

STUDER INTERNATIONAL

a division of STUDER REVOX AG

STUDER MONO LOCAL BROADCAST
STUDIO

14/78 E

Product Information

Prepared and edited by:
STUDER INTERNATIONAL
a division of STUDER REVOX AG
TECHNICAL DOCUMENTATION
Althardstrasse 10
CH-8105 Regensdorf-Zürich

Sorry, this is the best quality available



DESCRIPTION OF A STUDER MONO LOCAL BROADCAST STUDIO

1. General

The local studio includes all technical equipment required to construct a small monophonic local studio:

- 1 Audio Mixing Console STUDER 169
- 2 Tape Recorders STUDER B 67
- 2 Studio Turntables EMT 930
- 1 Intercom Box
- 2 Loudspeakers REVOX AX 5/4
- 1 Rack, 19", consisting of the following:

- 2 FM-Tuners STUDER A176
- 2 AM-Tuners
- 2 Power Amplifiers STUDER 1.090.046
- 2 Power Supply Units STUDER 1.090.027/057
- 1 Dual Line Amplifier STUDER 1.091.036
- 1 Relay Unit 1.090.061/75

- 1 Set of Installation Material

Program sources consist of the following:

Two high-quality FM tuners which can be used as relay and monitoring receivers, two tape decks for recording and playing, two record players, five microphones. Up to six external sources (e.g. G.P.O. lines). Transmission mixing and control is carried out at a small mixing console STUDER 169. Additional units such as power amplifier, power supply and input/output distribution, and monitoring are accommodated in a 19" rack.

2. Controle Console 169

The mixing desk is accommodated in a console similar to the tape deck console. The desk contains 10 input channels, each of which is equipped with a switchable microphone and line input, phase switch, presence and absence filters, treble and bass controls, prefade listening switch, professional fader for level control and two auxiliary outputs for re-verberation and foldback.

The master channel has an additional high-level input for 11 inputs available in total. The level of the sum output signal is adjusted by means of a fader. A high-grade limiter can be switched in as 'line and transmission protector'. A 1000 cycles identification signal can also be connected.

The reverberation and foldback channel contains the sum amplifiers and potentiometers for these two auxiliary channels in addition to the intercom, microphone and associated buttons.

The desk also contains two monitor channels, one driving the control loudspeaker, the other feeding the studio loudspeaker, which can be interrupted as soon as the transmission signal is switched on.

The following sources can be selected:

- Foldback
- Reverb
- PFL
- Tape 1
- Tape 2
- Σ Master output
- Aux

The monitor bar of the crossbar is connected to the external input.

The instrument panel contains a Peak Program Meter (PPM) which either reads sum or monitor signal. Another instrument indicates the amplification reduction of the sum limiter, and two VU-meters monitor the reverboration and foldback output. The prelistening signal and intercom signal coming from the studio is monitored by a 1 W amplifier and speaker incorporated in the instrument panel.

3. Distribution and Amplifier Cabinet

Input and output distributors, power amplifiers, receivers, power supply and other auxiliary circuits are installed in a 19" cabinet.

3.1 Power Supply

The power input is placed at the rear of the rack. Voltage requirements can be selected on both power supply units. Seven (7) power plugs are connected in parallel to the power input.

3.2. Power Supply Units

Each of the two units are provided with an individual mains switch.

3.21 Power Supply Unit 1.090.027

The unit supplies the following independant and separated powers:

Supply voltage 1 + 2	each 22 V DC stablized, outputs fully protected (current, temperature, overload) for the power supply of audio and signalling circuits.
Supply voltage 3	48 V DC stabilized

3.22 Power Supply Unit 1.090.057

Supply voltage 1	14,3 V stabilized, outputs fully protected (current, temperature, overload) for the power supply of the audio mixer model 169 and the two AM-receivers.
Supply voltage 2 + 3	50 V DC not stabilized, for the power supply of the two power amplifiers.

An LED-Diode indicates the available voltage.

3.3 Earthing

The modulation earth is connected with an earth-strap on the connection field of the 19" rack.

3.4 Connections

All audio frequency connections between mixing console and 19" rack are provided with two multipole connections (6 single shielded cables each). All other audio frequency connections on the 19" rack are provided with Cannon-connectors.

3.5 Crossbar

Ten input lines are fed-in via isolating plugs (Lemo RAX/CAVX 0.650) to the gaps in the crossbar. The coupling points consist of six rows of ten interlocking pushbuttons. Outputs of rows of buttons can also be taken to isolating plugs.

The two transmission lines are each fed to an isolating amplifier, with input and output sides leading across isolating plugs in a manner that enables easy exchange of amplifier inputs and outputs should faults occur.

An additional set of push buttons monitors all inputs and outputs. The AM receivers and the ten inputs are selected by means of interlocking buttons. The crossbar outputs are connected to the built-in

6 W amplifier, whereas the monitor speaker is operated by impulse buttons. The crossbar monitor signal is also available on the monitor system of the control desk.

3.6 FM Tuners

The two FM tuners STUDER A176 with digital frequency display can be used as retransmission receiver or as monitoring receiver. 15 transmission frequencies can be stored in the memory and recalled by numbered push buttons.

3.7 AM Tuners

Two single AM-receivers with symmetrical output can be connected to the monitor bar if required.

3.8 19" Slide-in Rack

In addition to the two power supply units, the following equipment is housed in the 19" slide-in rack:

- 2 power amplifiers, 40 W, for monitoring loudspeaker in studio and control room.
- 1 dual line amplifier, serving as isolating amplifier of the transmission lines.
- 1 dual-6 W-amplifier feeding control loudspeaker in the 19" rack and intercom loudspeaker in the studio.
- 1 relay-unit which interrupts the studio and intercom loudspeaker during red light.

4. Intercom Box

A small box, containing talk-back microphone, one loudspeaker and control button as well as transmission signal being installed in the speaker studio.

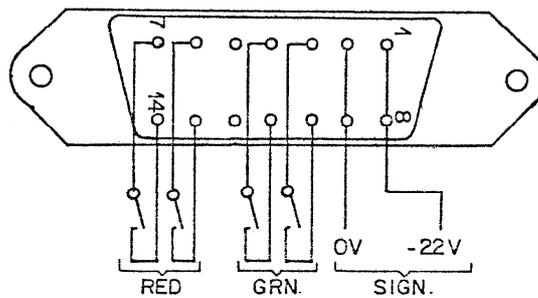
The speaker can talk on the prelistening control speaker in console by pressing the button. He receives an answer via the desk microphone, 6 W-amplifier and control speaker.

As soon as the command-button is pressed, the two microphone channels of the mixer are interrupted (cough pushbutton).

5. Studio Signalling

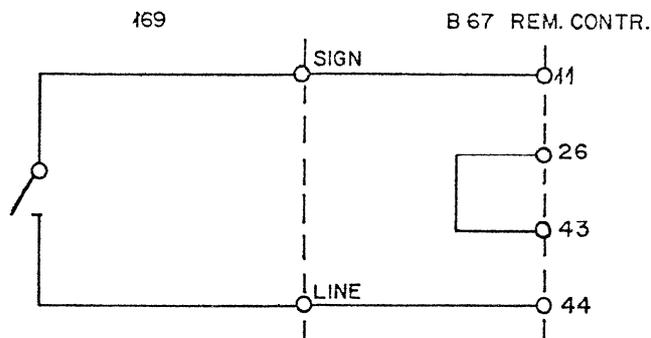
It consists of a red and green light-signal. When switching the mixer signalling on, the green lamp lights up. As soon as the microphone fader and master fader are opened, the signal changes to transmission (red). This interrupts the studio and intercom loudspeaker.

Each of the two signals are double-connected via relay-contact to a 14-pole connector.

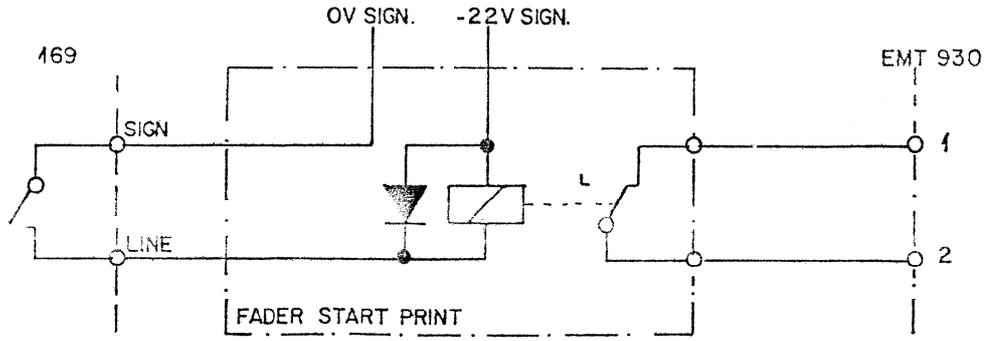


5.1 Faderstart B 67

Push button "Faderstart" has to be pressed on the tape recorder



5.2 Faderstart EMT 930



SUMMARY of EQUIPMENT
STUDER DESIGNED MONO LOCAL STUDIO

1 Distributor & Amplifier Cabinet

consisting of:

- 1 19" ELMA cabinet 1520-20
- 1 19" rack including mounted elements
- 10 ISEP rack sets
- 1 power unit 2 x 22 V
- 1 power unit 1 x 12 V plus 2 x 20 V
- 2 40 W amplifiers
- 2 isolating amplifiers
- 1 dual 6 W amplifier
- 1 relay slide-in unit
- 1 crossbar panel with 6 rows of
10 pushbuttons, isolating plugs,
prelistener loudspeaker,
prelistening buttons (11 inter-
locking plus 6 impulse)
- 1 connector plug panel incl. wiring
for the units
- 2 FM tuners type A176
incl. front panel
- 2 AM autoradio receivers incl.
front panel with selector
- 1 blank panel for telephone
- 3 side and rear panels

1 Intercom Box in Studio

containing:

- microphone
- loudspeaker
- pushbutton
- 2 signal lamps

1 STUDER 169 Audio Mixing Desk 1.169.010

equipped with:

- 10 inputs
- 1 sum
- 1 reverberator
- 2 monitors
- 1 PPM
- 1 special speaker for prelistening
- 1 console

cont'd ...

continued - 2 -

2 STUDER B 67-1

Professional Studio Tape Recorder, mono,
Speeds 3 3/4 - 7.5 - 15 ips, CCIR,
reel shelf with monitor loudspeaker above
tape deck, mounted in console

2 EMT 930/47k

Professional Studio Turntable,
with magnetic pick-up system,
reel shelf with monitor loudspeaker above
tape deck, mounted in console

2 REVOX AX 5/4

100/150 Watt loudspeaker

2 Corner Furniture

with shelves

Microphones

2 Dynamic Microphones AKG D 202 E 1

3 Condenser Microphones (2 CMC 541 U, 1 CMC 55 U)

Accessories for Mic's: table and floor stands, booms

2 Headphones BEYER DT 100

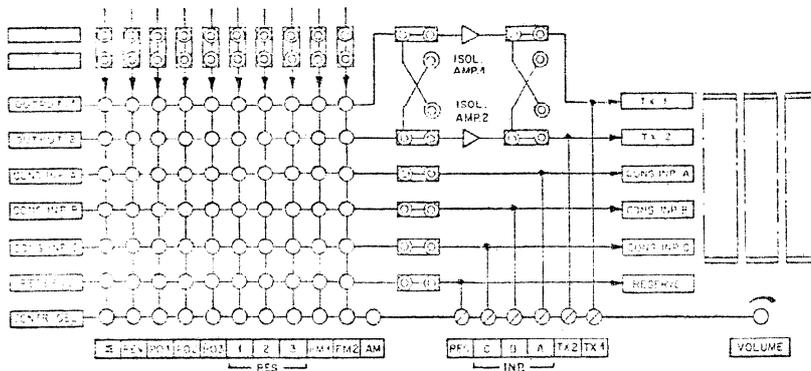
1 Set of Installation material

1 Set of Connectiong Cables

1 Set of Spare Parts

1st November 1978

De/gw



CROSSBAR
AND CONTROL
SPEAKER
KREUZSCHIENEN
UND
KONTROLLSPR.

3E

3E

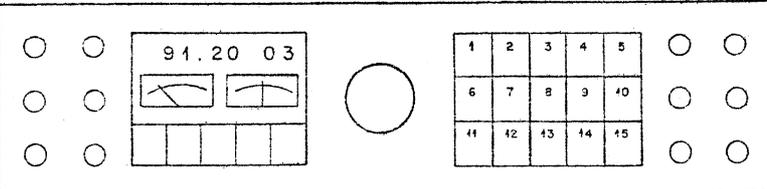
3E

1E

4E

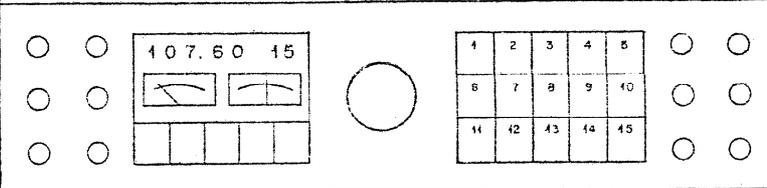
4E

STUDER
A176

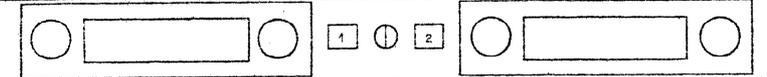


FM-TUNER 1
STUDER A176

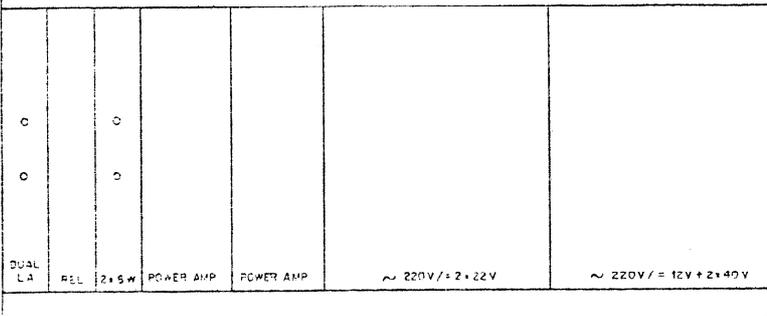
STUDER
A176



FM-TUNER 2
STUDER A176



AM 4 / AM 2



AMPLIFIER AND
POWER SUPPLY
VERSTÄRKER +
NETZTEIL

ÜBERBRÜCKUNGSGEHEBER
LEAD CABLE DESK
PATCH CONNECTOR

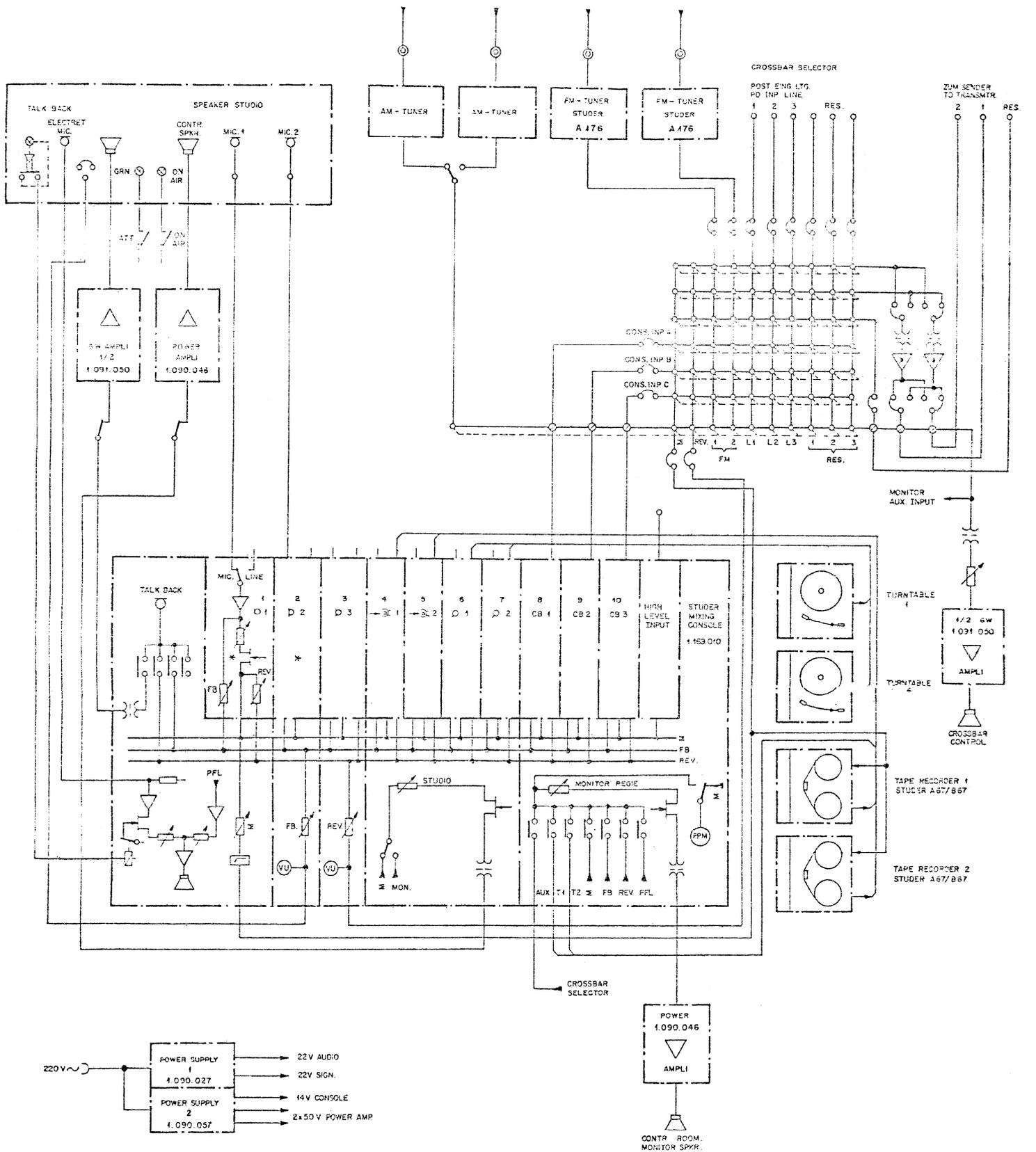
- DRUCKKLEBEN, SCHWACH
NICHT HALTBAR, INTERLOCKED PB
- DRUCKKLEBEN MIT ANZEIGE SCHWACH
GEISENHEITIG AUSLOSBAR
MOMENTARY PB

3	4	5	6
---	---	---	---

7.289.971/25

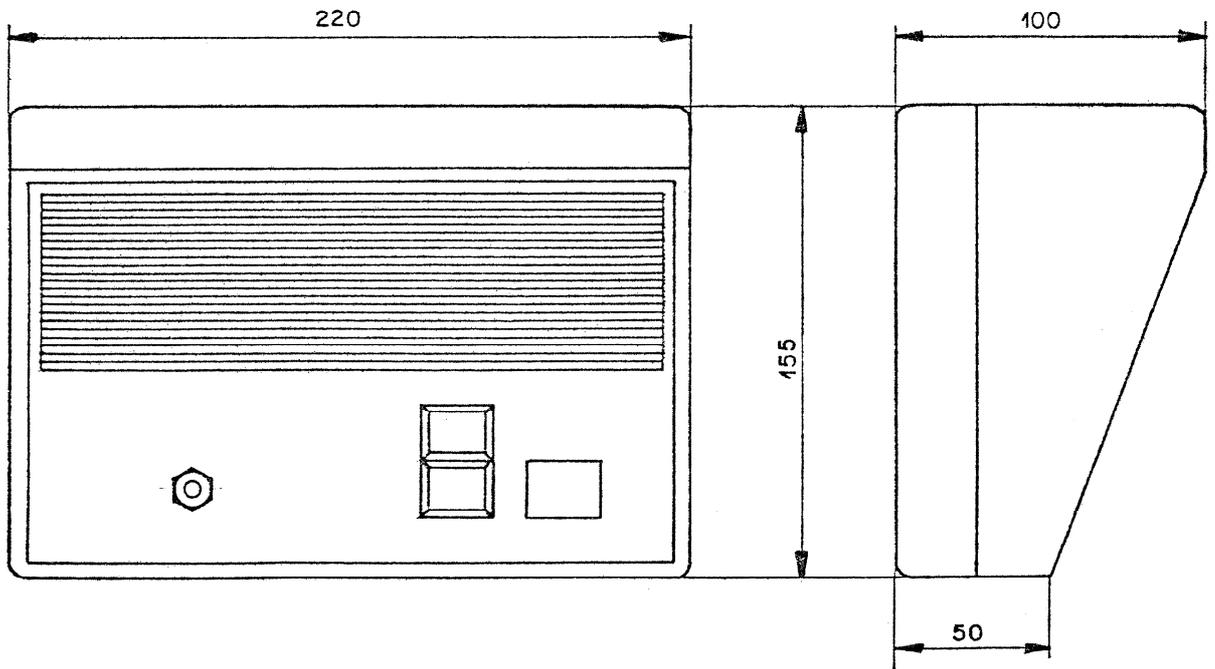
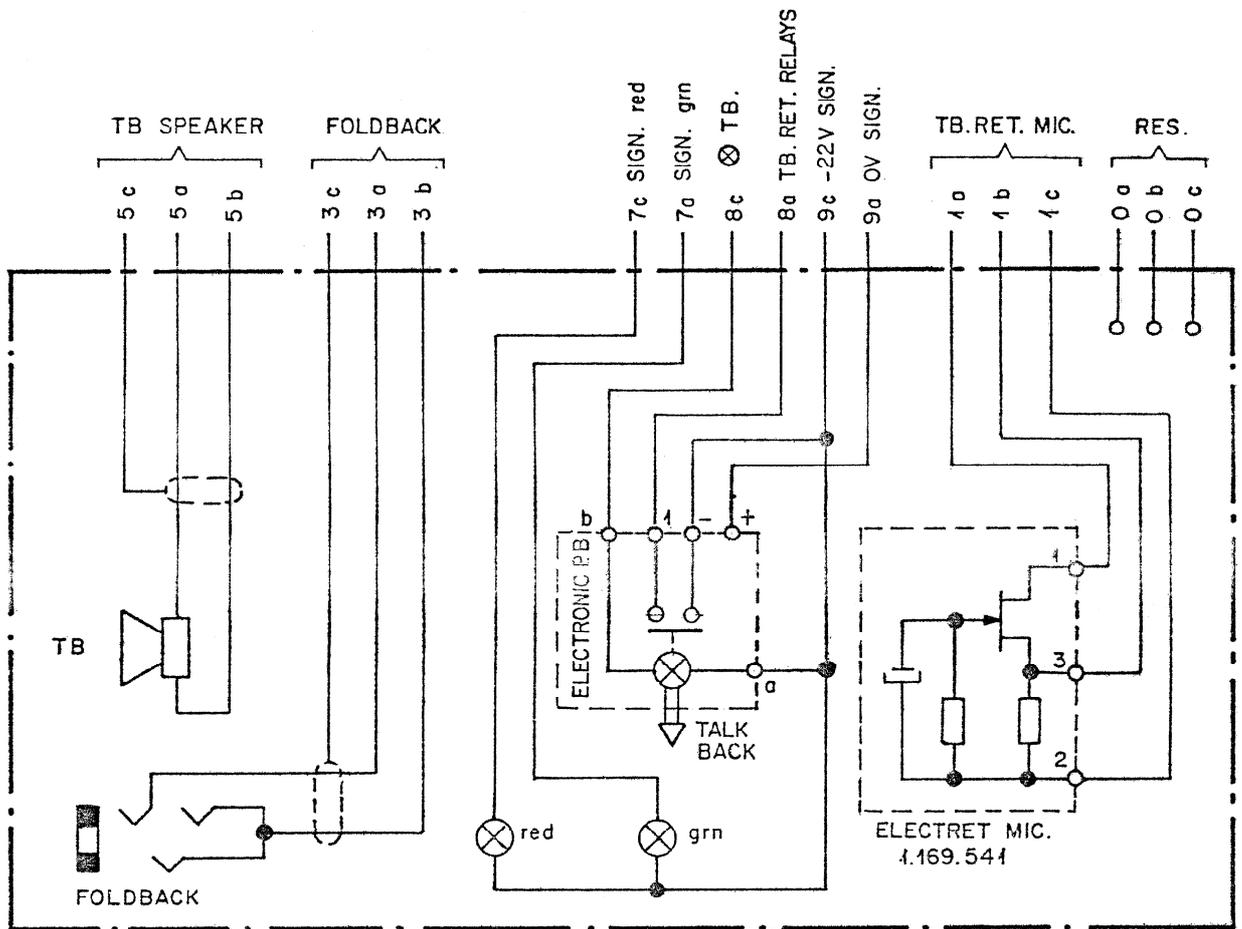
MONO LOCAL STUDIO
19" RACK

STUDER
HELDENBURG
ZÜRICH

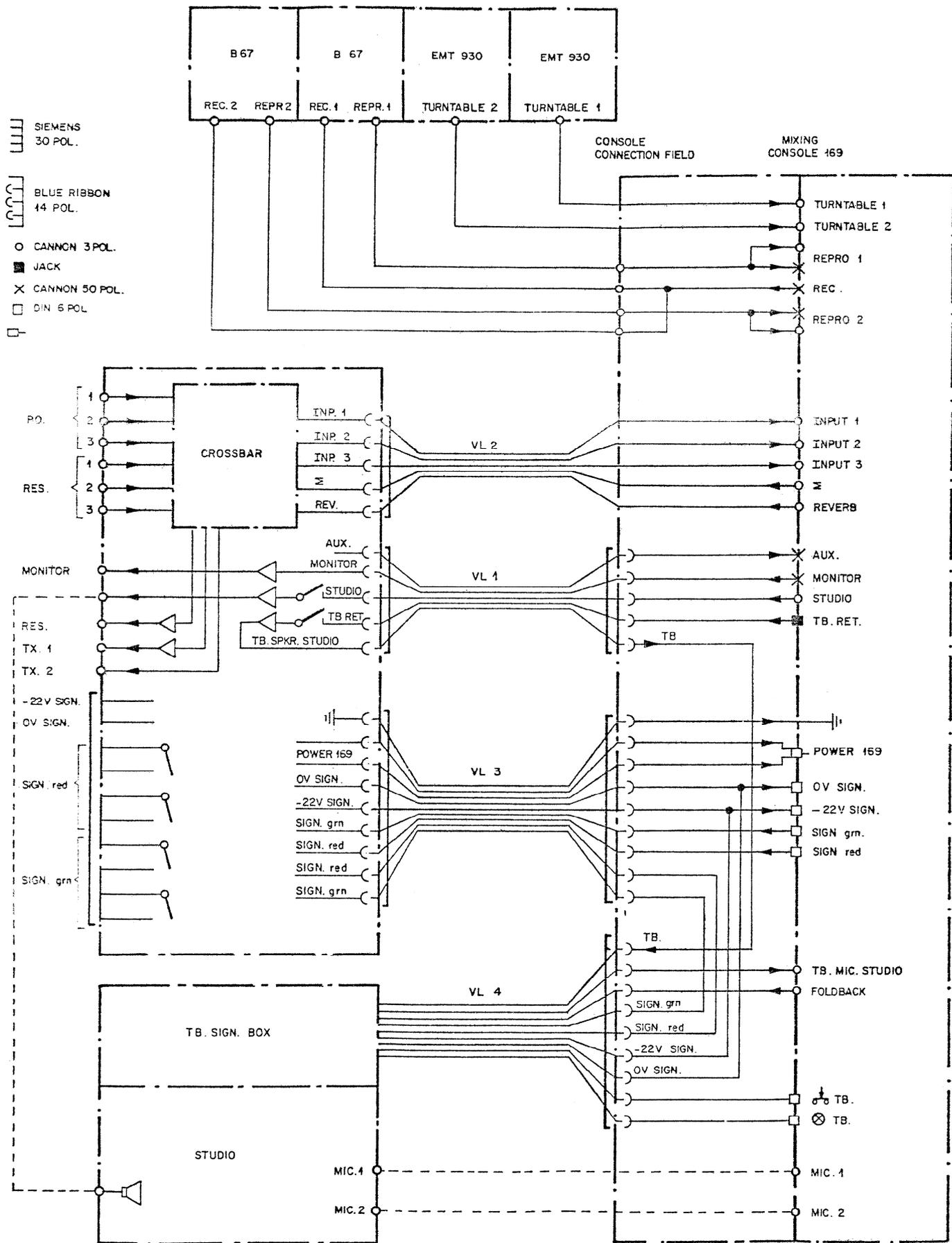


- ⊙ DRUCKTASTEN IMPULS
MOMENTARY P.B.
- ⊙ DRUCKTASTEN GEGENSEITIG AUSLOSSEND
INTERLOCKED P.B.
- ⊙ LEWIS ÜBERSBRÜCKUNGSTECKER
PAX/CAVX 0550 PATCH CONNECTOR
- * MUTING, WENN TALK BACK TASTE GEDRÜCKT
- ▽ ISOL AMPLI 1.091.036

Ersetzt für:		Ersetzt durch:		Klapp für:	
STUDER REGENSDORF ZÜRICH		Erneuerung		MONO LOCAL STUDIO	
Registrier- Nummer	3 1 77	St.	1/2	1	⊙
Änderung					
Nummer	7.289 971/1				



Zugehörige Unterlagen:	Freimasstoleranz: ±	Maßstab:	Ausgabe 7. 12. 76	Si	Si	⊙
Ersatz für:	Ersetzt durch:	Kopie für:	Datum	Gez.	Gepr.	Ges. Index
STUDER REGENDORF ZÜRICH	Benennung: TB/SIGN. BOX	Nummer: 7. 289.971/4				



Zugehörige Unterlagen:	Freimasstoleranz:	Maßstab:	Ausgabe	14. 2. 77	Si	<i>Anders</i>	⊙
	±		Datum	Gez.	Gepr.	Ges.	Index
Ersatz für:	Ersetzt durch:	Kopie für:					
STUBER REGENSDORF ZÜRICH	Benennung:	VERBINDUNGSPLAN				Nummer:	7.289.971/3