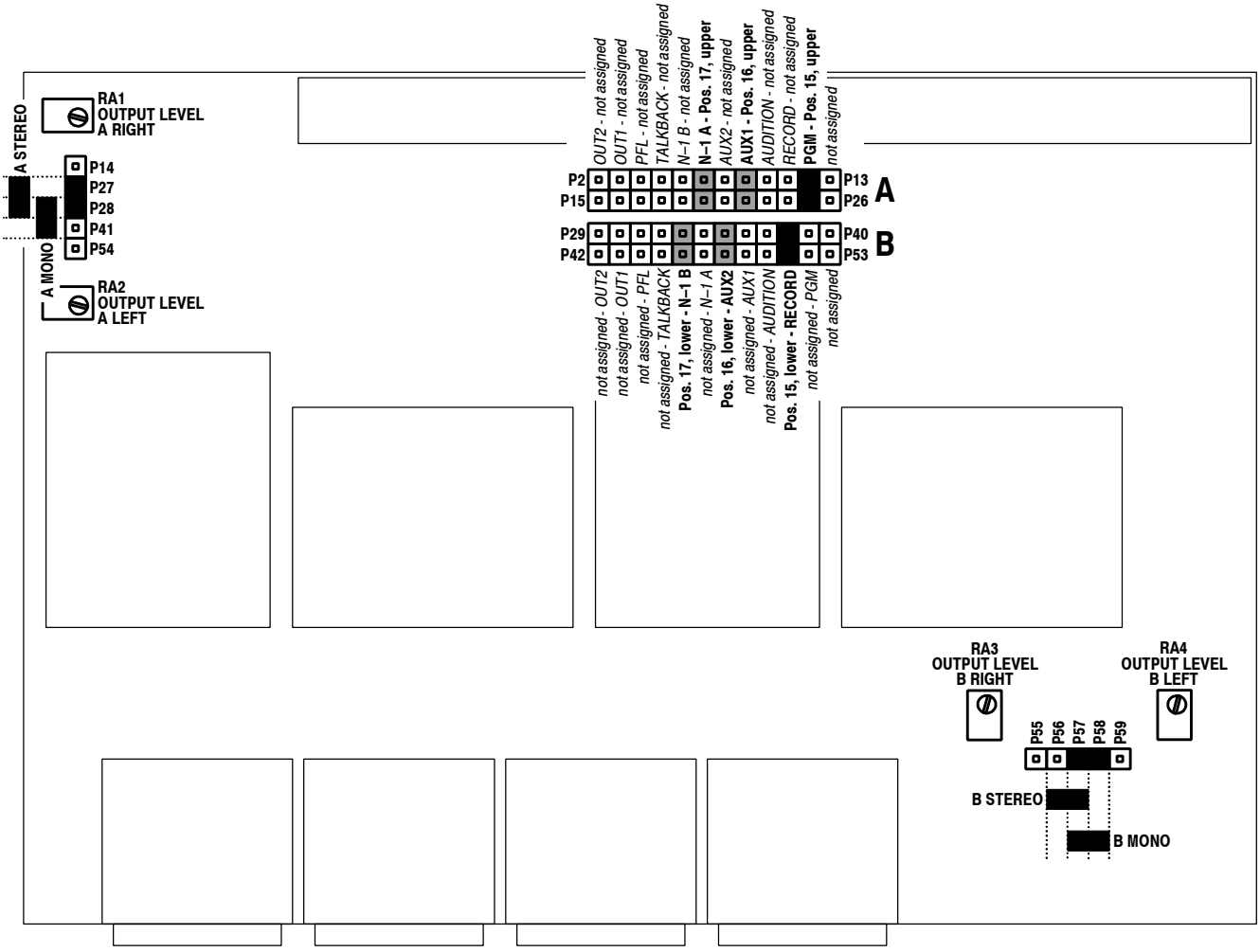
- Repeat this procedure for each of the four output connectors of each of the three Analog Output Units.

Note: Please consider that maximum undistorted level of the analog outputs is +23 dBu (@ 0 dB_{FS}) into a 300 Ω load. When setting the output levels, do not exceed a value of +14 dBu (with an input signal of –9 dB_{FS}), considering the standard headroom margin of 9 dB.

PCB Locations 15...17:



Analog Output Units: Temporary jumper setting to PGM and RECORD – see jumper positions marked in black:



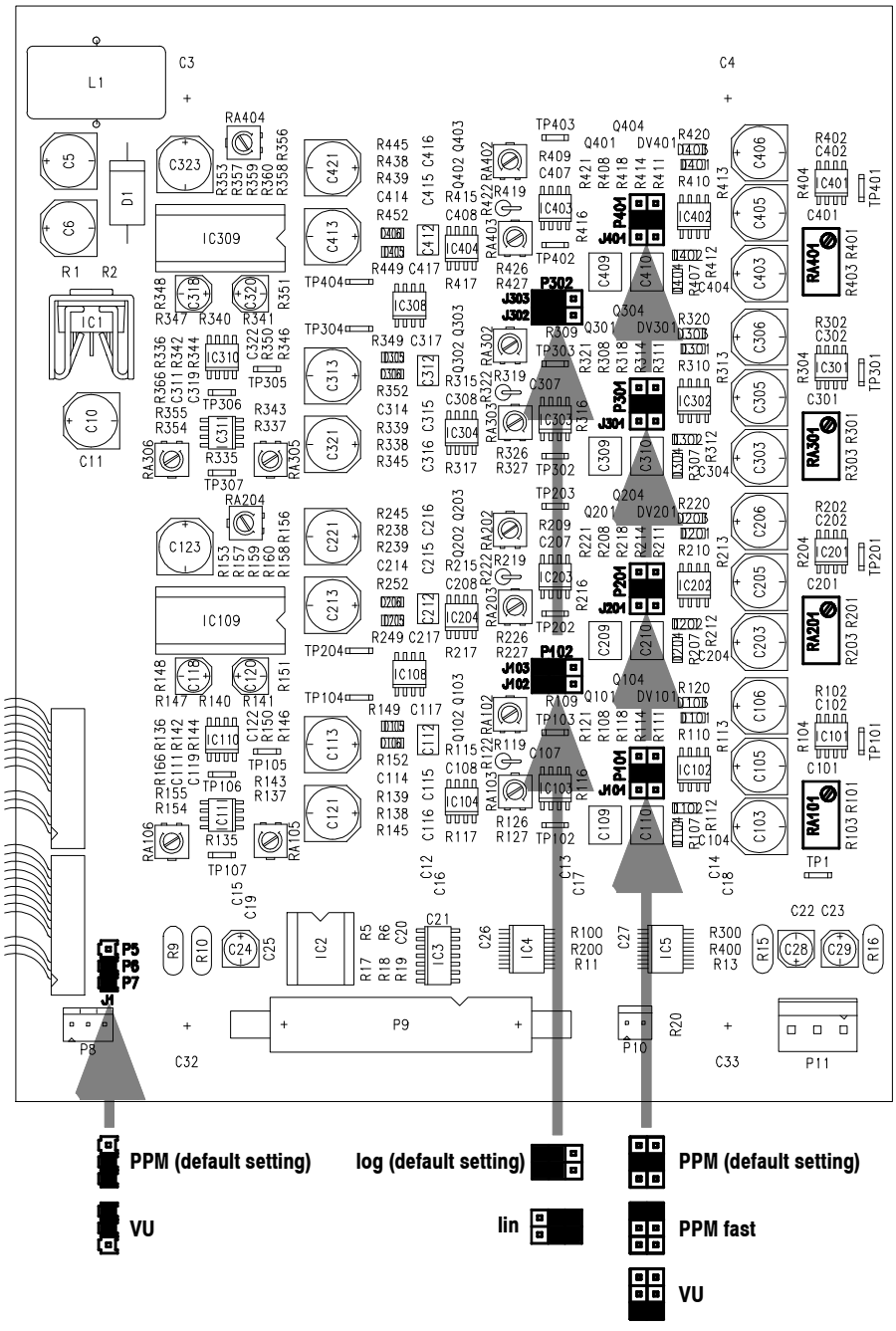
Notes: The two other default factory jumper positions (marked in gray) are valid for the AUX1/2 outputs (PCB in location 16) and for the N–1 A/B outputs (PCB in location 17).

Once finished, don't forget to set the jumpers back to their original positions and to re-establish the console settings as they were before the alignment procedure.

4.3.3 Level Meter 1.942.613.xx

Prerequisite: *The console is set to a nominal level of +6 dBu and to 9 dB headroom (adjustment in the INPUT CONFIG. page of the analog line inputs).*

Notes: Changeover between VU, PPM, and PPM fast operation is done directly on the Level Meter PCB; PPM is the default factory setting. *For this changeover, several jumpers must be changed simultaneously, together with aligning trimmer potentiometers.* Please refer to the drawing below. *Please consider that a re-calibration of the trimmer potentiometers RA101 to RA401 must always be performed after a change of the display characteristics (PPM to VU, or vice versa).*



Jumper Setting: **J101...J401:** Meter characteristics selection

PPM: Peak Program Meter (default factory setting)

PPM fast: Peak Program Meter with reduced fall time

VU: Standard VU meter.

(cont.) *It is recommended to set all four jumpers to the same position – having different meter characteristics in one single console doesn't make sense.*

J102, J103, J302, J303: Logarithmic/linear selection
log: for PPM and PPM fast
lin: for VU only.
It is recommended to set all four jumpers to the same position – having different meter characteristics in one console doesn't make sense.

J1: LED switchover
Set this jumper according to the PPM/VU setting with jumpers J101...J401.

Procedure:

- Perform the fader 0 dB point alignment for all faders, according to chapter 13.3.1 of the OnAir 1000 Operating Manual.
- Touch the MIXER SETUP field on the center touch-screen, followed by SYSTEM CONFIG and INPUT. The INPUT CONFIG. page will appear.
- Press the SEL key in the strip of the input channel where your CD player or generator is connected (e.g. Ch9). Select the corresponding input of this channel by pressing the A or B key in the channel strip. Select the correct input connector (XLR, RCA, or TOS).
- Select the Channel Control page (e.g. "I 9A") by touching HOME and pressing the SEL key of the corresponding channel again.
- Perform the following settings on the Channel Control page:
  MODE: ST (stereo), LR (normal stereo mode)
  PHASE: NORM
  CAL: 0 dB
  Routing: to the PGM and REC outputs; ΣPROGRAM and ΣRECORD touch-screen fields must be highlighted.
  BAL: center position.
- Switch the EQ off by pressing the EQ key if it is illuminated.
- Select the LEVEL METER page (touch MIXER SETUP field on the center touch-screen, followed by SYSTEM CONFIG and LEVEL METER). Switch METER 1 SOURCE to PROGRAM, and METER 2 SOURCE to RECORD.
- Switch the corresponding channel ON, and set its channel fader as well as the PGM and REC faders to their 0 dB position.
- Switch the console off.
- Connect a digital signal generator (400 Hz) to one of the digital inputs (e.g. Channel 9); a CD player with an appropriate test CD does a good job as well.
- Open the console according to chapter 4.1, but leave the front cover connected so that the console remains operative.
- Switch the console on again.
- Set the jumpers on the Level Meter PCB to the desired positions according to the diagram above.

Meter in PPM Mode:

1. Make sure that all parameters are correctly set according to the "Procedure" paragraph above.
2. Set jumpers J101/201/301/401 to the *PPM* positions (or *PPM fast*, if required), and jumpers J102/103/302/303 to the *LOG* positions.
3. Trimmer potentiometer preset:
   Set RA102/202/302/402 to center
   Set RA103/203/303/403 to position "2 o'clock"
4. Feed a 400 Hz, –3 dB_{FS} sine-wave signal to the console.

5. Align for a reading of **–1.00 ±0.02 V_{DC}**, using the test points and trimmer potentiometers according to the table below.

Meter no.:	Test point:	Align with:
Meter 1 left	TP102	RA101
Meter 1 right	TP202	RA201
Meter 2 left	TP302	RA301
Meter 2 right	TP402	RA401

6. Align for a reading of **+3.06 ±0.10 V_{DC}**, using the test points and trimmer potentiometers according to the table below.

Meter no.:	Test point:	Align with:
Meter 1 left	TP103	RA102
Meter 1 right	TP203	RA202
Meter 2 left	TP303	RA302
Meter 2 right	TP403	RA402

Check: All green LEDs plus 4 red LEDs must be illuminated.

7. Feed a 400 Hz, –33 dB_{FS} sine-wave signal to the console.
8. Align for a reading of **+560 ±20 mV_{DC}**, using the test points and trimmer potentiometers according to the table below.

Meter no.:	Test point:	Align with:
Meter 1 left	TP103	RA103
Meter 1 right	TP203	RA203
Meter 2 left	TP303	RA303
Meter 2 right	TP403	RA403

Check: 4 green LEDs must be illuminated.

9. Repeat steps no. 4 to 8 above until optimum alignment is reached.
10. Feed a 400 Hz, –9 dB_{FS} sine-wave signal to the console. *All green LEDs must be illuminated.* A slight correction with RA101/201/301/401 may be necessary.
11. For checking the integrator stage, feed a 1 kHz, –9 dB_{FS} sine-wave burst signal (10 ms ON, 1.7 s OFF) to the console. *All green LEDs must be illuminated.* Please note that the top green LED is illuminated for a very short time only. To improve visibility during this check, the other green LEDs can be covered, e.g., with a sheet of paper.
12. If required, proceed with the "Correlator Meter Setting" paragraph below.

Note: *Once finished, make sure to re-establish the console settings as they were before the alignment.*

Meter in VU Mode:

1. Make sure that all parameters are correctly set according to the "Procedure" paragraph above.
2. Set jumpers J101/201/301/401 to the *VU* positions, and jumpers J102/103/302/303 to the *LIN* positions.
3. Feed a 400 Hz, –9 dB_{FS} sine-wave signal to the console.
4. Align for 0 dB indication on the meters, using the trimmer potentiometers according to the table below.

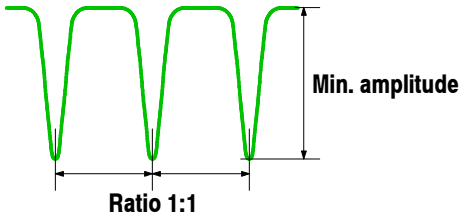
Meter no.:	Align with:
Meter 1, left	RA101
Meter 1, right	RA201
Meter 2, left	RA301
Meter 2, right	RA401

Check: All green LEDs must be illuminated.

5. Check the voltages at the following test points:
   TP101/201/301/401: **285 mV_{AC}**
   TP102/202/302/402: **–370 ±20 mV_{DC}**
   TP103/203/303/403: **+2.55 ±0.10 V_{DC}**
6. Feed a 400 Hz, –5.5 dB_{FS} sine-wave signal to the console.
   Check: All LEDs of the bargraph must be illuminated.
   Check the voltages at the following test points:
   TP103/203/303/403: **+3.8 V_{DC} ±0.1 V**
7. Feed a 400 Hz, –32 dB_{FS} sine-wave signal to the console.
   Check: Only the lowest green LED of the bargraph must be illuminated.
8. Check the voltages at the following test points:
   TP103/203/303/403**: +170 mV_{DC} ±30 mV**
9. If required, proceed with the "Correlator Meter Setting" paragraph below.
10. *Once finished, make sure to re-establish the console settings as they were before the alignment.*

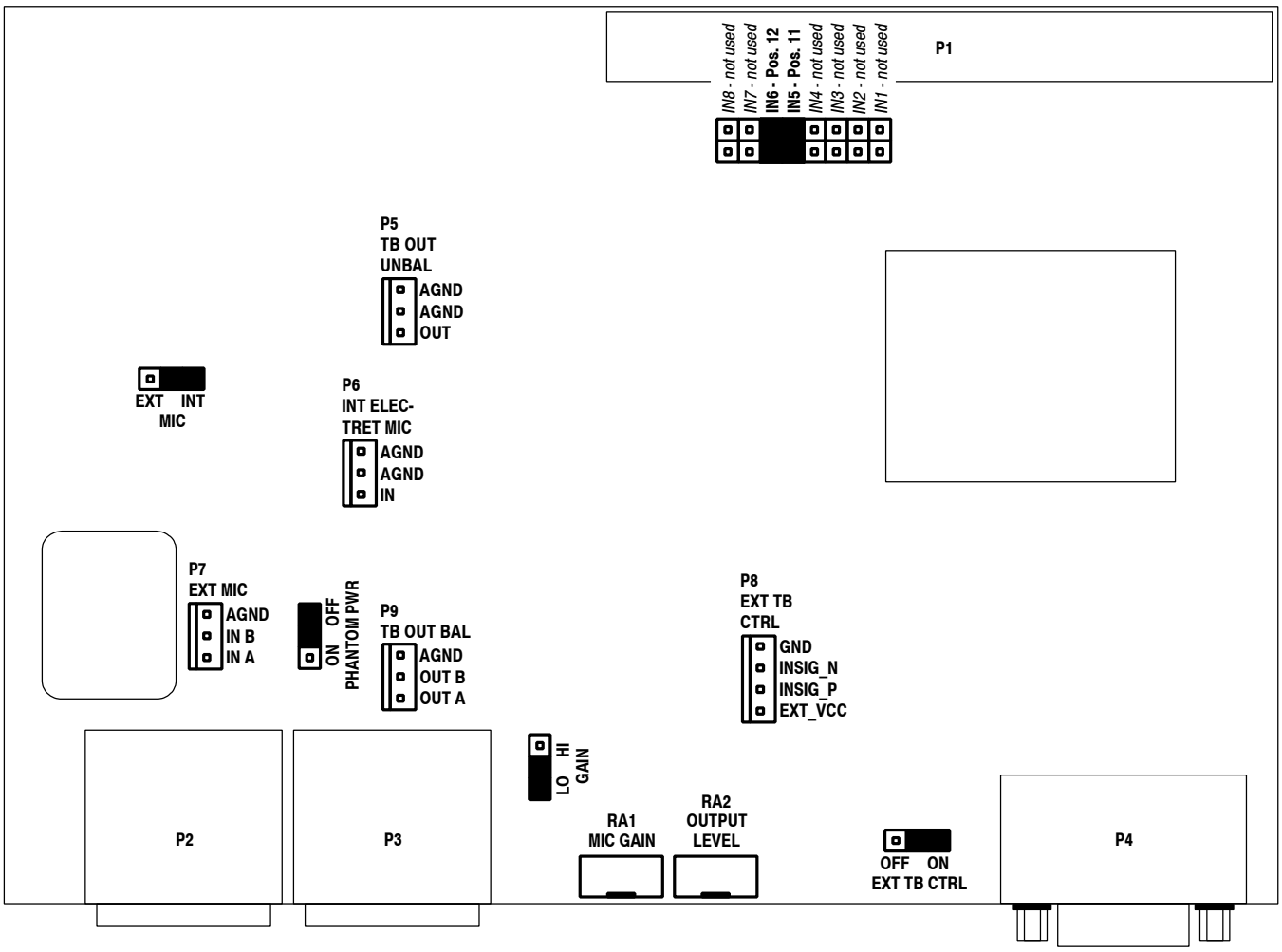
Correlator Meter Setting:

1. The correlator meter can be aligned regardless of the VU or PPM meter setting.
2. Make sure that all parameters are correctly set according to the "Procedure" paragraph above.
3. For the following adjustment, an oscilloscope with a 10:1 probe is required. Set the Oscilloscope to: x = 0.5 or 1 ms/div.; y = 0.2 V/div., select AC coupling, and proceed with step no. 4.
   If no oscilloscope should be available, setting the trimmer potentiometers RA204 and RA404 to their center positions is a tolerable makeshift solution. In such a case, proceed with step no. 8.
4. Feed a 400 Hz, –42 dB_{FS} sine-wave signal to the console.
5. Connect the scope probe to pin 6 of IC109.
6. Measured wave form, typical:



   Adjust the pulse duration ratio with trimmer potentiometer RA204 to 1:1; the pulse amplitude becomes then minimal.
   The measured wave form is depending on the input signal level.
7. Connect the scope probe to pin 6 of IC309 and perform the same adjustment with RA404.
8. Feed a 400 Hz, –9 dB_{FS} sine-wave signal, L/R out of phase, to the console.
9. Align for a reading of **+1.35 ±0.20 V_{DC}**, using the test points TP107/307 and trimmer potentiometers RA105/305.
   Check: Only one LED at the far left of the bargraph scales is illuminated.
10. Feed a 400 Hz, –9 dB_{FS} sine-wave signal, L/R in phase, to the console.
11. Align for a reading of **+200 ±5 mV_{DC}**, using the test points TP107/307 and trimmer potentiometers RA106/306.
    Check: Only one LED at the far right of the bargraph scales is illuminated.
12. Repeat steps no. 8 to 11 above until optimum alignment is reached.
13. *Once finished, make sure to re-establish the console settings as they were before the alignment.*

4.3.4 TB Mic Input 1.942.719.xx



Jumper Setting: MIC INT/EXT Input selection – either internal, unbalanced microphone (i.e. the built-in electret TB mic with fixed supply voltage), connected to P6, or external, balanced microphone with switchable phantom power, connected to P2 or to P7. *Factory setting for TB Mic Input "CR": INT MIC; for TB Mic Input "Studio": EXT MIC.*

PHANTOM PWR ON/OFF Selection of 48 V phantom power for the balanced mic input (P2 or P7). *Factory setting: PHANTOM PWR OFF.*

GAIN HI/LO For the internal standard electret TB mic, the LO position (nominal input level: –60 dBu) is used. In HI position, the mic input gain is increased by 20 dB, i.e. nominal input level –80 dBu. *Factory setting: GAIN LO.*

EXT. TB CTRL ON/OFF Activates or deactivates the external TB control input on P4 or P8. *Factory setting: EXT. TB CTRL ON.*

IN1...8 Address selection. *Factory setting for TB Mic Input "CR" (i.e., the built-in electret TB mic): IN5; for TB Mic Input "Studio": IN6. These jumper positions must not be changed.*

On-Board Connectors:

P6 Internal electret TB mic input (unbalanced, with fixed supply voltage)

P7 External, transformer-balanced mic input (parallel to XLR connector P2)

P5 Unbalanced TB output

P9 Transformer-balanced TB output (parallel to XLR connector P3)

P8 External TB control input (parallel to D-type connector P4).

Alignment:

MIC GAIN Depending on the output level of the microphone used, the limiter threshold is aligned with the MIC GAIN trimmer potentiometer (RA1). For the internal standard electret TB mic (nominal output level –60 dBu), the MIC INT/EXT jumper is set to the INT position, the GAIN jumper is set to the LO position. Connect an AF voltmeter to the unbalanced TB OUT connector (P5 on the PCB). Then a sine-wave signal (approx. 1 kHz with a fixed level of –60 dBu is fed to the INT ELECTRET MIC connector (P6 on the PCB), and the MIC GAIN trimmer potentiometer is aligned to a level just below the point where no more output level increase is measured.
If an other microphone is used, the appropriate input connector, jumper settings and input signal level must be used.

OUTPUT LEVEL After the MIC GAIN alignment, the level of the balanced TB mic output – available at the XLR connector OUT (P3), or at the AMP connector TB OUT SYM (P9) on the PCB – is aligned with the OUTPUT LEVEL trimmer potentiometer (RA2) to the desired nominal level.

4.3.5 Insert 1.942.660.xx

The analog insert assembly needs to be sent to the factory for alignment. Replacement assemblies come pre-aligned.

4.3.6 Monitoring 1.942.182.xx, 1.942.133.xx, 1.942.139.xx, 1.942.129.xx

Monitoring assemblies need to be sent to the factory for alignment. Replacement assemblies come pre-aligned.

5 SERVICE TERMINAL

A service terminal connector is provided for servicing the OnAir 1000.

The Service Terminal Task enables the user to bypass the "normal" user interface and approach the system in a more direct way. This is used in two specific cases:

Service and Maintenance (normal user mode)

- Enable/disable the output of errors, warnings, and information on the service terminal. (Filter for errors, warnings, and information).
- System data (current console status, console configuration, etc.) can be dumped to the service terminal.
- For integration test use, parts of the system data can be transferred to the service terminal.
- Shutdown or reset the console.

Debugging and Testing (extended user mode, *for factory tests and experts only*)

There are some software debugging functions that are hidden to the normal user. In addition to the normal user mode, these functions can also read and write memory contents, and communicate with other tasks directly (i.e. not through the command interpreter).

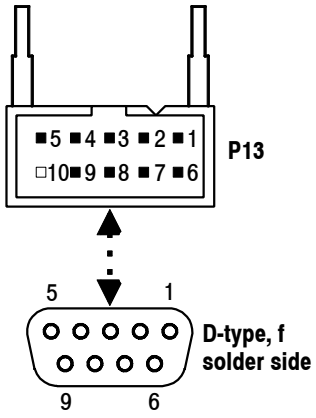
- System data (current console status, console configuration, etc.) can be displayed on the service terminal.
- Any message can be generated and sent to any task in the system.
- Task message communication can be displayed individually on the service terminal.
- Telegrams to any bus can be generated and posted.
- Telegram flow can be displayed on the service terminal for each bus (input/output, DSP bus...) individually.
- Telegram polling period can be determined, or telegram polling can be suppressed by time-out 0.
- Any memory position can be displayed and written.
- Any flash-memory position (bit range, section no., address) can be displayed and written.

It is important to notice that the service terminal must not be used during the normal operation of the console. Functions and modes activated from the service terminal can strongly affect the console's performance. Some debug and test functions can even corrupt the system data and cause a system crash.

The service terminal command structure is similar to the DOS directory level structure; if a service terminal command is not finished, the header of the next command line indicates the level reached. Extended user mode (i.e. debug) is a level, too, in this context. The command for leaving a level is similar to the DOS command ("..").

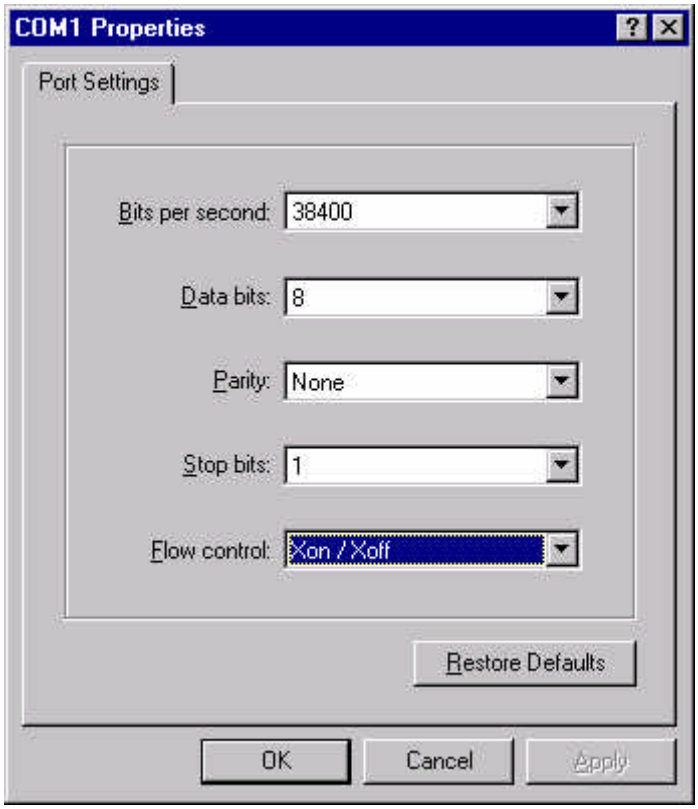
5.1 Connecting Cable

The terminal is connected to the 10-pin header connector (P13) labeled "SERVICE TERMINAL" on the Controller Board. The connecting cable is a straight 10-pin header to 9-pin D-type cable, where wire no. 10 is not used at the D-type connector side; a standard ribbon cable works fine, provided that its length does not exceed 2...3 m.



Almost any ASCII terminal capable of handling 38.4 kBaud will work; the Windows95 "HyperTerminal" or "Procomm" have been tested.

The following terminal settings must be used:



5.2 SW Update via the Service Terminal

Procedure

1. Dump all snapshots, mic settings, and configuration data to a PC-Card or to the service terminal.

2. Connect the cable between the PC (COM1 or COM2) and the OnAir 1000 ("service terminal" connector on the controller board). To do this, you have to open the console, refer to chapter 4.1.

3. After pressing ENTER or switching the console on, you will see the message
   `ServIf:\`
   on the terminal.
   If you enter **`?`** followed by ENTER, you will see a list of all possible debug commands.

4. To download the new software you need to type
   `startdownload serviceterminal`, followed by ENTER at the prompt.

5. Then send the file OA1000.ABS as a text file.
   This procedure will take about 10...15 min to complete the download.

6. Reload all snapshots, mic settings, and configuration data from the PC-Card or the service terminal.

5.3 Service Terminal Commands and Examples

Below, a series of Service Terminal commands is listed; for each command, a possible reaction of the console is given as well. Most commands are self-explaining. *However, please be aware of the fact that for using some of the commands, additional knowledge and skills are required.*

Lost Admin Password: See page 5-9, **ServIf:\debug\disp\uc:userID> 0**

```
ServIf:\>?
    Orthography :
    =============
    Service-Monitor operation is modelled on DOS-Command
    and -Directory Structure.
    - command-line-header indicates the state(-level)
    - several commands (separated by ' ' or '\') are possible
    - if a command is not finished, then the next level is achieved
    - '..' is used to get one level back

    ENTER             exec command
    SPACE or \        separate commands
    BS                backspace
    ESC               delete line
    CTRL_V            insert mode on/off
    CTRL_X            repeat(exec) last command
    CTRL_N            restore last line
    CTRL_L            cursor one character left
    CTRL_R            cursor one character right
    CTRL_B            cursor one word left
    CTRL_F            cursor one word right

    Commands :
    ==========
    DOWN              simulates a PowerDown : puts a PowerFail-
                      Telegram in the Inp-Queue of Diagnostics-And-
                      Error-Handling-Task
    FILTER            change to FILTER-mode : suppress/display
                      ERROR-, INFO- and WARNING- messages
    CAL               change to CALIBRATE-mode : send a FaderCal-
                      Message to Surface Controller 1/2/3/4/all
    IFXWS             Examines IFX Workspace and displays WorkspaceSize,
                      ActualUsedWorkspace and NumberWorkspaceTooSmall
    STARTDOWNLOAD     change to STARTDOWNLOAD-mode (Start SW Update)
                      SW from SERVICE TERMINAL or PC CARD
    STOPDOWNLOAD      Cancel SW Update
    PGMASKSINIT       Init PGMasks
    DUMP              change to DUMP-mode (dump ConsoleConfiguration,
                      GlobalSnapshots, PrivateSnapshots.. to Service Terminal)
    CHECK             change to CHECK-mode (for Integration use)
    CCODE             0xFFFFFFFF  Enter your customer code
    RQS               resets the Queue statistics to its initial values


ServIf:\debug>?
    DISP <par>                              change to DISPLAY-mode
                                            disp Conf- and Par-Tables
    MEM <addr> <val>                        change to MEMORY-mode
                                            disp and change memory
    FLASH <bitrng> <secno> <addr> <val>     change to FLASH-ERASE-MODE
                                            erase a section of FlashMemory
    TDEB <busid> <on/off>                   change to TDEB-mode
                                            debug incoming Telegrams
    TSEND <busid> <tel0> ...                change to TSEND-mode
                                            send a Tel. to a xx-bus
    TPOLL <busid> <val>                     change to TPOLL-mode
                                            timeout to suppress polling
    MDEB <mq> <on/off>                      change to MDEB-mode
                                            debug incoming Messages
    MSEND <mq> ...                          change to MSEND-mode
                                            send a msg to a xx-queue
    DSP <lqstart/lqstop>                    change to DSP-mode
                                            used for LQSTART/LQSTOP
    plus all Commands of ROOT-mode
```

```
ServIf:\debug\disp>?
    CCH               display   Console Configuration Header
    CSH               display   Current Console State Header
    GCC               display   Global Console Configuration
    SC                display   Surface Configuration
    SI(:module-no>)   display   System Identification
    UC(:userID)       display   User Configuration
    CC                display   Channel Configuration
    IC(:input-no>)    display   Input Configuration
    CCP               display   Channel Common Parameters
    CIP(:input-no>)   display   Channel Input Parameters
    MP                display   Monitoring Parameters
    PDP               display   Profanity Delay Parameters
    ASP               display   Aux Send Parameters
    IAP               display   Insert Assign Parameters
    CRP               display   Channel Routing Parameters
    SCP               display   Snapshot Control Parameters
    DP                display   Diagnostics Parameters
    CUC               display   Customer Code Parameters
    USER              display   User Parameters
    TIP               display   Timer Parameters
    AP                display   Automation Parameters
    ACP               display   Automation Channel Parameters


ServIf:\debug\mem>?
     <addr>          display memory position (poss. to change)
     term. by <ENTER>  display(change) one
     term. by <space>  display(change) and increment address


ServIf:\debug\tdeb>?
    Tel-Debug autob is        off.
    Tel-Debug cmbus is        off.
    Tel-Debug  iomb is        off.
    Tel-Debug   spi is        off.


ServIf:\debug\tdeb>iomb on
ServIf:\debug\tdeb>
    Tdeb(s)  iomb : 20 80 01
    Tdeb(r)  iomb : 20 -- FF
    Tdeb(s)  iomb : 20 81 01
    Tdeb(r)  iomb : 20 -- FF
    Tdeb(s)  iomb : 20 82 01
    Tdeb(r)  iomb : 20 -- FF
    Tdeb(s)  iomb : 20 83 01
    Tdeb(r)  iomb : 20 -- FF
    Tdeb(s)  iomb : 20 84 01
    Tdeb(r)  iomb : 20 -- FF
    ....
    ....
    Tdeb(s)  iomb : 24 8C 05 iom
    Tdeb(s)  iomb : 20 80 01
    Tdeb(r)  iomb : 20 -- FF
    Tdeb(s)  iomb : 20 81 01
    Tdeb(r)  iomb : 20 -- FF
    ....
    ....
    Tdeb(r)  iomb : 24 -- FF
    Tdeb(s)  iomb : 24 8C 01
    Tdeb(r)  iomb : 24 -- FF b
    Tdeb(s)  iomb : 20 80 05
    Tdeb(s)  iomb : 20 81 05
    ....
    ....
    Tdeb(s)  iomb : 24 8B 05
    Tdeb(s)  iomb : 24 8C 05 off
```

```
ServIf:\debug\tsend>?
    AUTOB            to send Telegrams to Automation
    IOMB             to send Telegrams to Input/Output Module
    CMBUS            to send Telegrams to Control Module


ServIf:\debug\tpoll>?
    IOMB             to set polling rate on Input/Output Module Bus
    CMBUS            to set polling rate on Control Module Bus


ServIf:\debug\mdeb>?
    Msg-Debug    iomb is        off.
    Msg-Debug    cmbu is        off.
    Msg-Debug    diag is        off.
    Msg-Debug    chan is        off.
    Msg-Debug hwaudio is        off.
    Msg-Debug    dspb is        off.
    Msg-Debug    hwui is        off.
    Msg-Debug    monc is        off.
    Msg-Debug    cpgc is        off.
    Msg-Debug    flpg is        off.
    Msg-Debug    frpg is        off.
    Msg-Debug    lpgc is        off.
    Msg-Debug    rpgc is        off.
    Msg-Debug    conf is        off.
    Msg-Debug    time is        off.
    Msg-Debug    hwic is        off.
    Msg-Debug    serv is        off.
    Msg-Debug    card is        off.
    Msg-Debug    snap is        off.
    Msg-Debug    auto is        off.
    Msg-Debug    auif is        off.


ServIf:\debug\mdeb>
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37
    Mdeb :  time : 37 tim
    Mdeb :  time : 37 e o
    Mdeb :  time : 37 ff


ServIf:\debug\msend>?
     <queue-name>    determine a <queue-name>-Queue
                     for sending a Message
                     Queues : iomb, cmbu, diag, chan, hwaudio, dspb, hwui
                        monc, cpgc, flpg, frpg, lpgc, rpgc, conf
                        time, hwic, serv, card, snap, auto, auif


ServIf:\debug\dsp>?
    LQSTART                          start asking overloads
    LQSTOP                           stop asking overloads
```

```
ServIf:\debug\disp>dp
    DIAGNOSTICS PARAMETERS :
    ========================

    Main PLL State                              unlocked
    Video PLL State                            undefined

    Queue Statistics:

    Queue Name   Buffer  Max.    Buffer    Queue Name   Buffer  Max.    Buffer
                  full  message  free                    full  message  free

       iomb        0      0       93.1         cmbu       0      0      100.0
       diag        0      0      100.0         chan       0      0       93.1
    hwaudio        0      0       76.8         dspb       0      0       99.0
       hwui        0      0       95.2         monc       0      0      100.0
       cpgc        0      0       99.6         flpg       0      0       96.4
       frpg        0      0      100.0         lpgc       0      0       97.6
       rpgc        0      0      100.0         conf       0      0      100.0
       time        0      0      100.0         hwic       0      0       96.4
       serv        0      0      100.0         card       0      0      100.0
       snap        0      0      100.0         auto       0      0       82.0
       auif        0      0       99.3


    ON-AIR 1000 MODULE SETUP :
    ==========================
                                            Number
    Module                        Type     of Inputs     Present

    CPU Mainboard                                       yes
    Channel Front Board 1                               yes
    Input Module Channel  1          mic inp      2     yes
    Input Module Channel  2          mic inp      2     yes
    Input Module Channel  3          mic inp      2     yes
    Input Module Channel  4     ana line inp      2     yes
    Input Module Channel  5     ana line inp      2     yes
    Input Module Channel  6     dig line inp      2     yes
    Channel Front Board 2                               yes
    Input Module Channel  7     dig line inp      2     yes
    Input Module Channel  8     dig line inp      2     yes
    ....
    ....
    Control Front Board                                 yes
    Pgm Digital Output                                  yes
    Record Digital Output                               yes
    Aux 1 Digital Output                                yes
    Aux 2 Digital Output                                yes
    N-1 A Digital Output                                 no
    N-1 B Digital Output                                 no
    Audition Digital Output                              no
    Monitor Module                                      yes
    Insert Module 1/2                                   yes
    Insert Module 3/4                                    no
    Time Sync Module                                    yes
    Clock Sync Module                                   yes
    Tel Hybrid Module                                   yes
    General Purpose Module                               no
    Channel DSP  1                                      yes
    Channel DSP  3                                      yes
    Channel DSP  5                                      yes
    ....
    ....
    Channel DSP 19                                       no
    Channel DSP 21                                       no
    Channel DSP 23                                       no
    Sum DSP                                             yes
    Insert DSP                                          yes
    Aux DSP                                             yes
    Number of channels       12
    Insert 1/2 Type              analog
    Insert 3/4 Type              analog
```

```
ServIf:\debug\disp>cch
    CONSOLE CONFIGURATION HEADER :
    ==============================

    SW-Version                              V4.0 23.01.2002
    Number of Channels                                   24
    Checksum                                         0x294b


ServIf:\debug\disp>csh
    CURRENT CONSOLE STATE HEADER :
    ==============================

    Block in Use                                     In Use
    Checksum                                         0x2971


ServIf:\debug\disp>gcc
    GLOBAL CONSOLE CONFIGURATION :
    ==============================

    PFL Bus Source             PF (PFL)
    PFL Cut when Chn active         yes   CR DIM when Audition     don't care
    Insert 1/2 Type              analog   Insert 3/4 Type              analog
    Meter 1 Source              program   Meter 2 Source               monitor
    Service Term. baudrate   38400 baud   SerModuleBus2 baudrate   38400 baud
    Program digital standard    aes/ebu   Record digital standard     aes/ebu
    Aux 1 digital standard      aes/ebu   Aux 1 output type            stereo
    Aux 2 digital standard      aes/ebu   Aux 2 output type            stereo
    N-1 A digital standard      aes/ebu   N-1 A output type              mono
    N-1 B digital standard      aes/ebu   N-1 B output type              mono
    Audition digital std        aes/ebu   Audition output type         stereo
    Sync source                internal
    Sampling rate                48 kHz   Watch sync source  time sync module
    Daylight saving change          yes   MEST Offset                       0
    Profanity delay time            0 s   Profanity Delay Option           no
    ON-AIR Indication               pgm   Billing Enable                   no
    DCF 77 Option                    no   LAURA Mode                       no
    Number of Faders                 24
    Default Pgm Master Level 0.0          Default Rec Master Level 0.0
    Time Synch Protocol        2


ServIf:\debug\disp>sc
SURFACE CONFIGURATION :
    ======================

    Function of channel KEY 3                   off-func
    Operationg Mode                          normal mode
    Display Mode                                advanced
    Time Format                                   europe
    Date Format                                 DD.MMM.YY
    Function of KEY F1                          mon ext 4
    Function of KEY F2                          mon ext 5
    Function of KEY F3                          mon ext 6
    Function of KEY F4                          mon ext 7
    Function of KEY F5                          mon ext 8


ServIf:\debug\disp\si:module>2
    SYSTEM IDENTIFICATION :                  Module    2
    ======================

    Module : Channel Front Board 1           Present : yes
    Software ID                                    0.30
```

```
ServIf:\debug\disp\uc:userID>1
    USER CONFIGURATION :   userID    1
    ====================

    User Name                       DEFAULT USER
    User Password                   ''
    Accept Error allowed            yes
    Insert allowed                  yes
    Aux Send allowed                yes
    Audition Level allowed          yes
    N-1 Level allowed               yes
    Aux 1 (chn) allowed             yes
    Aux 2 (chn) allowed             yes
    Phase allowed                   yes
    Phantom allowed                 yes
    Stereo allowed                  yes
    Gain/Cal allowed                yes
    Pan/Bal allowed                 yes
    Sum allowed                     yes
    Eq allowed                      yes
    Input Selection allowed         yes
    System Configuration allowed    yes
    Channel Routing allowed         yes
    Default channel routing init    no

    Chn        assigned   sel.   protect      Chn        assigned   sel.   protect
                Fader   Input                              Fader   Input
    1            1        A       no         14           14        A       no
    2            2        A       no         15           15        A       no
    3            3        A       no         16           16        A       no
    4            4        A       no         17           17        A       no
    5            5        A       no         18           18        A       no
    6            6        A       no         19           19        A       no
    7            7        A       no         20           20        A       no
    8            8        A       no         21           21        A       no
    9            9        A       no         22           22        A       no
   10           10        A       no         23           23        A       no
   11           11        A       no         24           24        A       no
   12           12        A       no         PGMMASTER    NONE              no
   13           13        A       no         RECMASTER    NONE              no


ServIf:\debug\disp\uc:userID>   0
    USER CONFIGURATION :   userID    0
    ====================

    User Name                       ADMIN
    User Password                   'ADMIN'
    Accept Error allowed            yes
    Insert allowed                  yes
    Aux Send allowed                yes
    Audition Level allowed          yes
    N-1 Level allowed               yes
    Aux 1 (chn) allowed             yes
    Aux 2 (chn) allowed             yes
    Phase allowed                   yes
    Phantom allowed                 yes
    Stereo allowed                  yes
    Gain/Cal allowed                yes
    Pan/Bal allowed                 yes
    Sum allowed                     yes
    Eq allowed                      yes
    Input Selection allowed         yes
    System Configuration allowed    yes
    Channel Routing allowed         yes
    Default channel routing init    no
```

ServIf:\debug\disp>cc

CHANNEL CONFIGURATION :
==========

Chn	Input Type	Number of Inputs	Array of Input Identification ID1	ID2	ID3	ID4	ID5	ID6	Auto Ctrl
1	mic inp	2	1	2	no	no	no	no	no
2	mic inp	2	3	4	no	no	no	no	no
3	mic inp	2	5	6	no	no	no	no	no
4	mic inp	2	7	8	no	no	no	no	no
5	mic inp	2	9	10	no	no	no	no	no
6	mic inp	2	11	12	no	no	no	no	no
7	ana line inp	2	13	14	no	no	no	no	no
8	ana line inp	2	15	16	no	no	no	no	no
9	ana line inp	2	17	18	no	no	no	no	no
10	ana line inp	2	19	20	no	no	no	no	no
11	ana line inp	2	21	22	no	no	no	no	no
12	ana line inp	2	23	24	no	no	no	no	no
13	ana line inp	2	25	26	no	no	no	no	no
14	ana line inp	2	27	28	no	no	no	no	no
15	ana line inp	2	29	30	no	no	no	no	no
16	ana line inp	2	31	32	no	no	no	no	no
17	ana line inp	2	33	34	no	no	no	no	no
18	ana line inp	2	35	36	no	no	no	no	no
19	ana line inp	2	37	38	no	no	no	no	no
20	ana line inp	2	39	40	no	no	no	no	no
21	dig line inp	2	41	42	no	no	no	no	no
22	dig line inp	2	43	44	no	no	no	no	no
23	dig line inp	2	45	46	no	no	no	no	no
24	dig line inp	2	47	48	no	no	no	no	no

ServIf:\debug\disp\ic:inp>1

INPUT CONFIGURATION : input 1
==========

Label-String	I 1A	Input level (Line only)	60
Headroom Level	9	To Audition Bus	never
To N-1 A Bus	never	To N-1 B Bus	never
To N-1 C Bus	never	To N-1 D Bus	never
To N-1 E Bus	never	To N-1 F Bus	never
Timer Start	no	Ctrl. Out 1	on & fader
Ctrl. Out 2	locate-pfl	Ctrl. In	ext. mute
Talkback source	ST		
Signaling	ST		
Input Connector	XLR		

ServIf:\debug\disp>ccp

CHANNEL COMMON PARAMETERS :

Chn	Inp Sel	Main Lev	Main FadLev	Chn on/off	PFL on/off	Loc	Next
1	A	-12800	-12800	off	off	inact	inact
2	A	-12800	-12800	off	off	inact	inact
3	A	-12800	-12800	off	off	inact	inact
4	A	-12800	-12800	off	off	inact	inact
5	A	-12800	-12800	off	off	inact	inact
6	A	-12800	-12800	off	off	inact	inact
7	A	-12800	-12800	on	off	inact	inact
8	A	-12800	-12800	on	off	inact	inact
9	A	-12800	-12800	on	off	inact	inact
10	A	-12800	-12800	on	off	inact	inact
11	A	-12800	-12800	on	off	inact	inact
12	A	-12800	-12800	on	off	inact	inact
13	A	-12800	-12800	off	off	inact	inact
14	A	0	0	off	off	inact	inact
15	A	-12800	-12800	on	off	inact	inact
16	A	-12800	-12800	on	off	inact	inact
17	A	-12800	-12800	on	off	inact	inact
18	A	-12800	-12800	on	off	inact	inact
19	A	-12800	-12800	on	off	inact	inact
20	A	-12800	-12800	on	off	inact	inact
21	A	-12800	-12800	on	off	inact	inact
22	A	-12800	-12800	on	off	inact	inact
23	A	-12800	-12800	on	off	inact	inact
24	A	-12800	-12800	on	off	inact	inact

ServIf:\debug\disp\cip:ch>1

CHANNEL INPUT PARAMETERS : input 1

Phantom (Mic Inputs)	no	Phase	normal
Gain / Cal	35	Stereo / Mono	stereo
Stereo mode (Left-Right)	LR	To Program	yes
To Record	yes	Pan / Balance	0
Aux 1 On / Off	no	Aux 1 Source AF / PF	AF (CUE)
Aux 1 Level	-700	Aux 2 On / Off	no
Aux 2 Source AF / PF	AF (CUE)	Aux 2 Level	-700
Equalizer On / Off	off	HPF On / Off	off
LF Gain	0	LF Frequency	200
MF Gain	0	MF Frequency	1000
HF Gain	0	HF Frequency	10000
Ready active / inactive	inact	Cough active / inactive	inact
Emphasis Yes / No	no		

```
ServIf:\debug\disp>mp
    MONITORING PARAMETERS :
    =======================
    Studio Monitoring Source                      program
    Control Room Monitoring Source                program
    Control Room Volume                             -4403
    CR DIM                                            off
    CR CUT                                            off
    ST DIM                                            off
    ST CUT                                            off
    PFL/TB Volume                                   -4613
    Headphone Source                             cr stereo
    DJ Headphone Volume                             -3526
    PFL to Monitor                                    yes
    TB CR to Studio                                    no
    TB CR to Aux 1                                     no
    TB CR to Aux 2                                     no
    TB CR to N-1 A                                     no
    TB CR to N-1 B                                     no
    TB CR to N-1 C                                     no
    TB CR to N-1 D                                     no
    TB CR to N-1 E                                     no
    TB CR to N-1 F                                     no
    TB Studio to CR                                    no
    TB Studio to N-1 A                                 no
    TB Studio to N-1 B                                 no
    TB Extern to CR                                    no
    TB Extern to Studio                                no
    Extern to PFL                                      no
    ON-AIR Signal Input                                no
    Monitor Expander Output F1                 not active
    Monitor Expander Output F2                 not active
    Monitor Expander Output F3                 not active
    Monitor Expander Output F4                 not active
    Monitor Expander Output F5                 not active


ServIf:\debug\disp>asp
    AUX SEND PARAMETERS :
    =====================
    Aux Master 1 Level                              -700
    Aux Master 1 On                                   no
    Aux Master 1 PFL                                 off
    Aux Master 2 Level                              -700
    Aux Master 2 On                                   no
    Aux Master 2 PFL                                 off
    N-1 A Level                                     -700
    N-1 A On                                         yes
    N-1 A PFL                                        off
    N-1 B Level                                     -700
    N-1 B On                                         yes
    N-1 B PFL                                        off
    N-1 C Level                                     -700
    N-1 C On                                         yes
    N-1 C PFL                                        off
    N-1 D Level                                     -700
    N-1 D On                                         yes
    N-1 D PFL                                        off
    N-1 E Level                                     -700
    N-1 E On                                         yes
    N-1 E PFL                                        off
    N-1 F Level                                     -700
    N-1 F On                                         yes
    N-1 F PFL                                        off
    Audition Level                                  -700
    Audition On                                      yes
    Audition PFL                                     off
    Program Master Level                             -19
    Program Master On                                yes
    Program Master PFL                               off
    Record Master Level                              -39
    Record Master On                                 yes
    Record Master PFL                                off
```

ServIf:\debug\disp>iap

```
    INSERT ASSIGN PARAMETERS :
    ==========================

    Insert 1 assign                                    NO
    Insert 1 on/off                                   off
    Insert 2 assign                                    NO
    Insert 2 on/off                                   off
    Insert 3 assign                                    NO
    Insert 3 on/off                                   off
    Insert 4 assign                                    NO
    Insert 4 on/off                                   off
```

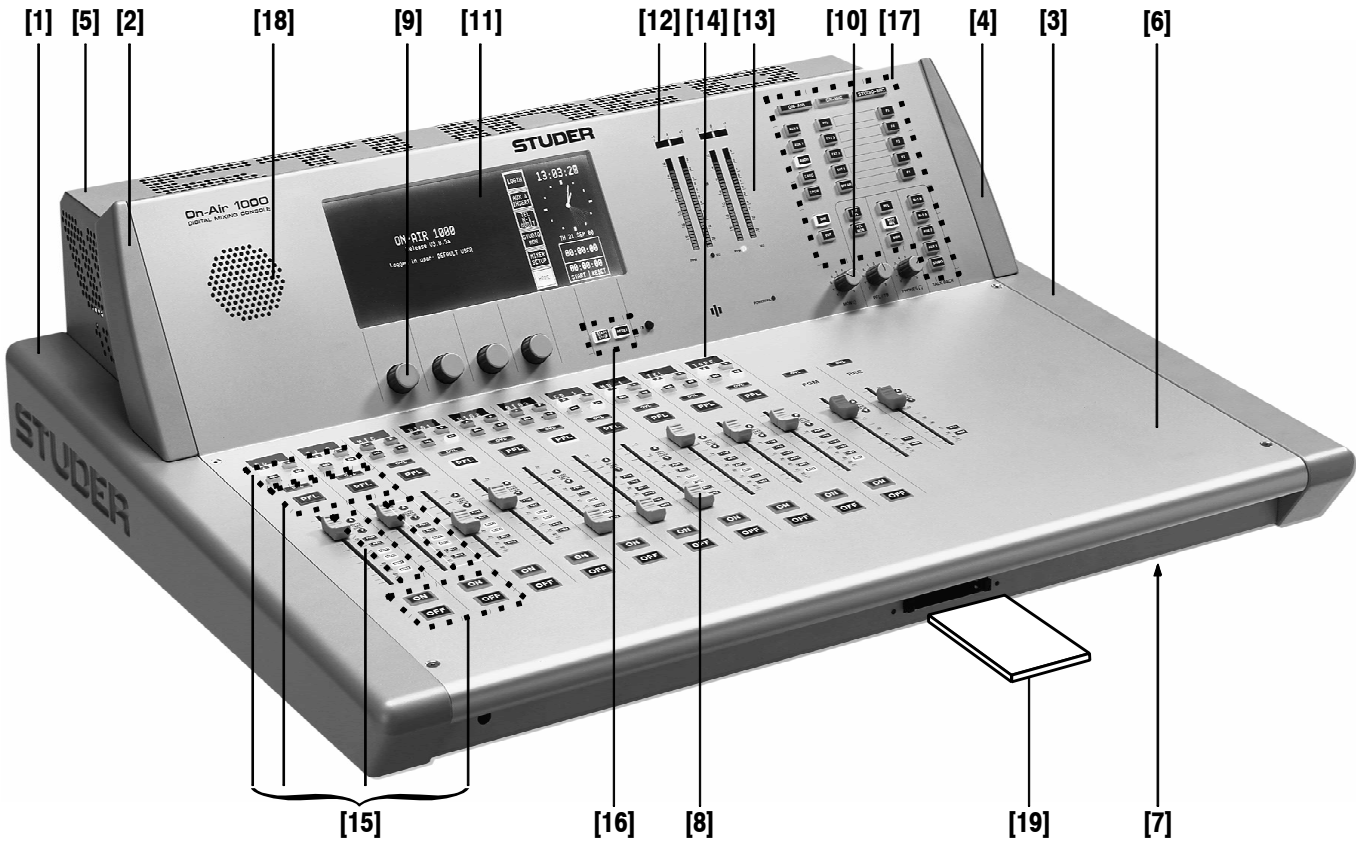
ServIf:\debug\disp>crp

```
    CHANNEL ROUTING PARAMETERS :
    ============================

    Channel to Fader Assignment

    Chn         assigned   protect      Chn         assigned   protect
                  Fader                                Fader
     1            1          no         14           NONE       no
     2            2          no         15           15         no
     3            3          no         16           16         no
     4            4          no         17           17         no
     5            5          no         18           18         no
     6            6          no         19           19         no
     7            7          no         20           20         no
     8            8          no         21           21         no
     9            9          no         22           22         no
    10           10          no         23           23         no
    11           11          no         24           24         no
    12           12          no         PGMMASTER    13         no
    13           NONE        no         RECMASTER    14         no

    Fader to Channel Assignment

    Fader      assigned            Fader   assigned
                 Chn                         Chn
     1           1                 13        PGMMASTER
     2           2                 14        RECMASTER
     3           3                 15        14
     4           4                 16        15
     5           5                 17        16
     6           6                 18        17
     7           7                 19        18
     8           8                 20        19
     9           9                 21        20
    10          10                 22        21
    11          11                 23        22
    12          12                 24        23
```

```
ServIf:\debug\disp>scp
    SNAPSHOT CONTROL PARAMETERS :
    ============================

    SnapShot Section active                      Section 0
    SnapShot Section Write Pointer              0x00181F21

    Array of 5 Global SnapShots :

         GRUNDEINST.
                 NIL
                 NIL
                 NIL
                 NIL

    Array of 10 pointers to Global Mic Settings :

                 NIL                   NIL                   NIL
                 NIL                   NIL                   NIL
                 NIL                   NIL                   NIL
                 NIL

    Array of 5 Global Channel Routings :

                 NIL
                 NIL
                 NIL
                 NIL
                 NIL

    For each user an array of 4 Private SnapShots :

    Private SnapShots of user DEFAULT USER:

                 NIL                   NIL                   NIL
                 NIL

    Private SnapShots of user with index 2:

                 NIL                   NIL                   NIL
                 NIL

    ....
    ....

    Private SnapShots of user with index 20:

                 NIL                   NIL                   NIL
                 NIL

    Private SnapShots of user with index 21:

                 NIL                   NIL                   NIL
                 NIL

    For each user an array of 4 Private Mic Settings :

    Private Mic Settings of user DEFAULT USER:

                 NIL                   NIL                   NIL
                 NIL

    Private Mic Settings of user with index 2:

                 NIL                   NIL                   NIL
                 NIL

    ....
    ....
```

```
 ServIf:\debug\disp>cuc
    CUSTOMER CODE :
    ===============

    previous version            0x00000000
    current version             0x00000000


ServIf:\debug\disp>user
    USER PARAMETERS :
    =================

    Currently logged in user (name)                   ADMIN
    Currently logged in user (ID)                         0


ServIf:\debug\disp>tip
    TIMER PARAMETERS :
    ==================

    User  Stopwatch State                            stopped
    Fader Stopwatch State                            stopped


ServIf:\debug\disp>ap
    AUTOMATION PARAMETERS :
    ======================

    BCA Present                                           no


ServIf:\debug\disp>acp
    AUTOMATION CHANNEL PARAMETERS :
    ===============================

           Source     Display
    Chn   Selection    Text

      1       NO       ""
      2       NO       ""
      3       NO       ""
      4       NO       ""
      5       NO       ""
      6       NO       ""
      7       NO       ""
      8       NO       ""
      9       NO       ""
     10       NO       ""
     11       NO       ""
     12       NO       ""
     13       NO       ""
     14       NO       ""
     15       NO       ""
     16       NO       ""
     17       NO       ""
     18       NO       ""
     19       NO       ""
     20       NO       ""
     21       NO       ""
     22       NO       ""
     23       NO       ""
     24       NO       ""
```

6 SPARE PARTS, ACCESSORIES



Spare Parts:

Item	Order No.:	Designation
1	1.942.500.08	Side panel, lower, left
2	1.942.500.06	Side panel, upper, left
3	1.942.500.09	Side panel, lower, right
4	1.942.500.07	Side panel, upper, right
5	1.942.500.02	Rear panel, for analog-biased version
	1.942.500.03	Rear panel, for digitally-biased version
6	1.942.500.04	Top cover
7	1.942.500.01	Bottom cover
8	58.30.0101	Fader 100 mm, 10 kΩ lin.
	1.911.000.48	Fader knob, light grey (12 pcs. shipped with the unit as standard)
9	42.01.0414	Rotary knob large, dark grey
	42.01.0464	Knob cover large, light grey
10	42.01.0209	Rotary knob small, dark grey
	42.01.0257	Knob cover small, light grey, with dash
11	1.942.082.00	Touch-screen module, complete
	10.942.161.00	CFL backlight lamp
12	1.942.500.15	Glass cover for correlator display (2 used)
13	1.942.500.16	Glass cover for level meter display (4 used)
14	1.942.500.05	Glass cover for channel label display (10 used)
15	1.942.710.01	Keyboard and lamp rubber mat set (w. conductive-plastic contacts), for two fader strips (6 sets used), consisting of: Keyboard mat (A/B/SEL/EQ); keyboard mat (OVL/PFL); 2 x lamp mat (arrow up/down/PGM/REC/AUX/INS); keyboard mat ON/OFF)
16	1.942.010.08	Keyboard rubber mat (START-STOP/RESET) for Stopwatch
17	1.942.010.07	Keyboard and lamp rubber mat for Monitoring section
18	71.01.0174	Loudspeaker, 15 Ω/1 W
19	89.20.0302	PC-Card, 4 MB
	89.20.0301	PC-Card, 2 MB

Accessory Set:

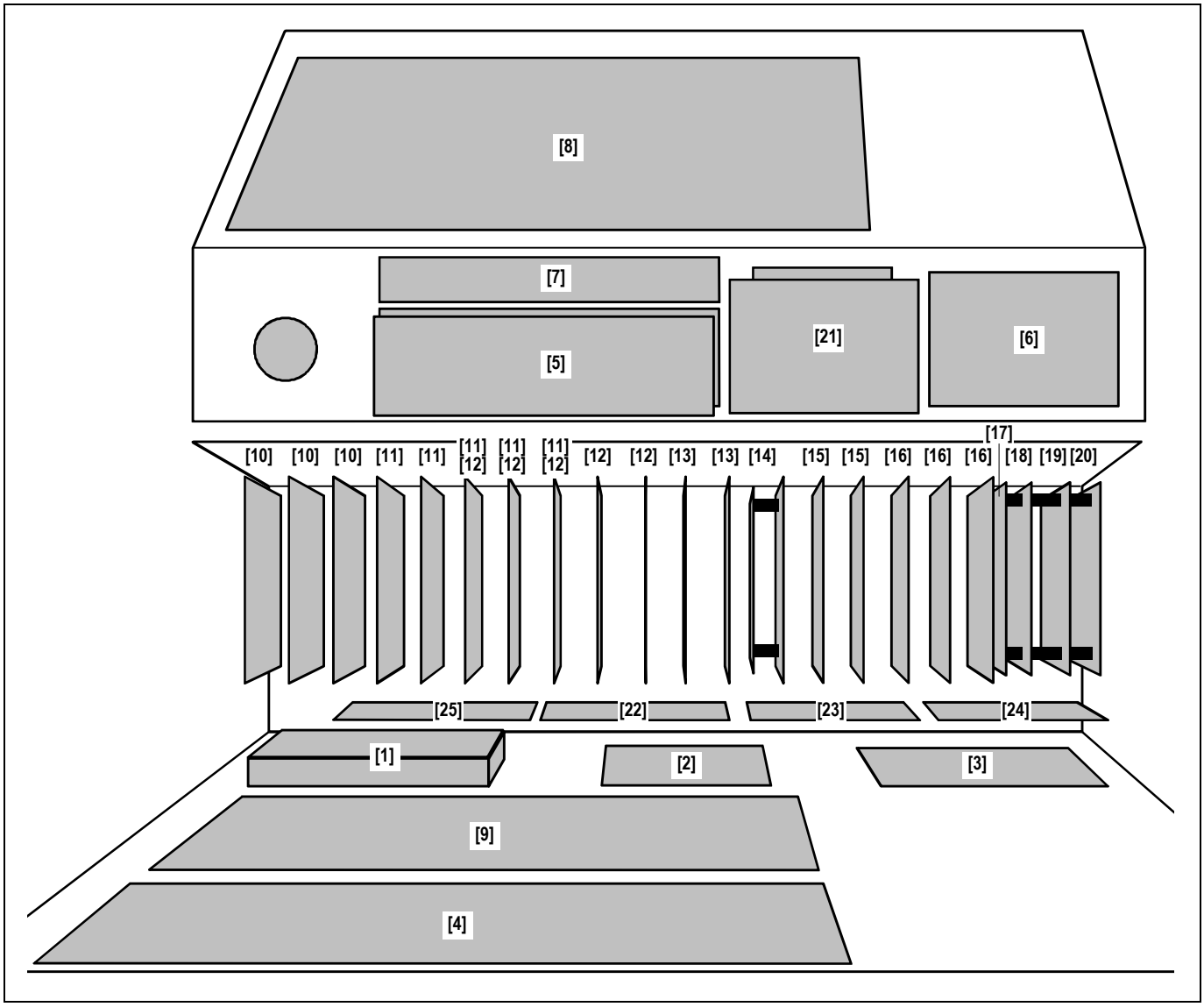
1.942.596.00	(shipped with the unit):
consisting of:	• Mains cable socket IEC320 • DC supply connector • Mains cable strain relief • Fader knobs: 2 each - red, orange, yellow, green, blue

CONTENTS PART 3 – DIAGRAMS

Software Survey

Assembly		Software Label	Position
Controller	**1.942.600.xx**	1.942.904.xx	IC30
		1.942.905.xx	IC31
		1.942.926.xx	IC18
SW Set, earlier version: 1.942.900.28		*1.942.951.28 IC28*	*IC28*
		1.942.951.28 IC26	*IC26*
		1.942.951.28 IC24	*IC24*
		1.942.951.28 IC23	*IC23*
SW Set, from V3.08 and up: 1.942.900.xx		1.942.900.xx IC28	IC28
		1.942.900.xx IC26	IC26
		1.942.900.xx IC24	IC24
		1.942.900.xx IC23	IC23
		Snapshot Flash Memory	IC32
DSP Board	**1.942.102.xx**	1.942.906.xx	IC03
		1.942.907.xx	IC04
		1.942.908.xx	IC28
		1.942.908.xx	IC27
		1.942.908.xx	IC26
		1.942.909.xx	IC38
		1.942.909.xx	IC39
		1.942.909.xx	IC40
Control Front Board I	**1.942.110.xx**	1.942.910.xx	IC01
Front Board	**1.942.710.xx**	1.942.950.xx	IC36
Mic Input	**1.942.720.xx**	1.942.921.xx	IC06
Line Input	**1.942.732.xx**	1.942.922.xx	IC08
Digital Input	**1.942.740.xx**	1.942.923.xx	IC07
Digital Output	**1.942.624.xx**	1.942.927.xx	IC10
		1.942.912.xx	IC07
		1.942.912.xx	IC11
Monitoring Controller	**1.942.182.xx**	1.942.913.xx	IC08
Time Sync IF	**1.942.650.xx**	1.942.928.xx	IC01
Clock Sync IF	**1.942.635.xx**	1.866.914.xx	IC01
		1.866.910.xx	IC09
Telephone Hybrid IF	**1.942.640.xx**	1.942.915.xx	IC03
Analog Insert (SW installed on Insert Controller	**1.942.660.xx** 1.942.161.xx)	1.942.918.xx	IC05

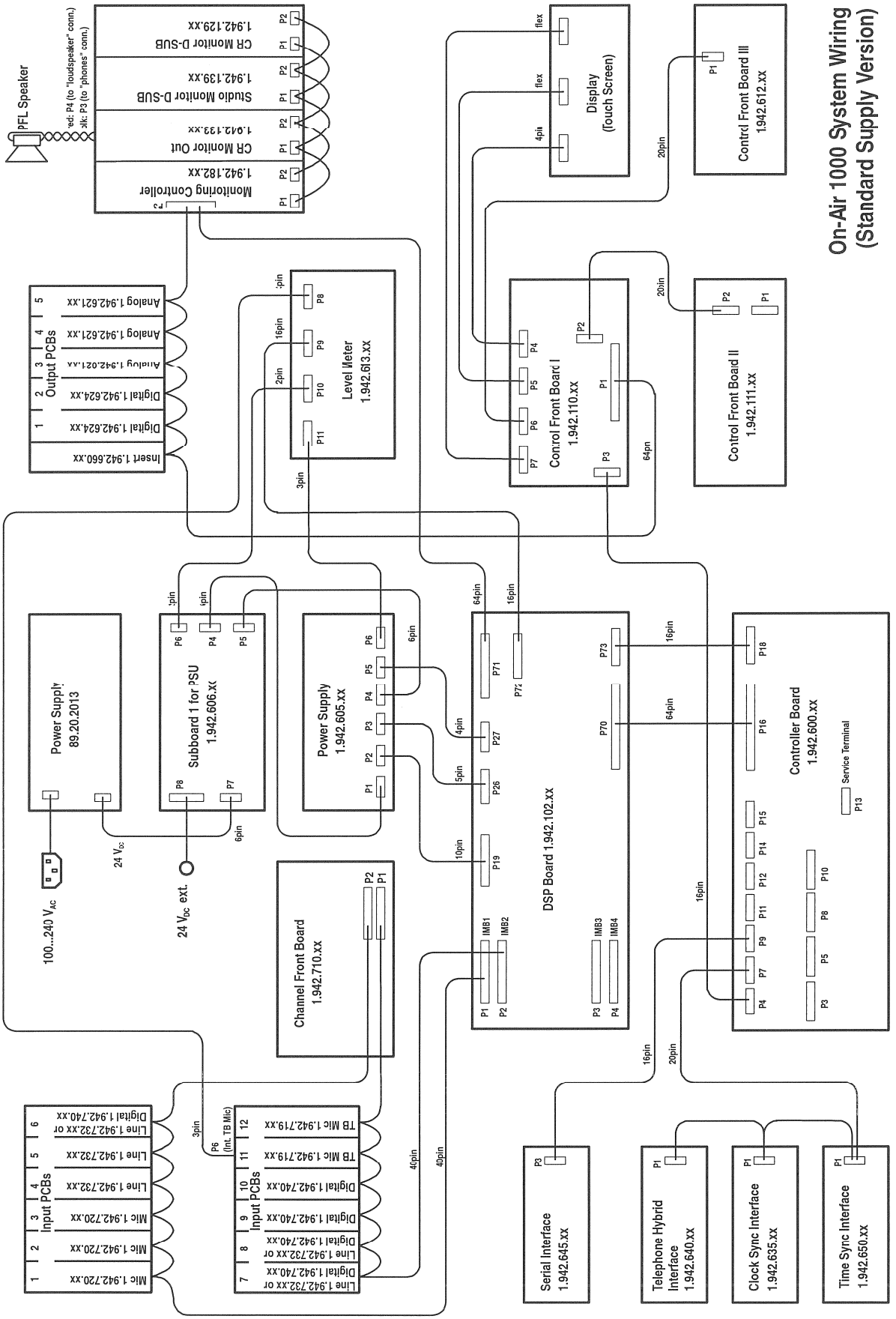
Assembly Survey



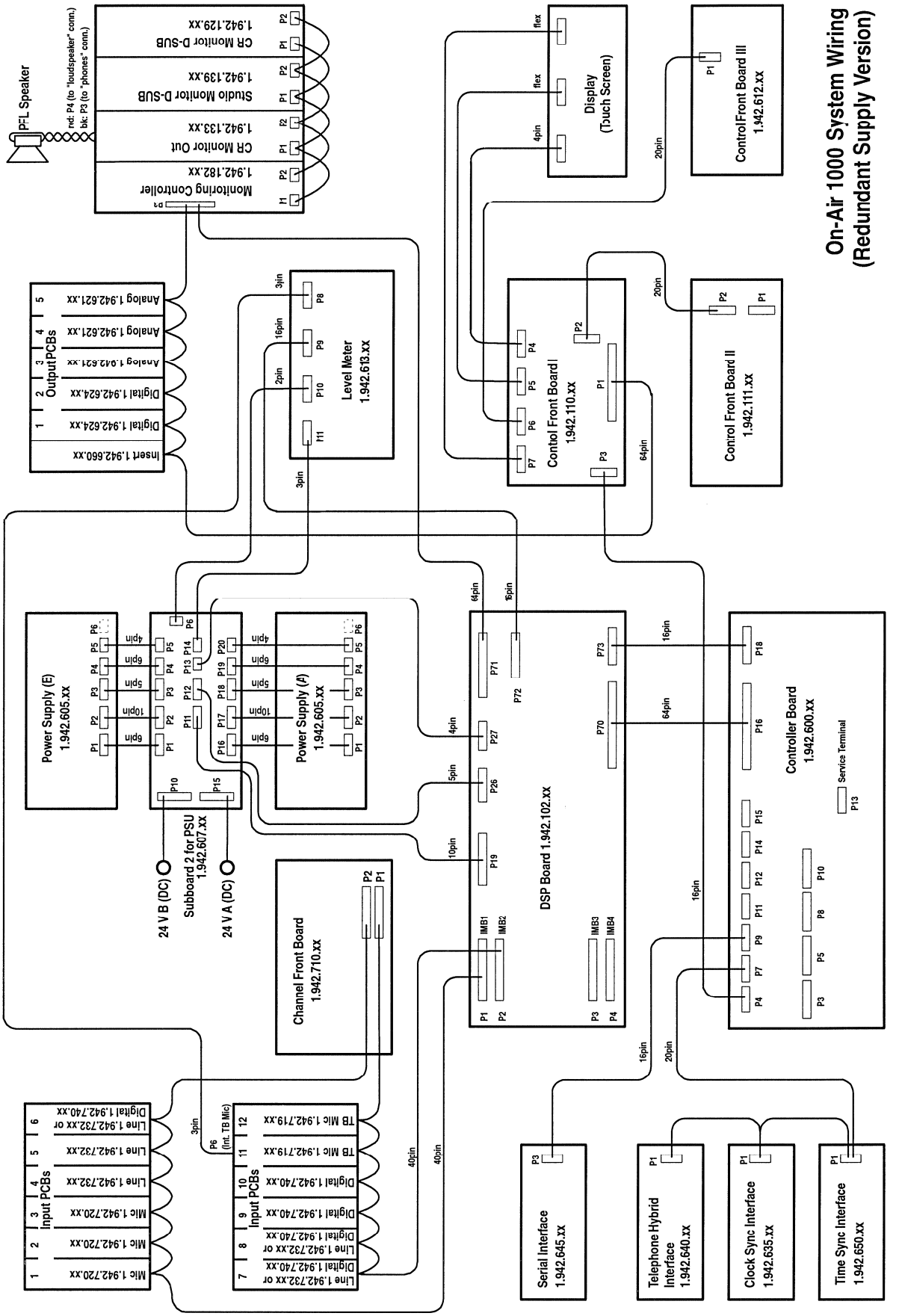
Index	Designation	Order No.
[1]	Primary Power Supply (Standard Versions)	
[1]	*Power Supply (Redundant Supply Versions)*	*1.942.605.xx*
[2]	Subboard 1 for PSU (Standard Versions)	1.942.606.xx
[2]	*Subboard 2 for PSU (Redundant Supply V.)*	*1.942.607.xx*
[3]	Power Supply (both Versions)	1.942.605.xx
[4]	Controller	1.942.600.xx
[5]	Control Front Board I	1.942.110.xx
[6]	Control Front Board II	1.942.111.xx
[7]	Control Front Board III	1.942.612.xx
[8]	Front Board	1.942.710.xx
[9]	DSP Board	1.942.102.xx
[10]	Mic Input	1.942.720.xx
to above	Insert Send	1.942.221.xx
[11]	Line Input	1.942.732.xx
[12]	Digital Input	1.942.740.xx

Index	Designation	Order No.
[13]	TB Mic Input	1.942.719.xx
[14]	Analog Insert	1.942.660.xx
to above	Insert Controller	1.942.161.xx
to above	Analog Insert D-Sub	1.942.163.xx
[15]	Digital Output	1.942.624.xx
[16]	(Dual) Analog Output	1.942.621.xx
[17]	Monitoring Controller	1.942.182.xx
[18]	CR Monitor Out	1.942.133.xx
[19]	Studio Monitor D-Sub	1.942.139.xx
[20]	CR Monitor D-Sub	1.942.129.xx
[21]	Level Meter	1.942.613.xx
[22]	Clock Sync Interface	1.942.635.xx
[23]	Telephone Hybrid Interface	1.942.640.xx
[24]	(Serial) RS232 Interface	1.942.645.xx
[25]	Time Sync Interface	1.942.650.xx

System Wiring Diagram – Standard Versions

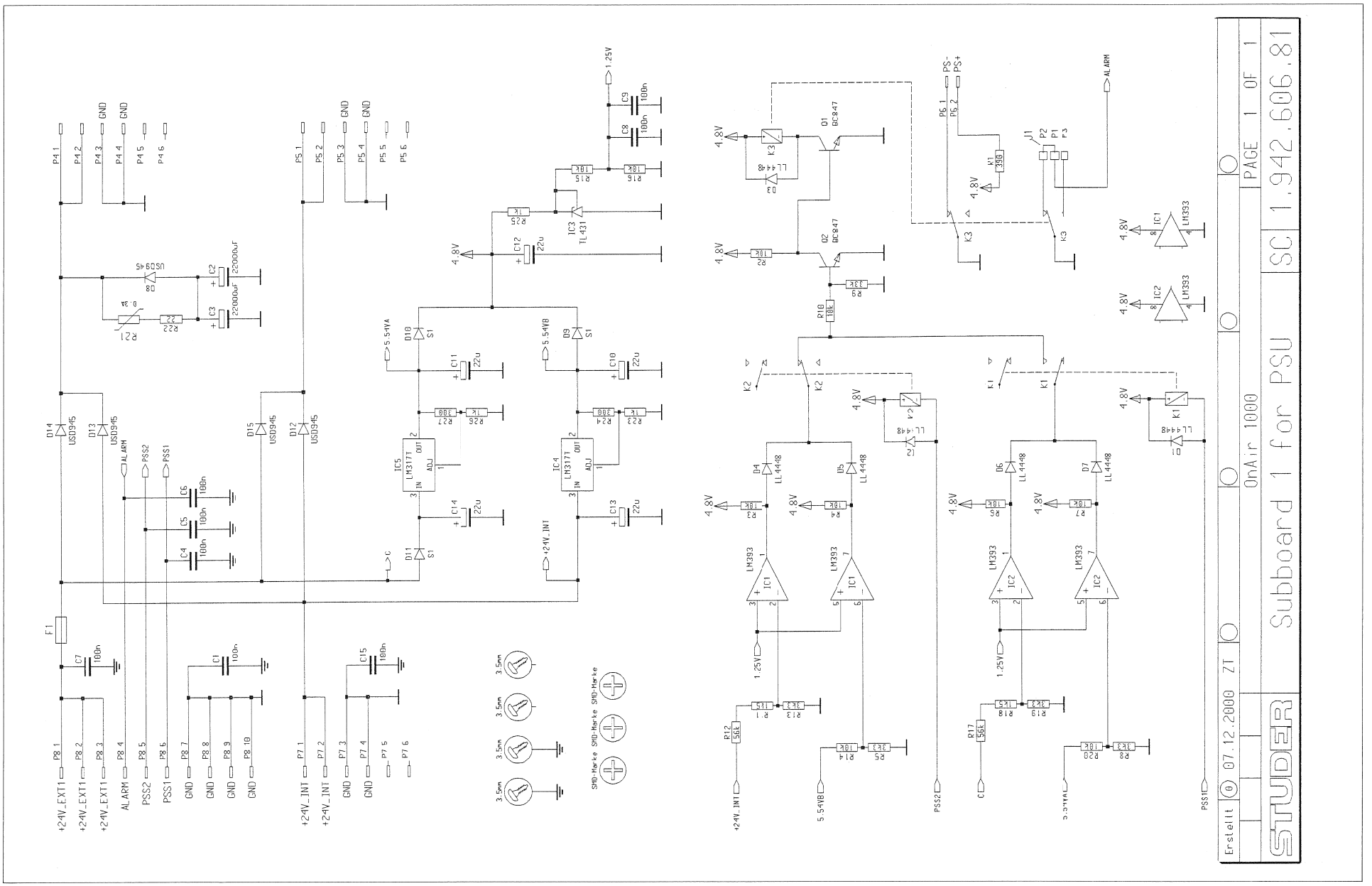


System Wiring Diagram – Redundant Supply Versions

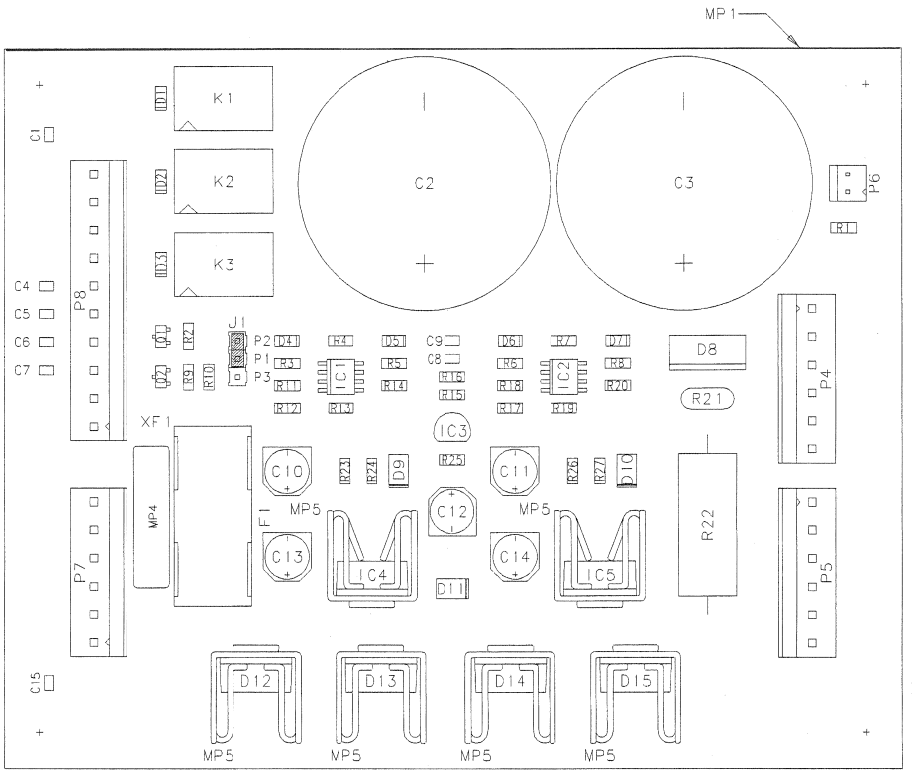


Date printed: 16.05.01

Subboard 1 for PSU 1.942.606.81



Subboard 1 for PSU 1.942.606.81



Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 2	59.29.0422	1 pce	22m	EL 35V RM10 radial
0	C 3	59.29.0422	1 pce	22m	EL 35V RM10 radial
0	C 4	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 5	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 6	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 7	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 8	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 9	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 10	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 11	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 12	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 13	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 14	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 15	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	D 1	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 6	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 7	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 8	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 9	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 10	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 11	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 12	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 13	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 14	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 15	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	F 1	51.01.0126	1 pce	8.0A	T 5*20 L 250V
0	IC 1	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 2	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 3	50.10.0108	1 pce	TL431	Shunt regulator
0	IC 4	50.10.0104	1 pce	LM317SP	Series regulator 1.5A ..+37V
0	IC 5	50.10.0104	1 pce	LM317SP	Series regulator 1.5A ..+37V
0	J 1	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	K 1	56.04.0198	1 pce	2*u	5V 125V 2A Ag/Au
0	K 2	56.04.0198	1 pce	2*u	5V 125V 2A Ag/Au
0	K 3	56.04.0198	1 pce	2*u	5V 125V 2A Ag/Au
0	MP 1	1.942.606.13	1 pce		SUBBOARD 1 FOR PSU PCB
0	MP 2	1.942.606.10	1 pce		NR.ETIKETTE
0	MP 3	43.01.0108	1 pce	Label	ESE-WARNSCHILD

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	MP 4	1.010.124.51	1 pce		TEXT-ETIK.1*20 (T8.00A)
0	MP 5	51.20.3011	6 pcs		Kühlkörper, °O 220, vertikal
0	P 1	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 2	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 3	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 4	54.12.0506	1 pce	6p	P Stecker 3p Power-Pin
0	P 5	54.12.0506	1 pce	6p	P Stecker 3p Power-Pin
0	P 6	54.12.0702	1 pce	2p	Stecker gerade PCB
0	P 7	54.12.0506	1 pce	6p	P Stecker 3p Power-Pin
0	P 8	54.12.0510	1 pce	10p	P Stecker 0p Power-Pin
0	Q 1	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	Q 2	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	R 1	57.60.1391	1 pce	390R	MF, 1%, 0208, E24
0	R 2	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 3	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 4	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 5	57.60.1332	1 pce	3k3	MF, 1%, 0208, E24
0	R 6	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 7	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 8	57.60.1332	1 pce	3k3	MF, 1%, 0208, E24
0	R 9	57.60.1333	1 pce	3k	MF, 1%, 0208, E24
0	R 10	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 11	57.60.1152	1 pce	1k5	MF, 1%, 0208, E24
0	R 12	57.60.1563	1 pce	56k	MF, 1%, 0208, E24
0	R 13	57.60.1332	1 pce	3k3	MF, 1%, 0208, E24
0	R 14	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 15	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 16	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 17	57.60.1563	1 pce	56k	MF, 1%, 0208, E24
0	R 18	57.60.1152	1 pce	1k5	MF, 1%, 0208, E24
0	R 19	57.60.1332	1 pce	3k3	MF, 1%, 0208, E24
0	R 20	57.60.1103	1 pce	1k	MF, 1%, 0208, E24
0	R 21	57.92.7012	1 pce	03A	PTC 60V
0	R 22	57.56.5220	1 pce	2R	WW, 10%, 1 W
0	R 23	57.60.1102	1 pce	1k0	MF, 1%, 0208, E24
0	R 24	57.60.1301	1 pce	300R	MF, 1%, 0208, E24
0	R 25	57.60.1102	1 pce	1k0	MF, 1%, 0208, E24
0	R 26	57.60.1102	1 pce	1k0	MF, 1%, 0208, E24
0	R 27	57.60.1301	1 pce	300R	MF, 1%, 0208, E24
0	XF 1	53.03.0401	1 pce		XF 5 * 20, SOCKEL

End of List

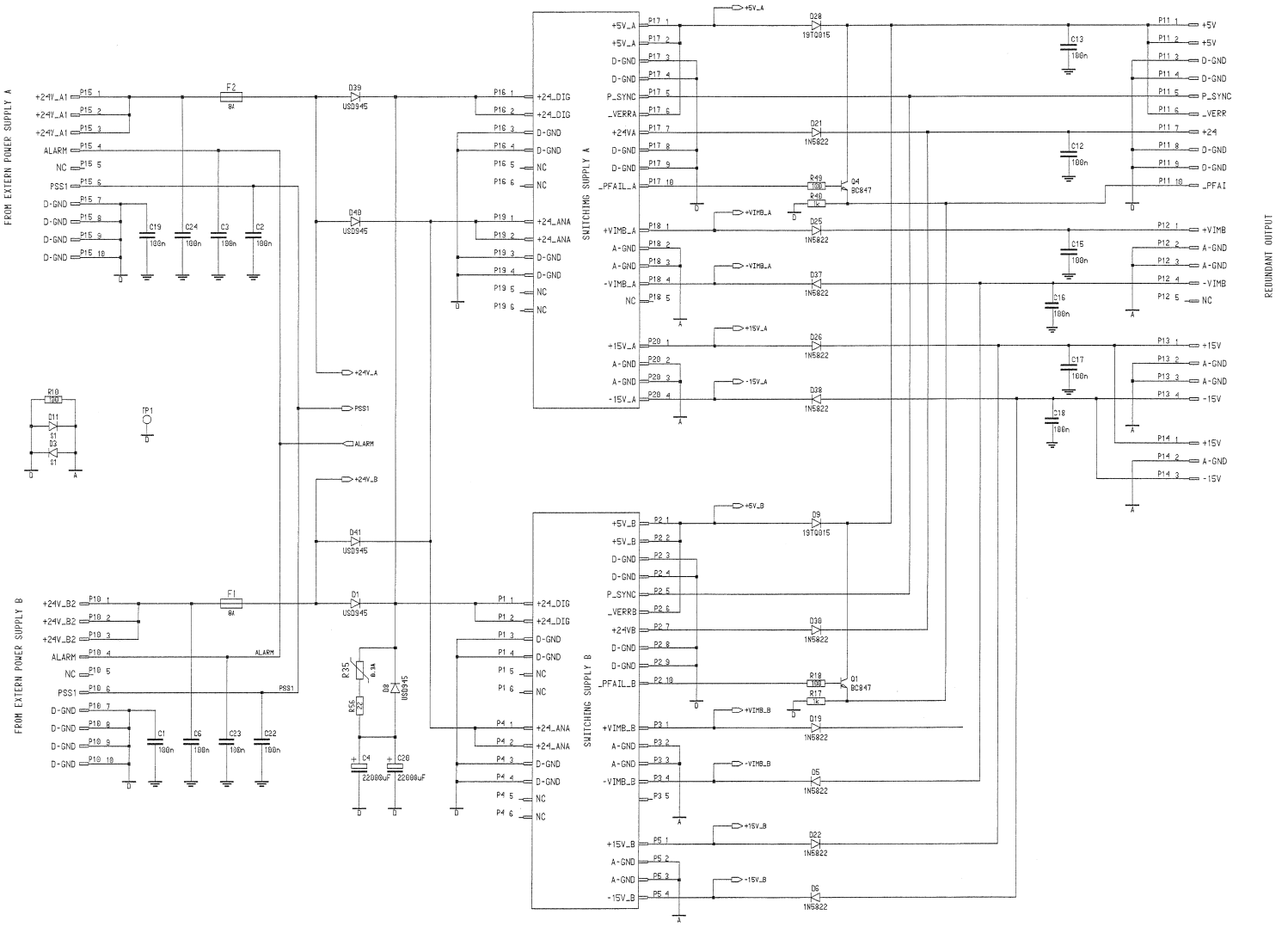
Comments:

Edition Ausgabe	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
	07.12.2000	ZT	PG	RL	0

Page: Seite: 1 / 1

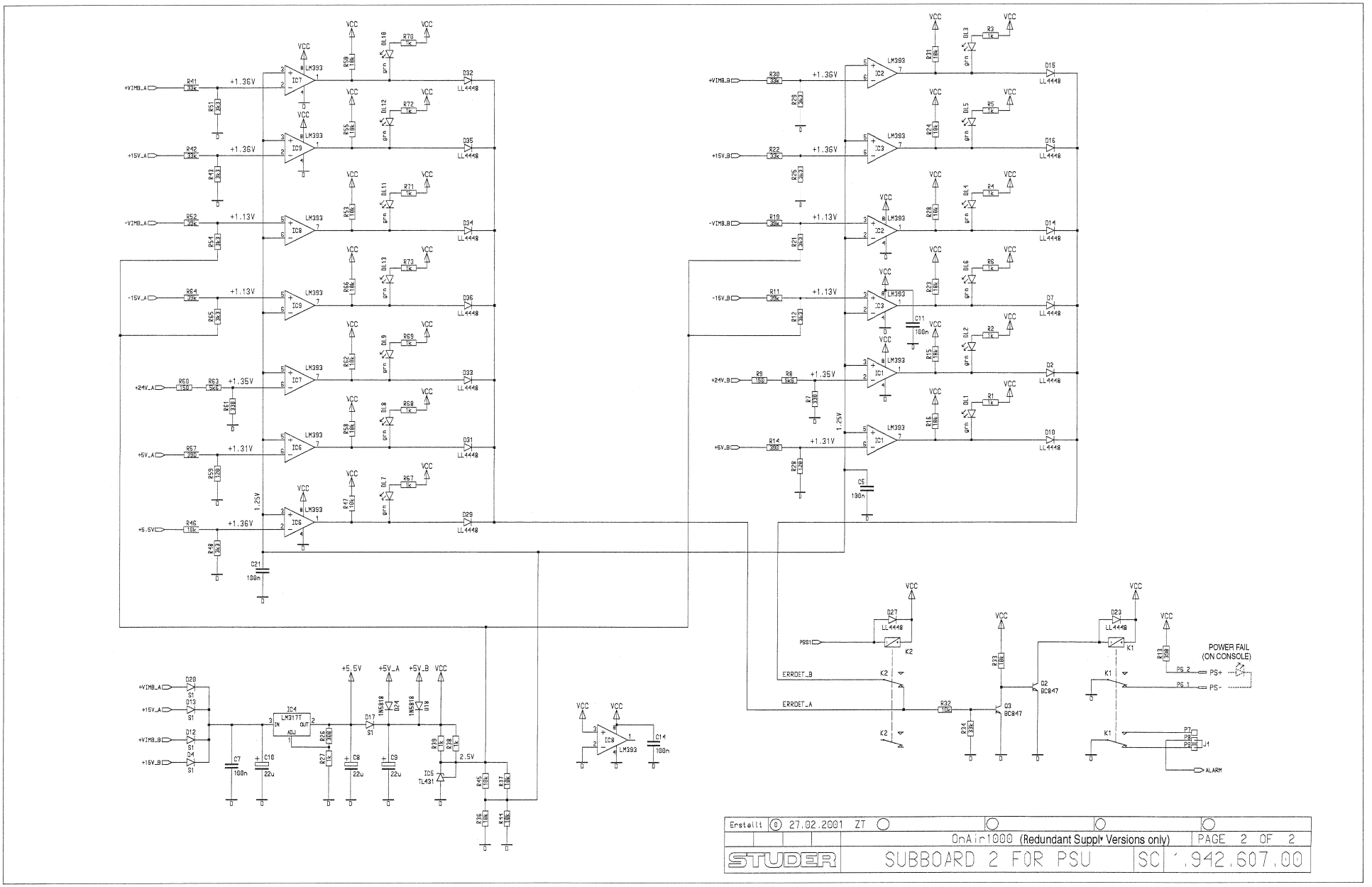
Z Number Nummer 1.942.606.81

Subboard 2 for PSU 1.942.607.00



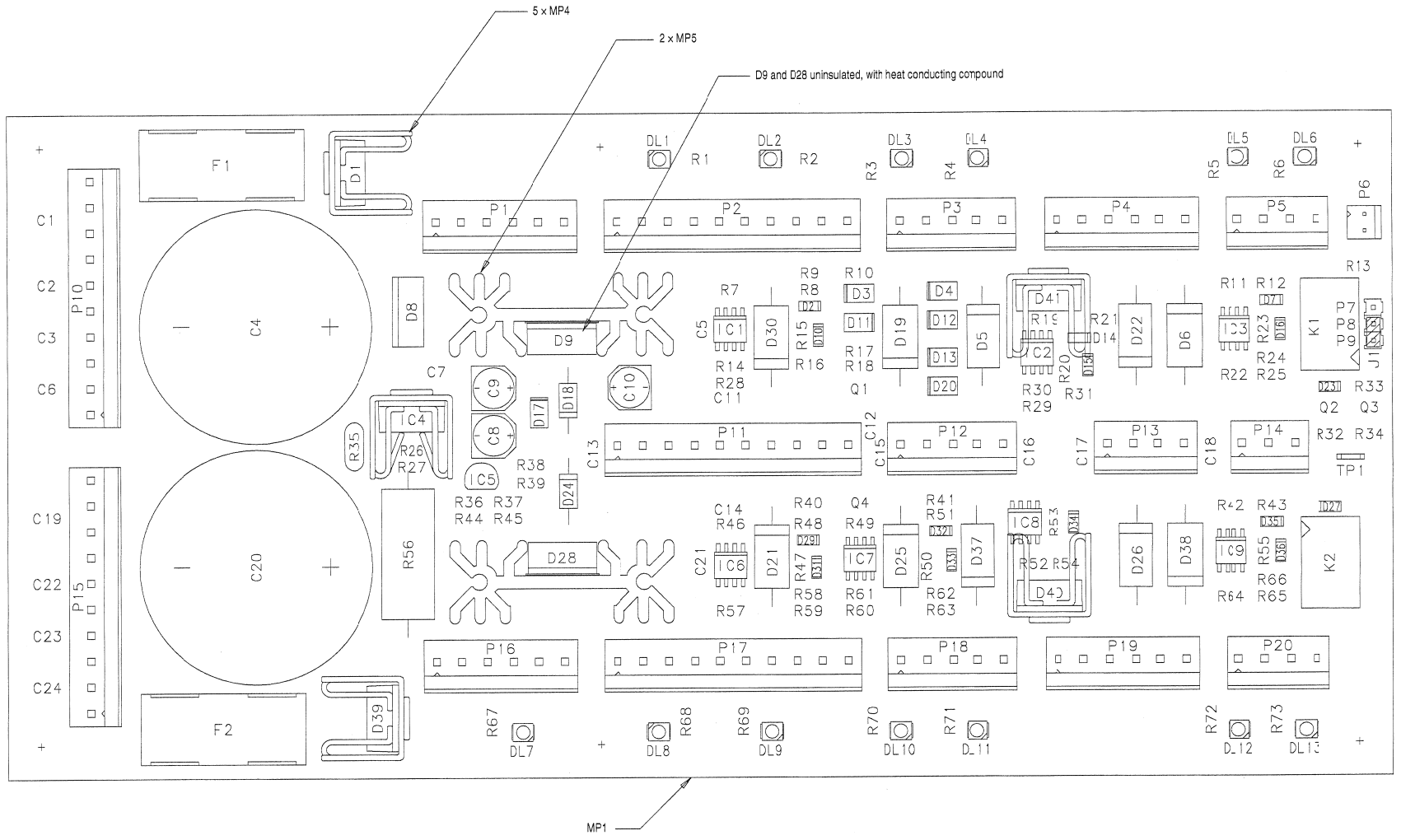
Erstellt	27.02.2001 ZT		
	OrAir1000 (Redundant Supply Versions only)		PAGE 1 OF 2
STUDER	SUBBOARD 2 FOR PSU	SC	1.942.607.00

Subboard 2 for PSU 1.942.607.00



Erstellt 0 27.02.2001 ZT				
	OnAir1000 (Redundant Suppl' Versions only)			PAGE 2 OF 2
STUDER	SUBBOARD 2 FOR PSU	SC	1.942.607.00	

Subboard 2 for PSU 1.942.607.00



Accompanying documents: Zugehoerige Unterlagen: PL, BV640	General tolerance: Freimasstoleranz:	Scale: Massstab:	Edition Ausgabe	27.02.2001 Date Datum	ZT Visa Gez.	PG Checked Gepr.	HW Seen Ges.	0 Index
Substitute for: Ersatz fuer:			Page: Seite:	1 / 1				
STUDER REGENSDORF	Description: Benennung: SUBBOARD 2 FOR PSU, ESE		Z	Number: Nummer: 1.942.607.00				

Subboard 2 for PSU 1.942.607.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 2	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 3	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 4	59.29.0422	1 pce	22m	EL 35V RM10 radial
0	C 5	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 6	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 8	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 9	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 10	59.68.0111	1 pce	22u	EL 35V, 6.3*5.7
0	C 11	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 12	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 15	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 16	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 17	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 18	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 20	59.29.0422	1 pce	22m	EL 35V RM10 radial
0	C 21	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 22	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 23	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 24	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	D 1	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 2	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 4	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 5	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 6	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 7	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 8	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 9	50.04.0529	1 pce	19TQ015	19A 15V Schottky, TO 220
0	D 10	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 11	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 12	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 13	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 14	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 15	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 16	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 17	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 18	50.04.0512	1 pce	1N5818	D 1N 5818, 1N 5819,
0	D 19	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 20	50.60.8003	1 pce	S1B	1000mA 100V DO 214AC
0	D 21	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 22	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 23	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 24	50.04.0512	1 pce	1N5818	D 1N 5818, 1N 5819,
0	D 25	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 26	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 27	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 28	50.04.0529	1 pce	19TQ015	19A 15V Schottky, TO 220
0	D 29	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 30	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 31	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 32	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 33	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 34	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 35	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 36	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 37	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 38	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 39	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 40	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	D 41	50.04.0516	1 pce	USD945	Schottky Rect 16A, 45V
0	DL 1	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 2	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 3	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 4	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 5	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 6	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 7	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 8	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 9	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 10	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 11	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 12	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	DL 13	50.60.9414	1 pce	grn	SMD LED 2.7*3.5
0	F 1	51.01.0126	1 pce	8.0A	T 5*20 L 250V
0	F 2	51.01.0126	1 pce	8.0A	T 5*20 L 250V
0	IC 1	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 2	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 3	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 4	50.10.0104	1 pce	LM317SP	Series regulator 1.5A ...+37V
0	IC 5	50.10.0106	1 pce	TL431	Shunt regulator
0	IC 6	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 7	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 8	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	IC 9	50.61.9001	1 pce	LM393	Dual voltage comp. SO 8
0	J 1	54.01.0021	1 pce	Jumper	0.62*0.63mm, Au
0	K 1	56.04.0198	1 pce	2*u	5V 125V 2A Ag/Au
0	K 2	56.04.0198	1 pce	2*u	5V 125V 2A Ag/Au

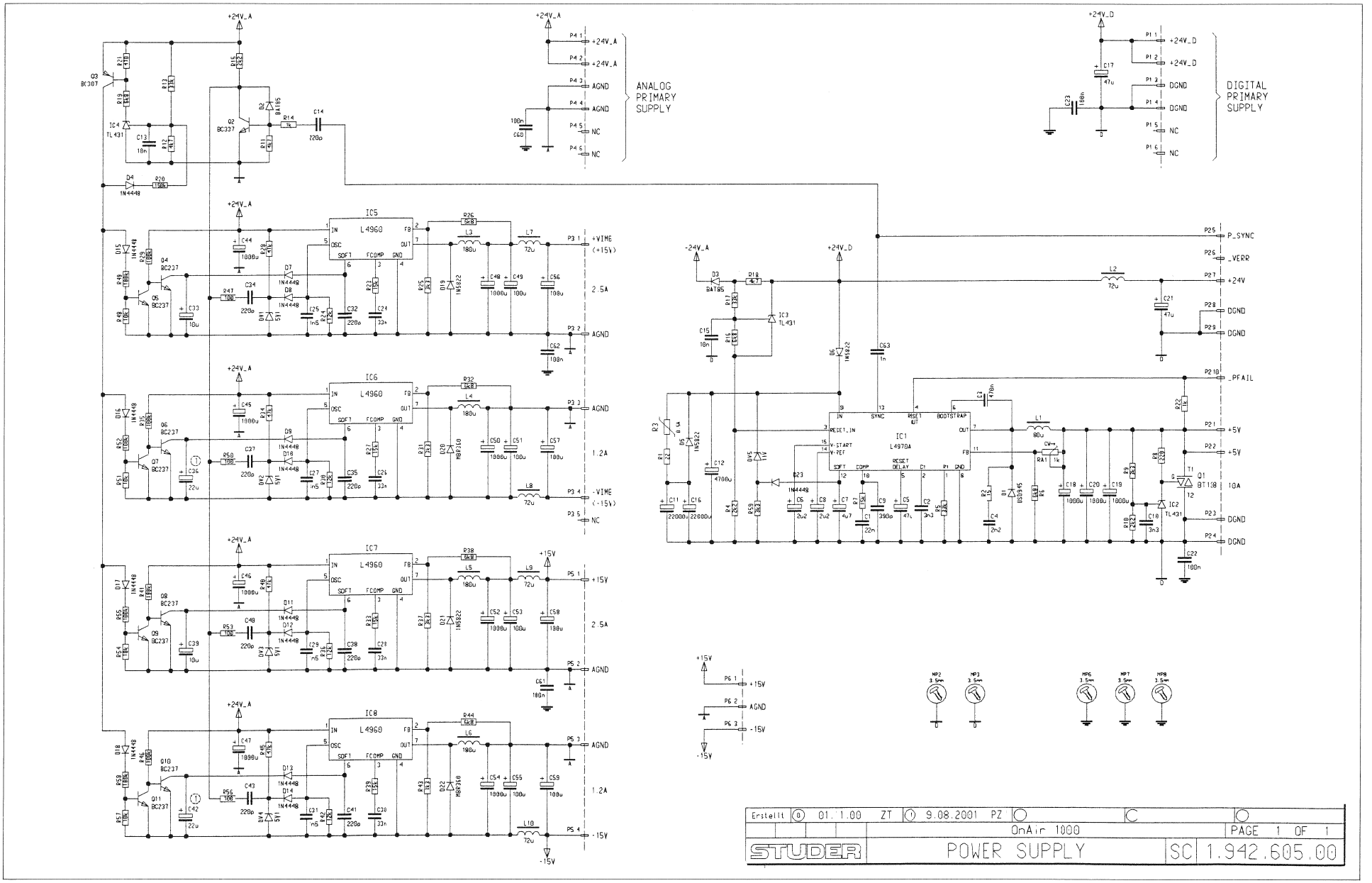
Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	MP 1	1.942.607.11	1 pce		SUBBOARD 2 FOR PSU PCB
0	MP 2	1.942.607.10	1 pce		NR.ETIKETTE
0	MP 3	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 4	50.20.3011	5 pcs		Kühlkörper, TO 220, vertikal
0	MP 5	50.20.3012	2 pcs		Kühlkörper, TO 220, vertikal
0	P 1	54.12.6506	1 pce	6p	P Stecker 6p Power-Pin
0	P 2	54.12.6510	1 pce	10p	P Stecker 10p Power-Pin
0	P 3	54.12.6505	1 pce	5p	P Stecker 5p Power-Pin
0	P 4	54.12.6506	1 pce	6p	P Stecker 6p Power-Pin
0	P 5	54.12.6504	1 pce	4p	P Stecker 4p Power-Pin
0	P 6	54.12.0702	1 pce	2p	Stecker gerade PCB
0	P 7	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 8	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 9	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 10	54.12.6510	1 pce	10p	P Stecker 10p Power-Pin
0	P 11	54.12.6510	1 pce	10p	P Stecker 10p Power-Pin
0	P 12	54.12.6505	1 pce	5p	P Stecker 5p Power-Pin
0	P 13	54.12.6504	1 pce	4p	P Stecker 4p Power-Pin
0	P 14	54.12.6503	1 pce	3p	P Stecker 3p Power-Pin
0	P 15	54.12.6510	1 pce	10p	P Stecker 10p Power-Pin
0	P 16	54.12.6506	1 pce	6p	P Stecker 6p Power-Pin
0	P 17	54.12.6510	1 pce	10p	P Stecker 10p Power-Pin
0	P 18	54.12.6505	1 pce	5p	P Stecker 5p Power-Pin
0	P 19	54.12.6506	1 pce	6p	P Stecker 6p Power-Pin
0	P 20	54.12.6504	1 pce	4p	P Stecker 4p Power-Pin
0	Q 1	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	Q 2	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	Q 3	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	Q 4	50.60.0001	1 pce	BC847B	NPN 45V 100mA SOT 23
0	R 1	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 2	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 3	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 4	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 5	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 6	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 7	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 8	57.60.1562	1 pce	5k6	MF, 1%, 0204, E24
0	R 9	57.60.1151	1 pce	150R	MF, 1%, 0204, E24
0	R 10	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 11	57.60.1393	1 pce	39k	MF, 1%, 0204, E24
0	R 12	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 13	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 14	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 15	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 16	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 17	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 18	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 19	57.60.1393	1 pce	39k	MF, 1%, 0204, E24
0	R 20	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 21	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 22	57.60.1333	1 pce	33k	MF, 1%, 0204, E24
0	R 23	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 24	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 25	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 26	57.60.1301	1 pce	300R	MF, 1%, 0204, E24
0	R 27	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 28	57.60.1121	1 pce	120R	MF, 1%, 0204, E24
0	R 29	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 30	57.60.1333	1 pce	33k	MF, 1%, 0204, E24
0	R 31	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 32	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 33	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 34	57.60.1333	1 pce	33k	MF, 1%, 0204, E24
0	R 35	57.92.7012	1 pce	0.3A	PTC 60V
0	R 36	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 37	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 38	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 39	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 40	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 41	57.60.1333	1 pce	33k	MF, 1%, 0204, E24
0	R 42	57.60.1333	1 pce	33k	MF, 1%, 0204, E24
0	R 43	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 44	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 45	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 46	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 47	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 48	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 49	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 50	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 51	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 52	57.60.1393	1 pce	39k	MF, 1%, 0204, E24
0	R 53	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 54	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 55	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 56	57.56.5220	1 pce	22R	WW, 10%, 4 W
0	R 57	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 58	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 59	57.60.1121	1 pce	120R	MF, 1%, 0204, E24
0	R 60	57.60.1151	1 pce	150R	MF, 1%, 0204, E24
0	R 61	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 62	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 63	57.60.1562	1 pce	5k6	MF, 1%, 0204, E24
0	R 64	57.60.1393	1 pce	39k	MF, 1%, 0204, E24

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 65	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 66	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 67	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 68	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 69	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 70	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 71	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 72	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 73	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	TP 1	54.33.6010	1 pce	2.8*0.8	PCB-Flachstecker, gerad
0	XF 1	53.03.0401	1 pce		XF 5 * 20, -SOCKEL
0	XF 2	53.03.0401	1 pce		XF 5 * 20, -SOCKEL

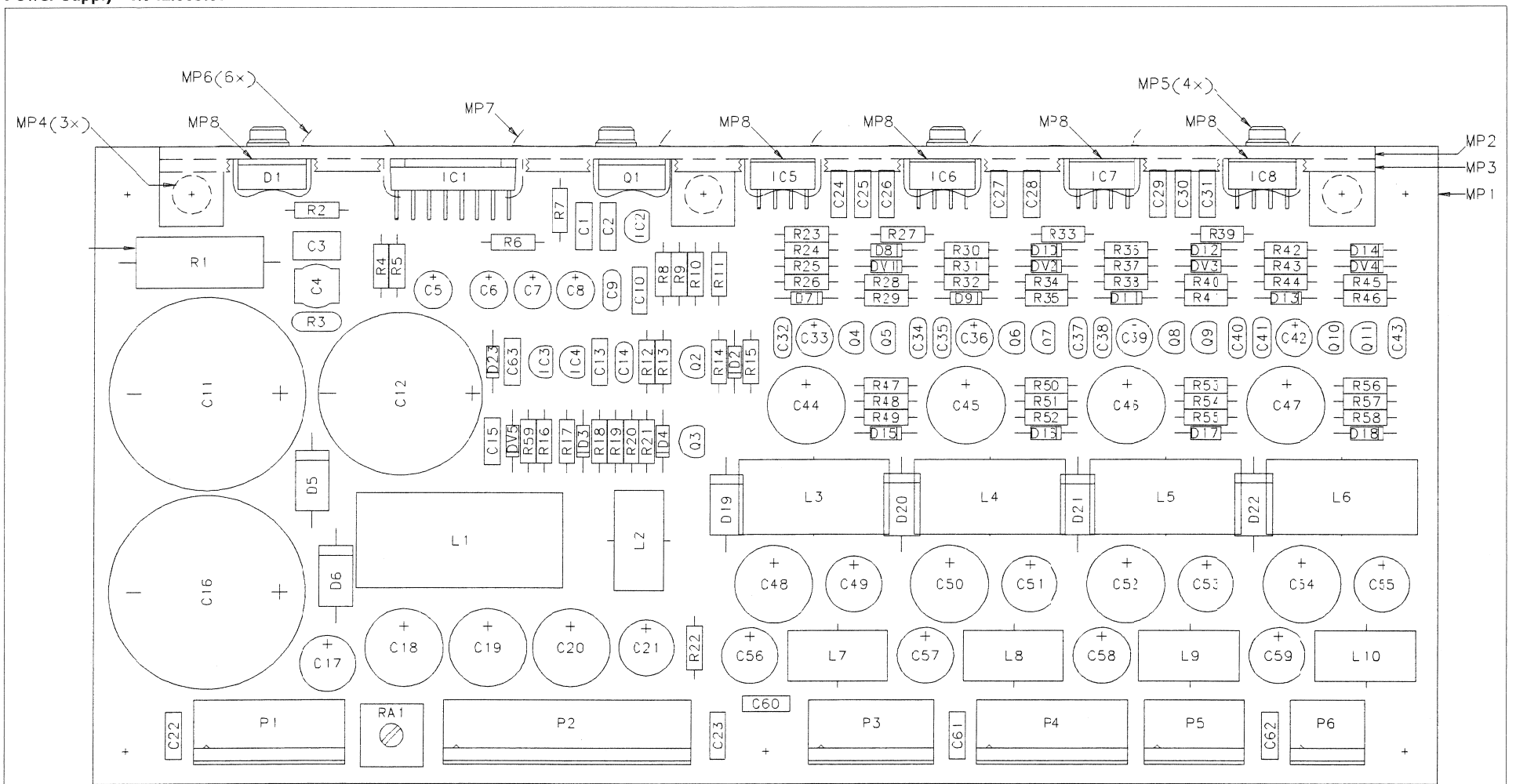
End of List

Comments:

Power Supply 1.942.605.81



Power Supply 1.942.605.81



Accompanying documents / Zugehoerige Unterlagen: PL,BV640		General tolerance: / Freimasstoleranz:	Scale / Massstab:	Edition / Ausgabe	01.11.2000	ZT	PG	R_	0
				Date / Datum		Visa / Gez.	Checked / Gepr.	Sen / Gs.	Index
Substitute for / Ersatz fuer:				Page / Seite:	1 / 1				
STUDER REGENSDORF	Description / Benennung: POWER SUPPLY, ESE			Z	Number / Nummer: 1.942.605.00				

POWER SUPPLY 1.942.605.81 (1)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.06.5223		22n	PETP, 63V, 5%, RM5
0	C 2	59.06.5332		3n3	PETP, 63V, 5%, RM5
0	C 3	59.06.0474		470n	PETP, 63V, 10%, RM5
0	C 4	59.05.2222		2n2	PP, 2.5%, 160V
0	C 5	59.22.3470		47u	EL 10V 20% RM5
0	C 6	59.22.8229		2u2	EL 50V 20% RM5
0	C 7	59.22.8479		4u7	EL 50V 20% RM5
0	C 8	59.22.8229		2u2	EL 50V 20% RM5
0	C 9	59.34.5391		390p	CER 63V, 5%, N1500
0	C 10	59.06.5332		3n3	PETP, 63V, 5%, RM5
0	C 11	59.29.0422		22m	EL 35V RM10 radial
0	C 12	59.29.4472		4m7	EL 35V RM10 radial 105
0	C 13	59.06.0103		10n	PETP, 63V, 10%, RM5
0	C 14	59.34.4221		220p	CER 63V, 5%, N750
0	C 15	59.06.0103		10n	PETP, 63V, 10%, RM5
0	C 16	59.29.0422		22m	EL 35V RM10 radial
0	C 17	59.22.0470		47u	EL 40V 20% RM5
0	C 18	59.22.4102		1m0	EL 16V 20% RM5
0	C 19	59.22.4102		1m0	EL 16V 20% RM5
0	C 20	59.22.4102		1m0	EL 16V 20% RM5
0	C 21	59.22.6470		47u	EL 40V 20% RM5
0	C 22	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 23	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 24	59.06.0333		33n	PETP, 63V, 10%, RM5
0	C 25	59.06.5152		1n5	PETP, 63V, 5%, RM5
0	C 26	59.06.0333		33n	PETP, 63V, 10%, RM5
0	C 27	59.06.5152		1n5	PETP, 63V, 5%, RM5
0	C 28	59.06.0333		33n	PETP, 63V, 10%, RM5
0	C 29	59.06.5152		1n5	PETP, 63V, 5%, RM5
0	C 30	59.06.0333		33n	PETP, 63V, 10%, RM5
0	C 31	59.06.5152		1n5	PETP, 63V, 5%, RM5
0	C 32	59.34.4221		220p	CER 63V, 5%, N750
0	C 33	59.22.6100		10u	EL 35V 20% RM5
0	C 34	59.34.4221		220p	CER 63V, 5%, N750
0	C 35	59.34.4221		220p	CER 63V, 5%, N750
1	C 36	59.22.6220		22u	EL 35V 20% RM5
0	C 37	59.34.4221		220p	CER 63V, 5%, N750
0	C 38	59.34.4221		220p	CER 63V, 5%, N750
0	C 39	59.22.6100		10u	EL 35V 20% RM5
0	C 40	59.34.4221		220p	CER 63V, 5%, N750
0	C 41	59.34.4221		220p	CER 63V, 5%, N750
1	C 42	59.22.6220		22u	EL 35V 20% RM5
0	C 43	59.34.4221		220p	CER 63V, 5%, N750
0	C 44	59.99.1708		1m0	EL 35V 20% RM5
0	C 45	59.99.1708		1m0	EL 35V 20% RM5
0	C 46	59.99.1708		1m0	EL 35V 20% RM5
0	C 47	59.99.1708		1m0	EL 35V 20% RM5
0	C 48	59.99.1708		1m0	EL 35V 20% RM5
0	C 49	59.22.5101		100u	EL 25V 20% RM5
0	C 50	59.99.1708		1m0	EL 35V 20% RM5
0	C 51	59.22.5101		100u	EL 25V 20% RM5
0	C 52	59.99.1708		1m0	EL 35V 20% RM5
0	C 53	59.22.5101		100u	EL 25V 20% RM5
0	C 54	59.99.1708		1m0	EL 35V 20% RM5
0	C 55	59.22.5101		100u	EL 25V 20% RM5
0	C 56	59.22.5101		100u	EL 25V 20% RM5
0	C 57	59.22.5101		100u	EL 25V 20% RM5
0	C 58	59.22.5101		100u	EL 25V 20% RM5
0	C 59	59.22.5101		100u	EL 25V 20% RM5
0	C 60	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 61	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 62	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 63	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	D 1	50.04.0516		USD945	Schottky Rect 16A, 45V
0	D 2	50.04.0127		BAT85	200mA, Schottky
0	D 3	50.04.0127		BAT85	200mA, Schottky
0	D 4	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 5	50.04.0519		1N5822	3A, Schottky
0	D 6	50.04.0519		1N5822	3A, Schottky
0	D 7	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 8	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 9	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 10	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 11	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 12	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
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	50.04.0519		1N5822	3A, Schottky
0	D 20	50.04.0526		MBR360	D MBR 360, SB 360, 31 DQ 06,
0	D 21	50.04.0519		1N5822	3A, Schottky
0	D 22	50.04.0526		MBR360	D MBR 360, SB 360, 31 DQ 06,
0	D 23	not used		1N4448	75V, 150mA, 4ns, DO-35
0	DV 1	50.04.1112		5V1	Zener, 5%, 0.5W, DO-35
0	DV 2	50.04.1112		5V1	Zener, 5%, 0.5W, DO-35
0	DV 3	50.04.1112		5V1	Zener, 5%, 0.5W, DO-35
0	DV 4	50.04.1112		5V1	Zener, 5%, 0.5W, DO-35
0	DV 5	not used		11V	Zener, 5%, 0.5W, DO-35
0	IC 1	50.10.0125		L4970A	Switching Regulator 10A
0	IC 2	50.10.0106		TL431	Shunt regulator
0	IC 3	50.10.0106		TL431	Shunt regulator
0	IC 4	50.10.0106		TL431	Shunt regulator
0	IC 5	50.10.0122		L4960	L 4960,
0	IC 6	50.10.0122		L4960	L 4960,
0	IC 7	50.10.0122		L4960	L 4960,
0	IC 8	50.10.0122		L4960	L 4960,
0	L 1	62.03.0045		80uH	10A Toroid Chocke
0	L 2	62.03.0015		72uH	2A Toroid Chocke
0	L 3	62.03.0035		180uH	3A Toroid Chocke
0	L 4	62.03.0035		180uH	3A Toroid Chocke
0	L 5	62.03.0035		180uH	3A Toroid Chocke
0	L 6	62.03.0035		180uH	3A Toroid Chocke
0	L 7	62.03.0015		72uH	2A Toroid Chocke
0	L 8	62.03.0015		72uH	2A Toroid Chocke
0	L 9	62.03.0015		72uH	2A Toroid Chocke
0	L 10	62.03.0015		72uH	2A Toroid Chocke
0	MP 1	1.942.105.12			POWER SUPPLY PCB
0	MP 2	1.942.105.01			Kühlkörper
0	MP 3	1.942.105.02			Kühlkörper
0	MP 4	21.38.0354	3 pcs	M3*6	Z - Schraube KS A2 blank
0	MP 5	21.53.9354	4 pcs	M3*6	Z-Schraube Inbus-Ripp Zn gb ch
0	MP 6	50.20.2003	6 pcs		Montageclip zu TO 220, NISOL.
0	MP 7	50.20.2005			Montageclip zu SOT 93
0	MP 8	50.20.0318	5 pcs	TO220	Glimmerscheibe, zu Clip
0	MP 9	1.942.105.10			NR.ETIKETTE 5X20
0	MP 10	43.01.0108		Label	ESE-WARNSCHILD
1	MP 11	43.10.0110		A	Revisions-Etikette 5mm h'blau
0	P 1	54.12.0506		6p	Power-Pin Stecker
0	P 2	54.12.0510		10p	Power-Pin Stecker
0	P 3	54.12.0505		5p	Power-Pin Stecker
0	P 4	54.12.0506		6p	Power-Pin Stecker
0	P 5	54.12.0504		4p	Power-Pin Stecker
0	P 6	54.12.0503		3p	Power-Pin Stecker
0	Q 1	50.99.0106		BT138	TRIAC 400V, 8A
0	Q 2	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 3	50.03.0515		BC307B	BC 307 B , BC 557 B ,PNP
0	Q 4	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 5	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 6	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 7	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 8	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 9	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 10	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 11	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	R 1	57.56.5220		22R	WW, 10%, 4 W
0	R 2	57.11.3150		15R	MF, 1%, 0207
0	R 3	57.92.7013		0.5A	PTC 60V
0	R 4	57.11.3222		2k2	MF, 1%, 0207
0	R 5	57.11.3333		33k	MF, 1%, 0207
0	R 6	57.11.3682		6k8	MF, 1%, 0207
0	R 7	57.11.3153		15k	MF, 1%, 0207
0	R 8	57.11.3221		220R	MF, 1%, 0207
0	R 9	57.11.3332		3k3	MF, 1%, 0207
0	R 10	57.11.3222		2k2	MF, 1%, 0207
0	R 11	57.11.3472		4k7	MF, 1%, 0207
0	R 12	57.11.3472		4k7	MF, 1%, 0207
0	R 13	57.11.3333		33k	MF, 1%, 0207
0	R 14	57.11.3102		1k0	MF, 1%, 0207
0	R 15	57.11.3222		2k2	MF, 1%, 0207
0	R 16	57.11.3682		6k8	MF, 1%, 0207
0	R 17	57.11.3333		33k	MF, 1%, 0207
0	R 18	57.11.3472		4k7	MF, 1%, 0207
0	R 19	57.11.3682		6k8	MF, 1%, 0207
0	R 20	57.11.3154		150k	MF, 1%, 0207
0	R 21	57.11.3471		470R	MF, 1%, 0207
0	R 22	57.11.3102		1k0	MF, 1%, 0207
0	R 23	57.11.3153		15k	MF, 1%, 0207
0	R 24	57.11.3123		12k	MF, 1%, 0207
0	R 25	57.11.3332		3k3	MF, 1%, 0207
0	R 26	57.11.3682		6k8	MF, 1%, 0207
0	R 27	57.11.3153		15k	MF, 1%, 0207
0	R 28	57.11.3473		47k	MF, 1%, 0207
0	R 29	57.11.3104		100k	MF, 1%, 0207
0	R 30	57.11.3123		12k	MF, 1%, 0207
0	R 31	57.11.3332		3k3	MF, 1%, 0207
0	R 32	57.11.3682		6k8	MF, 1%, 0207
0	R 33	57.11.3153		15k	MF, 1%, 0207
0	R 34	57.11.3473		47k	MF, 1%, 0207
0	R 35	57.11.3104		100k	MF, 1%, 0207
0	R 36	57.11.3123		12k	MF, 1%, 0207
0	R 37	57.11.3332		3k3	MF, 1%, 0207

POWER SUPPLY 1.942.605.81 (1)

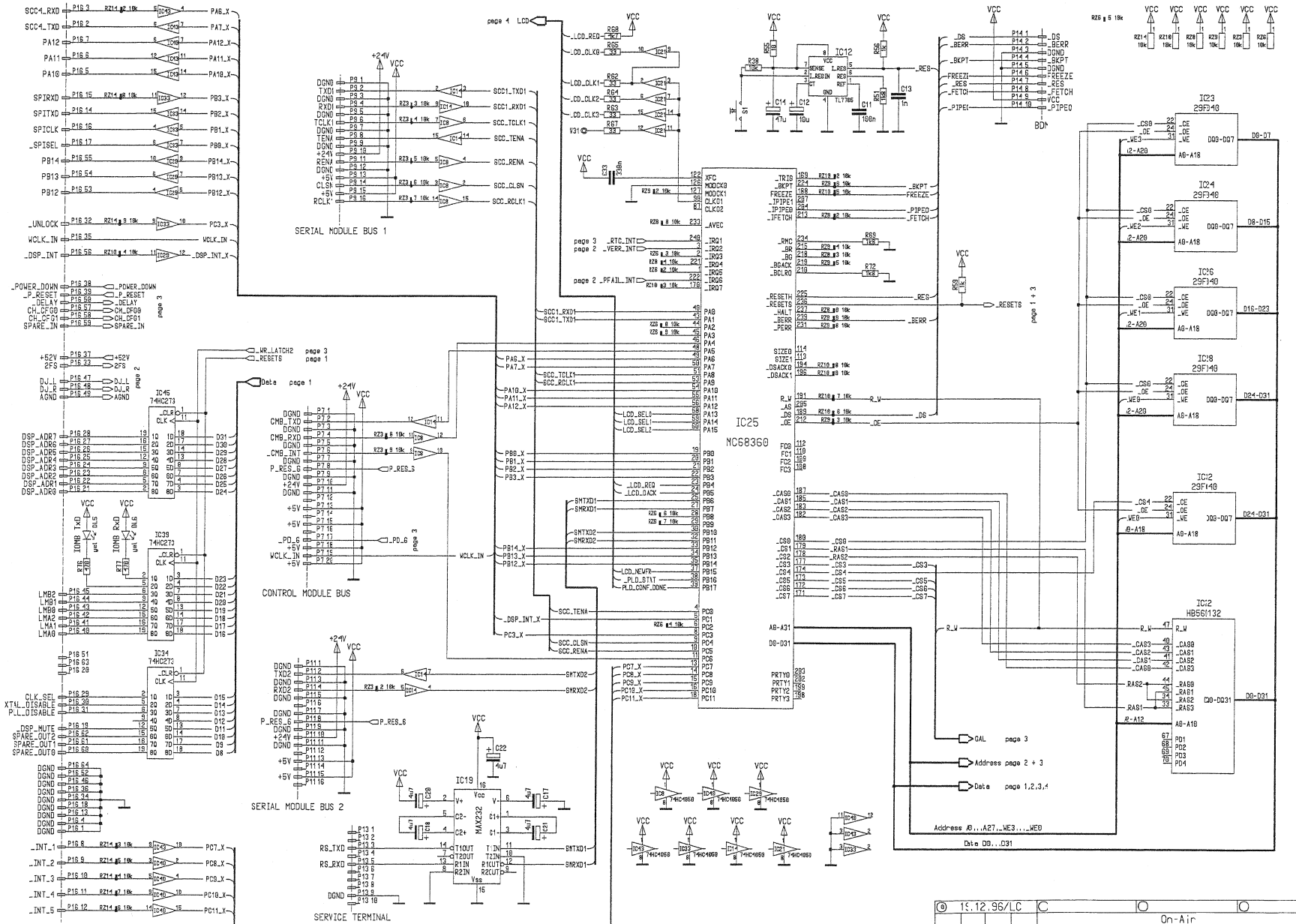
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 38	57.11.3682		6k8	MF, 1%, 0207
0	R 39	57.11.3153		15k	MF, 1%, 0207
0	R 40	57.11.3473		47k	MF, 1%, 0207
0	R 41	57.11.3104		100k	MF, 1%, 0207
0	R 42	57.11.3123		12k	MF, 1%, 0207
0	R 43	57.11.3332		3k3	MF, 1%, 0207
0	R 44	57.11.3682		6k8	MF, 1%, 0207
0	R 45	57.11.3473		47k	MF, 1%, 0207
0	R 46	57.11.3104		100k	MF, 1%, 0207
0	R 47	57.11.3101		100R	MF, 1%, 0207
0	R 48	57.11.3103		10k	MF, 1%, 0207
0	R 49	57.11.3104		100k	MF, 1%, 0207
0	R 50	57.11.3101		100R	MF, 1%, 0207
0	R 51	57.11.3103		10k	MF, 1%, 0207
0	R 52	57.11.3104		100k	MF, 1%, 0207
0	R 53	57.11.3101		100R	MF, 1%, 0207
0	R 54	57.11.3103		10k	MF, 1%, 0207
0	R 55	57.11.3104		100k	MF, 1%, 0207
0	R 56	57.11.3101		100R	MF, 1%, 0207
0	R 57	57.11.3103		10k	MF, 1%, 0207
0	R 58	57.11.3104		100k	MF, 1%, 0207
0	R 59	not used		3k3	MF, 1%, 0207
0	RA 1	58.01.8102		1k0	Cermet, 10%, 0.5W, horizontal

End of List

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description

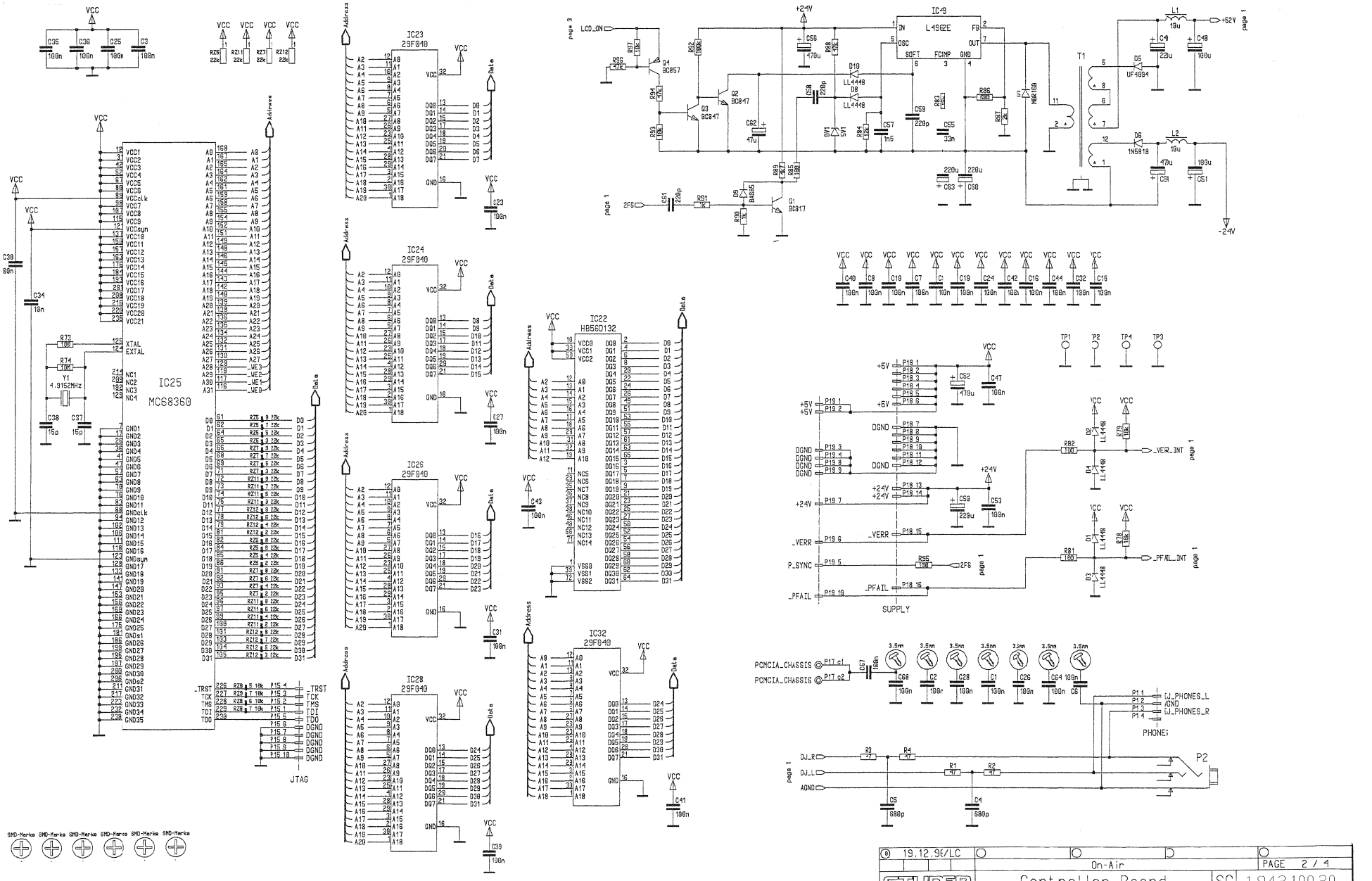
(01) C36, C42: 10uF->22uF; Revision label->"A" added

Controller Board 1.942.601.20

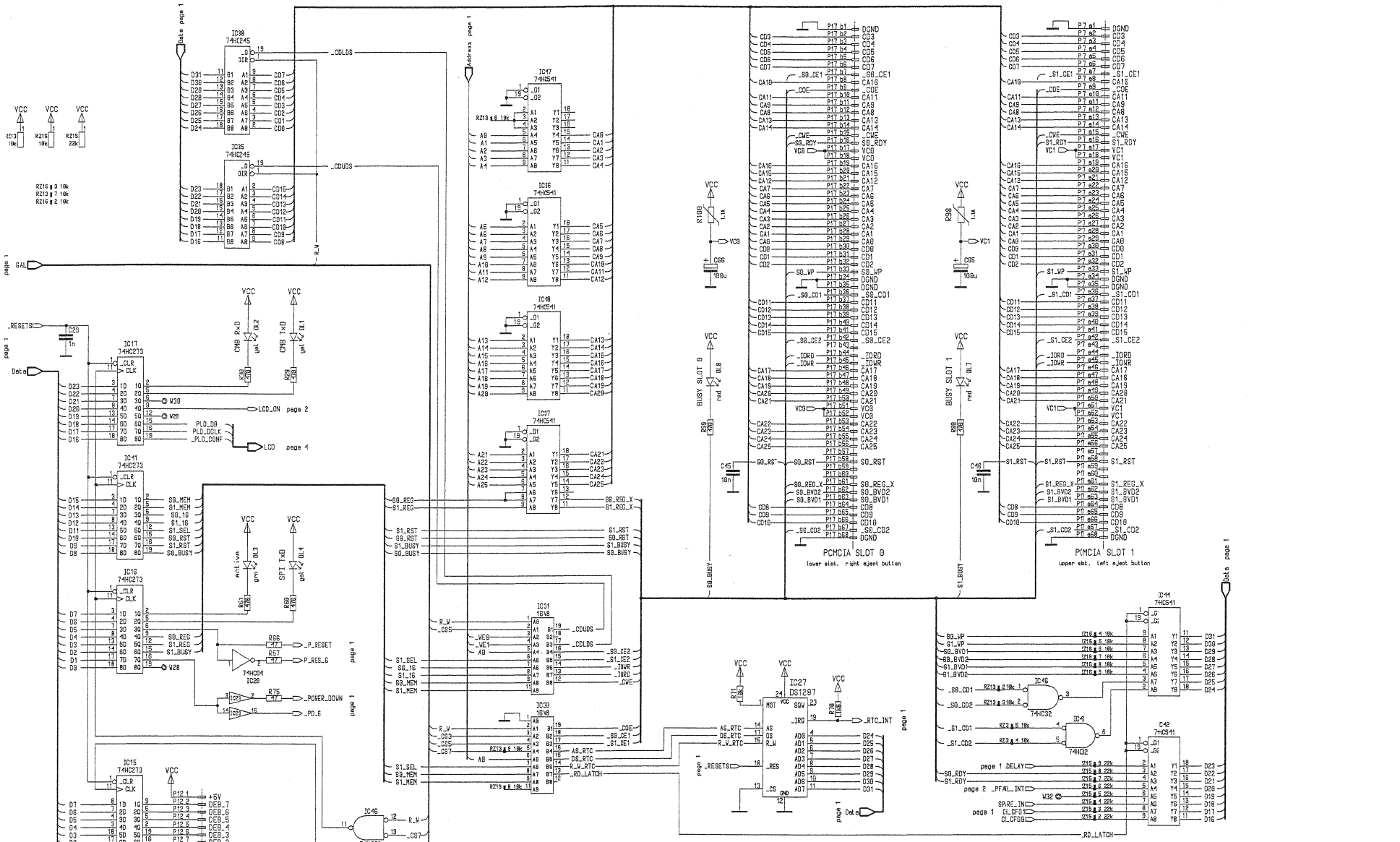


ⓐ 15.12.96/LC	C		O	O	O
			On-Air		PAGE 1 / 4
STUDER	Controller Board		SC	1.942.100.20	

Controller Board 1.942.601.20

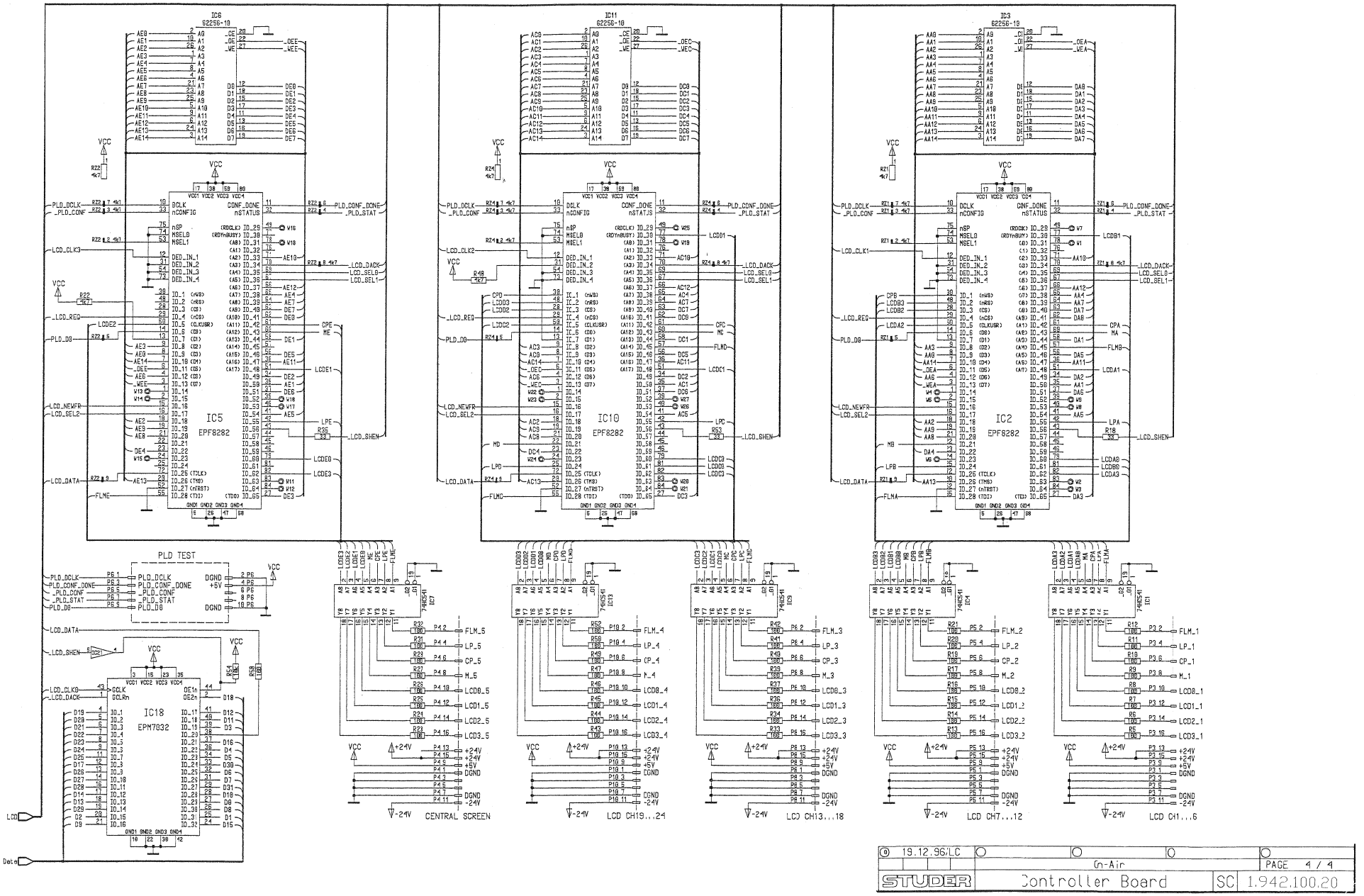


Controller Board 1.942.601.20



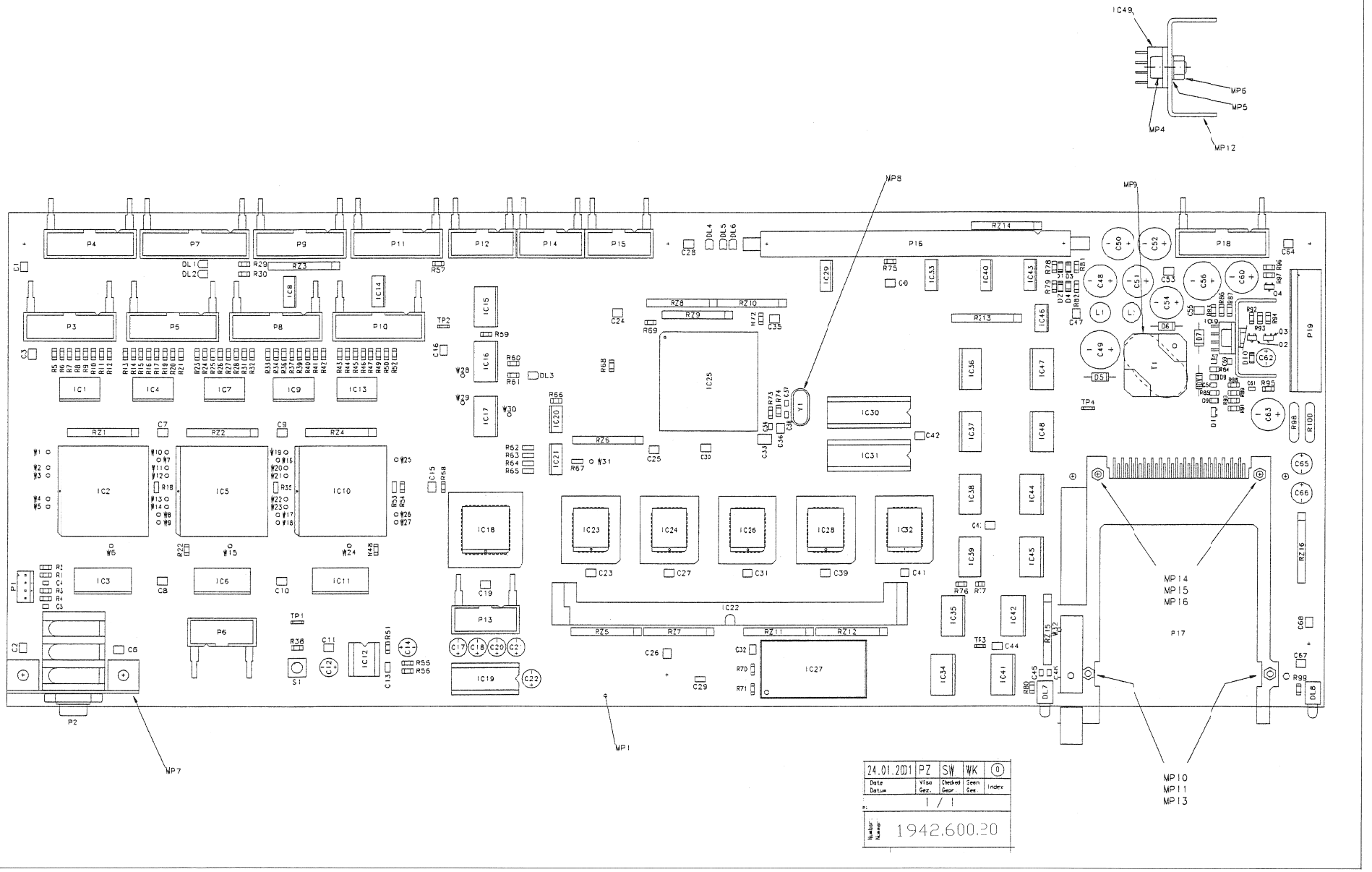
© 13.12.96/LC				PAGE 3 / 4
STUDER	On-Air	Controller Board	SC	1.942.100.20

Controller Board 1.942.601.20



0 19.12.96/LC			
	On-Air		PAGE 4 / 4
STUDER	Controller Board	SC	1.942.100.20

Controller Board 1.942.601.20



CONTROLLER BOARD 1.942.600.21 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 2	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 3	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 4	59.60.2369		680p	CER 50V, 5%, C0G, 0805
0	C 5	59.60.2369		680p	CER 50V, 5%, C0G, 0805
0	C 6	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 7	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 8	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 9	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 10	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 11	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 12	59.22.6100		10u	EL 35V 20% RM5
0	C 13	59.60.2473		1n	CER 50V, 5%, C0G, 1206
0	C 14	59.22.3470		47u	EL 10V 20% RM5
0	C 15	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 16	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 17	59.22.8479		4u7	EL 50V 20% RM5
0	C 18	59.22.8479		4u7	EL 50V 20% RM5
0	C 19	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 20	59.22.8479		4u7	EL 50V 20% RM5
0	C 21	59.22.8479		4u7	EL 50V 20% RM5
0	C 22	59.22.8479		4u7	EL 50V 20% RM5
0	C 23	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 24	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 25	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 26	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 27	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 28	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 29	59.60.2473		1n	CER 50V, 5%, C0G, 1206
0	C 30	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 31	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 32	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 33	59.60.3743		330n	CER 50V, 10%, X7R, 1812
0	C 34	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 35	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 36	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 37	59.60.2329		15p	CER 50V, 5%, C0G, 0805
0	C 38	59.60.2329		15p	CER 50V, 5%, C0G, 0805
0	C 39	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 40	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 41	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 42	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 43	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 44	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 45	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 46	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 47	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 48	59.22.8101		100u	EL 63V 20% RM5
0	C 49	59.22.8221		220u	EL 63V 20% RM5
0	C 50	59.22.6221		220u	EL 40V 20% RM5
0	C 51	59.22.6101		100u	EL 40V 20% RM5
0	C 52	59.22.3471		470u	EL 10V 20% RM5
0	C 53	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 54	59.22.4471		470u	EL 16V 20% RM5
0	C 55	59.60.3531		33n	CER 50V, 10%, X7R, 1210
0	C 56	59.22.6471		470u	EL 40V 20% RM5
0	C 57	59.60.3315		1n5	CER 50V, 10%, X7R, 0805
0	C 58	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 59	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 60	59.22.5221		220u	EL 25V 20% RM5
0	C 61	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 62	59.22.3470		47u	EL 10V 20% RM5
0	C 63	59.22.5221		220u	EL 25V 20% RM5
0	C 64	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 65	59.22.3101		100u	EL 10V 20% RM5
0	C 66	59.22.3101		100u	EL 10V 20% RM5
0	C 67	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 68	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 5	50.04.0138		UF4004	D BYT 01-400, UF 4004
0	D 6	50.04.0512		1N5818	D 1N 5818, 1N 5819,
0	D 7	50.04.0527		MBR160	MBR 160, SB 160, 11 DQ 06,
0	D 8	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 9	50.60.8101		BAS85	200mA 30V Schottky SOD 80
0	D 10	50.60.8001		4448	200mA 75V 4ns SOD 80
0	DL 1	50.04.2133		TLUY 2401	DL TLUY 2401 GB MATT
0	DL 2	50.04.2133		TLUY 2401	DL TLUY 2401 GB MATT
0	DL 3	50.04.2132		TLUG 2401	DL TLUG 2401 GN MATT
0	DL 4	50.04.2133		TLUY 2401	DL TLUY 2401 GB MATT
0	DL 5	50.04.2133		TLUY 2401	DL TLUY 2401 GB MATT
0	DL 6	50.04.2133		TLUY 2401	DL TLUY 2401 GB MATT
0	DL 7	50.04.2750		red	LED mit Halter
0	DL 8	50.04.2750		red	LED mit Halter
0	DV 1	50.04.1112		5V1	Zener, 5%, 0.5W, DO-35

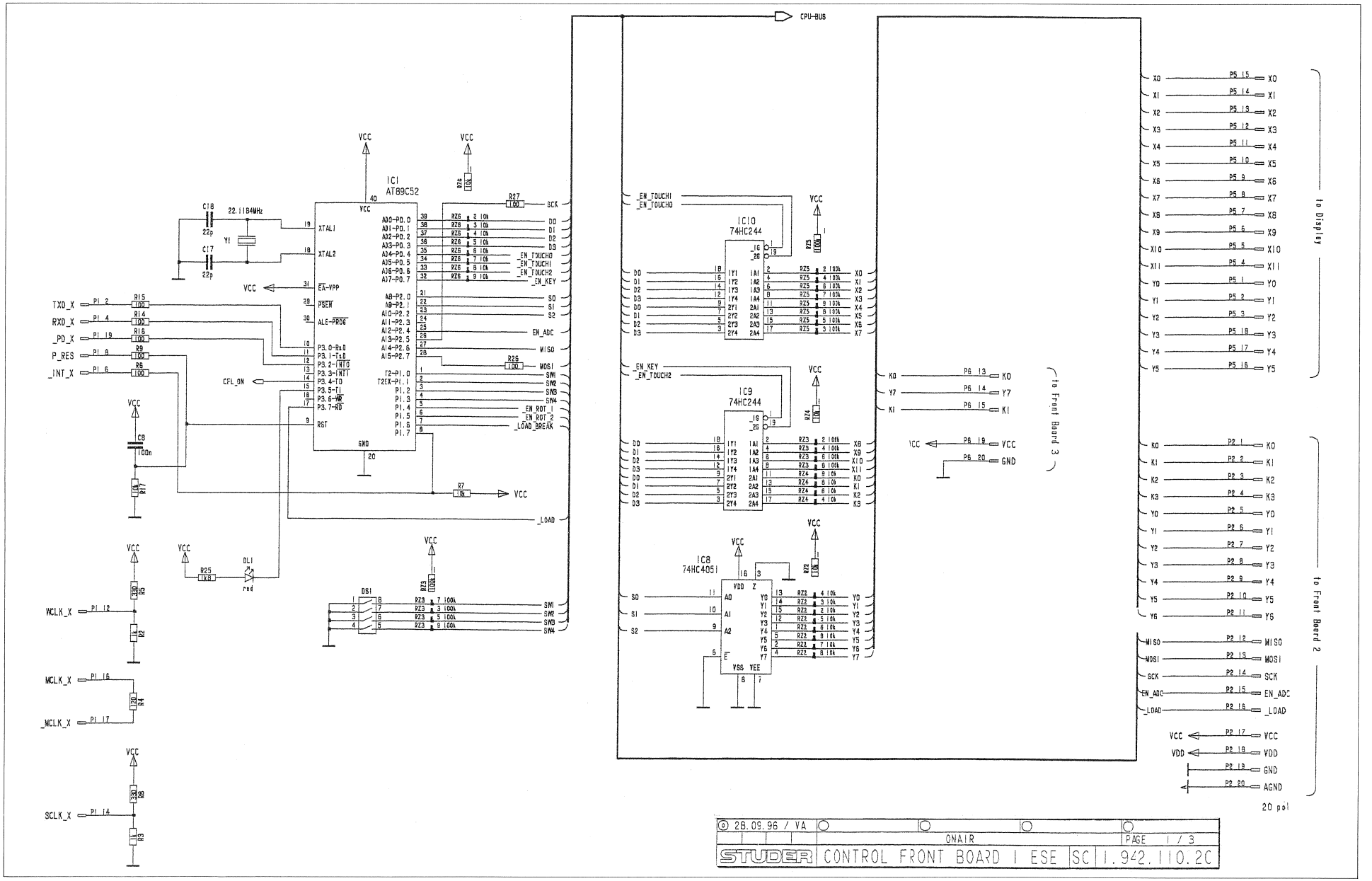
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 1	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 2	50.63.4203		EPLD8282	EPLD 2500 PLCC84
0	IC 3	50.63.1503		62256	SRAM 32K*8, 100ns
0	IC 4	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 5	50.63.4203		EPLD8282	EPLD 2500 PLCC84
0	IC 6	50.63.1503		62256	SRAM 32K*8, 100ns
0	IC 7	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 8	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 9	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 10	50.63.4203		EPLD8282	EPLD 2500 PLCC84
0	IC 11	50.63.1503		62256	SRAM 32K*8, 100ns
0	IC 12	50.11.0137		TL7705B	IC TL 7705 BCP,
0	IC 13	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 14	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 15	50.62.1273		74HC273	Octal D-FF with reset
0	IC 16	50.62.1273		74HC273	Octal D-FF with reset
0	IC 17	50.62.1273		74HC273	Octal D-FF with reset
0	IC 18	1.942.926.20		*50634201*	SW.100 CONTROLLER BOARD
0	IC 19	50.15.0120		MAX232	IC MAX 232 CPE
0	IC 20	50.62.1004		74HC 04	Hex inverter
0	IC 21	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 22	50.00.1052		1M*32	DRAM 1M*32, SIMM 72
0	IC 23	1.942.900.29		*50631301*	SW.100 CONTROLLER BOARD
0	IC 24	1.942.900.29		*50631301*	SW.100 CONTROLLER BOARD
0	IC 25	50.63.0201		68EN360	Communication Controller
0	IC 26	1.942.900.29		*50631301*	SW.100 CONTROLLER BOARD
0	IC 27	50.16.0801		DS12887	Real Time Clock
0	IC 28	1.942.900.29		*50631301*	SW.100 CONTROLLER BOARD
0	IC 29	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 30	1.942.904.20		*50180103*	SW.100 CONTROLLER BOARD
0	IC 31	1.942.905.20		*50180103*	SW.100 CONTROLLER BOARD
0	IC 32	50.63.1301		29F040B	Flash Memory 512K*8
0	IC 33	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 34	50.62.1273		74HC273	Octal D-FF with reset
0	IC 35	50.62.1245		74HC245	Octal bus transceiver
0	IC 36	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 37	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 38	50.62.1245		74HC245	Octal bus transceiver
0	IC 39	50.62.1273		74HC273	Octal D-FF with reset
0	IC 40	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 41	50.62.1273		74HC273	Octal D-FF with reset
0	IC 42	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 43	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 44	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 45	50.62.1273		74HC273	Octal D-FF with reset
0	IC 46	50.62.1032		74HC 32	Quad 2input OR
0	IC 47	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 48	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 49	50.10.0118		L4962	IC L 4962 E,
0	L 1	62.02.3100		10uH	10%, radial RM 5
0	L 2	62.02.3100		10uH	10%, radial RM 5
0	MP 1	1.942.100.11			CONTROLLER BOARD PCB
0	MP 2	1.942.600.10			NR.ETIKETTE 5X20
0	MP 3	43.01.0108		Label	ESE-WARNSCHILD
0	MP 4	21.53.0354		M3*6	Z-Schraube Inbus Zn gb chr
0	MP 5	24.16.1030		3.2/5.5	Rippenscheibe
0	MP 6	22.01.8030		M3	6kt-Mutter 0.8d St gb
0	MP 7	1.942.100.01			HALTEBLECH JACK SOCKET
0	MP 8	89.01.1499			QUARZ - ISOLIERPLATTE
0	MP 9	1.010.002.61			UNTERLAGE ZU 61.01.0281
0	MP 10	21.01.0205	2 pcs	M2*8	Z - Schraube Zn gb chr
0	MP 11	24.16.2020	2 pcs	2.2/4.5	Fächerscheibe Form A
0	MP 12	50.03.9934		TO220	Kühlkörper
0	MP 13	22.01.8020	2 pcs	M2	6kt-Mutter 0.8d St gb
0	MP 14	not used	2 pcs	M2*8	Z - Schraube Zn gb chr
0	MP 15	not used	2 pcs	2.2/4.5	Fächerscheibe Form A
0	MP 16	not used	2 pcs	M2	6kt-Mutter 0.8d St gb
0	MP 17	1.101.001.20		Label	TEXT-ETIK. 5*20 HARDWARE -20
0	P 1	54.12.0704		4p	Stecker gerade PCB
0	P 2	54.24.0123			J JACK-SOCKET, 6.3MM, PCB
0	P 3	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 4	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 5	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 6	not used		10p	1/20" Au, gerade, Verrieg
0	P 7	54.14.2103		20p	1/20" Au, gerade, Verrieg
0	P 8	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 9	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 10	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 11	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 12	54.14.2101		10p	1/20" Au, gerade, Verrieg
0	P 13	54.14.2101		10p	1/20" Au, gerade, Verrieg
0	P 14	54.14.2101		10p	1/20" Au, gerade, Verrieg

CONTROLLER BOARD 1.942.600.21 (0)

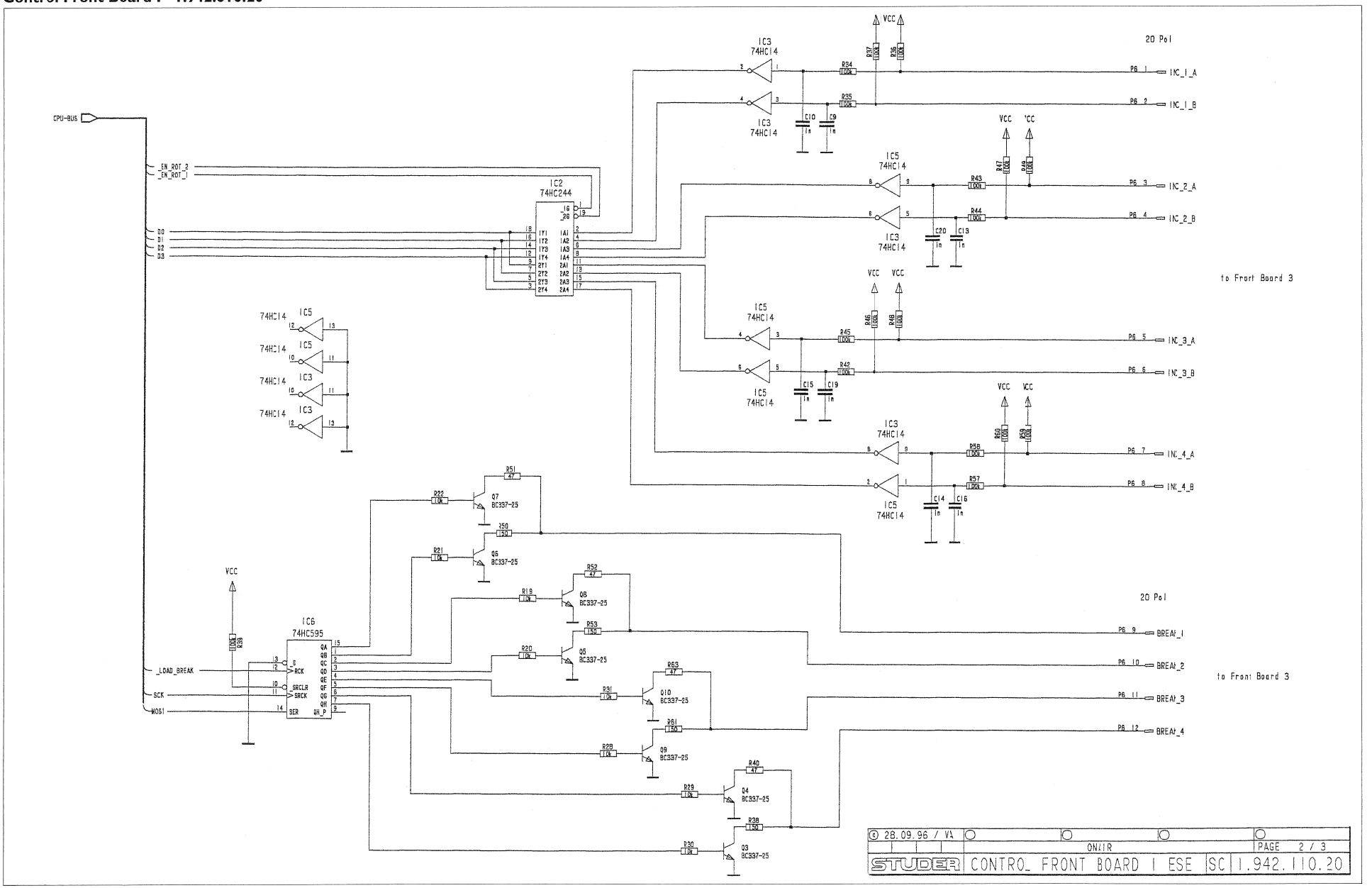
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	P 15	54.14.2101		10p	1/20" Au, gerade, Verrieg
0	P 16	54.14.2056		64p	Stecker gerade Au
0	P 17	54.99.0347		68p	1 slot PCMCIA-III connector
0	P 18	54.14.2102		16p	1/20" Au, gerade, Verrieg
0	P 19	not used		10p	Power-Pin Stecker
0	Q 1	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 2	50.60.0001		BC847B	NPN 45V 100mA SOT 23
0	Q 3	50.60.0001		BC847B	NPN 45V 100mA SOT 23
0	Q 4	50.60.1001		BC857B	PNP 45V 100mA SOT 23
0	R 1	57.60.1470		47R	MF, 1%, 0204, E24
0	R 2	57.60.1470		47R	MF, 1%, 0204, E24
0	R 3	57.60.1470		47R	MF, 1%, 0204, E24
0	R 4	57.60.1470		47R	MF, 1%, 0204, E24
0	R 5	57.60.1101		100R	MF, 1%, 0204, E24
0	R 6	57.60.1101		100R	MF, 1%, 0204, E24
0	R 7	57.60.1101		100R	MF, 1%, 0204, E24
0	R 8	57.60.1101		100R	MF, 1%, 0204, E24
0	R 9	57.60.1101		100R	MF, 1%, 0204, E24
0	R 10	57.60.1101		100R	MF, 1%, 0204, E24
0	R 11	57.60.1101		100R	MF, 1%, 0204, E24
0	R 12	57.60.1101		100R	MF, 1%, 0204, E24
0	R 13	57.60.1101		100R	MF, 1%, 0204, E24
0	R 14	57.60.1101		100R	MF, 1%, 0204, E24
0	R 15	57.60.1101		100R	MF, 1%, 0204, E24
0	R 16	57.60.1101		100R	MF, 1%, 0204, E24
0	R 17	57.60.1101		100R	MF, 1%, 0204, E24
0	R 18	57.60.1330		33R	MF, 1%, 0204, E24
0	R 19	57.60.1101		100R	MF, 1%, 0204, E24
0	R 20	57.60.1101		100R	MF, 1%, 0204, E24
0	R 21	57.60.1101		100R	MF, 1%, 0204, E24
0	R 22	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 23	57.60.1101		100R	MF, 1%, 0204, E24
0	R 24	57.60.1101		100R	MF, 1%, 0204, E24
0	R 25	57.60.1101		100R	MF, 1%, 0204, E24
0	R 26	57.60.1101		100R	MF, 1%, 0204, E24
0	R 27	57.60.1101		100R	MF, 1%, 0204, E24
0	R 28	57.60.1101		100R	MF, 1%, 0204, E24
0	R 29	57.60.1471		470R	MF, 1%, 0204, E24
0	R 30	57.60.1471		470R	MF, 1%, 0204, E24
0	R 31	57.60.1101		100R	MF, 1%, 0204, E24
0	R 32	57.60.1101		100R	MF, 1%, 0204, E24
0	R 33	57.60.1101		100R	MF, 1%, 0204, E24
0	R 34	57.60.1101		100R	MF, 1%, 0204, E24
0	R 35	57.60.1330		33R	MF, 1%, 0204, E24
0	R 36	57.60.1101		100R	MF, 1%, 0204, E24
0	R 37	57.60.1101		100R	MF, 1%, 0204, E24
0	R 38	57.60.1103		10k	MF, 1%, 0204, E24
0	R 39	57.60.1101		100R	MF, 1%, 0204, E24
0	R 40	57.60.1101		100R	MF, 1%, 0204, E24
0	R 41	57.60.1101		100R	MF, 1%, 0204, E24
0	R 42	57.60.1101		100R	MF, 1%, 0204, E24
0	R 43	57.60.1101		100R	MF, 1%, 0204, E24
0	R 44	57.60.1101		100R	MF, 1%, 0204, E24
0	R 45	57.60.1101		100R	MF, 1%, 0204, E24
0	R 46	57.60.1101		100R	MF, 1%, 0204, E24
0	R 47	57.60.1101		100R	MF, 1%, 0204, E24
0	R 48	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 49	57.60.1101		100R	MF, 1%, 0204, E24
0	R 50	57.60.1101		100R	MF, 1%, 0204, E24
0	R 51	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 52	57.60.1101		100R	MF, 1%, 0204, E24
0	R 53	57.60.1330		33R	MF, 1%, 0204, E24
0	R 54	57.60.1103		10k	MF, 1%, 0204, E24
0	R 55	57.60.1100		10R	MF, 1%, 0204, E24
0	R 56	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 57	57.60.1470		47R	MF, 1%, 0204, E24
0	R 58	57.60.1101		100R	MF, 1%, 0204, E24
0	R 59	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 60	57.60.1471		470R	MF, 1%, 0204, E24
0	R 61	57.60.1471		470R	MF, 1%, 0204, E24
0	R 62	57.60.1330		33R	MF, 1%, 0204, E24
0	R 63	57.60.1330		33R	MF, 1%, 0204, E24
0	R 64	57.60.1330		33R	MF, 1%, 0204, E24
0	R 65	57.60.1330		33R	MF, 1%, 0204, E24
0	R 66	57.60.1470		47R	MF, 1%, 0204, E24
0	R 67	57.60.1330		33R	MF, 1%, 0204, E24
0	R 68	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 69	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 70	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 71	57.60.1103		10k	MF, 1%, 0204, E24
0	R 72	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 73	57.60.1101		100R	MF, 1%, 0204, E24
0	R 74	57.60.1106		10M	MF, 1%, 0204, E24
0	R 75	57.60.1470		47R	MF, 1%, 0204, E24
0	R 76	57.60.1471		470R	MF, 1%, 0204, E24
0	R 77	57.60.1471		470R	MF, 1%, 0204, E24
0	R 78	57.60.1103		10k	MF, 1%, 0204, E24
0	R 79	57.60.1103		10k	MF, 1%, 0204, E24
0	R 80	57.60.1471		470R	MF, 1%, 0204, E24
0	R 81	57.60.1101		100R	MF, 1%, 0204, E24
0	R 82	57.60.1101		100R	MF, 1%, 0204, E24
0	R 83	57.60.1153		15k	MF, 1%, 0204, E24
0	R 84	57.60.1123		12k	MF, 1%, 0204, E24
0	R 85	57.60.1101		100R	MF, 1%, 0204, E24
0	R 86	57.60.1681		680R	MF, 1%, 0204, E24
0	R 87	57.60.1202		2k0	MF, 1%, 0204, E24
0	R 88	57.60.1473		47k	MF, 1%, 0204, E24
0	R 89	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 90	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 91	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 92	57.60.1104		100k	MF, 1%, 0204, E24
0	R 93	57.60.1103		10k	MF, 1%, 0204, E24
0	R 94	57.60.1473		47k	MF, 1%, 0204, E24
0	R 95	57.60.1101		100R	MF, 1%, 0204, E24
0	R 96	57.60.1473		47k	MF, 1%, 0204, E24
0	R 97	57.60.1103		10k	MF, 1%, 0204, E24
0	R 98	57.92.7015		1.1A	PTC 50V
0	R 99	57.60.1471		470R	MF, 1%, 0204, E24
0	R 100	57.92.7015		1.1A	PTC 50V
0	RZ 1	57.88.4472		4k7	8*R Resistor-Netw 2% SIP9
0	RZ 2	57.88.4472		4k7	8*R Resistor-Netw 2% SIP9
0	RZ 3	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 4	57.88.4472		4k7	8*R Resistor-Netw 2% SIP9
0	RZ 5	57.88.4223		22k	8*R Resistor-Netw 2% SIP9
0	RZ 6	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 7	57.88.4223		22k	8*R Resistor-Netw 2% SIP9
0	RZ 8	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 9	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 10	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 11	57.88.4223		22k	8*R Resistor-Netw 2% SIP9
0	RZ 12	57.88.4223		22k	8*R Resistor-Netw 2% SIP9
0	RZ 13	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 14	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 15	57.88.4223		22k	8*R Resistor-Netw 2% SIP9
0	RZ 16	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	S 1	56.15.0136		TA	S 1 TASTE, TA,IMPULS,1.0 N
0	T 1	1.022.655.00			48V ON AIR 2000 TRAFO
0	TP 1	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 2	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 3	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 4	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	XIC 18	53.03.2244		44p	PLCC-Socket
0	XIC 19	53.03.0168		16p	DIL 0.3", löt, gerade
0	XIC 22	54.10.3772		72p	SIMM-Socket 72p
0	XIC 23	53.03.2232		32p	PLCC-Socket
0	XIC 24	53.03.2232		32p	PLCC-Socket
0	XIC 26	53.03.2232		32p	PLCC-Socket
0	XIC 27	53.03.0169		24p	DIL 0.6", löt, gerade
0	XIC 28	53.03.2232		32p	PLCC-Socket
0	XIC 30	53.03.0165		20p	DIL 0.3", löt, gerade
0	XIC 31	53.03.0165		20p	DIL 0.3", löt, gerade
0	XIC 32	53.03.2232		32p	PLCC-Socket
0	Y 1	89.01.0560		4.9152MHz	XTAL

End of List

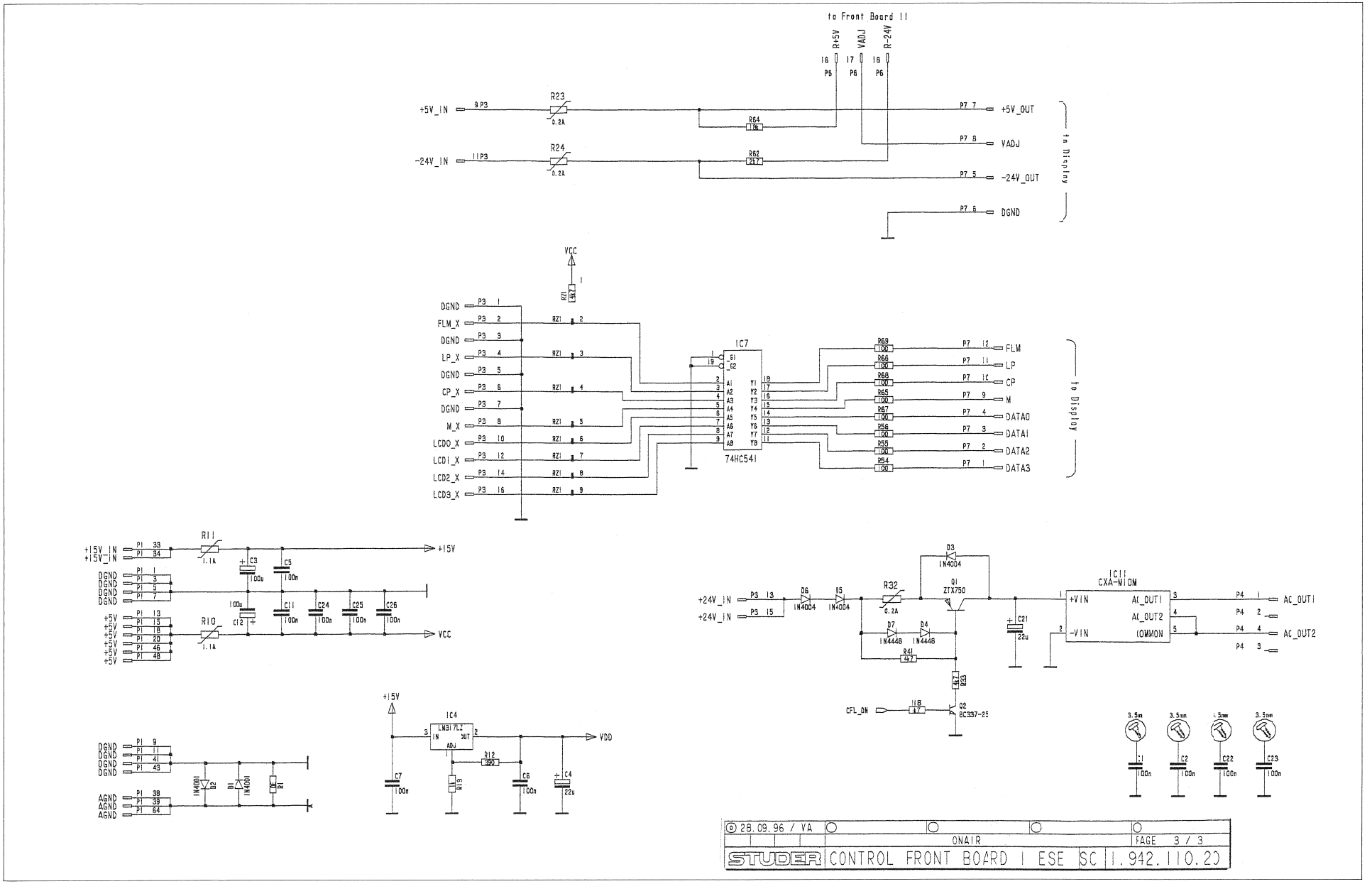
Control Front Board I 1.942.610.20



Control Front Board I 1.942.610.20

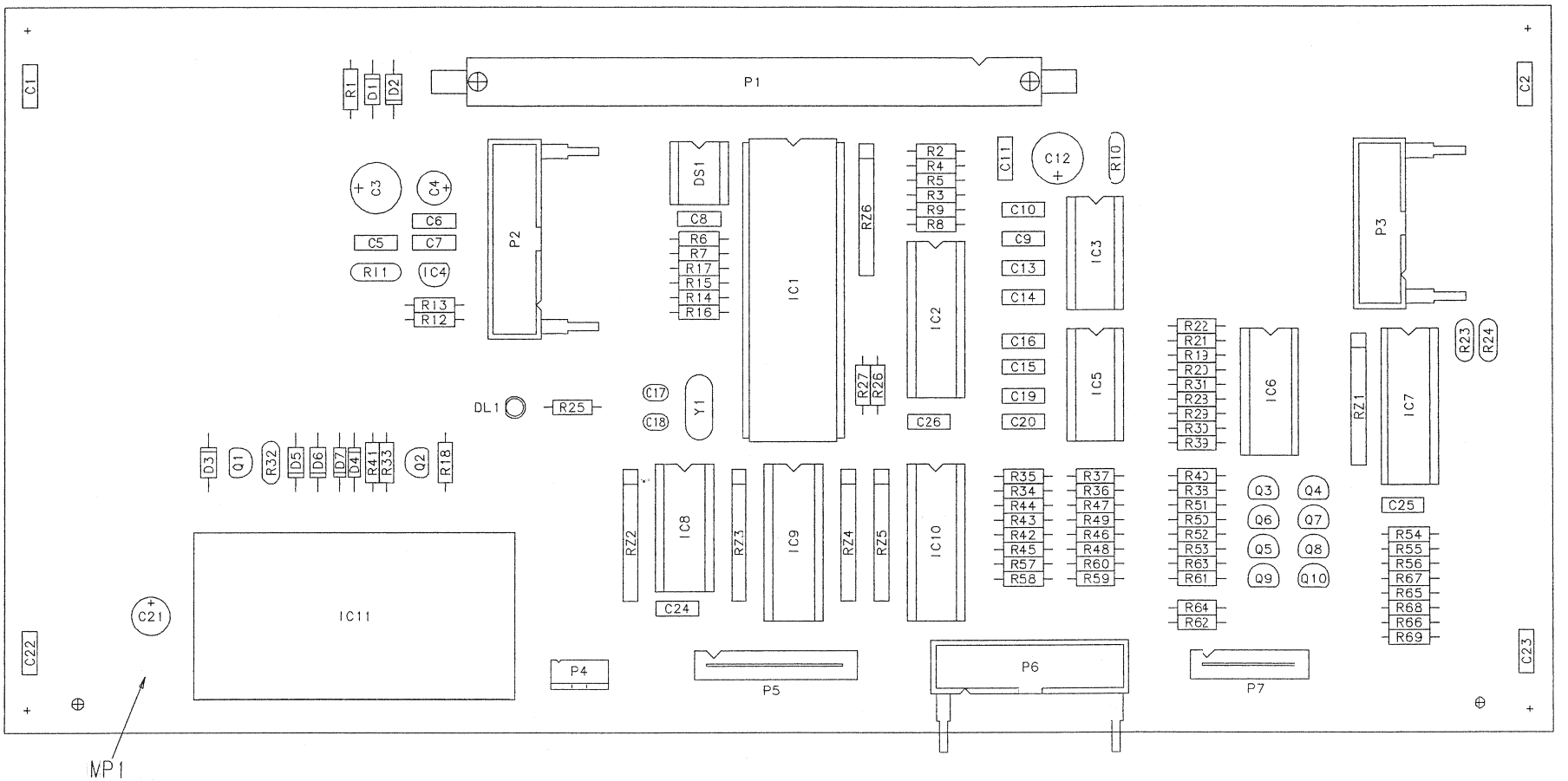


Control Front Board I 1.942.610.20



© 28.09.96 / VA			
	ONAIR		PAGE 3 / 3
STUDER	CONTROL FRONT BOARD I ESE	SC	1.942.110.20

Control Front Board I 1.942.610.20



Edition Modification Ausgabe Aenderung						1 2 3 0
Date Datum	27.9.96	PZ				
Visa Sez.						
Dessin Gepr.						
Seen Ges.						
Index						

Copy to: Kopie fuer:

STUDER REGENSDORF Description Bezeichnung CONTROL FRONT BOARD I ESE

Number Nummer 1.942.110.20

Control Front Board I 1.942.610.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 2	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 3	59.22.5101		100u	EL 25V 20% RM5
0	C 4	59.22.5220		22u	EL 25V 20% RM5
0	C 5	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 6	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 7	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 8	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 9	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 10	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 11	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 12	59.22.5101		100u	EL 25V 20% RM5
0	C 13	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 14	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 15	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 16	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 17	59.34.2220		22p	CER 63V, 5%, N150
0	C 18	59.34.2220		22p	CER 63V, 5%, N150
0	C 19	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 20	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 21	59.22.6220		22u	EL 35V 20% RM5
0	C 22	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 23	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 24	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 25	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 26	59.06.0104		100n	PETP, 63V, 10%, RM5
0	D 1	50.04.0122		1N4001	1A, DO 41
0	D 2	50.04.0122		1N4001	1A, DO 41
0	D 3	50.04.0105		1N4004	1A, DO 41
0	D 4	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 5	50.04.0105		1N4004	1A, DO 41
0	D 6	50.04.0105		1N4004	1A, DO 41
0	D 7	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	DL 1	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DS 1	55.01.0164		4*a	SZ , 4*A, DIL
0	IC 1	1.942.910.22			SW.110 CONTROL FRONT BOARD 1
				(50160314,	*DS87C520)*
0	IC 2	50.17.1244		74HC244	IC ... 74 HC 244 ., ,A
0	IC 3	50.17.1014		74HC14	IC ... 74 HC 14 ., ,A
0	IC 4	50.10.0108		LM317L	Series regulator 100mA ...+37V
0	IC 5	50.17.1014		74HC14	IC ... 74 HC 14 ., ,A
0	IC 6	50.17.1595		74HC595	IC ... 74 HC 595 ., ,A
0	IC 7	50.17.1541		74HC541	IC ... 74 HC 541 ., ,A
0	IC 8	50.17.4051			IC ... 74 HC 4051 ., ,A
0	IC 9	50.17.1244		74HC244	IC ... 74 HC 244 ., ,A
0	IC 10	50.17.1244		74HC244	IC ... 74 HC 244 ., ,A
0	IC 11	89.20.2201		600VAC	DC / AC Converter
0	MP 1	1.942.110.11	1 pce		CONTOL FRONT BOARD 1 PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.110.10	1 pce		NR.ETIKETTE 5X20
				(plus Hardware-Etikette 1.101.001.21)	
0	MP 4	43.01.0104	1 pce		WARNSCHILD (BLITZ)
0	P 1	54.14.2056		64p	Stecker gerade Au
0	P 2	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	P 3	54.14.2102		16p	P STECKER 16 P,AU,VR,GERADE
0	P 4	54.99.0337		P4p	P 4p Pin-Row vertical
0	P 5	54.10.4018		18p	Flex-ZIF gerade, PCB
0	P 6	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	P 7	54.10.4012		12p	Flex-ZIF gerade, PCB
0	Q 1	50.03.0631		ZTX750	ZTX 750
0	Q 2	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 3	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 4	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 5	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 6	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 7	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 8	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 9	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 10	50.03.0340		BC337-25	800mA, 45V, NPN
0	R 1	57.11.3000		0R0	MF, 0207
0	R 2	57.11.3102		1k0	MF, 1%, 0207
0	R 3	57.11.3102		1k0	MF, 1%, 0207
0	R 4	57.11.3121		120R	MF, 1%, 0207
0	R 5	57.11.3331		330R	MF, 1%, 0207
0	R 6	57.11.3101		100R	MF, 1%, 0207
0	R 7	57.11.3103		10k	MF, 1%, 0207
0	R 8	57.11.3331		330R	MF, 1%, 0207
0	R 9	57.11.3101		100R	MF, 1%, 0207
0	R 10	57.92.7015		1.1A	PTC 50V
0	R 11	57.92.7015		1.1A	PTC 50V
0	R 12	57.11.3391		390R	MF, 1%, 0207

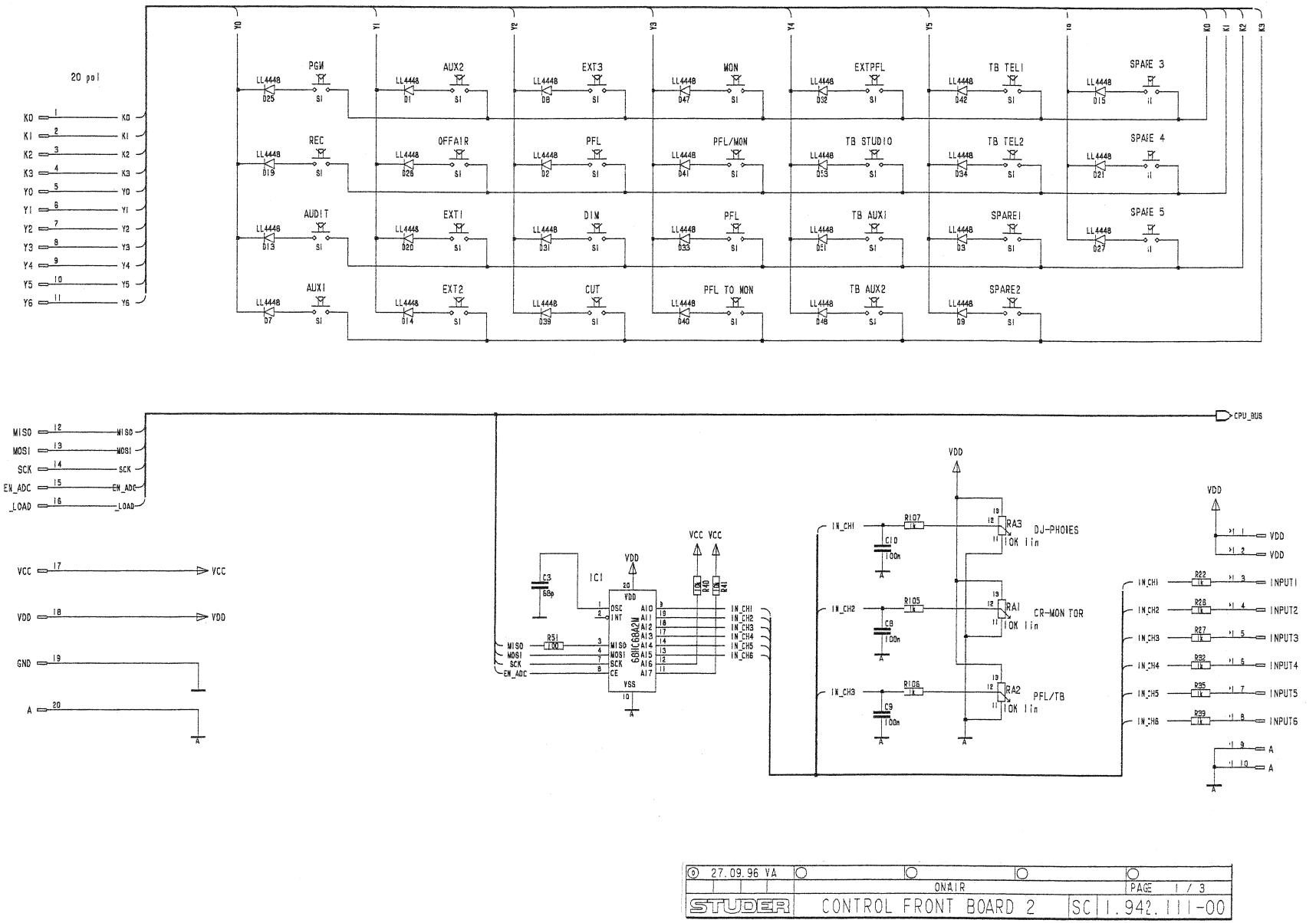
Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 13	57.11.3102		1k0	MF, 1%, 0207
0	R 14	57.11.3101		100R	MF, 1%, 0207
0	R 15	57.11.3101		100R	MF, 1%, 0207
0	R 16	57.11.3101		100R	MF, 1%, 0207
0	R 17	57.11.3103		10k	MF, 1%, 0207
0	R 18	57.11.3472		4k7	MF, 1%, 0207
0	R 19	57.11.3103		10k	MF, 1%, 0207
0	R 20	57.11.3103		10k	MF, 1%, 0207
0	R 21	57.11.3103		10k	MF, 1%, 0207
0	R 22	57.11.3103		10k	MF, 1%, 0207
0	R 23	57.92.7011		0.2A	PTC 60V
0	R 24	57.92.7011		0.2A	PTC 60V
0	R 25	57.11.3182		1k8	MF, 1%, 0207
0	R 26	57.11.3101		100R	MF, 1%, 0207
0	R 27	57.11.3101		100R	MF, 1%, 0207
0	R 28	57.11.3103		10k	MF, 1%, 0207
0	R 29	57.11.3103		10k	MF, 1%, 0207
0	R 30	57.11.3103		10k	MF, 1%, 0207
0	R 31	57.11.3103		10k	MF, 1%, 0207
0	R 32	57.92.7011		0.2A	PTC 60V
0	R 33	57.11.3472		4k7	MF, 1%, 0207
0	R 34	57.11.3104		100k	MF, 1%, 0207
0	R 35	57.11.3104		100k	MF, 1%, 0207
0	R 36	57.11.3104		100k	MF, 1%, 0207
0	R 37	57.11.3104		100k	MF, 1%, 0207
0	R 38	57.11.3151		150R	MF, 1%, 0207
0	R 39	57.11.3104		100k	MF, 1%, 0207
0	R 40	57.11.3470		47R	MF, 1%, 0207
0	R 41	57.11.3472		4k7	MF, 1%, 0207
0	R 42	57.11.3104		100k	MF, 1%, 0207
0	R 43	57.11.3104		100k	MF, 1%, 0207
0	R 44	57.11.3104		100k	MF, 1%, 0207
0	R 45	57.11.3104		100k	MF, 1%, 0207
0	R 46	57.11.3104		100k	MF, 1%, 0207
0	R 47	57.11.3104		100k	MF, 1%, 0207
0	R 48	57.11.3104		100k	MF, 1%, 0207
0	R 49	57.11.3104		100k	MF, 1%, 0207
0	R 50	57.11.3151		150R	MF, 1%, 0207
0	R 51	57.11.3470		47R	MF, 1%, 0207
0	R 52	57.11.3470		47R	MF, 1%, 0207
0	R 53	57.11.3151		150R	MF, 1%, 0207
0	R 54	57.11.3101		100R	MF, 1%, 0207
0	R 55	57.11.3101		100R	MF, 1%, 0207
0	R 56	57.11.3101		100R	MF, 1%, 0207
0	R 57	57.11.3104		100k	MF, 1%, 0207
0	R 58	57.11.3104		100k	MF, 1%, 0207
0	R 59	57.11.3104		100k	MF, 1%, 0207
0	R 60	57.11.3104		100k	MF, 1%, 0207
0	R 61	57.11.3151		150R	MF, 1%, 0207
0	R 62	57.11.3272		2k7	MF, 1%, 0207
0	R 63	57.11.3470		47R	MF, 1%, 0207
0	R 64	57.11.3183		18k	MF, 1%, 0207
0	R 65	57.11.3101		100R	MF, 1%, 0207
0	R 66	57.11.3101		100R	MF, 1%, 0207
0	R 67	57.11.3101		100R	MF, 1%, 0207
0	R 68	57.11.3101		100R	MF, 1%, 0207
0	R 69	57.11.3101		100R	MF, 1%, 0207
0	RZ 1	57.88.4472		4k7	8*R Resistor-Netw 2% SIP9
0	RZ 2	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 3	57.88.4104		100k	8*R Resistor-Netw 2% SIP9
0	RZ 4	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 5	57.88.4104		100k	8*R Resistor-Netw 2% SIP9
0	RZ 6	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	XIC 1	53.03.0172		40p	DIL 0.6", löt, gerade
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

End of List

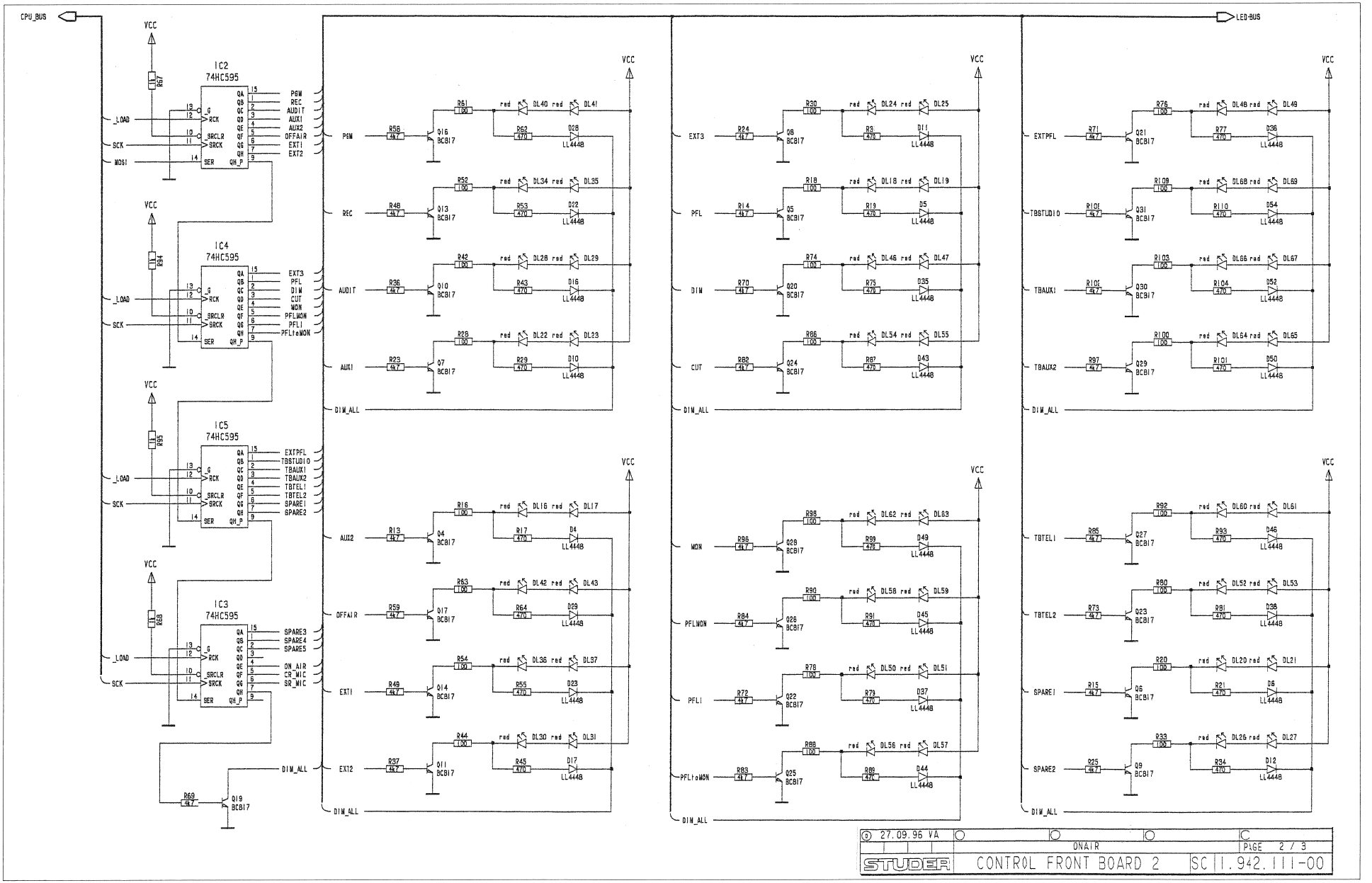
Comments

(22) IC1 Software change

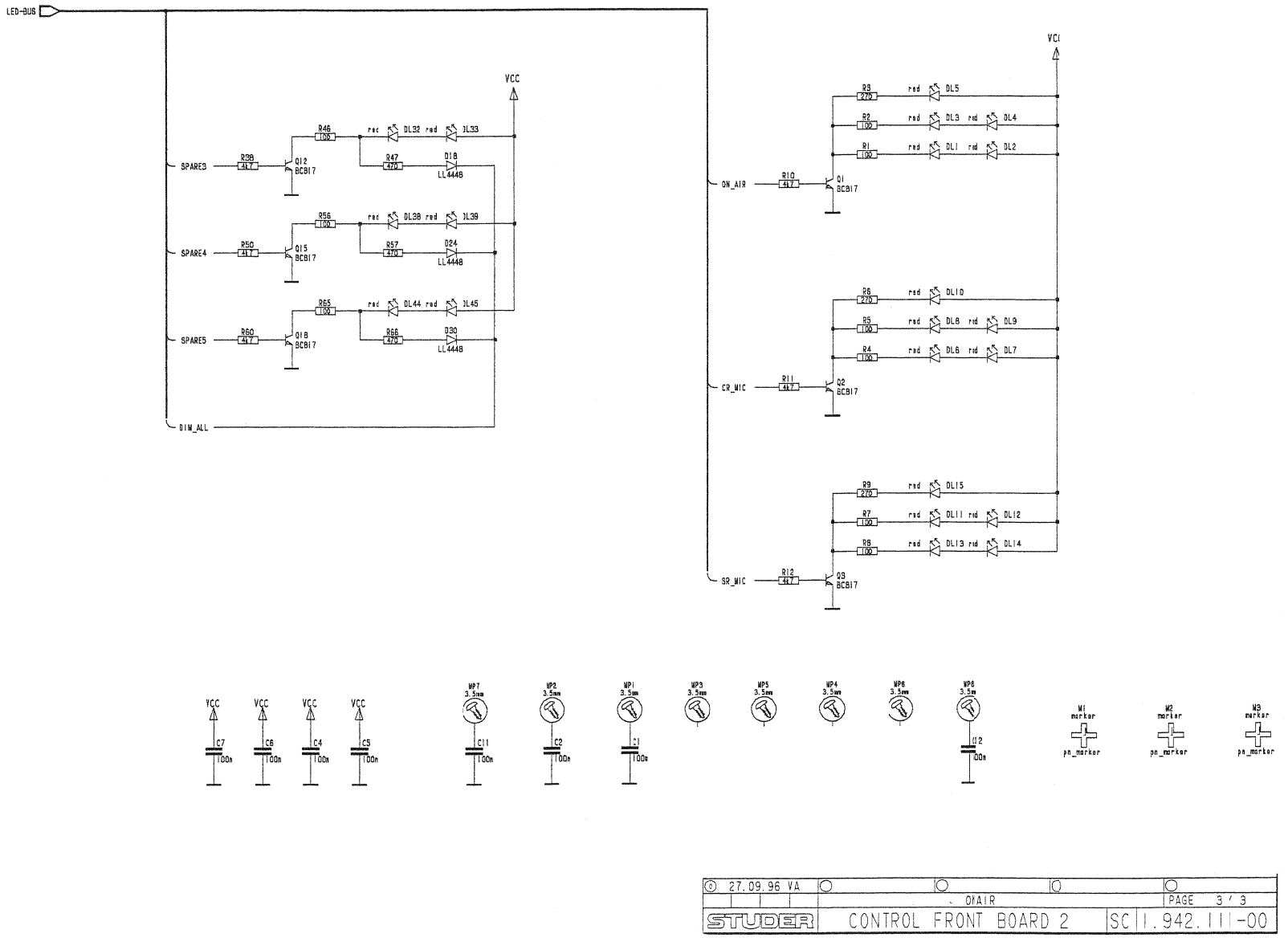
Control Front Board II 1.942.111.00



Control Front Board II 1.942.111.00

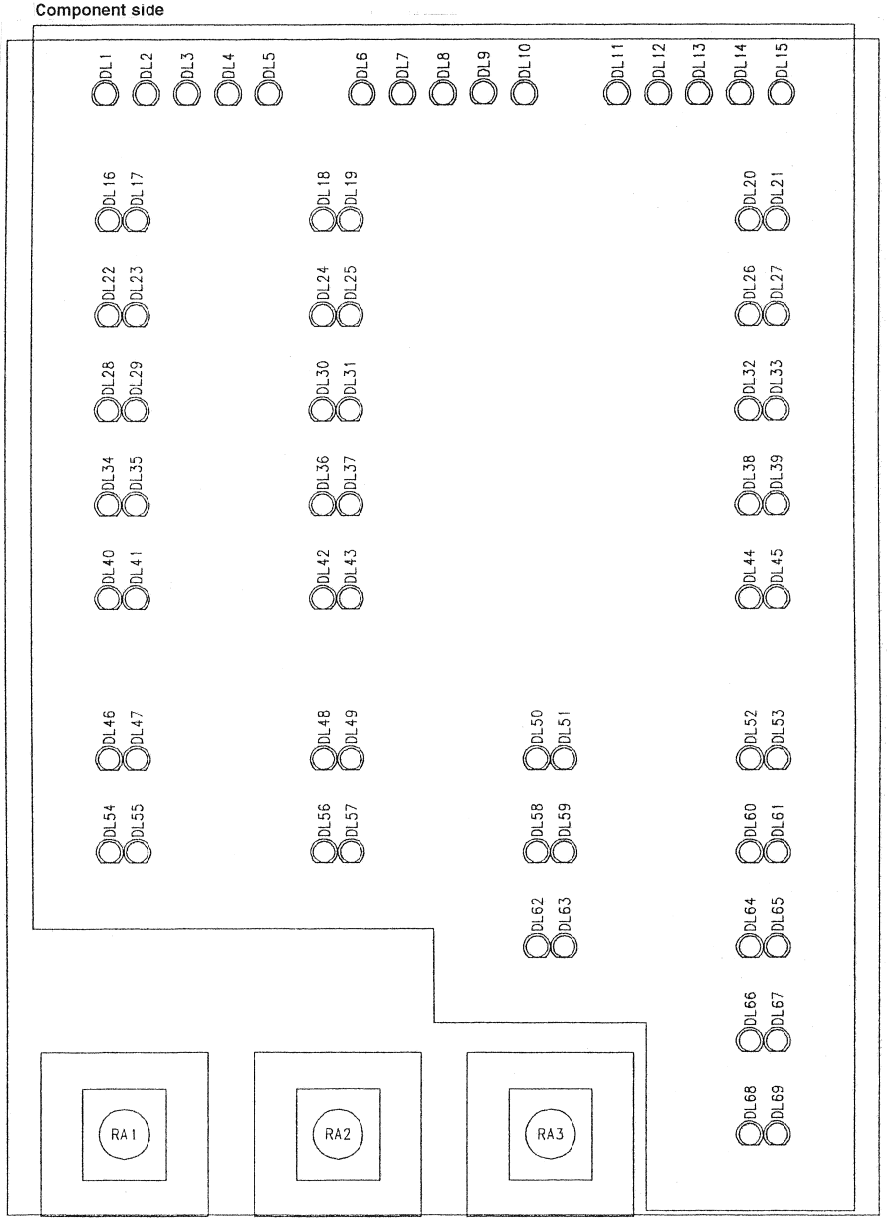


Control Front Board II 1.942.111.00

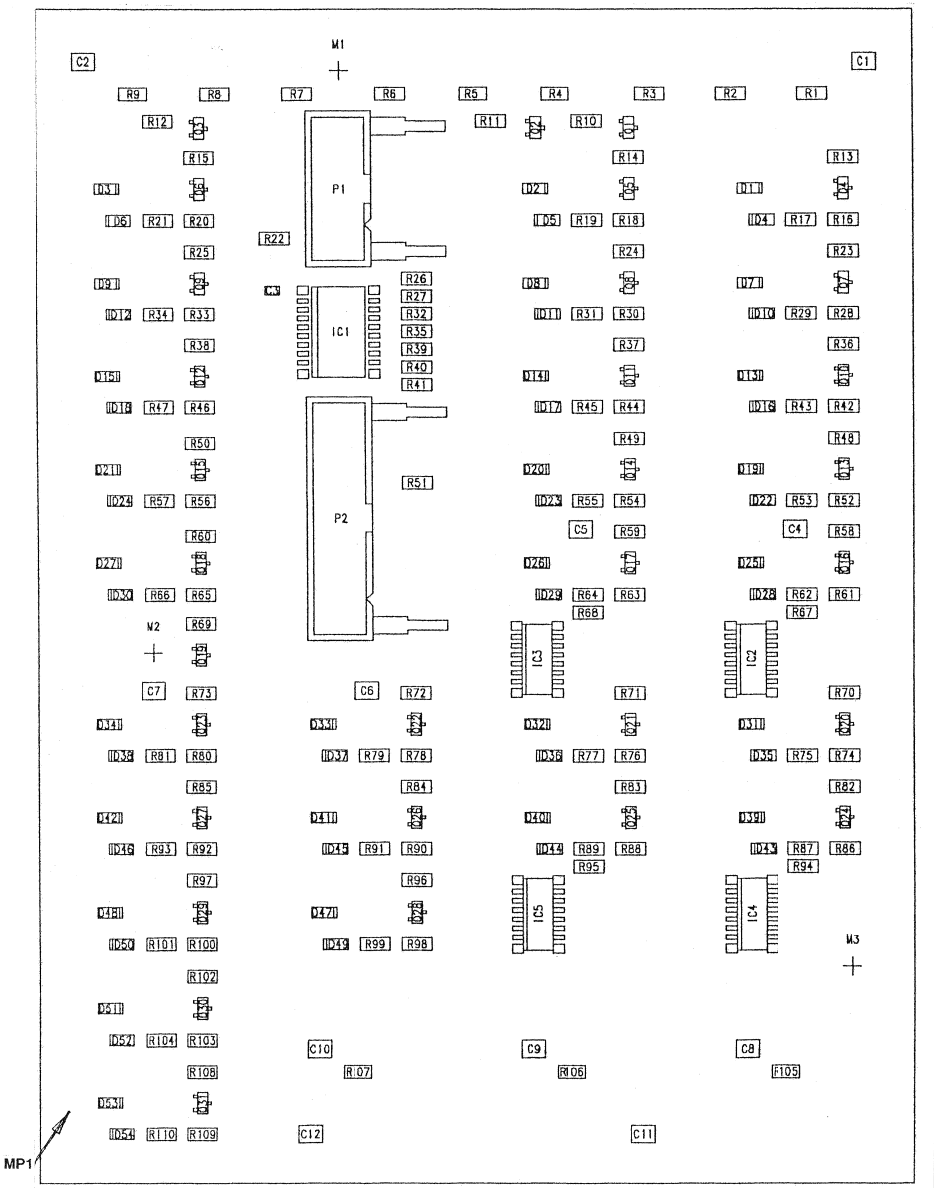


Control Front Board II 1.942.111.00

Component side



Solder side



Control Front Board II 1.942.111.00

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 2	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 3	59.60.0680		68p	CER 63V, 5%, C0G, 0805
0	C 4	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 5	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 6	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 7	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 8	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 9	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 10	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 11	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	C 12	59.60.1104		100n	CER 63V, 10%, X7R, 1210
0	D 1	50.60.8001		4448	D LL 4448 SOD 80
0	D 2	50.60.8001		4448	D LL 4448 SOD 80
0	D 3	50.60.8001		4448	D LL 4448 SOD 80
0	D 4	50.60.8001		4448	D LL 4448 SOD 80
0	D 5	50.60.8001		4448	D LL 4448 SOD 80
0	D 6	50.60.8001		4448	D LL 4448 SOD 80
0	D 7	50.60.8001		4448	D LL 4448 SOD 80
0	D 8	50.60.8001		4448	D LL 4448 SOD 80
0	D 9	50.60.8001		4448	D LL 4448 SOD 80
0	D 10	50.60.8001		4448	D LL 4448 SOD 80
0	D 11	50.60.8001		4448	D LL 4448 SOD 80
0	D 12	50.60.8001		4448	D LL 4448 SOD 80
0	D 13	50.60.8001		4448	D LL 4448 SOD 80
0	D 14	50.60.8001		4448	D LL 4448 SOD 80
0	D 15	50.60.8001		4448	D LL 4448 SOD 80
0	D 16	50.60.8001		4448	D LL 4448 SOD 80
0	D 17	50.60.8001		4448	D LL 4448 SOD 80
0	D 18	50.60.8001		4448	D LL 4448 SOD 80
0	D 19	50.60.8001		4448	D LL 4448 SOD 80
0	D 20	50.60.8001		4448	D LL 4448 SOD 80
0	D 21	50.60.8001		4448	D LL 4448 SOD 80
0	D 22	50.60.8001		4448	D LL 4448 SOD 80
0	D 23	50.60.8001		4448	D LL 4448 SOD 80
0	D 24	50.60.8001		4448	D LL 4448 SOD 80
0	D 25	50.60.8001		4448	D LL 4448 SOD 80
0	D 26	50.60.8001		4448	D LL 4448 SOD 80
0	D 27	50.60.8001		4448	D LL 4448 SOD 80
0	D 28	50.60.8001		4448	D LL 4448 SOD 80
0	D 29	50.60.8001		4448	D LL 4448 SOD 80
0	D 30	50.60.8001		4448	D LL 4448 SOD 80
0	D 31	50.60.8001		4448	D LL 4448 SOD 80
0	D 32	50.60.8001		4448	D LL 4448 SOD 80
0	D 33	50.60.8001		4448	D LL 4448 SOD 80
0	D 34	50.60.8001		4448	D LL 4448 SOD 80
0	D 35	50.60.8001		4448	D LL 4448 SOD 80
0	D 36	50.60.8001		4448	D LL 4448 SOD 80
0	D 37	50.60.8001		4448	D LL 4448 SOD 80
0	D 38	50.60.8001		4448	D LL 4448 SOD 80
0	D 39	50.60.8001		4448	D LL 4448 SOD 80
0	D 40	50.60.8001		4448	D LL 4448 SOD 80
0	D 41	50.60.8001		4448	D LL 4448 SOD 80
0	D 42	50.60.8001		4448	D LL 4448 SOD 80
0	D 43	50.60.8001		4448	D LL 4448 SOD 80
0	D 44	50.60.8001		4448	D LL 4448 SOD 80
0	D 45	50.60.8001		4448	D LL 4448 SOD 80
0	D 46	50.60.8001		4448	D LL 4448 SOD 80
0	D 47	50.60.8001		4448	D LL 4448 SOD 80
0	D 48	50.60.8001		4448	D LL 4448 SOD 80
0	D 49	50.60.8001		4448	D LL 4448 SOD 80
0	D 50	50.60.8001		4448	D LL 4448 SOD 80
0	D 51	50.60.8001		4448	D LL 4448 SOD 80
0	D 52	50.60.8001		4448	D LL 4448 SOD 80
0	D 53	50.60.8001		4448	D LL 4448 SOD 80
0	D 54	50.60.8001		4448	D LL 4448 SOD 80
0	DL 1	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 2	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 3	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 4	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 5	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 6	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 7	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 8	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 9	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 10	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 11	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 12	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 13	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 14	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 15	50.04.2159		HLMP1340	LED 3mm, rot klar
0	DL 16	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 17	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 18	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 19	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 20	50.04.2152		HLMP1440	LED 3mm, gelb klar

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	DL 21	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 22	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 23	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 24	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 25	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 26	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 27	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 28	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 29	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 30	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 31	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 32	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 33	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 34	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 35	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 36	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 37	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 38	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 39	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 40	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 41	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 42	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 43	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 44	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 45	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 46	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 47	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 48	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 49	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 50	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 51	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 52	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 53	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 54	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 55	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 56	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 57	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 58	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 59	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 60	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 61	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 62	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 63	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 64	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 65	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 66	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 67	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 68	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 69	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	IC 1	50.61.8101			IC CDP 68 HC 68 A2M ,A
0	IC 2	50.62.1595		74HC595	IC .. 74 HC 595 . ,A
0	IC 3	50.62.1595		74HC595	IC .. 74 HC 595 . ,A
0	IC 4	50.62.1595		74HC595	IC .. 74 HC 595 . ,A
0	IC 5	50.62.1595		74HC595	IC .. 74 HC 595 . ,A
0	MP 1	1.942.111.11	1 pce		CONTOL FRONT BOARD 2 PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.111.10	1 pce		NR.ETIKETTE 5X20
0	P 1	54.14.2101		10p	P STECKER 10 P,AU,VR,GERADE
0	P 2	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	Q 1	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 2	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 3	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 4	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 5	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 6	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 7	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 8	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 9	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 10	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 11	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 12	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 13	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 14	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 15	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 16	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 17	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 18	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 19	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 20	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 21	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 22	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 23	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 24	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 25	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23

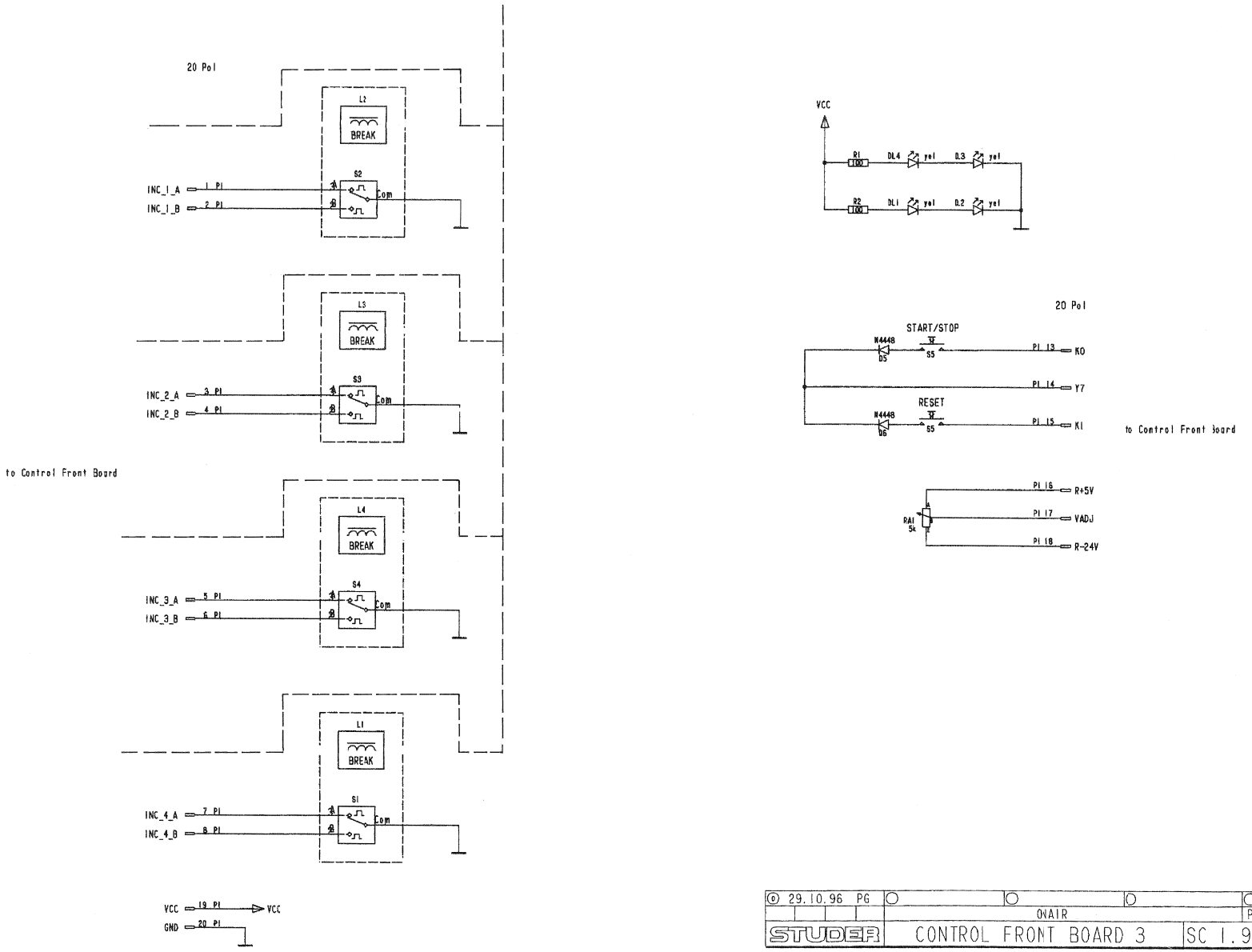
Control Front Board II 1.942.111.00

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	Q 26	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 27	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 28	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 29	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 30	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	Q 31	50.60.0050		BC817-25	Q BC 817-25, NPN SOT 23
0	R 1	57.60.1101		100R	MF, 1%, 0204, E24
0	R 2	57.60.1101		100R	MF, 1%, 0204, E24
0	R 3	57.60.1271		270R	MF, 1%, 0204, E24
0	R 4	57.60.1101		100R	MF, 1%, 0204, E24
0	R 5	57.60.1101		100R	MF, 1%, 0204, E24
0	R 6	57.60.1271		270R	MF, 1%, 0204, E24
0	R 7	57.60.1101		100R	MF, 1%, 0204, E24
0	R 8	57.60.1101		100R	MF, 1%, 0204, E24
0	R 9	57.60.1271		270R	MF, 1%, 0204, E24
0	R 10	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 11	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 12	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 13	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 14	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 15	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 16	57.60.1101		100R	MF, 1%, 0204, E24
0	R 17	57.60.1471		470R	MF, 1%, 0204, E24
0	R 18	57.60.1101		100R	MF, 1%, 0204, E24
0	R 19	57.60.1471		470R	MF, 1%, 0204, E24
0	R 20	57.60.1101		100R	MF, 1%, 0204, E24
0	R 21	57.60.1471		470R	MF, 1%, 0204, E24
0	R 22	57.60.1102		1K	MF, 1%, 0204, E24
0	R 23	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 24	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 25	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 26	57.60.1102		1K	MF, 1%, 0204, E24
0	R 27	57.60.1102		1K	MF, 1%, 0204, E24
0	R 28	57.60.1101		100R	MF, 1%, 0204, E24
0	R 29	57.60.1471		470R	MF, 1%, 0204, E24
0	R 30	57.60.1101		100R	MF, 1%, 0204, E24
0	R 31	57.60.1471		470R	MF, 1%, 0204, E24
0	R 32	57.60.1102		1K	MF, 1%, 0204, E24
0	R 33	57.60.1101		100R	MF, 1%, 0204, E24
0	R 34	57.60.1471		470R	MF, 1%, 0204, E24
0	R 35	57.60.1102		1K	MF, 1%, 0204, E24
0	R 36	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 37	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 38	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 39	57.60.1102		1K	MF, 1%, 0204, E24
0	R 40	57.60.1103		10K	MF, 1%, 0204, E24
0	R 41	57.60.1103		10K	MF, 1%, 0204, E24
0	R 42	57.60.1101		100R	MF, 1%, 0204, E24
0	R 43	57.60.1471		470R	MF, 1%, 0204, E24
0	R 44	57.60.1101		100R	MF, 1%, 0204, E24
0	R 45	57.60.1471		470R	MF, 1%, 0204, E24
0	R 46	57.60.1101		100R	MF, 1%, 0204, E24
0	R 47	57.60.1471		470R	MF, 1%, 0204, E24
0	R 48	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 49	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 50	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 51	57.60.1101		100R	MF, 1%, 0204, E24
0	R 52	57.60.1101		100R	MF, 1%, 0204, E24
0	R 53	57.60.1471		470R	MF, 1%, 0204, E24
0	R 54	57.60.1101		100R	MF, 1%, 0204, E24
0	R 55	57.60.1471		470R	MF, 1%, 0204, E24
0	R 56	57.60.1101		100R	MF, 1%, 0204, E24
0	R 57	57.60.1471		470R	MF, 1%, 0204, E24
0	R 58	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 59	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 60	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 61	57.60.1101		100R	MF, 1%, 0204, E24
0	R 62	57.60.1471		470R	MF, 1%, 0204, E24
0	R 63	57.60.1101		100R	MF, 1%, 0204, E24
0	R 64	57.60.1471		470R	MF, 1%, 0204, E24
0	R 65	57.60.1101		100R	MF, 1%, 0204, E24
0	R 66	57.60.1471		470R	MF, 1%, 0204, E24
0	R 67	57.60.1102		1K	MF, 1%, 0204, E24
0	R 68	57.60.1102		1K	MF, 1%, 0204, E24
0	R 69	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 70	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 71	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 72	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 73	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 74	57.60.1101		100R	MF, 1%, 0204, E24
0	R 75	57.60.1471		470R	MF, 1%, 0204, E24
0	R 76	57.60.1101		100R	MF, 1%, 0204, E24
0	R 77	57.60.1471		470R	MF, 1%, 0204, E24
0	R 78	57.60.1101		100R	MF, 1%, 0204, E24
0	R 79	57.60.1471		470R	MF, 1%, 0204, E24
0	R 80	57.60.1101		100R	MF, 1%, 0204, E24
0	R 81	57.60.1471		470R	MF, 1%, 0204, E24
0	R 82	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 83	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 84	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 85	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 86	57.60.1101		100R	MF, 1%, 0204, E24
0	R 87	57.60.1471		470R	MF, 1%, 0204, E24
0	R 88	57.60.1101		100R	MF, 1%, 0204, E24
0	R 89	57.60.1471		470R	MF, 1%, 0204, E24
0	R 90	57.60.1101		100R	MF, 1%, 0204, E24
0	R 91	57.60.1471		470R	MF, 1%, 0204, E24
0	R 92	57.60.1101		100R	MF, 1%, 0204, E24
0	R 93	57.60.1471		470R	MF, 1%, 0204, E24
0	R 94	57.60.1102		1K	MF, 1%, 0204, E24
0	R 95	57.60.1102		1K	MF, 1%, 0204, E24
0	R 96	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 97	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 98	57.60.1101		100R	MF, 1%, 0204, E24
0	R 99	57.60.1471		470R	MF, 1%, 0204, E24
0	R 100	57.60.1101		100R	MF, 1%, 0204, E24
0	R 101	57.60.1471		470R	MF, 1%, 0204, E24
0	R 102	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 103	57.60.1101		100R	MF, 1%, 0204, E24
0	R 104	57.60.1471		470R	MF, 1%, 0204, E24
0	R 105	57.60.1102		1K	MF, 1%, 0204, E24
0	R 106	57.60.1102		1K	MF, 1%, 0204, E24
0	R 107	57.60.1102		1K	MF, 1%, 0204, E24
0	R 108	57.60.1472		4K7	MF, 1%, 0204, E24
0	R 109	57.60.1101		100R	MF, 1%, 0204, E24
0	R 110	57.60.1471		470R	MF, 1%, 0204, E24
0	RA 1	58.20.7102		10k	1*R, lin
0	RA 2	58.20.7102		10k	1*R, lin
0	RA 3	58.20.7102		10k	1*R, lin
0	S 1	1.942.010.07			KONTAKTMATTE,27 TASTEN

End of List

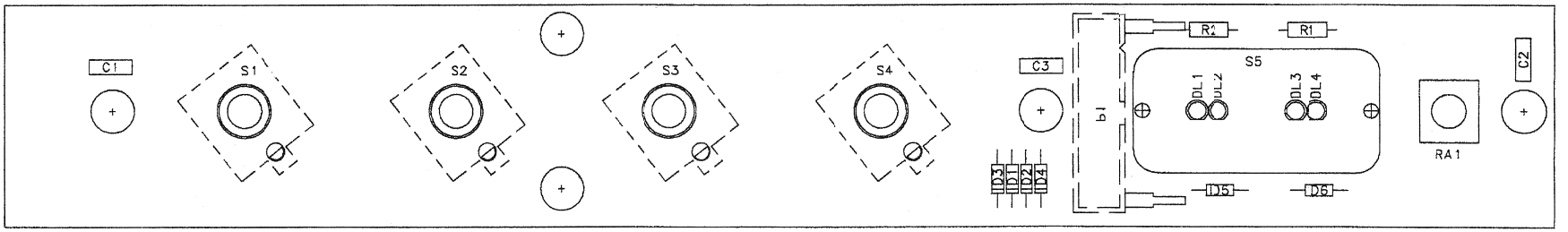
Comments

Control Front Board III 1.942.612.00



0 29.10.96 PG					
		ONAIR			PAGE 1 / 1
STUDER	CONTROL FRONT BOARD 3				SC 1.942.612.00

Control Front Board III 1.942.612.00



Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 2	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 3	59.06.0104		100n	PETP, 63V, 10%, RM5
0	D 5	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 6	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	DL 1	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 2	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 3	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	DL 4	50.04.2152		HLMP1440	LED 3mm, gelb klar
0	MP 1	1.942.112.11	1 pce		CONTOL FRONT BOARD 3 PCB
0	MP 3	1.942.112.10	1 pce		NR.ETIKETTE 5X20
0	P 1	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	R 1	57.11.3101		100R	MF, 1%, 0207
0	R 2	57.11.3101		100R	MF, 1%, 0207
0	RA 1	58.20.7101		5k	1*R, lin
0	S 1	55.12.1302		N=24	Drehgeber
0	S 2	55.12.1302		N=24	Drehgeber
0	S 3	55.12.1302		N=24	Drehgeber
0	S 4	55.12.1302		N=24	Drehgeber
0	S 5	1.942.010.08			KONTAKTMATTE,2 TASTEN

End of List

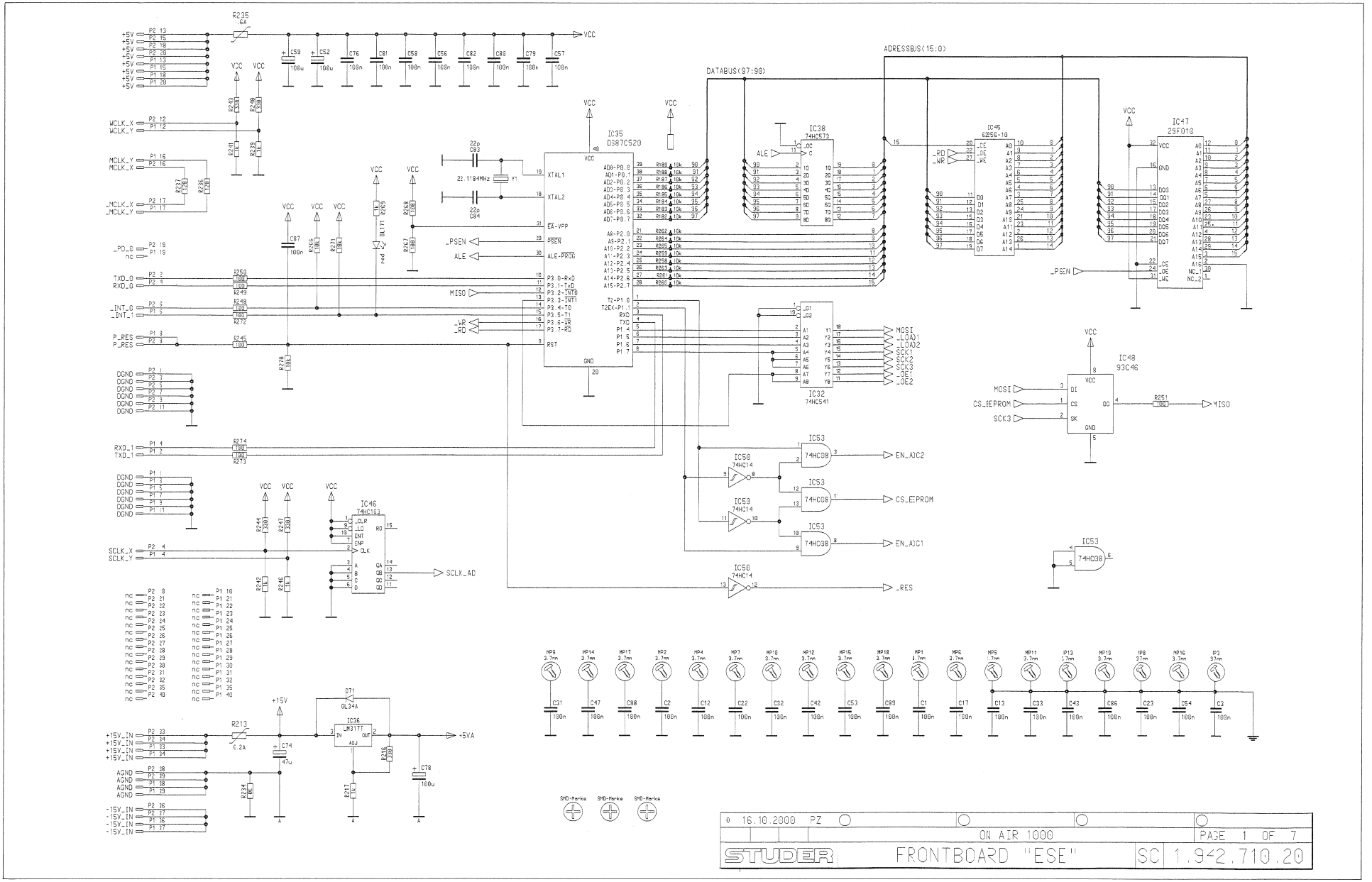
Comments

Modification Aenderung				
	.	.	.	3
	.	.	.	2
	.	.	.	1
Edition Ausgabe	29 10.96	PZ	VA Ga	0
	Date Datum	Visa Gez.	Checked Seen Gepr. Ges.	Index

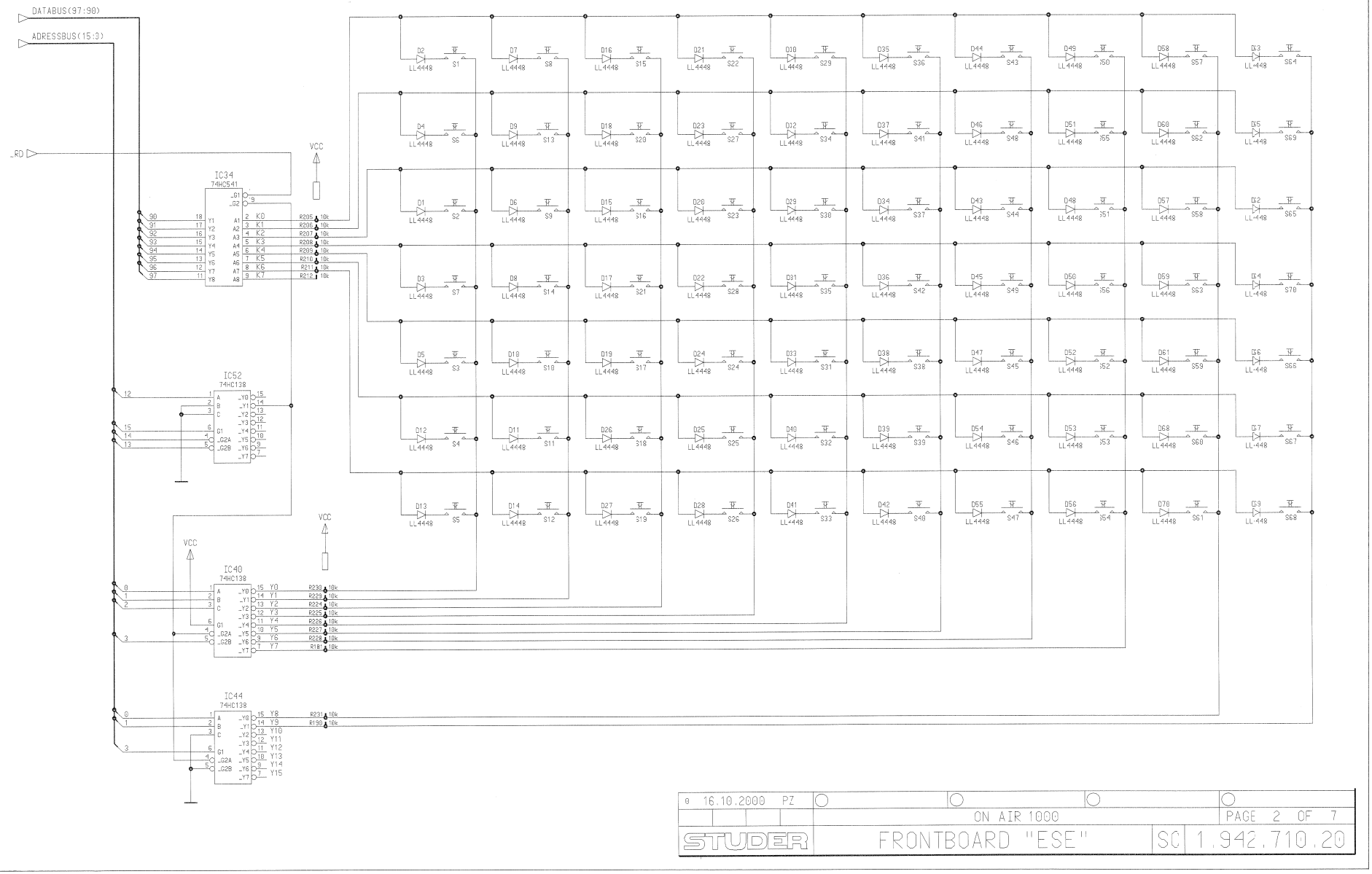
Copy to: Kopie fuer:

STUDER REGENSDORF	Description: Benennung:	CONTROL FRONT BOARD 3	Number: Nummer:	1.942.612.00

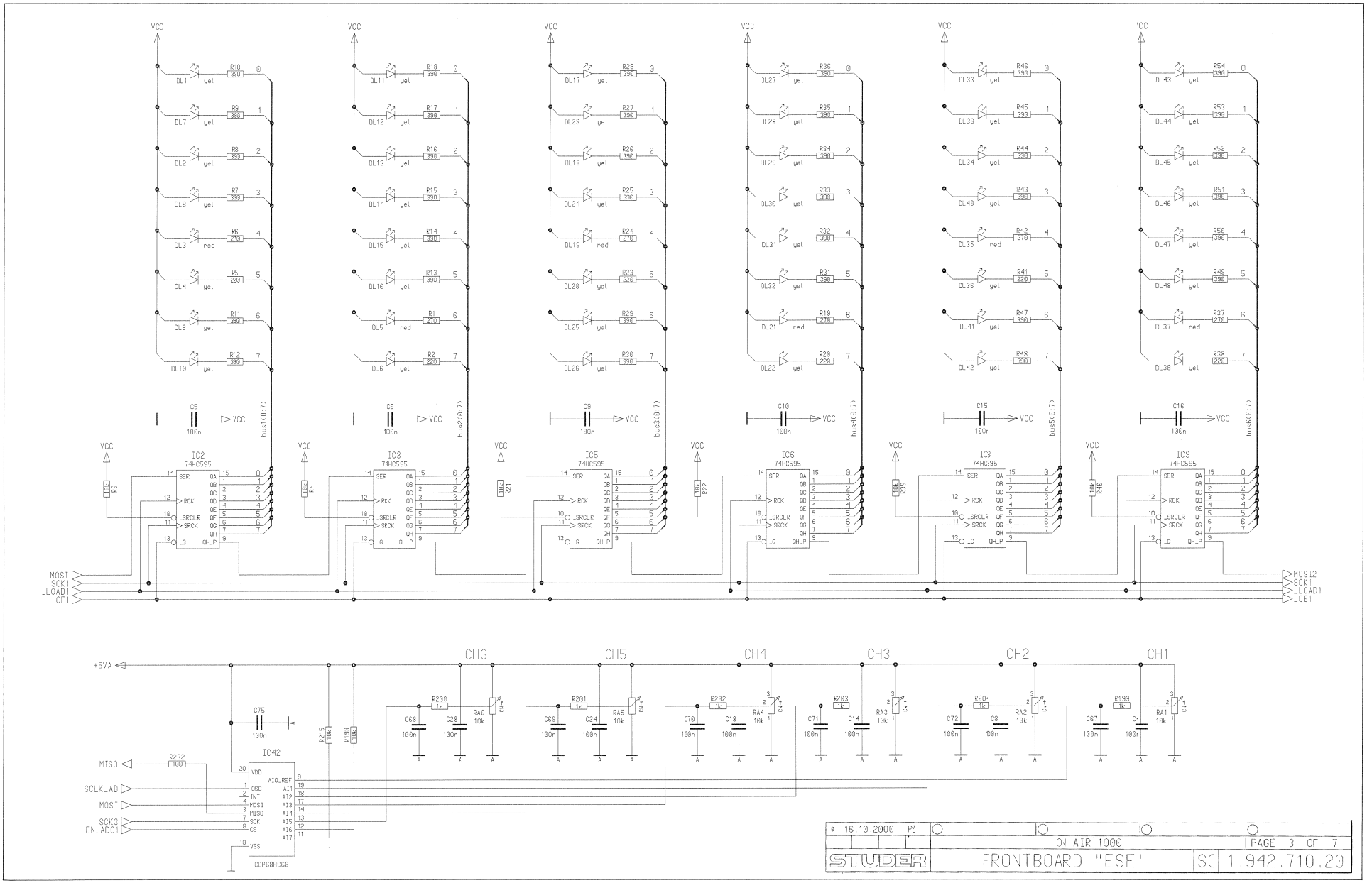
Front Board 1.942.710.20



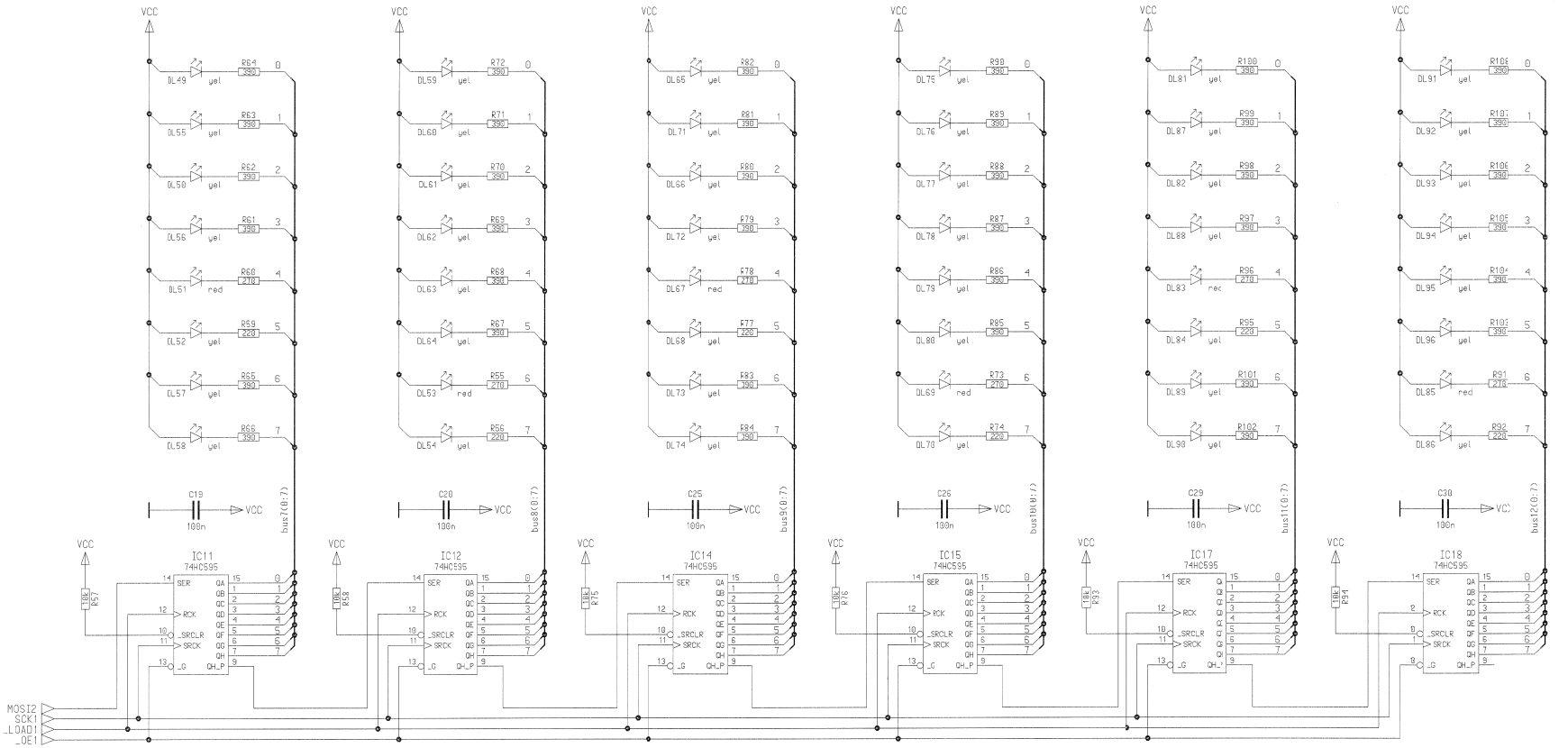
Front Board 1.942.710.20



Front Board 1.942.710.20

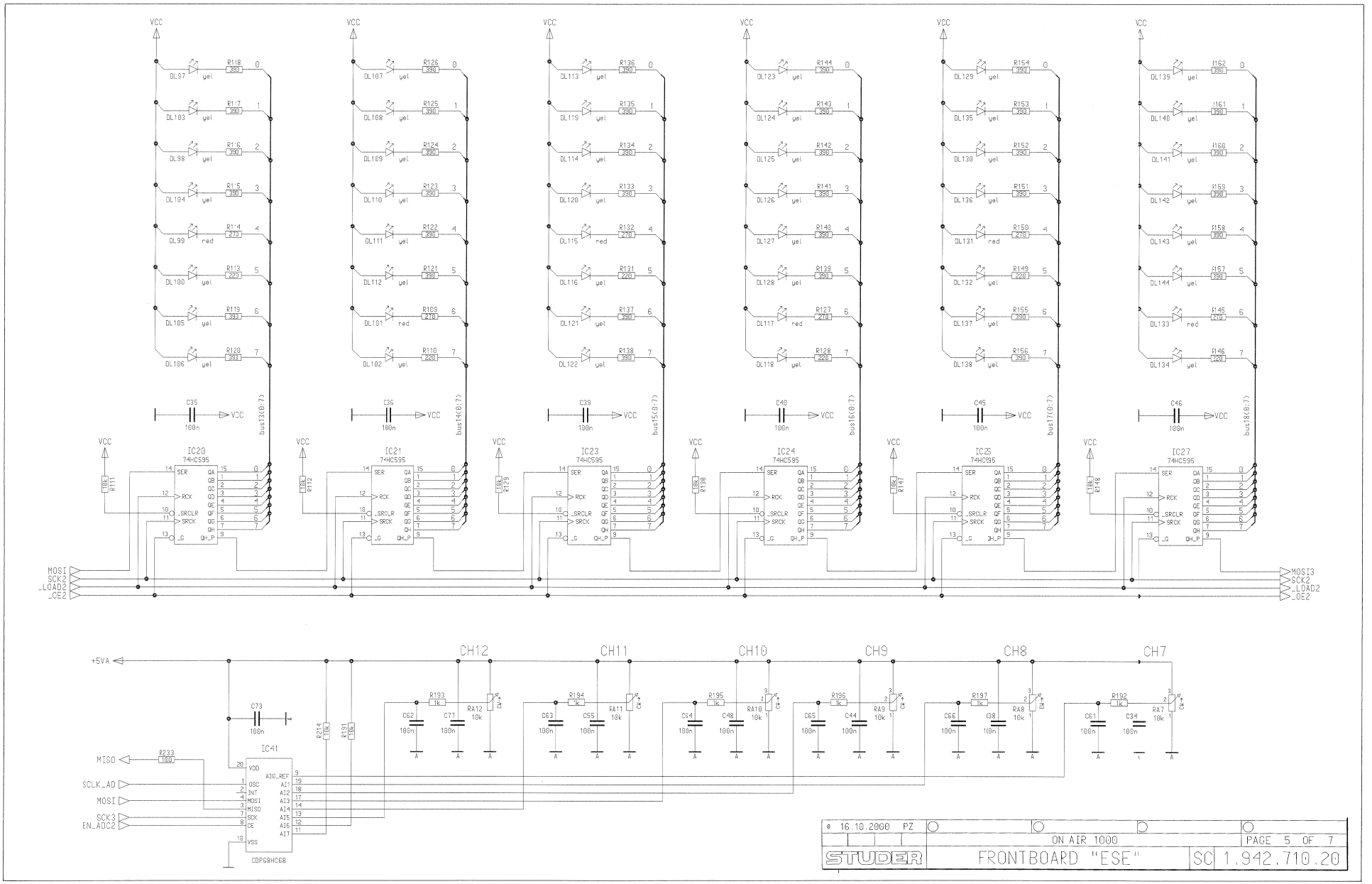


Front Board 1.942.710.20

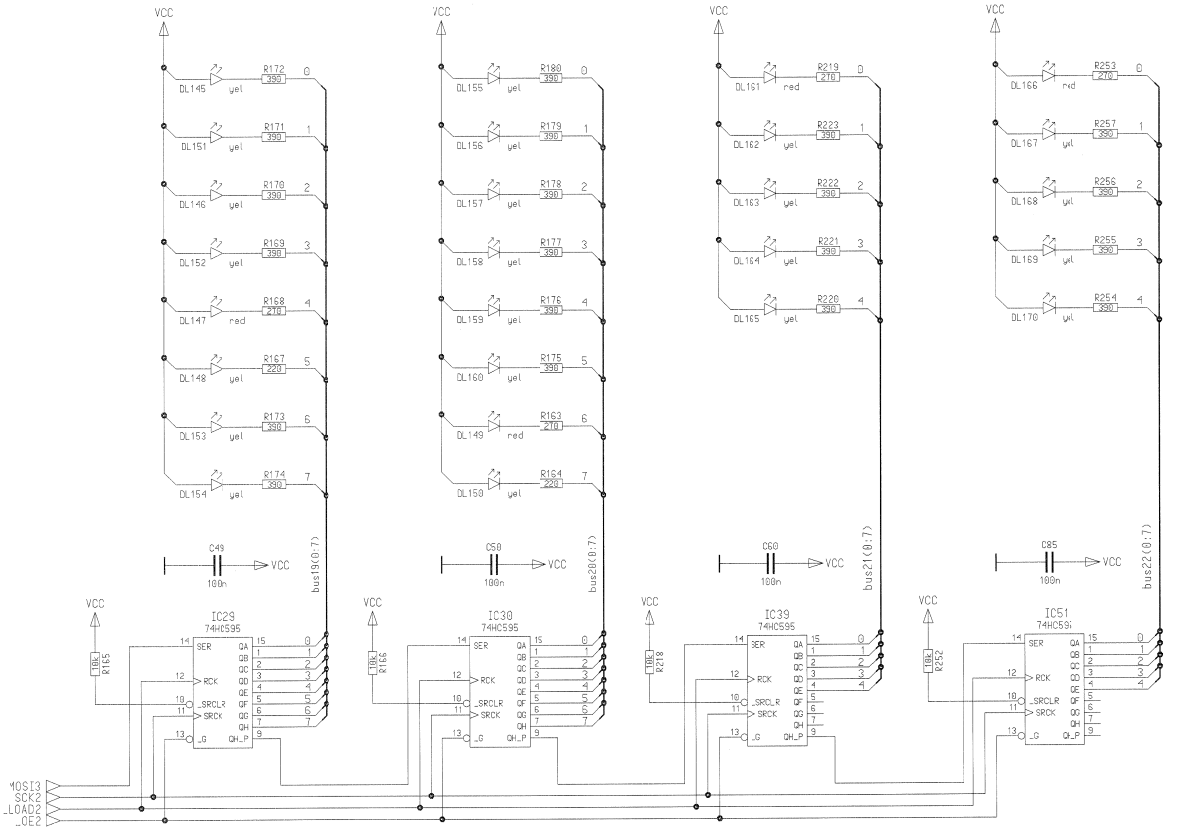


0 16.10.2000 PZ				
	ON AIR 1000			PAGE 4 OF 7
STUDER	FRONTBOARD "ESE"		SC	1.942.710.20

Front Board 1.942.710.20

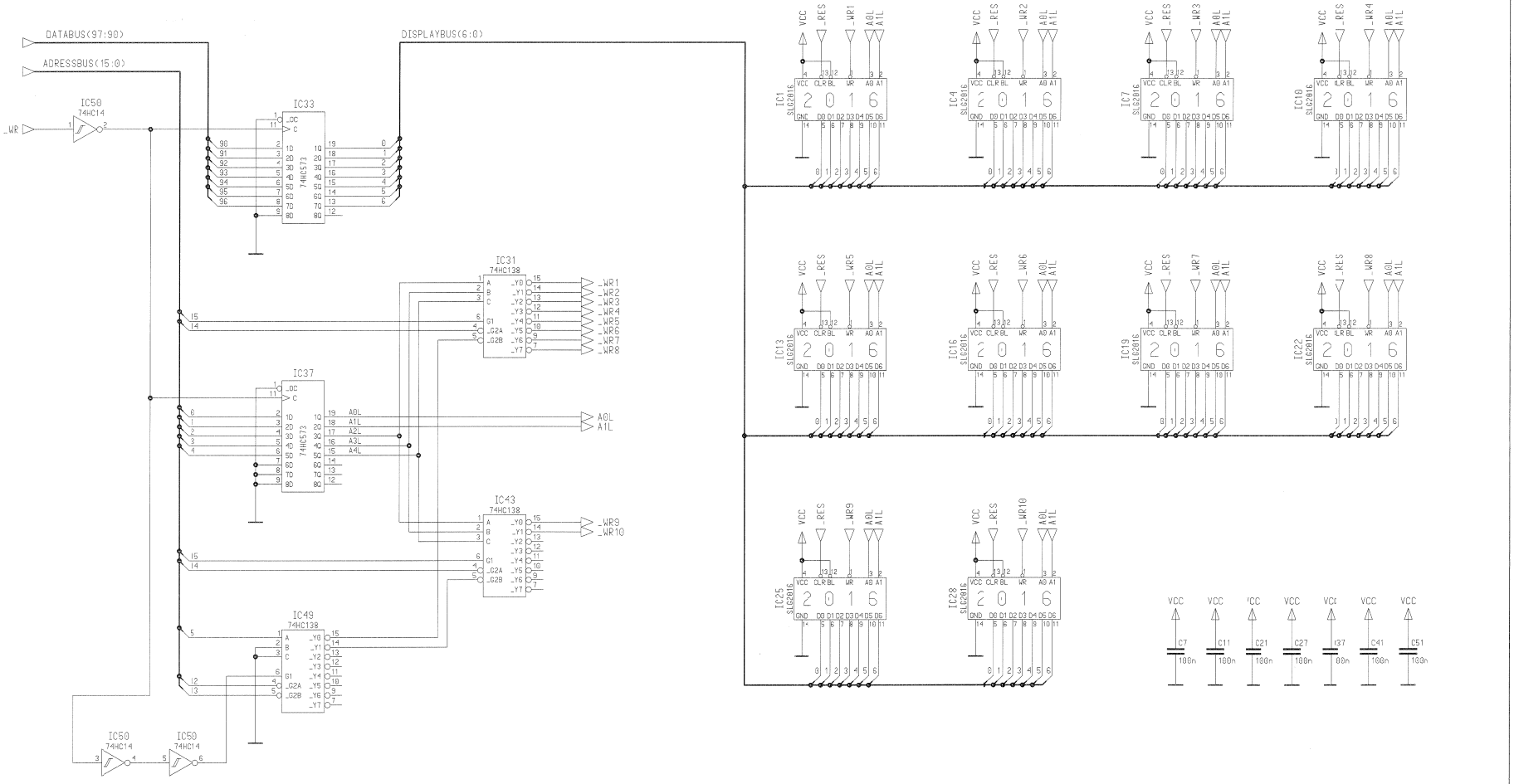


Front Board 1.942.710.20



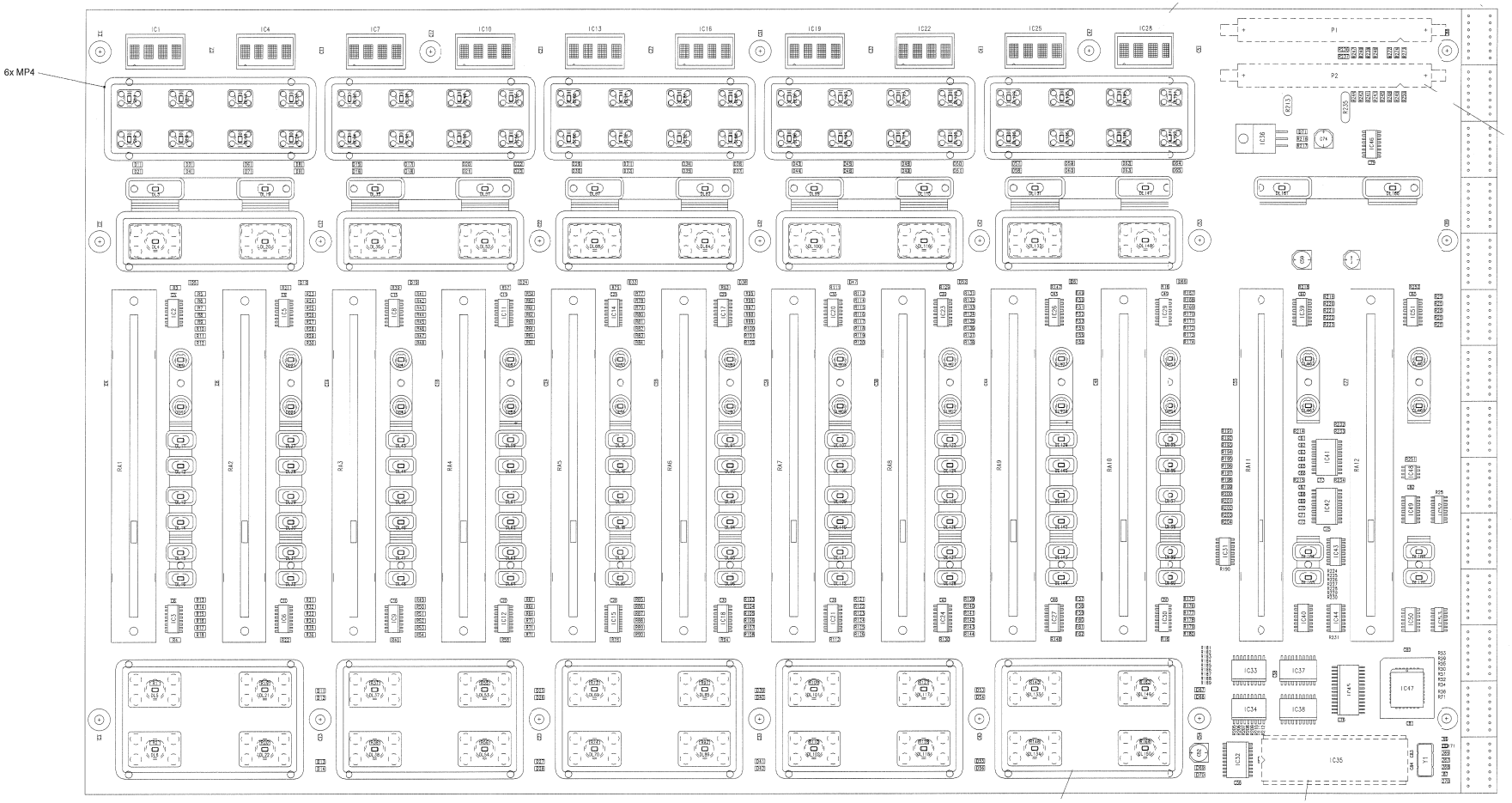
0 16.10.2000 PZ			
	ON AIR 1000		PAGE 6 OF 7
STUDER	FRONTBOARD "ESE"	SC	1.942.710.20

Front Board 1.942.710.20



0 16.10.2000 PZ			
	ON AIR 1000		PAGE 7 OF 7
STUDER	FRONTBOARD "ESE"	SC	1.942.710.20

Front Board 1.942.710.20



Edition Ausgabe	16.10.2000	PZ	KG	RL	0
Page Seite		Date Datum	Erstellt Ers.	Geprüft Gepr.	Geänd. Änd.	Index
	1 / 1				

STUDER REGENSDORF — FRONTBOARD "ESE", ESE — Z — 1.942.710.20

Front Board 1.942.710.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 2	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 3	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 4	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 5	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 6	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 7	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 8	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 9	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 10	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 11	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 12	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 13	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 14	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 15	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 16	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 17	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 18	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 19	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 20	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 21	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 22	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 23	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 24	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 25	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 26	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 27	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 28	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 29	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 30	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 31	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 32	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 33	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 34	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 35	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 36	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 37	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 38	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 39	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 40	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 41	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 42	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 43	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 44	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 45	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 46	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 47	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 48	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 49	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 50	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 51	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 52	59.68.0029	1 pce	100u	EL 6V 6.3*5.7
0	C 53	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 54	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 55	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 56	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 57	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 58	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 59	59.68.0029	1 pce	100u	EL 6V 6.3*5.7
0	C 60	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 61	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 62	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 63	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 64	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 65	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 66	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 67	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 68	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 69	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 70	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 71	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 72	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 73	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 74	59.68.0069	1 pce	47u	EL 16V 6.3*5.7
0	C 75	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 76	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 77	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805
0	C 78	59.68.0029	1 pce	100u	EL 6V 6.3*5.7
0	C 79	59.60.3337	1 pce	100n	CER 50V 10%, X7R, 0805

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 80	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 81	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 82	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 83	59.60.2233	1 pce	22p	CER 50V, 5%, C0G, 0603
0	C 84	59.60.2233	1 pce	22p	CER 50V, 5%, C0G, 0603
0	C 85	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 86	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 87	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 88	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	C 89	59.60.3337	1 pce	100n	CER 50V, 10%, X7R 0805
0	D 1	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 6	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 7	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 8	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 9	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 10	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 11	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 12	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 13	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 14	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 15	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 16	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 17	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 18	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 19	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 20	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 21	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 22	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 23	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 24	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 25	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 26	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 27	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 28	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 29	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 30	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 31	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 32	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 33	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 34	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 35	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 36	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 37	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 38	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 39	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 40	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 41	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 42	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 43	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 44	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 45	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 46	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 47	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 48	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 49	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 50	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 51	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 52	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 53	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 54	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 55	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 56	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 57	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 58	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 59	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 60	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 61	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 62	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 63	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 64	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 65	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 66	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 67	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 68	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	D 69	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 70	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 71	50.60.8002	1 pce	GL34A	500mA 50V DO 213
0	DL 1	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 2	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 3	50.60.9401	1 pce	red	SMD LED superred
0	DL 4	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 5	50.60.9401	1 pce	red	SMD LED superred
0	DL 6	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 7	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 8	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 9	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 10	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 11	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 12	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 13	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 14	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 15	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 16	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 17	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 18	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 19	50.60.9401	1 pce	red	SMD LED superred
0	DL 20	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 21	50.60.9401	1 pce	red	SMD LED superred
0	DL 22	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 23	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 24	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 25	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 26	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 27	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 28	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 29	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 30	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 31	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 32	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 33	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 34	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 35	50.60.9401	1 pce	red	SMD LED superred
0	DL 36	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 37	50.60.9401	1 pce	red	SMD LED superred
0	DL 38	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 39	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 40	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 41	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 42	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 43	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 44	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 45	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 46	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 47	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 48	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 49	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 50	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 51	50.60.9401	1 pce	red	SMD LED superred
0	DL 52	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 53	50.60.9401	1 pce	red	SMD LED superred
0	DL 54	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 55	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 56	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 57	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 58	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 59	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 60	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 61	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 62	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 63	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 64	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 65	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 66	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 67	50.60.9401	1 pce	red	SMD LED superred
0	DL 68	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 69	50.60.9401	1 pce	red	SMD LED superred
0	DL 70	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 71	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 72	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 73	50.60.9402	1 pce	yel	SMD LED yellow

Idx	Pos.	Part No.	Qty.	Type/Va.	Description
0	DL 74	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 75	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 76	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 77	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 78	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 79	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 80	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 81	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 82	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 83	50.60.940!	1 pce	red	SMD LED superred
0	DL 84	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 85	50.60.940!	1 pce	red	SMD LED superred
0	DL 86	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 87	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 88	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 89	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 90	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 91	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 92	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 93	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 94	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 95	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 96	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 97	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 98	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 99	50.60.940!	1 pce	red	SMD LED superred
0	DL 100	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 101	50.60.940!	1 pce	red	SMD LED superred
0	DL 102	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 103	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 104	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 105	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 106	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 107	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 108	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 109	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 110	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 111	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 112	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 113	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 114	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 115	50.60.940!	1 pce	red	SMD LED superred
0	DL 116	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 117	50.60.940!	1 pce	red	SMD LED superred
0	DL 118	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 119	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 120	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 121	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 122	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 123	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 124	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 125	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 126	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 127	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 128	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 129	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 130	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 131	50.60.940!	1 pce	red	SMD LED superred
0	DL 132	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 133	50.60.940!	1 pce	red	SMD LED superred
0	DL 134	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 135	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 136	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 137	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 138	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 139	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 140	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 141	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 142	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 143	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 144	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 145	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 146	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 147	50.60.940	1 pce	red	SMD LED superred
0	DL 148	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 149	50.60.940	1 pce	red	SMD LED superred
0	DL 150	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 151	50.60.940!	1 pce	yel	SMD LED yellow
0	DL 152	50.60.940!	1 pce	yel	SMD LED yellow

Front Board 1.942.710.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	DL 153	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 154	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 155	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 156	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 157	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 158	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 159	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 160	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 161	50.60.9401	1 pce	red	SMD LED superred
0	DL 162	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 163	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 164	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 165	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 166	50.60.9401	1 pce	red	SMD LED superred
0	DL 167	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 168	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 169	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 170	50.60.9402	1 pce	yel	SMD LED yellow
0	DL 171	not used	1 pce	red	SMD LED superred
0	IC 1	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 2	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 3	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 4	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 5	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 6	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 7	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 8	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 9	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 10	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 11	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 12	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 13	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 14	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 15	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 16	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 17	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 18	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 19	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 20	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 21	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 22	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 23	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 24	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 25	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 26	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 27	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 28	73.01.0408	1 pce	4digit	5*7 Dot matrix display green
0	IC 29	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 30	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 31	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 32	50.62.1541	1 pce	74HC541	Octal buffer line driver/recei
0	IC 33	50.62.1573	1 pce	74HC573	Octal D-type latch
0	IC 34	50.62.1541	1 pce	74HC541	Octal buffer line driver/recei
0	IC 35	1.942.950.20	1 pce		SW Frontboard (50.16.0314)
0	IC 36	50.10.0104	1 pce	LM317SP	Series regulator 1.5A ...+37V
0	IC 37	50.62.1573	1 pce	74HC573	Octal D-type latch
0	IC 38	50.62.1573	1 pce	74HC573	Octal D-type latch
0	IC 39	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 40	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 41	50.61.8101	1 pce	68HC68	A/D Converter 10bit 8Ch SO 20
0	IC 42	50.61.8101	1 pce	68HC68	A/D Converter 10bit 8Ch SO 20
0	IC 43	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 44	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 45	50.63.1503	1 pce	62256	SRAM 32K*8, 100ns
0	IC 46	50.62.1163	1 pce	74HC163	Synchr preset 4bit counter bin
0	IC 47	not used	1 pce	29F010	Flash Memory 128K*8
0	IC 48	50.63.1108	1 pce	93C46	EEPROM 64*16, SO 8
0	IC 49	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 50	50.62.1014	1 pce	74HC 14	Hex Schmitt trigger inverter
0	IC 51	50.62.1595	1 pce	74HC595	8bit shift/output register
0	IC 52	50.62.1138	1 pce	74HC138	3 to 8 line decoder
0	IC 53	50.62.1008	1 pce	74HC 08	Quad 2input AND
0	MP 1	1.942.710.12	1 pce		FRONTBOARD PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.710.10	1 pce		NR.ETIKETTE
0	MP 4	1.942.710.01	6 pcs		KONTAKTMATTEN SET
0	P 1	54.14.2054	1 pce	40p	Stecker gerade Au
0	P 2	54.14.2054	1 pce	40p	Stecker gerade Au
0	R 1	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 2	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 3	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 4	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 5	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 6	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 7	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 8	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 9	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 10	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 11	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 12	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 13	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 14	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 15	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 16	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 17	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 18	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 19	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 20	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 21	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 22	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 23	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 24	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 25	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 26	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 27	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 28	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 29	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 30	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 31	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 32	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 33	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 34	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 35	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 36	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 37	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 38	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 39	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 40	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 41	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 42	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 43	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 44	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 45	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 46	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 47	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 48	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 49	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 50	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 51	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 52	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 53	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 54	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 55	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 56	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 57	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 58	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 59	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 60	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 61	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 62	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 63	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 64	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 65	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 66	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 67	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 68	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 69	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 70	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 71	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 72	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 73	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 74	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 75	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 76	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 77	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 78	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 79	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 80	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 81	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 82	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 83	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 84	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 85	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 86	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 87	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 88	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 89	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 90	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 91	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 92	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 93	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 94	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 95	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 96	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 97	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 98	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 99	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 100	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 101	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 102	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 103	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 104	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 105	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 106	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 107	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 108	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 109	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 110	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 111	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 112	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 113	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 114	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 115	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 116	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 117	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 118	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 119	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 120	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 121	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 122	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 123	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 124	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 125	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 126	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 127	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 128	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 129	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 130	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 131	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 132	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 133	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 134	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 135	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 136	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 137	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 138	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 139	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 140	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 141	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 142	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 143	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 144	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 145	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 146	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 147	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 148	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 149	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 150	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 151	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 152	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 153	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 154	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 155	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 156	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 157	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 158	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 159	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 160	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 161	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 162	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 163	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 164	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 165	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 166	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 167	57.60.1221	1 pce	220R	MF, 1%, 0204, E24
0	R 168	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 169	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 170	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 171	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 172	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 173	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 174	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 175	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 176	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 177	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 178	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 179	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 180	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 181	57.69.1097	1 pce	10k	CF 5% 0603
0	R 182	57.69.1097	1 pce	10k	CF 5% 0603
0	R 183	57.69.1097	1 pce	10k	CF 5% 0603
0	R 184	57.69.1097	1 pce	10k	CF 5% 0603
0	R 185	57.69.1097	1 pce	10k	CF 5% 0603
0	R 186	57.69.1097	1 pce	10k	CF 5% 0603
0	R 187	57.69.1097	1 pce	10k	CF 5% 0603
0	R 188	57.69.1097	1 pce	10k	CF 5% 0603
0	R 189	57.69.1097	1 pce	10k	CF 5% 0603
0	R 190	57.69.1097	1 pce	10k	CF 5% 0603
0	R 191	57.60.1103	1 pce	10k	MF,1%, 0204, E24
0	R 192	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 193	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 194	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 195	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 196	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 197	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 198	57.60.1103	1 pce	10k	MF,1%, 0204, E24
0	R 199	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 200	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 201	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 202	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 203	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 204	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 205	57.69.1097	1 pce	10k	CF 5% 0603
0	R 206	57.69.1097	1 pce	10k	CF 5% 0603
0	R 207	57.69.1097	1 pce	10k	CF 5% 0603
0	R 208	57.69.1097	1 pce	10k	CF 5% 0603
0	R 209	57.69.1097	1 pce	10k	CF 5% 0603
0	R 210	57.69.1097	1 pce	10k	CF 5% 0603
0	R 211	57.69.1097	1 pce	10k	CF 5% 0603
0	R 212	57.69.1097	1 pce	10k	CF 5% 0603
0	R 213	57.92.7011	1 pce	0.2A	PTC 60V
0	R 214	57.60.1103	1 pce	10k	MF,1%, 0204, E24
0	R 215	57.60.1103	1 pce	10k	MF,1%, 0204, E24
0	R 216	57.60.1331	1 pce	330R	MF,1%, 0204, E24
0	R 217	57.60.1102	1 pce	1k0	MF,1%, 0204, E24
0	R 218	57.60.1103	1 pce	10k	MF,1%, 0204, E24
0	R 219	57.60.1271	1 pce	270R	MF,1%, 0204, E24
0	R 220	57.60.1391	1 pce	390R	MF,1%, 0204, E24
0	R 221	57.60.1391	1 pce	390R	MF,1%, 0204, E24
0	R 222	57.60.1391	1 pce	390R	MF,1%, 0204, E24
0	R 223	57.60.1391	1 pce	390R	MF,1%, 0204, E24
0	R 224	57.69.1097	1 pce	10k	CF 5% 0603
0	R 225	57.69.1097	1 pce	10k	CF 5% 0603
0	R 226	57.69.1097	1 pce	10k	CF 5% 0603
0	R 227	57.69.1097	1 pce	10k	CF 5% 0603
0	R 228	57.69.1097	1 pce	10k	CF 5% 0603
0	R 229	57.69.1097	1 pce	10k	CF 5% 0603
0	R 230	57.69.1097	1 pce	10k	CF 5% 0603
0	R 231	57.69.1097	1 pce	10k	CF 5% 0603
0	R 232	57.60.1101	1 pce	100R	MF,1%, 0204, E24
0	R 233	57.60.1101	1 pce	100R	MF,1%, 0204, E24

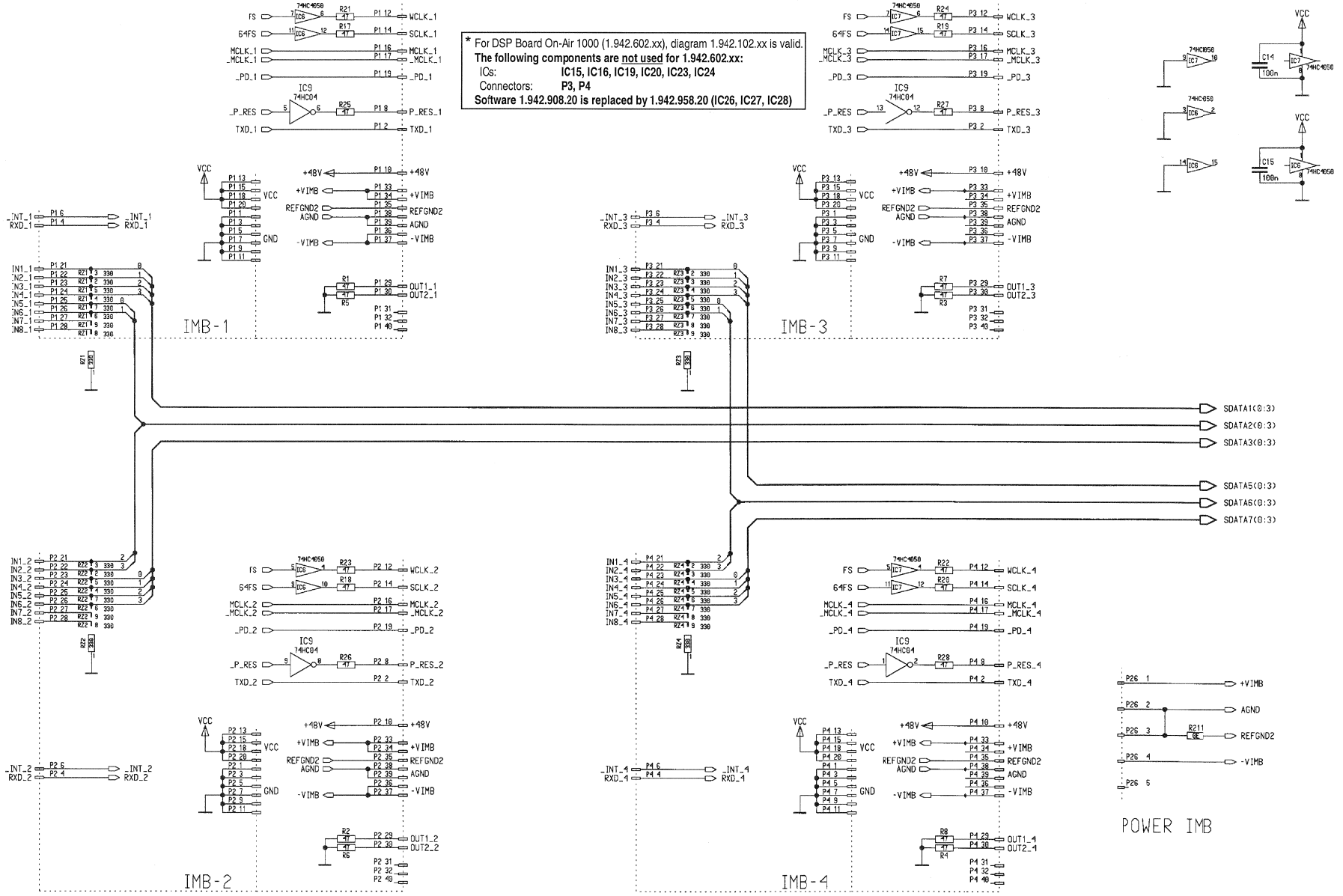
Front Board 1.942.710.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 234	57.60.1000	1 pce	0R0	MF, 0204
0	R 235	57.92.7053	1 pce	1.6A	PTC 30V
0	R 236	57.60.1121	1 pce	120R	MF, 1%, 0204, E24
0	R 237	57.60.1121	1 pce	120R	MF, 1%, 0204, E24
0	R 239	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 240	not used	1 pce	330R	MF, 1%, 0204, E24
0	R 241	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 242	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 243	not used	1 pce	330R	MF, 1%, 0204, E24
0	R 244	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 245	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 246	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 247	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 248	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 249	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 250	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 251	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 252	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 253	57.60.1271	1 pce	270R	MF, 1%, 0204, E24
0	R 254	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 255	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 256	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 257	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 258	57.69.1097	1 pce	10k	CF 5% 0603
0	R 259	57.69.1097	1 pce	10k	CF 5% 0603
0	R 260	57.69.1097	1 pce	10k	CF 5% 0603
0	R 261	57.69.1097	1 pce	10k	CF 5% 0603
0	R 262	57.69.1097	1 pce	10k	CF 5% 0603
0	R 263	57.69.1097	1 pce	10k	CF 5% 0603
0	R 264	57.69.1097	1 pce	10k	CF 5% 0603
0	R 265	57.69.1097	1 pce	10k	CF 5% 0603
0	R 266	57.69.1097	1 pce	10k	CF 5% 0603
0	R 267	not used	1 pce	100R	MF, 1%, 0204, E24
0	R 268	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 269	not used	1 pce	1k0	MF, 1%, 0204, E24
0	R 270	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 271	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 272	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 273	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 274	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	RA 1	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 2	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 3	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 4	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 5	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 6	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 7	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 8	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 9	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 10	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 11	58.30.0101	1 pce	10k lin	Fader 100m
0	RA 12	58.30.0101	1 pce	10k lin	Fader 100m
0	XIC 35	53.03.0172	1 pce	40p	DIL 0.6", löt, gerade
0	XIC 47	not used	1 pce	32p	PLCC-Socket
0	Y 1	89.60.1004	1 pce	22.1184MHz	SMD Quartz

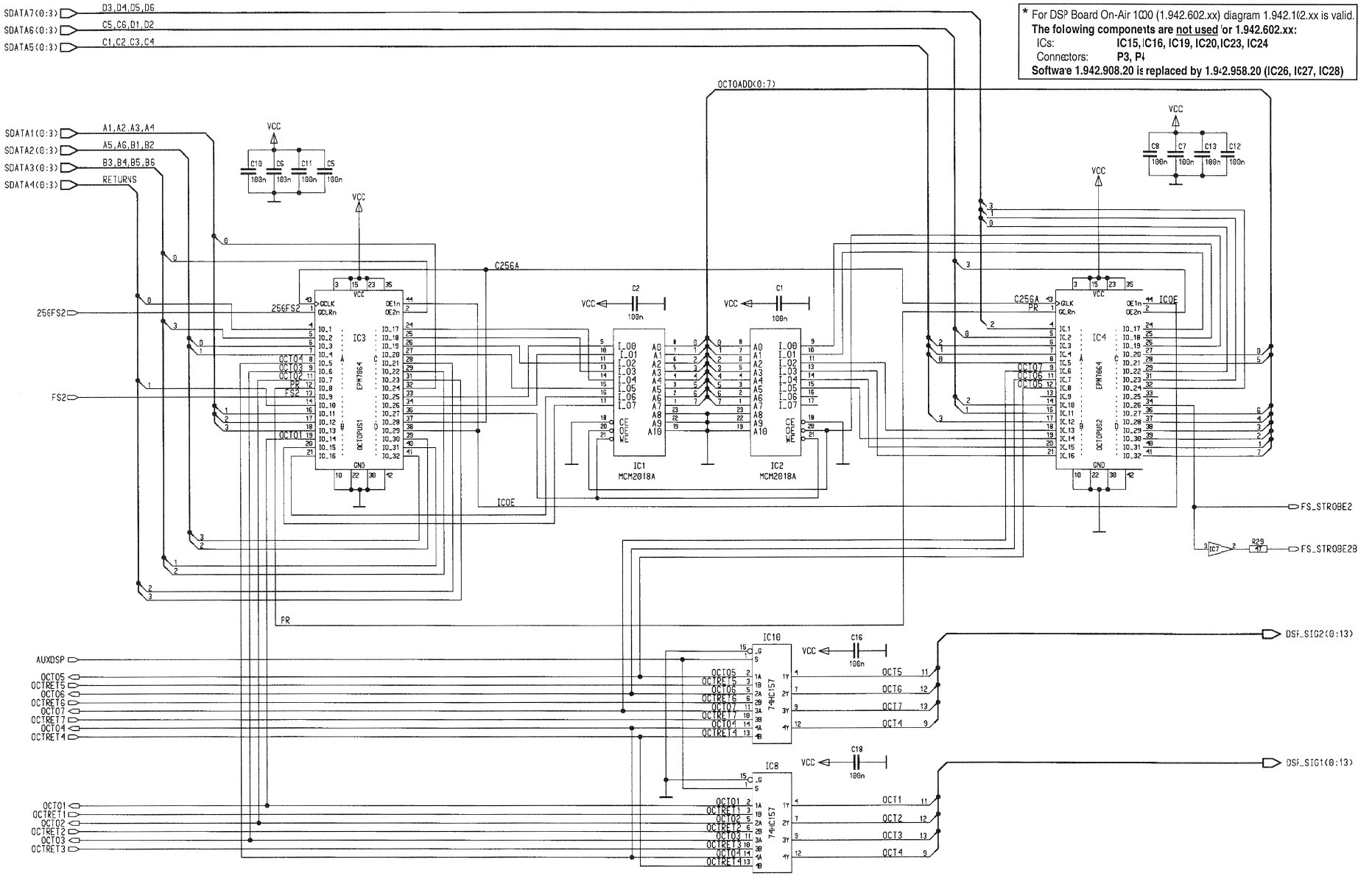
End of List

Comments:

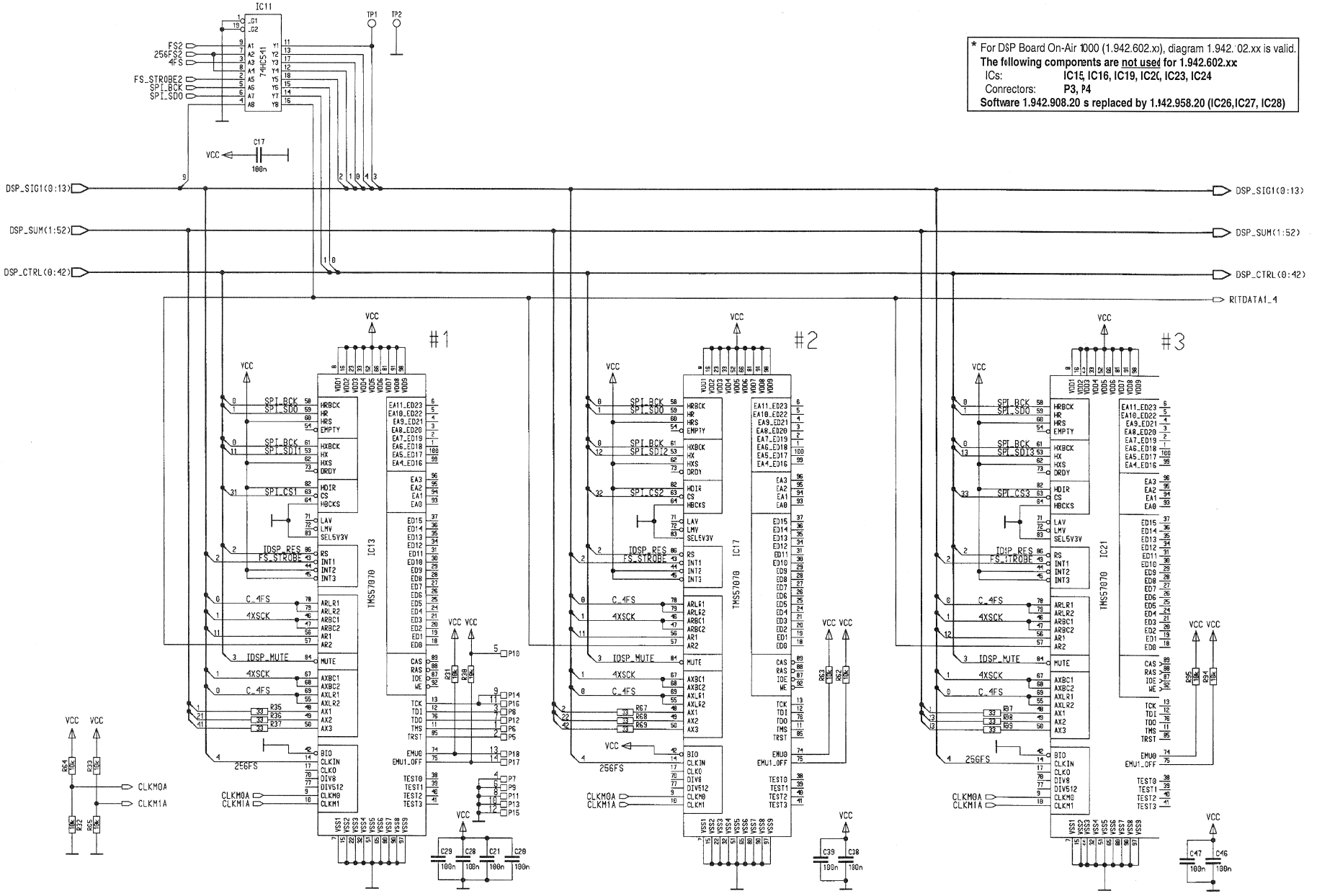
DSP Board 1.942.602.20



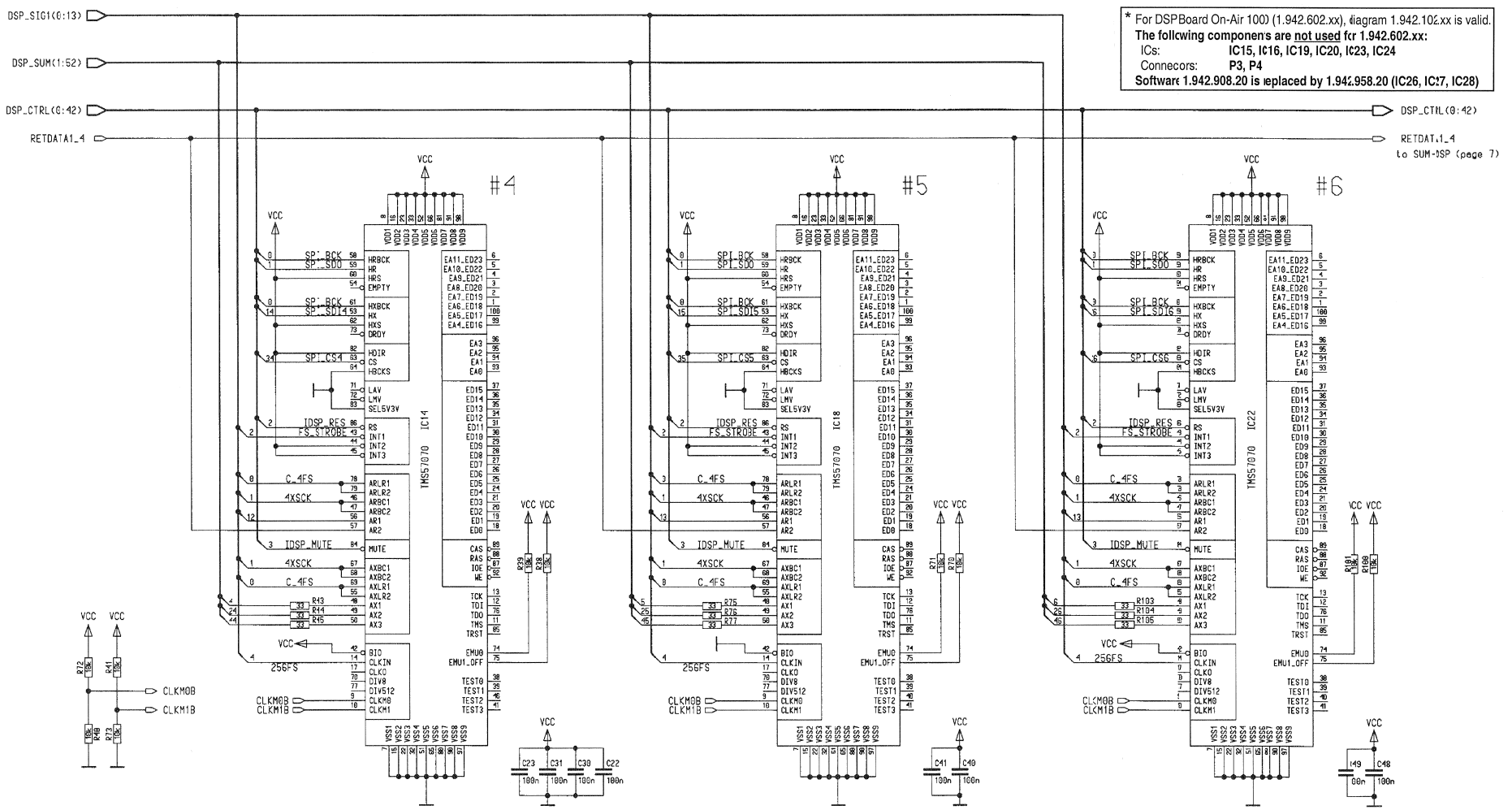
DSP Board 1.942.602.20



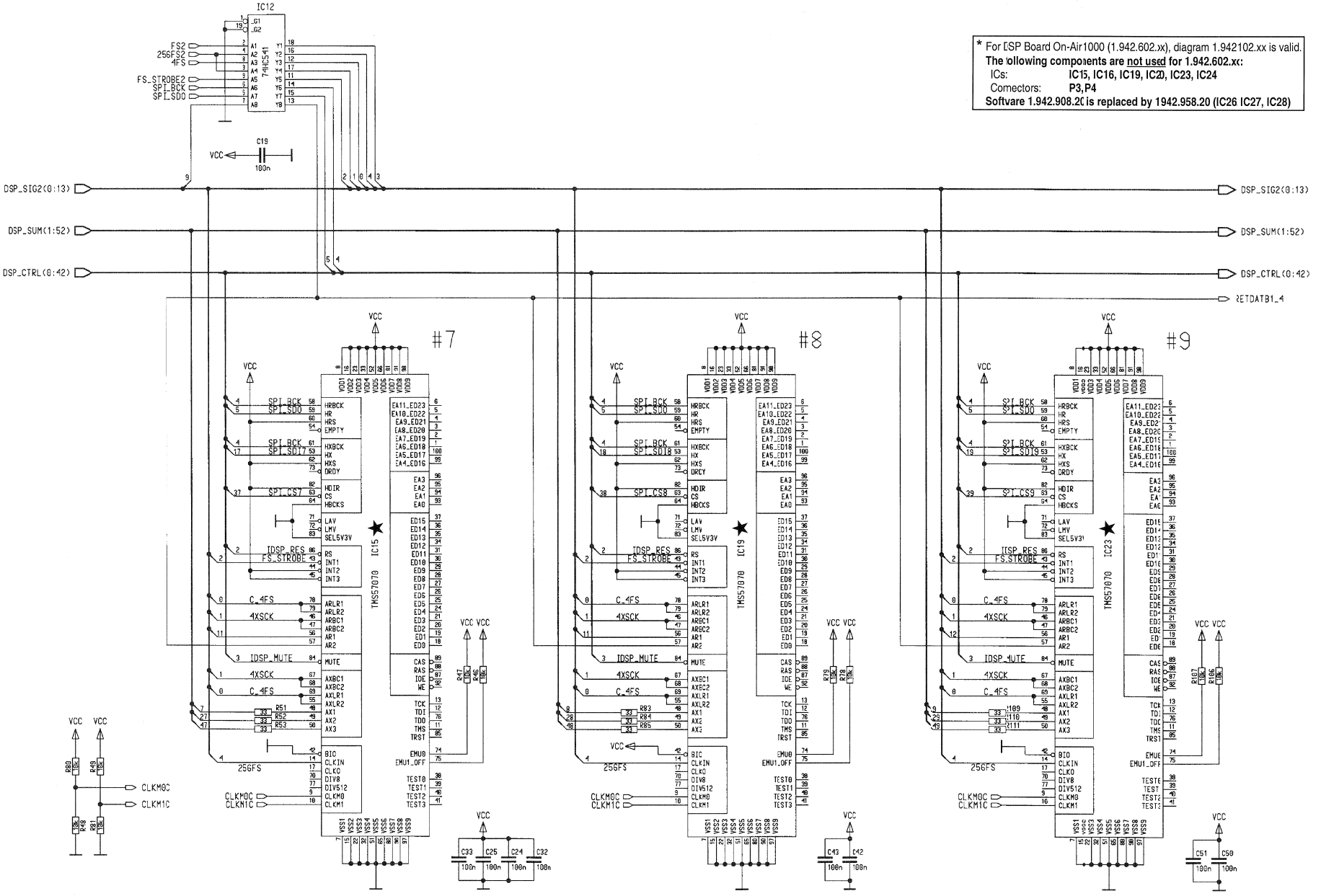
DSP Board 1.942.602.20



DSP Board 1.942.602.20

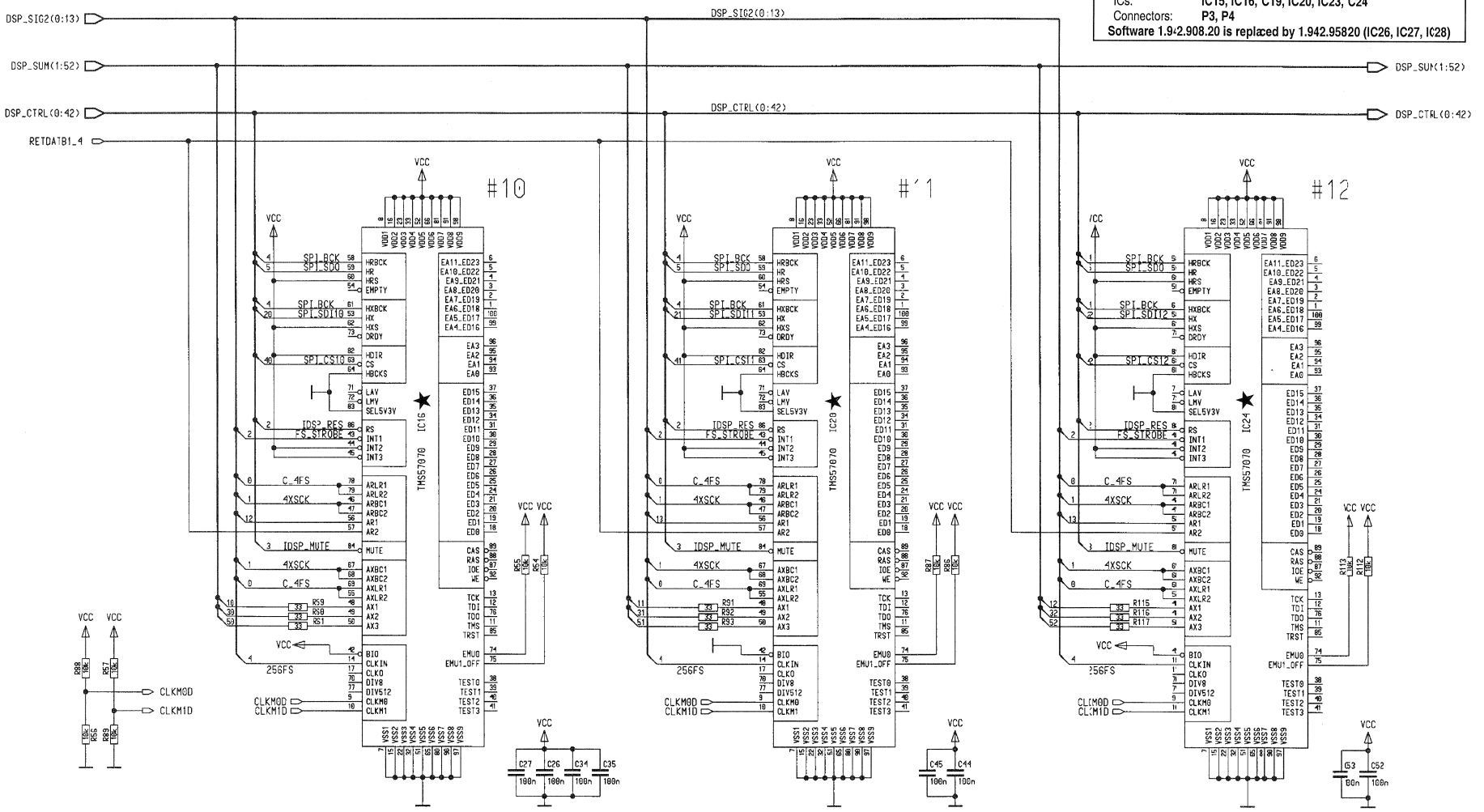


DSP Board 1.942.602.20



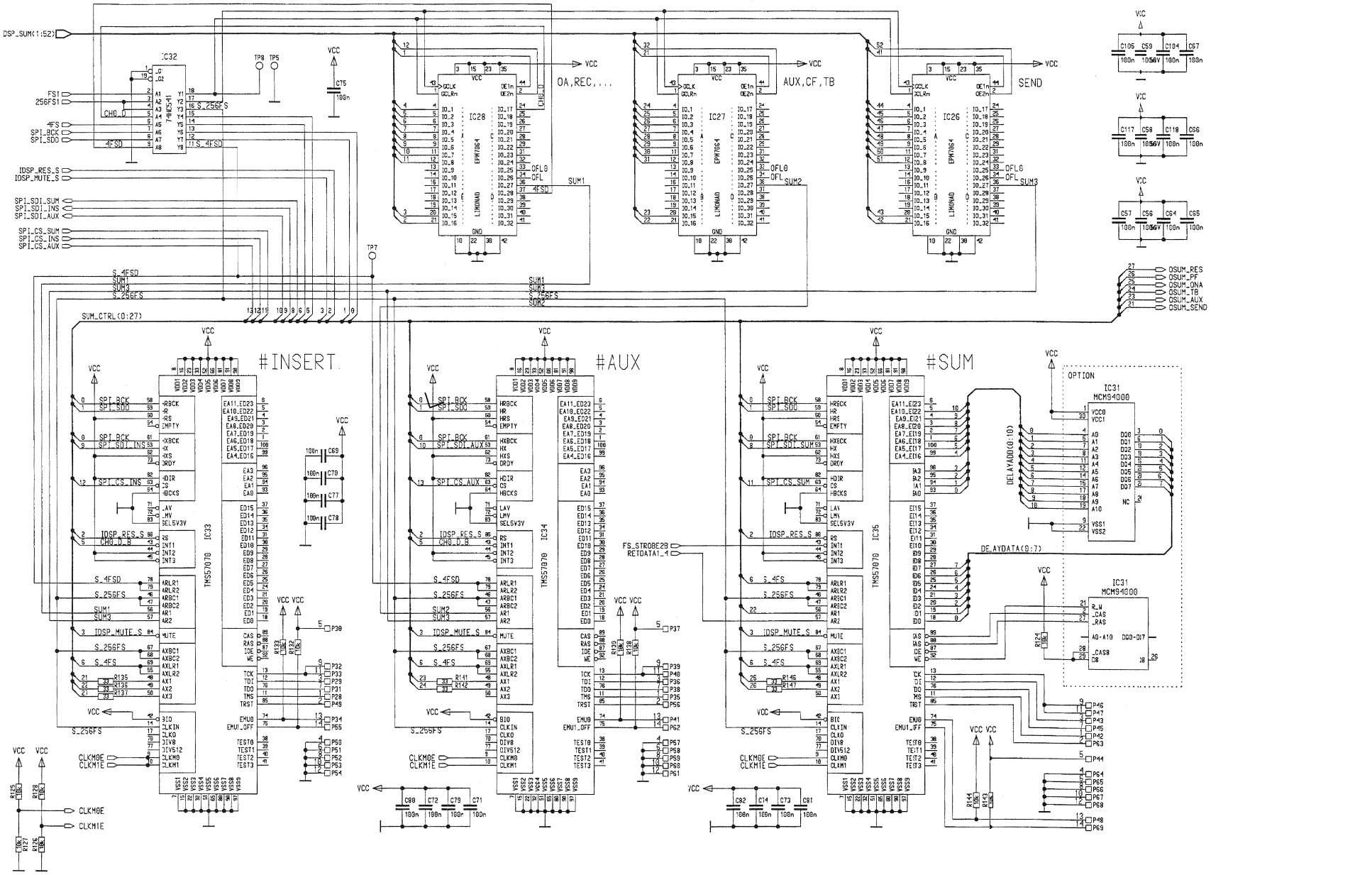
DSP Board 1.942.602.20

* For DSP Board On-Air 1000 (1.942.602.xx), diagram 1.942.102.xx is valid.
The following components are not used for 1.942.602.xx:
ICs: **IC15, IC16, C19, IC20, IC23, C24**
Connectors: **P3, P4**
Software 1.942.908.20 is replaced by 1.942.95820 (IC26, IC27, IC28)



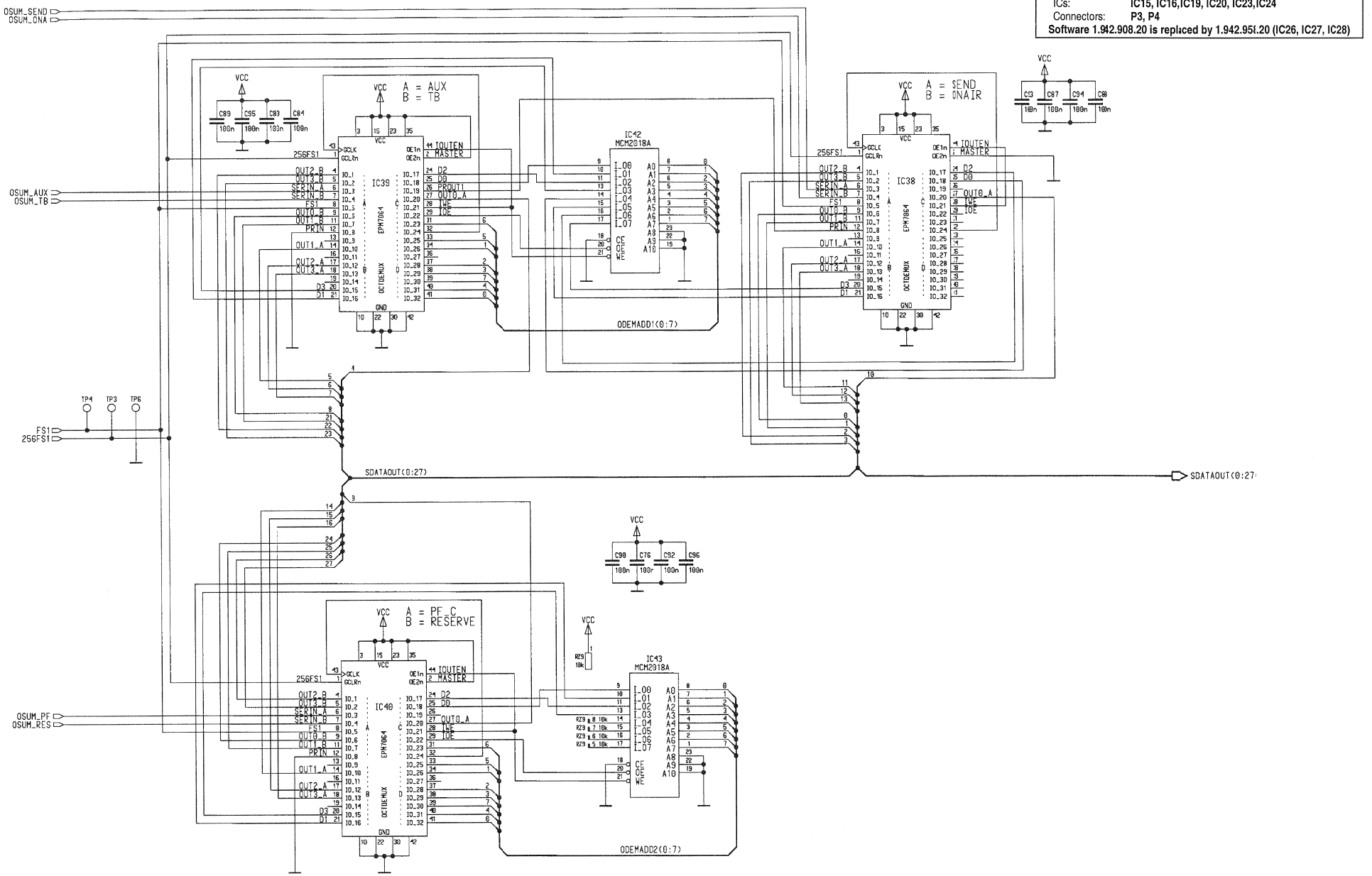
* ForDSP Board On-Air 1000 (1.942.602xx), diagram 1.942.102.xx is valid.
The following components are not used for 1.942.602.xx:
ICs: IC15, IC16, IC19, IC20, IC23, IC24
Connectors: P1, P4
Software 1.942.908.20 is replaced by 1.942.958.20 (IC26, IC27, IC28)

DSP Board 1.942.602.20

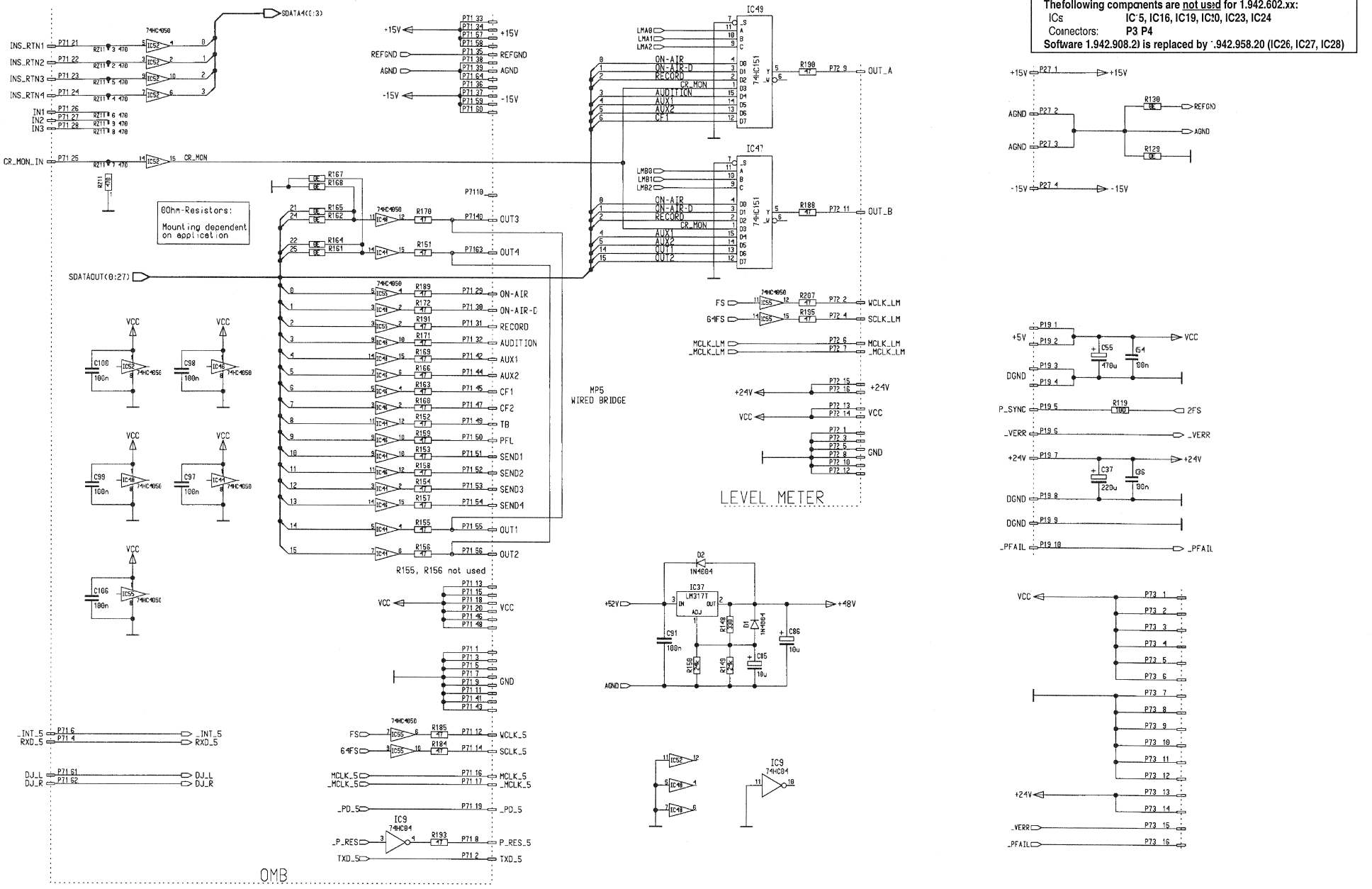


DSP Board 1.942.602.20

* For DSP Board On-Air 1000 (1.942.602.xx), diagram 1.942.102.xx is valid.
The following components are not used for 1.942.602.xx:
ICs: **IC15, IC16, IC19, IC20, IC23, IC24**
Connectors: **P3, P4**
Software 1.942.908.20 is replaced by 1.942.956.20 (IC26, IC27, IC28)



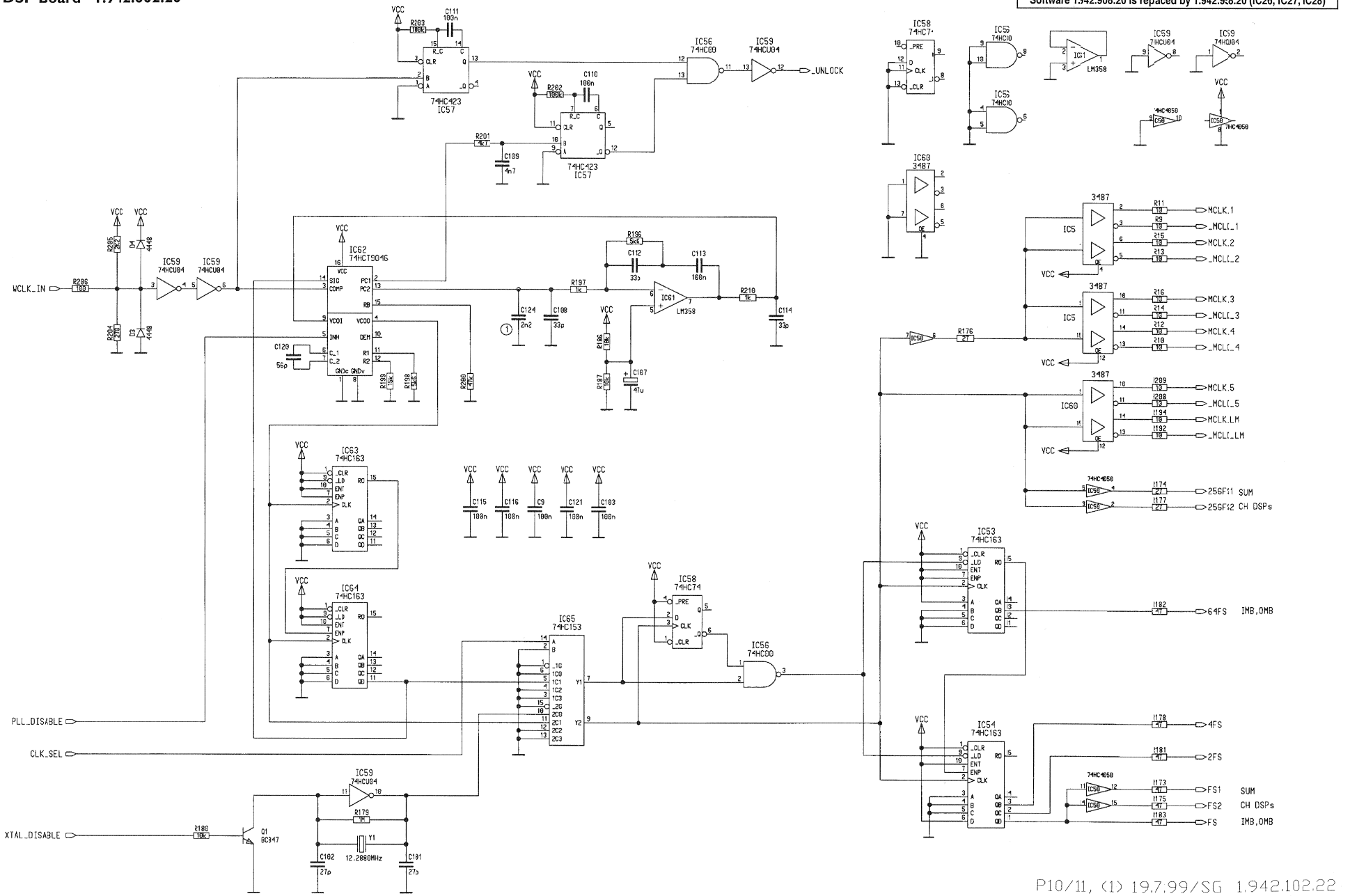
DSP Board 1.942.602.20



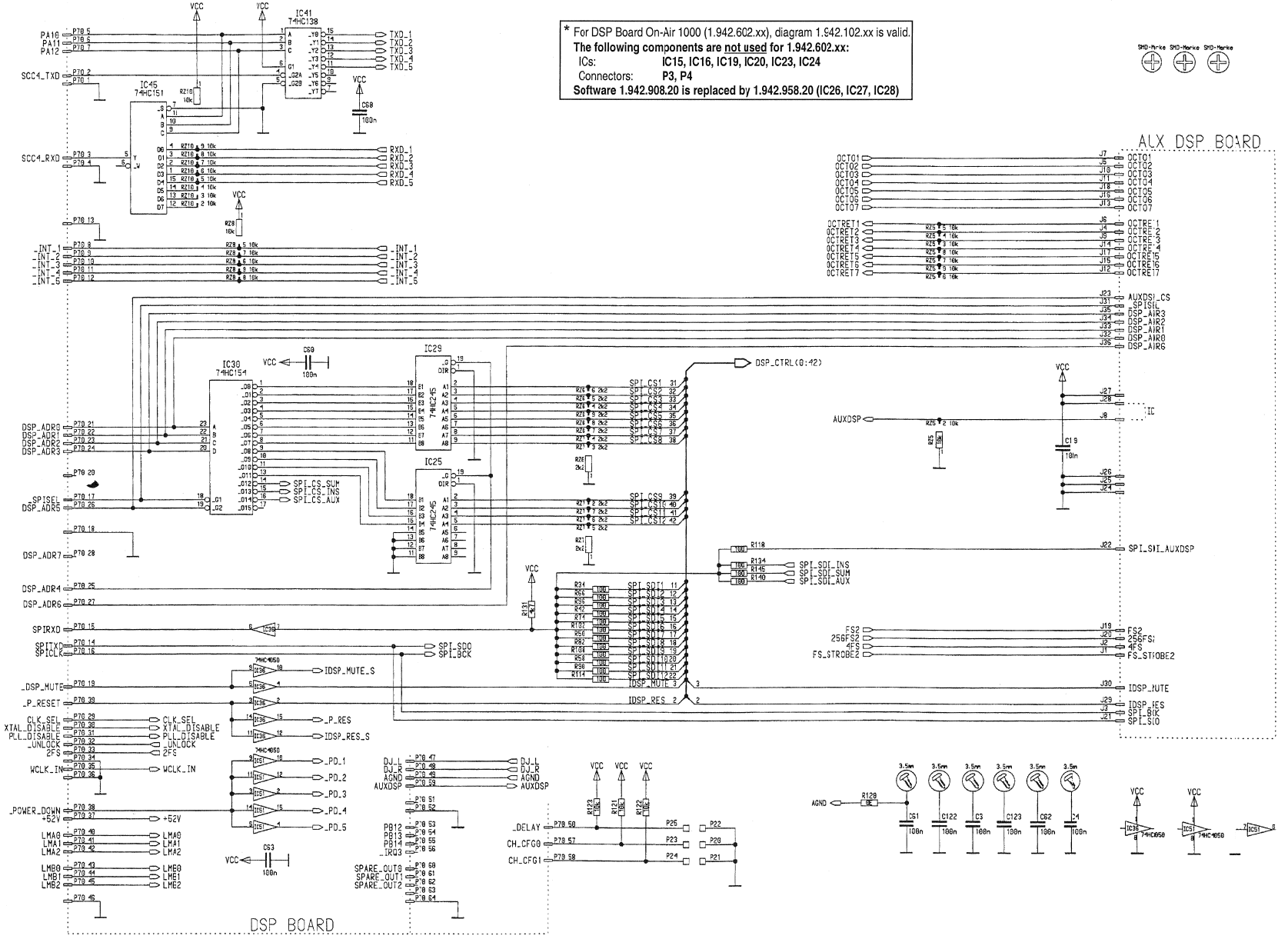
* For DSP Board On-Air1000 (1.942.602.xx), diagram 1.942.102.xx is valid.
Thefollowing compcnents are not used for 1.942.602.xx:
ICs **IC 5, IC16, IC19, IC20, IC23, IC24**
Connectors: **P3 P4**
Software 1.942.908.20 is replaced by .942.958.20 (IC26, IC27, IC28)

* For DSP Board On-Air 1000 (*.942.602.xx), diagram 1.942.102.xx is valid.
The following components are not used for 1.942.602.xx:
ICs: IC15, IC16, IC19, IC20, IC23, IC24
Connectors: P3, P4
Software 1.942.908.20 is repaced by 1.942.958.20 (IC26, IC27, IC28)

DSP Board 1.942.602.20



DSP Board 1.942.602.20

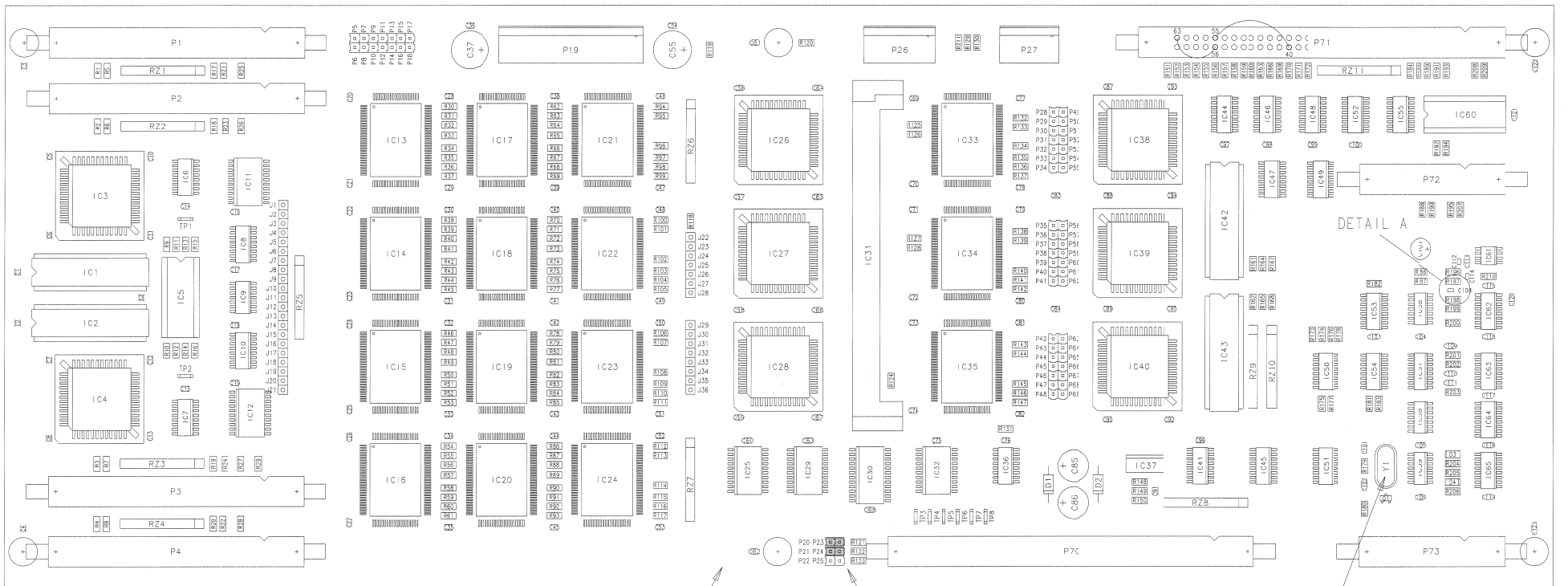


DSP Board 1.942.602.20

* For DSP Board On-Air 1000 (1.942.602.xx), diagram 1.942.102.xx is valid.
The following components are not used for 1.942.602.xx:
ICs: **IC15, IC16, IC19, IC20, IC23, IC24**
Connectors: **P3, P4**
Software 1.942.908.20 is replaced by 1.942.958.20 (IC26, IC27, IC28)

DETAIL A

MP5
zwei Verbindungen
Pin 63 und Pin 56
Pin 40 und Pin 55



Modification / Aenderung					
	.	.	.	.	3
	.	.	.	.	2
	.	.	.	.	1
Edition / Ausgabe	09.03.99	PZ	SW	.	0
	Date / Datum	Visa / Gez.	Checked / Gepr.	Seen / Ges.	Index

Copy to:
Kopie fuer:

STUDER REGENSDORF	Description / Benennung: DSP BOARD "ESE"	Number / Nummer:	Z 1.942.102-22

DSP BOARD OA1000 1.942.602.20 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 2	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 3	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 9	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 15	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 16	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 17	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 18	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 20	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 21	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 22	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 23	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 24	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 25	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 26	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 27	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 28	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 29	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 30	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 31	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 32	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 33	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 34	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 35	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 36	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 37	59.22.6221		220u	EL 40V 20% RM5
0	C 38	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 39	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 40	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 43	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 44	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 45	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 46	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 47	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 48	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 49	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 50	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 51	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 52	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 53	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 54	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 55	59.22.3471		470u	EL 10V 20% RM5
0	C 56	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 57	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 58	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 59	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 60	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 61	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 62	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 63	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 64	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 65	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 66	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 67	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 68	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 69	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 70	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 71	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 72	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 73	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 74	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 75	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 76	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 77	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 78	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 79	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 80	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 81	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 82	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 83	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 84	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 85	59.22.8100		10u	EL 63V 20% RM5
0	C 86	59.22.8100		10u	EL 63V 20% RM5
0	C 87	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 88	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 89	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 90	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 91	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 92	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 93	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 94	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 95	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 96	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 97	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 98	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 99	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 100	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 101	59.60.0470		47p	CER 63V, 5%, C0G, 0805
0	C 102	59.60.0470		47p	CER 63V, 5%, C0G, 0805
0	C 103	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 104	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 105	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 106	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 107	59.22.3470		47u	EL 10V 20% RM5
0	C 108	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 109	59.60.1472		4n7	CER 63V, 10%, X7R, 0805
0	C 110	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 111	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 112	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 113	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 114	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 115	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 116	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 117	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 118	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 119	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 120	59.60.0560		56p	CER 63V, 5%, C0G, 0805
0	C 121	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 122	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 123	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	D 1	50.04.0105		1N4004	1A, DO 41
0	D 2	50.04.0105		1N4004	1A, DO 41
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.14.1009		7C128A	SRAM 2K*8 35ns
0	IC 2	50.14.1009		7C128A	SRAM 2K*8 35ns
0	IC 3	1.942.906.20			SW.102 DSP BOARD, OCTOPUS1 *50634202. EPLD 7064*
0	IC 4	1.942.907.20			SW.102 DSP BOARD, OCTOPUS2 *50634202. EPLD 7064*
0	IC 5	50.15.0105		3487	IC MC 3487 P, DS 3487 N,
0	IC 6	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 7	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 8	50.62.1157		74HC157	Quad 2ch multiplexer
0	IC 9	50.62.1004		74HC 04	Hex inverter
0	IC 10	50.62.1157		74HC157	Quad 2ch multiplexer
0	IC 11	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 12	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 13	50.63.0407		TMS57070	DSP 24 bit
0	IC 14	50.63.0407		TMS57070	DSP 24 bit
0	IC 15	not used		TMS57070	DSP 24 bit
0	IC 16	not used		TMS57070	DSP 24 bit
0	IC 17	50.63.0407		TMS57070	DSP 24 bit
0	IC 18	50.63.0407		TMS57070	DSP 24 bit
0	IC 19	not used		TMS57070	DSP 24 bit
0	IC 20	not used		TMS57070	DSP 24 bit
0	IC 21	50.63.0407		TMS57070	DSP 24 bit
0	IC 22	50.63.0407		TMS57070	DSP 24 bit
0	IC 23	not used		TMS57070	DSP 24 bit
0	IC 24	not used		TMS57070	DSP 24 bit
0	IC 25	50.62.1245		74HC245	Octal bus transceiver
0	IC 26	1.942.958.20			SW.102 DSP BOARD, LIMONAD
0	IC 27	1.942.958.20			SW.102 DSP BOARD, LIMONAD
0	IC 28	1.942.958.20			SW.102 DSP BOARD, LIMONAD
0	IC 29	50.62.1245		74HC245	Octal bus transceiver
0	IC 30	50.62.1154		74HC154	1-of-16 decoder/demux
0	IC 31	not used		not used	not used
0	IC 32	50.62.1541		74HC541	Octal buffer line driver/recei
0	IC 33	50.63.0407		TMS57070	DSP 24 bit
0	IC 34	50.63.0407		TMS57070	DSP 24 bit
0	IC 35	50.63.0407		TMS57070	DSP 24 bit
0	IC 36	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 37	50.10.0104		LM317SP	Series regulator 1.5A ...+37V
0	IC 38	1.942.909.20			SW.102 DSP BOARD, OCTDEMUX *50634202. EPLD 7064*
0	IC 39	1.942.909.20			SW.102 DSP BOARD, OCTDEMUX *50634202. EPLD 7064*
0	IC 40	1.942.909.20			SW.102 DSP BOARD, OCTDEMUX *50634202. EPLD 7064*
0	IC 41	50.62.1138		74HC138	3 to 8 line decoder
0	IC 42	50.14.1009		7C128A	SRAM 2K*8 35ns
0	IC 43	50.14.1009		7C128A	SRAM 2K*8 35ns

DSP BOARD OA1000 1.942.602.20 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 44	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 45	50.62.1151		74HC151	8 channel multiplexer
0	IC 46	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 47	50.62.1151		74HC151	8 channel multiplexer
0	IC 48	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 49	50.62.1151		74HC151	8 channel multiplexer
0	IC 50	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 51	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 52	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 53	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 54	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 55	50.62.1950		74HC4050	Hex High-to-Low Level Shifter
0	IC 56	50.62.1000		74HC 00	Quad 2input NAND
0	IC 57	50.62.1423		74HC423	Dual multivibr monost retrigg
0	IC 58	50.62.1074		74HC 74	Dual D-type FF, preset clear
0	IC 59	50.62.1904		74HCU04	Hex inverter unbuffered
0	IC 60	50.15.0105		3487	IC MC 3487 P, DS 3487 N,
0	IC 61	50.61.0202		LM358	Op-Amp single supply
0	IC 62	50.62.4946		74HCT9046	PLL with bandgap contr VCO
0	IC 63	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 64	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 65	50.62.1153		74HC153	Dual 4ch multiplexer
0	J 1	53.03.0218		1p	single-in-line
0	J 2	53.03.0218		1p	single-in-line
0	J 3	53.03.0218		1p	single-in-line
0	J 4	53.03.0218		1p	single-in-line
0	J 5	53.03.0218		1p	single-in-line
0	J 6	53.03.0218		1p	single-in-line
0	J 7	53.03.0218		1p	single-in-line
0	J 8	53.03.0218		1p	single-in-line
0	J 9	53.03.0218		1p	single-in-line
0	J 10	53.03.0218		1p	single-in-line
0	J 11	53.03.0218		1p	single-in-line
0	J 12	53.03.0218		1p	single-in-line
0	J 13	53.03.0218		1p	single-in-line
0	J 14	53.03.0218		1p	single-in-line
0	J 15	53.03.0218		1p	single-in-line
0	J 16	53.03.0218		1p	single-in-line
0	J 17	53.03.0218		1p	single-in-line
0	J 18	53.03.0218		1p	single-in-line
0	J 19	53.03.0218		1p	single-in-line
0	J 20	53.03.0218		1p	single-in-line
0	J 21	53.03.0218		1p	single-in-line
0	J 22	53.03.0218		1p	single-in-line
0	J 23	53.03.0218		1p	single-in-line
0	J 24	53.03.0218		1p	single-in-line
0	J 25	53.03.0218		1p	single-in-line
0	J 26	53.03.0218		1p	single-in-line
0	J 27	53.03.0218		1p	single-in-line
0	J 28	53.03.0218		1p	single-in-line
0	J 29	53.03.0218		1p	single-in-line
0	J 30	53.03.0218		1p	single-in-line
0	J 31	53.03.0218		1p	single-in-line
0	J 32	53.03.0218		1p	single-in-line
0	J 33	53.03.0218		1p	single-in-line
0	J 34	53.03.0218		1p	single-in-line
0	J 35	53.03.0218		1p	single-in-line
0	J 36	53.03.0218		1p	single-in-line
0	JP 1	54.01.0021		Jumper	0.63*0.63mm, Au
0	JP 2	54.01.0021		Jumper	0.63*0.63mm, Au
0	MP 1	1.942.102.11	1 pce		DSP BOARD PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.602.10			Nr. Etikette 5x20
0	MP 4	1.101.001.20		Label	TEXT-ETIK. 5*20 HARDWARE -20
0	MP 5	1.010.108.64			WIRE WRAP DRAHT D .255 L= 80
0	P 1	54.14.2054		40p	Stecker gerade Au
0	P 2	54.14.2054		40p	Stecker gerade Au
0	P 3	not used		40p	Stecker gerade Au
0	P 4	not used		40p	Stecker gerade Au
0	P 5	not used		1p	Pin, 1reihig, gerade
0	P 6	not used		1p	Pin, 1reihig, gerade
0	P 7	not used		1p	Pin, 1reihig, gerade
0	P 8	not used		1p	Pin, 1reihig, gerade
0	P 9	not used		1p	Pin, 1reihig, gerade
0	P 10	not used		1p	Pin, 1reihig, gerade
0	P 11	not used		1p	Pin, 1reihig, gerade
0	P 12	not used		1p	Pin, 1reihig, gerade
0	P 13	not used		1p	Pin, 1reihig, gerade
0	P 14	not used		1p	Pin, 1reihig, gerade
0	P 15	not used		1p	Pin, 1reihig, gerade
0	P 16	not used		1p	Pin, 1reihig, gerade
0	P 17	not used		1p	Pin, 1reihig, gerade
0	P 18	not used		1p	Pin, 1reihig, gerade
0	P 19	54.12.0510		10p	Power-Pin Stecker
0	P 20	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 21	not used		1p	Pin, 1reihig, gerade
0	P 22	not used		1p	Pin, 1reihig, gerade
0	P 23	not used		1p	Pin, 1reihig, gerade
0	P 24	not used		1p	Pin, 1reihig, gerade
0	P 25	not used		1p	Pin, 1reihig, gerade
0	P 26	54.12.0505		5p	Power-Pin Stecker
0	P 27	54.12.0504		4p	Power-Pin Stecker
0	P 28	not used		1p	Pin, 1reihig, gerade
0	P 29	not used		1p	Pin, 1reihig, gerade
0	P 30	not used		1p	Pin, 1reihig, gerade
0	P 31	not used		1p	Pin, 1reihig, gerade
0	P 32	not used		1p	Pin, 1reihig, gerade
0	P 33	not used		1p	Pin, 1reihig, gerade
0	P 34	not used		1p	Pin, 1reihig, gerade
0	P 35	not used		1p	Pin, 1reihig, gerade
0	P 36	not used		1p	Pin, 1reihig, gerade
0	P 37	not used		1p	Pin, 1reihig, gerade
0	P 38	not used		1p	Pin, 1reihig, gerade
0	P 39	not used		1p	Pin, 1reihig, gerade
0	P 40	not used		1p	Pin, 1reihig, gerade
0	P 41	not used		1p	Pin, 1reihig, gerade
0	P 42	not used		1p	Pin, 1reihig, gerade
0	P 43	not used		1p	Pin, 1reihig, gerade
0	P 44	not used		1p	Pin, 1reihig, gerade
0	P 45	not used		1p	Pin, 1reihig, gerade
0	P 46	not used		1p	Pin, 1reihig, gerade
0	P 47	not used		1p	Pin, 1reihig, gerade
0	P 48	not used		1p	Pin, 1reihig, gerade
0	P 49	not used		1p	Pin, 1reihig, gerade
0	P 50	not used		1p	Pin, 1reihig, gerade
0	P 51	not used		1p	Pin, 1reihig, gerade
0	P 52	not used		1p	Pin, 1reihig, gerade
0	P 53	not used		1p	Pin, 1reihig, gerade
0	P 54	not used		1p	Pin, 1reihig, gerade
0	P 55	not used		1p	Pin, 1reihig, gerade
0	P 56	not used		1p	Pin, 1reihig, gerade
0	P 57	not used		1p	Pin, 1reihig, gerade
0	P 58	not used		1p	Pin, 1reihig, gerade
0	P 59	not used		1p	Pin, 1reihig, gerade
0	P 60	not used		1p	Pin, 1reihig, gerade
0	P 61	not used		1p	Pin, 1reihig, gerade
0	P 62	not used		1p	Pin, 1reihig, gerade
0	P 63	not used		1p	Pin, 1reihig, gerade
0	P 64	not used		1p	Pin, 1reihig, gerade
0	P 65	not used		1p	Pin, 1reihig, gerade
0	P 66	not used		1p	Pin, 1reihig, gerade
0	P 67	not used		1p	Pin, 1reihig, gerade
0	P 68	not used		1p	Pin, 1reihig, gerade
0	P 69	not used		1p	Pin, 1reihig, gerade
0	P 70	54.14.2056		64p	Stecker gerade Au
0	P 71	54.14.2056		64p	Stecker gerade Au
0	P 72	54.14.2052		16p	Stecker gerade Au
0	P 73	54.14.2052		16p	Stecker gerade Au
0	Q 1	50.60.0001		BC847B	NPN 45V 100mA SOT 23
0	R 1	57.60.1470		47R	MF, 1%, 0204, E24
0	R 2	57.60.1470		47R	MF, 1%, 0204, E24
0	R 3	57.60.1470		47R	MF, 1%, 0204, E24
0	R 4	57.60.1470		47R	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.60.1470		47R	MF, 1%, 0204, E24
0	R 7	57.60.1470		47R	MF, 1%, 0204, E24
0	R 8	57.60.1470		47R	MF, 1%, 0204, E24
0	R 9	57.60.1100		10R	MF, 1%, 0204, E24
0	R 10	57.60.1100		10R	MF, 1%, 0204, E24
0	R 11	57.60.1100		10R	MF, 1%, 0204, E24
0	R 12	57.60.1100		10R	MF, 1%, 0204, E24
0	R 13	57.60.1100		10R	MF, 1%, 0204, E24
0	R 14	57.60.1100		10R	MF, 1%, 0204, E24
0	R 15	57.60.1100		10R	MF, 1%, 0204, E24
0	R 16	57.60.1100		10R	MF, 1%, 0204, E24
0	R 17	57.60.1470		47R	MF, 1%, 0204, E24
0	R 18	57.60.1470		47R	MF, 1%, 0204, E24
0	R 19	57.60.1470		47R	MF, 1%, 0204, E24
0	R 20	57.60.1470		47R	MF, 1%, 0204, E24
0	R 21	57.60.1470		47R	MF, 1%, 0204, E24
0	R 22	57.60.1470		47R	MF, 1%, 0204, E24
0	R 23	57.60.1470		47R	MF, 1%, 0204, E24
0	R 24	57.60.1470		47R	MF, 1%, 0204, E24
0	R 25	57.60.1470		47R	MF, 1%, 0204, E24
0	R 26	57.60.1470		47R	MF, 1%, 0204, E24
0	R 27	57.60.1470		47R	MF, 1%, 0204, E24
0	R 28	57.60.1470		47R	MF, 1%, 0204, E24
0	R 29	57.60.1470		47R	MF, 1%, 0204, E24
0	R 30	57.60.1103		10k	MF, 1%, 0204, E24
0	R 31	57.60.1103		10k	MF, 1%, 0204, E24
0	R 32	not used		10k	MF, 1%, 0204, E24
0	R 33	not used		10k	MF, 1%, 0204, E24
0	R 34	57.60.1101		100R	MF, 1%, 0204, E24
0	R 35	57.60.1330		33R	MF, 1%, 0204, E24

DSP BOARD OA1000 1.942.602.20 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 36	57.60.1330		33R	MF, 1%, 0204, E24
0	R 37	57.60.1330		33R	MF, 1%, 0204, E24
0	R 38	57.60.1103		10k	MF, 1%, 0204, E24
0	R 39	57.60.1103		10k	MF, 1%, 0204, E24
0	R 40	not used		10k	MF, 1%, 0204, E24
0	R 41	not used		10k	MF, 1%, 0204, E24
0	R 42	57.60.1101		100R	MF, 1%, 0204, E24
0	R 43	57.60.1330		33R	MF, 1%, 0204, E24
0	R 44	57.60.1330		33R	MF, 1%, 0204, E24
0	R 45	57.60.1330		33R	MF, 1%, 0204, E24
0	R 46	57.60.1103		10k	MF, 1%, 0204, E24
0	R 47	57.60.1103		10k	MF, 1%, 0204, E24
0	R 48	not used		10k	MF, 1%, 0204, E24
0	R 49	not used		10k	MF, 1%, 0204, E24
0	R 50	57.60.1101		100R	MF, 1%, 0204, E24
0	R 51	57.60.1330		33R	MF, 1%, 0204, E24
0	R 52	57.60.1330		33R	MF, 1%, 0204, E24
0	R 53	57.60.1330		33R	MF, 1%, 0204, E24
0	R 54	57.60.1103		10k	MF, 1%, 0204, E24
0	R 55	57.60.1103		10k	MF, 1%, 0204, E24
0	R 56	not used		10k	MF, 1%, 0204, E24
0	R 57	not used		10k	MF, 1%, 0204, E24
0	R 58	57.60.1101		100R	MF, 1%, 0204, E24
0	R 59	57.60.1330		33R	MF, 1%, 0204, E24
0	R 60	57.60.1330		33R	MF, 1%, 0204, E24
0	R 61	57.60.1330		33R	MF, 1%, 0204, E24
0	R 62	57.60.1103		10k	MF, 1%, 0204, E24
0	R 63	57.60.1103		10k	MF, 1%, 0204, E24
0	R 64	57.60.1103		10k	MF, 1%, 0204, E24
0	R 65	57.60.1103		10k	MF, 1%, 0204, E24
0	R 66	57.60.1101		100R	MF, 1%, 0204, E24
0	R 67	57.60.1330		33R	MF, 1%, 0204, E24
0	R 68	57.60.1330		33R	MF, 1%, 0204, E24
0	R 69	57.60.1330		33R	MF, 1%, 0204, E24
0	R 70	57.60.1103		10k	MF, 1%, 0204, E24
0	R 71	57.60.1103		10k	MF, 1%, 0204, E24
0	R 72	57.60.1103		10k	MF, 1%, 0204, E24
0	R 73	57.60.1103		10k	MF, 1%, 0204, E24
0	R 74	57.60.1101		100R	MF, 1%, 0204, E24
0	R 75	57.60.1330		33R	MF, 1%, 0204, E24
0	R 76	57.60.1330		33R	MF, 1%, 0204, E24
0	R 77	57.60.1330		33R	MF, 1%, 0204, E24
0	R 78	57.60.1103		10k	MF, 1%, 0204, E24
0	R 79	57.60.1103		10k	MF, 1%, 0204, E24
0	R 80	57.60.1103		10k	MF, 1%, 0204, E24
0	R 81	57.60.1103		10k	MF, 1%, 0204, E24
0	R 82	57.60.1101		100R	MF, 1%, 0204, E24
0	R 83	57.60.1330		33R	MF, 1%, 0204, E24
0	R 84	57.60.1330		33R	MF, 1%, 0204, E24
0	R 85	57.60.1330		33R	MF, 1%, 0204, E24
0	R 86	57.60.1103		10k	MF, 1%, 0204, E24
0	R 87	57.60.1103		10k	MF, 1%, 0204, E24
0	R 88	57.60.1103		10k	MF, 1%, 0204, E24
0	R 89	57.60.1103		10k	MF, 1%, 0204, E24
0	R 90	57.60.1101		100R	MF, 1%, 0204, E24
0	R 91	57.60.1330		33R	MF, 1%, 0204, E24
0	R 92	57.60.1330		33R	MF, 1%, 0204, E24
0	R 93	57.60.1330		33R	MF, 1%, 0204, E24
0	R 94	57.60.1103		10k	MF, 1%, 0204, E24
0	R 95	57.60.1103		10k	MF, 1%, 0204, E24
0	R 96	57.60.1101		100R	MF, 1%, 0204, E24
0	R 97	57.60.1330		33R	MF, 1%, 0204, E24
0	R 98	57.60.1330		33R	MF, 1%, 0204, E24
0	R 99	57.60.1330		33R	MF, 1%, 0204, E24
0	R 100	57.60.1103		10k	MF, 1%, 0204, E24
0	R 101	57.60.1103		10k	MF, 1%, 0204, E24
0	R 102	57.60.1101		100R	MF, 1%, 0204, E24
0	R 103	57.60.1330		33R	MF, 1%, 0204, E24
0	R 104	57.60.1330		33R	MF, 1%, 0204, E24
0	R 105	57.60.1330		33R	MF, 1%, 0204, E24
0	R 106	57.60.1103		10k	MF, 1%, 0204, E24
0	R 107	57.60.1103		10k	MF, 1%, 0204, E24
0	R 108	57.60.1101		100R	MF, 1%, 0204, E24
0	R 109	57.60.1330		33R	MF, 1%, 0204, E24
0	R 110	57.60.1330		33R	MF, 1%, 0204, E24
0	R 111	57.60.1330		33R	MF, 1%, 0204, E24
0	R 112	57.60.1103		10k	MF, 1%, 0204, E24
0	R 113	57.60.1103		10k	MF, 1%, 0204, E24
0	R 114	57.60.1101		100R	MF, 1%, 0204, E24
0	R 115	57.60.1330		33R	MF, 1%, 0204, E24
0	R 116	57.60.1330		33R	MF, 1%, 0204, E24
0	R 117	57.60.1330		33R	MF, 1%, 0204, E24
0	R 118	57.60.1101		100R	MF, 1%, 0204, E24
0	R 119	57.60.1101		100R	MF, 1%, 0204, E24
0	R 120	57.60.1000		0R0	MF, 0204
0	R 121	57.60.1103		10k	MF, 1%, 0204, E24
0	R 122	57.60.1103		10k	MF, 1%, 0204, E24
0	R 123	57.60.1103		10k	MF, 1%, 0204, E24
0	R 124	57.60.1103		10k	MF, 1%, 0204, E24
0	R 125	57.60.1103		10k	MF, 1%, 0204, E24
0	R 126	57.60.1103		10k	MF, 1%, 0204, E24
0	R 127	not used		10k	MF, 1%, 0204, E24
0	R 128	not used		10k	MF, 1%, 0204, E24
0	R 129	57.60.1000		0R0	MF, 0204
0	R 130	57.60.1000		0R0	MF, 0204
0	R 131	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 132	57.60.1103		10k	MF, 1%, 0204, E24
0	R 133	57.60.1103		10k	MF, 1%, 0204, E24
0	R 134	57.60.1101		100R	MF, 1%, 0204, E24
0	R 135	57.60.1330		33R	MF, 1%, 0204, E24
0	R 136	57.60.1330		33R	MF, 1%, 0204, E24
0	R 137	57.60.1330		33R	MF, 1%, 0204, E24
0	R 138	57.60.1103		10k	MF, 1%, 0204, E24
0	R 139	57.60.1103		10k	MF, 1%, 0204, E24
0	R 140	57.60.1101		100R	MF, 1%, 0204, E24
0	R 141	57.60.1330		33R	MF, 1%, 0204, E24
0	R 142	57.60.1330		33R	MF, 1%, 0204, E24
0	R 143	57.60.1103		10k	MF, 1%, 0204, E24
0	R 144	57.60.1103		10k	MF, 1%, 0204, E24
0	R 145	57.60.1101		100R	MF, 1%, 0204, E24
0	R 146	57.60.1330		33R	MF, 1%, 0204, E24
0	R 147	57.60.1330		33R	MF, 1%, 0204, E24
0	R 148	57.60.1331		330R	MF, 1%, 0204, E24
0	R 149	57.60.1243		24k	MF, 1%, 0204, E24
0	R 150	57.60.1243		24k	MF, 1%, 0204, E24
0	R 151	57.60.1470		47R	MF, 1%, 0204, E24
0	R 152	57.60.1470		47R	MF, 1%, 0204, E24
0	R 153	57.60.1470		47R	MF, 1%, 0204, E24
0	R 154	57.60.1470		47R	MF, 1%, 0204, E24
0	R 155	57.60.1470		47R	MF, 1%, 0204, E24
0	R 156	57.60.1470		47R	MF, 1%, 0204, E24
0	R 157	57.60.1470		47R	MF, 1%, 0204, E24
0	R 158	57.60.1470		47R	MF, 1%, 0204, E24
0	R 159	57.60.1470		47R	MF, 1%, 0204, E24
0	R 160	57.60.1470		47R	MF, 1%, 0204, E24
0	R 161	not used		0R0	MF, 0204
0	R 162	not used		0R0	MF, 0204
0	R 163	57.60.1470		47R	MF, 1%, 0204, E24
0	R 164	not used		0R0	MF, 0204
0	R 165	not used		0R0	MF, 0204
0	R 166	57.60.1470		47R	MF, 1%, 0204, E24
0	R 167	57.60.1000		0R0	MF, 0204
0	R 168	57.60.1000		0R0	MF, 0204
0	R 169	57.60.1470		47R	MF, 1%, 0204, E24
0	R 170	57.60.1470		47R	MF, 1%, 0204, E24
0	R 171	57.60.1470		47R	MF, 1%, 0204, E24
0	R 172	57.60.1470		47R	MF, 1%, 0204, E24
0	R 173	57.60.1470		47R	MF, 1%, 0204, E24
0	R 174	57.60.1270		27R	MF, 1%, 0204, E24
0	R 175	57.60.1470		47R	MF, 1%, 0204, E24
0	R 176	57.60.1270		27R	MF, 1%, 0204, E24
0	R 177	57.60.1270		27R	MF, 1%, 0204, E24
0	R 178	57.60.1470		47R	MF, 1%, 0204, E24
0	R 179	57.60.1105		1M	MF, 1%, 0204, E24
0	R 180	57.60.1103		10k	MF, 1%, 0204, E24
0	R 181	57.60.1470		47R	MF, 1%, 0204, E24
0	R 182	57.60.1470		47R	MF, 1%, 0204, E24
0	R 183	57.60.1470		47R	MF, 1%, 0204, E24
0	R 184	57.60.1470		47R	MF, 1%, 0204, E24
0	R 185	57.60.1470		47R	MF, 1%, 0204, E24
0	R 186	57.60.1103		10k	MF, 1%, 0204, E24
0	R 187	57.60.1103		10k	MF, 1%, 0204, E24
0	R 188	57.60.1470		47R	MF, 1%, 0204, E24
0	R 189	57.60.1470		47R	MF, 1%, 0204, E24
0	R 190	57.60.1470		47R	MF, 1%, 0204, E24
0	R 191	57.60.1470		47R	MF, 1%, 0204, E24
0	R 192	57.60.1100		10R	MF, 1%, 0204, E24
0	R 193	57.60.1470		47R	MF, 1%, 0204, E24
0	R 194	57.60.1100		10R	MF, 1%, 0204, E24
0	R 195	57.60.1470		47R	MF, 1%, 0204, E24
0	R 196	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 197	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 198	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 199	57.60.1153		15k	MF, 1%, 0204, E24
0	R 200	57.60.1473		47k	MF, 1%, 0204, E24
0	R 201	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 202	57.60.1104		100k	MF, 1%, 0204, E24
0	R 203	57.60.1104		100k	MF, 1%, 0204, E24
0	R 204	57.60.1271		270R	MF, 1%, 0204, E24
0	R 205	57.60.1681		680R	MF, 1%, 0204, E24
0	R 206	57.60.1101		100R	MF, 1%, 0204, E24
0	R 207	57.60.1470		47R	MF, 1%, 0204, E24
0	R 208	57.60.1100		10R	MF, 1%, 0204, E24
0	R 209	57.60.1100		10R	MF, 1%, 0204, E24

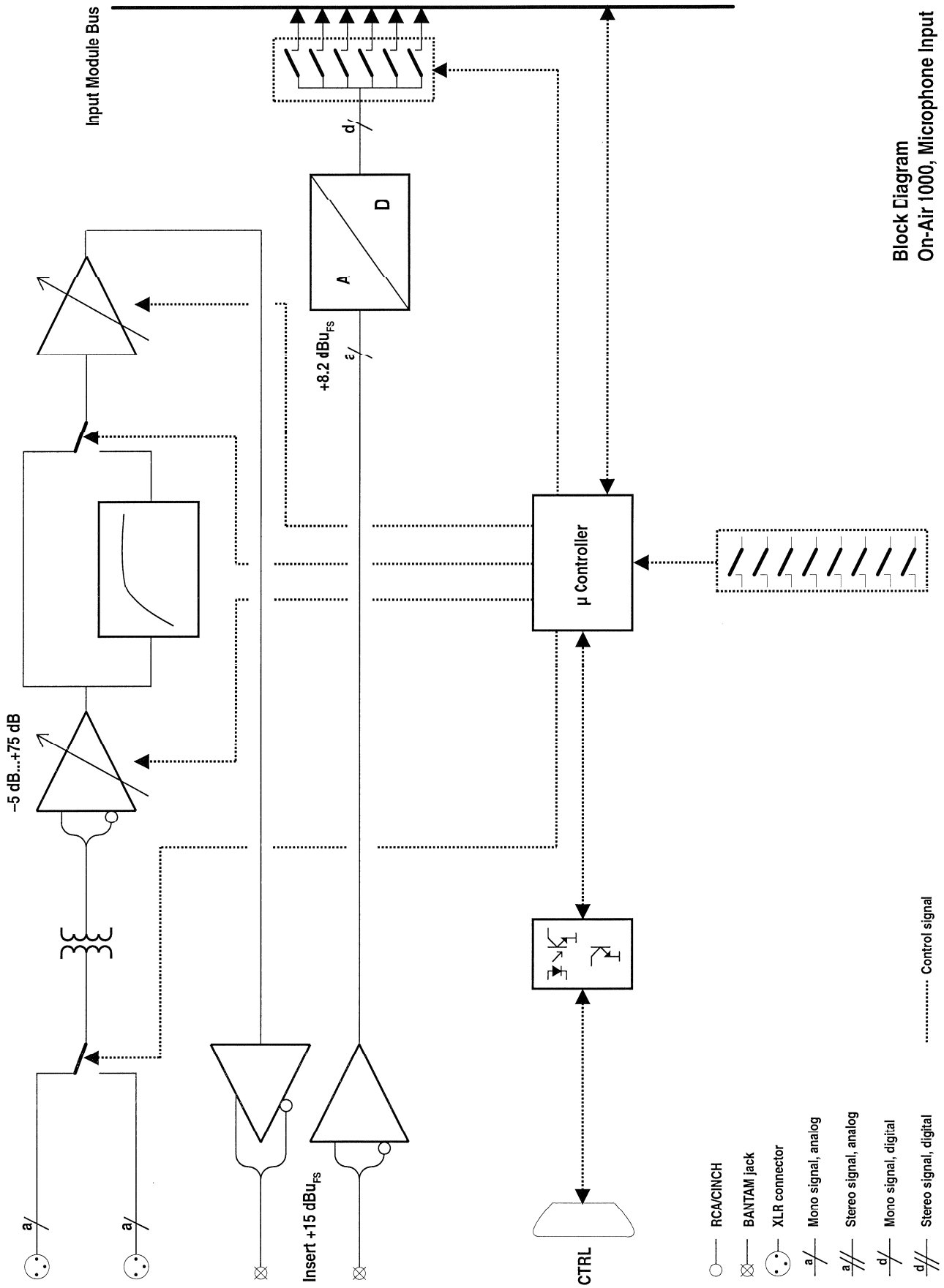
DSP BOARD OA1000 1.942.602.20 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 210	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 211	57.60.1000		0R0	MF, 0204
0	RZ 1	57.88.4331		330R	8*R Resistor-Netw 2% SIP9
0	RZ 2	57.88.4331		330R	8*R Resistor-Netw 2% SIP9
0	RZ 3	57.88.4331		330R	8*R Resistor-Netw 2% SIP9
0	RZ 4	57.88.4331		330R	8*R Resistor-Netw 2% SIP9
0	RZ 5	57.88.4222		2k2	8*R Resistor-Netw 2% SIP9
0	RZ 6	57.88.4222		2k2	8*R Resistor-Netw 2% SIP9
0	RZ 7	57.88.4222		2k2	8*R Resistor-Netw 2% SIP9
0	RZ 8	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 9	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 10	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 11	57.88.4471		470R	8*R Resistor-Netw 2% SIP9
0	TP 1	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 2	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 3	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 4	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 5	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 6	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 7	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 8	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	XIC 1	53.03.0182		24p	DIL 0.3", löt, gerade
0	XIC 2	53.03.0182		24p	DIL 0.3", löt, gerade
0	XIC 3	53.03.2244		44p	PLCC-Socket
0	XIC 4	53.03.2244		44p	PLCC-Socket
0	XIC 5	53.03.0168		16p	DIL 0.3", löt, gerade
0	XIC 26	53.03.2244		44p	PLCC-Socket
0	XIC 27	53.03.2244		44p	PLCC-Socket
0	XIC 28	53.03.2244		44p	PLCC-Socket
0	XIC 31	54.10.3730		30p	SIMM-Socket 30p
0	XIC 38	53.03.2244		44p	PLCC-Socket
0	XIC 39	53.03.2244		44p	PLCC-Socket
0	XIC 40	53.03.2244		44p	PLCC-Socket
0	XIC 42	53.03.0182		24p	DIL 0.3", löt, gerade
0	XIC 43	53.03.0182		24p	DIL 0.3", löt, gerade
0	XIC 60	53.03.0168		16p	DIL 0.3", löt, gerade
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1015		12.288MHz	XTAL HC 49/U

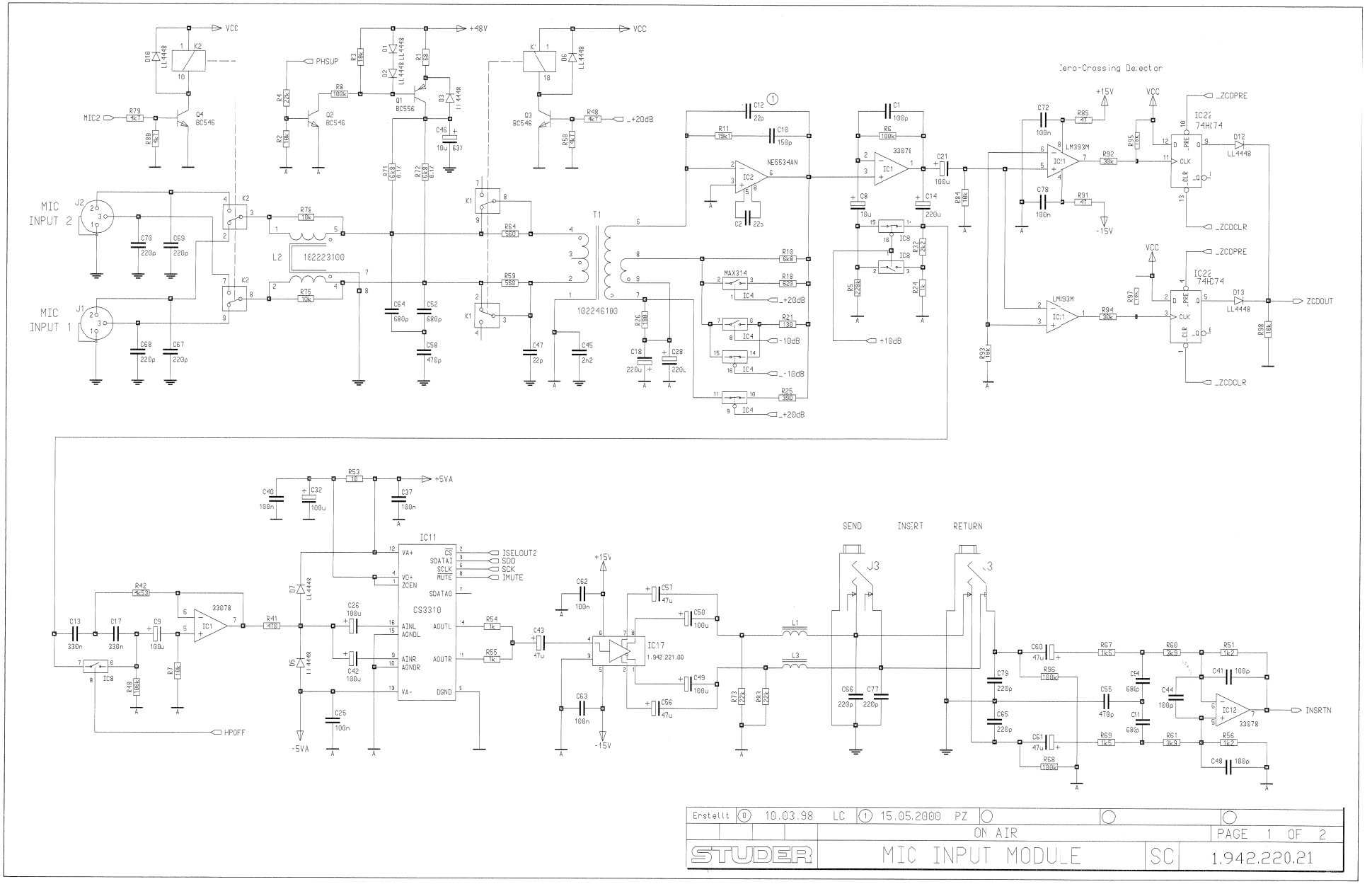
End of List

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description

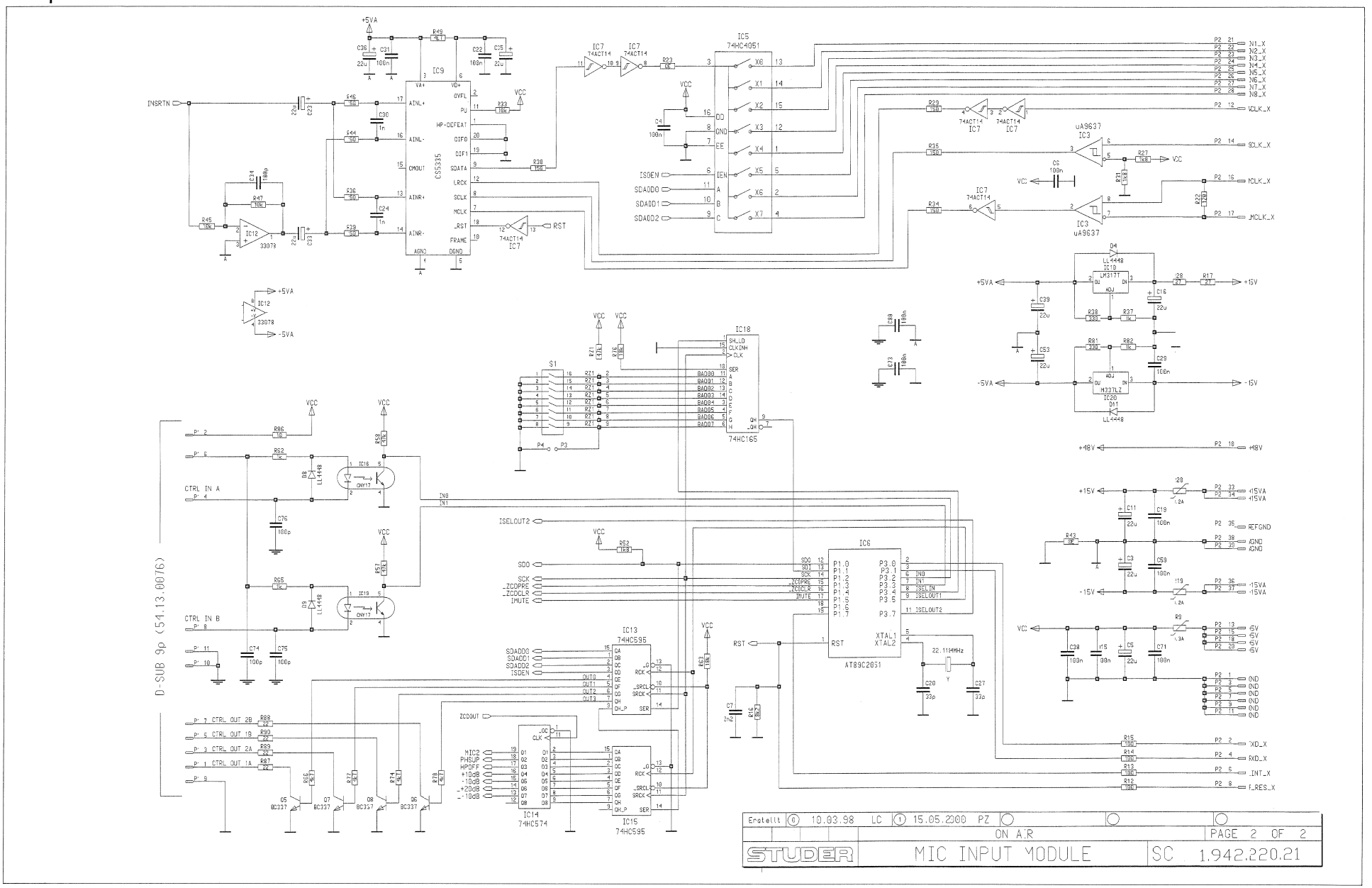
Block Diagram Microphone Input



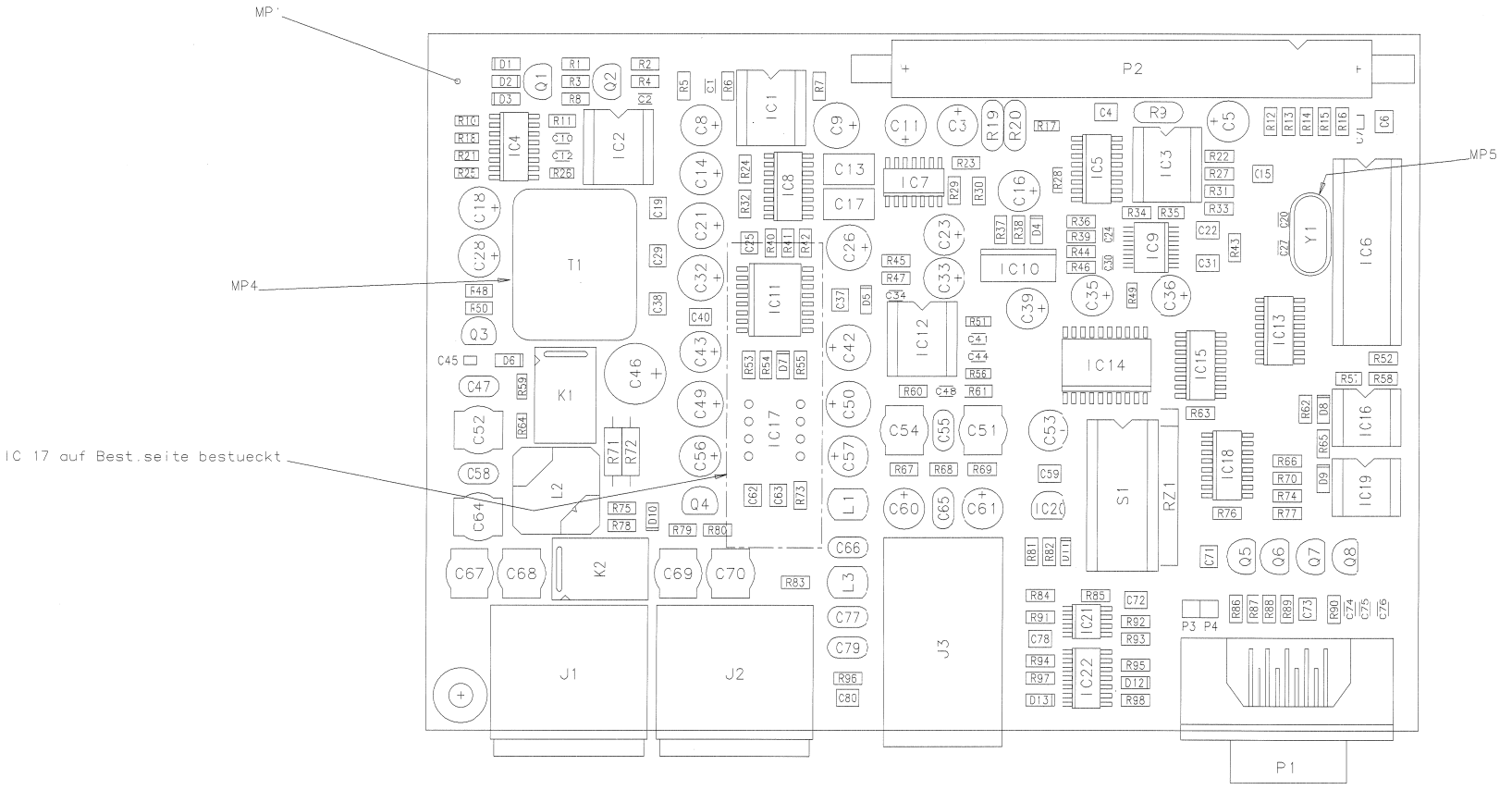
Mic Input 1.942.720.21



Mic Input 1.942.720.21



Mic Input 1.942.720.21



Edition Ausgabe	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
	22.01.2011	PZ	SW	WK	0

Page: Seite: 1 / 1

STUDER REGENSDORF | Description Benennung: MIC INPUT MODULE, ESE | Z | Number Nummer: 1.942.720.20

Mic Input 1.942.720.21 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 2	59.60.2333		22p	CER 50V, 5%, C0G, 0805
0	C 3	59.22.5220		22u	EL 25V 20% RM5
0	C 4	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 5	59.22.5220		22u	EL 25V 20% RM5
0	C 6	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 7	59.60.3317		2n2	CER 50V, 10%, X7R, 0805
0	C 8	59.22.6100		10u	EL 35V 20% RM5
0	C 9	59.22.4002		100u	EL 16V 20% RM5
0	C 10	59.60.2353		150p	CER 50V, 5%, C0G, 0805
0	C 11	59.22.5220		22u	EL 25V 20% RM5
0	C 12	59.60.2333		22p	CER 50V, 5%, C0G, 0805
0	C 13	59.06.5334		330n	PETP, 63V, 5%, RM5
0	C 14	59.22.3003		220u	EL 10V 20% RM5
0	C 15	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 16	59.22.5220		22u	EL 25V 20% RM5
0	C 17	59.06.5334		330n	PETP, 63V, 5%, RM5
0	C 18	59.22.3003		220u	EL 10V 20% RM5
0	C 19	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 20	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 21	59.22.4002		100u	EL 16V 20% RM5
0	C 22	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 23	59.22.5220		22u	EL 25V 20% RM5
0	C 24	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 25	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 26	59.22.4002		100u	EL 16V 20% RM5
0	C 27	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 28	59.22.3003		220u	EL 10V 20% RM5
0	C 29	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 30	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 31	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 32	59.22.4002		100u	EL 16V 20% RM5
0	C 33	59.22.5220		22u	EL 25V 20% RM5
0	C 34	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 35	59.22.5220		22u	EL 25V 20% RM5
0	C 36	59.22.5220		22u	EL 25V 20% RM5
0	C 37	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 38	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 39	59.22.5220		22u	EL 25V 20% RM5
0	C 40	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 41	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 42	59.22.4002		100u	EL 16V 20% RM5
0	C 43	59.22.3470		47u	EL 10V 20% RM5
0	C 44	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 45	59.60.3317		2n2	CER 50V, 10%, X7R, 0805
0	C 46	59.22.8100		10u	EL 63V 20% RM5
0	C 47	59.32.1220		22p	CER 10%, 400V
0	C 48	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 49	59.22.4002		100u	EL 16V 20% RM5
0	C 50	59.22.4002		100u	EL 16V 20% RM5
0	C 51	59.05.1681		680p	PP, 1%, 630V
0	C 52	59.05.1681		680p	PP, 1%, 630V
0	C 53	59.22.5220		22u	EL 25V 20% RM5
0	C 54	59.05.1681		680p	PP, 1%, 630V
0	C 55	59.32.1471		470p	CER 10%, 400V
0	C 56	59.22.3470		47u	EL 10V 20% RM5
0	C 57	59.22.3470		47u	EL 10V 20% RM5
0	C 58	59.32.1471		470p	CER 10%, 400V
0	C 59	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 60	59.22.3470		47u	EL 10V 20% RM5
0	C 61	59.22.3470		47u	EL 10V 20% RM5
0	C 62	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 63	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 64	59.05.1681		680p	PP, 1%, 630V
0	C 65	59.32.1221		220p	CER 10%, 400V
0	C 66	59.32.1221		220p	CER 10%, 400V
0	C 67	59.05.1221		220p	PP, 1%, 630V
0	C 68	59.05.1221		220p	PP, 1%, 630V
0	C 69	59.05.1221		220p	PP, 1%, 630V
0	C 70	59.05.1221		220p	PP, 1%, 630V
0	C 71	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 72	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 73	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 74	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 75	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 76	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 77	59.32.1221		220p	CER 10%, 400V
0	C 78	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 79	59.32.1221		220p	CER 10%, 400V
0	C 80	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 6	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 7	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 8	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 9	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 10	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 11	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 12	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 13	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.09.0117		33078	Dual Op Amp
0	IC 2	50.05.0244		5534A	Single Op-amp, low noise
0	IC 3	50.15.0114		9637	Dual diff Line Receiver
0	IC 4	50.61.8203		MAX314	Quad SPST SO 16
0	IC 5	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 6	1.942.221.32			SW.220 MIC INP MOD (50160313)
0	IC 7	50.62.6014		74ACT 14	Hex inverting Schmitt trigger
0	IC 8	50.61.8202		ADG433	Quad SPST SO 16
0	IC 9	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 10	50.10.0104		LM317SP	Series regulator 1.5A ...+37V
0	IC 11	50.61.8301		CS3310	Dig volume control ste SO16
0	IC 12	50.09.0117		33078	Dual Op Amp
0	IC 13	50.62.1595		74HC595	8bit shift/output register
0	IC 14	50.62.1574		74HC574	Octal D-FF
0	IC 15	50.62.1595		74HC595	8bit shift/output register
0	IC 16	50.04.3200		CNY17-2	Opto-coupler
0	IC 17	1.942.221.00			INSERT SEND BOARD ,A
0	IC 18	50.62.1165		74HC165	8bit shift register
0	IC 19	50.04.3200		CNY17-2	Opto-coupler
0	IC 20	50.10.0109		LM337L	Series regulator 100mA ...-37V
0	IC 21	50.61.9001		LM393	Dual voltage comp. SO 8
0	IC 22	50.62.1074		74HC 74	Dual D-type FF. preset clear
0	J 1	54.21.2203		3p	XLR PCB Winkel
0	J 2	54.21.2203		3p	XLR PCB Winkel
0	J 3	54.24.0211		2*3p	Bantam-Buchse, 4.4mm
0	K 1	56.04.0198		2*u	5V 125V 2A Ag/Au
0	K 2	56.04.0198		2*u	5V 125V 2A Ag/Au
0	L 1	62.01.0301		110MHz	Breitband-Drossel
0	L 2	1.022.231.00		235mH	HF-ASYM. DROSSEL RM5
0	L 3	62.01.0301		110MHz	Breitband-Drossel
0	MP 1	1.942.220.11	1 pce		MIC INPUT MODUL PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.720.10	1 pce		NR.ETIKETTE
0	MP 4	1.022.400.03	1 pce		ISOLATION
0	MP 5	89.01.1499	1 pce		QUARZ - ISOLIERPLATTE
0	MP 6	1.101.001.20		Label	TEXT-ETIK. 5*20 HARDWARE -20
0	P 1	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 2	54.14.2054		40p	Stecker gerade Au
0	P 3	54.01.0020		1p	Pin, 1reihig, gerade
0	P 4	54.01.0020		1p	Pin, 1reihig, gerade
0	Q 1	50.03.0492		BC556B	BC 556 B PNP
0	Q 2	50.03.0491		BC546B	BC 546 B NPN
0	Q 3	50.03.0491		BC546B	BC 546 B NPN
0	Q 4	50.03.0491		BC546B	BC 546 B NPN
0	Q 5	50.03.0340		BC337-25	NPN, 800mA
0	Q 6	50.03.0340		BC337-25	NPN, 800mA
0	Q 7	50.03.0340		BC337-25	NPN, 800mA
0	Q 8	50.03.0340		BC337-25	NPN, 800mA
0	R 1	57.60.1680		68R	MF, 1%, 0204, E24
0	R 2	57.60.1103		10k	MF, 1%, 0204, E24
0	R 3	57.60.1103		10k	MF, 1%, 0204, E24
0	R 4	57.60.1223		22k	MF, 1%, 0204, E24
0	R 5	57.60.1224		220k	MF, 1%, 0204, E24
0	R 6	57.60.1104		100k	MF, 1%, 0204, E24
0	R 7	57.60.1103		10k	MF, 1%, 0204, E24
0	R 8	57.60.1104		100k	MF, 1%, 0204, E24
0	R 9	57.92.7012		0.3A	PTC 60V
0	R 10	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 11	57.60.2428		19k1	MF, 1%, 0204, E96
0	R 12	57.60.1101		100R	MF, 1%, 0204, E24
0	R 13	57.60.1101		100R	MF, 1%, 0204, E24
0	R 14	57.60.1101		100R	MF, 1%, 0204, E24
0	R 15	57.60.1101		100R	MF, 1%, 0204, E24
0	R 16	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 17	57.60.1270		27R	MF, 1%, 0204, E24
0	R 18	57.60.1621		620R	MF, 1%, 0204, E24
0	R 19	57.92.7011		0.2A	PTC 60V
0	R 20	57.92.7011		0.2A	PTC 60V
0	R 21	57.60.1131		130R	MF, 1%, 0204, E24
0	R 22	not used		120R	MF, 1%, 0204, E24
0	R 23	57.60.1000		0R0	MF, 0204
0	R 24	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 25	57.60.1391		390R	MF, 1%, 0204, E24
0	R 26	57.60.1181		180R	MF, 1%, 0204, E24
0	R 27	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 28	57.60.1270		27R	MF, 1%, 0204, E24
0	R 29	57.60.1151		150R	MF, 1%, 0204, E24
0	R 30	57.60.1151		150R	MF, 1%, 0204, E24
0	R 31	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 32	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 33	57.60.1103		10k	MF, 1%, 0204, E24

Mic Input 1.942.720.21 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 34	57.60.1151		150R	MF, 1%, 0204, E24
0	R 35	57.60.1151		150R	MF, 1%, 0204, E24
0	R 36	57.60.1151		150R	MF, 1%, 0204, E24
0	R 37	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 38	57.60.1331		330R	MF, 1%, 0204, E24
0	R 39	57.60.1151		150R	MF, 1%, 0204, E24
0	R 40	57.60.1104		100k	MF, 1%, 0204, E24
0	R 41	57.60.1471		470R	MF, 1%, 0204, E24
0	R 42	57.60.2364		4k53	MF, 1%, 0204, E96
0	R 43	57.60.1000		0R0	MF, 0204
0	R 44	57.60.1151		150R	MF, 1%, 0204, E24
0	R 45	57.60.1103		10k	MF, 1%, 0204, E24
0	R 46	57.60.1151		150R	MF, 1%, 0204, E24
0	R 47	57.60.1103		10k	MF, 1%, 0204, E24
0	R 48	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 49	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 50	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 51	57.60.1122		1k2	MF, 1%, 0204, E24
0	R 52	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 53	57.60.1100		10R	MF, 1%, 0204, E24
0	R 54	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 55	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 56	57.60.1122		1k2	MF, 1%, 0204, E24
0	R 57	57.60.1473		47k	MF, 1%, 0204, E24
0	R 58	57.60.1473		47k	MF, 1%, 0204, E24
0	R 59	57.60.1561		560R	MF, 1%, 0204, E24
0	R 60	57.60.1392		3k9	MF, 1%, 0204, E24
0	R 61	57.60.1392		3k9	MF, 1%, 0204, E24
0	R 62	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 63	57.60.1103		10k	MF, 1%, 0204, E24
0	R 64	57.60.1561		560R	MF, 1%, 0204, E24
0	R 65	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 66	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 67	57.60.1152		1k5	MF, 1%, 0204, E24
0	R 68	57.60.1104		100k	MF, 1%, 0204, E24
0	R 69	57.60.1152		1k5	MF, 1%, 0204, E24
0	R 70	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 71	57.99.0250		6k8	MF 0.1%, 25ppm 0207
0	R 72	57.99.0250		6k8	MF 0.1%, 25ppm 0207
0	R 73	57.60.1223		22k	MF, 1%, 0204, E24
0	R 74	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 75	57.60.1103		10k	MF, 1%, 0204, E24
0	R 76	57.60.1103		10k	MF, 1%, 0204, E24
0	R 77	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 78	57.60.1103		10k	MF, 1%, 0204, E24
0	R 79	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 80	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 81	57.60.1331		330R	MF, 1%, 0204, E24
0	R 82	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 83	57.60.1223		22k	MF, 1%, 0204, E24
0	R 84	57.60.1103		10k	MF, 1%, 0204, E24
0	R 85	57.60.1470		47R	MF, 1%, 0204, E24
0	R 86	57.60.1100		10R	MF, 1%, 0204, E24
0	R 87	57.60.1220		22R	MF, 1%, 0204, E24
0	R 88	57.60.1220		22R	MF, 1%, 0204, E24
0	R 89	57.60.1220		22R	MF, 1%, 0204, E24
0	R 90	57.60.1220		22R	MF, 1%, 0204, E24
0	R 91	57.60.1470		47R	MF, 1%, 0204, E24
0	R 92	57.60.1303		30k	MF, 1%, 0204, E24
0	R 93	57.60.1103		10k	MF, 1%, 0204, E24
0	R 94	57.60.1303		30k	MF, 1%, 0204, E24
0	R 95	57.60.1103		10k	MF, 1%, 0204, E24
0	R 96	57.60.1104		100k	MF, 1%, 0204, E24
0	R 97	57.60.1103		10k	MF, 1%, 0204, E24
0	R 98	57.60.1103		10k	MF, 1%, 0204, E24
0	RZ 1	57.88.4473		47k	8*R Resistor-Netw 2% SIP9
0	S 1	55.01.0168		8*a	DIL-Switch, PCB
0	T 1	1.022.461.00			HIGH-LEVEL MIC INPUT
0	XIC 6	53.03.0165		20p	DIL-socket 0.3"
0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

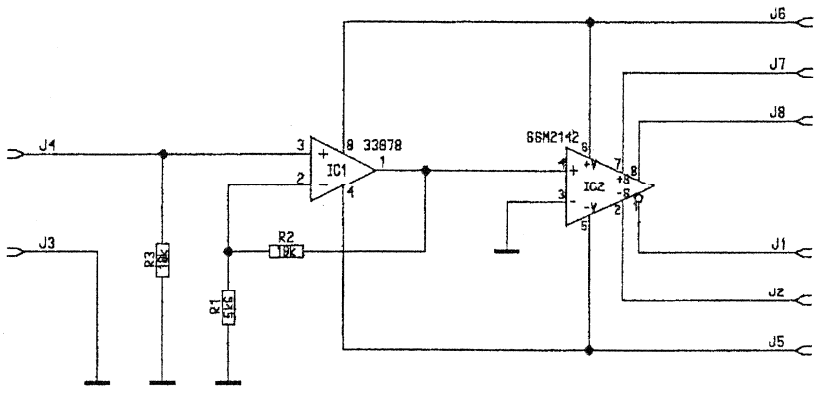
End of List

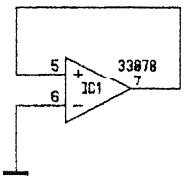
Comments:

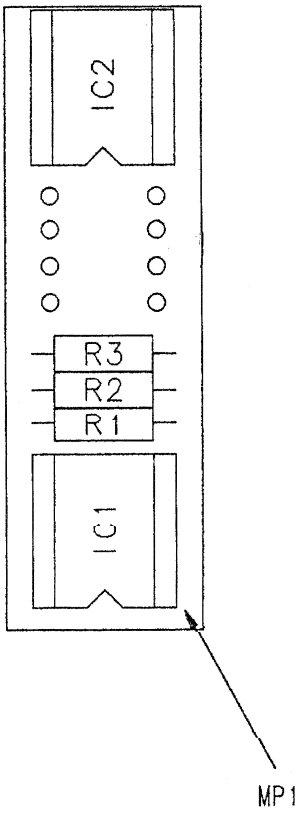
(21) Software update IC6

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description

Insert Send 1.942.221.00







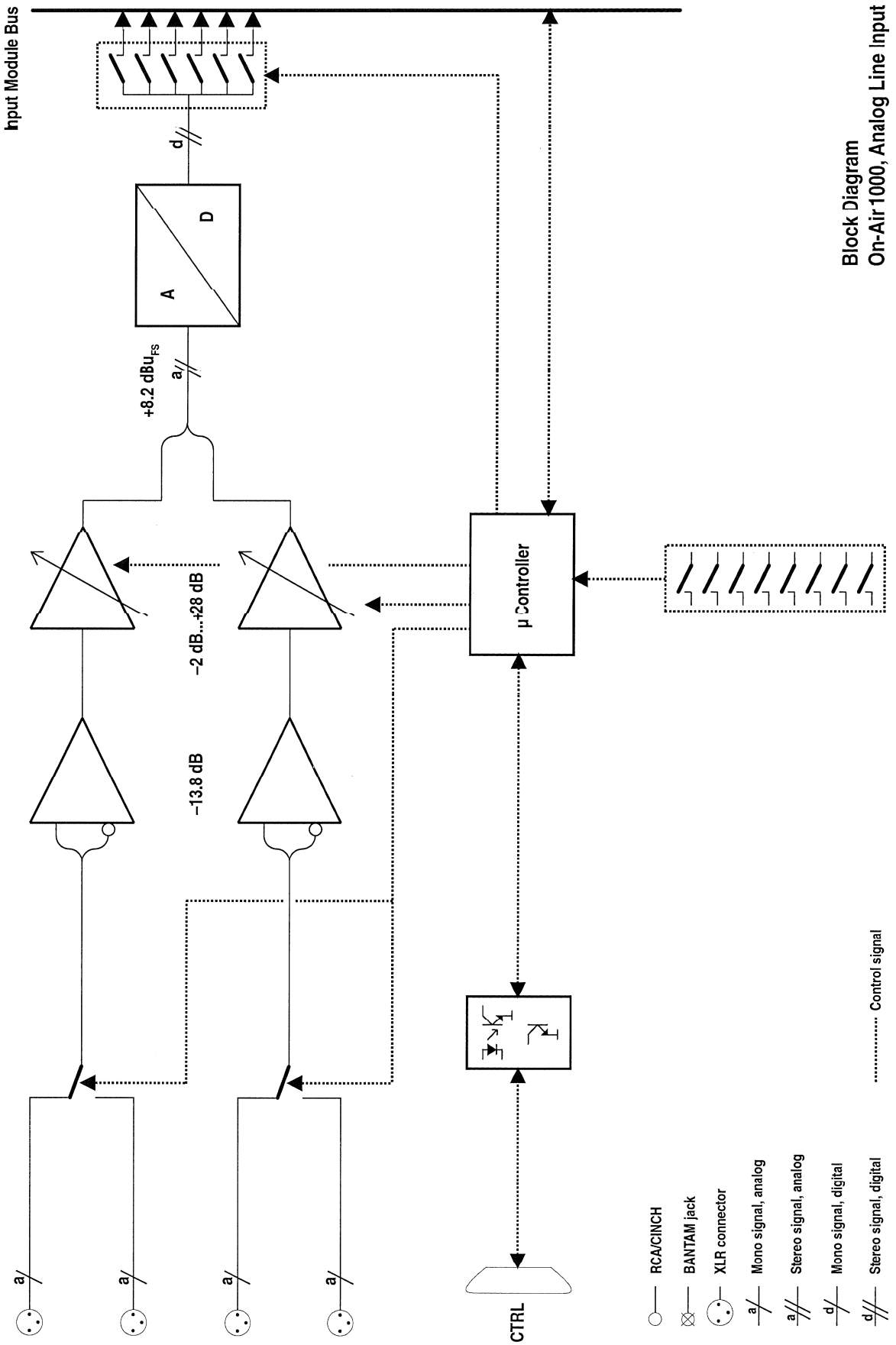
Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 1	50.09.0117		MC33078	IC MC 33078 P
0	IC 2	50.09.0124		2142	Audio balanced line driver
0	MP 1	1.942.221.11	1 pce		INSERT SEND PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.221.10	1 pce		NR.ETIKETTE 5X20
0	MP 4	1.010.018.54	8 pcs	1p	KONTAKTSTIFT, L = 16 MM
0	R 1	57.11.3562		5k6	MF, 1%, 0207
0	R 2	57.11.3103		10k	MF, 1%, 0207
0	R 3	57.11.3103		10k	MF, 1%, 0207

End of List

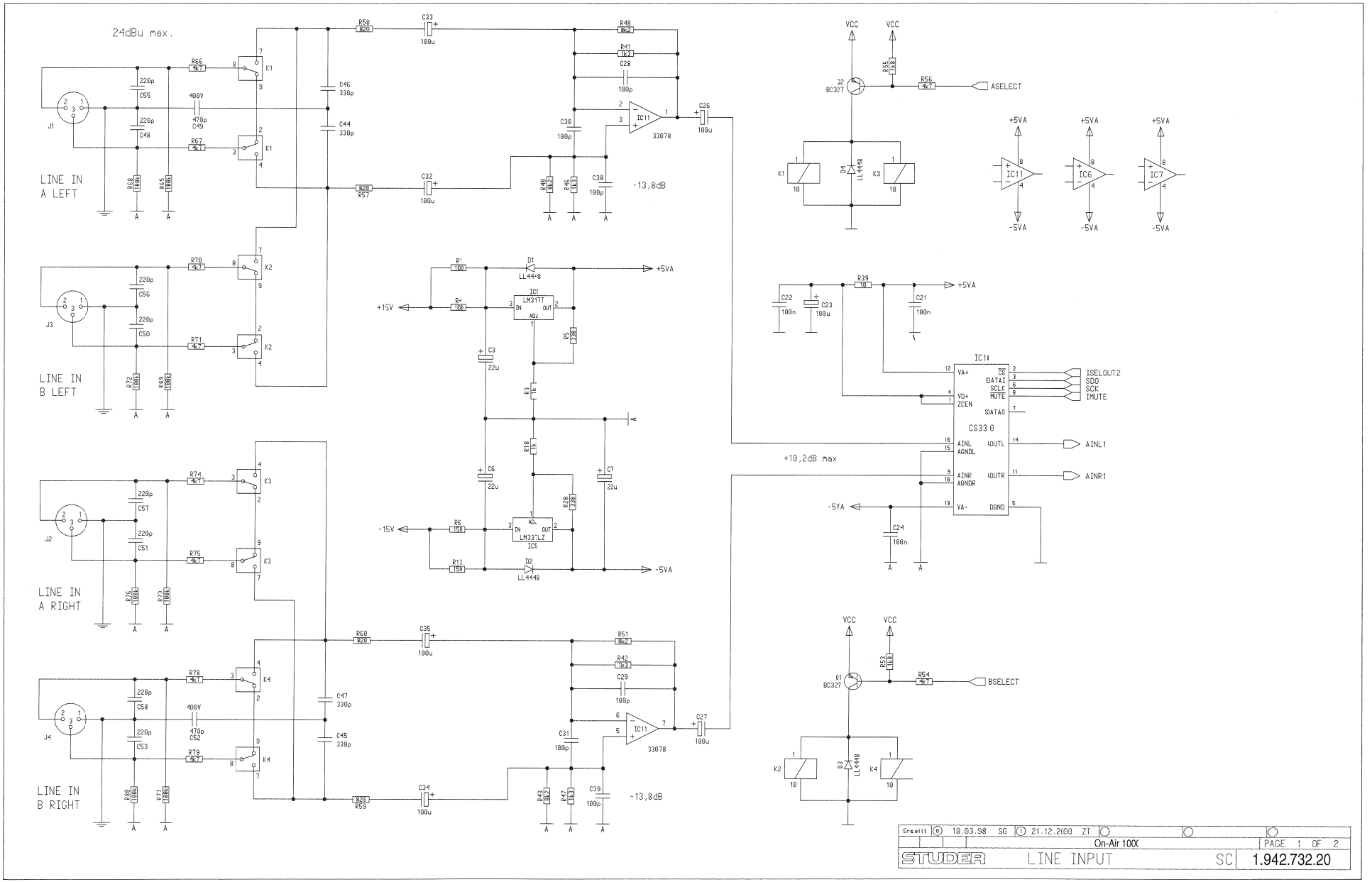
Comments

0 3.4.97 / VA			
	ON AIR		PAGE 1 / 1
STUDER	INSERT SEND	SC	1.942.221.00

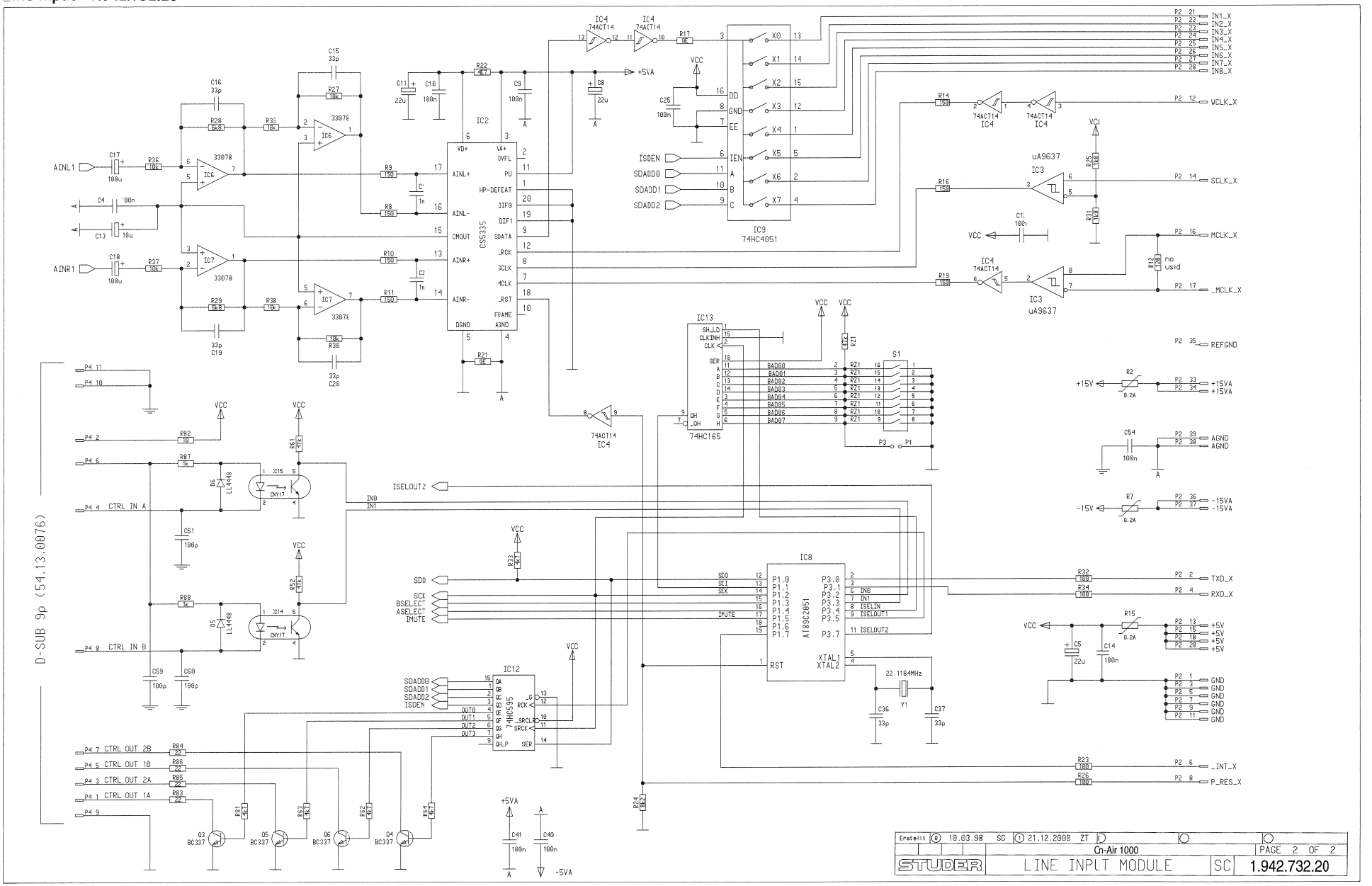
Block Diagram Analog Line Input



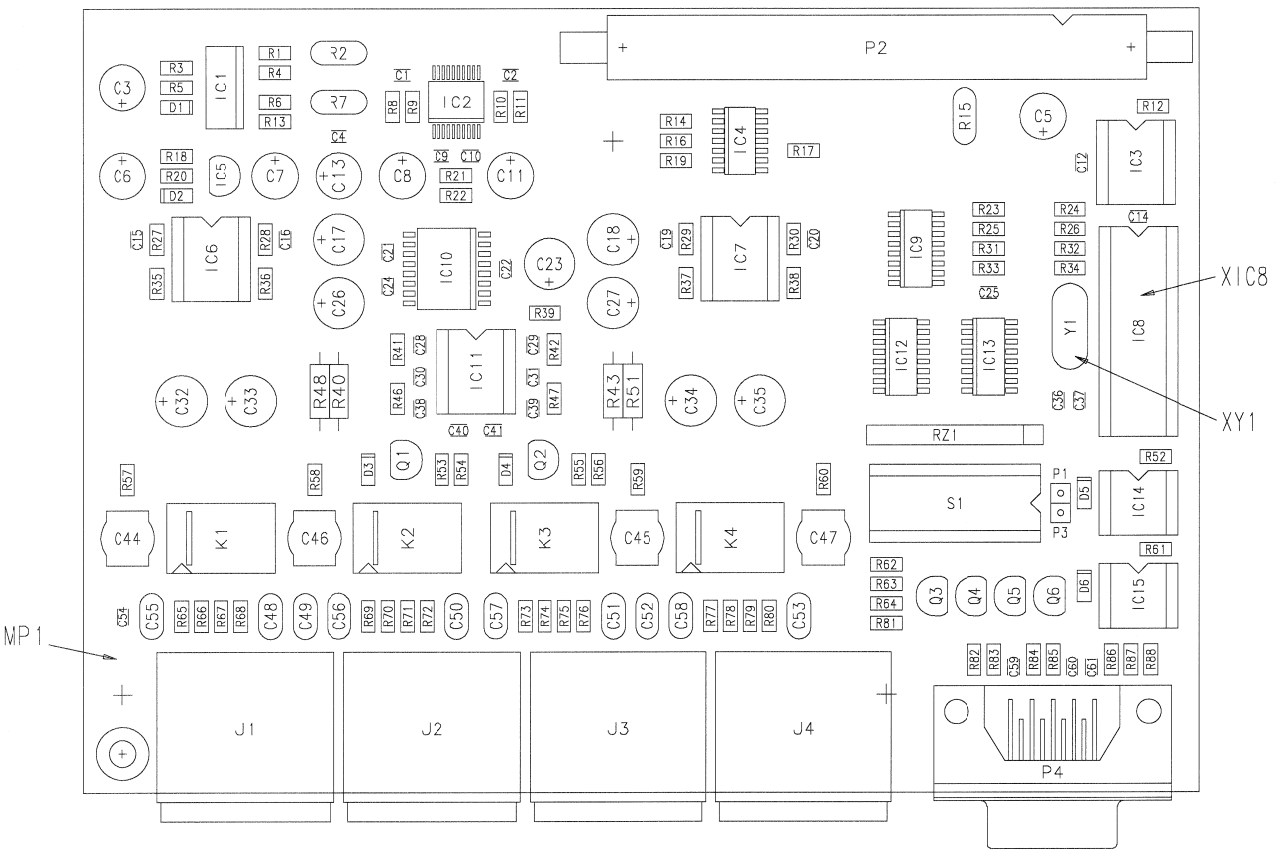
Line Input 1.942.732.20



Line Input 1.942.732.20



Line Input 1.942.732.20



Edition Ausgabe	19.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page: Seite:	1 / 1				

STUDER REGENSDORF — Description Bezeichnung: LINE INPUT MODULE, ESE — Z — Number: Nummer: 1.942.732.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 2	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 3	59.22.5220		22u	EL 25V 20% RM5
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.22.5220		22u	EL 25V 20% RM5
0	C 6	59.22.5220		22u	EL 25V 20% RM5
0	C 7	59.22.5220		22u	EL 25V 20% RM5
0	C 8	59.22.5220		22u	EL 25V 20% RM5
0	C 9	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.22.5220		22u	EL 25V 20% RM5
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 13	59.22.6100		10u	EL 35V 20% RM5
0	C 14	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 15	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 16	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 17	59.22.4002		100u	EL 16V 20% RM5
0	C 18	59.22.4002		100u	EL 16V 20% RM5
0	C 19	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 20	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 21	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 22	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 23	59.22.4002		100u	EL 16V 20% RM5
0	C 24	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 25	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 26	59.22.4002		100u	EL 16V 20% RM5
0	C 27	59.22.4002		100u	EL 16V 20% RM5
0	C 28	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 29	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 30	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 31	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 32	59.22.4002		100u	EL 16V 20% RM5
0	C 33	59.22.4002		100u	EL 16V 20% RM5
0	C 34	59.22.4002		100u	EL 16V 20% RM5
0	C 35	59.22.4002		100u	EL 16V 20% RM5
0	C 36	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 37	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 38	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 39	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 40	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	not used			
0	C 43	not used			
0	C 44	59.05.1331		330p	PF, 1%, 630V
0	C 45	59.05.1331		330p	PF, 1%, 630V
0	C 46	59.05.1331		330p	PF, 1%, 630V
0	C 47	59.05.1331		330p	PF, 1%, 630V
0	C 48	59.32.1221		220p	CER 10%, 400V
0	C 49	59.32.1471		470p	CER 10%, 400V
0	C 50	59.32.1221		220p	CER 10%, 400V
0	C 51	59.32.1221		220p	CER 10%, 400V
0	C 52	59.32.1471		470p	CER 10%, 400V
0	C 53	59.32.1221		220p	CER 10%, 400V
0	C 54	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 55	59.32.1221		220p	CER 10%, 400V
0	C 56	59.32.1221		220p	CER 10%, 400V
0	C 57	59.32.1221		220p	CER 10%, 400V
0	C 58	59.32.1221		220p	CER 10%, 400V
0	C 59	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 60	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 61	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 6	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.10.0104		LM317SP	Series regulator 1.5A ...+37V
0	IC 2	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 3	50.15.0114		9637	Dual diff Line Receiver
0	IC 4	50.62.6014		74ACT 14	Hex inverting Schmitt trigger
0	IC 5	50.10.0109		LM337L	Series regulator 100mA ...-37V
0	IC 6	50.09.0117		MC33078	IC MC 33078 P
0	IC 7	50.09.0117		MC33078	IC MC 33078 P
0	IC 8	1.942.922.21			SW.230 LINE INPUT MODULE (5/160313, AT89C2051)
0	IC 9	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 10	50.61.8301		CS3310	Dig volume control ste SO16
0	IC 11	50.09.0117		MC33078	IC MC 33078 P
0	IC 12	50.62.1595		74HC595	8bt shift/output register
0	IC 13	50.62.1165		74HC165	8bt shift register
0	IC 14	50.04.3200		CNY17-2	Opto-coupler
0	IC 15	50.04.3200		CNY17-2	Opto-coupler
0	J 1	54.21.2203		3p	XLR PCB Winkel
0	J 2	54.21.2203		3p	XLR PCB Winkel
0	J 3	54.21.2203		3p	XLR PCB Winkel
0	J 4	54.21.2203		3p	XLR PCB Winkel
0	K 1	56.04.0198		2*u	5* 125V 2A Ag/Au
0	K 2	56.04.0198		2*u	5* 125V 2A Ag/Au
0	K 3	56.04.0198		2*u	5* 125V 2A Ag/Au
0	K 4	56.04.0198		2*u	5* 125V 2A Ag/Au
0	MP 1	1.942.230.11	pce		Line Input Module pcb
0	MP 2	43.01.0108	pce	Label	EBE-WARNSCHILD
0	MP 3	1.942.732.10	pce		NF.ETIKETTE
0	MP 4	1.101.001.20	pce	Label	TEXT-ETIK. 5*20 HARDWARE -20

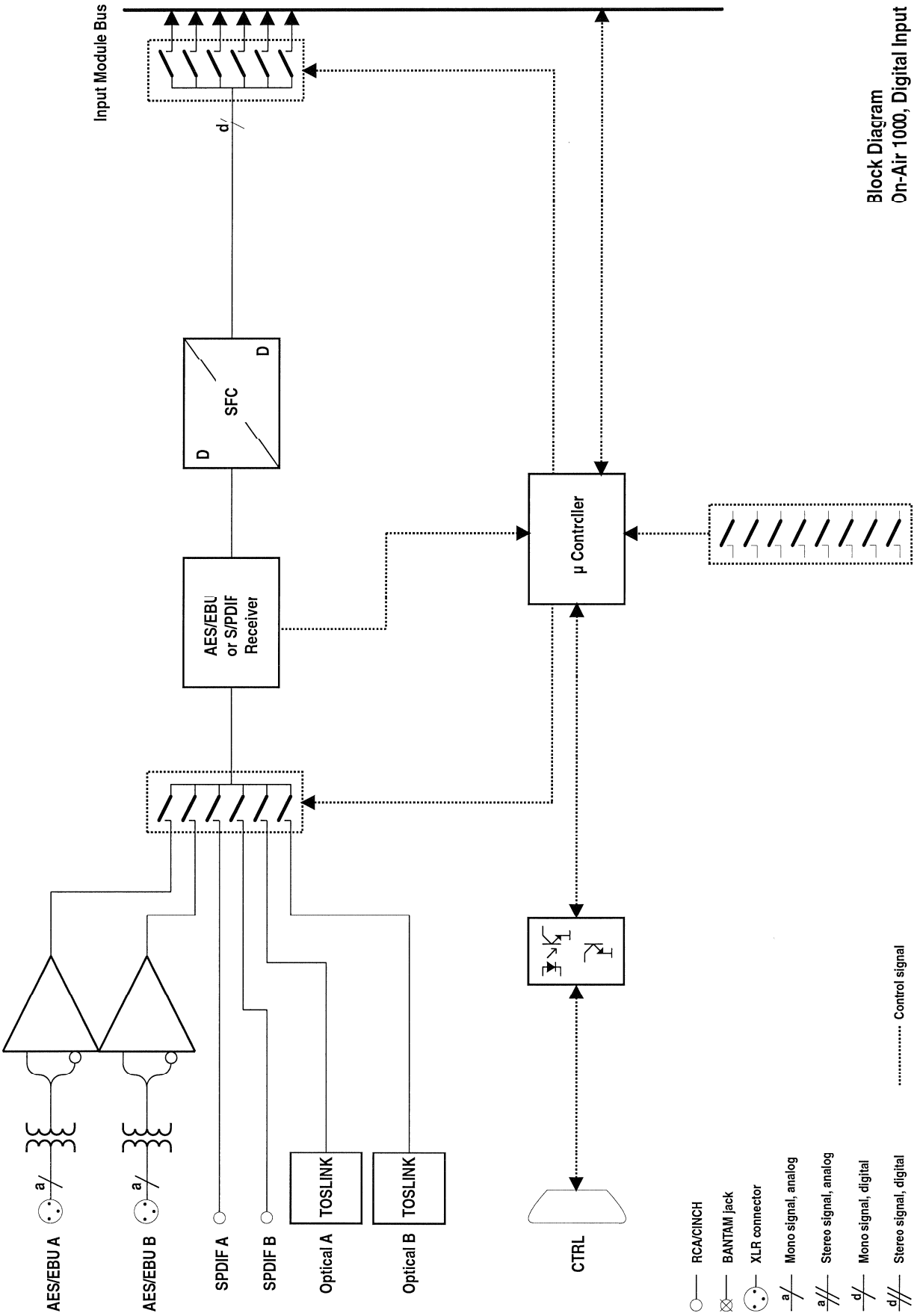
Line Input 1.942.732.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	P 1	54.01.0020		1p	Pin, 1reihig, gerade
0	P 2	54.14.2054		40p	Stecker gerade Au
0	P 3	54.01.0020		1p	Pin, 1reihig, gerade
0	P 4	54.13.0076		9p	D-Sub, PCB, Winkel
0	Q 1	50.03.0351		BC327-25	PNP, 800mA
0	Q 2	50.03.0351		BC327-25	PNP, 800mA
0	Q 3	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 4	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 5	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 6	50.03.0340		BC337-25	800mA, 45V, NPN
0	R 1	57.60.1101		100R	MF, 1%, 0204, E24
0	R 2	57.92.7011		0.2A	PTC 60V
0	R 3	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 4	57.60.1101		100R	MF, 1%, 0204, E24
0	R 5	57.60.1331		330R	MF, 1%, 0204, E24
0	R 6	57.60.1151		150R	MF, 1%, 0204, E24
0	R 7	57.92.7011		0.2A	PTC 60V
0	R 8	57.60.1151		150R	MF, 1%, 0204, E24
0	R 9	57.60.1151		150R	MF, 1%, 0204, E24
0	R 10	57.60.1151		150R	MF, 1%, 0204, E24
0	R 11	57.60.1151		150R	MF, 1%, 0204, E24
0	R 12	not used			
0	R 13	57.60.1151		150R	MF, 1%, 0204, E24
0	R 14	57.60.1151		150R	MF, 1%, 0204, E24
0	R 15	57.92.7011		0.2A	PTC 60V
0	R 16	57.60.1151		150R	MF, 1%, 0204, E24
0	R 17	57.60.1000		0R0	MF, 0204
0	R 18	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 19	57.60.1151		150R	MF, 1%, 0204, E24
0	R 20	57.60.1331		330R	MF, 1%, 0204, E24
0	R 21	57.60.1000		0R0	MF, 0204
0	R 22	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 23	57.60.1101		100R	MF, 1%, 0204, E24
0	R 24	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 25	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 26	57.60.1101		100R	MF, 1%, 0204, E24
0	R 27	57.60.1103		10k	MF, 1%, 0204, E24
0	R 28	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 29	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 30	57.60.1103		10k	MF, 1%, 0204, E24
0	R 31	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 32	57.60.1101		100R	MF, 1%, 0204, E24
0	R 33	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 34	57.60.1101		100R	MF, 1%, 0204, E24
0	R 35	57.60.1103		10k	MF, 1%, 0204, E24
0	R 36	57.60.1103		10k	MF, 1%, 0204, E24
0	R 37	57.60.1103		10k	MF, 1%, 0204, E24
0	R 38	57.60.1103		10k	MF, 1%, 0204, E24
0	R 39	57.60.1100		10R	MF, 1%, 0204, E24
0	R 40	57.11.3822		8k2	MF, 1%, 0207
0	R 41	57.60.1132		1k3	MF, 1%, 0204, E24
0	R 42	57.60.1132		1k3	MF, 1%, 0204, E24
0	R 43	57.11.3822		8k2	MF, 1%, 0207
0	R 44	not used			
0	R 45	not used			
0	R 46	57.60.1132		1k3	MF, 1%, 0204, E24
0	R 47	57.60.1132		1k3	MF, 1%, 0204, E24
0	R 48	57.11.3822		8k2	MF, 1%, 0207
0	R 49	not used			
0	R 50	not used			
0	R 51	57.11.3822		8k2	MF, 1%, 0207
0	R 52	57.60.1473		47k	MF, 1%, 0204, E24
0	R 53	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 54	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 55	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 56	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 57	57.60.1821		820R	MF, 1%, 0204, E24
0	R 58	57.60.1821		820R	MF, 1%, 0204, E24
0	R 59	57.60.1821		820R	MF, 1%, 0204, E24
0	R 60	57.60.1821		820R	MF, 1%, 0204, E24
0	R 61	57.60.1473		47k	MF, 1%, 0204, E24
0	R 62	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 63	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 64	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 65	57.60.1104		100k	MF, 1%, 0204, E24
0	R 66	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 67	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 68	57.60.1104		100k	MF, 1%, 0204, E24
0	R 69	57.60.1104		100k	MF, 1%, 0204, E24
0	R 70	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 71	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 72	57.60.1104		100k	MF, 1%, 0204, E24
0	R 73	57.60.1104		100k	MF, 1%, 0204, E24
0	R 74	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 75	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 76	57.60.1104		100k	MF, 1%, 0204, E24
0	R 77	57.60.1104		100k	MF, 1%, 0204, E24
0	R 78	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 79	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 80	57.60.1104		100k	MF, 1%, 0204, E24
0	R 81	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 82	57.60.1100		10R	MF, 1%, 0204, E24
0	R 83	57.60.1220		22R	MF, 1%, 0204, E24
0	R 84	57.60.1220		22R	MF, 1%, 0204, E24
0	R 85	57.60.1220		22R	MF, 1%, 0204, E24
0	R 86	57.60.1220		22R	MF, 1%, 0204, E24
C	R 87	57.60.1102		1k0	MF, 1%, 0204, E24
C	R 88	57.60.1102		1k0	MF, 1%, 0204, E24
C	RZ 1	57.88.4473		47k	8*R Resistor-Netw 2% SIP9
C	S 1	55.01.0168		8*a	SZ , 8*A, DIL
C	XIC 8	53.03.0165		20p	DIL 0.3", I1, gerade
C	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
C	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

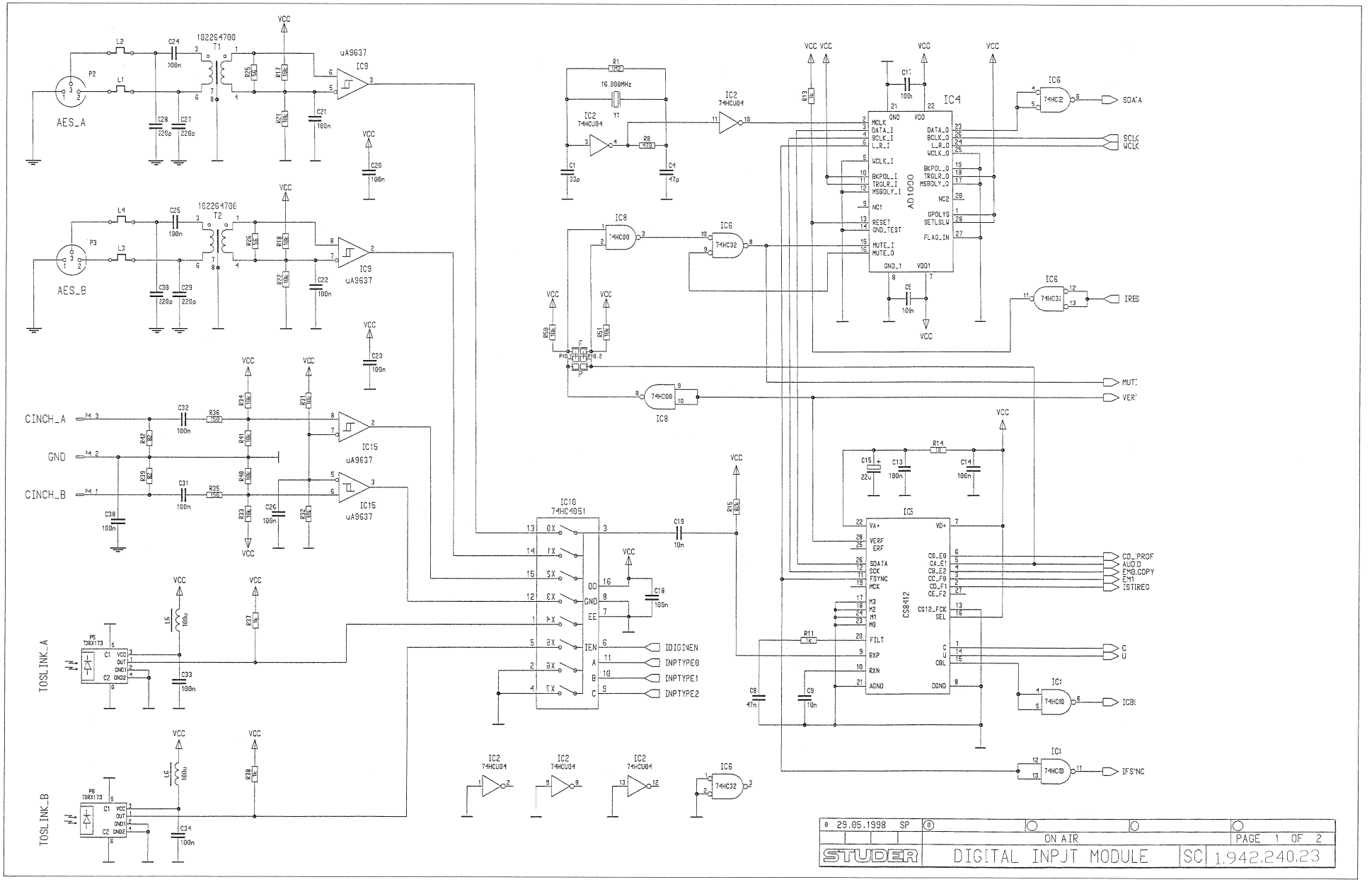
End of List

Comments:

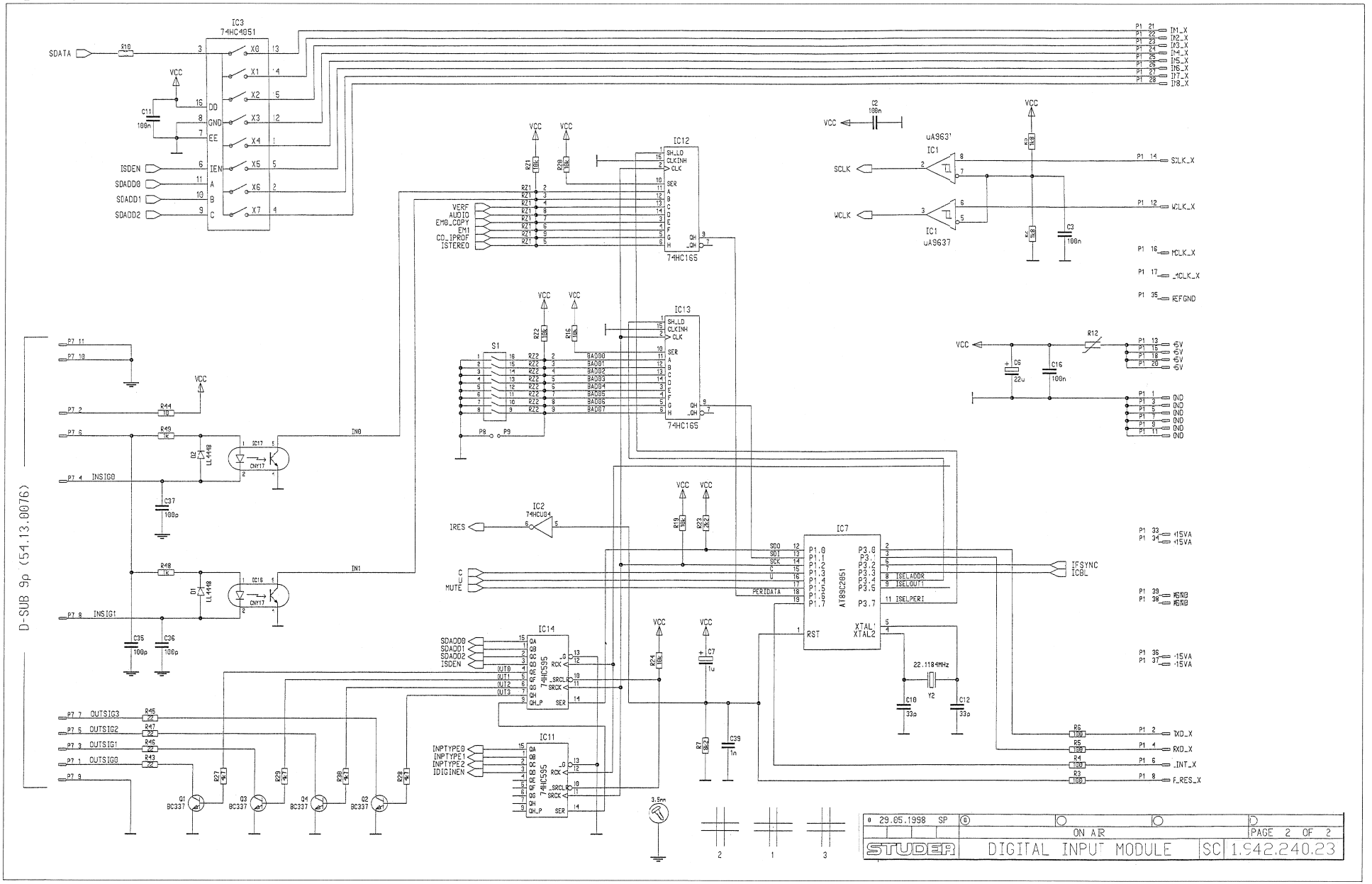
Block Diagram Digital Input



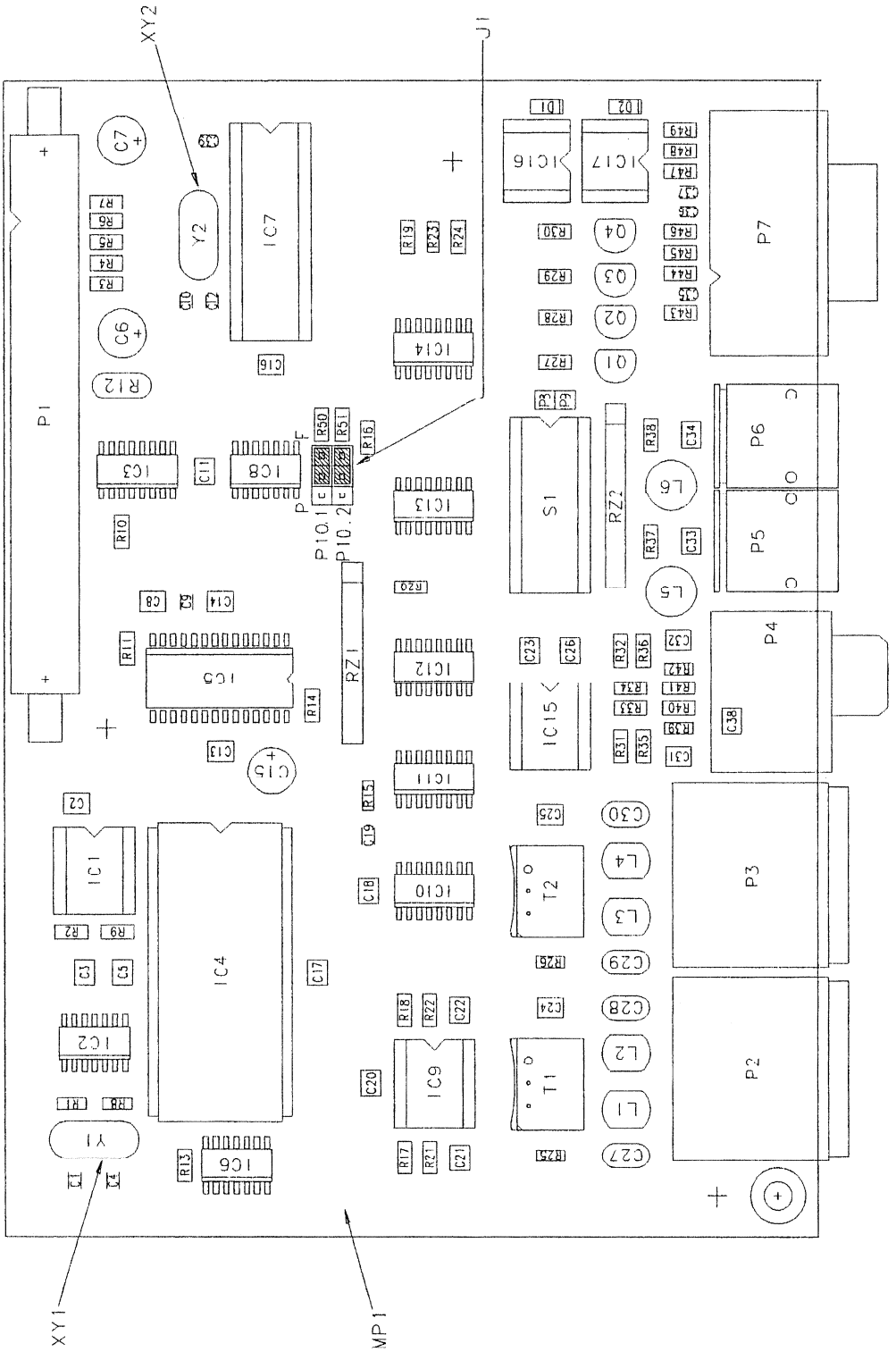
Digital Input 1.942.740.20



Digital Input 1.942.740.20



Digital Input 1.942.740.20



Accompanying documents / Zugehoerige Unterlagen: PL	General tolerance: / Freimasstoleranz:	Scale / Massstab: 1,5 : 1	Edition / Ausgabe	19.01.2001	PZ	SW	WK	0
			Date / Datum		Visa / Ges.	Checked / Gepr.	Seen / Ges.	Index
Substitute for / Ersatz fuer:			Page / Seite: 1 / 1					

STUDER REGENSDORF — Description / Bezeichnung: DIGITAL INPUT MODULE, ESE — Z — Number / Nummer: 1.942.740.20

Digital Input 1.942.740.20 (1)

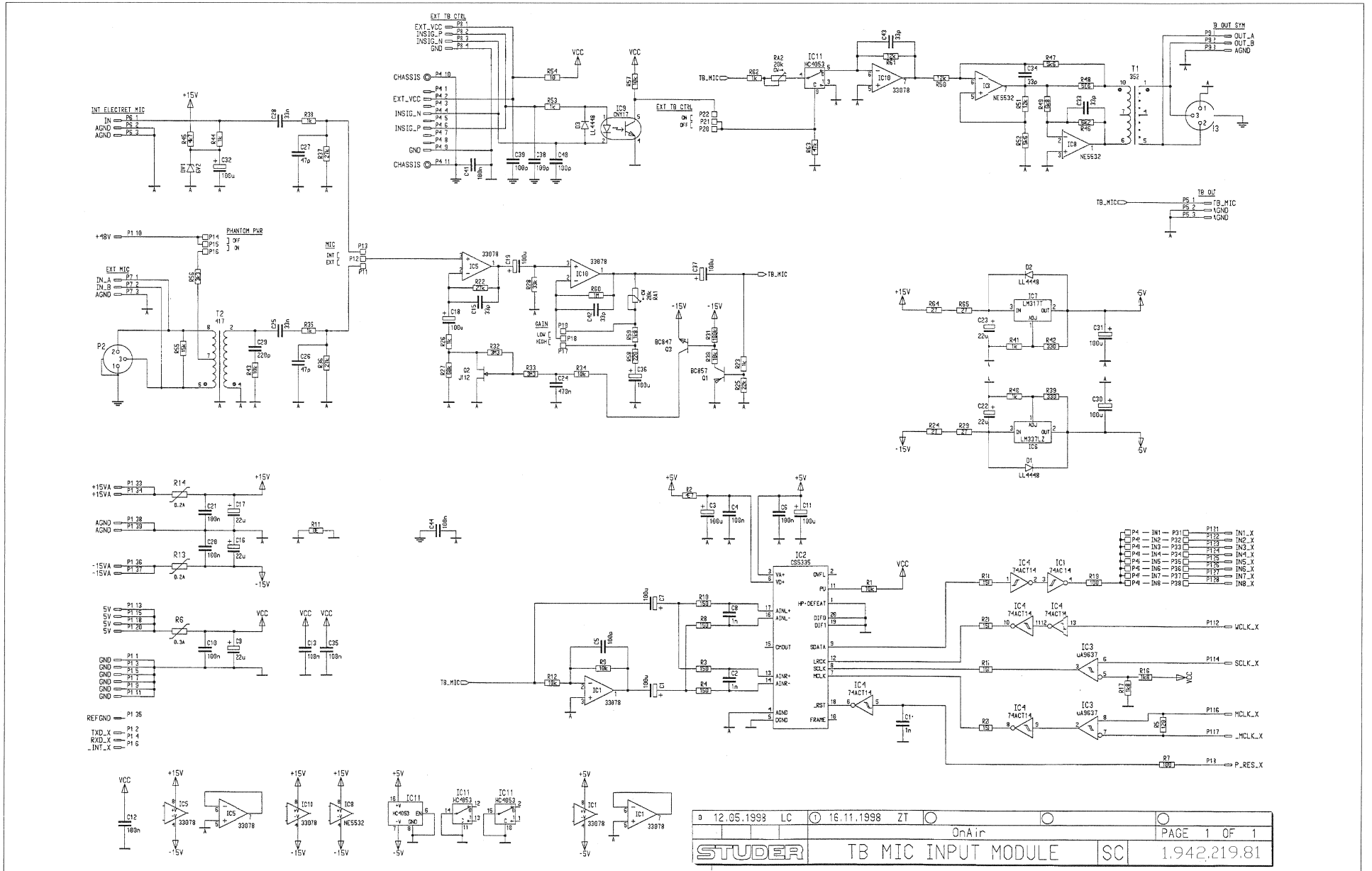
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 2	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 3	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 4	59.60.2341		47p	CER 50V, 5%, C0G, 0805
0	C 5	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 6	59.22.5220		22u	EL 25V 20% RM5
0	C 7	not used		1u0	EL 50V 20% RM5
0	C 8	59.60.3533		47n	CER 50V, 10%, X7R, 1210
0	C 9	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 11	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 12	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 13	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 14	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 15	59.22.5220		22u	EL 25V 20% RM5
0	C 16	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 17	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 18	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 19	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 20	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 21	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 22	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 23	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 24	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 25	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 26	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 27	59.32.1221		220p	CER 10%, 400V
0	C 28	59.32.1221		220p	CER 10%, 400V
0	C 29	59.32.1221		220p	CER 10%, 400V
0	C 30	59.32.1221		220p	CER 10%, 400V
0	C 31	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 32	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 33	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 34	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 35	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 36	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 37	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 38	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 39	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.15.0114		9637	Dual diff Line Receiver
0	IC 2	50.62.1904		74HCU04	Hex inverter unbuffered
0	IC 3	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 4	50.13.0204			IC AD 1890 JN ,A
0	IC 5	50.62.0913		CS8412	AES-Receiver
0	IC 6	50.62.1032		74HC 32	Quad 2input OR
0	IC 7	1.942.923.21			SW.240 DIGITAL INPUT MODULE
				(50160313, AT89C2051)	
0	IC 8	50.62.1000		74HC 00	Quad 2input NAND
0	IC 9	50.15.0114		9637	Dual diff Line Receiver
0	IC 10	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 11	50.62.1595		74HC595	8bit shift/output register
0	IC 12	50.62.1165		74HC165	8bit shift register
0	IC 13	50.62.1165		74HC165	8bit shift register
0	IC 14	50.62.1595		74HC595	8bit shift/output register
0	IC 15	50.15.0114		9637	Dual diff Line Receiver
0	IC 16	50.04.3200		CNY17-2	Opto-coupler
0	IC 17	50.04.3200		CNY17-2	Opto-coupler
0	J 1	54.01.0021	2 pcs	Jumper	0.63*0.63mm, Au
0	L 1	1.010.321.64		Wire	U shaped wire 0.6mm, 4.3*5.0
0	L 2	1.010.321.64		Wire	U shaped wire 0.6mm, 4.3*5.0
0	L 3	1.010.321.64		Wire	U shaped wire 0.6mm, 4.3*5.0
0	L 4	1.010.321.64		Wire	U shaped wire 0.6mm, 4.3*5.0
0	L 5	62.02.3101		100uH	10%, radial RM 5
0	L 6	62.02.3101		100uH	10%, radial RM 5
0	MP 1	1.942.240.12	1 pce		Digital Input Module PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.740.10	1 pce		NR.ETIKETTE
0	MP 4	1.101.001.20	1 pce	Label	TEXT-ETIK. 5*20 HARDWARE -20
1	MP 5	43.10.0110		A	Revisions-Etikette 5mm h'blau
0	P 1	54.14.2054		40p	Stecker gerade Au
0	P 2	54.21.2203		3p	XLR PCB Winkel
0	P 3	54.21.2203		3p	XLR PCB Winkel
0	P 4	54.21.2006		1*2p	Cinch vertikal PCB
0	P 5	89.10.0121		TORX173	Toslink Receiver
0	P 6	89.10.0121		TORX173	Toslink Receiver
0	P 7	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 8	54.01.0020		1p	Pin, 1reihig, gerade
0	P 9	54.01.0020		1p	Pin, 1reihig, gerade
0	P 10	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	Q 1	50.03.0340		BC337-25	NPN, 800mA
0	Q 2	50.03.0340		BC337-25	NPN, 800mA
0	Q 3	50.03.0340		BC337-25	NPN, 800mA
0	Q 4	50.03.0340		BC337-25	NPN, 800mA
0	R 1	57.60.1125		1M2	MF, 1%, 0204, E24
0	R 2	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 3	57.60.1101		100R	MF, 1%, 0204, E24
0	R 4	57.60.1101		100R	MF, 1%, 0204, E24
0	R 5	57.60.1101		100R	MF, 1%, 0204, E24
0	R 6	57.60.1101		100R	MF, 1%, 0204, E24
0	R 7	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 8	57.60.1471		470R	MF, 1%, 0204, E24
0	R 9	57.60.1182		1k8	MF, 1%, 0204, E24
1	R 10	57.60.1000		0R0	MF, 0204
0	R 11	57.60.1102		1k0	MF, 1%, 0204, E24
1	R 12	57.92.7013		0.5A	PTC 60V
0	R 13	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 14	57.60.1100		10R	MF, 1%, 0204, E24
0	R 15	57.60.1823		82k	MF, 1%, 0204, E24
0	R 16	57.60.1103		10k	MF, 1%, 0204, E24
0	R 17	57.60.1103		10k	MF, 1%, 0204, E24
0	R 18	57.60.1103		10k	MF, 1%, 0204, E24
0	R 19	57.60.1103		10k	MF, 1%, 0204, E24
0	R 20	57.60.1103		10k	MF, 1%, 0204, E24
0	R 21	57.60.1103		10k	MF, 1%, 0204, E24
0	R 22	57.60.1103		10k	MF, 1%, 0204, E24
0	R 23	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 24	57.60.1103		10k	MF, 1%, 0204, E24
0	R 25	57.60.1560		56R	MF, 1%, 0204, E24
0	R 26	57.60.1560		56R	MF, 1%, 0204, E24
0	R 27	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 28	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 29	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 30	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 31	57.60.1103		10k	MF, 1%, 0204, E24
0	R 32	57.60.1103		10k	MF, 1%, 0204, E24
0	R 33	57.60.1103		10k	MF, 1%, 0204, E24
0	R 34	57.60.1103		10k	MF, 1%, 0204, E24
0	R 35	57.60.1151		150R	MF, 1%, 0204, E24
0	R 36	57.60.1151		150R	MF, 1%, 0204, E24
0	R 37	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 38	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 39	57.60.1820		82R	MF, 1%, 0204, E24
0	R 40	57.60.1103		10k	MF, 1%, 0204, E24
0	R 41	57.60.1103		10k	MF, 1%, 0204, E24
0	R 42	57.60.1820		82R	MF, 1%, 0204, E24
0	R 43	57.60.1220		22R	MF, 1%, 0204, E24
0	R 44	57.60.1100		10R	MF, 1%, 0204, E24
0	R 45	57.60.1220		22R	MF, 1%, 0204, E24
0	R 46	57.60.1220		22R	MF, 1%, 0204, E24
0	R 47	57.60.1220		22R	MF, 1%, 0204, E24
0	R 48	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 49	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 50	57.60.1103		10k	MF, 1%, 0204, E24
0	R 51	57.60.1103		10k	MF, 1%, 0204, E24
0	RZ 1	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 2	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	S 1	55.01.0168		8*a	DIL-Switch, PCB
0	T 1	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	T 2	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	XIC 7	53.03.0165		20p	DIL-socket 0.3"
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	XY 2	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1009		16.000MHz	XTAL HC 49/U
0	Y 2	89.01.1016		22.1184MHz	XTAL HC 49/U

End of List

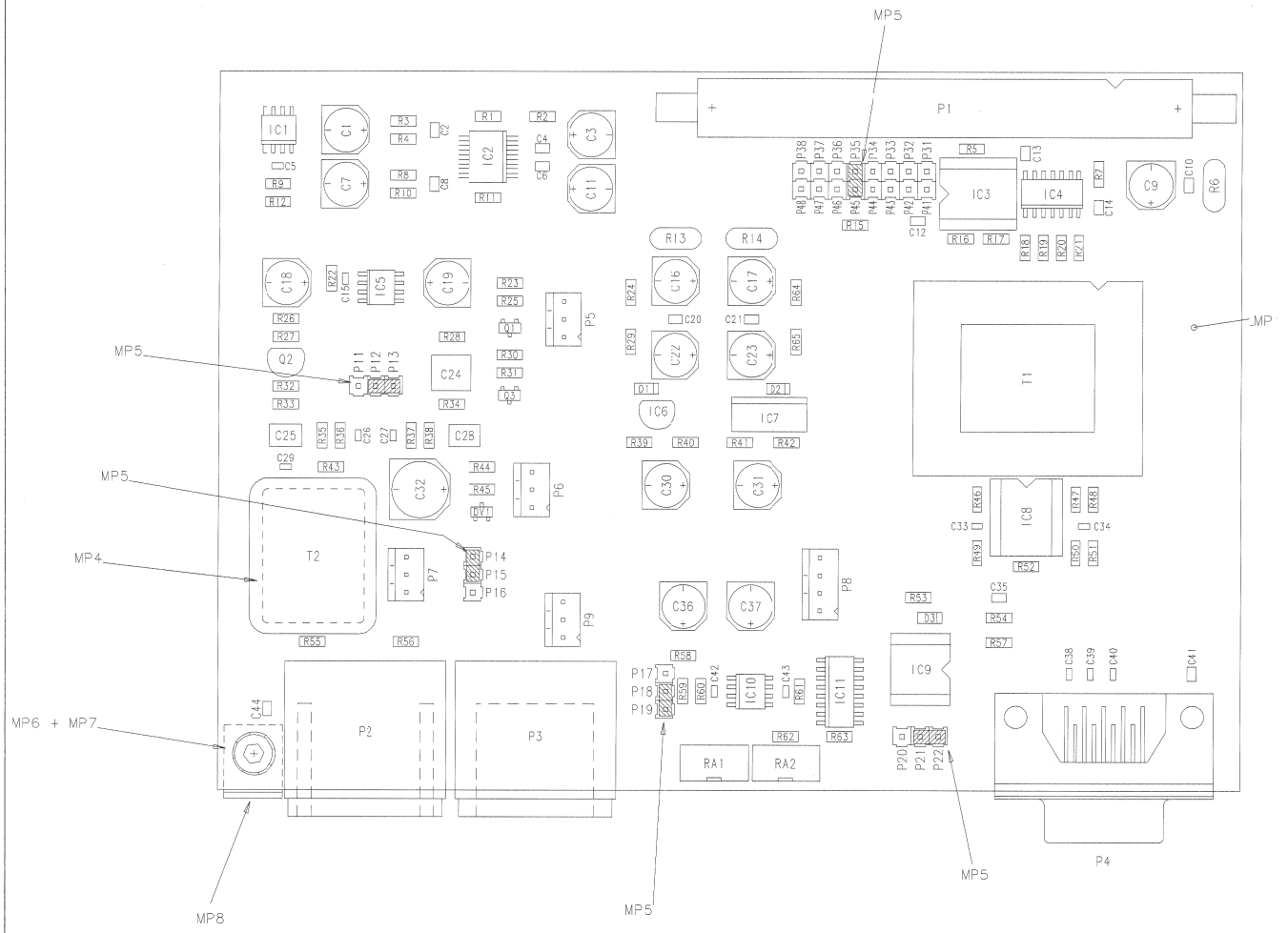
Comments:

(01) R10 22R->0R0 57.60.1220->57.60.1000; R12 0.3A->0.5A 57.92.7012->57.92.7013

TB Mic Input 1.942.719.00



TB Mic Input 1.942.719.00



Edition Ausgabe	22.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page Seite:	1 / 1				

STUDER REGENSDORF — Description Benennung: TB MIC INPUT MODULE, ESE — Number Nummer: Z 1.942.719.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 2	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 3	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 8	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 9	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 15	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 16	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 17	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 18	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 19	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 20	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 21	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 22	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 23	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 24	59.60.3845		470n	CER 50V, 10%, X7R, 2220
0	C 25	59.63.0119		33n	PEN 50V, 5%, 1812
0	C 26	59.60.2241		47p	CER 50V, 5%, C0G, 0603
0	C 27	59.60.2241		47p	CER 50V, 5%, C0G, 0603
0	C 28	59.63.0119		33n	PEN 50V, 5%, 1812
0	C 29	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 30	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 31	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 32	59.68.0071		100u	EL 16V, 8.0*6.3
0	C 33	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 34	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 35	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 36	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 37	59.68.0029		100u	EL 3V, 6.3*5.7
0	C 38	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 39	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 40	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 43	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 44	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	DV 1	50.60.9012		6V2	5%, 0.3W, SOT 23
0	IC 1	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 2	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 3	50.15.0114		9637	Dual dif Line Receiver
0	IC 4	50.62.6014		74ACT 14	Hex inverting Schmitt trigger
0	IC 5	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 6	50.10.0109		LM337L	Series egulator 100mA ...-37V
0	IC 7	50.10.0104		LM317SP	Series egulator 1.5A ...+37V
0	IC 8	50.09.0105		NE5532N	IC NE5532 N, RC 5532 NB A
0	IC 9	50.04.3200		CNY17-2	Opto-coupler
0	IC 10	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 11	50.62.8053		HC4053	Tripple2ch analog mux/demux
0	MP 1	1942.219.12	1 pce		TB MIC INPUT PCB
0	MP 2	13.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1942.719.10	1 pce		NR.ETKETTE
0	MP 4	1922.400.03	1 pce		ISOLATION
0	MP 5	54.01.0021	5 pcs	Jumper	0.63*0.33mm, Au
0	MP 6	21.53.0353	1 pce	M3*5	Z-Schraube Inbus Zn gb chr
0	MP 7	24.16.2030	1 pce		FAECHERSCHEIBE A D 3.2
0	MP 8	1942.500.21	1 pce		WINKEL
0	P 1	54.14.2054		40p	Steckergerade Au
0	P 2	54.21.2203		3p	XLR PCB Winkel
0	P 3	54.21.2202		3p	XLR PCB Winkel
0	P 4	54.13.0076		9p	D-Sub,PCB, Winkel
0	P 5	54.12.0703		3p	Steckergerade PCB
0	P 6	54.12.0703		3p	Steckergerade PCB
0	P 7	54.12.0703		3p	Steckergerade PCB
0	P 8	54.12.0704		4p	Steckergerade PCB
0	P 9	54.12.0703		3p	Steckergerade PCB

TB Mic Input 1.942.719.00

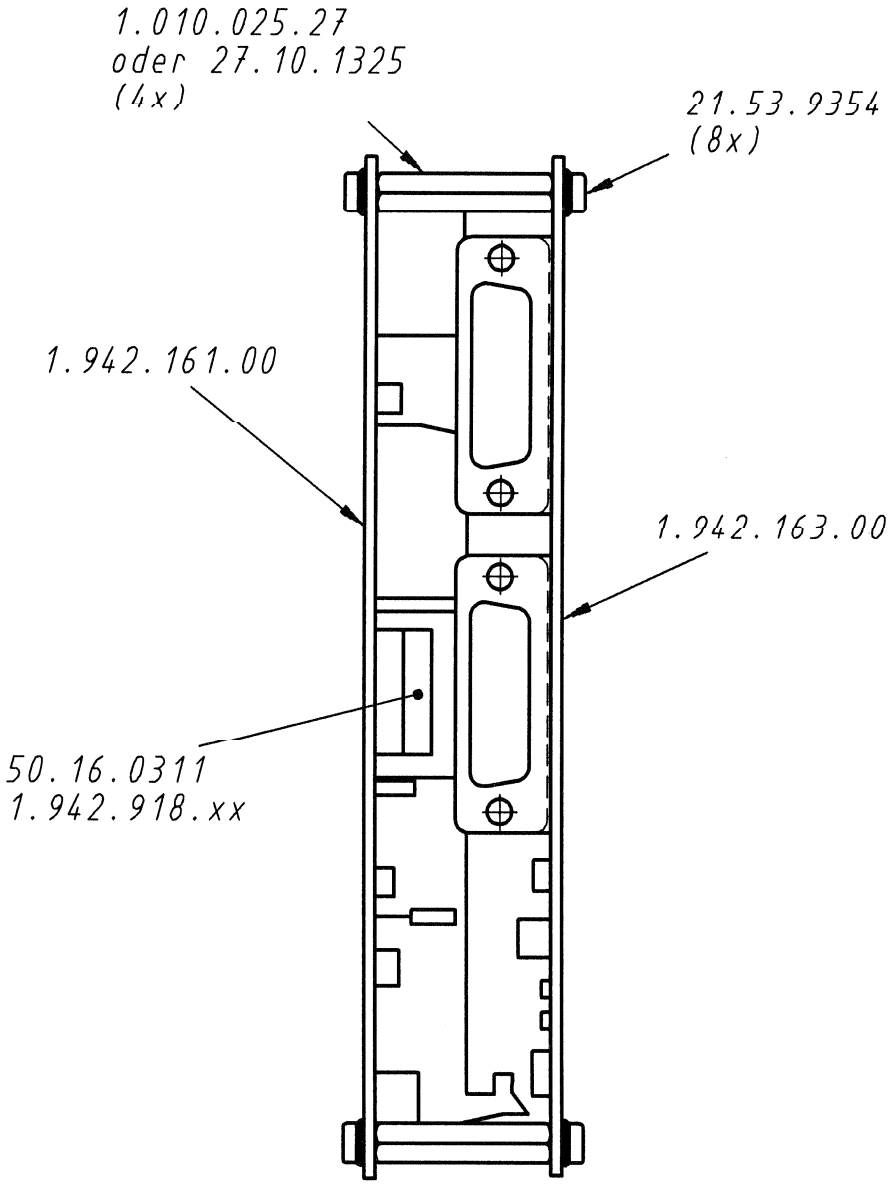
Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	P 11	54.01.0020		1p	Pin, 1reihig, gerade
0	P 12	54.01.0020		1p	Pin, 1reihig, gerade
0	P 13	54.01.0020		1p	Pin, 1reihig, gerade
0	P 14	54.01.0020		1p	Pin, 1reihig, gerade
0	P 15	54.01.0020		1p	Pin, 1reihig, gerade
0	P 16	54.01.0020		1p	Pin, 1reihig, gerade
0	P 17	54.01.0020		1p	Pin, 1reihig, gerade
0	P 18	54.01.0020		1p	Pin, 1reihig, gerade
0	P 19	54.01.0020		1p	Pin, 1reihig, gerade
0	P 20	54.01.0020		1p	Pin, 1reihig, gerade
0	P 21	54.01.0020		1p	Pin, 1reihig, gerade
0	P 22	54.01.0020		1p	Pin, 1reihig, gerade
0	P 31	54.01.0020		1p	Pin, 1reihig, gerade
0	P 32	54.01.0020		1p	Pin, 1reihig, gerade
0	P 33	54.01.0020		1p	Pin, 1reihig, gerade
0	P 34	54.01.0020		1p	Pin, 1reihig, gerade
0	P 35	54.01.0020		1p	Pin, 1reihig, gerade
0	P 36	54.01.0020		1p	Pin, 1reihig, gerade
0	P 37	54.01.0020		1p	Pin, 1reihig, gerade
0	P 38	54.01.0020		1p	Pin, 1reihig, gerade
0	P 41	54.01.0020		1p	Pin, 1reihig, gerade
0	P 42	54.01.0020		1p	Pin, 1reihig, gerade
0	P 43	54.01.0020		1p	Pin, 1reihig, gerade
0	P 44	54.01.0020		1p	Pin, 1reihig, gerade
0	P 45	54.01.0020		1p	Pin, 1reihig, gerade
0	P 46	54.01.0020		1p	Pin, 1reihig, gerade
0	P 47	54.01.0020		1p	Pin, 1reihig, gerade
0	P 48	54.01.0020		1p	Pin, 1reihig, gerade
0	Q 1	50.60.1001		BC857B	PNP 45V 100mA SOT 23
0	Q 2	50.03.0350		J112	JFET N-Channel
0	Q 3	50.60.0001		BC847B	NPN 45V 100mA SOT 23
0	R 1	57.60.1103		10k	MF, 1%, 0204, E24
0	R 2	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 3	57.60.1151		150R	MF, 1%, 0204, E24
0	R 4	57.60.1151		150R	MF, 1%, 0204, E24
0	R 5	57.60.1121		120R	MF, 1%, 0204, E24
0	R 6	57.92.7012		0.3A	PTC 60V
0	R 7	57.60.1101		100R	MF, 1%, 0204, E24
0	R 8	57.60.1151		150R	MF, 1%, 0204, E24
0	R 9	57.60.1103		10k	MF, 1%, 0204, E24
0	R 10	57.60.1151		150R	MF, 1%, 0204, E24
0	R 11	57.60.1000		0R0	MF, 0204
0	R 12	57.60.1103		10k	MF, 1%, 0204, E24
0	R 13	57.92.7011		0.2A	PTC 60V
0	R 14	57.92.7011		0.2A	PTC 60V
0	R 15	57.60.1151		150R	MF, 1%, 0204, E24
0	R 16	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 17	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 18	57.60.1151		150R	MF, 1%, 0204, E24
0	R 19	57.60.1101		100R	MF, 1%, 0204, E24
0	R 20	57.60.1151		150R	MF, 1%, 0204, E24
0	R 21	57.60.1151		150R	MF, 1%, 0204, E24
0	R 22	57.60.1273		27k	MF, 1%, 0204, E24
0	R 23	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 24	57.60.1270		27R	MF, 1%, 0204, E24
0	R 25	57.60.1223		22k	MF, 1%, 0204, E24
0	R 26	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 27	57.60.1683		68k	MF, 1%, 0204, E24
0	R 28	57.60.1333		33k	MF, 1%, 0204, E24
0	R 29	57.60.1270		27R	MF, 1%, 0204, E24
0	R 30	57.60.1103		10k	MF, 1%, 0204, E24

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 31	57.60.1104		100k	MF, 1%, 0204, E24
0	R 32	57.60.1335		3M3	MF, 1%, 0204, E24
0	R 33	57.60.1335		3M3	MF, 1%, 0204, E24
0	R 34	57.60.1103		10k	MF, 1%, 0204, E24
0	R 35	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 36	57.60.1273		27k	MF, 1%, 0204, E24
0	R 37	57.60.1273		27k	MF, 1%, 0204, E24
0	R 38	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 39	57.60.1331		330R	MF, 1%, 0204, E24
0	R 40	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 41	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 42	57.60.1331		330R	MF, 1%, 0204, E24
0	R 43	57.60.1103		10k	MF, 1%, 0204, E24
0	R 44	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 45	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 46	57.60.1622		6k2	MF, 1%, 0204, E24
0	R 47	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 48	57.60.1569		5R6	MF, 1%, 0204, E24
0	R 49	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 50	57.60.1123		12k	MF, 1%, 0204, E24
0	R 51	57.60.1123		12k	MF, 1%, 0204, E24
0	R 52	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 53	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 54	57.60.1100		10R	MF, 1%, 0204, E24
0	R 55	57.60.1153		15k	MF, 1%, 0204, E24
0	R 56	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 57	57.60.1103		10k	MF, 1%, 0204, E24
0	R 58	57.60.1221		220R	MF, 1%, 0204, E24
0	R 59	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 60	57.60.1105		1M	MF, 1%, 0204, E24
0	R 61	57.60.1123		12k	MF, 1%, 0204, E24
0	R 62	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 63	57.60.1473		47k	MF, 1%, 0204, E24
0	R 64	57.60.1270		27R	MF, 1%, 0204, E24
0	R 65	57.60.1270		27R	MF, 1%, 0204, E24
0	RA 1	58.01.9203		20k	Cermet, 10%, 0.5W, vertical
0	RA 2	58.01.9203		20k	Cermet, 10%, 0.5W, vertical
0	T 1	1.022.352.00			LEITUNGSTRAFO
0	T 2	1.022.417.00		1:3,16	EINGANGSTRAFO 1:3,16

End of List

Comments:

Insert Module 1.942.660.20

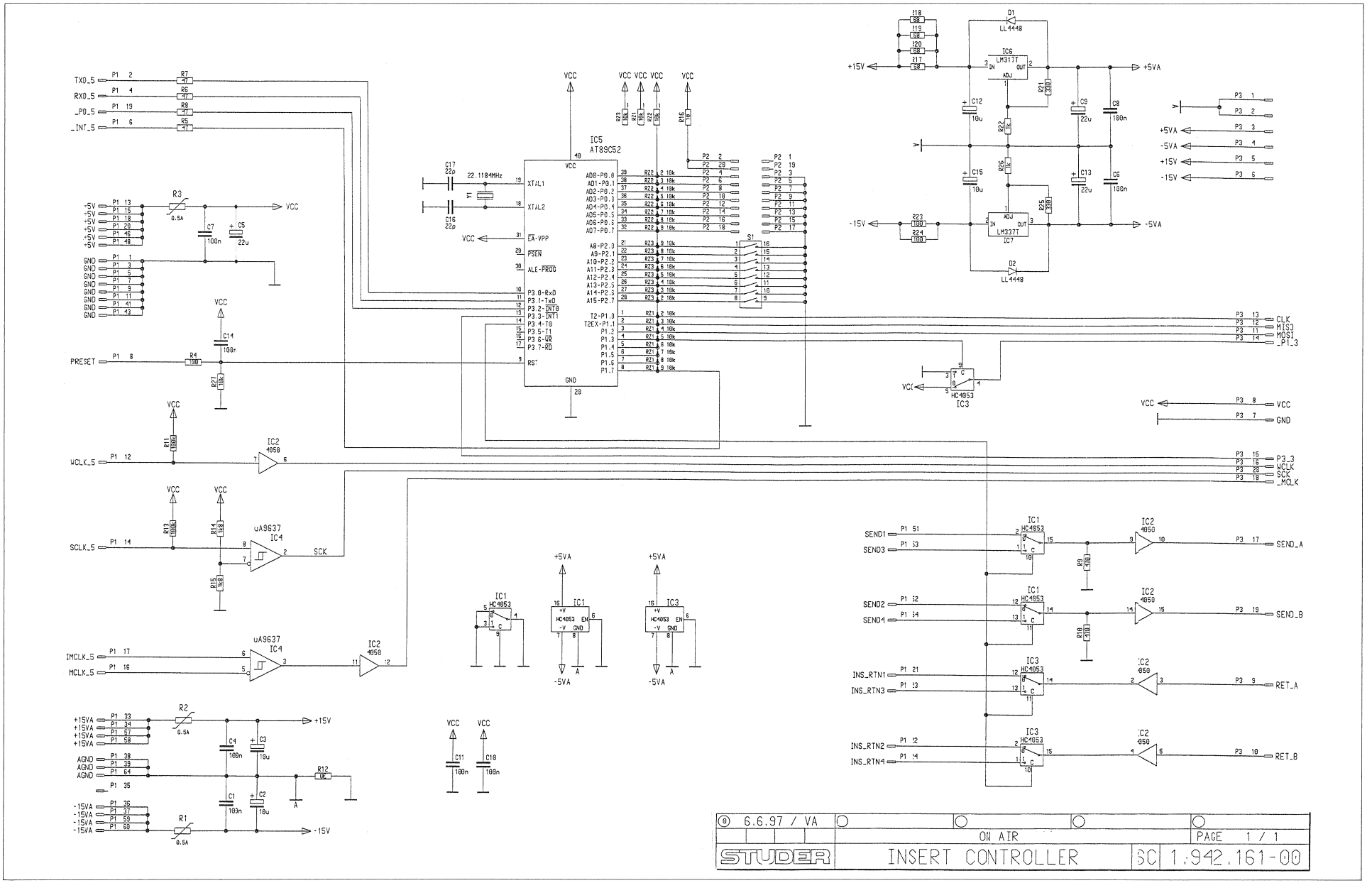


Modification Änderung					
	.	.	.	.	3
	.	.	.	.	2
	.	.	.	.	1
Edition Ausgabe	25.01.01	SW	PG	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index

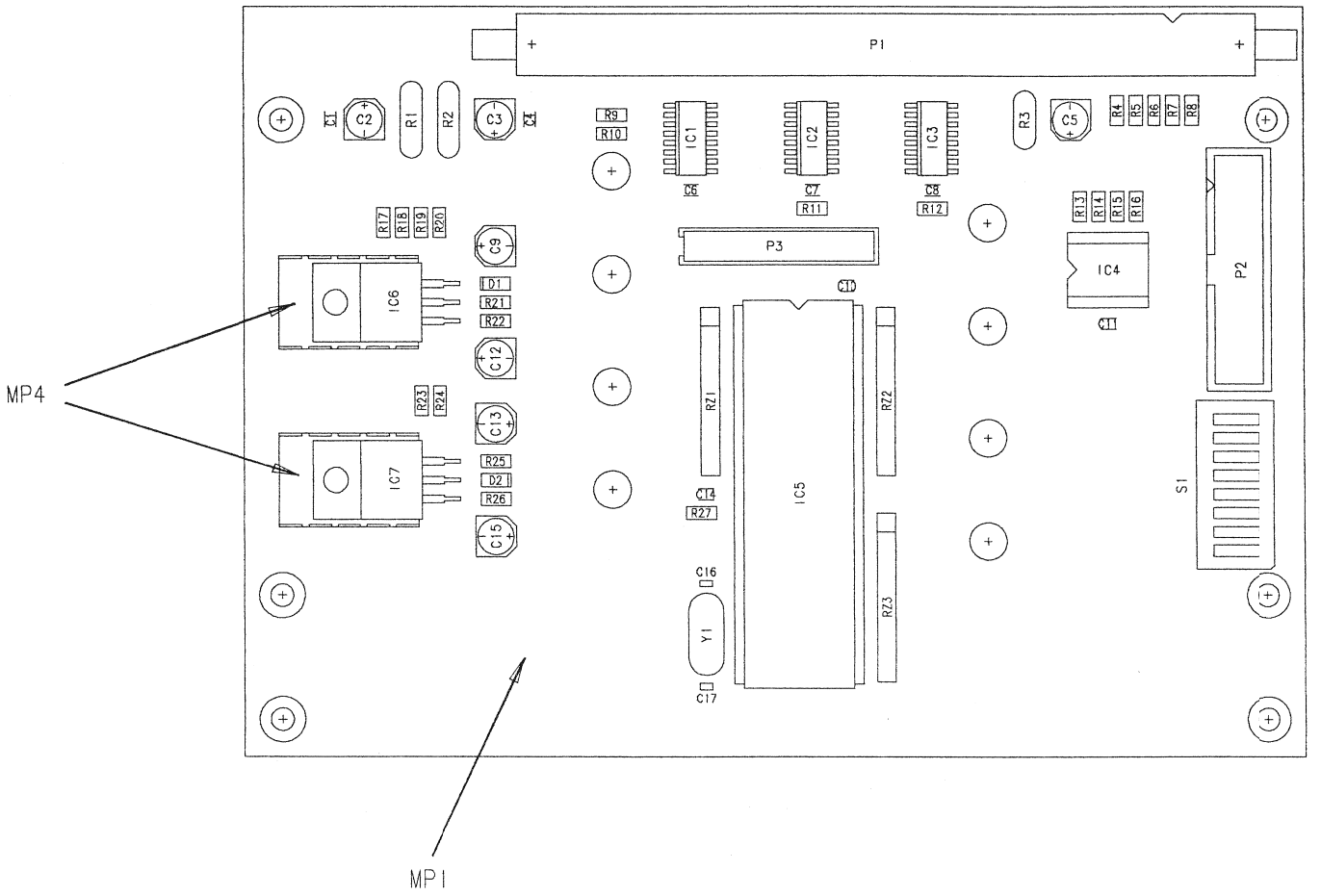
Original Size: Originalformat:	A4	Page: Seite:	1/1

STUDER REGENSDORF	Description: Benennung: ANALOG INSERT MODULE OA 1000, ESE	Number: Nummer: Z 1.942.660.20

Insert Controller 1.942.161.00



Insert Controller 1.942.161.00



Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 2	59.68.0109		10u	C-EL 16V, 5.0*5.7
0	C 3	59.68.0109		10u	C-EL 16V, 5.0*5.7
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.68.0067		22u	C-EL 16V, 5.0*5.7
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 9	59.68.0067		22u	C-EL 16V, 5.0*5.7
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 12	59.68.0109		10u	C-EL 35V, 5.0*5.7
0	C 13	59.68.0067		22u	C-EL 16V, 5.0*5.7
0	C 14	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 15	59.68.0109		10u	C-EL 35V, 5.0*5.7
0	C 16	59.60.2233		22p	CER 50V, 5%, C0G, 0603
0	C 17	59.60.2233		22p	CER 50V, 5%, C0G, 0603
0	D 1	50.60.8001		4448	D LL4448 SOD 80
0	D 2	50.60.8001		4448	D LL4448 SOD 80
0	IC 1	50.62.8053		4053	IC ..74 HC 4053 . ,A
0	IC 2	50.62.1950		74HC4050	Hex high-to-Low Level Shifter
0	IC 3	50.62.8053		4053	IC ..74 HC 4053 . ,A
0	IC 4	50.15.0114		9637	Dual diff Line Receiver
0	IC 5	not used		89C52	Microcontroller 24MHz
0	IC 6	50.10.0104		LM317SP	IC LM 317 SP, ..T,
0	IC 7	50.10.0105		LM337KC	IC LM 337 KC, ..SP, ..T,
0	MP 1	1.942.161.11	1 pce		INSERT CONTROLLER PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-VARNSCHILD
0	MP 3	1.942.161.10	1 pce		NR.ETIKETTE 5X20
0	MP 4	50.20.3004	2 pcs		Kühlkrper, TO 220, horizontal
0	P 1	54.14.2056		64p	P STECKER 64 P , AU, GERADE
0	P 2	54.14.2008		20p	1/20" Au, gerade, ohne Verrieg
0	P 3	54.14.5520		20p	PCB-buchse gerade
0	R 1	57.92.7013		0.5A	POLY PTC, 60V
0	R 2	57.92.7013		0.5A	POLY PTC, 60V
0	R 3	57.92.7013		0.5A	POLY PTC, 60V
0	R 4	57.60.1101		100R	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.60.1470		47R	MF, 1%, 0204, E24
0	R 7	57.60.1470		47R	MF, 1%, 0204, E24
0	R 8	57.60.1470		47R	MF, 1%, 0204, E24
0	R 9	57.60.1471		470R	MF, 1%, 0204, E24
0	R 10	57.60.1471		470R	MF, 1%, 0204, E24
0	R 11	57.60.1104		100K	MF, 1%, 0204, E24
0	R 12	57.60.1000		0R0	MF, 0204
0	R 13	57.60.1104		100K	MF, 1%, 0204, E24
0	R 14	57.60.1182		1K8	MF, 1%, 0204, E24
0	R 15	57.60.1182		1K8	MF, 1%, 0204, E24
0	R 16	57.60.1100		10R	MF, 1%, 0204, E24
0	R 17	57.60.1680		68R	MF, 1%, 0204, E24
0	R 18	57.60.1680		68R	MF, 1%, 0204, E24
0	R 19	57.60.1680		68R	MF, 1%, 0204, E24
0	R 20	57.60.1680		68R	MF, 1%, 0204, E24
0	R 21	57.60.1331		330R	MF, 1%, 0204, E24
0	R 22	57.60.1102		1K	MF, 1%, 0204, E24
0	R 23	57.60.1101		100R	MF, 1%, 0204, E24
0	R 24	57.60.1101		100R	MF, 1%, 0204, E24
0	R 25	57.60.1331		330R	MF, 1%, 0204, E24
0	R 26	57.60.1102		1K	MF, 1%, 0204, E24
0	R 27	57.60.1103		10K	MF, 1%, 0204, E24
0	RZ 1	57.88.4103		8*10k	2%, SP 9
0	RZ 2	57.88.4103		8*10k	2%, SP 9
0	RZ 3	57.88.4103		8*10k	2%, SP 9
0	S 1	55.01.0168		8*a	SZ , 8*A, DIL
0	XIC 5	53.03.0172		40p	DIL 0,3", lötl, gerade
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1016		22.1184MHz	22.1184 MHz, HC 49/U

End of List

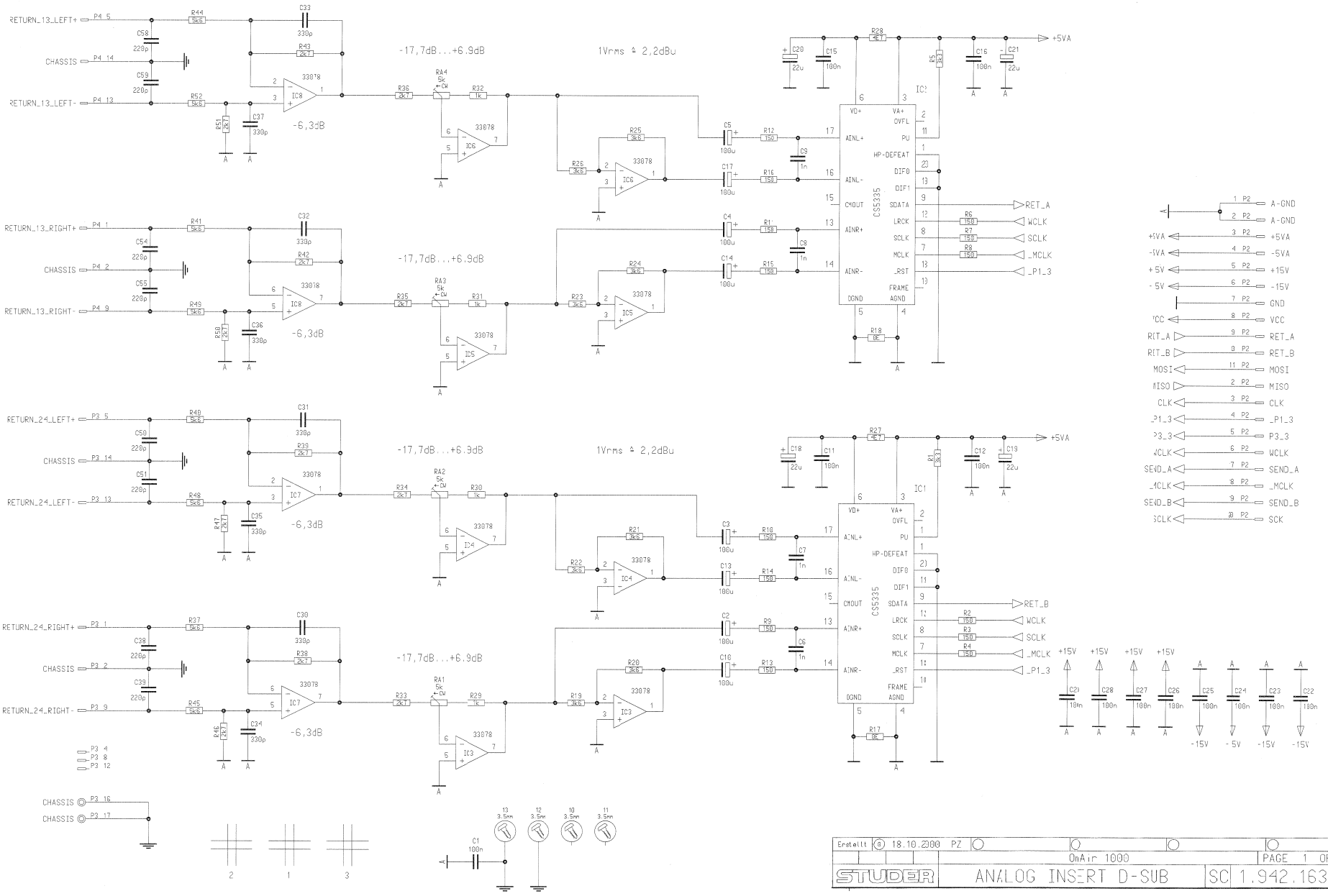
Comments

Modification / Änderung				
Edition / Ausgabe	Date / Datum	Visa / Ges.	Checked / Gepr.	Saved / Ges.
21.5.97	PZ			Index

Copy to: / Kopie fuer:

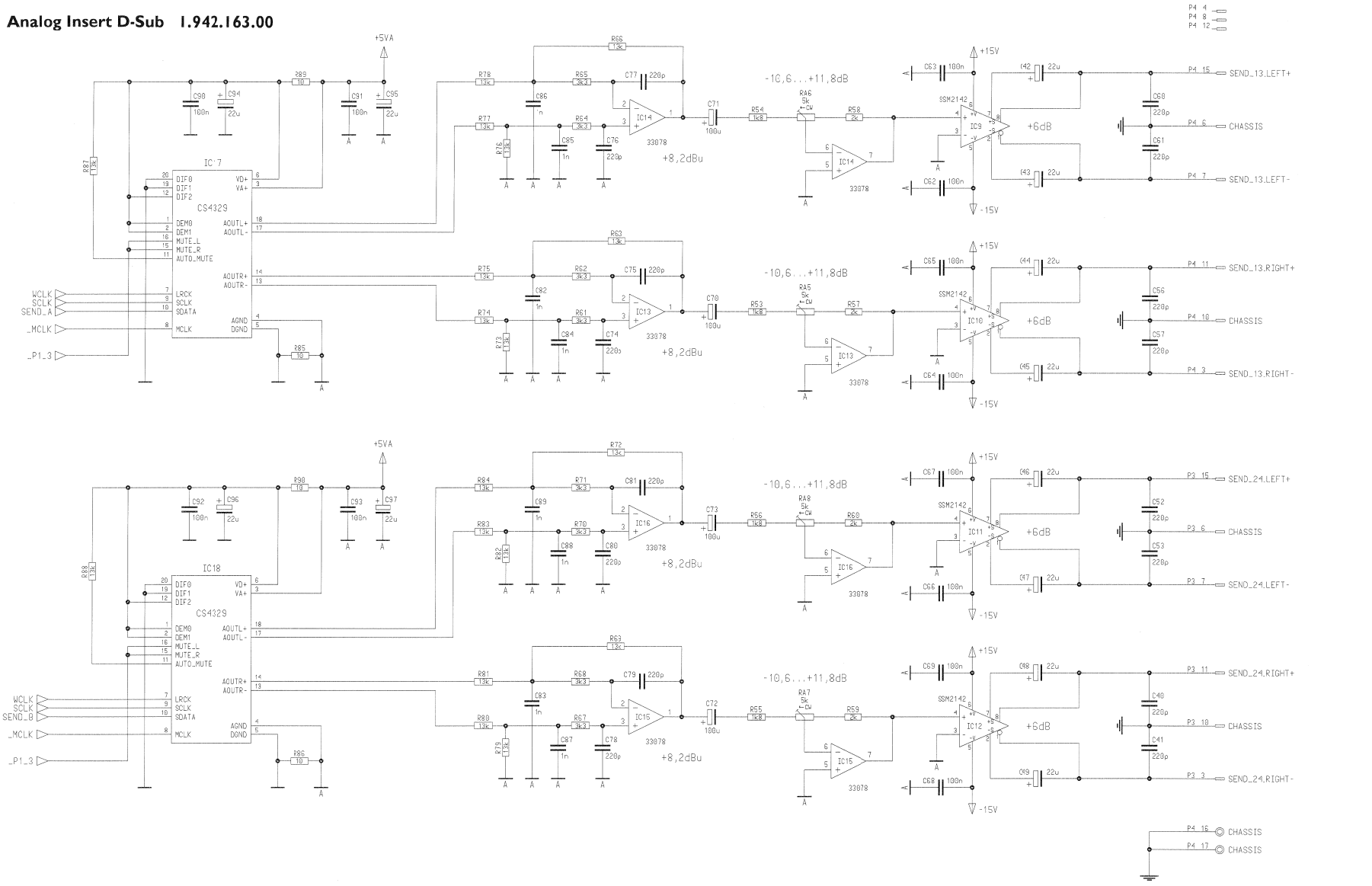
STUDER REGENSDORF | Description / Benennung: INSERT CONTROLLER 'ESE' | Number / Nummer: 1.942.161-00

Analog Insert D-Sub 1.942.163.00



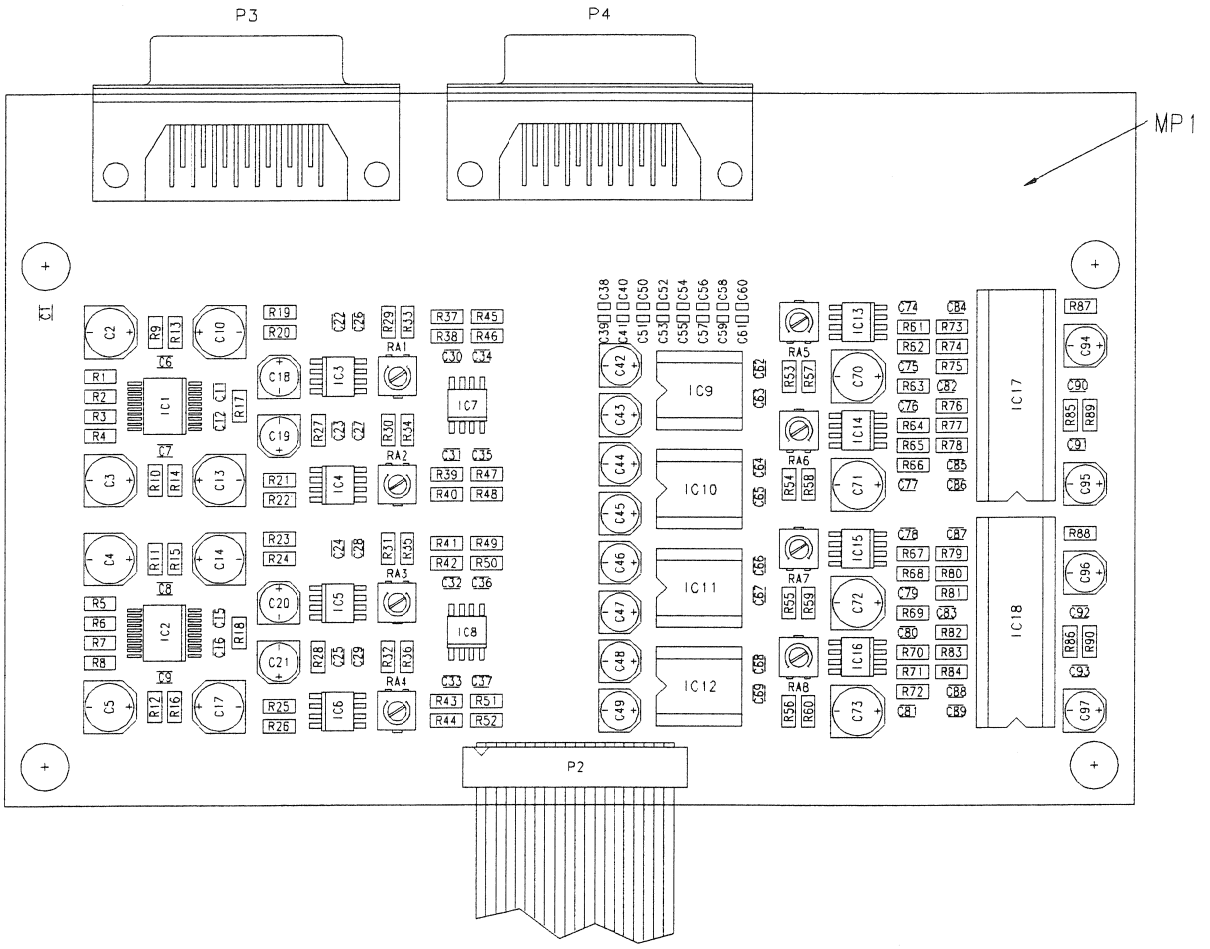
Erstellt	18.10.2000 PZ			
		OnAir 1000		PAGE 1 OF 2
STUDER	ANALOG INSERT D-SUB		SC	1.942.163.00

Analog Insert D-Sub 1.942.163.00



Erstellt	18.10.2000 PZ				
		OnAir 1000		PAGE 2 OF 2	
STUDER	ANALOG INSERT D-SUB			SC 1.942.163.00	

Analog Insert D-Sub 1.942.163.00



Edition Ausgabe	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
	18.10.2000	PZ	PG	RL	

Page Seite: 1 / 1

STUDER REGENSDORF — Description Benennung: ANALOG INSERT D-SUB, ESE — Number Nummer: Z 1.942.163.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 2	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 3	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 4	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 5	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 6	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 7	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 8	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 9	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 10	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 11	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 13	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 14	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 15	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 16	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 17	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 18	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 19	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 20	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 21	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 22	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 23	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 24	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 25	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 26	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 27	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 28	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 29	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 30	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 31	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 32	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 33	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 34	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 35	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 36	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 37	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 38	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 39	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 40	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 41	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 42	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 43	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 44	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 45	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 46	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 47	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 48	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 49	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 50	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 51	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 52	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 53	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 54	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 55	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 56	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 57	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 58	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 59	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 60	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 61	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 62	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 63	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 64	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 65	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 66	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 67	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 68	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 69	59.60.3337		100n	CER 50V, 10%, X7R 0805
0	C 70	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 71	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 72	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 73	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 74	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 75	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 76	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 77	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 78	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 79	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 80	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 81	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 82	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 83	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 84	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 85	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 86	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 87	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 88	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 89	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 90	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 91	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 92	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 93	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 94	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 95	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 96	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 97	59.63.1105		220p	PPS 50V, 2%, 0805

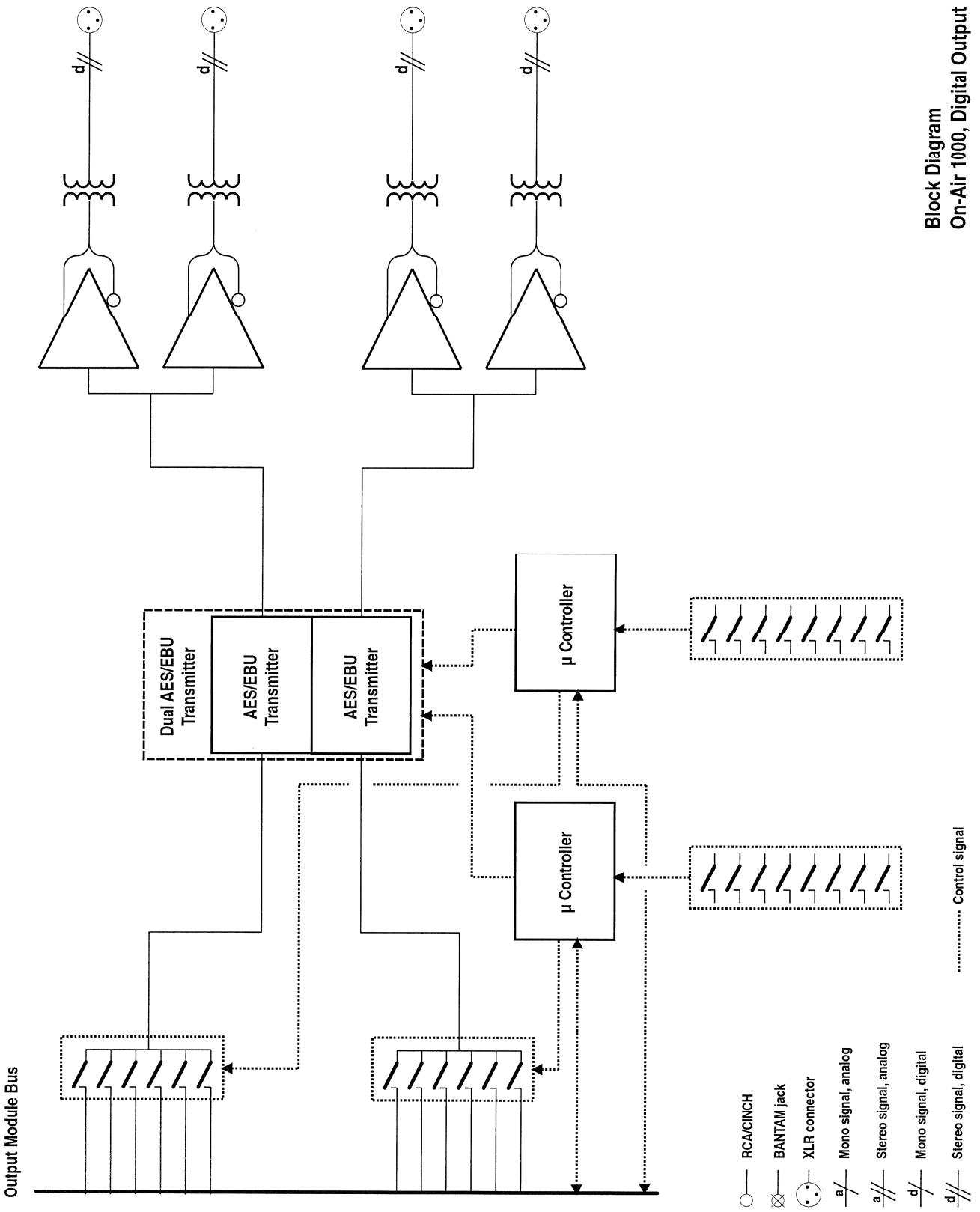
Analog Insert D-Sub 1.942.163.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 81	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 82	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 83	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 84	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 85	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 86	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 87	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 88	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 89	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 90	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 91	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 92	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 93	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 94	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 95	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 96	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 97	59.68.0067		22u	EL 16V, 5.0*5.7
0	IC 1	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 2	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 3	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 4	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 5	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 6	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 7	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 8	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 9	50.09.0124		2142	Audio balanced line drivar
0	IC 10	50.09.0124		2142	Audio balanced line drivar
0	IC 11	50.09.0124		2142	Audio balanced line drivar
0	IC 12	50.09.0124		2142	Audio balanced line drivar
0	IC 13	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 14	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 15	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 16	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 17	50.19.0114		CS4329/439	D/A Converter 20/24bit stereo
0	IC 18	50.19.0114		CS4329/439	D/A Converter 20/24bit stereo
0	MP 1	1.942.163.11	1 pce		ANALOG INSERT PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.163.10	1 pce		NR.ETIKETTE 5X20
0	P 2	1.023.567.04		Ribbon20p	FLACHKABEL 20 POL. 0.04M
0	P 3	54.13.0072		15p	D-Sub, PCB, Winkel
0	P 4	54.13.0072		15p	D-Sub, PCB, Winkel
0	R 1	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 2	57.60.1151		150R	MF, 1%, 0204, E24
0	R 3	57.60.1151		150R	MF, 1%, 0204, E24
0	R 4	57.60.1151		150R	MF, 1%, 0204, E24
0	R 5	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 6	57.60.1151		150R	MF, 1%, 0204, E24
0	R 7	57.60.1151		150R	MF, 1%, 0204, E24
0	R 8	57.60.1151		150R	MF, 1%, 0204, E24
0	R 9	57.60.1151		150R	MF, 1%, 0204, E24
0	R 10	57.60.1151		150R	MF, 1%, 0204, E24
0	R 11	57.60.1151		150R	MF, 1%, 0204, E24
0	R 12	57.60.1151		150R	MF, 1%, 0204, E24
0	R 13	57.60.1151		150R	MF, 1%, 0204, E24
0	R 14	57.60.1151		150R	MF, 1%, 0204, E24
0	R 15	57.60.1151		150R	MF, 1%, 0204, E24
0	R 16	57.60.1151		150R	MF, 1%, 0204, E24
0	R 17	57.60.1000		0R0	MF, 0204
0	R 18	57.60.1000		0R0	MF, 0204
0	R 19	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 20	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 21	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 22	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 23	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 24	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 25	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 26	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 27	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 28	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 29	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 30	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 31	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 32	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 33	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 34	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 35	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 36	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 37	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 38	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 39	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 40	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 41	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 42	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 43	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 44	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 45	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 46	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 47	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 48	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 49	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 50	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 51	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 52	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 53	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 54	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 55	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 56	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 57	57.60.1202		2k0	MF, 1%, 0204, E24
0	R 58	57.60.1202		2k0	MF, 1%, 0204, E24
0	R 59	57.60.1202		2k0	MF, 1%, 0204, E24
0	R 60	57.60.1202		2k0	MF, 1%, 0204, E24
0	R 61	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 62	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 63	57.60.1133		13k	MF, 1%, 0204, E24
0	R 64	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 65	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 66	57.60.1133		13k	MF, 1%, 0204, E24
0	R 67	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 68	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 69	57.60.1133		13k	MF, 1%, 0204, E24
0	R 70	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 71	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 72	57.60.1133		13k	MF, 1%, 0204, E24
0	R 73	57.60.1133		13k	MF, 1%, 0204, E24
0	R 74	57.60.1133		13k	MF, 1%, 0204, E24
0	R 75	57.60.1133		13k	MF, 1%, 0204, E24
0	R 76	57.60.1133		13k	MF, 1%, 0204, E24
0	R 77	57.60.1133		13k	MF, 1%, 0204, E24
0	R 78	57.60.1133		13k	MF, 1%, 0204, E24
0	R 79	57.60.1133		13k	MF, 1%, 0204, E24
0	R 80	57.60.1133		13k	MF, 1%, 0204, E24
0	R 81	57.60.1133		13k	MF, 1%, 0204, E24
0	R 82	57.60.1133		13k	MF, 1%, 0204, E24
0	R 83	57.60.1133		13k	MF, 1%, 0204, E24
0	R 84	57.60.1133		13k	MF, 1%, 0204, E24
0	R 85	57.60.1100		10R	MF, 1%, 0204, E24
0	R 86	57.60.1100		10R	MF, 1%, 0204, E24
0	R 87	57.60.1133		13k	MF, 1%, 0204, E24
0	R 88	57.60.1133		13k	MF, 1%, 0204, E24
0	R 89	57.60.1100		10R	MF, 1%, 0204, E24
0	R 90	57.60.1100		10R	MF, 1%, 0204, E24
0	RA 1	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 2	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 3	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 4	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 5	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 6	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 7	58.60.0117		5k0	SMD 20%, 0.25W, Cermet
0	RA 8	58.60.0117		5k0	SMD 20%, 0.25W, Cermet

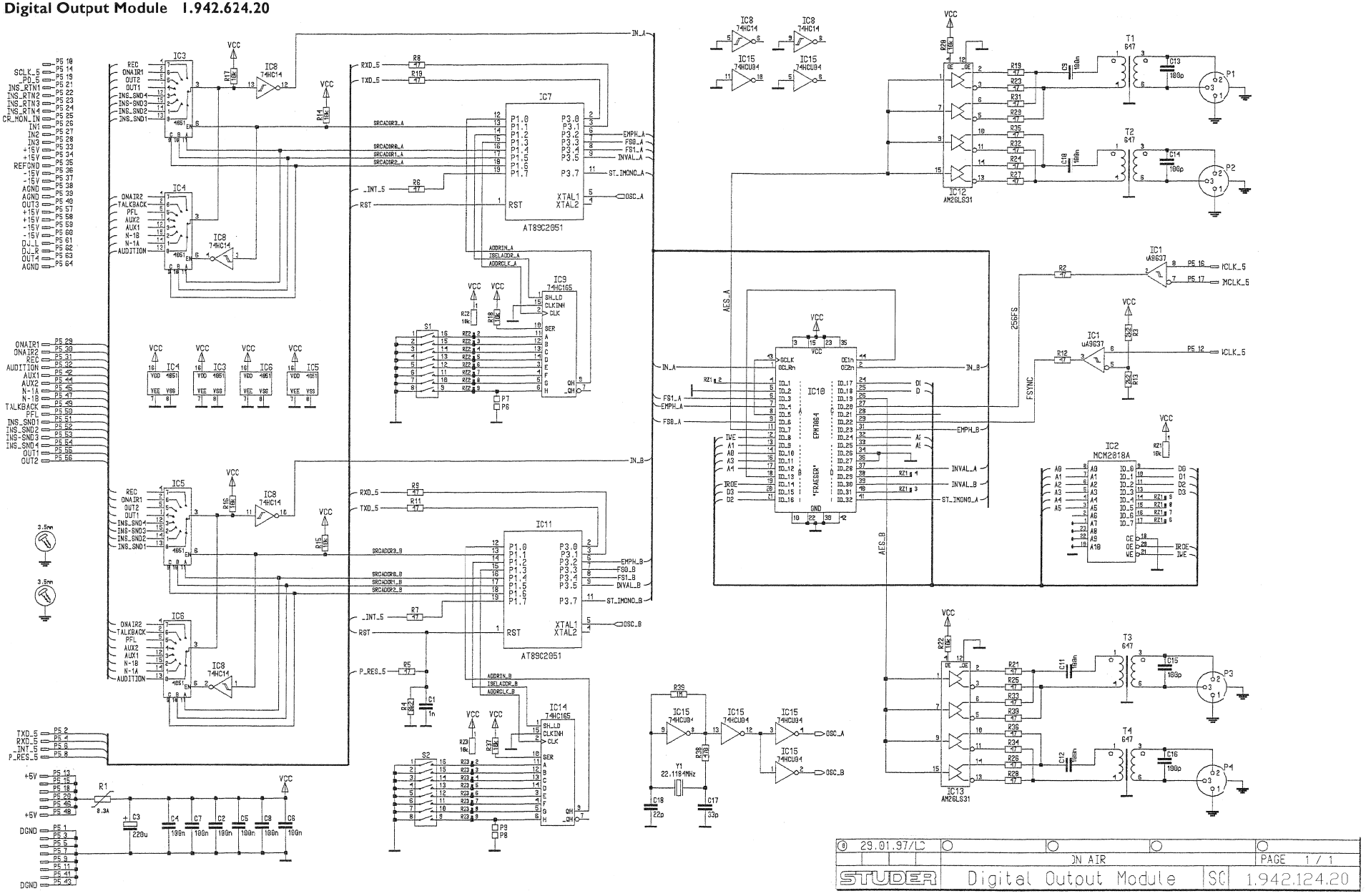
End of List

Comments:

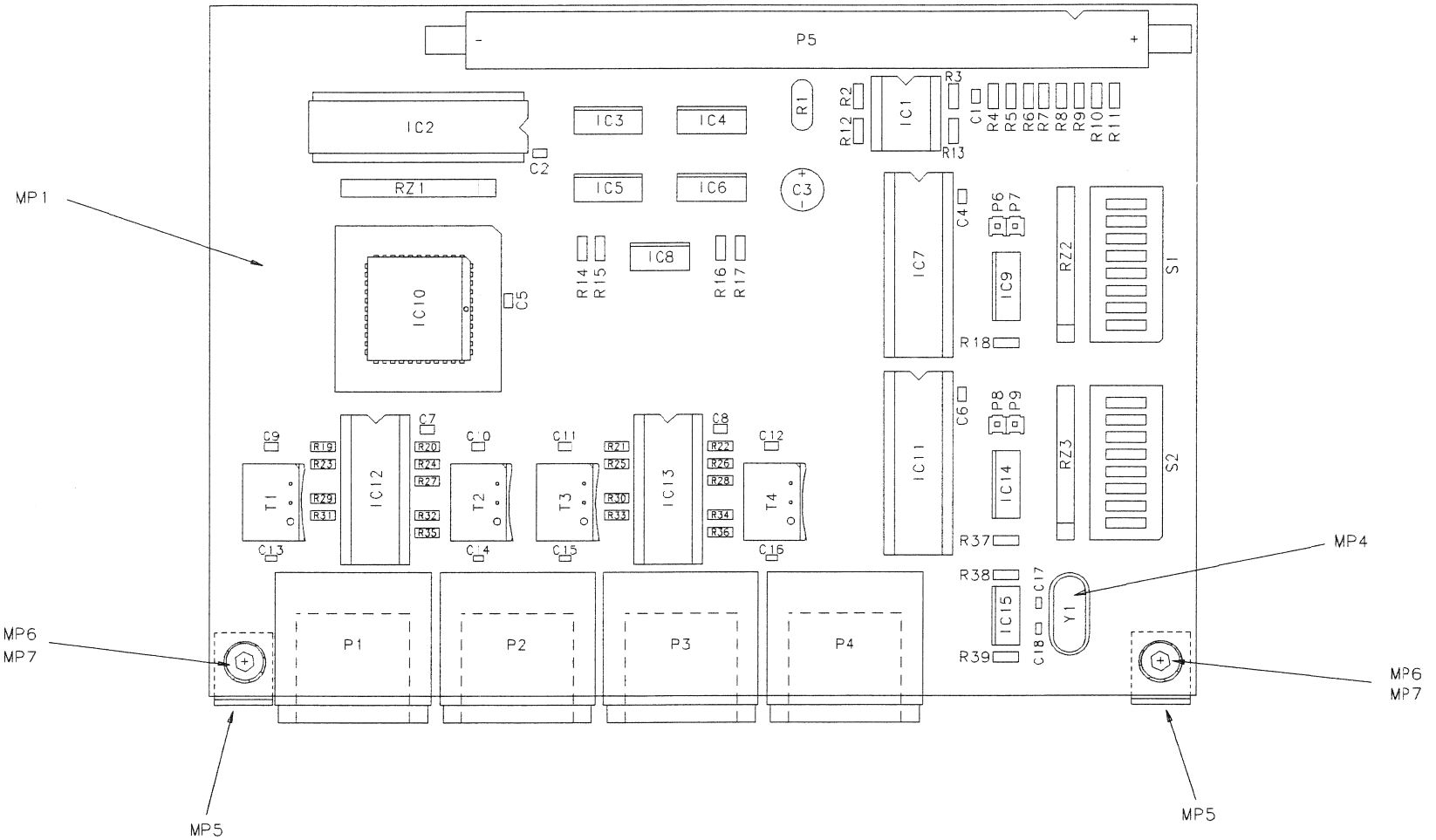
Block Diagram Digital Output



Digital Output Module 1.942.624.20



Digital Output Module 1.942.624.20



Edition Ausgabe	23.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page Seite:	1 / 1				

STUDER REGENSDORF | Description Bezeichnung: DIGITAL OUTPUT, ESE | Z | Number Nummer: 1.942.624.20

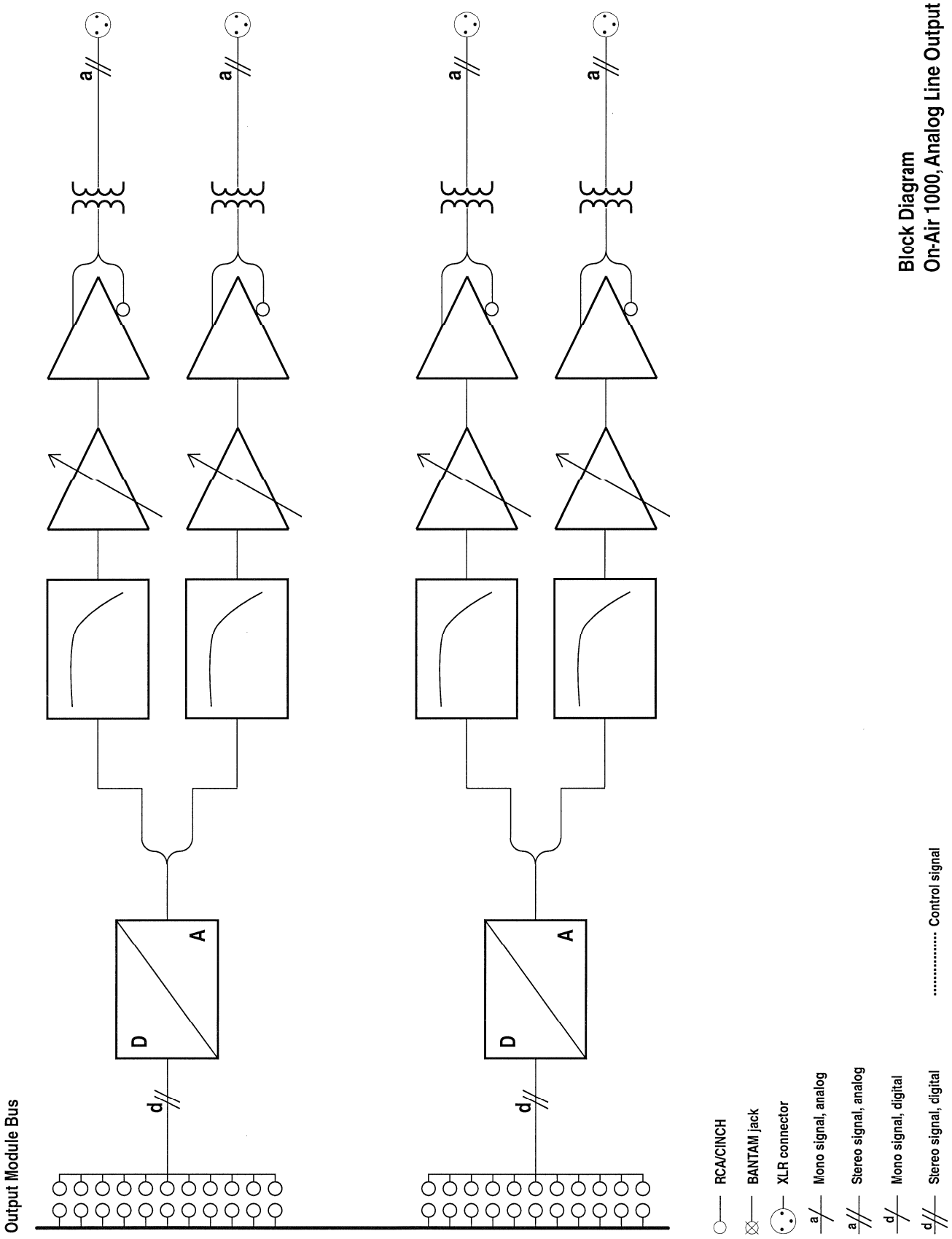
Digital Output Module 1.942.624.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 2	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 3	59.22.3003		220u	EL 10V 20% RM5
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 9	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 14	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 15	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 16	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 17	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 18	59.60.2233		22p	CER 50V, 5%, C0G, 0603
0	IC 1	50.15.0114		9637	Dual diff Line Receiver
0	IC 2	50.14.1009		7C128A	SRAM 2K*8 35ns
0	IC 3	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 4	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 5	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 6	50.62.1951		74HC4051	8ch analog mux/demux
0	IC 7	1.942.912.22			SW.124 DIGITAL OUT. MOD., uP
				50160313, 89C2051	
0	IC 8	50.62.1014		74HC 14	Hex Schmitt trigger inverter
0	IC 9	50.62.1165		74HC165	8bit shift register
0	IC 10	1.942.927.20			SW.124 DIGITAL OUT. MOD., PLD
				50634202, EPLD 7064	
0	IC 11	1.942.912.22			SW.124 DIGITAL OUT. MOD., uP
				50160313, 89C2051	
0	IC 12	50.15.0108		26LS31	Quad diff line driver
0	IC 13	50.15.0108		26LS31	Quad diff line driver
0	IC 14	50.62.1165		74HC165	8bit shift register
0	IC 15	50.62.1904		74HCU04	Hex inverter unbuffered
0	MP 1	1.942.124.11	1 pce		DIGITAL OUTPUT MODULE PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.024.10	1 pce		NR.ETIKETTE
0	MP 4	89.01.1499	1 pce		QUARZ - ISOLIERPLATTE
0	MP 5	1.942.500.21	2 pcs		WINKEL
0	MP 6	21.53.0353	2 pcs	M3*5	Z-Schraube Inbus Zn gb chr
0	MP 7	24.16.2030	2 pcs		FAECHERSCHEIBE A D 3.2
0	P 1	54.21.2202		3p	XLR PCB Winkel
0	P 2	54.21.2202		3p	XLR PCB Winkel
0	P 3	54.21.2202		3p	XLR PCB Winkel
0	P 4	54.21.2202		3p	XLR PCB Winkel
0	P 5	54.14.2056		64p	Stecker gerade Au
0	P 6	54.01.0020		1p	Pin, 1reihig, gerade
0	P 7	54.01.0020		1p	Pin, 1reihig, gerade
0	P 8	54.01.0020		1p	Pin, 1reihig, gerade
0	P 9	54.01.0020		1p	Pin, 1reihig, gerade
0	R 1	57.92.7012		0.3A	PTC 60V
0	R 2	57.60.1470		47R	MF, 1%, 0204, E24
0	R 3	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 4	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.60.1470		47R	MF, 1%, 0204, E24
0	R 7	57.60.1470		47R	MF, 1%, 0204, E24
0	R 8	57.60.1470		47R	MF, 1%, 0204, E24
0	R 9	57.60.1470		47R	MF, 1%, 0204, E24
0	R 10	57.60.1470		47R	MF, 1%, 0204, E24
0	R 11	57.60.1470		47R	MF, 1%, 0204, E24
0	R 12	57.60.1470		47R	MF, 1%, 0204, E24
0	R 13	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 14	57.60.1103		10k	MF, 1%, 0204, E24
0	R 15	57.60.1103		10k	MF, 1%, 0204, E24
0	R 16	57.60.1103		10k	MF, 1%, 0204, E24
0	R 17	57.60.1103		10k	MF, 1%, 0204, E24
0	R 18	57.60.1103		10k	MF, 1%, 0204, E24
0	R 19	57.60.1470		47R	MF, 1%, 0204, E24
0	R 20	57.60.1103		10k	MF, 1%, 0204, E24
0	R 21	57.60.1470		47R	MF, 1%, 0204, E24
0	R 22	57.60.1103		10k	MF, 1%, 0204, E24
0	R 23	57.60.1470		47R	MF, 1%, 0204, E24
0	R 24	57.60.1470		47R	MF, 1%, 0204, E24
0	R 25	57.60.1470		47R	MF, 1%, 0204, E24
0	R 26	57.60.1470		47R	MF, 1%, 0204, E24
0	R 27	57.60.1470		47R	MF, 1%, 0204, E24
0	R 28	57.60.1470		47R	MF, 1%, 0204, E24
0	R 29	57.60.1470		47R	MF, 1%, 0204, E24
0	R 30	57.60.1470		47R	MF, 1%, 0204, E24
0	R 31	57.60.1470		47R	MF, 1%, 0204, E24
0	R 32	57.60.1470		47R	MF, 1%, 0204, E24
0	R 33	57.60.1470		47R	MF, 1%, 0204, E24
0	R 34	57.60.1470		47R	MF, 1%, 0204, E24
0	R 35	57.60.1470		47R	MF, 1%, 0204, E24
0	R 36	57.60.1470		47R	MF, 1%, 0204, E24
0	R 37	57.60.1103		10k	MF, 1%, 0204, E24
0	R 38	57.60.1471		470R	MF, 1%, 0204, E24
0	R 39	57.60.1105		1M	MF, 1%, 0204, E24
0	RZ 1	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 2	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 3	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	S 1	55.01.0168		8*a	SZ , 8*A, DIL
0	S 2	55.01.0168		8*a	SZ , 8*A, DIL
0	T 1	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	T 2	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	T 3	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	T 4	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	XIC 7	53.03.0165		20p	DIL 0.3", löt, gerade
0	XIC 10	53.03.2244		44p	PLCC-Socket
0	XIC 11	53.03.0165		20p	DIL 0.3", löt, gerade
0	XIC 12	53.03.0100		10p	DIL 0.3", löt, gerade
0	XIC 13	53.03.0168		16p	DIL 0.3", löt, gerade
0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

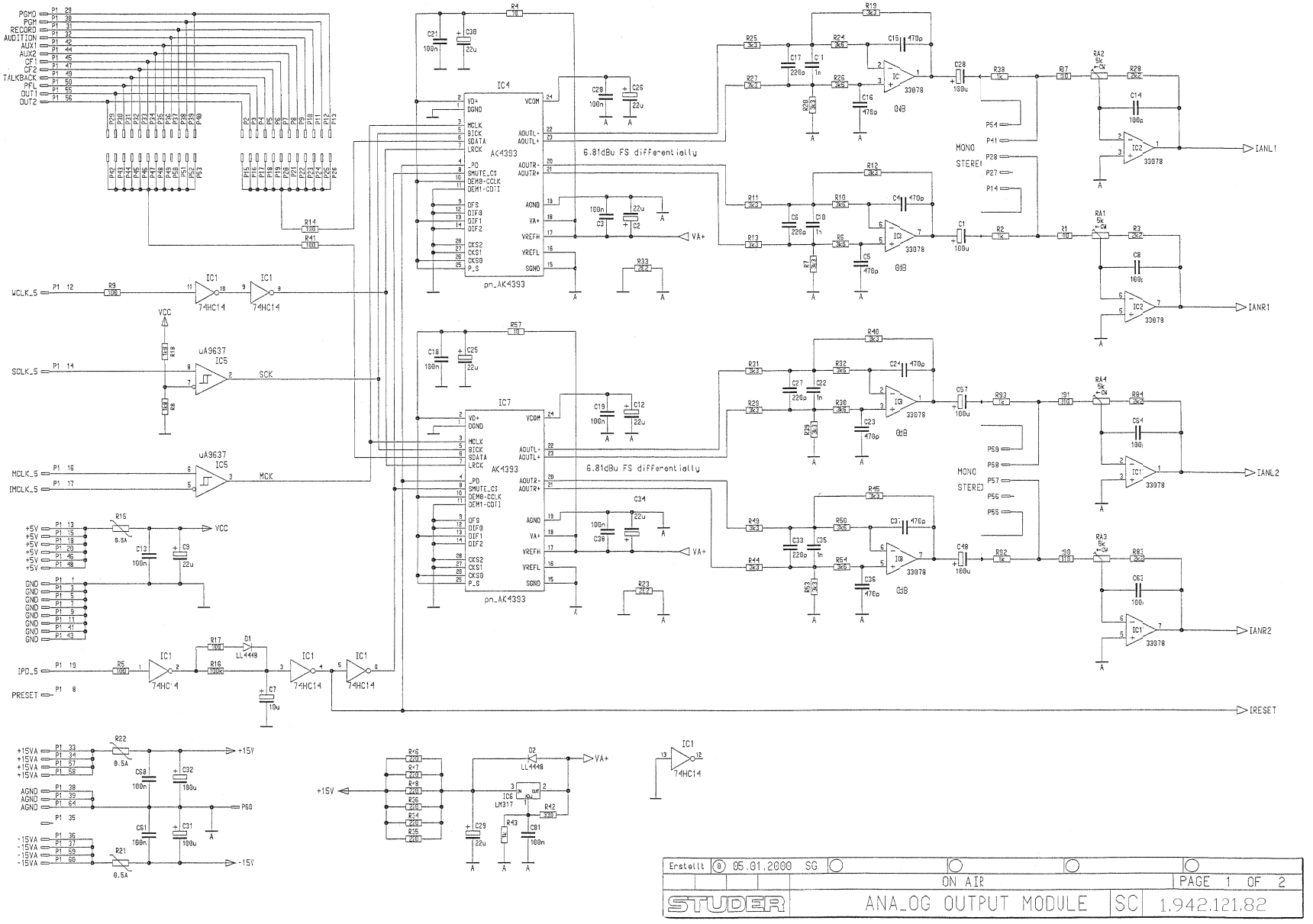
End of List

Comments:

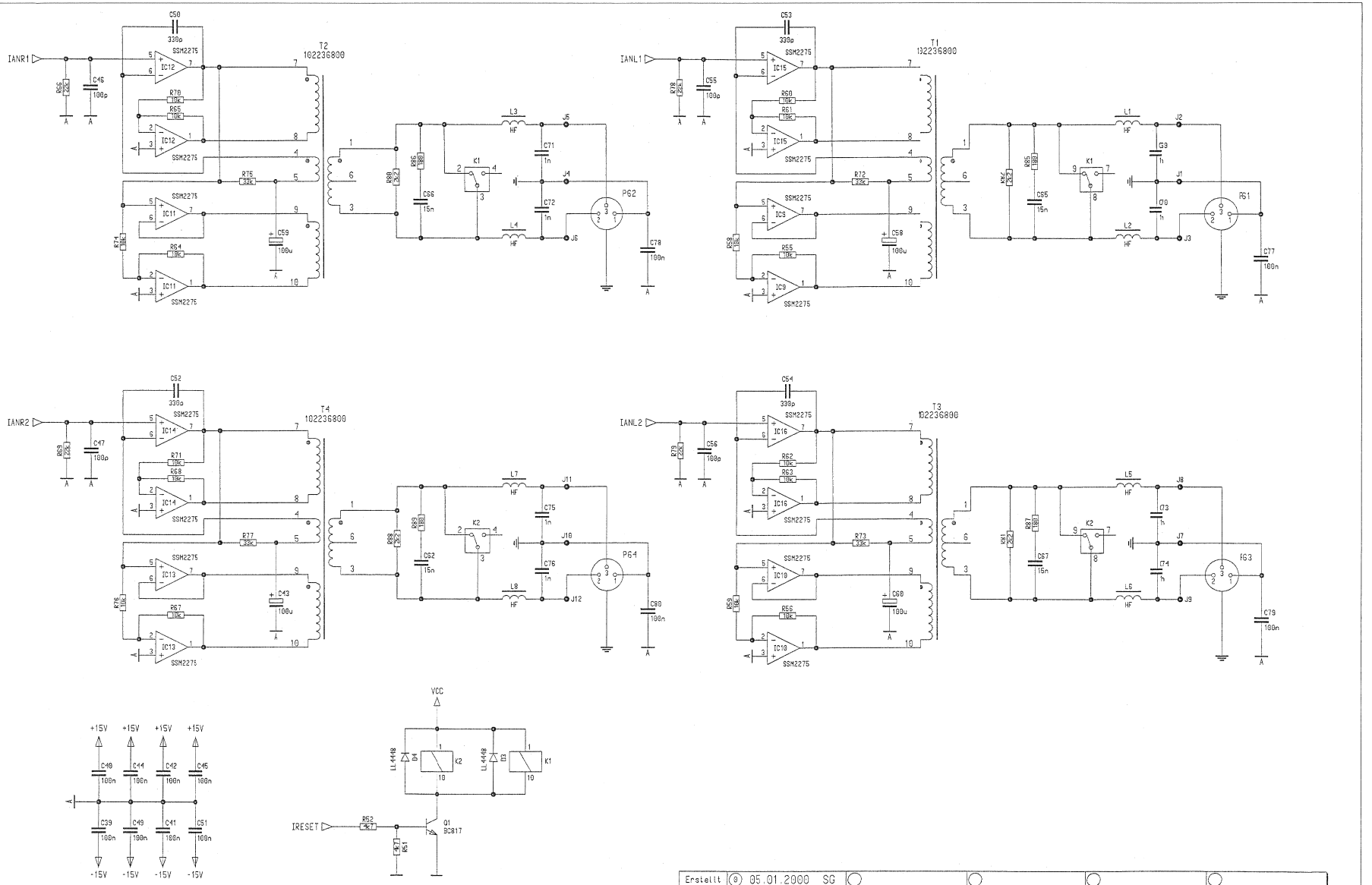
Block Diagram Analog Line Output



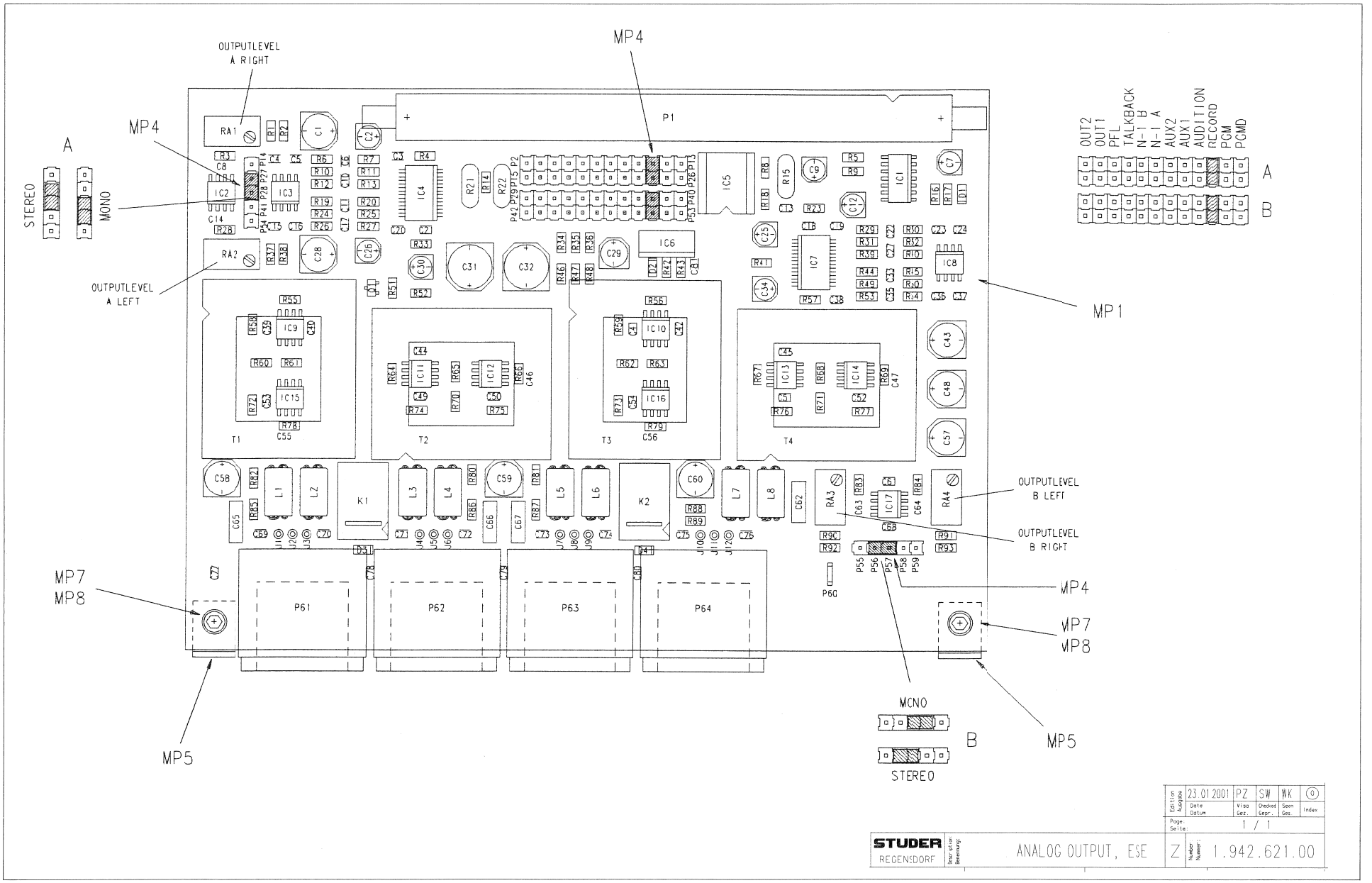
Analog Output Module 1.942.621.00



Analog Output Module 1.942.621.00



Analog Output Module 1.942.621.00



Analog Output 1.942.621.00 (1)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 2	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 3	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 4	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 5	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 6	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 7	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 8	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 9	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 10	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 11	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 12	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 13	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 15	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 16	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 17	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 18	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 20	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 21	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 22	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 23	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 24	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 25	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 26	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 27	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 28	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 29	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 30	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 31	59.68.0071		100u	EL 16V, 8.0*6.3
0	C 32	59.68.0071		100u	EL 16V, 8.0*6.3
0	C 33	59.63.1105		220p	PPS 50V, 2%, 0805
0	C 34	59.68.0025		22u	EL 6V, 4.0*5.7
0	C 35	59.63.1113		1n0	PPS 50V, 2%, 0805
0	C 36	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 37	59.63.1109		470p	PPS 50V, 2%, 0805
0	C 38	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 39	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 40	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 43	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 44	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 45	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 46	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 47	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 48	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 49	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 50	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 51	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 52	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 53	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 54	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 55	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 56	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 57	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 58	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 59	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 60	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 61	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 62	59.06.0153		15n	PETP, 63V, 10%, RM5
0	C 63	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 64	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 65	59.06.0153		15n	PETP, 63V, 10%, RM5
0	C 66	59.06.0153		15n	PETP, 63V, 10%, RM5
0	C 67	59.06.0153		15n	PETP, 63V, 10%, RM5
0	C 68	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 69	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 70	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 71	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 72	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 73	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 74	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 75	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 76	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 77	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 78	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 79	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 80	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 81	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.62.1014		74HC 14	Hex Schmitt trigger inverter
0	IC 2	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 3	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 4	50.61.8005		AK4393	D/A Converter 24bit DS SOP28
0	IC 5	50.15.0114		9637	Dual diff Line Receiver
0	IC 6	50.10.0104		LM317SP	Series regulator 1.5A ...+37V
0	IC 7	50.61.8005		AK4393	D/A Converter 24bit DS SOP28
0	IC 8	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 9	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 10	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 11	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 12	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 13	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 14	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 15	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 16	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 17	50.61.0204		MC33078	Dual Op-Amp low noise
0	K 1	56.04.0198		2*u	5V 125V 2A Ag/Au
0	K 2	56.04.0198		2*u	5V 125V 2A Ag/Au
0	L 1	62.60.0902			SMD Wideband choke
0	L 2	62.60.0902			SMD Wideband choke
0	L 3	62.60.0902			SMD Wideband choke
0	L 4	62.60.0902			SMD Wideband choke
0	L 5	62.60.0902			SMD Wideband choke
0	L 6	62.60.0902			SMD Wideband choke
0	L 7	62.60.0902			SMD Wideband choke
0	L 8	62.60.0902			SMD Wideband choke
0	MP 1	1.942.121.13	1 pce		DUAL ANALOG OUTPUT PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.621.10	1 pce		NR ETIKETTE
0	MP 4	54.01.0021	4 pcs	Jumper	0.63*0.63mm, Au
0	MP 5	1.942.500.21	2 pcs		WINKEL
0	MP 7	24.16.2030	2 pcs	3.2/6.0	Fächerscheibe Form A
0	MP 8	21.53.0353	2 pcs	M3*5	Z-Schraube Inbus Zn gb chr
1	MP 9	43.10.0110		A	Revisions-Etikette 5mm h'blau
0	P 1	54.14.2056		64p	Stecker gerade Au
0	P 2	54.01.0020		1p	Pin, 1reihig, gerade
0	P 3	54.01.0020		1p	Pin, 1reihig, gerade
0	P 4	54.01.0020		1p	Pin, 1reihig, gerade
0	P 5	54.01.0020		1p	Pin, 1reihig, gerade
0	P 6	54.01.0020		1p	Pin, 1reihig, gerade
0	P 7	54.01.0020		1p	Pin, 1reihig, gerade
0	P 8	54.01.0020		1p	Pin, 1reihig, gerade
0	P 9	54.01.0020		1p	Pin, 1reihig, gerade
0	P 10	54.01.0020		1p	Pin, 1reihig, gerade
0	P 11	54.01.0020		1p	Pin, 1reihig, gerade
0	P 12	54.01.0020		1p	Pin, 1reihig, gerade
0	P 13	54.01.0020		1p	Pin, 1reihig, gerade
0	P 14	54.01.0020		1p	Pin, 1reihig, gerade
0	P 15	54.01.0020		1p	Pin, 1reihig, gerade
0	P 16	54.01.0020		1p	Pin, 1reihig, gerade
0	P 17	54.01.0020		1p	Pin, 1reihig, gerade
0	P 18	54.01.0020		1p	Pin, 1reihig, gerade
0	P 19	54.01.0020		1p	Pin, 1reihig, gerade
0	P 20	54.01.0020		1p	Pin, 1reihig, gerade
0	P 21	54.01.0020		1p	Pin, 1reihig, gerade
0	P 22	54.01.0020		1p	Pin, 1reihig, gerade
0	P 23	54.01.0020		1p	Pin, 1reihig, gerade
0	P 24	54.01.0020		1p	Pin, 1reihig, gerade
0	P 25	54.01.0020		1p	Pin, 1reihig, gerade
0	P 26	54.01.0020		1p	Pin, 1reihig, gerade
0	P 27	54.01.0020		1p	Pin, 1reihig, gerade
0	P 28	54.01.0020		1p	Pin, 1reihig, gerade
0	P 29	54.01.0020		1p	Pin, 1reihig, gerade
0	P 30	54.01.0020		1p	Pin, 1reihig, gerade
0	P 31	54.01.0020		1p	Pin, 1reihig, gerade
0	P 32	54.01.0020		1p	Pin, 1reihig, gerade
0	P 33	54.01.0020		1p	Pin, 1reihig, gerade
0	P 34	54.01.0020		1p	Pin, 1reihig, gerade
0	P 35	54.01.0020		1p	Pin, 1reihig, gerade
0	P 36	54.01.0020		1p	Pin, 1reihig, gerade
0	P 37	54.01.0020		1p	Pin, 1reihig, gerade
0	P 38	54.01.0020		1p	Pin, 1reihig, gerade
0	P 39	54.01.0020		1p	Pin, 1reihig, gerade
0	P 40	54.01.0020		1p	Pin, 1reihig, gerade
0	P 41	54.01.0020		1p	Pin, 1reihig, gerade
0	P 42	54.01.0020		1p	Pin, 1reihig, gerade
0	P 43	54.01.0020		1p	Pin, 1reihig, gerade
0	P 44	54.01.0020		1p	Pin, 1reihig, gerade
0	P 45	54.01.0020		1p	Pin, 1reihig, gerade
0	P 46	54.01.0020		1p	Pin, 1reihig, gerade
0	P 47	54.01.0020		1p	Pin, 1reihig, gerade
0	P 48	54.01.0020		1p	Pin, 1reihig, gerade
0	P 49	54.01.0020		1p	Pin, 1reihig, gerade
0	P 50	54.01.0020		1p	Pin, 1reihig, gerade
0	P 51	54.01.0020		1p	Pin, 1reihig, gerade
0	P 52	54.01.0020		1p	Pin, 1reihig, gerade
0	P 53	54.01.0020		1p	Pin, 1reihig, gerade
0	P 54	54.01.0020		1p	Pin, 1reihig, gerade

Analog Output 1.942.621.00 (1)

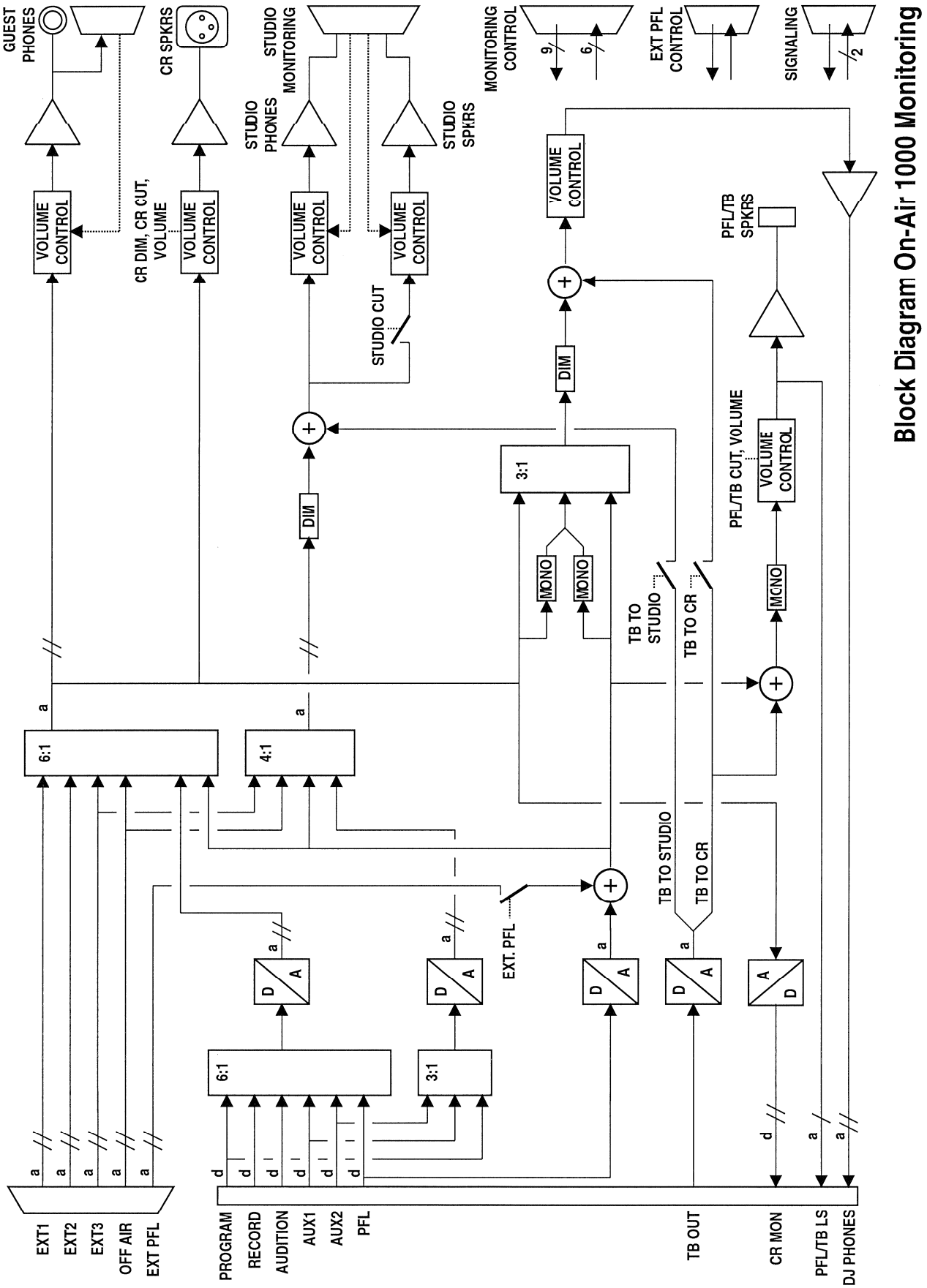
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	P 55	54.01.0020		1p	Pin, 1reihig, gerade
0	P 56	54.01.0020		1p	Pin, 1reihig, gerade
0	P 57	54.01.0020		1p	Pin, 1reihig, gerade
0	P 58	54.01.0020		1p	Pin, 1reihig, gerade
0	P 59	54.01.0020		1p	Pin, 1reihig, gerade
0	P 60	not used		1p	PCB-Flachst 2.8*0.8, gerade
0	P 61	54.21.2202		3p	XLR PCB Winkel
0	P 62	54.21.2202		3p	XLR PCB Winkel
0	P 63	54.21.2202		3p	XLR PCB Winkel
0	P 64	54.21.2202		3p	XLR PCB Winkel
0	Q 1	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	R 1	57.60.1911		910R	MF, 1%, 0204, E24
0	R 2	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 3	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 4	57.60.1100		10R	MF, 1%, 0204, E24
0	R 5	57.60.1101		100R	MF, 1%, 0204, E24
0	R 6	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 7	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 8	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 9	57.60.1101		100R	MF, 1%, 0204, E24
0	R 10	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 11	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 12	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 13	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 14	57.60.1101		100R	MF, 1%, 0204, E24
0	R 15	57.92.7013		0.5A	PTC 60V
0	R 16	57.60.1104		100k	MF, 1%, 0204, E24
0	R 17	57.60.1101		100R	MF, 1%, 0204, E24
0	R 18	57.60.1182		1k8	MF, 1%, 0204, E24
0	R 19	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 20	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 21	57.92.7013		0.5A	PTC 60V
0	R 22	57.92.7013		0.5A	PTC 60V
0	R 23	57.60.1229		2R2	MF, 1%, 0204, E24
0	R 24	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 25	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 26	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 27	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 28	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 29	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 30	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 31	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 32	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 33	57.60.1229		2R2	MF, 1%, 0204, E24
0	R 34	57.60.1221		220R	MF, 1%, 0204, E24
0	R 35	57.60.1221		220R	MF, 1%, 0204, E24
0	R 36	57.60.1221		220R	MF, 1%, 0204, E24
0	R 37	57.60.1911		910R	MF, 1%, 0204, E24
0	R 38	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 39	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 40	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 41	57.60.1101		100R	MF, 1%, 0204, E24
0	R 42	57.60.1331		330R	MF, 1%, 0204, E24
0	R 43	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 44	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 45	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 46	57.60.1221		220R	MF, 1%, 0204, E24
0	R 47	57.60.1221		220R	MF, 1%, 0204, E24
0	R 48	57.60.1221		220R	MF, 1%, 0204, E24
0	R 49	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 50	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 51	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 52	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 53	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 54	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 55	57.60.1103		10k	MF, 1%, 0204, E24
0	R 56	57.60.1103		10k	MF, 1%, 0204, E24
0	R 57	57.60.1100		10R	MF, 1%, 0204, E24
0	R 58	57.60.1103		10k	MF, 1%, 0204, E24
0	R 59	57.60.1103		10k	MF, 1%, 0204, E24
0	R 60	57.60.1103		10k	MF, 1%, 0204, E24
0	R 61	57.60.1103		10k	MF, 1%, 0204, E24
0	R 62	57.60.1103		10k	MF, 1%, 0204, E24
0	R 63	57.60.1103		10k	MF, 1%, 0204, E24
0	R 64	57.60.1103		10k	MF, 1%, 0204, E24
0	R 65	57.60.1103		10k	MF, 1%, 0204, E24
0	R 66	57.60.1223		22k	MF, 1%, 0204, E24
0	R 67	57.60.1103		10k	MF, 1%, 0204, E24
0	R 68	57.60.1103		10k	MF, 1%, 0204, E24
0	R 69	57.60.1223		22k	MF, 1%, 0204, E24
0	R 70	57.60.1103		10k	MF, 1%, 0204, E24
0	R 71	57.60.1103		10k	MF, 1%, 0204, E24
0	R 72	57.60.1333		33k	MF, 1%, 0204, E24
0	R 73	57.60.1333		33k	MF, 1%, 0204, E24
0	R 74	57.60.1103		10k	MF, 1%, 0204, E24
0	R 75	57.60.1333		33k	MF, 1%, 0204, E24
0	R 76	57.60.1103		10k	MF, 1%, 0204, E24
0	R 77	57.60.1333		33k	MF, 1%, 0204, E24
0	R 78	57.60.1223		22k	MF, 1%, 0204, E24
0	R 79	57.60.1223		22k	MF, 1%, 0204, E24
0	R 80	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 81	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 82	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 83	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 84	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 85	57.60.1181		180R	MF, 1%, 0204, E24
0	R 86	57.60.1181		180R	MF, 1%, 0204, E24
0	R 87	57.60.1181		180R	MF, 1%, 0204, E24
0	R 88	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 89	57.60.1181		180R	MF, 1%, 0204, E24
0	R 90	57.60.1911		910R	MF, 1%, 0204, E24
0	R 91	57.60.1911		910R	MF, 1%, 0204, E24
0	R 92	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 93	57.60.1102		1k0	MF, 1%, 0204, E24
1	RA 1	58.05.0502		5k0	10%, 0.5W, Cermet
1	RA 2	58.05.0502		5k0	10%, 0.5W, Cermet
1	RA 3	58.05.0502		5k0	10%, 0.5W, Cermet
1	RA 4	58.05.0502		5k0	10%, 0.5W, Cermet
0	T 1	1.022.368.00			Line Output Trafo 6 dB
0	T 2	1.022.368.00			Line Output Trafo 6 dB
0	T 3	1.022.368.00			Line Output Trafo 6 dB
0	T 4	1.022.368.00			Line Output Trafo 6 dB

End of List

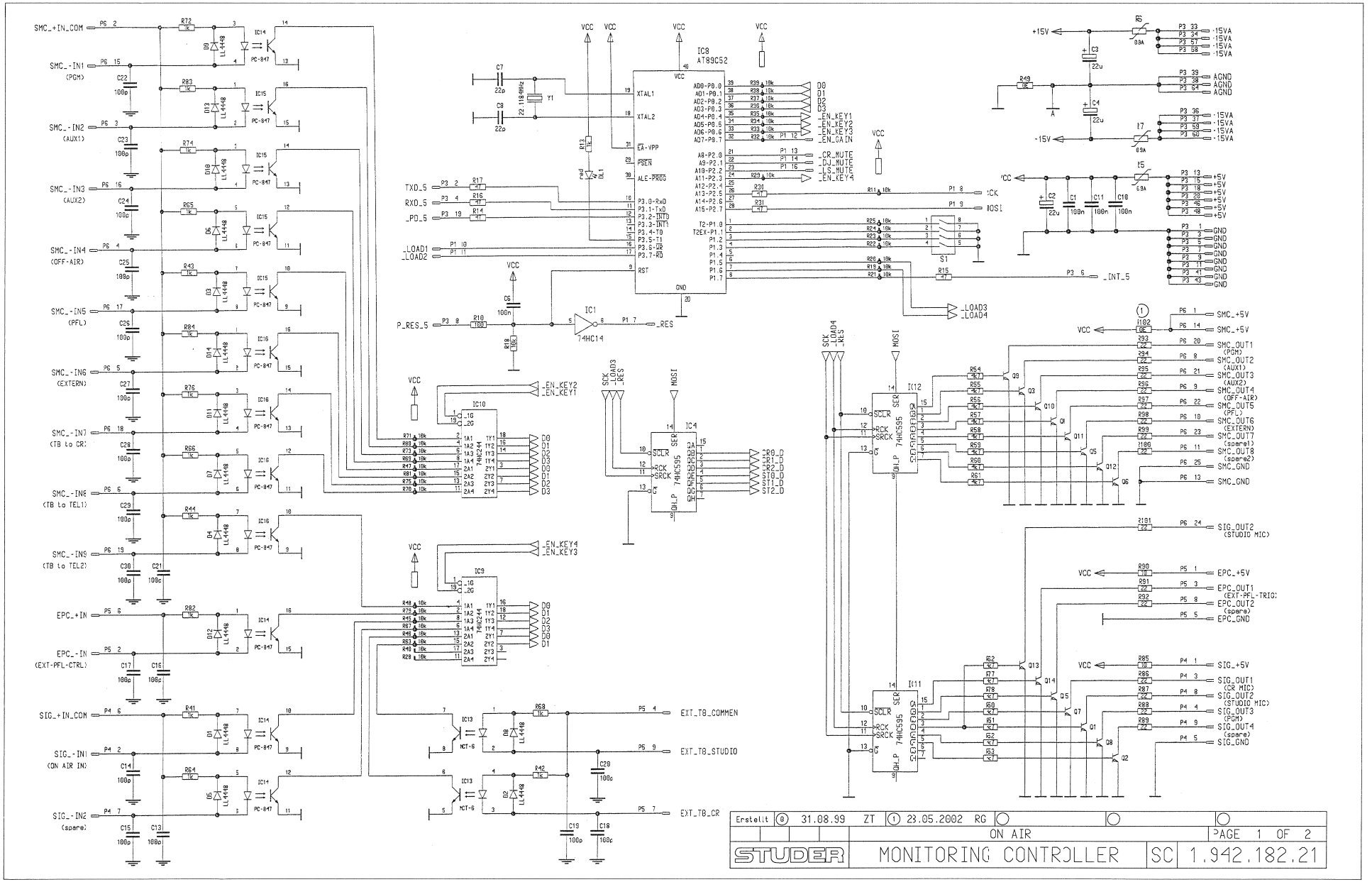
Comments:

(01) RA1, RA2, RA3, RA4 5k0: 58.05.1502->58.05.0502
MP9 added

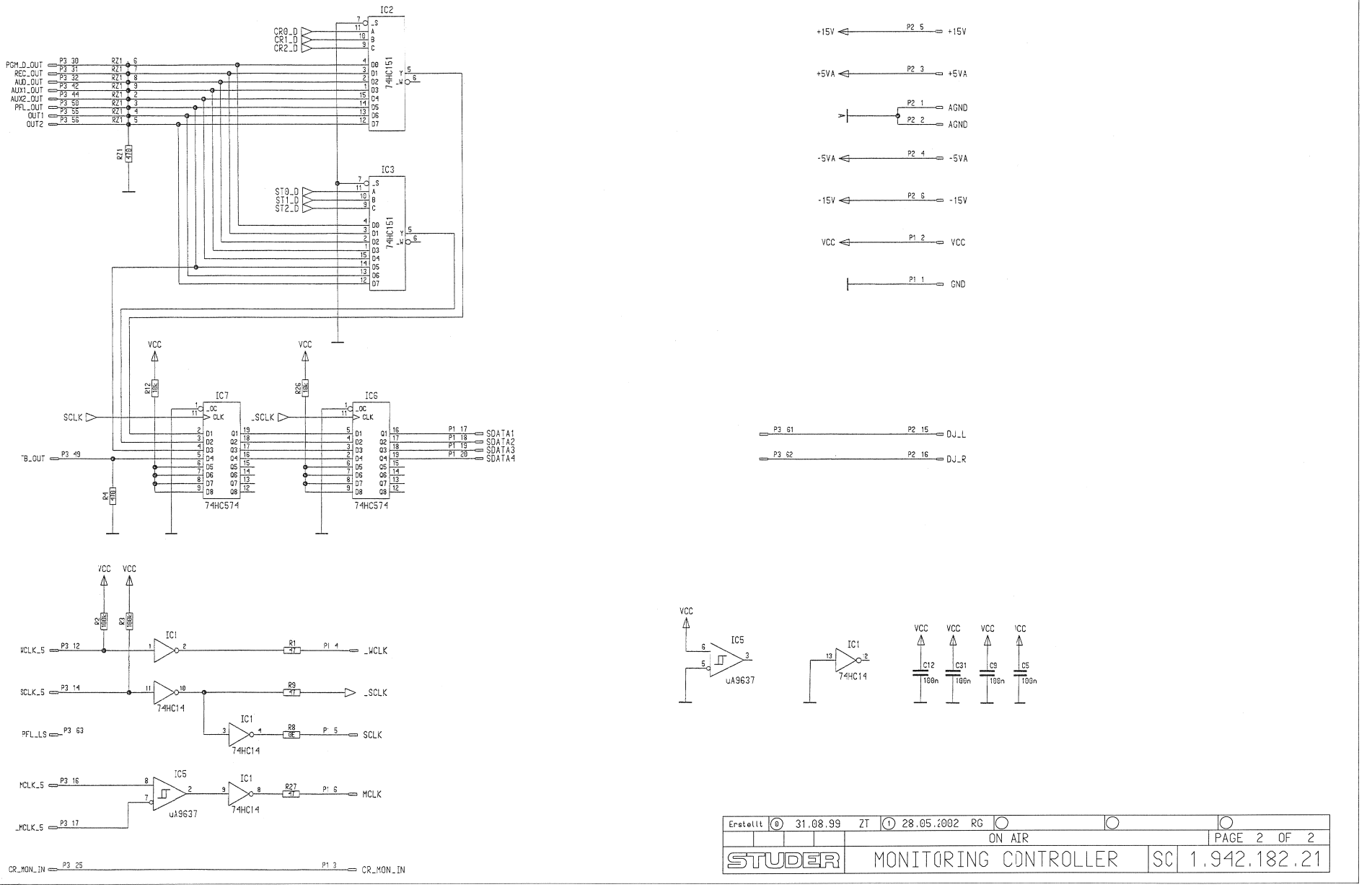
Block Diagram Monitoring



Monitoring Controller 1.942.182.21

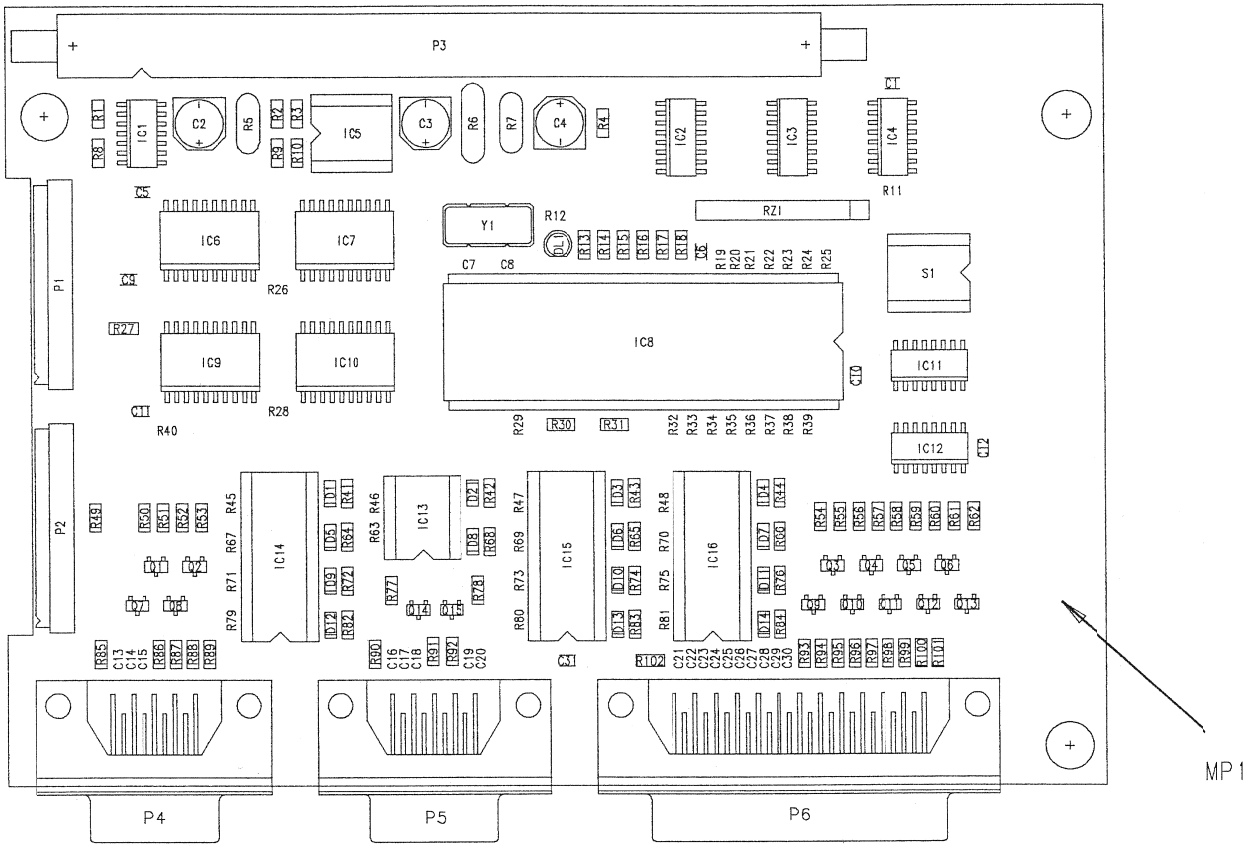


Monitoring Controller 1.942.182.21



Erstellt	0 31.08.99 ZT	1 28.05.2002 RG			
		ON AIR			PAGE 2 OF 2
STUDER	MONITORING CONTROLLER		SC	1.942.182.21	

Monitoring Controller 1.942.182.21



Edition Ausgabe	Modification Aenderung				
Date Datum	5.12.98	PZ			Index
Copy to: Kopie fuer: -					

STUDER REGENSDORF | Description Benennung: MONITORING CONTROLLER | Number Nummer: 1.942.182-21

MONITORING CONTROLLER 1.942.182.21 (1)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 2	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 3	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 4	59.68.0111		22u	EL 35V, 6.3*5.7
0	C 5	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.2233		22p	CER 50V, 5%, C0G, 0603
0	C 8	59.60.2233		22p	CER 50V, 5%, C0G, 0603
0	C 9	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 12	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 14	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 15	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 16	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 17	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 18	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 19	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 20	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 21	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 22	59.60.2249		100n	CER 50V, 5%, C0G, 0603
0	C 23	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 24	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 25	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 26	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 27	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 28	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 29	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 30	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 31	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 6	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 7	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 8	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 9	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 10	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 11	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 12	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 13	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 14	50.60.8001		4448	200mA 75V 4ns SOD 80
0	DL 1	50.04.2141		LR3360	LED 3.18mm, rot
0	IC 1	50.62.1014		74HC 14	Hex Schmitt trigger inverter
0	IC 2	50.62.1151		74HC151	8 channel multiplexer
0	IC 3	50.62.1151		74HC151	8 channel multiplexer
0	IC 4	50.62.1595		74HC595	8bit shift/output register
0	IC 5	50.15.0114		9637	Dual diff Line Receiver
0	IC 6	50.62.1574		74HC574	Octal D-FF
0	IC 7	50.62.1574		74HC574	Octal D-FF
0	IC 8	1.942.913.24			SW.130 MON MODULE (50.16.0311)
0	IC 9	50.62.1244		74HC244	Octal buffer line driver/recei
0	IC 10	50.62.1244		74HC244	Octal buffer line driver/recei
0	IC 11	50.62.1595		74HC595	8bit shift/output register
0	IC 12	50.62.1595		74HC595	8bit shift/output register
0	IC 13	50.99.0111		MCT6	DLQ ILD-74, MCT 6, TLP 504 A
0	IC 14	50.04.2138		PC847	DLQ PC-847 , EE-CM 4
0	IC 15	50.04.2138		PC847	DLQ PC-847 , EE-CM 4
0	IC 16	50.04.2138		PC847	DLQ PC-847 , EE-CM 4
0	MP 1	1.942.130.12	1 pce		MONITORING CONTROLLER PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.182.10	1 pce		NR. ETIKETTE 5X20
0	MP 4	1.101.001.21	1 pce		TEXT-ETIK. 5*20 HARDWARE -21
0	P 1	54.14.5540		20p	PCB-Buchse winkel
0	P 2	54.14.5540		20p	PCB-Buchse winkel
0	P 3	54.14.2056		64p	Stecker gerade Au
0	P 4	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 5	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 6	54.13.0078		25p	D-Sub, PCB, Winkel
0	Q 1	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 2	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 3	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 4	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 5	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 6	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 7	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 8	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 9	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 10	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 11	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 12	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 13	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 14	50.60.0050		BC817-25	NPN 45V 800mA SOT 23
0	Q 15	50.60.0050		BC817-25	NPN 45V 800mA SOT 23

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 1	57.60.1470		47R	MF, 1%, 0204, E24
0	R 2	57.60.1104		100k	MF, 1%, 0204, E24
0	R 3	57.60.1104		100k	MF, 1%, 0204, E24
0	R 4	57.60.1471		470R	MF, 1%, 0204, E24
0	R 5	57.92.7021		0.9A	PTC 60V
0	R 6	57.92.7021		0.9A	PTC 60V
0	R 7	57.92.7021		0.9A	PTC 60V
0	R 8	57.60.1000		0R0	MF, 0204
0	R 9	57.60.1470		47R	MF, 1%, 0204, E24
0	R 10	57.60.1101		100R	MF, 1%, 0204, E24
0	R 11	57.69.1097		10k	CF 5% 0603
0	R 12	57.69.1097		10k	CF 5% 0603
0	R 13	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 14	57.60.1470		47R	MF, 1%, 0204, E24
0	R 15	57.60.1470		47R	MF, 1%, 0204, E24
0	R 16	57.60.1470		47R	MF, 1%, 0204, E24
0	R 17	57.60.1470		47R	MF, 1%, 0204, E24
0	R 18	57.60.1103		10k	MF, 1%, 0204, E24
0	R 19	57.69.1097		10k	CF 5% 0603
0	R 20	57.69.1097		10k	CF 5% 0603
0	R 21	57.69.1097		10k	CF 5% 0603
0	R 22	57.69.1097		10k	CF 5% 0603
0	R 23	57.69.1097		10k	CF 5% 0603
0	R 24	57.69.1097		10k	CF 5% 0603
0	R 25	57.69.1097		10k	CF 5% 0603
0	R 26	57.69.1097		10k	CF 5% 0603
0	R 27	57.60.1470		47R	MF, 1%, 0204, E24
0	R 28	57.69.1097		10k	CF 5% 0603
0	R 29	57.69.1097		10k	CF 5% 0603
0	R 30	57.60.1470		47R	MF, 1%, 0204, E24
0	R 31	57.60.1470		47R	MF, 1%, 0204, E24
0	R 32	57.69.1097		10k	CF 5% 0603
0	R 33	57.69.1097		10k	CF 5% 0603
0	R 34	57.69.1097		10k	CF 5% 0603
0	R 35	57.69.1097		10k	CF 5% 0603
0	R 36	57.69.1097		10k	CF 5% 0603
0	R 37	57.69.1097		10k	CF 5% 0603
0	R 38	57.69.1097		10k	CF 5% 0603
0	R 39	57.69.1097		10k	CF 5% 0603
0	R 40	57.69.1097		10k	CF 5% 0603
0	R 41	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 42	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 43	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 44	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 45	57.69.1097		10k	CF 5% 0603
0	R 46	57.69.1097		10k	CF 5% 0603
0	R 47	57.69.1097		10k	CF 5% 0603
0	R 48	57.69.1097		10k	CF 5% 0603
0	R 49	57.60.1000		0R0	MF, 0204
0	R 50	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 51	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 52	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 53	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 54	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 55	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 56	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 57	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 58	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 59	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 60	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 61	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 62	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 63	57.69.1097		10k	CF 5% 0603
0	R 64	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 65	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 66	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 67	57.69.1097		10k	CF 5% 0603
0	R 68	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 69	57.69.1097		10k	CF 5% 0603
0	R 70	57.69.1097		10k	CF 5% 0603
0	R 71	57.69.1097		10k	CF 5% 0603
0	R 72	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 73	57.69.1097		10k	CF 5% 0603
0	R 74	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 75	57.69.1097		10k	CF 5% 0603
0	R 76	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 77	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 78	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 79	57.69.1097		10k	CF 5% 0603
0	R 80	57.69.1097		10k	CF 5% 0603
0	R 81	57.69.1097		10k	CF 5% 0603
0	R 82	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 83	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 84	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 85	57.60.1100		10R	MF, 1%, 0204, E24
0	R 86	57.60.1220		22R	MF, 1%, 0204, E24
0	R 87	57.60.1220		22R	MF, 1%, 0204, E24

MONITORING CONTROLLER 1.942.182.21 (1)

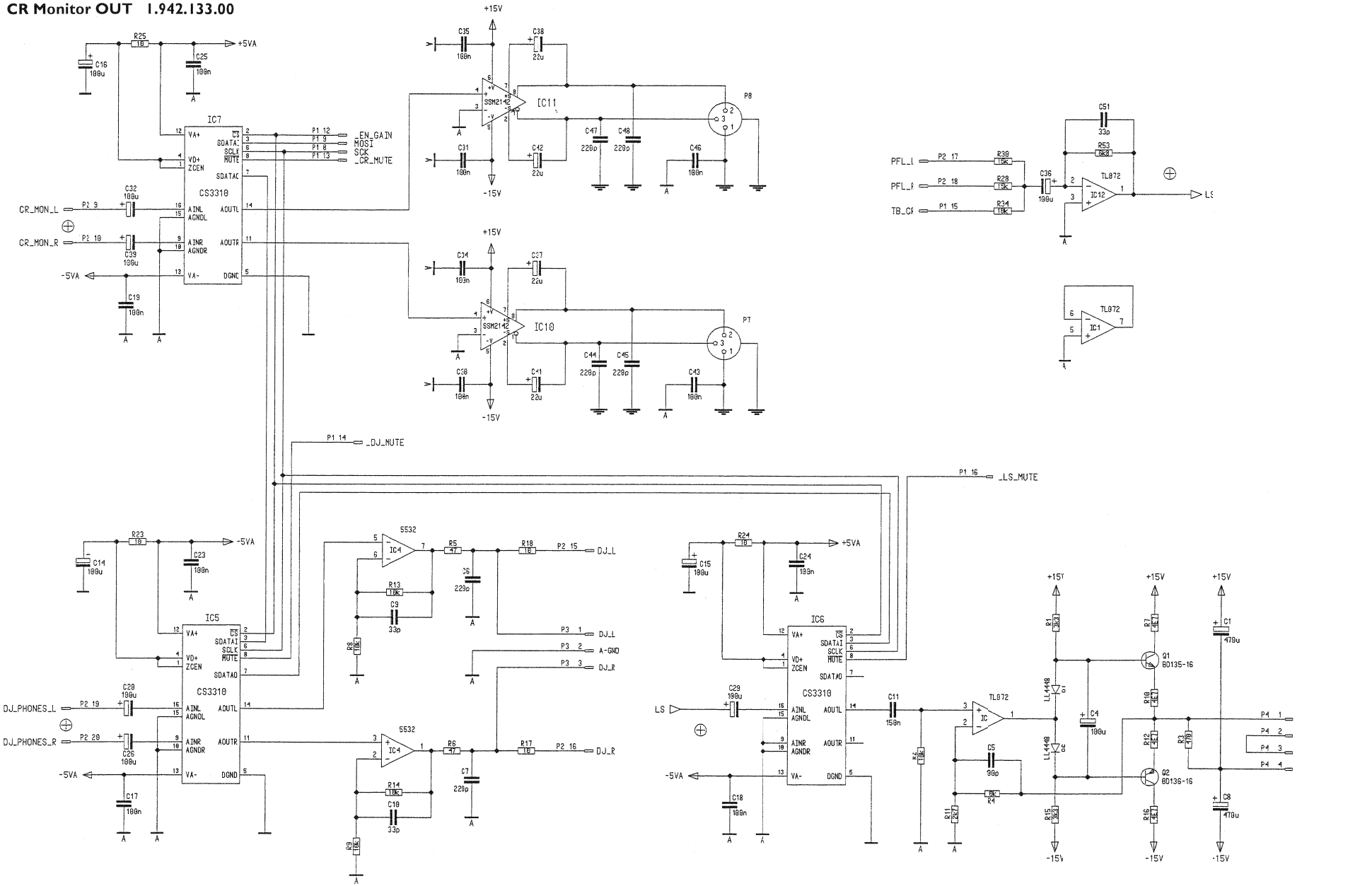
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 88	57.60.1220		22R	MF, 1%, 0204, E24
0	R 89	57.60.1220		22R	MF, 1%, 0204, E24
0	R 90	57.60.1100		10R	MF, 1%, 0204, E24
0	R 91	57.60.1220		22R	MF, 1%, 0204, E24
0	R 92	57.60.1220		22R	MF, 1%, 0204, E24
0	R 93	57.60.1220		22R	MF, 1%, 0204, E24
0	R 94	57.60.1220		22R	MF, 1%, 0204, E24
0	R 95	57.60.1220		22R	MF, 1%, 0204, E24
0	R 96	57.60.1220		22R	MF, 1%, 0204, E24
0	R 97	57.60.1220		22R	MF, 1%, 0204, E24
0	R 98	57.60.1220		22R	MF, 1%, 0204, E24
0	R 99	57.60.1220		22R	MF, 1%, 0204, E24
0	R 100	57.60.1220		22R	MF, 1%, 0204, E24
0	R 101	57.60.1220		22R	MF, 1%, 0204, E24
1	R 102	57.60.1000		0R0	MF, 0204
0	RZ 1	57.88.4471		470R	8*R Resistor-Netw 2% SIP9
0	S 1	55.01.0164		4*a	DIL-Switch, PCB
0	XIC 8	53.03.0172		40p	DIL 0.6", löt, gerade
0	Y 1	89.60.1004		22.1184MHz	SMD Quartz

End of List

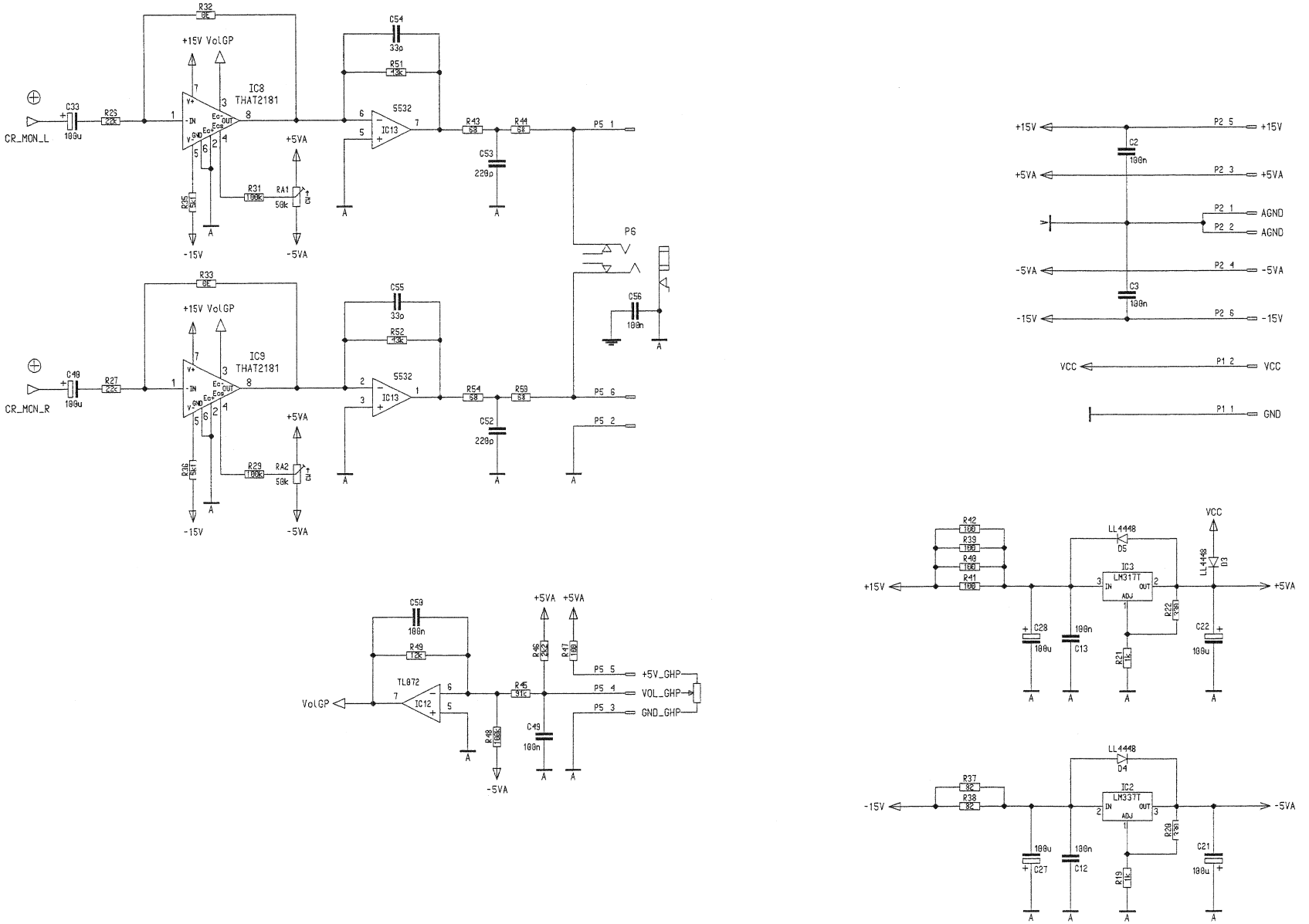
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description

(1) R102 (10R) changed to 0R0

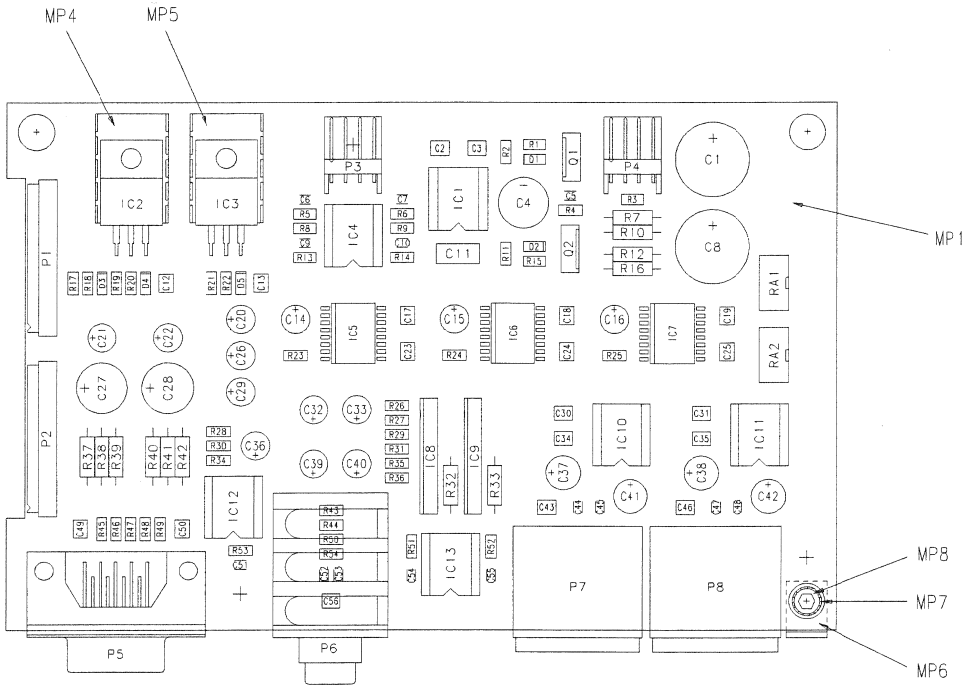
CR Monitor OUT 1.942.133.00



CR Monitor OUT 1.942.133.00



CR Monitor OUT 1.942.133.00



Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.22.5471		470u	EL 35V 20% RM5
0	C 2	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 3	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 4	59.22.5101		100u	EL 25V 20% RM5
0	C 5	59.60.2349		100p	CER 50V, 5%, C0G, 0805
0	C 6	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 8	59.22.5471		470u	EL 35V 20% RM5
0	C 9	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 10	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 11	59.06.0154		150n	PETP, 63V, 10%, RM5
0	C 12	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 13	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 14	59.22.4002		100u	EL 16V 20% RM5
0	C 15	59.22.4002		100u	EL 16V 20% RM5
0	C 16	59.22.4002		100u	EL 16V 20% RM5
0	C 17	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 18	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 19	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 20	59.22.4002		100u	EL 16V 20% RM5
0	C 21	59.22.4002		100u	EL 16V 20% RM5
0	C 22	59.22.4002		100u	EL 16V 20% RM5
0	C 23	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 24	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 25	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 26	59.22.4002		100u	EL 16V 20% RM5
0	C 27	59.22.5101		100u	EL 25V 20% RM5
0	C 28	59.22.5101		100u	EL 25V 20% RM5
0	C 29	59.22.4002		100u	EL 16V 20% RM5
0	C 30	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 31	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 32	59.22.4002		100u	EL 16V 20% RM5
0	C 33	59.22.4002		100u	EL 16V 20% RM5
0	C 34	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 35	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 36	59.22.4002		100u	EL 16V 20% RM5
0	C 37	59.22.5220		22u	EL 25V 20% RM5
0	C 38	59.22.5220		22u	EL 25V 20% RM5
0	C 39	59.22.4002		100u	EL 16V 20% RM5
0	C 40	59.22.4002		100u	EL 16V 20% RM5
0	C 41	59.22.5220		22u	EL 25V 20% RM5
0	C 42	59.22.5220		22u	EL 25V 20% RM5
0	C 43	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 44	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 45	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 46	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 47	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 48	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 49	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 50	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	C 51	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 52	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 53	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 54	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 55	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 56	59.60.3537		100n	CER 50V, 10%, X7R, 1210
0	D 1	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 4	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 5	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	50.09.0101		TL072	IC T. 072 CN ,A
0	IC 2	50.10.0105		LM337KC	Series regulator 1.5A ...-37V
0	IC 3	50.10.0104		LM317SP	Series regulator 1.5A ...+37V
0	IC 4	50.09.0106		5532AN	DualOp-Amp,low noise
0	IC 5	50.61.8301		CS3310	Dig volume control ste SO16
0	IC 6	50.61.8301		CS3310	Dig volume control ste SO16
0	IC 7	50.61.8301		CS3310	Dig volume control ste SO16
0	IC 8	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 9	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 10	50.09.0124		2142	Audio balanced line driver
0	IC 11	50.09.0124		2142	Audio balanced line driver
0	IC 12	50.09.0101		TL072	IC T. 072 CN ,A
0	IC 13	50.09.0106		5532AN	DualOp-Amp,low noise
0	MP 1	1.942.133.11	1 pce		CR MONITOR OUT PCB
0	MP 2	43.01.0108	1 pce	Label	ESEWARNSCHILD
0	MP 3	1.942.133.10	1 pce		NR. ETIKETTE 5X20
0	MP 4	50.20.3004	1 pce		Kühlkörper, TO 220, horizontal
0	MP 5	50.20.3004	1 pce		Kühlkörper, TO 220, horizontal

Idx	Pos.	Part No	Qty.	Type/Val.	Description
1	MP 6	1.942.500.11	1 pce		WINKEL
1	MP 7	24.16.2080	1 pce		FAECHERSCHEIBE A D 3.2
1	MP 8	21.53.0313	1 pce	M3*5	Z-Schraube Inbus Zn gb chr
0	P 1	54.14.5510		20p	PCB-Buchse winkel
0	P 2	54.14.5510		20p	PCB-Buchse winkel
0	P 3	54.12.0714		4p	Stecker winkel PCB
0	P 4	54.12.0714		4p	Stecker winkel PCB
0	P 5	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 6	54.24.0113			J JACK-SOCKET, 6.3MM, PCB
0	P 7	54.21.2212		3p	XLR PCB Winke
0	P 8	54.21.2212		3p	XLR PCB Winke
0	Q 1	50.03.0415		BD135- 6	BD 135-16 NPN
0	Q 2	50.03.05 0		BD136-.6	BD 136-16, ..-K, -.., -M
0	R 1	57.60.1312		3k3	MF, 1%, 0204, E24
0	R 2	57.60.1113		10k	MF, 1%, 0204, E24
0	R 3	57.60.1411		470R	MF, 1%, 0204, E24
0	R 4	57.60.1113		10k	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.60.1470		47R	MF, 1%, 0204, E24
0	R 7	57.19.0479		4R7	5%, 0207, Fuse
0	R 8	57.60.1113		10k	MF, 1%, 0204, E24
0	R 9	57.60.1113		10k	MF, 1%, 0204, E24
0	R 10	57.19.0479		4R7	5%, 0207, Fuse
0	R 11	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 12	57.19.0479		4R7	5%, 0207, Fuse
0	R 13	57.60.1113		10k	MF, 1%, 0204, E24
0	R 14	57.60.1113		10k	MF, 1%, 0204, E24
0	R 15	57.60.1312		3k3	MF, 1%, 0204, E24
0	R 16	57.19.0479		4R7	5%, 0207, Fuse
0	R 17	57.60.1100		10R	MF, 1%, 0204, E24
0	R 18	57.60.1100		10R	MF, 1%, 0204, E24
0	R 19	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 20	57.60.1311		330R	MF, 1%, 0204, E24
0	R 21	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 22	57.60.1311		330R	MF, 1%, 0204, E24
0	R 23	57.60.1100		10R	MF, 1%, 0204, E24
0	R 24	57.60.1100		10R	MF, 1%, 0204, E24
0	R 25	57.60.1100		10R	MF, 1%, 0204, E24
0	R 26	57.60.1223		22k	MF, 1%, 0204, E24
0	R 27	57.60.1223		22k	MF, 1%, 0204, E24
0	R 28	57.60.1153		15k	MF, 1%, 0204, E24
0	R 29	57.60.1104		100k	MF, 1%, 0204, E24
0	R 30	57.60.1153		15k	MF, 1%, 0204, E24
0	R 31	57.60.1104		100k	MF, 1%, 0204, E24
0	R 32	not used		0R0	MF, 0207
0	R 33	not used		0R0	MF, 0207
0	R 34	57.60.1153		10k	MF, 1%, 0204, E24
0	R 35	57.60.1522		5k1	MF, 1%, 0204, E24
0	R 36	57.60.1522		5k1	MF, 1%, 0204, E24
0	R 37	57.11.3820		82R	MF, 1%, 0207
0	R 38	57.11.3820		82R	MF, 1%, 0207
0	R 39	57.11.3111		100R	MF, 1%, 0207
0	R 40	57.11.3111		100R	MF, 1%, 0207
0	R 41	57.11.3111		100R	MF, 1%, 0207
0	R 42	57.11.3111		100R	MF, 1%, 0207
0	R 43	57.60.1680		68R	MF, 1%, 0204, E24
0	R 44	57.60.1680		68R	MF, 1%, 0204, E24
0	R 45	57.60.1913		91k	MF, 1%, 0204, E24
0	R 46	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 47	57.60.1111		100R	MF, 1%, 0204, E24
0	R 48	57.60.1104		100k	MF, 1%, 0204, E24
0	R 49	57.60.1123		12k	MF, 1%, 0204, E24
0	R 50	57.60.1680		68R	MF, 1%, 0204, E24
0	R 51	57.60.1433		43k	MF, 1%, 0204, E24
0	R 52	57.60.1433		43k	MF, 1%, 0204, E24
0	R 53	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 54	57.60.1680		68R	MF, 1%, 0204, E24
0	RA 1	58.01.9503		50k	Cermet, 10%, 0.5W, vertical
0	RA 2	58.01.9503		50k	Cermet, 10%, 0.5W, vertical

End of List

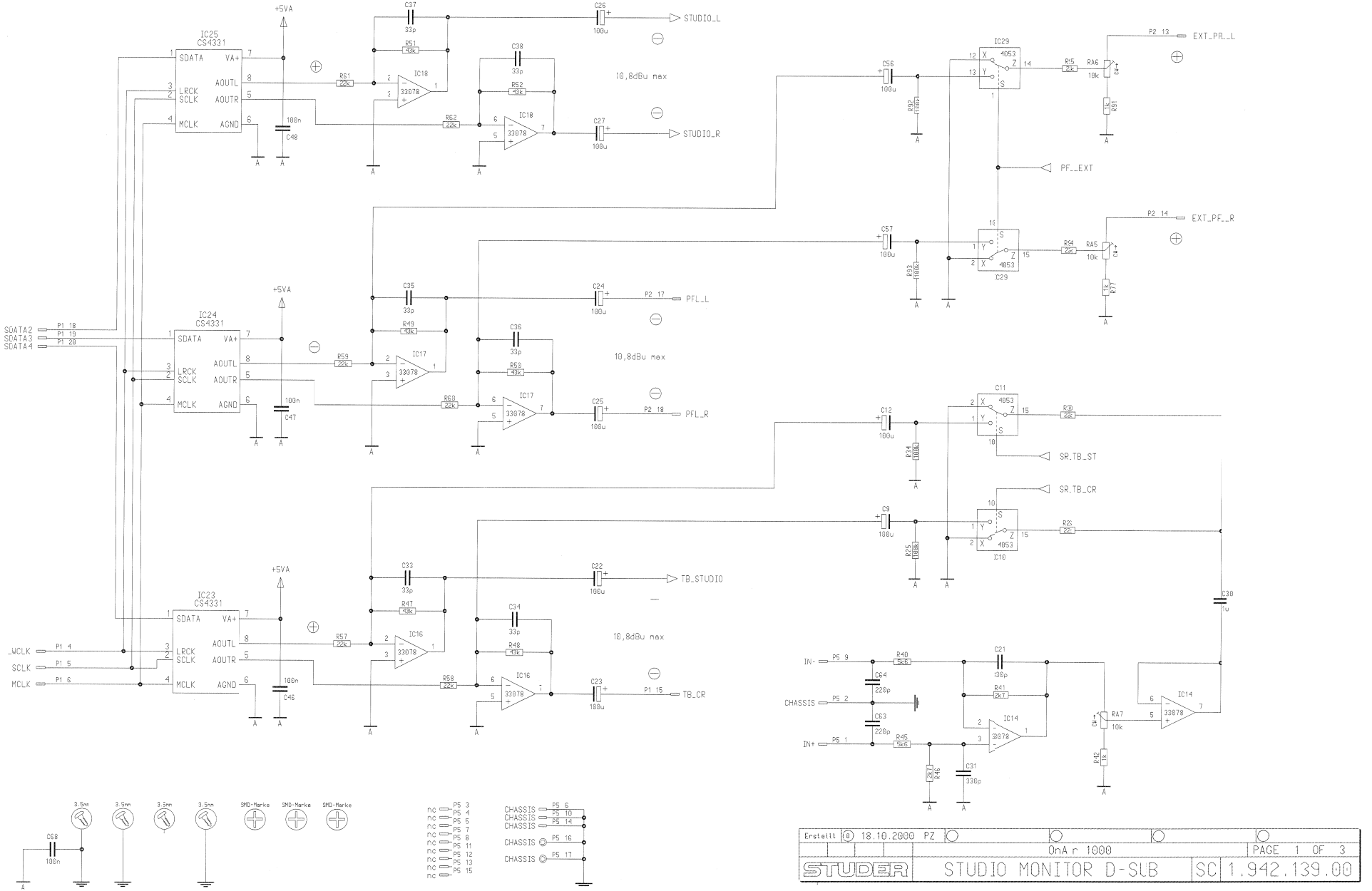
Comments:

Edition / Ausgabe	Date / Datum	Visa / Gez.	Checked / Gepr.	Seen / Ges.	Index
	8.02.2001	PZ	SW	WK	1

Page / Seite: 1 / 1

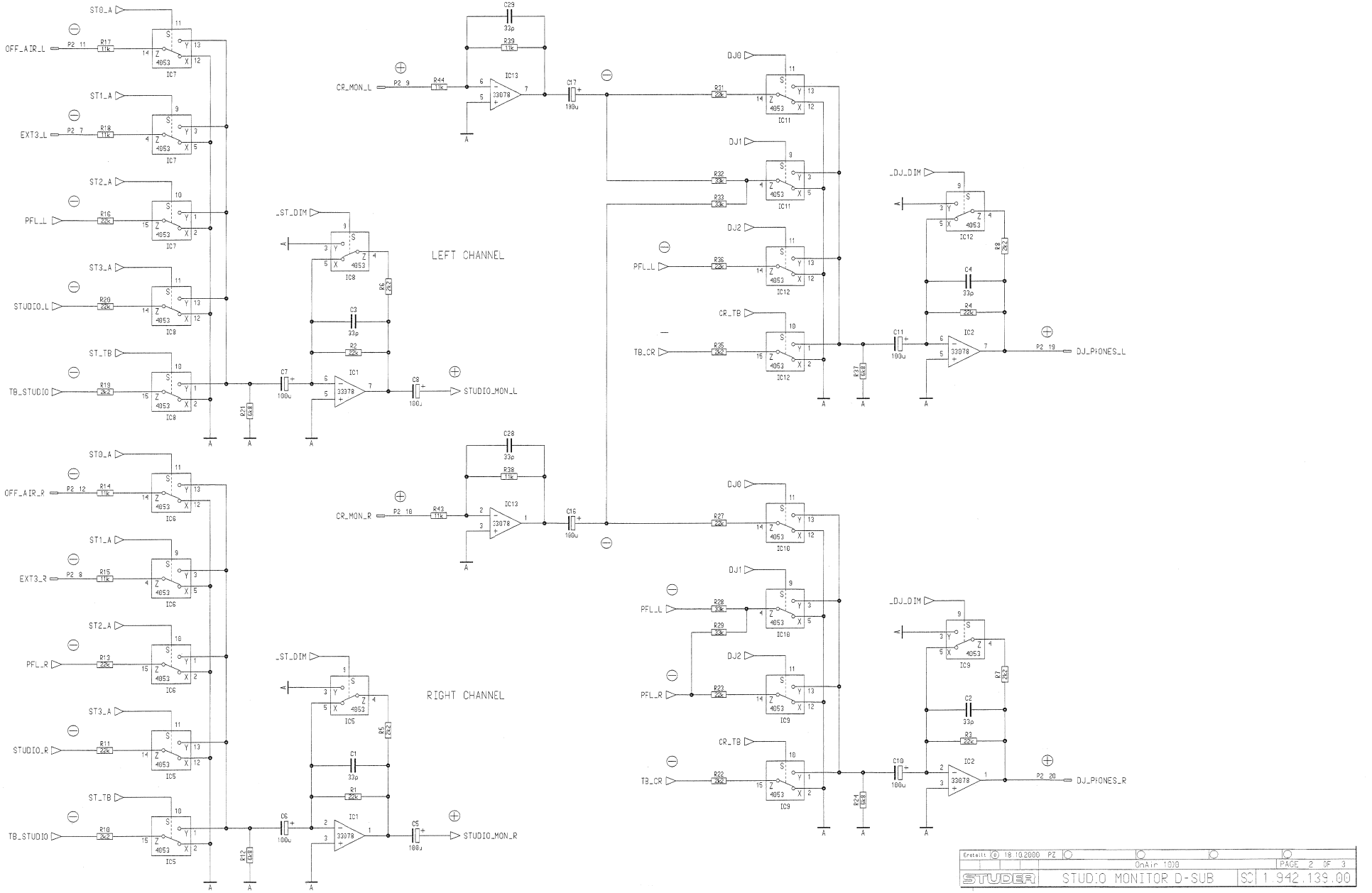
STUDER REGENSDORF — Description / Benennung: CR MONITOR OJT, ESE Z — Number / Numero: 1.942.133-00

Studio Monitor D-Sub 1.942.139.00



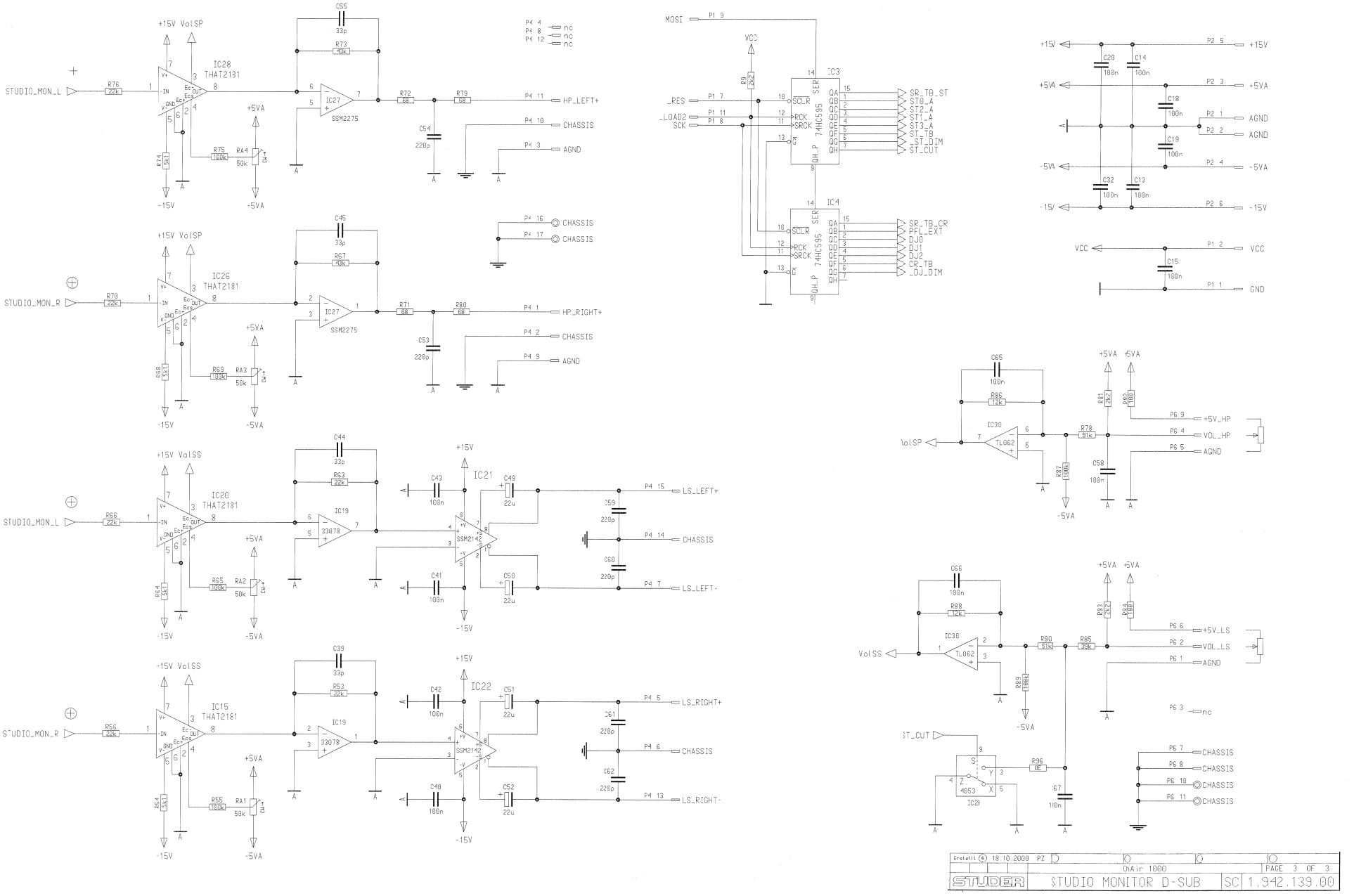
Erstellt	18.10.2000	PZ			
			OnAir 1000		PAGE 1 OF 3
STUDER	STUDIO MONITOR D-SUB			SC	1.942.139.00

Studio Monitor D-Sub 1.942.139.00



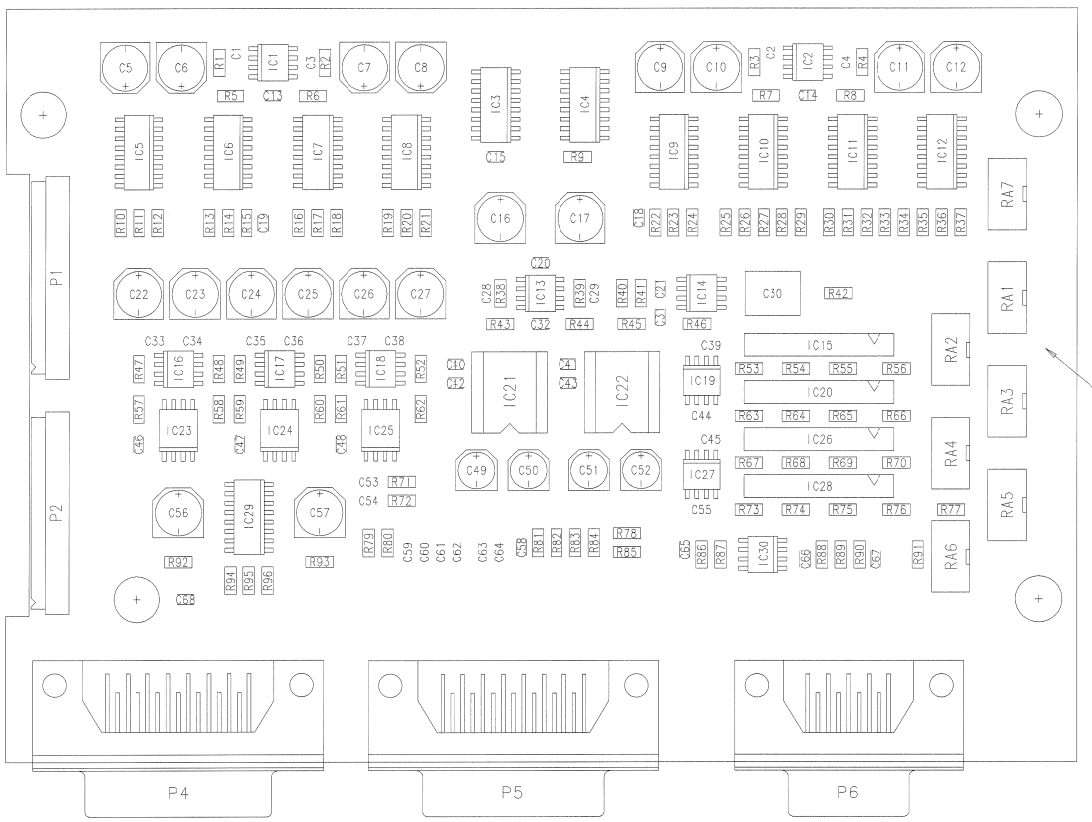
Erstellt 18.10.2000 PZ			PAGE 2 OF 3
	OnAir 1000		
STUDER	STUDIO MONITOR D-SUB	SC	1.942.139.00

Studio Monitor D-Sub 1.942.139.00



Erstellt 18.10.2000 PZ				
		On Air 1000		PAGE 3 OF 3
STUDER	STUDIO MONITOR D-SUB		SC	1.942.139.00

Studio Monitor D-Sub 1.942.139.00



Edition Ausgabe	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
	18.10.2000	PZ	PG	RL	0

Page: Seite: 1 / 1

Description Benennung	Number Nummer	Index
STUDER REGENSDORF STUDIO MONITOR D-SUB, ESE	Z 1.942.139.00	

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 2	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 3	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 4	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 5	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 6	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 7	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 8	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 9	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 10	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 11	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 12	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 13	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 15	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 16	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 17	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 18	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 20	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 21	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 22	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 23	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 24	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 25	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 26	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 27	59.68.0029		100u	EL 6V, 6.3*5.7
0	C 28	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 29	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 30	59.06.0105		1u0	PETP, 63V, 10%, RM5
0	C 31	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 32	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 33	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 34	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 35	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 36	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 37	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 38	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 39	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 40	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 43	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 44	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 45	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 46	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 47	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 48	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 49	59.68.0067		22u	EL 10V, 5.0*5.7
0	C 50	59.68.0067		22u	EL 10V, 5.0*5.7
0	C 51	59.68.0067		22u	EL 10V, 5.0*5.7
0	C 52	59.68.0067		22u	EL 10V, 5.0*5.7
0	C 53	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 54	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 55	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 56	59.68.0029		100u	EL 10V, 6.3*5.7
0	C 57	59.68.0029		100u	EL 10V, 6.3*5.7
0	C 58	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 59	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 60	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 61	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 62	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 63	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 64	59.60.2257		220p	CER 50V, 5%, C0G, 0603
0	C 65	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 66	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 67	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 68	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	IC 1	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 2	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 3	50.62.1595		74HC595	8bit shit/output register
0	IC 4	50.62.1595		74HC595	8bit shit/output register
0	IC 5	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 6	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 7	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 8	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 9	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 10	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 11	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 12	50.62.8053		HC4053	Tripple 2ch analog mux/demux

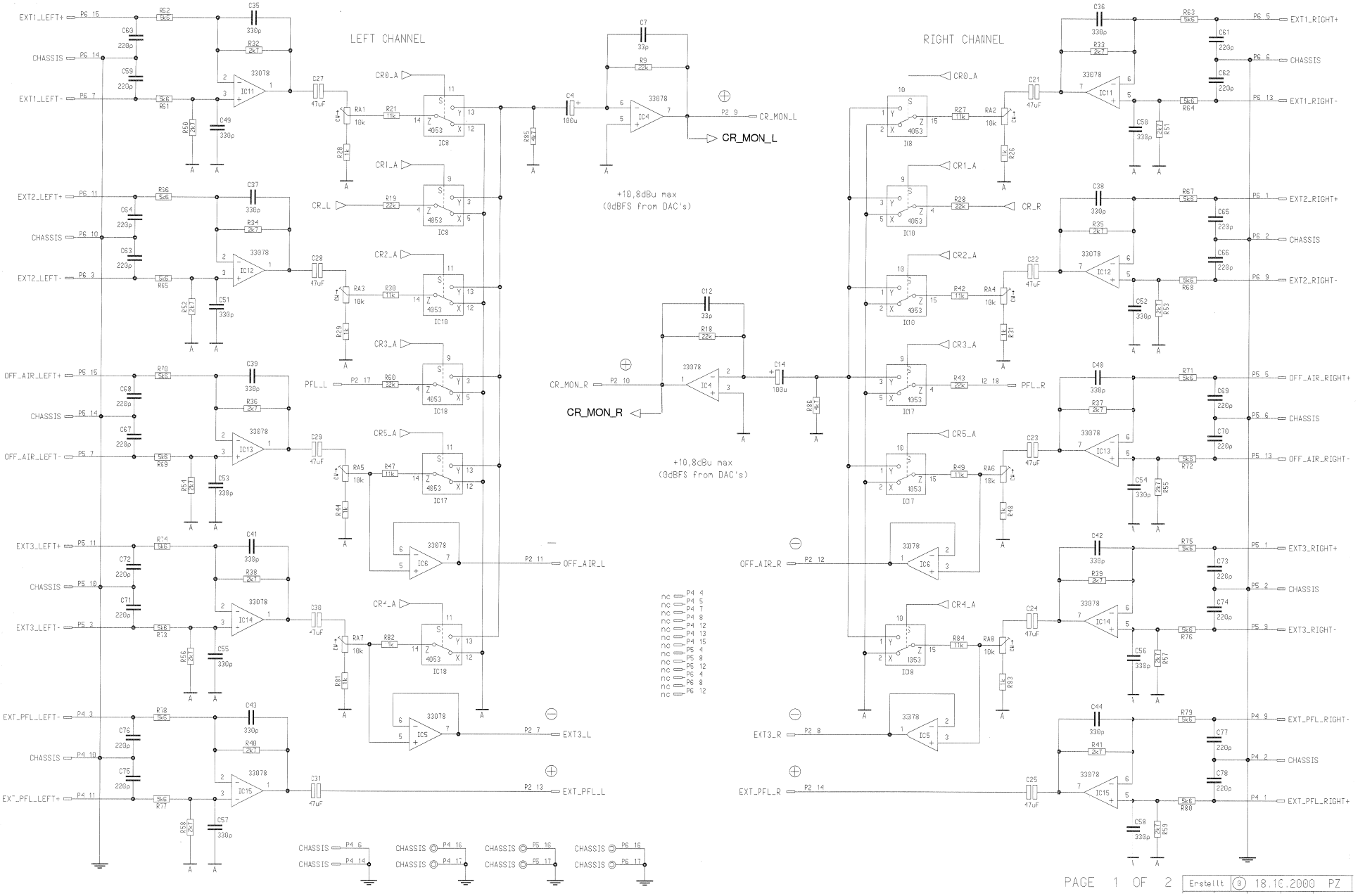
Studio Monitor D-Sub 1.942.139.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 13	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 14	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 15	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 16	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 17	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 18	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 19	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 20	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 21	50.09.0124		2142	Audio balanced line driver
0	IC 22	50.09.0124		2142	Audio balanced line driver
0	IC 23	50.61.8003		CS4331	D/A Converter 18bit Ste SO 8
0	IC 24	50.61.8003		CS4331	D/A Converter 18bit Ste SO 8
0	IC 25	50.61.8003		CS4331	D/A Converter 18bit Ste SO 8
0	IC 26	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 27	50.61.0206		SSM2275S	Dual Op-Amp, rail-to-rail SO 8
0	IC 28	50.11.0140		THAT2181C	IC VCA THAT 2181C
0	IC 29	50.62.8053		HC4053	Tripple 2ch analog mux/demux
0	IC 30	50.61.0201		TL062	Dual FET Op-Amp
0	MP 1	1.942.139.11	1 pce		STUDIO MONITOR D-SUB PCB
0	MP 2	13.01.0108	1 pce	Label	ESE WARNSCHILD
0	MP 3	1.942.139.10	1 pce		NR.ETIKETTE 5X20
0	P 1	54.14.5540		20p	PCB-Buchse winkel
0	P 2	54.14.5540		20p	PCB-Buchse winkel
0	P 4	54.13.0077		15p	D-Sub, PCB, Winkel
0	P 5	54.13.0072		15p	D-Sub, PCB, Winkel
0	P 6	54.13.0071		9p	D-Sub, PCB, Winkel
0	R 1	57.60.1223		22k	MF, 1%, 0204, E24
0	R 2	57.60.1223		22k	MF, 1%, 0204, E24
0	R 3	57.60.1223		22k	MF, 1%, 0204, E24
0	R 4	57.60.1223		22k	MF, 1%, 0204, E24
0	R 5	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 6	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 7	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 8	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 9	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 10	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 11	57.60.1223		22k	MF, 1%, 0204, E24
0	R 12	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 13	57.60.1223		22k	MF, 1%, 0204, E24
0	R 14	57.60.1113		11k	MF, 1%, 0204, E24
0	R 15	57.60.1113		11k	MF, 1%, 0204, E24
0	R 16	57.60.1223		22k	MF, 1%, 0204, E24
0	R 17	57.60.1113		11k	MF, 1%, 0204, E24
0	R 18	57.60.1113		11k	MF, 1%, 0204, E24
0	R 19	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 20	57.60.1223		22k	MF, 1%, 0204, E24
0	R 21	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 22	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 23	57.60.1223		22k	MF, 1%, 0204, E24
0	R 24	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 25	57.60.1104		100k	MF, 1%, 0204, E24
0	R 26	57.60.1223		22k	MF, 1%, 0204, E24
0	R 27	57.60.1223		22k	MF, 1%, 0204, E24
0	R 28	57.60.1333		33k	MF, 1%, 0204, E24
0	R 29	57.60.1333		33k	MF, 1%, 0204, E24
0	R 30	57.60.1223		22k	MF, 1%, 0204, E24
0	R 31	57.60.1223		22k	MF, 1%, 0204, E24
0	R 32	57.60.1333		33k	MF, 1%, 0204, E24
0	R 33	57.60.1333		33k	MF, 1%, 0204, E24
0	R 34	57.60.1104		100k	MF, 1%, 0204, E24
0	R 35	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 36	57.60.1223		22k	MF, 1%, 0204, E24
0	R 37	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 38	57.60.1113		11k	MF, 1%, 0204, E24
0	R 39	57.60.1113		11k	MF, 1%, 0204, E24
0	R 40	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 41	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 42	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 43	57.60.1113		11k	MF, 1%, 0204, E24
0	R 44	57.60.1113		11k	MF, 1%, 0204, E24
0	R 45	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 46	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 47	57.60.1433		43k	MF, 1%, 0204, E24
0	R 48	57.60.1433		43k	MF, 1%, 0204, E24
0	R 49	57.60.1433		43k	MF, 1%, 0204, E24
0	R 50	57.60.1433		43k	MF, 1%, 0204, E24
0	R 51	57.60.1433		43k	MF, 1%, 0204, E24
0	R 52	57.60.1433		43k	MF, 1%, 0204, E24
0	R 53	57.60.1223		22k	MF, 1%, 0204, E24
0	R 54	57.60.1512		5k1	MF, 1%, 0204, E24
0	R 55	57.60.1104		100k	MF, 1%, 0204, E24
0	R 56	57.60.1223		22k	MF, 1%, 0204, E24
0	R 57	57.60.1223		22k	MF, 1%, 0204, E24
0	R 58	57.60.1223		22k	MF, 1%, 0204, E24
0	R 59	57.60.1223		22k	MF, 1%, 0204, E24
0	R 60	57.60.1223		22k	MF, 1%, 0204, E24
0	R 61	57.60.1223		22k	MF, 1%, 0204, E24
0	R 62	57.60.1223		22k	MF, 1%, 0204, E24
0	R 63	57.60.1223		22k	MF, 1%, 0204, E24
0	R 64	57.60.1512		5k1	MF, 1%, 0204, E24
0	R 65	57.60.1104		100k	MF, 1%, 0204, E24
0	R 66	57.60.1223		22k	MF, 1%, 0204, E24
0	R 67	57.60.1433		43k	MF, 1%, 0204, E24
0	R 68	57.60.1512		5k1	MF, 1%, 0204, E24
0	R 69	57.60.1104		100k	MF, 1%, 0204, E24
0	R 70	57.60.1223		22k	MF, 1%, 0204, E24
0	R 71	57.60.1680		68R	MF, 1%, 0204, E24
0	R 72	57.60.1680		68R	MF, 1%, 0204, E24
0	R 73	57.60.1433		43k	MF, 1%, 0204, E24
0	R 74	57.60.1512		5k1	MF, 1%, 0204, E24
0	R 75	57.60.1104		100k	MF, 1%, 0204, E24
0	R 76	57.60.1223		22k	MF, 1%, 0204, E24
0	R 77	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 78	57.60.1913		91k	MF, 1%, 0204, E24
0	R 79	57.60.1680		68R	MF, 1%, 0204, E24
0	R 80	57.60.1680		68R	MF, 1%, 0204, E24
0	R 81	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 82	57.60.1101		100R	MF, 1%, 0204, E24
0	R 83	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 84	57.60.1101		100R	MF, 1%, 0204, E24
0	R 85	57.60.1393		39k	MF, 1%, 0204, E24
0	R 86	57.60.1123		12k	MF, 1%, 0204, E24
0	R 87	57.60.1104		100k	MF, 1%, 0204, E24
0	R 88	57.60.1123		12k	MF, 1%, 0204, E24
0	R 89	57.60.1104		100k	MF, 1%, 0204, E24
0	R 90	57.60.1513		51k	MF, 1%, 0204, E24
0	R 91	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 92	57.60.1104		100k	MF, 1%, 0204, E24
0	R 93	57.60.1104		100k	MF, 1%, 0204, E24
0	R 94	57.60.1223		22k	MF, 1%, 0204, E24
0	R 95	57.60.1223		22k	MF, 1%, 0204, E24
0	R 96	57.60.1000		0R0	MF, 0204
0	RA 1	58.01.9503		50k	Cermet, 10%, 0.5W, vertical
0	RA 2	58.01.9503		50k	Cermet, 10%, 0.5W, vertical
0	RA 3	58.01.9503		50k	Cermet, 10%, 0.5W, vertical
0	RA 4	58.01.9503		50k	Cermet, 10%, 0.5W, vertical
0	RA 5	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 6	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 7	58.01.9103		10k	Cermet, 10%, 0.5W, vertical

End of List

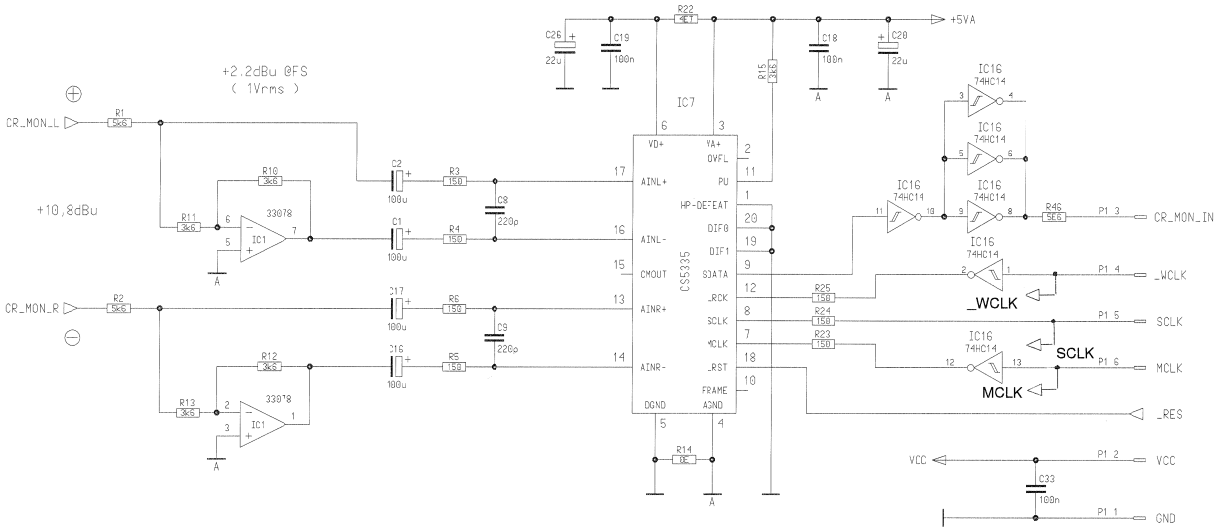
Comments:

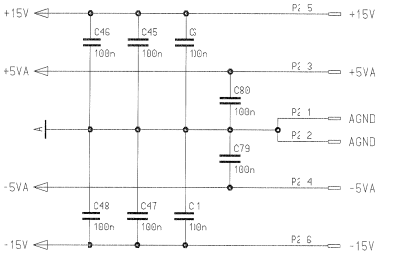
CR Monitor D-Sub 1.942.129.00

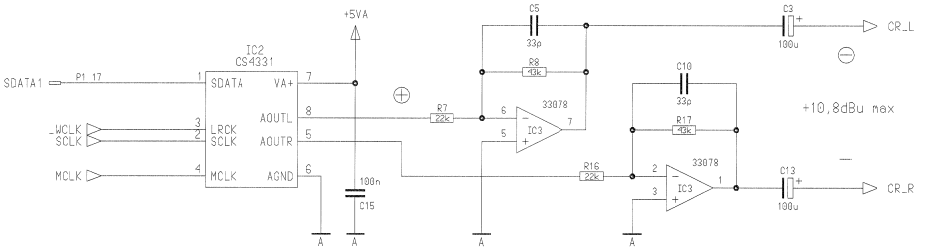


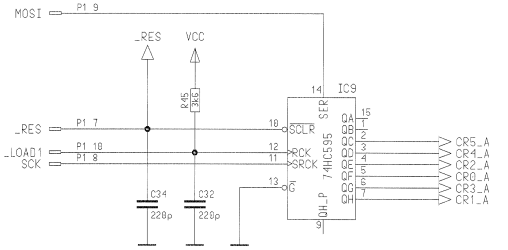
Erstellt 18.10.2000 PZ

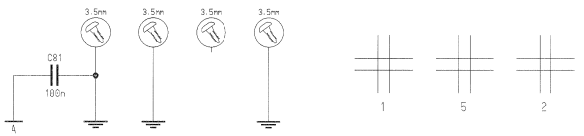
CR Monitor D-Sub 1.942.129.00



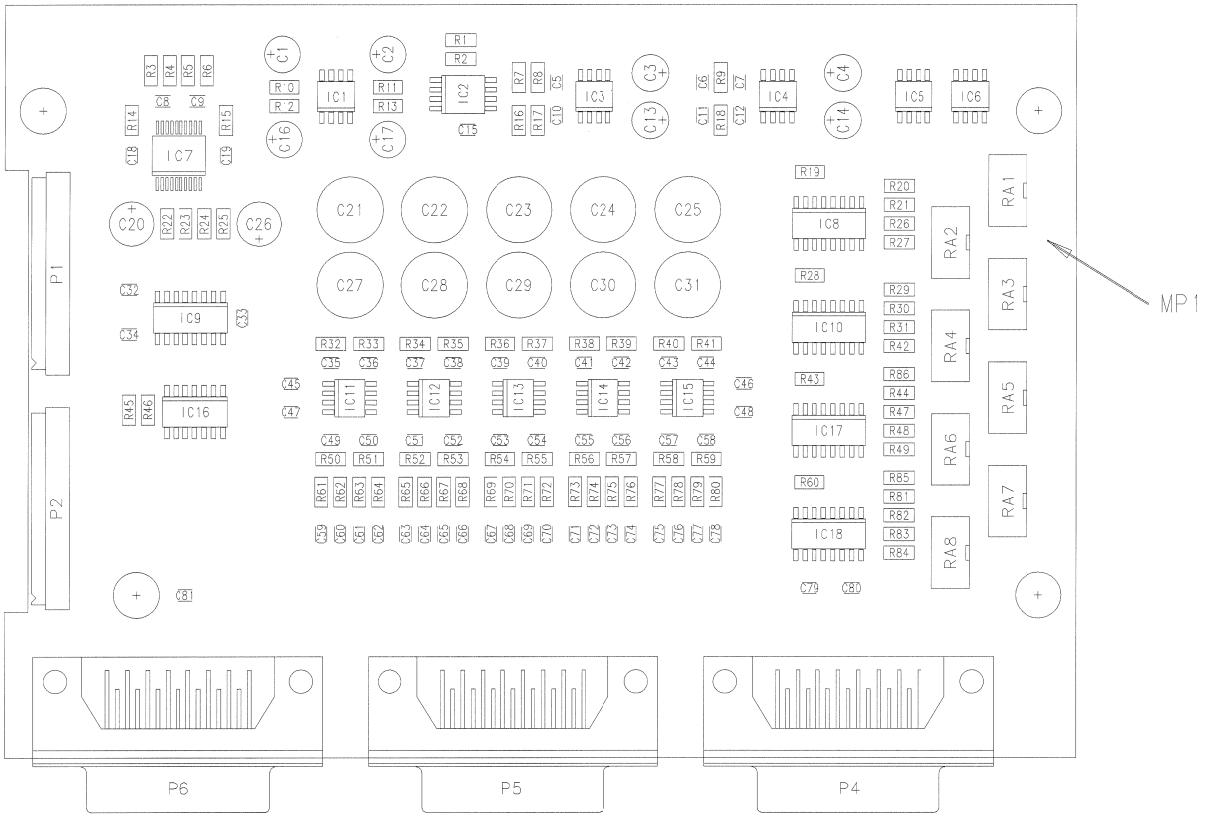








CR Monitor D-Sub 1.942.129.00



Edition Ausgabe	18.10.2000	PZ	PG	RL	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page: Seite:		1 / 1			
STUDER REGENSDORF	Description Benennung: CR MONITOR D-SUB, ESE	Z	Number: Nummer: 1.942.129.00		

Idx	Pos	Part No.	Qty.	Type/Val.	Description
0	C 1	59.22.4002		100u	EL 16V 20% RM5
0	C 2	59.22.4002		100u	EL 16V 20% RM5
0	C 3	59.22.4002		100u	EL 16V 20% RM5
0	C 4	59.22.4002		100u	EL 16V 20% RM5
0	C 5	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 8	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 9	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 1(	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 1'	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 1;	59.60.2337		33p	CER 50V, 5%, C0G, 0805
0	C 1<	59.22.4002		100u	EL 16V 20% RM5
0	C 1=	59.22.4002		100u	EL 16V 20% RM5
0	C 1>	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 1?	59.22.4002		100u	EL 16V 20% RM5
0	C 1@	59.22.4002		100u	EL 16V 20% RM5
0	C 1A	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 1B	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 2C	59.22.5220		22u	EL 25V 20% RM5
0	C 2D	59.99.2401		47u	BIP 16V 10%
0	C 2E	59.99.2401		47u	BIP 16V 10%
0	C 2F	59.99.2401		47u	BIP 16V 10%
0	C 2G	59.99.2401		47u	BIP 16V 10%
0	C 2H	59.99.2401		47u	BIP 16V 10%
0	C 2I	59.22.5220		22u	EL 25V 20% RM5
0	C 2J	59.99.2401		47u	BIP 16V 10%
0	C 2K	59.99.2401		47u	BIP 16V 10%
0	C 2L	59.99.2401		47u	BIP 16V 10%
0	C 2M	59.99.2401		47u	BIP 16V 10%
0	C 3	59.99.2401		47u	BIP 16V 10%
0	C 3C	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 3D	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 3E	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 3F	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3G	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3H	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3I	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3J	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3K	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3L	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 3M	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4C	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4D	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4E	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4F	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4G	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4H	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4I	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4J	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4K	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4L	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 4M	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5C	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5D	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5E	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5F	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5G	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5H	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5I	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5J	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5K	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5L	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 5M	59.60.2361		330p	CER 50V, 5%, C0G, 0805
0	C 6	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6C	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6D	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6E	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6F	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6G	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6H	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6I	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6J	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6K	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6L	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 6M	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7C	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7D	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7E	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7F	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7G	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7H	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7I	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7J	59.60.2357		220p	CER 50V, 5%, C0G, 0805
0	C 7K	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8(	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8C	59.60.3337		100n	CER 50V, 10%, X7R, 0805

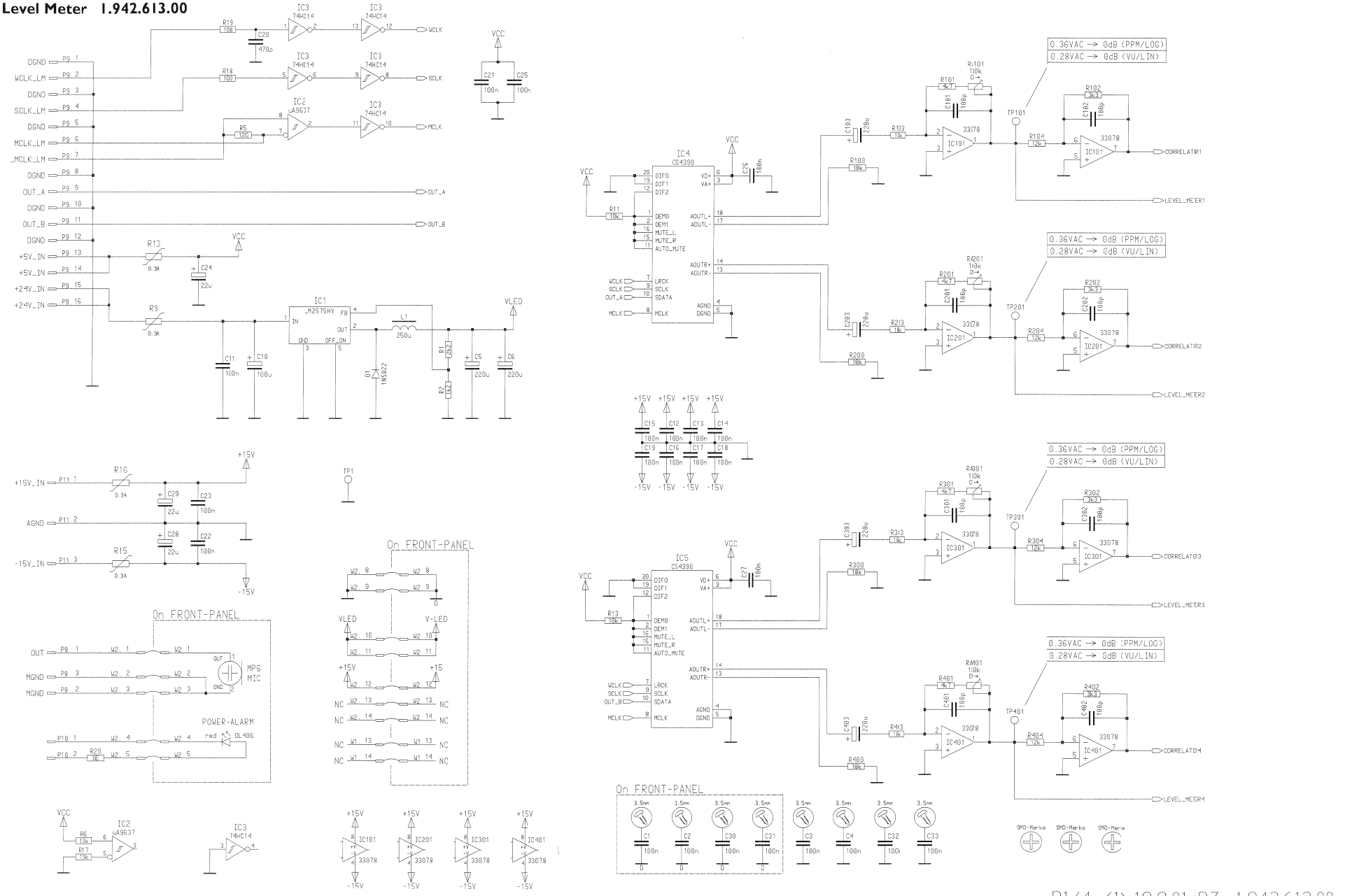
CR Monitor D-Sub 1.942.129.00

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 1	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 2	50.61.8003		CS4331	D/A Converter 18bit Ste SO 8
0	IC 3	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 4	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 5	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 6	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 7	50.61.8103		CS5360	A/D Converter 24bit Ste SSOP20
0	IC 8	50.62.8053		HC4053	Tripple 2ch analog muxdemux
0	IC 9	50.62.1595		74HC595	8bit shift/output register
0	IC 10	50.62.8053		HC4053	Tripple 2ch analog muxdemux
0	IC 11	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 12	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 13	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 14	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 15	50.61.0204		MC33078	Dual Op-Amp low noise
0	IC 16	50.62.1014		74HC 14	Hex Schmitt trigger inverter
0	IC 17	50.62.8053		HC4053	Tripple 2ch analog muxdemux
0	IC 18	50.62.8053		HC4053	Tripple 2ch analog muxdemux
0	MP 1	1.942.129.11	1 pce		CR MONITOR IN D-SUB PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.129.10	1 pce		NR. ETIKETTE 5X20
0	P 1	54.14.5540		20p	PCB-Buchse winkel
0	P 2	54.14.5540		20p	PCB-Buchse winkel
0	P 4	54.13.0072		15p	D-Sub, PCB, Winkel
0	P 5	54.13.0072		15p	D-Sub, PCB, Winkel
0	P 6	54.13.0072		15p	D-Sub, PCB, Winkel
0	R 1	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 2	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 3	57.60.1151		150R	MF, 1%, 0204, E24
0	R 4	57.60.1151		150R	MF, 1%, 0204, E24
0	R 5	57.60.1151		150R	MF, 1%, 0204, E24
0	R 6	57.60.1151		150R	MF, 1%, 0204, E24
0	R 7	57.60.1223		22k	MF, 1%, 0204, E24
0	R 8	57.60.1433		43k	MF, 1%, 0204, E24
0	R 9	57.60.1223		22k	MF, 1%, 0204, E24
0	R 10	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 11	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 12	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 13	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 14	57.60.1000		0R0	MF, 0204
0	R 15	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 16	57.60.1223		22k	MF, 1%, 0204, E24
0	R 17	57.60.1433		43k	MF, 1%, 0204, E24
0	R 18	57.60.1223		22k	MF, 1%, 0204, E24
0	R 19	57.60.1223		22k	MF, 1%, 0204, E24
0	R 20	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 21	57.60.1113		11k	MF, 1%, 0204, E24
0	R 22	57.60.1479		4R7	MF, 1%, 0204, E24
0	R 23	57.60.1151		150R	MF, 1%, 0204, E24
0	R 24	57.60.1151		150R	MF, 1%, 0204, E24
0	R 25	57.60.1151		150R	MF, 1%, 0204, E24
0	R 26	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 27	57.60.1113		11k	MF, 1%, 0204, E24
0	R 28	57.60.1223		22k	MF, 1%, 0204, E24
0	R 29	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 30	57.60.1113		11k	MF, 1%, 0204, E24
0	R 31	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 32	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 33	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 34	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 35	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 36	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 37	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 38	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 39	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 40	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 41	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 42	57.60.1113		11k	MF, 1%, 0204, E24
0	R 43	57.60.1223		22k	MF, 1%, 0204, E24
0	R 44	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 45	57.60.1362		3k6	MF, 1%, 0204, E24
0	R 46	57.60.1569		5R6	MF, 1%, 0204, E24
0	R 47	57.60.1113		11k	MF, 1%, 0204, E24
0	R 48	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 49	57.60.1113		11k	MF, 1%, 0204, E24
0	R 50	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 51	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 52	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 53	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 54	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 55	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 56	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 57	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 58	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 59	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 60	57.60.1223		22k	MF, 1%, 0204, E24
0	R 61	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 62	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 63	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 64	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 65	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 66	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 67	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 68	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 69	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 70	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 71	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 72	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 73	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 74	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 75	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 76	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 77	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 78	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 79	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 80	57.60.1562		5k6	MF, 1%, 0204, E24
0	R 81	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 82	57.60.1113		11k	MF, 1%, 0204, E24
0	R 83	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 84	57.60.1113		11k	MF, 1%, 0204, E24
0	R 85	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 86	57.60.1472		4k7	MF, 1%, 0204, E24
0	RA 1	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 2	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 3	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 4	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 5	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 6	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 7	58.01.9103		10k	Cermet, 10%, 0.5W, vertical
0	RA 8	58.01.9103		10k	Cermet, 10%, 0.5W, vertical

End of List

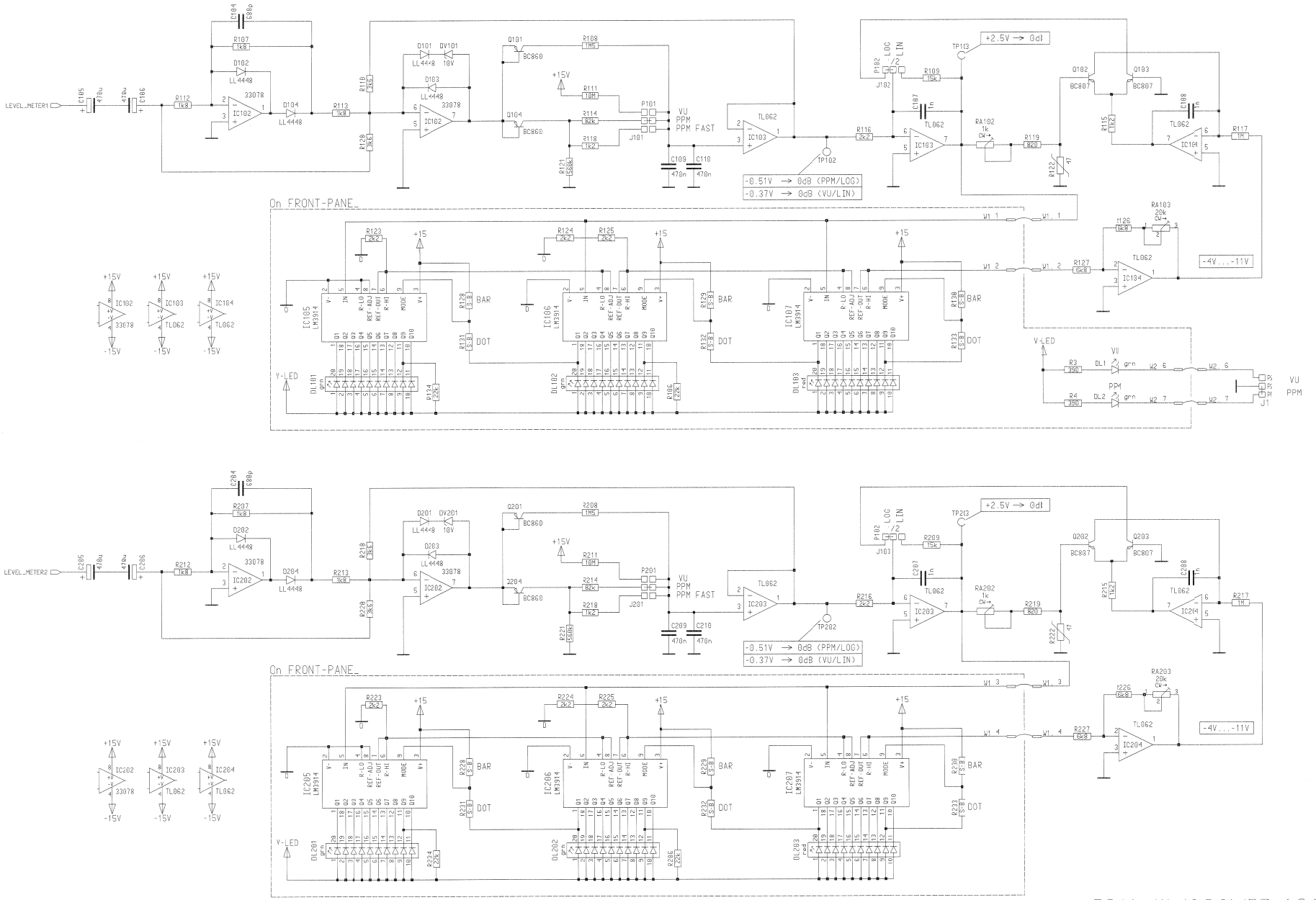
Comments:

Level Meter 1.942.613.00

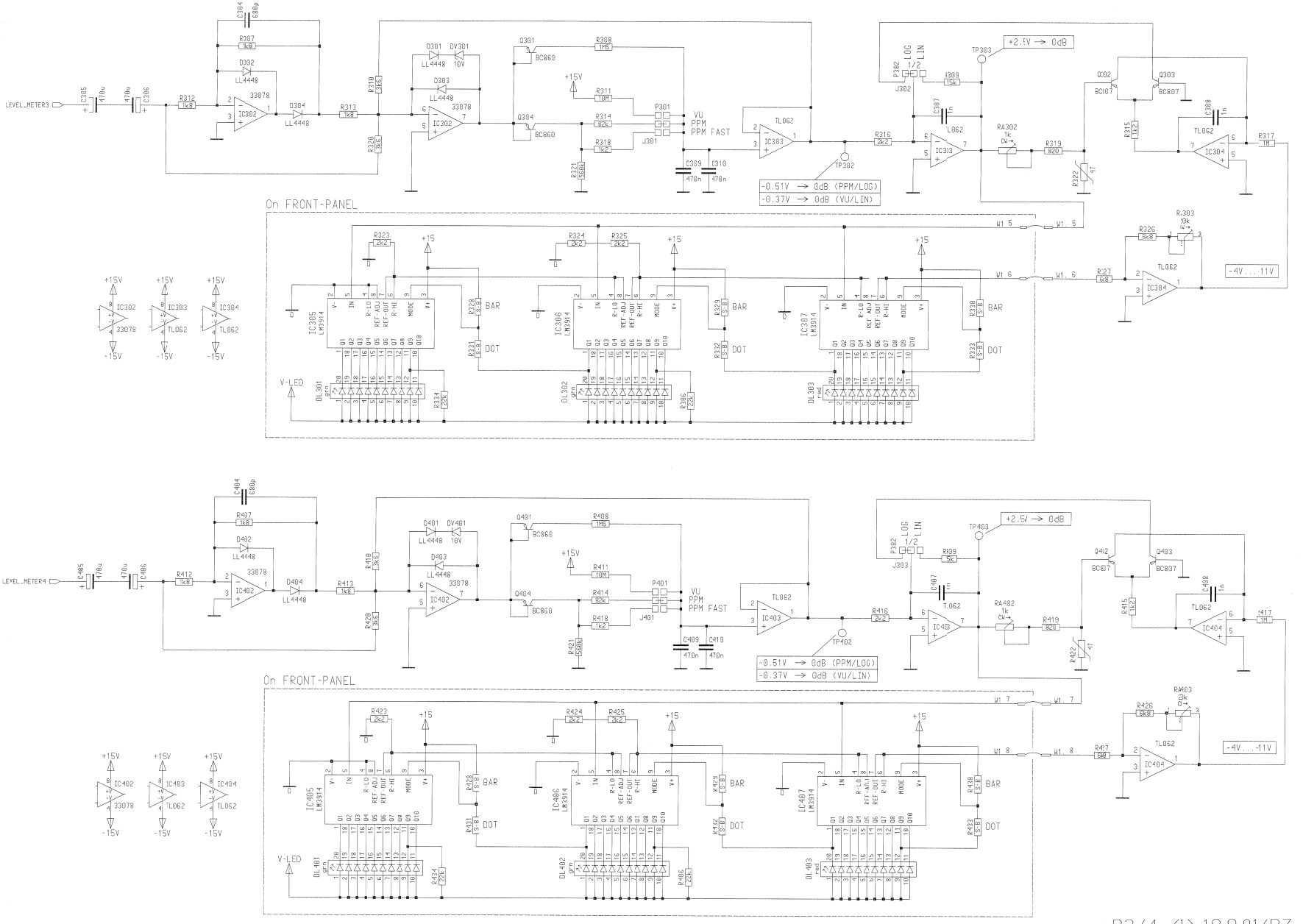


P1/4, (1) 18.9.01/PZ 1.942.613.00

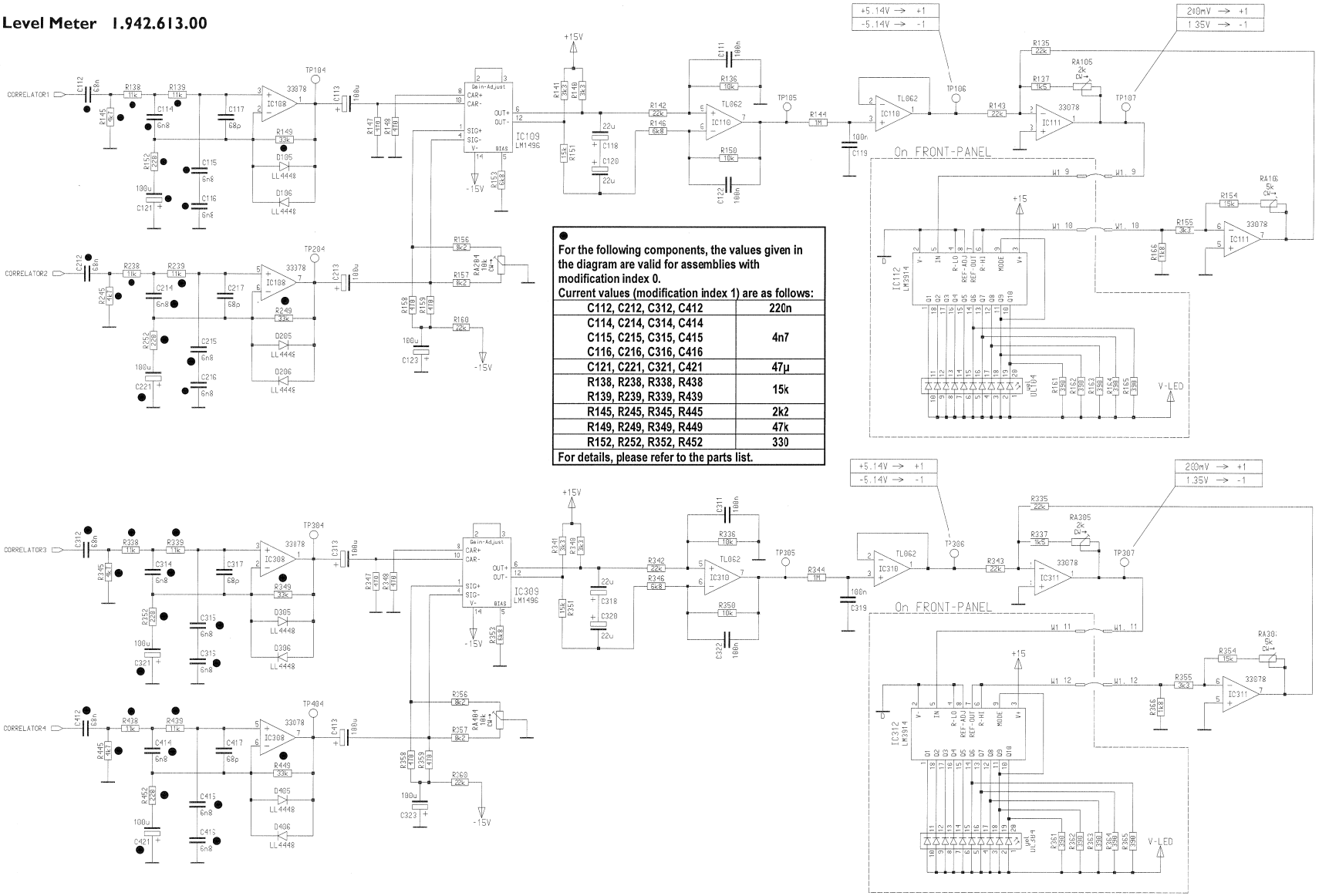
Level Meter 1.942.613.00



Level Meter 1.942.613.00



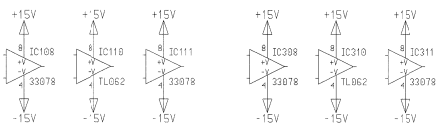
Level Meter 1.942.613.00



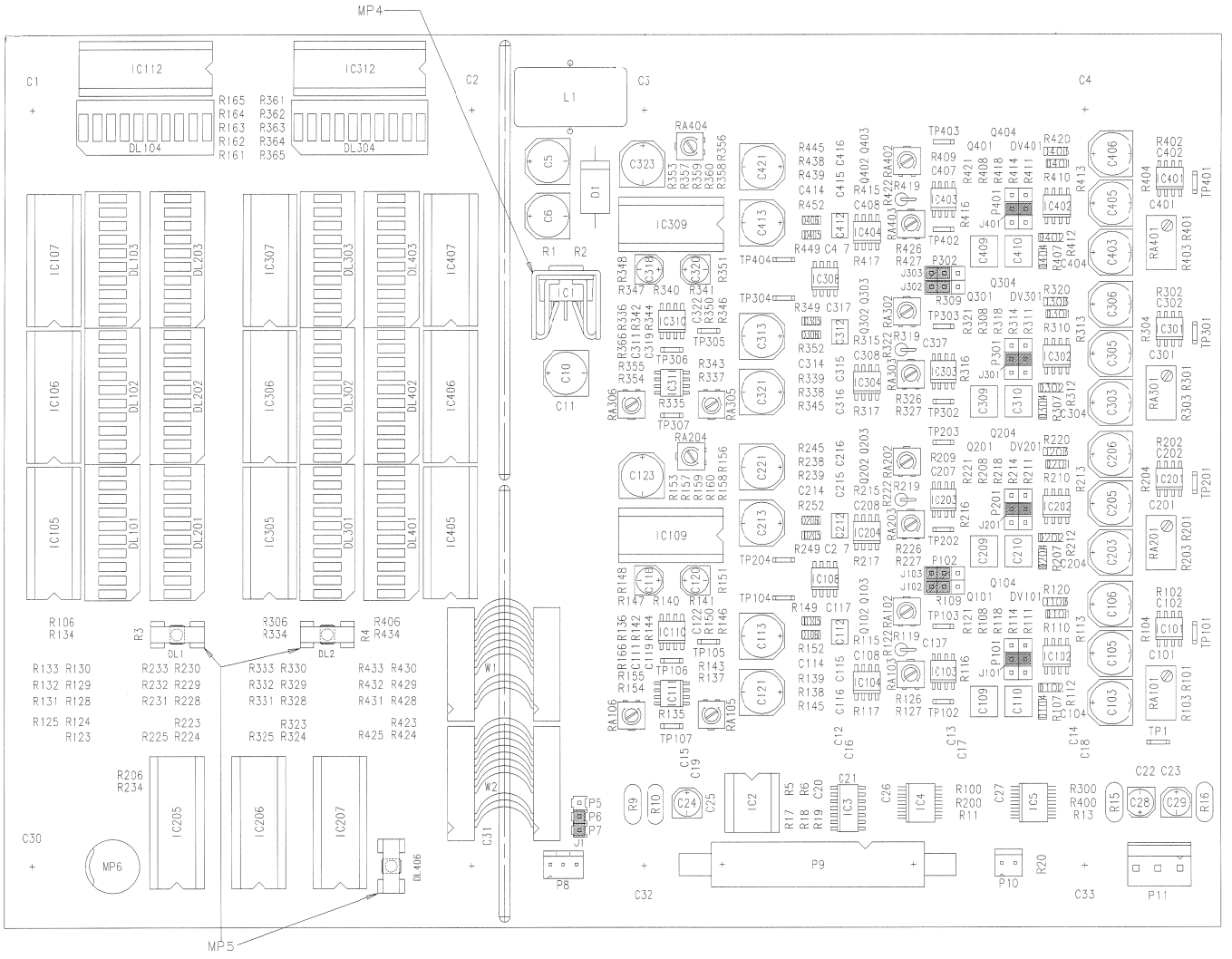
For the following components, the values given in the diagram are valid for assemblies with modification index 0.
Current values (modification index 1) are as follows:

C112, C212, C312, C412	220n
C114, C214, C314, C414 C115, C215, C315, C415 C116, C216, C316, C416	4n7
C121, C221, C321, C421	47µ
R138, R238, R338, R438 R139, R239, R339, R439	15k
R145, R245, R345, R445	2k2
R149, R249, R349, R449	47k
R152, R252, R352, R452	330

For details, please refer to the parts list.



Level Meter 1.942.613.00



Edition Ausgabe	10.11.2000	ZT	PG	HW	0
	Date Datum	Visa Gez	Checked Gepr	Seen Ges	Index
Page: Seite:	1 / 1				

STUDER REGENSDORF

Description Bezeichnung: LEVEL METER BOARD, ESE

Number Nummer: Z 1.942.613.00

LEVEL METER 1.942.613.00 (1)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 2	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 3	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 4	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 5	59.68.0073	1 pce	220u	EL 16V, 8.0*10.7
0	C 6	59.68.0073	1 pce	220u	EL 16V, 8.0*10.7
0	C 10	59.68.0115	1 pce	100u	EL 35V, 8.0*10.7
0	C 11	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 12	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 14	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 15	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 16	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 17	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 18	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 20	59.60.2365	1 pce	470p	CER 50V, 5%, C0G, 0805
0	C 21	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 22	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 23	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 24	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
0	C 25	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 26	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 27	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 28	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
0	C 29	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
0	C 30	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 31	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 32	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 33	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 101	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 102	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 103	59.68.0031	1 pce	220u	EL 6V, 8.0*6.3
0	C 104	59.60.2369	1 pce	680p	CER 50V, 5%, C0G, 0805
0	C 105	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 106	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 107	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
0	C 108	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
1	C 109	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 110	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
0	C 111	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
1	C 112	59.60.3741	1 pce	220n	CER 50V, 10%, X7R, 1812
0	C 113	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
1	C 114	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 115	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 116	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
0	C 117	59.60.2245	1 pce	68p	CER 50V, 5%, C0G, 0603
0	C 118	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
0	C 119	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 120	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
1	C 121	59.68.0113	1 pce	47u	EL 35V, 8.0*6.3
0	C 122	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 123	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
0	C 201	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 202	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 203	59.68.0031	1 pce	220u	EL 6V, 8.0*6.3
0	C 204	59.60.2369	1 pce	680p	CER 50V, 5%, C0G, 0805
0	C 205	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 206	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 207	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
0	C 208	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
1	C 209	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 210	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 212	59.60.3741	1 pce	220n	CER 50V, 10%, X7R, 1812
0	C 213	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
1	C 214	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 215	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 216	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
0	C 217	59.60.2245	1 pce	68p	CER 50V, 5%, C0G, 0603
1	C 221	59.68.0113	1 pce	47u	EL 35V, 8.0*6.3
0	C 301	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 302	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 303	59.68.0031	1 pce	220u	EL 6V, 8.0*6.3
0	C 304	59.60.2369	1 pce	680p	CER 50V, 5%, C0G, 0805
0	C 305	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 306	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 307	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
0	C 308	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
1	C 309	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 310	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
0	C 311	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
1	C 312	59.60.3741	1 pce	220n	CER 50V, 10%, X7R, 1812
0	C 313	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
1	C 314	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 315	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 316	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
0	C 317	59.60.2245	1 pce	68p	CER 50V, 5%, C0G, 0603
0	C 318	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
0	C 319	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 320	59.68.0067	1 pce	22u	EL 16V, 5.0*5.7
1	C 321	59.68.0113	1 pce	47u	EL 35V, 8.0*6.3
0	C 322	59.60.3337	1 pce	100n	CER 50V, 10%, X7R, 0805
0	C 323	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
0	C 401	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 402	59.60.2249	1 pce	100p	CER 50V, 5%, C0G, 0603
0	C 403	59.68.0031	1 pce	220u	EL 6V, 8.0*6.3
0	C 404	59.60.2369	1 pce	680p	CER 50V, 5%, C0G, 0805
0	C 405	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 406	59.68.0033	1 pce	470u	EL 6V, 8.0*10.7
0	C 407	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
0	C 408	59.60.2373	1 pce	1n0	CER 50V, 5%, C0G, 0805
1	C 409	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 410	59.60.3845	1 pce	470n	CER 50V, 10%, X7R, 2220
1	C 412	59.60.3741	1 pce	220n	CER 50V, 10%, X7R, 1812
0	C 413	59.68.0071	1 pce	100u	EL 16V, 8.0*6.3
1	C 414	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 415	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
1	C 416	59.60.3421	1 pce	4n7	CER 50V, 10%, X7R, 1206
0	C 417	59.60.2245	1 pce	68p	CER 50V, 5%, C0G, 0603
1	C 421	59.68.0113	1 pce	47u	EL 35V, 8.0*6.3
0	D 1	50.04.0519	1 pce	1N5822	3A, Schottky
0	D 101	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 102	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 103	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 104	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 105	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 106	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 201	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 202	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 203	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 204	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 205	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 206	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 301	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 302	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 303	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 304	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 305	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 306	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 401	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 402	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 403	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 404	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 405	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	D 406	50.60.8001	1 pce	4448	200mA 75V 4ns SOD 80
0	DL 1	50.60.9414	1 pce	gm	SMD LED 2.7*3.5
0	DL 2	50.60.9414	1 pce	gm	SMD LED 2.7*3.5
0	DL 101	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 102	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 103	50.04.2150	1 pce	MV57164	10*LED-Bargraf rot diffus
0	DL 104	50.04.2815	1 pce	10*yel	LED-Bargraph 10*yellow
0	DL 201	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 202	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 203	50.04.2150	1 pce	MV57164	10*LED-Bargraf rot diffus
0	DL 301	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 302	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 303	50.04.2150	1 pce	MV57164	10*LED-Bargraf rot diffus
0	DL 304	50.04.2815	1 pce	10*yel	LED-Bargraph 10*yellow
0	DL 401	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 402	50.04.2806	1 pce	DC10SGWA	LED-Bargraph 10*gn
0	DL 403	50.04.2150	1 pce	MV57164	10*LED-Bargraf rot diffus
0	DL 406	50.60.9412	1 pce	red	SMD LED 2.7*3.5
0	DV 101	50.60.9017	1 pce	10V	5%, 0.2W, SOT 23
0	DV 201	50.60.9017	1 pce	10V	5%, 0.2W, SOT 23
0	DV 301	50.60.9017	1 pce	10V	5%, 0.2W, SOT 23
0	DV 401	50.60.9017	1 pce	10V	5%, 0.2W, SOT 23
0	IC 1	50.10.0121	1 pce	LM2575HV	5V, 1A Switching Reg
0	IC 2	50.15.0114	1 pce	9637	Dual diff Line Receiver
0	IC 3	50.62.1014	1 pce	74HC 14	Hex Schmitt trigger inverter
0	IC 4	50.61.8004	1 pce	CS4390	D/A Converter 24bit Ste SO 20
0	IC 5	50.61.8004	1 pce	CS4390	D/A Converter 24bit Ste SO 20
0	IC 101	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 102	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 103	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 104	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 105	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 106	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 107	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 108	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 109	50.11.0110	1 pce		IC MC 1496 L, LM 1496 N
0	IC 110	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 111	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 112	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 201	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise

LEVEL METER 1.942.613.00 (1)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	IC 202	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 203	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 204	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 205	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 206	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 207	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 301	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 302	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 303	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 304	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 305	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 306	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 307	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 308	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 309	50.11.0110	1 pce		IC MC 1496 L, LM 1496 N
0	IC 310	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 311	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 312	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 401	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 402	50.61.0204	1 pce	MC33078	Dual Op-Amp low noise
0	IC 403	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 404	50.61.0201	1 pce	TL062	Dual FET Op-Amp
0	IC 405	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 406	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	IC 407	50.11.0119	1 pce	LM3914	IC LM 3914 N,
0	J 1	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 101	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 102	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 103	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 201	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 301	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 302	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 303	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	J 401	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	L 1	62.03.0025	1 pce	250uH	2A Toroid Chocke
0	MP 1	1.942.613.12	1 pce		LEVEL METER PCB
0	MP 2	1.942.613.10	1 pce		NR.ETIKETTE
0	MP 3	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 4	50.20.3011	1 pce		Kühlkörper, TO 220, vertikal
0	MP 5	50.60.9411	3 pcs	d3	Lichtleiter rund für LED
0	MP 6	89.01.3450	1 pce	Mic	Elektret-Kapsel mit Stiften
1	MP 7	43.10.0110	1 pce	A	Revisions-Etikette 5mm h'blau
0	P 5	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 6	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 7	54.01.0020	1 pce	1p	Pin, 1reihig, gerade
0	P 8	54.12.0703	1 pce	3p	Stecker gerade PCB
0	P 9	54.14.2052	1 pce	16p	Stecker gerade Au
0	P 10	54.12.0702	1 pce	2p	Stecker gerade PCB
0	P 11	54.12.0503	1 pce	3p	Power-Pin Stecker
0	P 101	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	P 102	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	P 201	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	P 301	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	P 302	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	P 401	54.11.0136	1 pce	2*3p	Pin 0.63*0.63, RM2.54
0	Q 101	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 102	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 103	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 104	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 201	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 202	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 203	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 204	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 301	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 302	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 303	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 304	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 401	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	Q 402	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 403	50.60.1050	1 pce	BC807-25	PNP 45V 800mA SOT 23
0	Q 404	50.60.1002	1 pce	BC860C	PNP 45V 100mA SOT 23
0	R 1	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 2	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 3	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 4	57.60.1391	1 pce	390R	MF, 1%, 0204, E24
0	R 5	57.60.1121	1 pce	120R	MF, 1%, 0204, E24
0	R 6	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 9	57.92.7012	1 pce	0.3A	PTC 60V
0	R 10	57.92.7012	1 pce	0.3A	PTC 60V
0	R 11	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 13	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 15	57.92.7012	1 pce	0.3A	PTC 60V
0	R 16	57.92.7012	1 pce	0.3A	PTC 60V
0	R 17	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 18	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 19	57.60.1101	1 pce	100R	MF, 1%, 0204, E24
0	R 20	57.60.1000	1 pce	0R0	MF, 0204
0	R 100	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 101	57.60.1472	1 pce	4k7	MF, 1%, 0204, E24
0	R 102	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 103	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 104	57.60.1123	1 pce	12k	MF, 1%, 0204, E24
0	R 106	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 107	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 108	57.60.1155	1 pce	1M5	MF, 1%, 0204, E24
0	R 109	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 110	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 111	57.60.1106	1 pce	10M	MF, 1%, 0204, E24
0	R 112	57.60.1102	1 pce	1k0	MF, 1%, 0204, E24
0	R 113	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 114	57.60.1823	1 pce	82k	MF, 1%, 0204, E24
0	R 115	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 116	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 117	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
0	R 118	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 119	57.60.1821	1 pce	820R	MF, 1%, 0204, E24
0	R 120	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 121	57.60.1564	1 pce	560k	MF, 1%, 0204, E24
0	R 122	57.99.0252	1 pce	47	MF 10%, +4500ppm
0	R 123	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 124	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 125	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 126	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 127	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 128	57.60.1000	1 pce	0R0	MF, 0204
0	R 129	57.60.1000	1 pce	0R0	MF, 0204
0	R 130	57.60.1000	1 pce	0R0	MF, 0204
0	R 131	not used	1 pce	0R0	MF, 0204
0	R 132	not used	1 pce	0R0	MF, 0204
0	R 133	not used	1 pce	0R0	MF, 0204
0	R 134	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 135	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 136	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 137	57.60.1152	1 pce	1k5	MF, 1%, 0204, E24
1	R 138	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 139	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 140	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 141	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 142	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 143	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 144	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
1	R 145	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 146	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 147	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 148	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
1	R 149	57.60.1473	1 pce	47k	MF, 1%, 0204, E24
0	R 150	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 151	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 152	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 153	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 154	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 155	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 156	57.60.1822	1 pce	8k2	MF, 1%, 0204, E24
0	R 157	57.60.1822	1 pce	8k2	MF, 1%, 0204, E24
0	R 158	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 159	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 160	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 161	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 162	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 163	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 164	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 165	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 166	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 200	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 201	57.60.1472	1 pce	4k7	MF, 1%, 0204, E24
0	R 202	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 203	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 204	57.60.1123	1 pce	12k	MF, 1%, 0204, E24
0	R 206	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 207	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 208	57.60.1155	1 pce	1M5	MF, 1%, 0204, E24
0	R 209	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 210	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 211	57.60.1106	1 pce	10M	MF, 1%, 0204, E24
0	R 212	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 213	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 214	57.60.1823	1 pce	82k	MF, 1%, 0204, E24
0	R 215	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 216	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 217	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
0	R 218	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 219	57.60.1821	1 pce	820R	MF, 1%, 0204, E24
0	R 220	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 221	57.60.1564	1 pce	560k	MF, 1%, 0204, E24

LEVEL METER 1.942.613.00 (1)

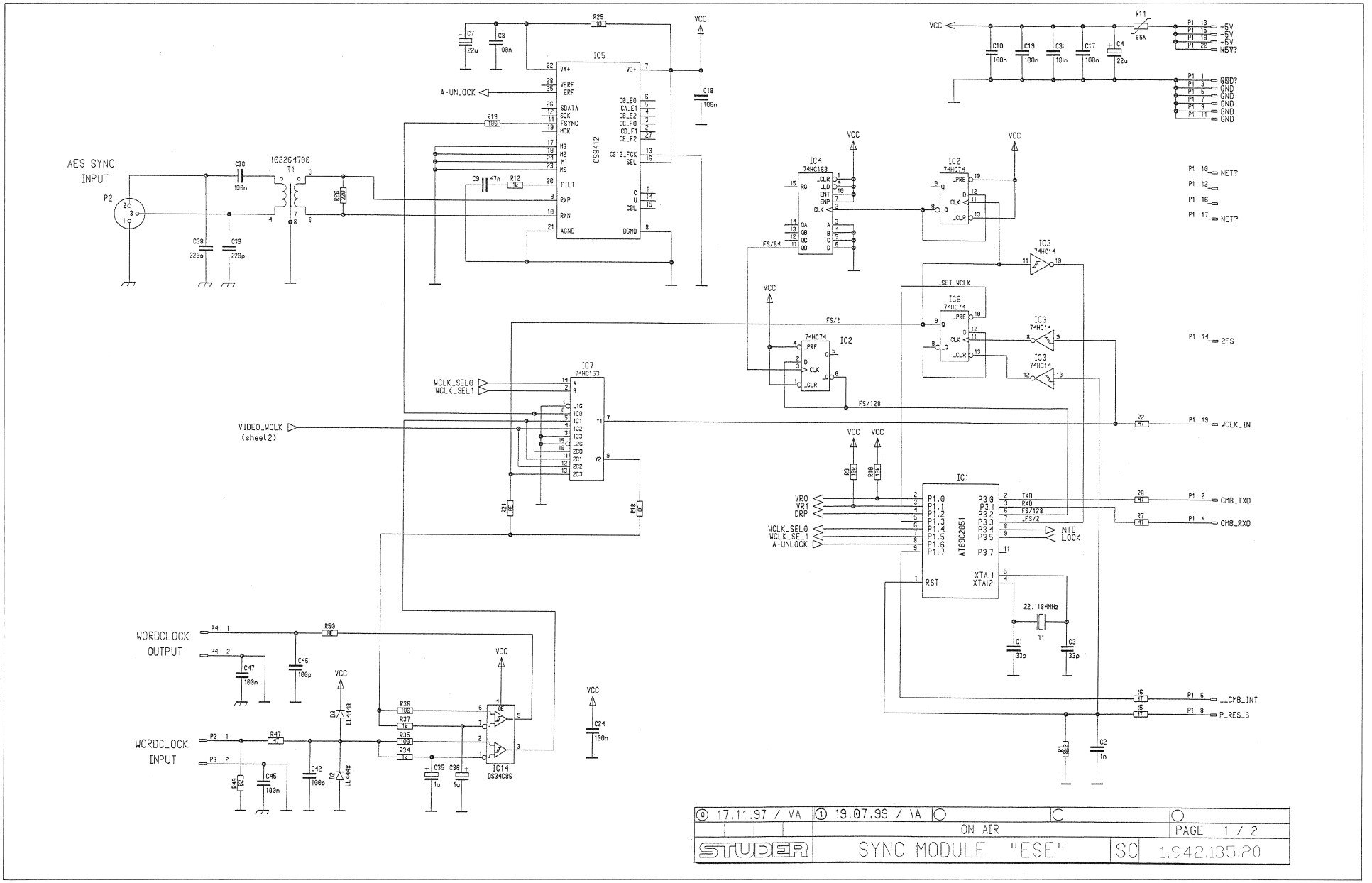
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 222	57.99.0252	1 pce	47	MF 10%, +4500ppm
0	R 223	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 224	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 225	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 226	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 227	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 228	57.60.1000	1 pce	0R0	MF, 0204
0	R 229	57.60.1000	1 pce	0R0	MF, 0204
0	R 230	57.60.1000	1 pce	0R0	MF, 0204
0	R 231	not used	1 pce	0R0	MF, 0204
0	R 232	not used	1 pce	0R0	MF, 0204
0	R 233	not used	1 pce	0R0	MF, 0204
0	R 234	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
1	R 238	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 239	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 245	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
1	R 249	57.60.1473	1 pce	47k	MF, 1%, 0204, E24
1	R 252	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 300	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 301	57.60.1472	1 pce	4k7	MF, 1%, 0204, E24
0	R 302	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 303	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 304	57.60.1123	1 pce	12k	MF, 1%, 0204, E24
0	R 306	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 307	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 308	57.60.1155	1 pce	1M5	MF, 1%, 0204, E24
0	R 309	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 310	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 311	57.60.1106	1 pce	10M	MF, 1%, 0204, E24
0	R 312	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 313	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 314	57.60.1823	1 pce	82k	MF, 1%, 0204, E24
0	R 315	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 316	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 317	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
0	R 318	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 319	57.60.1821	1 pce	820R	MF, 1%, 0204, E24
0	R 320	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 321	57.60.1564	1 pce	560k	MF, 1%, 0204, E24
0	R 322	57.99.0252	1 pce	47	MF 10%, +4500ppm
0	R 323	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 324	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 325	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 326	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 327	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 328	57.60.1000	1 pce	0R0	MF, 0204
0	R 329	57.60.1000	1 pce	0R0	MF, 0204
0	R 330	57.60.1000	1 pce	0R0	MF, 0204
0	R 331	not used	1 pce	0R0	MF, 0204
0	R 332	not used	1 pce	0R0	MF, 0204
0	R 333	not used	1 pce	0R0	MF, 0204
0	R 334	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 335	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 336	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 337	57.60.1152	1 pce	1k5	MF, 1%, 0204, E24
1	R 338	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 339	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 340	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 341	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 342	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 343	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 344	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
1	R 345	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 346	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 347	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 348	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
1	R 349	57.60.1473	1 pce	47k	MF, 1%, 0204, E24
0	R 350	57.60.1103	1 pce	10k	MF, 1%, 0204, E24
0	R 351	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 352	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	R 353	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 354	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 355	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 356	57.60.1822	1 pce	8k2	MF, 1%, 0204, E24
0	R 357	57.60.1822	1 pce	8k2	MF, 1%, 0204, E24
0	R 358	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 359	57.60.1471	1 pce	470R	MF, 1%, 0204, E24
0	R 360	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 361	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 362	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 363	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 364	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 365	not used	1 pce	390R	MF, 1%, 0204, E24
0	R 366	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 400	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 401	57.60.1472	1 pce	4k7	MF, 1%, 0204, E24
0	R 402	57.60.1332	1 pce	3k3	MF, 1%, 0204, E24
0	R 403	57.60.1183	1 pce	18k	MF, 1%, 0204, E24
0	R 404	57.60.1123	1 pce	12k	MF, 1%, 0204, E24
0	R 406	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
0	R 407	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 408	57.60.1155	1 pce	1M5	MF, 1%, 0204, E24
0	R 409	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
0	R 410	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 411	57.60.1106	1 pce	10M	MF, 1%, 0204, E24
0	R 412	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 413	57.60.1182	1 pce	1k8	MF, 1%, 0204, E24
0	R 414	57.60.1823	1 pce	82k	MF, 1%, 0204, E24
0	R 415	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 416	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 417	57.60.1105	1 pce	1M	MF, 1%, 0204, E24
0	R 418	57.60.1122	1 pce	1k2	MF, 1%, 0204, E24
0	R 419	57.60.1821	1 pce	820R	MF, 1%, 0204, E24
0	R 420	57.60.1362	1 pce	3k6	MF, 1%, 0204, E24
0	R 421	57.60.1564	1 pce	560k	MF, 1%, 0204, E24
0	R 422	57.99.0252	1 pce	47	MF 10%, +4500ppm
0	R 423	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 424	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 425	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
0	R 426	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 427	57.60.1682	1 pce	6k8	MF, 1%, 0204, E24
0	R 428	57.60.1000	1 pce	0R0	MF, 0204
0	R 429	57.60.1000	1 pce	0R0	MF, 0204
0	R 430	57.60.1000	1 pce	0R0	MF, 0204
0	R 431	not used	1 pce	0R0	MF, 0204
0	R 432	not used	1 pce	0R0	MF, 0204
0	R 433	not used	1 pce	0R0	MF, 0204
0	R 434	57.60.1223	1 pce	22k	MF, 1%, 0204, E24
1	R 438	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 439	57.60.1153	1 pce	15k	MF, 1%, 0204, E24
1	R 445	57.60.1222	1 pce	2k2	MF, 1%, 0204, E24
1	R 449	57.60.1473	1 pce	47k	MF, 1%, 0204, E24
1	R 452	57.60.1331	1 pce	330R	MF, 1%, 0204, E24
0	RA 101	58.05.1104	1 pce	100k	10%, 0.5W, Cermet
0	RA 102	58.60.0113	1 pce	1k0	SMD 20%, 0.25W, Cermet
0	RA 103	58.60.0121	1 pce	20k	SMD 20%, 0.25W, Cermet
0	RA 105	58.60.0115	1 pce	2k0	SMD 20%, 0.25W, Cermet
0	RA 106	58.60.0117	1 pce	5k0	SMD 20%, 0.25W, Cermet
0	RA 201	58.05.1104	1 pce	100k	10%, 0.5W, Cermet
0	RA 202	58.60.0113	1 pce	1k0	SMD 20%, 0.25W, Cermet
0	RA 203	58.60.0121	1 pce	20k	SMD 20%, 0.25W, Cermet
0	RA 204	58.60.0119	1 pce	10k	SMD 20%, 0.25W, Cermet
0	RA 301	58.05.1104	1 pce	100k	10%, 0.5W, Cermet
0	RA 302	58.60.0113	1 pce	1k0	SMD 20%, 0.25W, Cermet
0	RA 303	58.60.0121	1 pce	20k	SMD 20%, 0.25W, Cermet
0	RA 305	58.60.0115	1 pce	2k0	SMD 20%, 0.25W, Cermet
0	RA 306	58.60.0117	1 pce	5k0	SMD 20%, 0.25W, Cermet
0	RA 401	58.05.1104	1 pce	100k	10%, 0.5W, Cermet
0	RA 402	58.60.0113	1 pce	1k0	SMD 20%, 0.25W, Cermet
0	RA 403	58.60.0121	1 pce	20k	SMD 20%, 0.25W, Cermet
0	RA 404	58.60.0119	1 pce	10k	SMD 20%, 0.25W, Cermet
0	TP 1	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 101	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 102	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 103	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 104	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 105	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 106	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 107	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 201	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 202	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 203	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 204	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 301	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 302	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 303	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 304	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 305	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 306	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 307	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 401	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 402	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 403	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	TP 404	54.02.0320		1p	PCB-Flachst 2.8*0.8, gerade
0	W 1	1.023.555.01	1 pce		FLACHKABEL 14 POL. 0,055M
0	W 2	1.023.555.01	1 pce		FLACHKABEL 14 POL. 0,055M

End of List

Comments:

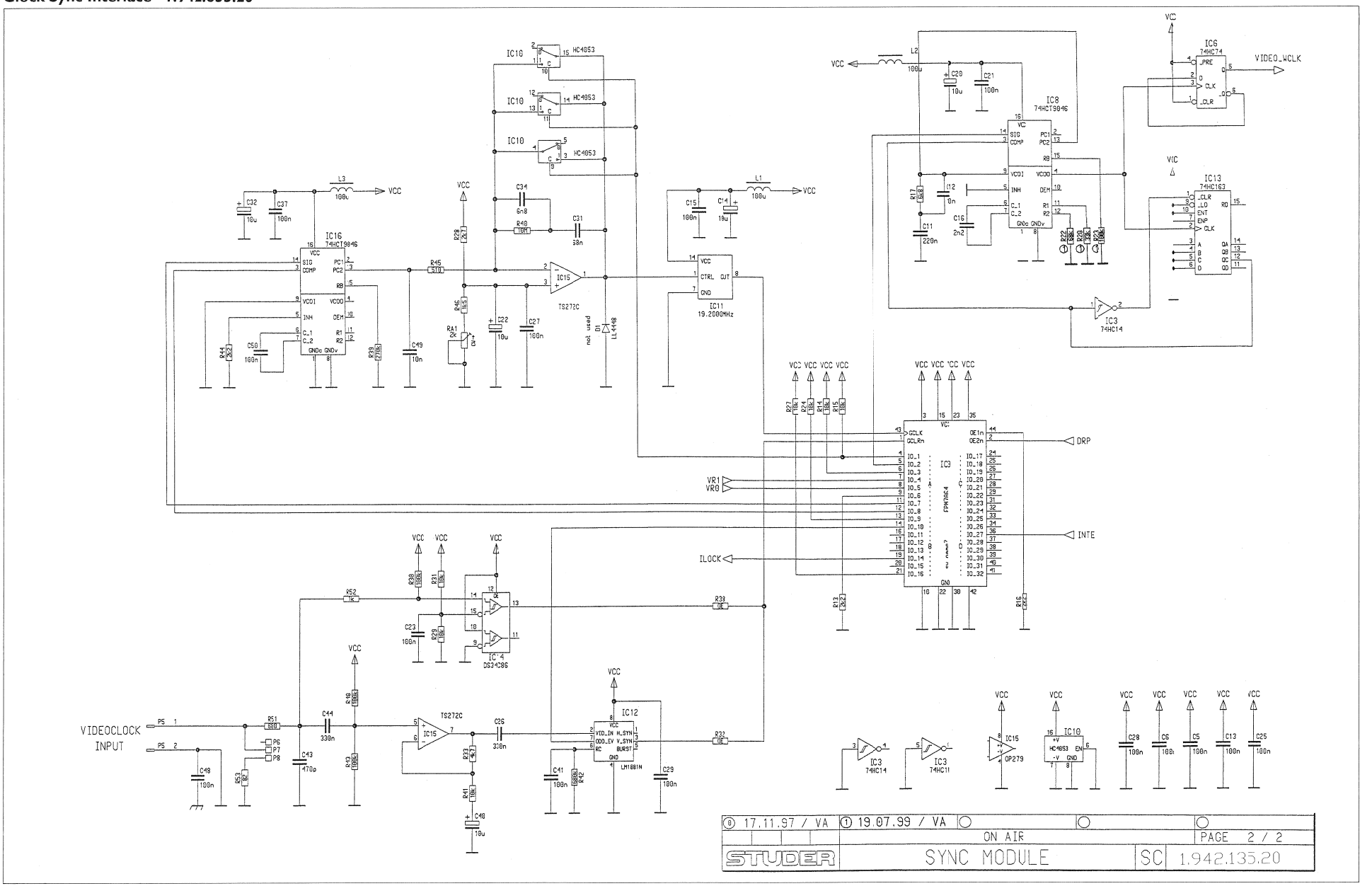
(01) Several foil caps changed to ceramic, several resistors adapted due to production problems

Clock Sync Interface 1.942.635.20

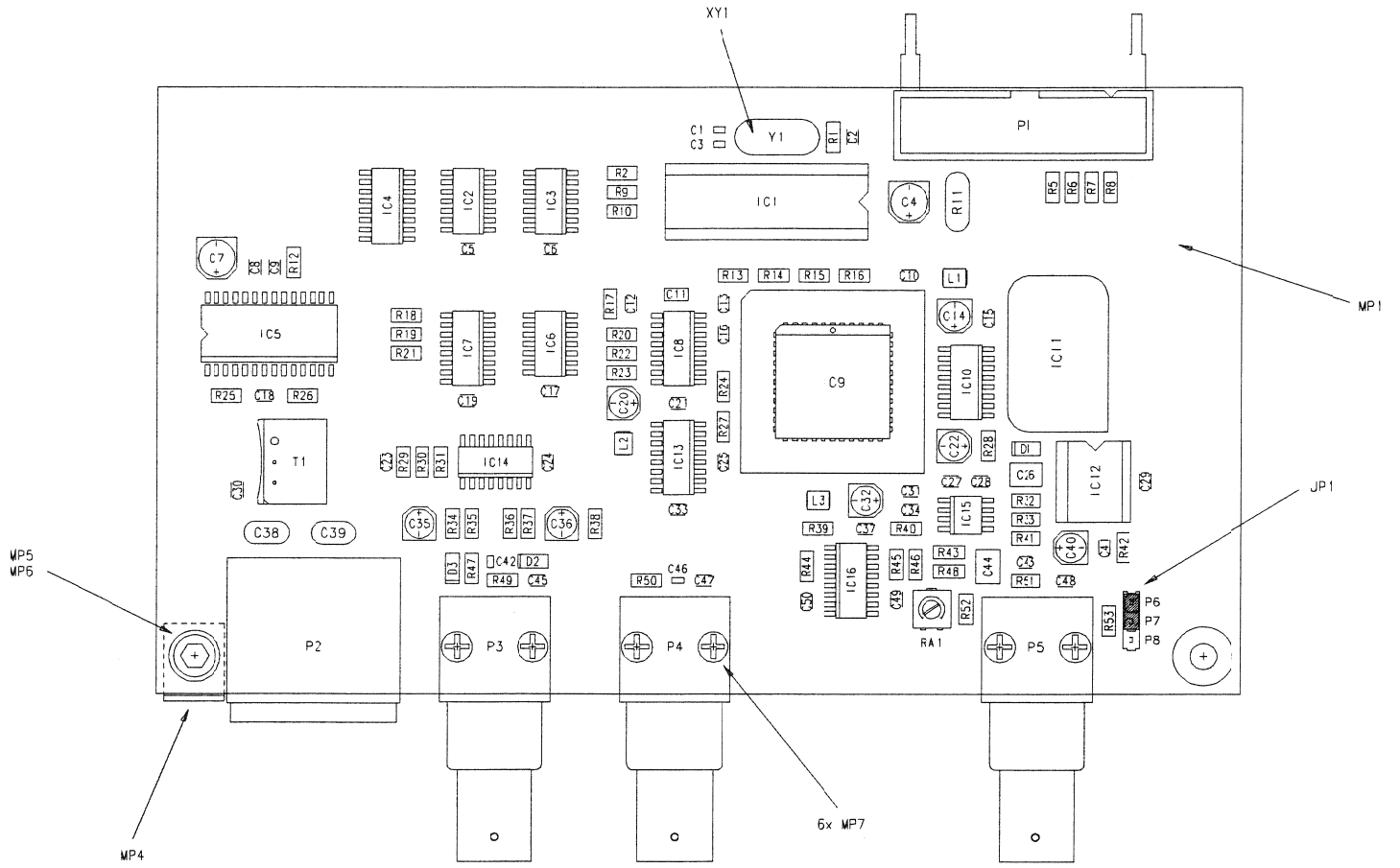


⓪ 17.11.97 / VA	① 19.07.99 / VA			
		ON AIR		PAGE 1 / 2
STUDER	SYNC MODULE "ESE"		SC	1.942.135.20

Clock Sync Interface 1.942.635.20



Clock Sync Interface 1.942.635.20



Edition Ausgabe	23.01.2001	PZ	SW	MK	0
	Date Datum	Visa Ges.	Checked Gepr.	Seen Ges.	Index
Page Seite:	1 / 1				

STUDER REGENSDORF — Description Benennung: SYNC MODULE, ESE — Z — Number Nummer: 1.942.635.20

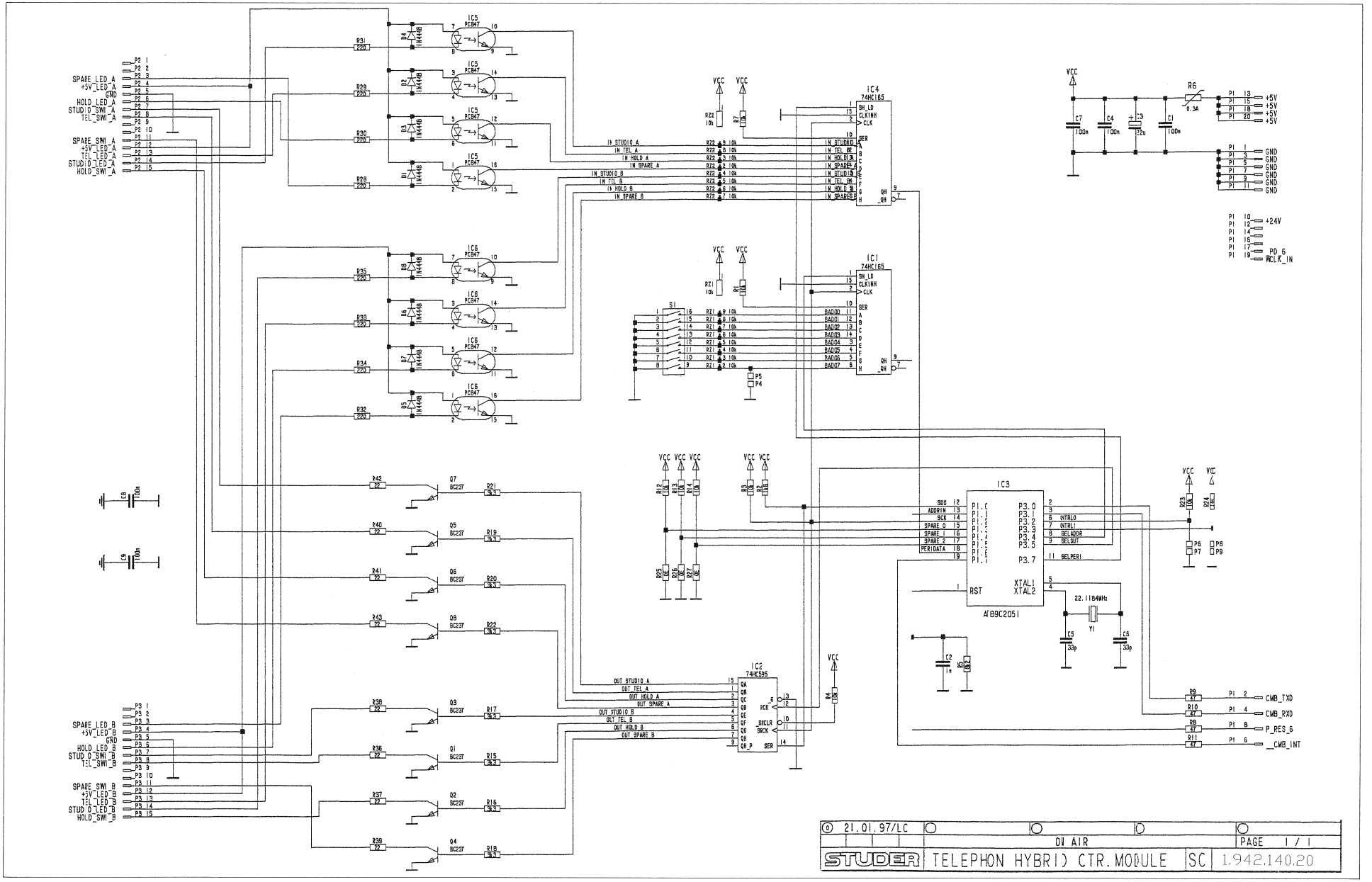
Clock Sync Interface 1.942.635.20

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 2	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 3	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 4	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 5	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 6	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 7	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 8	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 9	59.60.3333		47n	CER 50V, 10%, X7R, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.60.3441		220n	CER 50V, 10%, X7R, 1206
0	C 12	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 13	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 14	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 15	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 16	59.60.3317		2n2	CER 50V, 10%, X7R, 0805
0	C 17	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 18	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 20	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 21	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 22	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 23	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 24	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 25	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 26	59.60.3743		330n	CER 50V, 10%, X7R, 1812
0	C 27	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 28	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 29	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 30	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 31	59.60.3335		68n	CER 50V, 10%, X7R, 0805
0	C 32	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 33	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 34	59.60.3323		6n8	CER 50V, 10%, X7R, 0805
0	C 35	59.68.0127		1u0	EL 50V, 4.0*5.7
0	C 36	59.68.0127		1u0	EL 50V, 4.0*5.7
0	C 37	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 38	59.32.1221		220p	CER 10%, 400V
0	C 39	59.32.1221		220p	CER 10%, 400V
0	C 40	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 41	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 42	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 43	59.60.2365		470p	CER 50V, 5%, C0G, 0805
0	C 44	59.60.3743		330n	CER 50V, 10%, X7R, 1812
0	C 45	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 46	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 47	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 48	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 49	59.60.3325		10n	CER 50V, 10%, X7R, 0805
0	C 50	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	D 1	not used		4448	200mA 75V 4ns SOD 80
0	D 2	50.60.8001		4448	200mA 75V 4ns SOD 80
0	D 3	50.60.8001		4448	200mA 75V 4ns SOD 80
0	IC 1	1.942.914.20			SW.135 SYNC MODULE
		(50160313, 89C2051)			
0	IC 2	50.62.1074		74HC 74	Dual D-type FF, preset clear
0	IC 3	50.62.1014		74HC 14	Hex Schmitt trigger inverter
0	IC 4	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 5	50.62.0913		CS8412	AES-Receiver
0	IC 6	50.62.1074		74HC 74	Dual D-type FF, preset clear
0	IC 7	50.62.1153		74HC153	Dual 4ch multiplexer
0	IC 8	50.62.4946		74HCT9046	PLL with bandgap contr VCO
0	IC 9	1.866.910.20			SW120 MOLOCHA (50.63.4202)
0	IC 10	50.62.8053		HC4053	Tripple 2ch analog muxdemux
0	IC 11	89.01.1510		19.200MHz	VCXO Xtal-Oscillator voltage c
0	IC 12	50.11.0145		LM1881	C LM 1881 N,
0	IC 13	50.62.1163		74HC163	Synchr preset 4bit counter bin
0	IC 14	50.62.0463		DS34C86	4*RS 422 Line Receiver
0	IC 15	50.61.0205		TS272CD	Dual Op-Amp CMOS SO 8
0	IC 18	50.62.4946		74HCT9046	PLL with bandgap contr VCO
0	JP 1	54.01.0021	1 pce	Jumper	0.63*0.63mm, Au
0	L 1	62.60.0125		100uH	10%, SMD 1210
0	L 2	62.60.0125		100uH	10%, SMD 1210
0	L 3	62.60.0125		100uH	10%, SMD 1210
0	MP 1	1.942.135.11	1 pce		SYNC MODULE PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.635.10	1 pce		NR.ETIKETTE
0	MP 4	1.942.500.21	1 pce		WINKEL
0	MP 5	24.16.2030	1 pcs		FAECHERSCHEIBE A D 3.2
0	MP 6	21.53.0353	1 pcs	M3*5	Z-Schraube inbus Zn gb chr
0	MP 7	20.24.7280	6 pcs		LIN-FORMSCH.ZNSW,KS D2.5* 8
0	P 1	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	P 2	54.21.2203		3p	XLR PCB Winkel
0	P 3	54.21.2021		BNC	BNC 1p, angle, PCB
0	P 4	54.21.2021		BNC	BNC 1p, angle, PCB
0	P 5	54.21.2021		BNC	BNC 1p, angle, PCB
0	P 6	54.01.0020		1p	Pin, 1reihig, gerade
0	P 7	54.01.0020		1p	Pin, 1reihig, gerade
0	P 8	54.01.0020		1p	Pin, 1reihig, gerade
0	R 1	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 2	57.60.1470		47R	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.60.1470		47R	MF, 1%, 0204, E24
0	R 7	57.60.1470		47R	MF, 1%, 0204, E24
0	R 8	57.60.1470		47R	MF, 1%, 0204, E24
0	R 9	57.60.1103		10k	MF, 1%, 0204, E24
0	R 10	57.60.1103		10k	MF, 1%, 0204, E24
0	R 11	57.92.7013		0.5A	PTC 60V
0	R 12	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 13	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 14	57.60.1103		10k	MF, 1%, 0204, E24
0	R 15	57.60.1103		10k	MF, 1%, 0204, E24
0	R 16	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 17	57.60.1682		6k8	MF, 1%, 0204, E24
0	R 18	57.60.1000		0R0	MF, 0204
0	R 19	57.60.1101		100R	MF, 1%, 0204, E24
0	R 20	57.60.1333		33k	MF, 1%, 0204, E24
0	R 21	not used		0R0	MF, 0204
0	R 22	57.60.1683		68k	MF, 1%, 0204, E24
0	R 23	57.60.1104		100k	MF, 1%, 0204, E24
0	R 24	57.60.1103		10k	MF, 1%, 0204, E24
0	R 25	57.60.1100		10R	MF, 1%, 0204, E24
0	R 26	57.60.1221		220R	MF, 1%, 0204, E24
0	R 27	57.60.1103		10k	MF, 1%, 0204, E24
0	R 28	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 29	57.60.1103		10k	MF, 1%, 0204, E24
0	R 30	57.60.1104		100k	MF, 1%, 0204, E24
0	R 31	57.60.1103		10k	MF, 1%, 0204, E24
0	R 32	57.60.1000		0R0	MF, 0204
0	R 33	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 34	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 35	57.60.1101		100R	MF, 1%, 0204, E24
0	R 36	57.60.1101		100R	MF, 1%, 0204, E24
0	R 37	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 38	not used		0R0	MF, 0204
0	R 39	57.60.1274		270k	MF, 1%, 0204, E24
0	R 40	57.60.1106		10M	MF, 1%, 0204, E24
0	R 41	57.60.1103		10k	MF, 1%, 0204, E24
0	R 42	57.60.1684		680k	MF, 1%, 0204, E24
0	R 43	57.60.1104		100k	MF, 1%, 0204, E24
0	R 44	57.60.1222		2k2	MF, 1%, 0204, E24
0	R 45	57.60.1511		510R	MF, 1%, 0204, E24
0	R 46	57.60.1152		1k5	MF, 1%, 0204, E24
0	R 47	57.60.1470		47R	MF, 1%, 0204, E24
0	R 48	57.60.1104		100k	MF, 1%, 0204, E24
0	R 49	57.60.1820		82R	MF, 1%, 0204, E24
0	R 50	57.60.1000		0R0	MF, 0204
0	R 51	57.60.1681		680R	MF, 1%, 0204, E24
0	R 52	57.60.1102		1k0	MF, 1%, 0204, E24
0	R 53	57.60.1820		82R	MF, 1%, 0204, E24
0	RA 1	58.80.0115		2k0	SMD 20%, 0.25W, Cermet
0	T 1	1.022.647.00		1:1.4	OUTPUT TRAFO AES/EBU
0	XIC 1	53.03.0165		20p	DIL 0.3", löt, gerade
0	XIC 9	53.03.2244		44p	PLCC-Socket
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

End of List

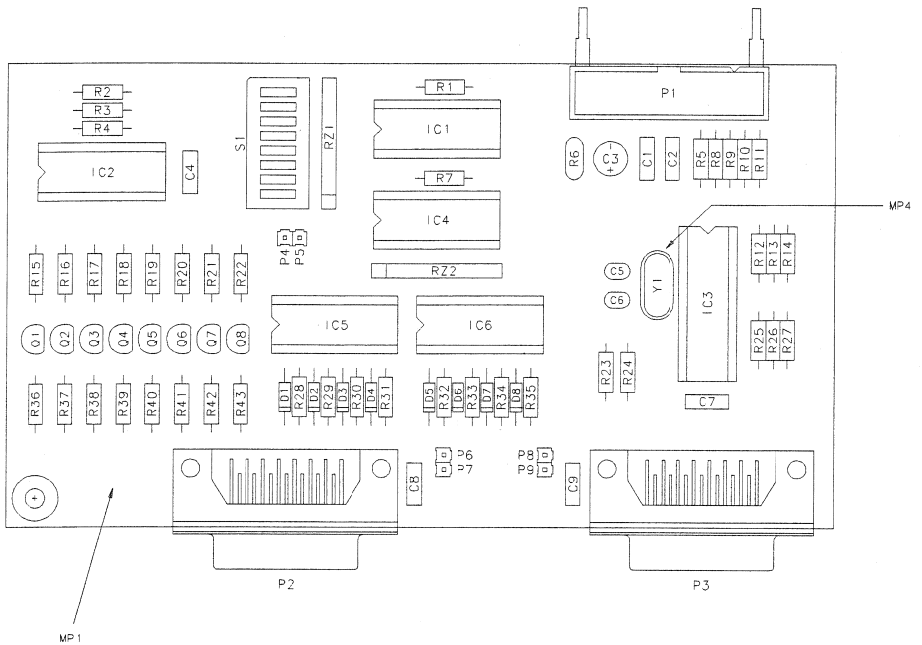
Comments:

Telephone Hybrid Interface 1.942.640.20



21.01.97/LC			
	ON AIR		PAGE 1 / 1
STUDER	TELEPHON HYBRID CTR. MODULE	SC	1.942.140.20

Telephone Hybrid Interface 1.942.640.20



Edition Ausgabe	23.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page Seite:		1 / 1			

STUDER REGENSDORF — Description Bezeichnung: TELEPHON HYBRID, ESE — Z — Number Nummer: 1.942.640.20

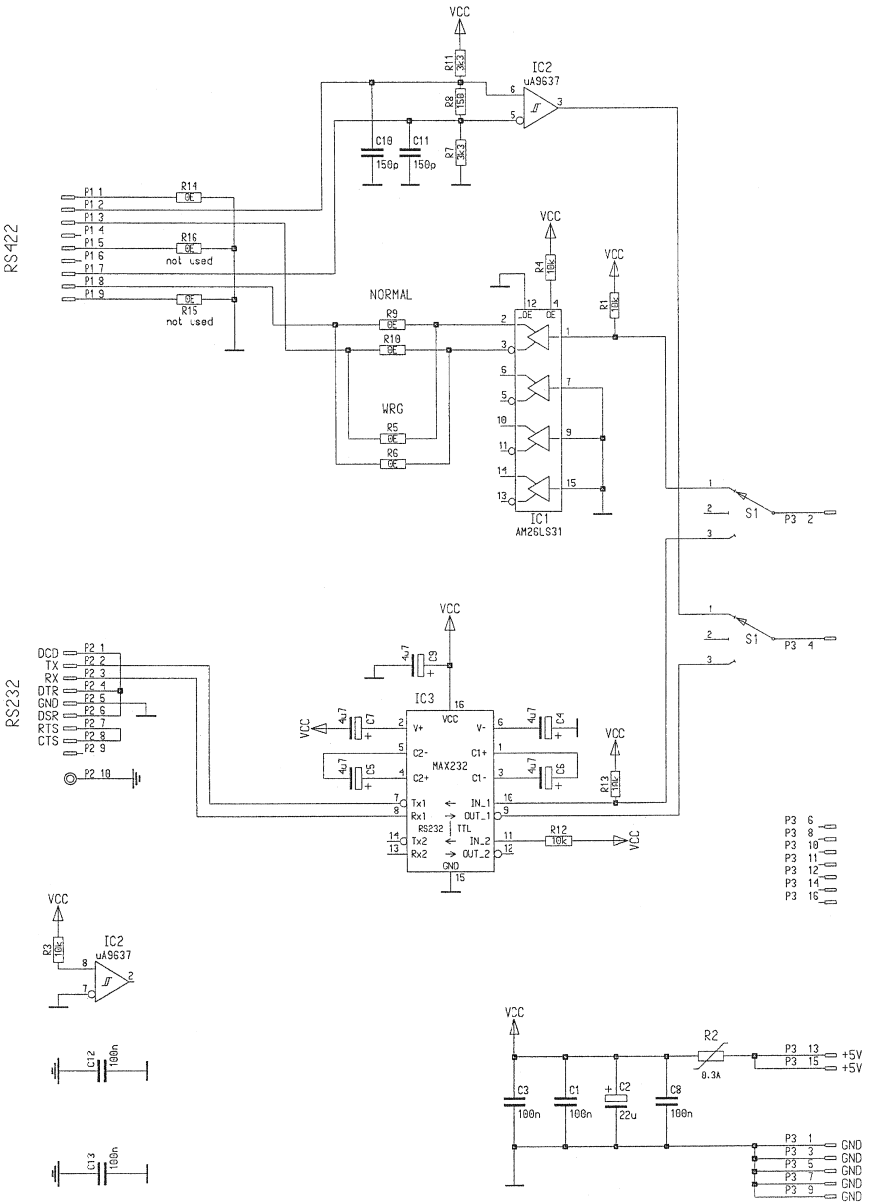
Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 2	59.06.0102		1n0	PETP, 63V, 10%, RM5
0	C 3	59.22.5220		22u	EL 25V 20% RM5
0	C 4	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 5	59.34.2330		33p	CER 63V, 5%, N150
0	C 6	59.34.2330		33p	CER 63V, 5%, N150
0	C 7	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 8	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 9	59.06.0104		100n	PETP, 63V, 10%, RM5
0	D 1	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 2	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 3	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 4	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 5	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 6	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 7	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 8	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	IC 1	50.17.1165		74HC165	IC ... 74 HC 165 .., ,A
0	IC 2	50.17.1595		74HC595	IC ... 74 HC 595 .., ,A
0	IC 3	1.942.915.21			SW.140 TELEPHON HYBR.CTR. MOD. *50160313, 89C2051*
0	IC 4	50.17.1165		74HC165	IC ... 74 HC 165 .., ,A
0	IC 5	50.04.2138		PC847	DLQ PC-847 , EECM 4
0	IC 6	50.04.2138		PC847	DLQ PC-847 , EECM 4
0	MP 1	1.942.140.11	1 pce		TELEPHON HYBRD CTR.MOD.PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.640.10	1 pce		NR.ETIKETTE
0	MP 4	89.01.1499	1 pce		QUARZ - ISOLIERPLATTE
0	P 1	54.14.2103		20p	P STECKER 20P,AU,VR,GERADE
0	P 2	54.13.0077		15p	D-Sub, PCB, Winkel
0	P 3	54.13.0077		15p	D-Sub, PCB, Winkel
0	P 4	54.01.0020		1p	Pin, 1reihig, gerade
0	P 5	54.01.0020		1p	Pin, 1reihig, gerade
0	P 6	54.01.0020		1p	Pin, 1reihig, gerade
0	P 7	54.01.0020		1p	Pin, 1reihig, gerade
0	P 8	54.01.0020		1p	Pin, 1reihig, gerade
0	P 9	54.01.0020		1p	Pin, 1reihig, gerade
0	Q 1	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 2	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 3	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 4	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 5	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 6	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 7	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	Q 8	50.03.0436		BC237B	BC 237 B, 547 B, 550 B,
0	R 1	57.11.3103		10k	MF, 1%, 0207
0	R 2	57.11.3182		1k8	MF, 1%, 0207
0	R 3	57.11.3103		10k	MF, 1%, 0207
0	R 4	57.11.3103		10k	MF, 1%, 0207
0	R 5	57.11.3822		8k2	MF, 1%, 0207
0	R 6	57.92.7012		0.3A	PTC 60V
0	R 7	57.11.3103		10k	MF, 1%, 0207
0	R 8	57.11.3470		47R	MF, 1%, 0207
0	R 9	57.11.3470		47R	MF, 1%, 0207
0	R 10	57.11.3470		47R	MF, 1%, 0207
0	R 11	57.11.3470		47R	MF, 1%, 0207
0	R 12	57.11.3103		10k	MF, 1%, 0207
0	R 13	57.11.3103		10k	MF, 1%, 0207
0	R 14	57.11.3103		10k	MF, 1%, 0207
0	R 15	57.11.3332		3k3	MF, 1%, 0207
0	R 16	57.11.3332		3k3	MF, 1%, 0207
0	R 17	57.11.3332		3k3	MF, 1%, 0207
0	R 18	57.11.3332		3k3	MF, 1%, 0207
0	R 19	57.11.3332		3k3	MF, 1%, 0207
0	R 20	57.11.3332		3k3	MF, 1%, 0207
0	R 21	57.11.3332		3k3	MF, 1%, 0207
0	R 22	57.11.3332		3k3	MF, 1%, 0207
0	R 23	57.11.3103		10k	MF, 1%, 0207
0	R 24	57.11.3103		10k	MF, 1%, 0207
0	R 25	57.11.3000		0R0	MF, 0207
0	R 26	57.11.3000		0R0	MF, 0207
0	R 27	57.11.3000		0R0	MF, 0207
0	R 28	57.11.3221		220R	MF, 1%, 0207
0	R 29	57.11.3221		220R	MF, 1%, 0207
0	R 30	57.11.3221		220R	MF, 1%, 0207
0	R 31	57.11.3221		220R	MF, 1%, 0207
0	R 32	57.11.3221		220R	MF, 1%, 0207
0	R 33	57.11.3221		220R	MF, 1%, 0207

Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 34	57.11.3221		220R	MF, 1%, 0207
0	R 35	57.11.3221		220R	MF, 1%, 0207
0	R 36	57.11.3220		22R	MF, 1%, 0207
0	R 37	57.11.3220		22R	MF, 1%, 0207
0	R 38	57.11.3220		22R	MF, 1%, 0207
0	R 39	57.11.3220		22R	MF, 1%, 0207
0	R 40	57.11.3220		22R	MF, 1%, 0207
0	R 41	57.11.3220		22R	MF, 1%, 0207
0	R 42	57.11.3220		22R	MF, 1%, 0207
0	R 43	57.11.3220		22R	MF, 1%, 0207
0	RZ 1	57.88.4103		10k	8*R Reistor-Netw 2% SIP9
0	RZ 2	57.88.4103		10k	8*R Reistor-Netw 2% SIP9
0	S 1	55.01.0188		8*a	SZ ,8*A, DIL
0	XIC 3	53.03.0165		20p	DIL 0.3" löt, gerade
0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U

End of List

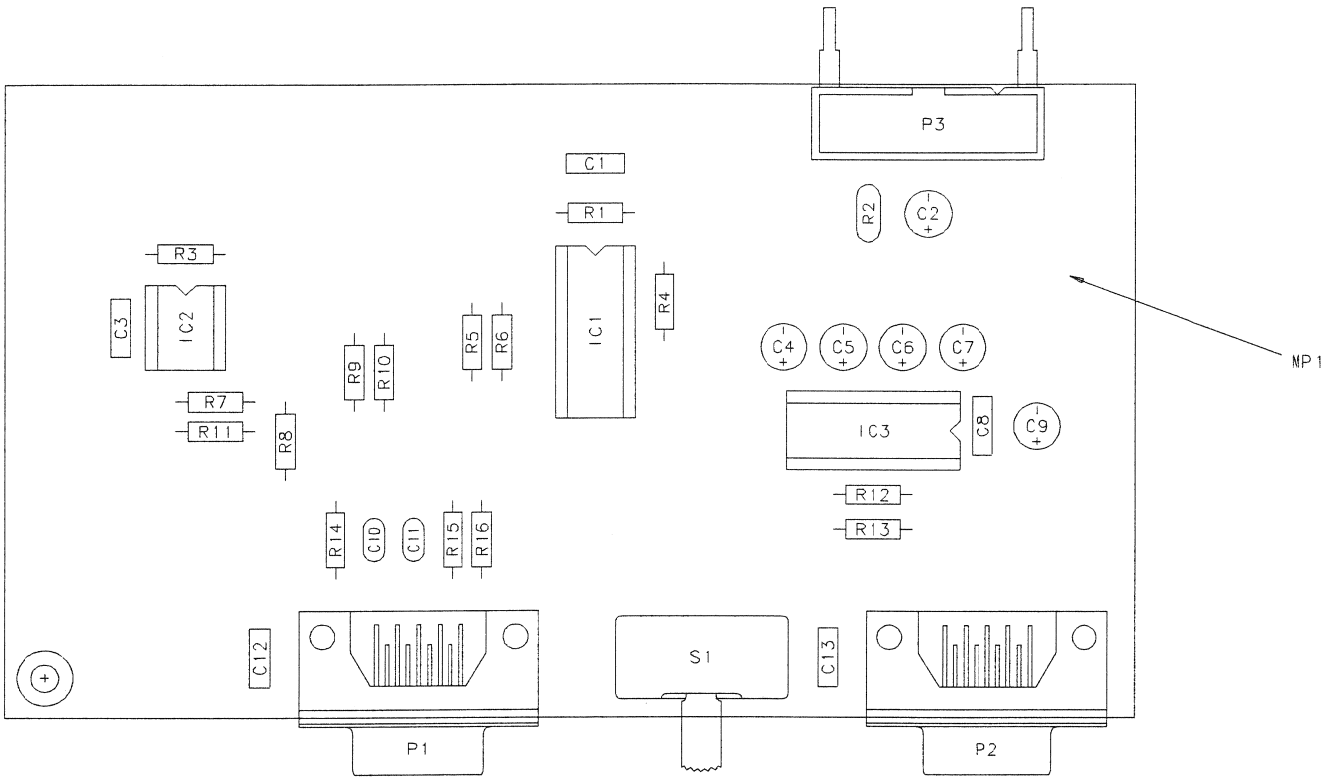
Comments:

RS 232 Interface 1.942.645.00



0 12.05.1998 LC					
			OnAir		PAGE 1 OF 1
STUDER	RS232 Module		SC	1.942.145.00	

RS 232 Interface 1.942.645.00



Idx	Pos.	PartNo.	Qty.	Type/Val.	Description
)	C 1	59.0i.0104		10)n	PETP, 63\, 10%, RM5
)	C 2	59.2:.5220		22ı	EL 25V 20% RM5
)	C 3	59.0i.0104		10)n	PETP, 63\, 10%, RM5
)	C 4	59.2:.8479		4u'	EL 50V 20% RM5
)	C 5	59.2:.8479		4u'	EL 50V 20% RM5
)	C 6	59.2:.8479		4u'	EL 50V 20% RM5
)	C 7	59.2:.8479		4u'	EL 50V 20% RM5
)	C 8	59.0i.0104		10)n	PETP, 63\, 10%, RM5
)	C 9	59.2:.8479		4u'	EL 50V 20% RM5
)	C 10	59.3-.4151		15)p	CER 63V,5%, N750
)	C 11	59.3-.4151		15)p	CER 63V,5%, N750
)	C 12	59.0i.0104		10)n	PETP, 63\, 10%, RM5
)	C 13	59.0i.0104		10)n	PETP, 63\, 10%, RM5
)	IC 1	50.1i.0108		26.S31	Quad diff line driver
)	IC 2	50.1i.0114		9637	Dual diff Line Receiver
)	IC 3	50.1i.0120		MaX232	IC MAX 2:2 CPE
)	MP 1	1.942. 45.12	1 pce		RS 232 M0DULE PCB
)	MP 2	43.0 .0108	1 pce	Lapel	ESE-WAR\SCHILD
)	MP 3	1.942.l45.10	1 pce		NR.ETIKETTE
)	P 1	54.1i.0076		9p	D-Sub, PC3, Winkel
)	P 2	54.1i.0071		9p	D-Sub, PC3, Winkel
)	P 3	54.1i.2102		1ê	P STECKER 16 P,AU,VR,GERADE
)	R 1	57.1i.3103		1(x	MF, 1%, (207
)	R 2	57.9:.7012		0.:A	PTC 60\
)	R 3	57.1i.3103		1(x	MF, 1%, (207
)	R 4	57.1i.3103		1(x	MF, 1%, (207
)	R 5	nt used		0F0	MF, (207
)	R 6	nt used		0F0	MF, (207
)	R 7	57.1i.3332		3k3	MF, 1%, (207
)	R 8	57.1i.3151		15)R	MF, 1%, (207
)	R 9	57.1i.3000		0F0	MF, (207
)	R 10	57.1i.3000		0F0	MF, (207
)	R 11	57.1i.3332		3k3	MF, 1%, (207
)	R 12	57.1i.3103		10k	MF, 1%, (207
)	R 13	57.1i.3103		10k	MF, 1%, (207
)	R 14	57.1i.3000		0F0	MF, (207
)	R 15	nt used		0F0	MF, (207
)	R 16	nt used		0F0	MF, (207
)	S 1	55.12.0003		2*ST	S SCHIE3E,2*3U, PRINT
)	XIC 1	53.03.0168		1ê	DIL 0.3", lit, gerade
)	XIC 2	53.03.0166		8ı	DIL 0.3", lit, gerade
)	XIC 3	53.03.0168		1ê	DIL 0.3", lit, gerade

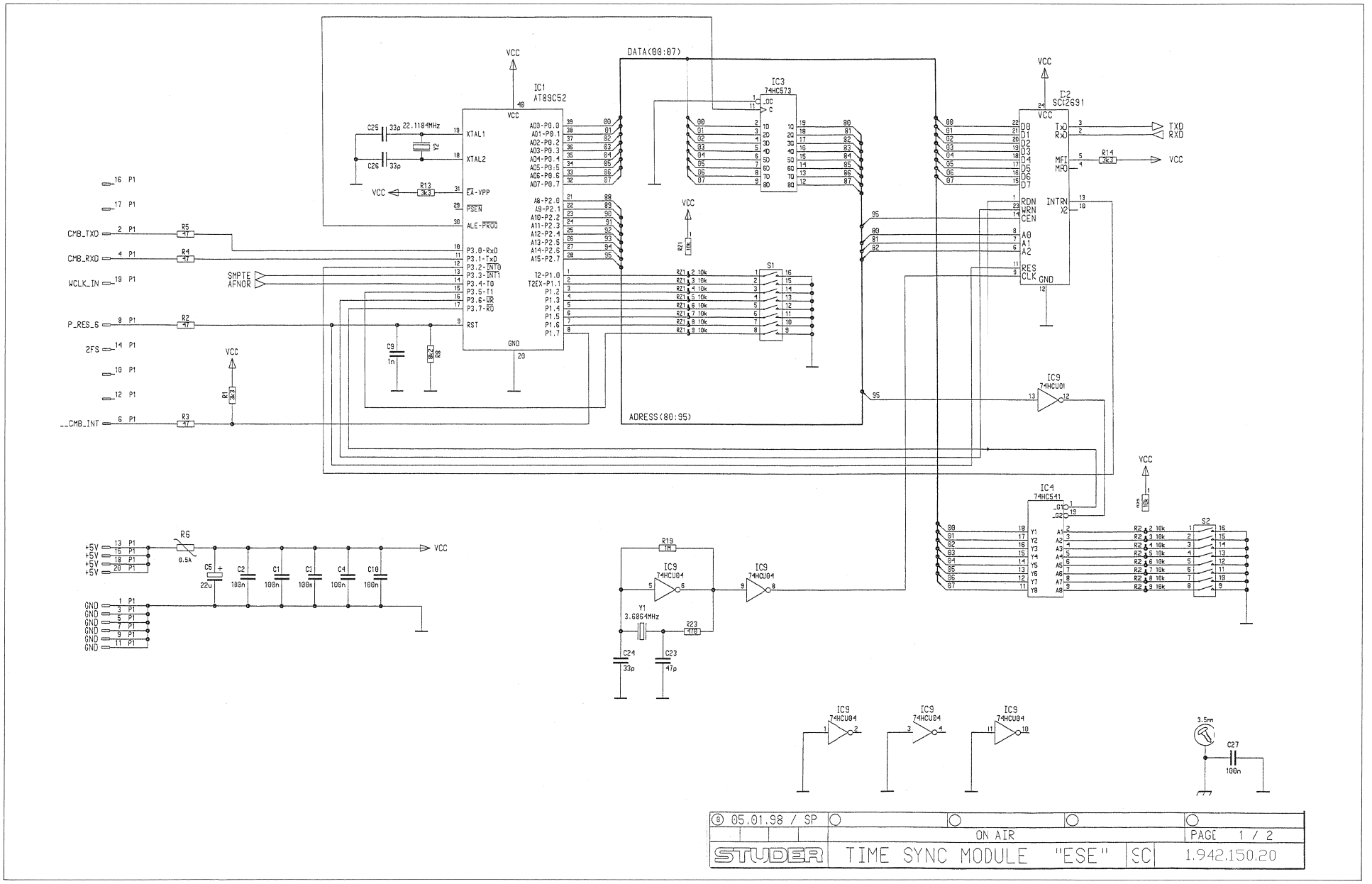
End of List

Comments:

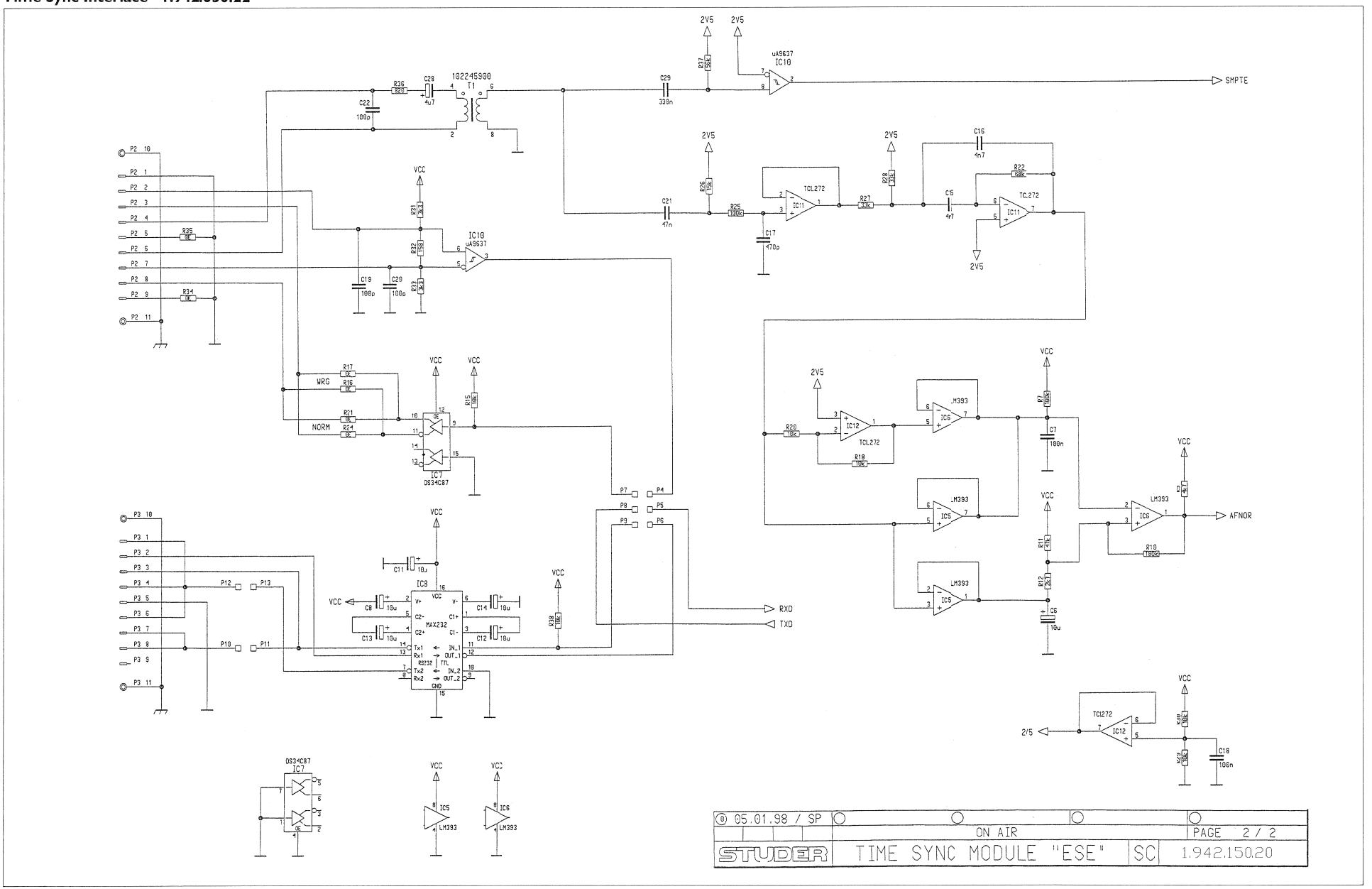
Edition Ausgabe	22.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page Seite	1 / 1				

STUDER REGENSDORF | Description Bezeichnung: RS232 Module, ESE | Z | Number Nummer: 1.942.645.00

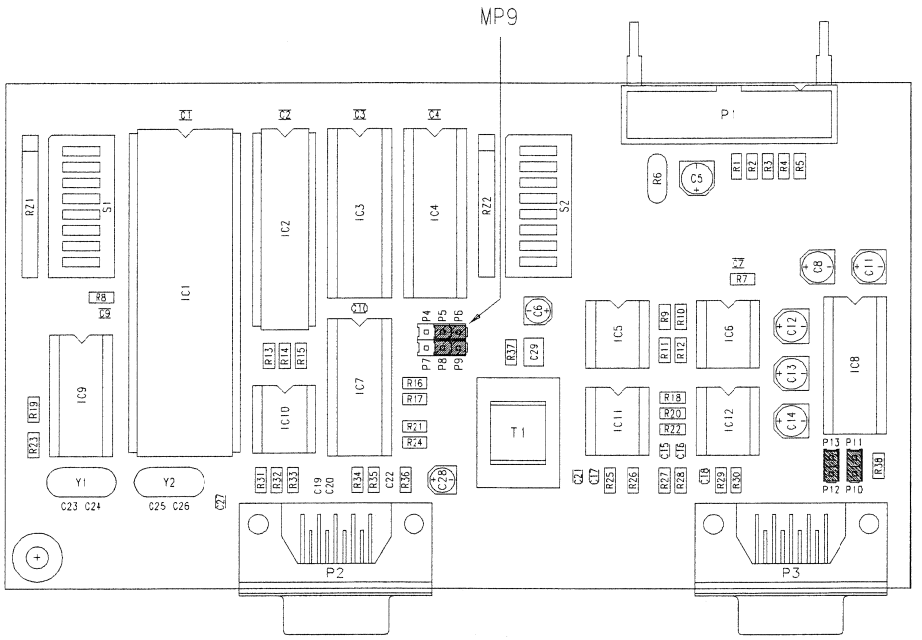
Time Sync Interface 1.942.650.22



Time Sync Interface 1.942.650.22



Time Sync Interface 1.942.650.22



Edition Ausgabe	22.01.2001	PZ	SW	WK	0
	Date Datum	Visa Gez.	Checked Gepr.	Seen Ges.	Index
Page Seite:	1 / 1				

STUDER REGENSDORF — Inscription Beschriftung: TIME SYNC MODULE, ESE — Z — Number Nummer: 1.942.650.20

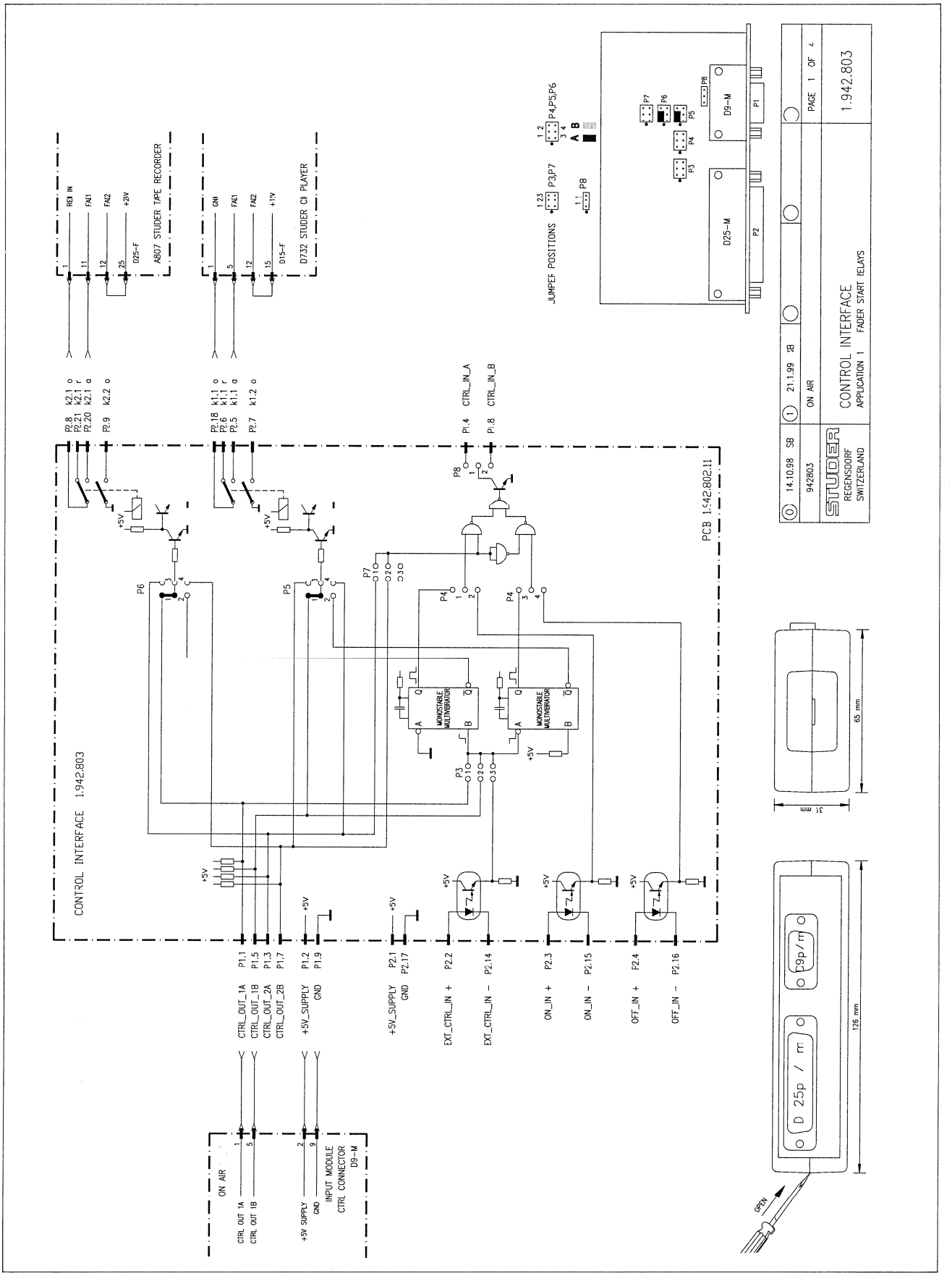
TIME SYNC 1.942.650.22 (0)

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 2	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 3	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 4	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 5	59.68.0067		22u	EL 16V, 5.0*5.7
0	C 6	59.68.0065		10u	EL 16V, 4.0*5.7
0	C 7	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 8	59.68.0109		10u	EL 35V, 5.0*5.7
0	C 9	59.60.2373		1n0	CER 50V, 5%, C0G, 0805
0	C 10	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 11	59.68.0109		10u	EL 35V, 5.0*5.7
0	C 12	59.68.0109		10u	EL 35V, 5.0*5.7
0	C 13	59.68.0109		10u	EL 35V, 5.0*5.7
0	C 14	59.68.0109		10u	EL 35V, 5.0*5.7
0	C 15	59.60.3321		4n7	CER 50V, 10%, X7R, 0805
0	C 16	59.60.3321		4n7	CER 50V, 10%, X7R, 0805
0	C 17	59.60.2365		470p	CER 50V, 5%, C0G, 0805
0	C 18	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 19	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 20	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 21	59.60.3333		47n	CER 50V, 10%, X7R, 0805
0	C 22	59.60.2249		100p	CER 50V, 5%, C0G, 0603
0	C 23	59.60.2241		47p	CER 50V, 5%, C0G, 0603
0	C 24	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 25	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 26	59.60.2237		33p	CER 50V, 5%, C0G, 0603
0	C 27	59.60.3337		100n	CER 50V, 10%, X7R, 0805
0	C 28	59.68.0107		4u7	EL 35V, 4.0*5.7
0	C 29	59.60.3743		330n	CER 50V, 10%, X7R, 1812
0	IC 1	1.942.928.26			SW.150 TIME SYNC MODULE
0	IC 2	50.16.0201		SCC2691	IC SCC 2691 AE 1 N 24 ,A
0	IC 3	50.17.1573		74HC573	74 HC 573(A)
0	IC 4	not used		74HC541	Octal bus buffer
0	IC 5	50.05.0283		LM393	Dual Comparator
0	IC 6	50.05.0283		LM393	Dual Comparator
0	IC 7	50.15.0127		34C87	IC DS 34 C 87 TN, MC34C87P ,A
0	IC 8	50.15.0120		MAX232	IC MAX 232 CPE
0	IC 9	50.17.1904		74HCU04	IC ... 74 HCU 04 ., ,A
0	IC 10	50.15.0114		9637	Dual diff Line Receiver
0	IC 11	50.09.0122		TLC272	Dual Op-Amp CMOS DIP 8
0	IC 12	50.09.0122		TLC272	Dual Op-Amp CMOS DIP 8
0	MP 1	1.942.150.11	1 pce		TIME SYNC PCB
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	MP 3	1.942.650.10	1 pce		NP ETIKETTE
0	MP 4	1.101.001.20	1 pce	Label	TEXT-ETIK. 5*20 HARDWARE -20
0	MP 9	54.01.0021	4 pcs	Jumper	0.63*0.63mm, Au
0	P 1	54.14.2103		20p	1/20" Au, gerade, Verrieg
0	P 2	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 3	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 4	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 10	54.01.0020		1p	Pin, 1reihig, gerade
0	P 11	54.01.0020		1p	Pin, 1reihig, gerade
0	P 12	54.01.0020		1p	Pin, 1reihig, gerade
0	P 13	54.01.0020		1p	Pin, 1reihig, gerade
0	R 1	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 2	57.60.1470		47R	MF, 1%, 0204, E24
0	R 3	57.60.1470		47R	MF, 1%, 0204, E24
0	R 4	57.60.1470		47R	MF, 1%, 0204, E24
0	R 5	57.60.1470		47R	MF, 1%, 0204, E24
0	R 6	57.92.7013		0.5A	PTC 60V
0	R 7	57.60.1104		100k	MF, 1%, 0204, E24
0	R 8	57.60.1822		8k2	MF, 1%, 0204, E24
0	R 9	57.60.1472		4k7	MF, 1%, 0204, E24
0	R 10	57.60.1184		180k	MF, 1%, 0204, E24
0	R 11	57.60.1473		47k	MF, 1%, 0204, E24
0	R 12	57.60.1272		2k7	MF, 1%, 0204, E24
0	R 13	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 14	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 15	57.60.1103		10k	MF, 1%, 0204, E24
0	R 16	not used		0R0	MF, 0204
0	R 17	not used		0R0	MF, 0204
0	R 18	57.60.1103		10k	MF, 1%, 0204, E24
0	R 19	57.60.1105		1M	MF, 1%, 0204, E24
0	R 20	57.60.1103		10k	MF, 1%, 0204, E24
0	R 21	57.60.1000		0R0	MF, 0204
0	R 22	57.60.1683		68k	MF, 1%, 0204, E24
0	R 23	57.60.1471		470R	MF, 1%, 0204, E24
0	R 24	57.60.1000		0R0	MF, 0204
0	R 25	57.60.1104		100k	MF, 1%, 0204, E24
0	R 26	57.60.1153		15k	MF, 1%, 0204, E24
0	R 27	57.60.1333		33k	MF, 1%, 0204, E24
0	R 28	57.60.1333		33k	MF, 1%, 0204, E24
0	R 29	57.60.1103		10k	MF, 1%, 0204, E24
0	R 30	57.60.1103		10k	MF, 1%, 0204, E24
0	R 31	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 32	57.60.1151		150R	MF, 1%, 0204, E24
0	R 33	57.60.1332		3k3	MF, 1%, 0204, E24
0	R 34	not used		0R0	MF, 0204
0	R 35	not used		0R0	MF, 0204
0	R 36	57.60.1821		820R	MF, 1%, 0204, E24
0	R 37	57.60.1563		56k	MF, 1%, 0204, E24
0	R 38	57.60.1103		10k	MF, 1%, 0204, E24
0	RZ 1	57.88.4103		10k	8*R Resistor-Netw 2% SIP9
0	RZ 2	not used		10k	8*R Resistor-Netw 2% SIP9
0	S 1	55.01.0168		8*a	DIL-Switch, PCB
0	S 2	not used		8*a	DIL-Switch, PCB
0	T 1	1.022.459.00			AUSGANGSTRAFO 1:1
0	XIC 1	53.03.0172		40p	DIL 0.6", löt, gerade
0	XIC 7	53.03.0168		16p	DIL 0.3", löt, gerade
0	XIC 8	53.03.0168		16p	DIL 0.3", löt, gerade
0	XIC 10	53.03.0166		8p	DIL 0.3", löt, gerade
0	XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
0	XY 2	89.01.1499			QUARZ - ISOLIERPLATTE
0	Y 1	89.01.1002		3.6864MHz	XTAL HC 18 U
0	Y 2	89.01.1016		22.1184MHz	XTAL HC 49/U

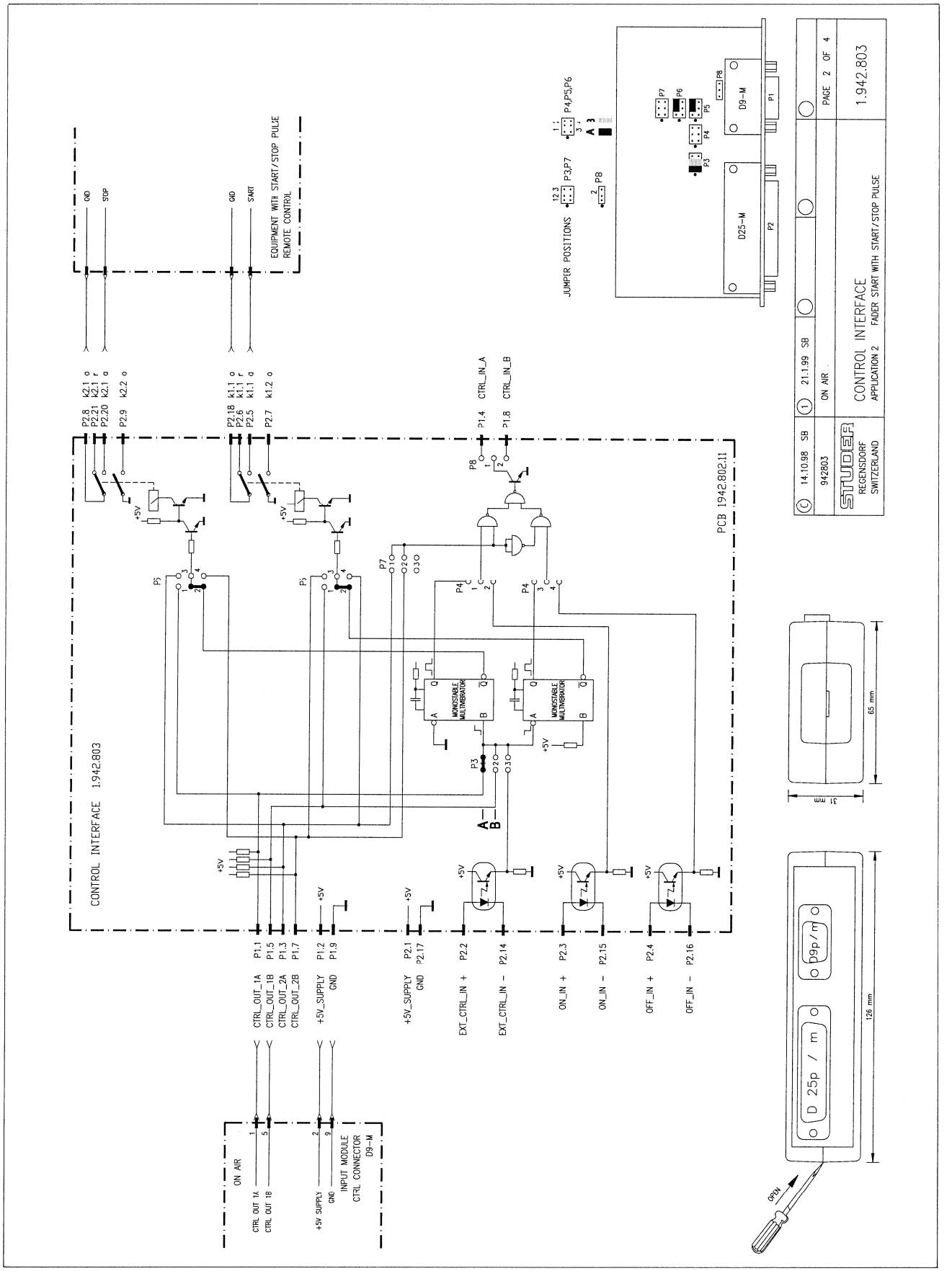
End of List

(26) SW update IC1

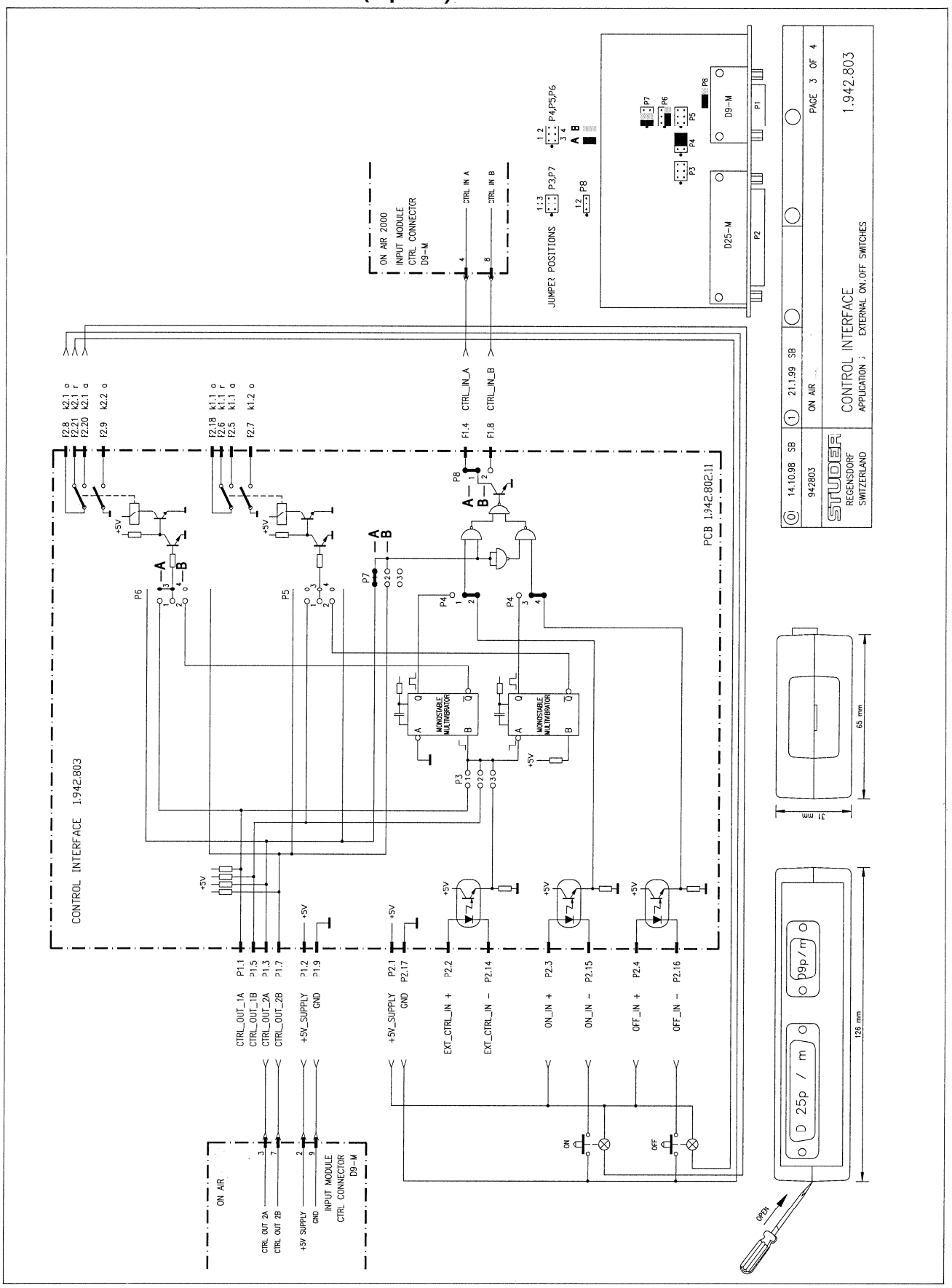
Control Interface Box 1.942.803 (Option)



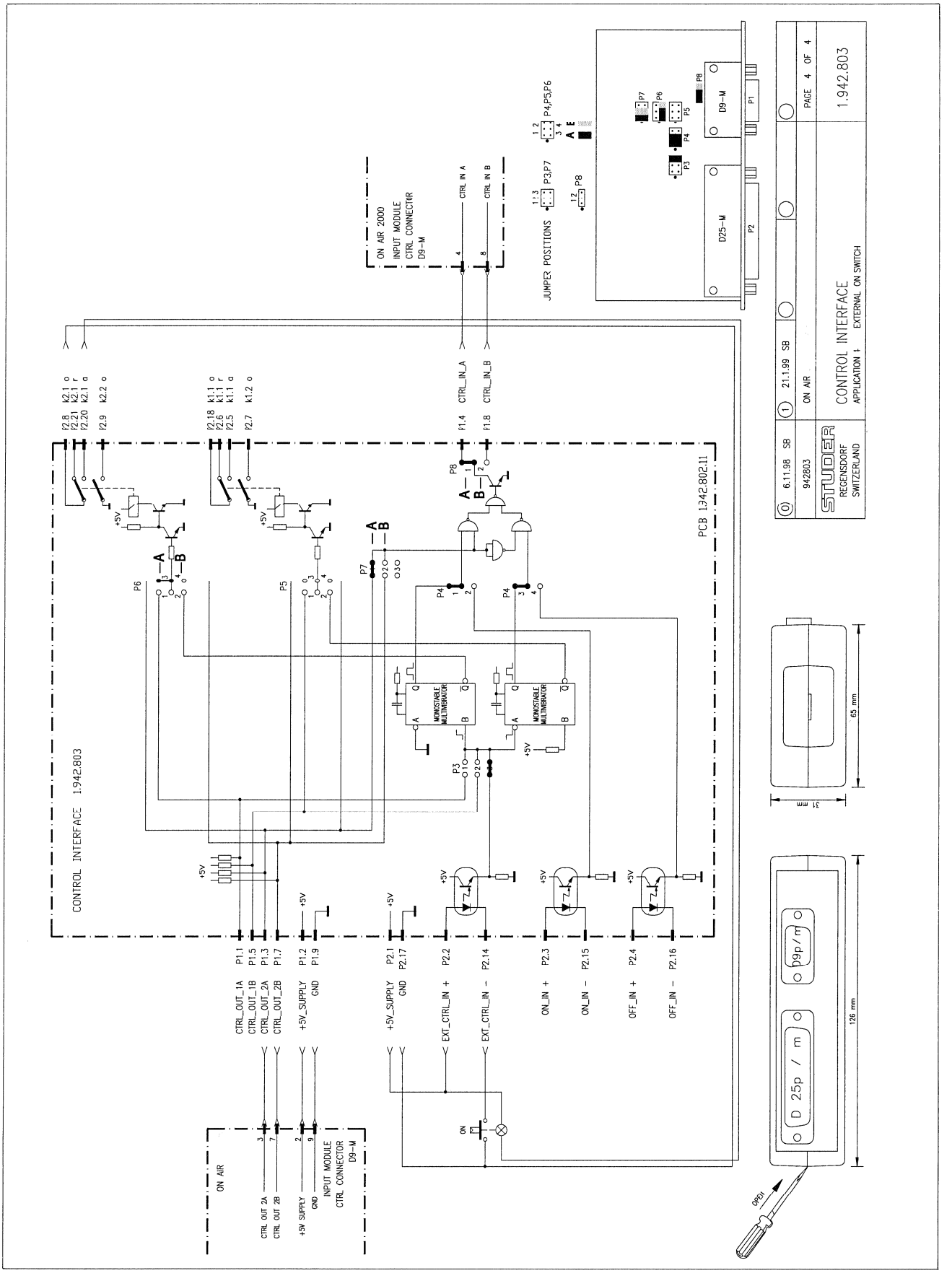
Control Interface Box 1.942.803 (Option)



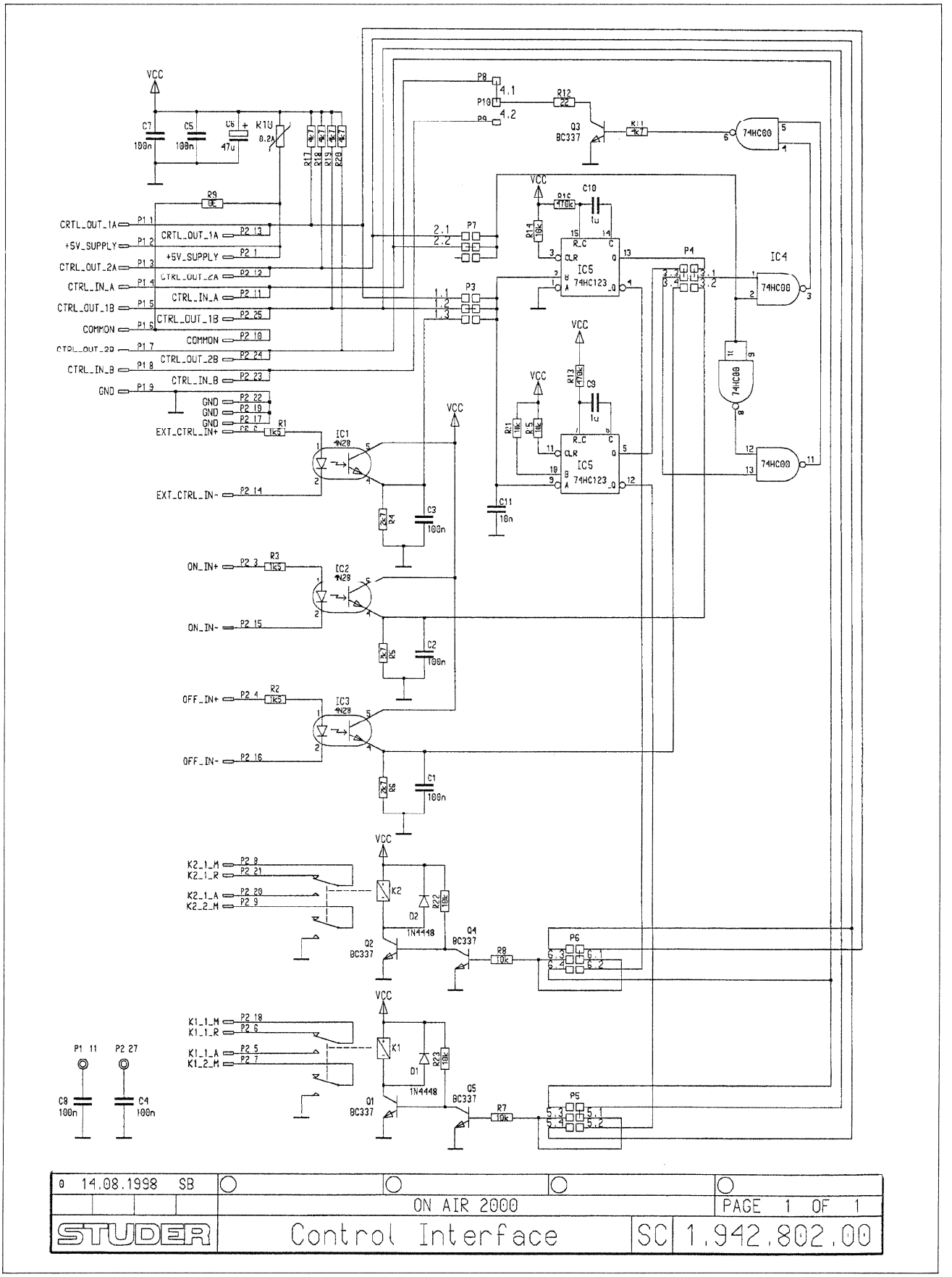
Control Interface Box 1.942.803 (Option)



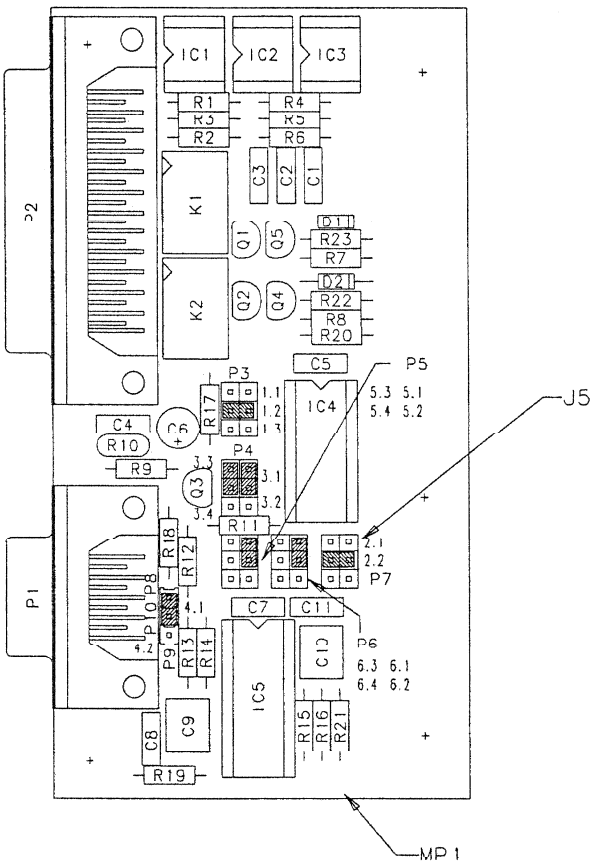
Control Interface Box 1.942.803 (Option)



Control Interface 1.942.802.00 (Option)



Control Interface 1.942.802.00 (Option)



Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
		not used			
0	C 1	not used		100n	PETP, 63V, 10%, RM5
0	C 2	not used		100n	PETP, 63V, 10%, RM5
0	C 3	not used		100n	PETP, 63V, 10%, RM5
0	C 4	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 5	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 6	59.22.3470		47u	EL 10V, 20%, RM5
0	C 7	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 8	59.06.0104		100n	PETP, 63V, 10%, RM5
0	C 9	59.06.0105		1u0	PETP, 50V, 10%, RM5
0	C 10	59.06.0105		1u0	PETP, 50V, 10%, RM5
0	C 11	59.06.0103		10n	PETP, 63V, 10%, RM5
0	D 1	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	D 2	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35
0	IC 1	50.99.0126		4N26	Optocoupler
0	IC 2	50.99.0126		4N26	Optocoupler
0	IC 3	50.99.0126		4N26	Optocoupler
0	IC 4	50.17.1000		74HC00	IC ... 74 HC 00 ., ,A
0	IC 5	50.17.1123		74HC123	IC ... 74 HC 123 ., ,A
0	J 5	54.01.0021	7 pcs	Jumper	0.63 * 0.63mm
0	K 1	56.04.0198		2u	5V 125V 2A Ag/Au
0	K 2	56.04.0198		2u	5V 125V 2A Ag/Au
0	MP 1	1.942.802.11	1 pce		CONTROLL INTERFACE PCB
0	MP 2	1.942.802.10	1 pce		NR.-ETIKETTE
0	MP 3	43.01.0108	1 pce	Label	ESE-WARNSCHILD
0	P 1	54.13.0076		9p	D-Sub, PCB, Winkel
0	P 2	54.13.0078		25p	D-Sub, PCB, Winkel
0	P 3	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 4	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 5	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 6	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 7	54.11.0136		2*3p	Pin 0.63*0.63, RM2.54
0	P 8	54.01.0020		1p	Pin 0.63*0.63
0	P 9	54.01.0020		1p	Pin 0.63*0.63
0	P 10	54.01.0020		1p	Pin 0.63*0.63
0	Q 1	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 2	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 3	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 4	50.03.0340		BC337-25	800mA, 45V, NPN
0	Q 5	50.03.0340		BC337-25	800mA, 45V, NPN
0	R 1	57.11.3152		1k5	MF, 1%, 0207
0	R 2	57.11.3152		1k5	MF, 1%, 0207
0	R 3	57.11.3152		1k5	MF, 1%, 0207
0	R 4	57.11.3272		2k7	MF, 1%, 0207
0	R 5	57.11.3272		2k7	MF, 1%, 0207
0	R 6	57.11.3272		2k7	MF, 1%, 0207
0	R 7	57.11.3103		10k	MF, 1%, 0207
0	R 8	57.11.3103		10k	MF, 1%, 0207
0	R 9	57.11.3000		0R0	MF, 0207
0	R 10	57.92.7011		0.2A	POLY- PTC, 60V
0	R 11	57.11.3472		4k7	MF, 1%, 0207
0	R 12	57.11.3220		22R	MF, 1%, 0207
0	R 13	57.11.3474		470k	MF, 1%, 0207
0	R 14	57.11.3103		10k	MF, 1%, 0207
0	R 15	57.11.3103		10k	MF, 1%, 0207
0	R 16	57.11.3474		470k	MF, 1%, 0207
0	R 17	57.11.3472		4k7	MF, 1%, 0207
0	R 18	57.11.3472		4k7	MF, 1%, 0207
0	R 19	57.11.3472		4k7	MF, 1%, 0207
0	R 20	57.11.3472		4k7	MF, 1%, 0207
0	R 21	57.11.3103		10k	MF, 1%, 0207
0	R 22	57.11.3103		10k	MF, 1%, 0207
0	R 23	57.11.3103		10k	MF, 1%, 0207
0	XIC 1	53.03.0164		6p	DIL 0.3", löt, gerade
0	XIC 2	53.03.0164		6p	DIL 0.3", löt, gerade
0	XIC 3	53.03.0164		6p	DIL 0.3", löt, gerade

End of List

Comments:

Modification / Änderung					
Edition / Ausgabe	Date / Datum	Visa / Gez.	Checked / Gepr.	Seen / Ges.	Index
	26.08.98	AF			0

Copy to: / Kopie fuer:

STUDER REGENSDORF — Description / Benennung: CONTROL INTERFACE — Number / Nummer: 1.942.802.00