

Technische Daten

Allgemeines	<ul style="list-style-type: none"> - Spannungen in dBu beziehen sich immer auf 0,775 V 0 dBu \triangleq 0,775 Veff - Kanalregler und Summenregler sind auf 0 dB eingestellt (Stellung der Flachbahnregler). - Leitungsausgänge sind mit 600 Ohm abgeschlossen. - Externe Quellen haben einen Quellenwiderstand von \leq 200 Ohm. - Die Angaben gelten im Frequenzbereich von 31,5 Hz ... 16 kHz. - Angegebene Pegel sind mit Sinusdauererton gemessen (0 VU \triangleq 6 dB unter Vollpegel).
Pegel	Eingänge: - 70 dBu ... + 20 dBu Empfindlichkeit MIC: einstellbar in 10-dB-Schritten, kontinuierlich überlappend mit Feinregler (max. Empfindlichkeit bei überzogenen Reglern - 90 dBu \triangleq 0,024 mV). Empfindlichkeit LINE: intern einstellbar von + 6 dBu ... + 15 dBu Feinregler mit Mittenrasterung \pm 6 dB Empfindlichkeit TAPE: intern einstellbar von + 6 dBu ... + 15 dBu Einschleifpunkte: Pegel 0 dBu
Impedanzen	Eingangsimpedanz MIC: Bereich - 60 ... - 10 dB \rightarrow Impedanz \geq 1,2 kOhm Bereich - 10 ... + 20 dB \rightarrow Impedanz \geq 5 kOhm LINE/TAPE: \geq 10 kOhm INSERT: ca. 5 kOhm Ausgangsimpedanz: Hauptausgang, Hilfsausgang, Studioausgang, Monitorausgang, einstellbar (Last 600 Ohm), + 6 ... + 15 dBu Kopfhörerausgang: \leq 50 Ohm ca. 135 Ohm INSERT: \leq 50 Ohm
Beschreibung:	MIC: Symmetrisch, erdfrei, Quelle \leq 200 Ohm LINE: Symmetrisch, erdfrei, Quelle \leq 200 Ohm TAPE: Symmetrisch, Quelle \leq 200 Ohm INSERT: Unsymmetrisch, Quelle \leq 200 Ohm Leitungsausgänge: Symmetrisch, erdfrei, Last \geq 200 Ohm Studioausgang: Symmetrisch, erdfrei, Last \geq 600 Ohm Monitorausgang: Symmetrisch, erdfrei, Last \geq 600 Ohm Insertausgang: Unsymmetrisch, Last \geq 2 kOhm Kopfhörerausgang: Unsymm., empfohlene Last \geq 200 Ohm
Maximale Pegel	Microfoneingang: + 24 dBu Leitungseingang: + 24 dBu Tape-Eingang: + 24 dBu Insert-Eingang: + 20 dBu Leitungsausgang: + 24 dBu Monitorausgang (30 Hz + 18 dBu): + 22 dBu Studioausgang (30 Hz + 18 dBu): + 22 dBu Insert-Ausgang: + 20 dBu Kopfhörerausgang (Leerlauf): + 20 dBu
Übersteuerungsreserve	Vor dem Kanalregler ($k^{tot}1\%$) 20 dB Vor dem Summenregler ($k^{tot}1\%$) 20 dB
Frequenzgänge (Monoeinheit, Version A)	Filter ausgeschaltet + 0,5 dB - 1 dB Trittschallfilter 12 dB/Octave 3 dB Punkt einstellbar von 30 Hz ... 330 Hz Höhenfilter 12 dB/Octave 3 dB Punkt einstellbar von 700 Hz ... 20 kHz Ausserhalb des Audiobereiches kontinuierlich abfallend mit 12 dB/Octave. Equalizer: Höhenregler "shelving" HF Umkehrpunkt einstellbar von 700 Hz ... 16 kHz Höhenregler "Bell" HF einstellbar von 700 Hz ... 16 kHz Güte Q \approx 1 Tiefenregler "shelving" LF Umkehrpunkt einstellbar \pm 15 dB Tiefenregler "Bell" LF einstellbar von 30 Hz ... 600 Hz Güte Q \approx 1 Präsenzfilter HMF einstellbar \pm 15 dB Güte schmal, bei max. Anhebung Q \approx 3 Güte breit, bei max. Anhebung Q \approx 1 Präsenzfilter LMF einstellbar \pm 15 dB Güte schmal, bei max. Anhebung Q \approx 3 Güte breit, bei max. Anhebung Q \approx 1

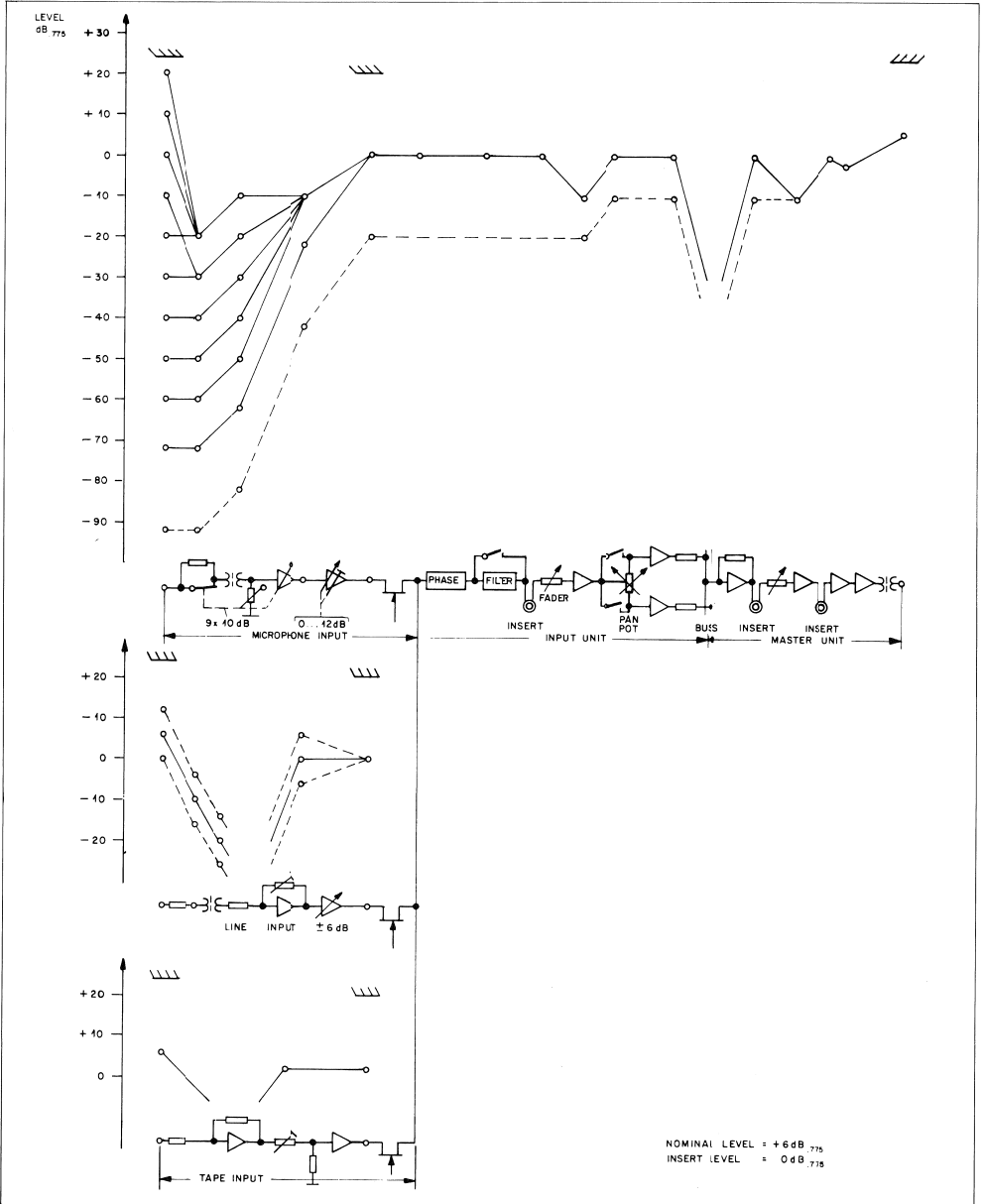
Technical specifications

General	<ul style="list-style-type: none"> - voltages in dBu are referred to 0.775 V 0 dBu \triangleq 0.775 V - channel and master faders are set to 0 dB (position of the linear faders). - line outputs are loaded with 600 ohms - external sources have a source impedance of \leq 200 ohms - data given are valid from 31.5 Hz ... 16 kHz - levels are measured with a continuous sine wave (0 VU \triangleq 6 dB below peak recording level)
Levels	Inputs: sensitivity MIC: adjustable in 10 dB steps, continuously variable with pot for fine attenuation, overlapping (max. sensitivity with open faders - 90 dBu \triangleq 0.024 mV) - 70 dBu ... + 20 dBu sensitivity LINE: internally presettable from pot for fine adjust with centre detent + 6 dBu ... + 15 dBu sensitivity TAPE: internally presettable from Insertion points: level \pm 6 dBu Outputs: main, auxiliary-, studio-, monitor-outputs presettable within a range of (load 600 ohms) + 6 dBu ... + 15 dBu
Impedances	input impedance MIC: range - 70 ... - 10 dBu \rightarrow impedance \geq 1.2 kohms range - 10 ... + 20 dBu \rightarrow impedance \geq 5 kohms LINE/TAPE INSERT approx. 5 kohms output impedance: main, auxiliary-, studio-, monitor-outputs headphones output 50 ohms INSERT approx. 135 ohms 50 ohms
Description	MIC: balanced, floating, source 200 ohms LINE: balanced, floating, source 200 ohms TAPE: balanced, source 200 ohms INSERT: unbalanced, source 200 ohms line outputs: balanced, floating, load 200 ohms studio output: balanced, floating, load 600 ohms monitor output: balanced, floating, load 600 ohms insert output: unbalanced, load 2 kohms headphones output: unbal., recommended load 100 ohms
Maximum levels	microphone input: + 24 dBu line: + 24 dBu tape: + 24 dBu insert input: + 20 dBu line output: + 24 dBu monitor output (30 Hz + 18 dBu): + 22 dBu studio output (30 Hz + 18 dBu): + 22 dBu insert output: + 20 dBu headphones output (unloaded): + 20 dBu
Overload margin	at the channel fader ($k^{tot}1\%$) 20 dB at the master fader ($k^{tot}1\%$) 20 dB
Frequency response (Mono Input, Version A)	filters off + 0.5 dB - 1 dB bass cut 12 dB/octave 3 dB point adjustable (roll-off) 30 Hz ... 330 Hz treble filter 12 dB/octave 3 dB point adjustable (roll-off) 700 Hz ... 20 kHz outside audio range continuously decreasing at 12 dB/octave treble control, shelving HF adjustable \pm 15 dB treble control, Bell HF adjustable 700 Hz ... 16 kHz \pm 15 dB 700 Hz ... 16 kHz Q \approx 1 bass control, shelving LF adjustable \pm 15 dB bass control, Bell LF adjustable 30 Hz ... 600 Hz \pm 15 dB 30 Hz ... 600 Hz Q \approx 1 presence/absence filter HMF adjustable \pm 15 dB Q narrow, at max. boost 350 Hz ... 7 kHz Q wide, at max. boost Q \approx 3 presence/absence filter LMF adjustable 350 Hz ... 7 kHz Q narrow, at max. boost Q \approx 1 Q wide, at max. boost 100 Hz ... 2 kHz Q \approx 3 Q \approx 1

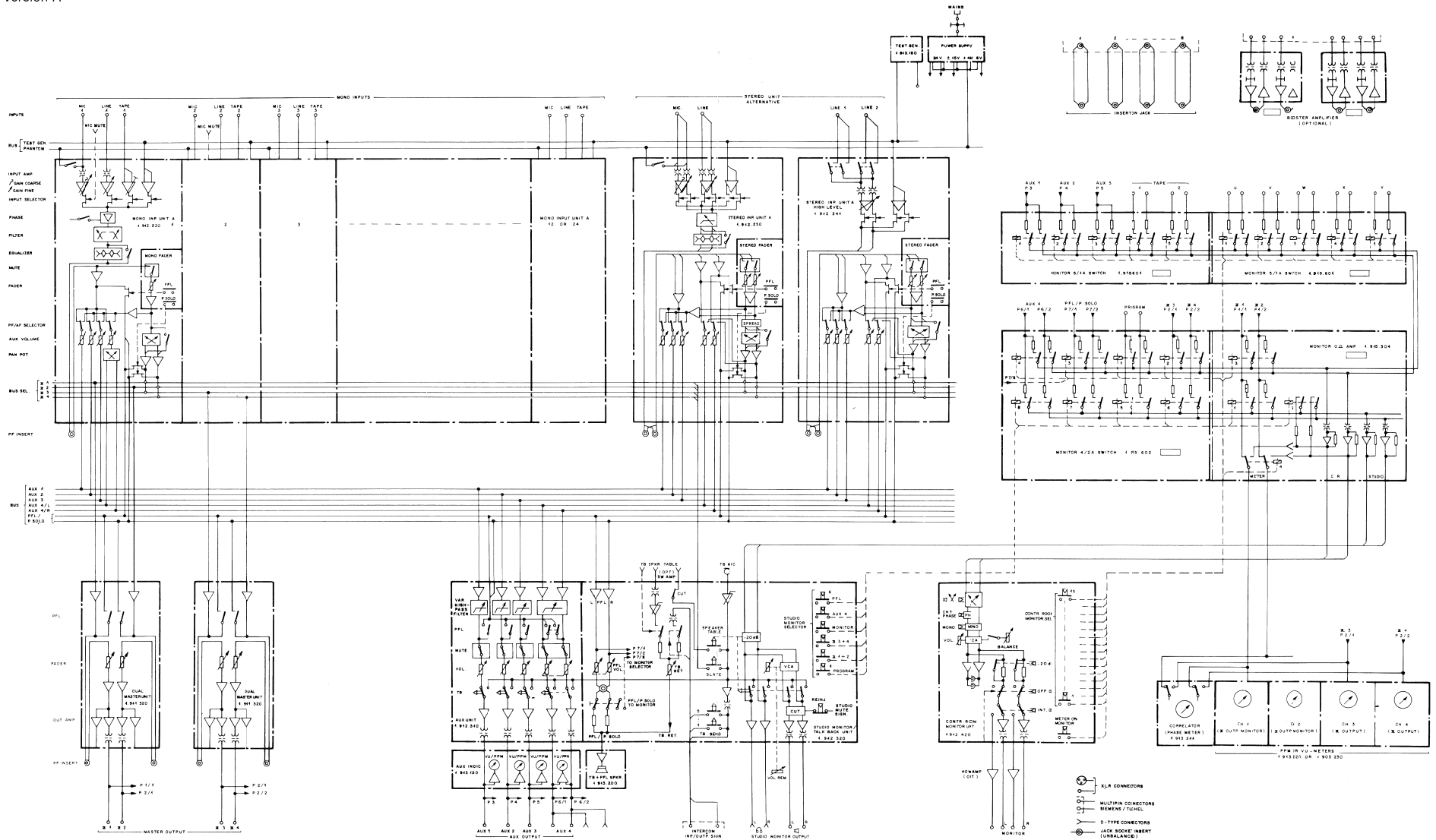
Fremdspannungen	Die Fremdspannungen sind Effektivwerte mit einer äquivalenten Rauschbandbreite von 30 Hz...23 kHz (Siemens U2033 oder gleichwertiges Instrument).		Noise weighted	noise voltages are measured with a true RMS voltmeter and an equivalent noise bandwidth of 30 Hz...23 kHz (e.g. Siemens U2033 or equal)	
	Rauschzahl F des Mikrofoneingangs, Quellenimpedanz = 200 Ohm	F ≤ 4 dB		noise figure of the microphone input, source impedance = 200 ohms	F ≤ 4 dB
	Fremdspannungsabstand am Summenausgang	> 100 dB		signal-to-noise ratio,	> 100 dB
	Summenregler geschlossen			master fader closed	
	Ein Kanal, Eingangs- und Summenregler 0 dB			one channel, input and master faders 0 dB	
	Verstärkung Eingang/Ausgang = 1, Stellung LINE			unity gain;	
	ohne Equalizer	> 98 dB		filters off	> 98 dB
	mit Equalizer (linear)	> 90 dB		filters on (linear)	> 90 dB
	12 Kanäle, Eingangs- und Summenregler 0 dB			12 channels, input and master faders 0 dB	
	Verstärkung Eingang/Ausgang = 1, Stellung LINE			unity gain;	
	ohne Equalizer	> 90 dB		filters off	> 90 dB
	mit Equalizer (linear)	> 82 dB		filters on (linear)	> 82 dB
	24 Kanäle, Eingangs- und Summenregler 0 dB			24 channels, input and master faders 0 dB	
	Verstärkung Eingang/Ausgang = 1, Stellung LINE			unity gain;	
	ohne Equalizer	> 87 dB		filters off	> 87 dB
	mit Equalizer (linear)	> 79 dB		filters on (linear)	> 79 dB
Klirrfaktor	Leitungspegel im Frequenzbereich	≤ 0,1%	Distortion	line level in frequency range	≤ 0,1%
Übersprechen	von Summe auf Summe	> 85 dB	Crosstalk	crosstalk from master to master	> 85 dB
Stromversorgung	Netzbetrieb Netzspannungen	umschaltbar	Power supply	mains operation, mains voltage selector for	
	100 V, 120 V, 140 V, 200 V, 220 V, 240 VAC ± 10%			100 V, 120 V, 140 V, 200 V, 220 V, 240 VAC ± 10%	
	Interne Betriebsspannungen:			Internal supply voltages:	
	Audio	- 15 V/+ 15 V		audio electronics	- 15/+ 15 VDC
	Logik	- 6 V		logic	- 6 VDC
	Logik/Steuerung	- 24 V		logic/control	- 24 VDC
	Signalisation	24 V		signalization	24 VDC
	Phantomspesung	48 V		phantom powering	48 VDC

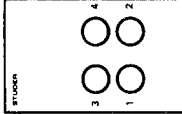
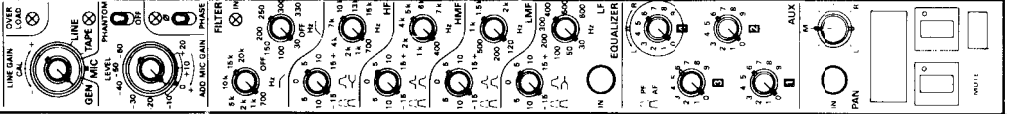
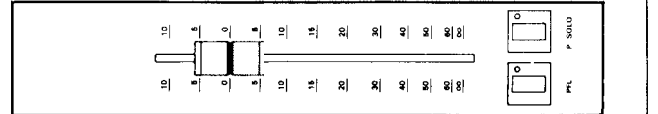
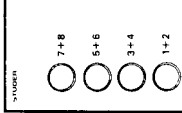

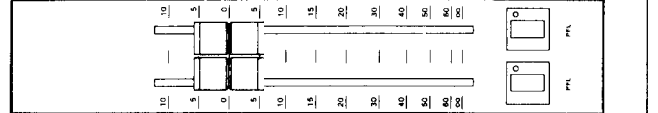
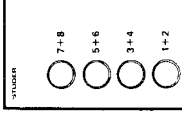
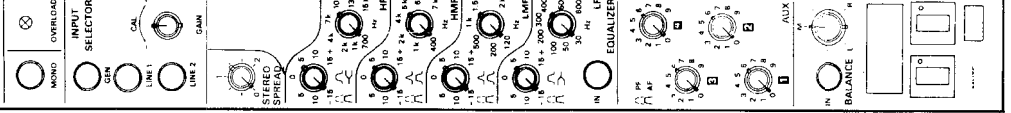

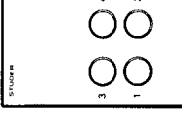
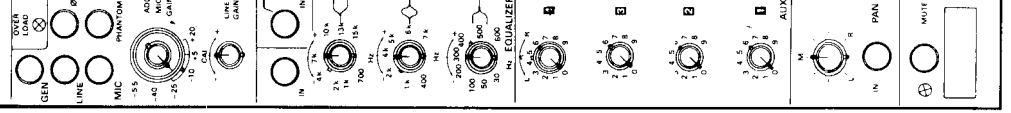
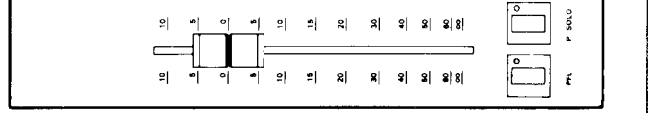
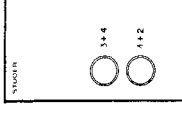
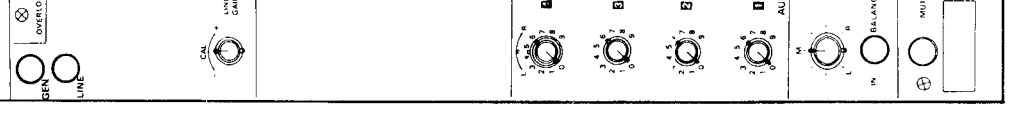
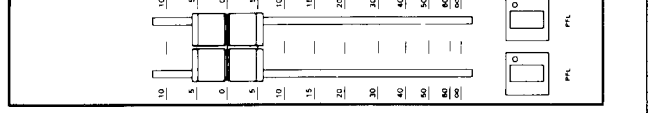
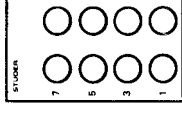
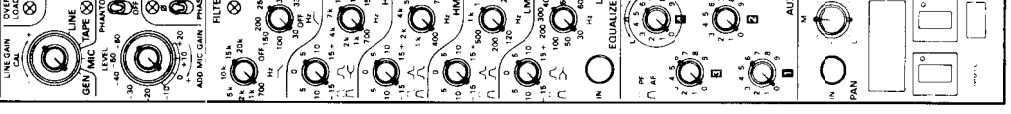
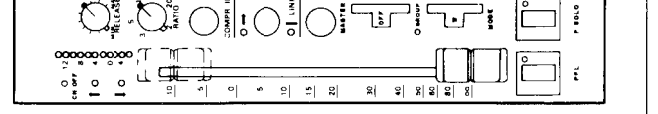
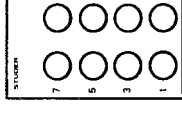
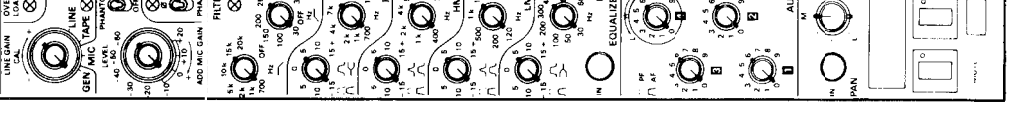
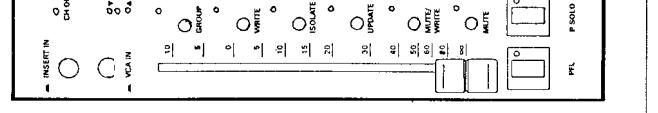
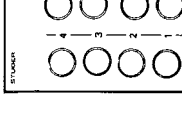
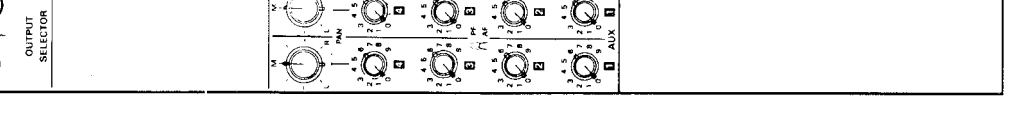
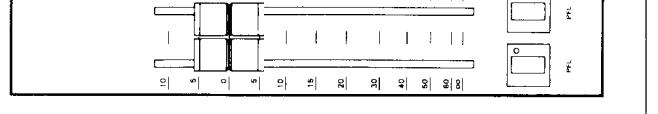

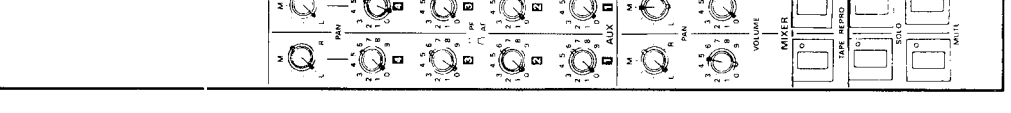
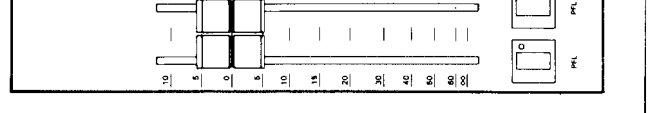
Pegeldiagramm

Level diagram



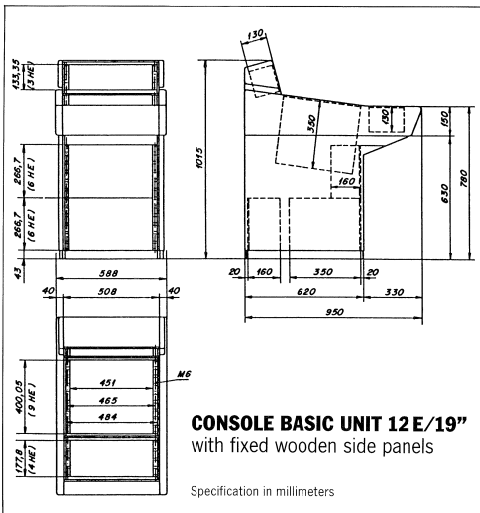
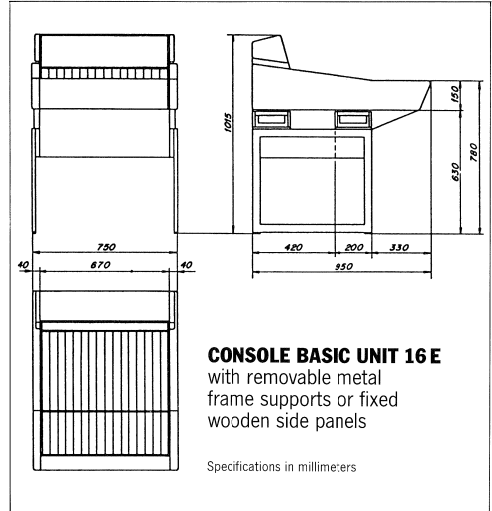
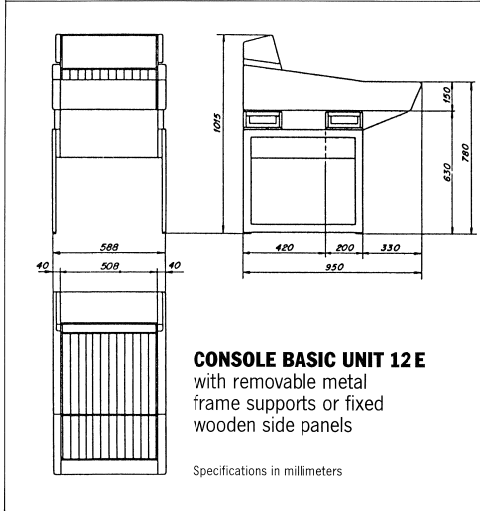
Modul version A



<p>MONO INPUT Version A</p>			
<p>STEREO/HL INPUT Version A</p>			
<p>STEREO HL INPUT with EQUALIZER Version A</p>			
<p>MONO INPUT Version B</p>			
<p>STEREO HL INPUT Version B</p>			
<p>MONO INPUT with VCA Fader #1 and GROUP SELECTOR (Multichannel)</p>			
<p>MONO INPUT with VCA Fader #2 and MULTICHANNEL SELECTOR with MONITOR MIXER</p>			
<p>OUTPUT with MASTER SELECTOR and DUAL BAR-GRAPH</p>			
<p>OUTPUT with MONITOR MIXER and DUAL BAR-GRAPH DISPLAY (Multichannel)</p>			

Konsolen-Versionen Abmessungen

Console versions Dimensions



STUDER INTERNATIONAL AG

Allhardstrasse 10, CH-8105 Regensdorf

Sales Offices:

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Printed in Switzerland by WILLI STUDER AG

10.26.0701 (Ed. 0190)

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