

# **Studer On-Air 5000**

## *Digital Mixing System*

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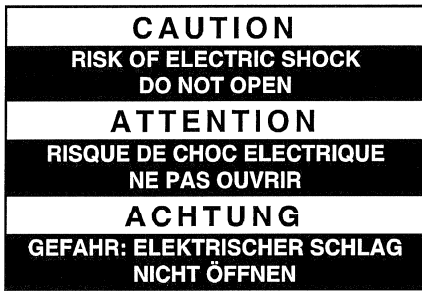
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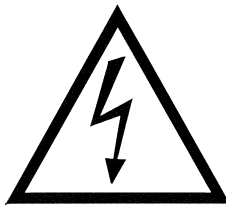
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To reduce the risk of electric shock, do not remove covers (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

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

Um die Gefahr eines elektrischen Schlages zu vermeiden, entfernen Sie weder Geräteabdeckungen noch Rückwand. Überlassen Sie Wartung und Reparatur qualifiziertem Fachpersonal.



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

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

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



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

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

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

**CAUTION:**

Lithium battery. Danger of explosion by incorrect handling. Replace by battery of the same make and type only.

**ATTENTION:**

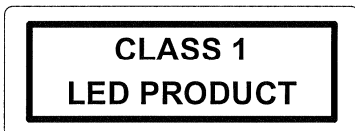
Pile au lithium. Danger d'explosion en cas de manipulation incorrecte. Ne remplacer que par un modèle de même type.

**ACHTUNG:**

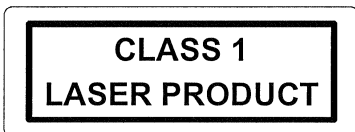
Explosionsgefahr bei unsachgemäßem Auswechseln der Lithium-batterie. Nur durch den selben Typ ersetzen.

**ADVARSEL:**

Lithiumbatteri. Eksplosionsfare. Udskiftning må kun foretages af en sagkyndig og som beskrevet i servicemanualen (DK).



Assemblies or sub-assemblies of this product can contain optoelectronic devices. As long as these devices comply with Class 1 of laser or LED product 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.



Baugruppen oder Unterbaugruppen dieses Produktes können optoelektronische Komponenten enthalten. Solange diese der Klasse 1 für Laser- oder LED-Produkte nach der Norm EN 60825-1:1994 entsprechen, sind sie nicht direkt am Gerät bezeichnet. Sollte eine Sonderausführung in eine höhere Klasse fallen, so ist die betreffende Baugruppe oder Unterbaugruppe gemäß dieser Norm mit entsprechender Aufschrift versehen.

**FIRST AID**

(in case of electric shock)

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

**WARNING!**

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

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

**PREMIERS SECOURS**

(en cas d'électrocution)

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

**ATTENTION!**

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

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

**ERSTE HILFE**

(bei Stromunfällen)


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

**ACHTUNG!**

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

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

### Installation

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

Untersuchen Sie das Gerät und sein Zubehör auf allfällige Transportschäden.


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

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

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

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

### Installation

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

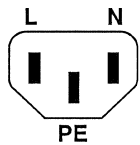
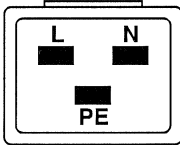
Check the equipment for any transport damage.

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

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

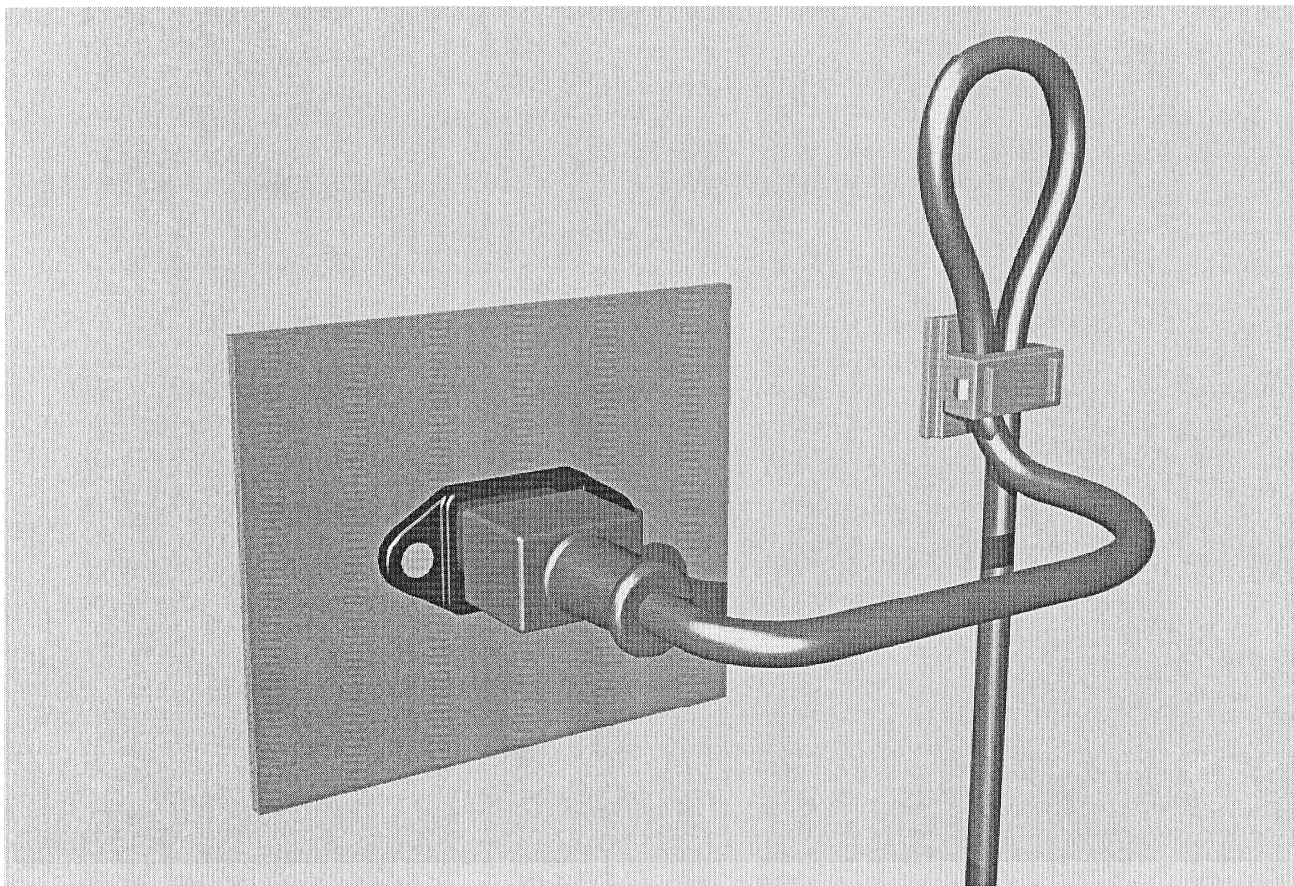
Before connecting the equipment to the AC power outlet, check that the local line voltage matches the equipment rating (voltage, frequency) within the admissible tolerance. The equipment fuses must be rated in accordance with the specifications on the equipment.

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

 <p><b>IEC 320 / C13</b></p>	 <p><b>IEC 320 / C19</b></p>												
Female plug (IEC320), view from contact side:	<table border="0"> <tr> <td>L</td> <td>live; brown</td> <td>National American Standard:</td> <td>Black</td> </tr> <tr> <td>N</td> <td>neutral; blue</td> <td></td> <td>White</td> </tr> <tr> <td>PE</td> <td>protective earth; green and yellow</td> <td></td> <td>green</td> </tr> </table>	L	live; brown	National American Standard:	Black	N	neutral; blue		White	PE	protective earth; green and yellow		green
L	live; brown	National American Standard:	Black										
N	neutral; blue		White										
PE	protective earth; green and yellow		green										
Connecteur femelle (IEC320), vue de la face aux contacts:	<table border="0"> <tr> <td>L</td> <td>phase; brun</td> <td>Standard national américain:</td> <td>Noir</td> </tr> <tr> <td>N</td> <td>neutre; bleu</td> <td></td> <td>Blanc</td> </tr> <tr> <td>PE</td> <td>terre protectrice; vert et jaune</td> <td></td> <td>Vert</td> </tr> </table>	L	phase; brun	Standard national américain:	Noir	N	neutre; bleu		Blanc	PE	terre protectrice; vert et jaune		Vert
L	phase; brun	Standard national américain:	Noir										
N	neutre; bleu		Blanc										
PE	terre protectrice; vert et jaune		Vert										
Ansicht auf Steckkontakte der Kabel-Gerätesteckdose (IEC320):	<table border="0"> <tr> <td>L</td> <td>Phase; braun</td> <td>USA-Standard:</td> <td>Schwarz</td> </tr> <tr> <td>N</td> <td>Nulleiter; blau</td> <td></td> <td>Weiss</td> </tr> <tr> <td>PE</td> <td>Schutzleiter; gelb/grün</td> <td></td> <td>grün</td> </tr> </table>	L	Phase; braun	USA-Standard:	Schwarz	N	Nulleiter; blau		Weiss	PE	Schutzleiter; gelb/grün		grün
L	Phase; braun	USA-Standard:	Schwarz										
N	Nulleiter; blau		Weiss										
PE	Schutzleiter; gelb/grün		grün										

### Zugentlastung für den Netzanschluss

Zum Verankern von Steckverbindungen ohne mechanische Verriegelung (z.B. IEC-Kaltgerätedosen) empfehlen wir die folgende Anordnung:



### Mains connector strain relief

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

Vorgehen: Der mitgelieferte Kabelhalter ist selbstklebend. Bitte beachten Sie bei der Montage die folgenden Regeln:

1. Der Untergrund muss sauber, trocken und frei von Fett, Öl und anderen Verunreinigungen sein. Temperaturbereich für optimale Verklebung: 20...40° C.
2. Entfernen Sie die Schutzfolie auf der Rückseite des Kabelhalters und bringen sie ihn mit kräftigem Druck an der gewünschten Stelle an. Lassen sie ihn unbelastet so lange wie möglich ruhen – die maximale Klebekraft ist erst nach rund 24 Stunden erreicht.
3. Die Stabilität des Kabelhalters wird erhöht, wenn Sie ihn zusätzlich verschrauben. Zu diesem Zweck liegen ihm eine selbstschneidende Schraube sowie eine M4-Schraube mit Mutter bei.
4. Legen Sie das Kabel gemäss Figur in den Halter ein und pressen Sie die Klemme kräftig auf, bis das Kabel fixiert ist.

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

1. The surface to be adhered to must be clean, dry, and free from grease, oil or other contaminants. Best application temperature range is 20...40° C.
2. 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.
3. For improved stability, the clamp can be fixed with a screw. For this purpose, a self-tapping screw and an M4 bolt and nut are included.
4. 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.

## Lufttemperatur und Feuchtigkeit

### Allgemein

Die Betriebstauglichkeit des Gerätes oder Systems ist unter folgenden Umgebungsbedingungen gewährleistet:

*EN 60721-3-3, Set IE32, Wert 3K3.*

Diese Norm besteht aus einem umfassenden Katalog von Parametern; die wichtigsten davon sind: Umgebungstemperatur +5...+40 °C; rel. Luftfeuchtigkeit 5...85% – d.h. weder Kondensation noch Eisbildung; abs. Luftfeuchtigkeit 1...25 g/m<sup>3</sup>; Temperatur-Änderungsrate < 0,5 °C/min. In den folgenden Abschnitten wird darauf näher eingegangen.

Unter den genannten Bedingungen startet und arbeitet das Gerät oder System problemlos. Ausserhalb dieser Spezifikationen möglicherweise auftretende Probleme sind in den folgenden Abschnitten beschrieben.

### Umgebungstemperatur

Geräte und Systeme von Studer sind allgemein für einen Umgebungs-Temperaturbereich (d.h. Temperatur der eintretenden Kühlluft) von +5...+40 °C ausgelegt. Bei Installation in einem Schrank muss der vorgesehene Luftdurchsatz und dadurch die Konvektionskühlung gewährleistet sein. Folgende Tatsachen sind dabei zu berücksichtigen:

1. Die zulässige Umgebungstemperatur für den Betrieb der Halbleiter-Bauelemente beträgt 0 °C bis +70 °C (commercial temperature range for operation).
2. Der Luftdurchsatz der Anlage muss gewährleisten, dass die austretende Kühlluft ständig kühler ist als 70 °C.
3. Die mittlere Erwärmung der Kühlluft soll 20 K betragen, die maximale Erwärmung an den heissen Komponenten darf somit um weitere 10 K höher liegen.
4. Zum Abführen einer Verlustleistung von 1 kW bei dieser zulässigen mittleren Erwärmung ist eine Luftmenge von 2,65 m<sup>3</sup>/min notwendig.

**Beispiel:** Für ein Rack mit einer Leistungsaufnahme  $P = 800 \text{ W}$  ist eine Kühlluftmenge von  $0,8 * 2,65 \text{ m}^3/\text{min}$  nötig, entsprechend  $2,12 \text{ m}^3/\text{min}$ .

5. Soll die Kühlfunktion der Anlage (z.B. auch bei Lüfter-Ausfall oder Bestrahlung durch Spotlampen) überwacht werden, so ist die Temperatur der Abluft unmittelbar oberhalb der Einschübe an mehreren Stellen im Rack zu messen; die Ansprechtemperatur der Sensoren soll 65 bis 70 °C betragen.

### Reif und Tau

Das unversiegelte System (Steckerpartien, Halbleiteranschlüsse) verträgt zwar leichte Eisbildung (Reif). Mit blossen Auge sichtbare Betauung führt jedoch bereits zu Funktionsstörungen. In der Praxis kann mit einem zuverlässigen Betrieb der Geräte bereits im Temperaturbereich ab -15 °C gerechnet werden, wenn für die Inbetriebnahme des kalten Systems die folgende allgemeine Regel beachtet wird:

Wird die Luft im System abgekühlt, so steigt ihre relative Feuchtigkeit an. Erreicht diese 100%, kommt es zu Niederschlag, meist in der Grenzschicht zwischen der Luft und einer kühleren Oberfläche, und somit zur Bildung von Eis oder Tau an empfindlichen Systemstellen (Kontakte, IC-Anschlüsse etc.). Ein störungsfreier Betrieb mit interner Betauung, unabhängig von der Temperatur, ist nicht gewährleistet.

## 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/m<sup>3</sup>; 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 sections.

### 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:

1. The admissible ambient temperature range for operation of the semiconductor components is 0 °C to +70 °C (commercial temperature range for operation).
2. The air flow through the installation must provide that the outgoing air is always cooler than 70 °C.
3. Average heat increase of the cooling air shall be 20 K, allowing for an additional maximum 10 K increase at the hot components.
4. In order to dissipate 1 kW with this admissible average heat increase, an air flow of 2,65 m<sup>3</sup>/min is required.

**Example:** A rack dissipating  $P = 800 \text{ W}$  requires an air flow of  $0,8 * 2,65 \text{ m}^3/\text{min}$  which corresponds to  $2,12 \text{ m}^3/\text{min}$ .

5. 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.

Vor der Inbetriebnahme muss das System auf allfällige interne Betauung oder Eisbildung überprüft werden. Nur bei sehr leichter Eisbildung kann mit direkter Verdunstung (Sublimation) gerechnet werden; andernfalls muss das System im abgeschalteten Zustand gewärmt und getrocknet werden.

Das System ohne feststellbare interne Eisbildung oder Betauung soll möglichst homogen (und somit langsam) mit eigener Wärmeleistung aufgewärmt werden; die Lufttemperatur der Umgebung soll ständig etwas tiefer als diejenige der Systemabluft sein.

Ist es unumgänglich, das abgekühlte System sofort in warmer Umgebungsluft zu betreiben, so muss diese entfeuchtet sein. Die absolute Luftfeuchtigkeit muss dabei so tief sein, dass die relative Feuchtigkeit, bezogen auf die kälteste Oberfläche im System, immer unterhalb 100% bleibt.

Es ist dafür zu sorgen, dass beim Abschalten des Systems die eingeschlossene Luft möglichst trocken ist (d.h. vor dem Abschalten im Winter den Raum mit kalter, trockener Luft belüften und feuchte Gegenstände, z.B. Kleider, entfernen).

Die Zusammenhänge sind im folgenden Klimatogramm ersichtlich. Zum kontrollierten Verfahren gehören Thermometer und Hygrometer sowie ein Thermometer im System.

**Beispiel 1:** Ein Ü-Wagen mit einer Innentemperatur von 20 °C und 40% relativer Luftfeuchtigkeit wird am Abend abgeschaltet. Sinkt die Temperatur unter +5 °C, bildet sich Tau oder Eis.

**Beispiel 2:** Ein Ü-Wagen wird morgens mit 20 °C warmer Luft von 40% relativer Luftfeuchtigkeit aufgewärmt. Auf Teilen, die kälter als +5 °C sind, bildet sich Tau oder Eis.

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 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 rel. 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 rel. humidity of 40%. On all parts being cooler than +5 °C, dew or ice will be forming.

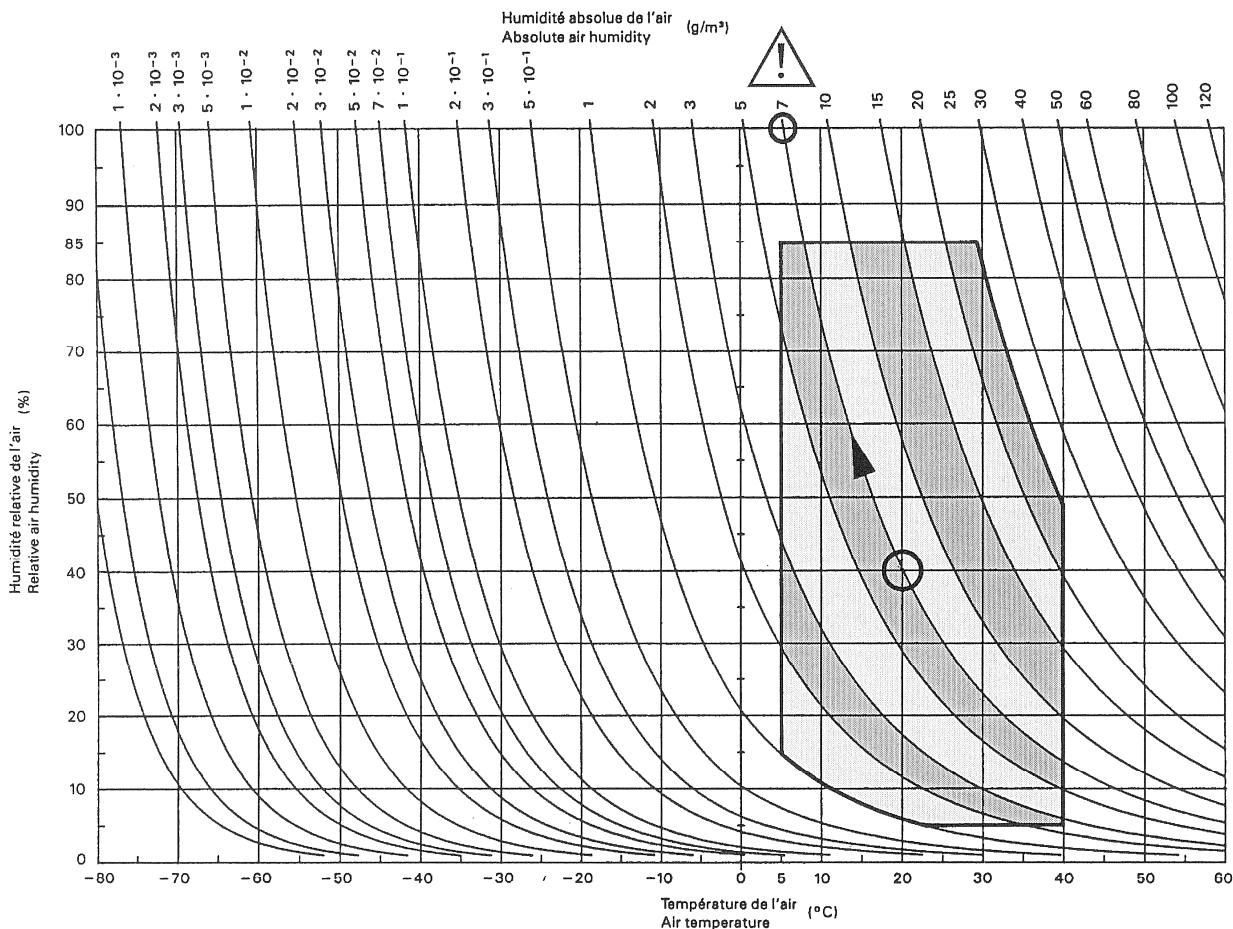


Figure B.3 – Climatogramme pour catégorie 3K3  
Climatogram for class 3K3

721-3-3 © CEI:1994



## Wartung und Reparatur

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

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

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

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

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

Zusätzliche Gefahren bestehen bei unsachgemässer Handhabung besonderer Komponenten:

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

*Solche Komponenten dürfen nur von ausgebildetem Fachpersonal mit den vorgeschriebenen Schutzmitteln (u.a. Schutzbrille, Handschuhe) gehandhabt werden.*

## Maintenance and Repair

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

Maintenance should only be performed by trained personnel in accordance with the applicable regulations.

The equipment should be switched off and disconnected from the AC power outlet before any housing parts are removed.

Even if the equipment is disconnected from the power, parts with hazardous charges (e.g. capacitors, picture tubes) must not be touched until they have been properly discharged. Touch hot components (power semiconductors, heat sinks, etc.) only when cooled off.

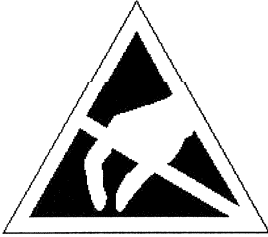
If maintenance is performed on a unit that is opened and switched on, no uninsulated circuit components and metallic semiconductor housings must be touched neither with your bare hands nor with uninsulated tools.

Certain components pose additional hazards:

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

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

## Elektrostatische Entladung (ESD) bei Wartung und Reparatur



**ATTENTION:**

Observe precautions for handling devices sensitive to electrostatic discharge!

**ATTENTION:**

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

**ACHTUNG:**

Vorsichtsmassnahmen bei der Handhabung von ESD-empfindlichen Bauelementen beachten!

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

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

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

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

Please observe the following rules when handling ESD sensitive components:

- ESD sensitive components should only be stored and transported in the packing material specifically provided for this purpose.
- Unpacked ESD sensitive components should only be handled in ESD protected areas (EPA, e.g. area for field service, repair or service bench) and only be touched by persons who wear a wristlet that is connected to the ground potential of the repair or service bench by a series resistor. The equipment to be repaired or serviced and all tools, aids, as well as electrically 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.

**SMD-Bauelemente**

**SMD Components**

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

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

Bei Studer werden keine handelsüblichen SMD-Bauteile bewirtschaftet. Für Reparaturen sind die notwendigen Bauteile lokal zu beschaffen. Die Spezifikationen von Spezialbauteilen finden Sie in der Serviceanleitung.

Studer does not keep any commercially available SMD components in stock. For repair the corresponding devices should be purchased locally. The specifications of special components can be found in the service manual.

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

## Störstrahlung und Störfestigkeit

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

1. Vom Gerät erzeugte elektromagnetische Strahlung ist soweit begrenzt, dass bestimmungsgemässer Betrieb anderer Geräte und Systeme möglich ist.
2. Das Gerät weist eine angemessene Festigkeit gegen elektromagnetische Störungen auf, so dass sein bestimmungsgemässer Betrieb möglich ist.

Das Gerät wurde getestet und erfüllt die Bedingungen der im Kapitel „Technische Daten“ aufgeführten EMV-Normen. Die Limiten dieser Standards gewährleisten mit angemessener Wahrscheinlichkeit sowohl den Schutz der Umgebung wie auch entsprechende Störfestigkeit des Gerätes. Absolute Garantie, dass keine unerlaubte elektromagnetische Beeinträchtigung während des Betriebes entsteht, ist jedoch nicht gegeben.

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

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

## Electromagnetic Compatibility

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

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

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

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

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

## Class A Equipment - FCC Notice

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

area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

*Caution:*

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

## CE-Konformitätserklärung

Der Hersteller,

Studer Professional Audio AG,  
CH-8105 Regensdorf,

erklärt in eigener Verantwortung, dass das Produkt

**Studer On-Air 5000, Digital Mixing System,**  
(ab Serie-Nr. 1001),

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

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

mit den folgenden Normen und normativen Dokumenten übereinstimmt:

- Sicherheit:  
Schutzklasse I, EN 60950:2000
- Sicherheit von Laser-Einrichtungen:  
EN 60825-1:1994 + A11 + A2, EN60825-2:2000
- EMV:  
EN 50081-1:1992, EN 50082-1:1992.

Regensdorf, 27. Februar 2002



B. Hochstrasser, Geschäftsleiter



P. Fiala, Leiter QS

## CE Declaration of Conformity

The manufacturer,

Studer Professional Audio AG,  
CH-8105 Regensdorf,

declares under his sole responsibility that the product

**Studer On-Air 5000, Digital Mixing System,**  
(on from serial No. 1001),

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

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

is in conformity with the following standards or other normative documents:

- Safety:  
Class I, EN 60950:2000
- Safety of laser products:  
EN 60825-1:1994 + A11 + A2, EN60825-2:2000
- EMC:  
EN 50081-1:1992, EN 50082-1:1992.

Regensdorf, February 27, 2002



B. Hochstrasser, President



P. Fiala, Manager QA

## ON-AIR 5000 ASSEMBLIES IN ALPHABETICAL ORDER

Assembly	Order No.	where is it?
??? PCB ( <i>in preparation</i> )	1.940.534	Section 6
37-pin D-Type Connection Unit (female)	1.980.761	Section 8
4-Channel Fader Unit	1.940.720	Section 3
8-Channel Fader Unit	1.940.715	Section 3
Analog Source Selector	1.917.400	Section 7
AUX Indicator 4 × LED	1.913.135	Section 6
Centralized Front Board	1.940.763	Section 4
Centralized Unit	1.940.765	Section 4
Channel Controller (Fader Unit)	1.940.756	Section 3
Channel Controller (Centr. Unit)	1.940.764	Section 4
CR Monitor Panel RS485	1.950.860	Section 5
CR Monitor Switch Board	1.990.429	Section 5
Dual Headphone Amp. Board	1.917.430	Section 7
Fader Front Board	1.940.713	Section 3
HDLC Bus Board 12A	1.992.170	Section 5
HDLC Bus Board 4A	1.992.171	Section 5
Insert Router Board	1.917.415	Section 7
LED PPM Meter	1.913.291	Section 6
Mic Pre-Amplifier	1.913.127	Section 6
Monitor Group Selector	1.917.410	Section 7
Optical Synchronous IF	1.940.140	Section 8
Panel Adapter RS485	1.950.891	Section 5
PFL Amplifier	1.913.200	Section 6
PFL Amplifier with Volume & Headphone Jack	1.913.202	Section 6
PFL/TB/HP Panel RS485	1.950.880	Section 5
PFL/TB/HP Switch Board	1.990.449	Section 5
Power Supply ± 15V/3.4A	1.940.602	Section 7
Power Supply 24V/4.2A	1.940.603	Section 7
Power Supply 3V...6V	1.915.111	Section 7
Power Supply 5V/20A	1.940.601	Section 7
Siemens 39-pin Connection Unit (male)	1.940.610	Section 8
Siemens 39-pin Connection Unit (male), gold contacts	1.940.609	Section 8
Signaling IN 24CH Board	1.917.425	Section 7
Signaling OUT 16CH Board	1.917.426	Section 7
Source Selector Panel RS485	1.950.890	Section 5
Source Selector Switch Board	1.990.499	Section 5
Studio Monitor Panel RS485	1.950.870	Section 5
Studio Monitor Switch Board	1.990.439	Section 5
Surface Interface	1.940.712	Section 3
Surface Interface	1.940.712	Section 4
Talkback Sel Sideboard	1.917.421	Section 7
Talkback Selector	1.917.420	Section 7
TB Mic/Power Alarm Unit	1.913.129	Section 6
XLR Connection Unit (female)	1.980.721	Section 8
XLR Connection Unit (male)	1.980.720	Section 8

**ON-AIR 5000 ASSEMBLIES IN NUMERICAL ORDER**

<b>Assembly</b>	<b>Order No.</b>	<b>where is it?</b>
1.913.127	Mic Pre-Amplifier	Section 6
1.913.129	TB Mic/Power Alarm Unit	Section 6
1.913.135	AUX Indicator 4 × LED	Section 6
1.913.200	PFL Amplifier	Section 6
1.913.202	PFL Amplifier with Volume & Headphone Jack	Section 6
1.913.291	LED PPM Meter	Section 6
1.915.111	Power Supply 3V...6V	Section 7
1.917.400	Analog Source Selector	Section 7
1.917.410	Monitor Group Selector	Section 7
1.917.415	Insert Router Board	Section 7
1.917.420	Talkback Selector	Section 7
1.917.421	Talkback Sel Sideboard	Section 7
1.917.425	Signaling IN 24CH Board	Section 7
1.917.426	Signaling OUT 16CH Board	Section 7
1.917.430	Dual Headphone Amp. Board	Section 7
1.940.140	Optical Synchronous IF	Section 8
1.940.534	??? PCB ( <i>in preparation</i> )	Section 6
1.940.601	Power Supply 5V/20A	Section 7
1.940.602	Power Supply ±15V/3.4A	Section 7
1.940.603	Power Supply 24V/4.2A	Section 7
1.940.609	Siemens 39pin Connection Unit (male), gold contacts	Section 8
1.940.610	Siemens 39pin Connection Unit (male)	Section 8
1.940.712	Surface Interface	Section 3
1.940.712	Surface Interface	Section 4
1.940.713	Fader Front Board	Section 3
1.940.715	8-Channel Fader Unit	Section 3
1.940.720	4-Channel Fader Unit	Section 3
1.940.756	Channel Controller (Fader Unit)	Section 3
1.940.763	Centralized Front Board	Section 4
1.940.764	Channel Controller (Centr. Unit)	Section 4
1.940.765	Centralized Unit	Section 4
1.950.860	CR Monitor Panel RS485	Section 5
1.950.870	Studio Monitor Panel RS485	Section 5
1.950.880	PFL/TB/HP Panel RS485	Section 5
1.950.890	Source Selector Panel RS485	Section 5
1.950.891	Panel Adapter RS485	Section 5
1.980.720	XLR Connection Unit (male)	Section 8
1.980.721	XLR Connection Unit (female)	Section 8
1.980.761	37pin D-Type Connection Unit (female)	Section 8
1.990.429	CR Monitor Switch Board	Section 5
1.990.439	Studio Monitor Switch Board	Section 5
1.990.449	PFL/TB/HP Switch Board	Section 5
1.990.499	Source Selector Switch Board	Section 5
1.992.170	HDLC Bus Board 12A	Section 5
1.992.171	HDLC Bus Board 4A	Section 5

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# *Digitales Sende- und Produktions-Mischsystem*

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# Studer On-Air 5000

## I Einleitung

Die Einführung von DAB (Digital Audio Broadcasting), der Ersatz der analogen Leitungen zwischen den Studiostandorten und den Sendern durch digitale Netze und der steigende Anteil an digitalen Tonträgern fordern für die Sendeabwicklung eine einfach zu bedienende, flexible und ergonomische Mischpultlösung mit vollständig digitaler Audio- und Datenverarbeitung.

Gleichzeitig wird für die Produktion von Wortbeiträgen, Features und die Vorproduktion gemischter Wort- und Musiksendungen ein einfach zu bedienendes, digitales Mischpult gefordert.

Das neue Mischpult On-Air 5000 eignet sich dank der hohen Flexibilität und funktionalen Übersichtlichkeit für beide Aufgaben hervorragend. Unabhängig davon, ob das Pult durch den Disk Jockey, den Sportredaktor, den Nachrichtensprecher, den Sendetechniker oder durch die Aufnahmetechnikerin bedient wird, kann es dank der persönlichen «Chip Card» in Sekundenbruchteilen für jeden Benutzer optimal konfiguriert werden.

Grosses Gewicht bei der Konzeption des Pultes wurde der Kommunikation mit den angeschlossenen Aussenstellen, wie Sportreportern, Telefon- oder Diskussionsteilnehmern, Wahlberichterstatern usw. gewidmet. Das Pult kann mit bis zu 16 Retourkanälen ausgerüstet werden. Zwei verschiedene Multiplex-Ebenen erlauben es, während einer laufenden Sendung, bei der jedem Teilnehmer ein N-1-Signal zurückgegeben wird, eine zweite Konferenzebene einzurichten, über die sich die wartenden Teilnehmer mit dem Ablaufredaktor absprechen können.

EBU-konforme Rufsignale und Anrufensoren (1900 Hz) und automatische Umschaltung der Konferenzebenen beim Öffnen des Flachbahnreglers erleichtern die Verständigung mit den Aussenposten.

Die Client-/Server-Architektur mit der «Active VMC» (Virtual Mixing Console) als Server erlaubt es, auf Kundenwünsche Rücksicht zu nehmen. Zur Signalverarbeitung wird der auch im digitalen Mischsystem D950 und im MADI-Router verwendete DSP-Core eingesetzt. Seine modernste Technologie setzt bezüglich Flexibilität und Audioqualität neue Grenzen.

Die vier Funktionsblöcke mit den Bedienelementen und dem Instrumentenpanel werden in ein Pult eingebaut, dessen Aussehen den Kundenwünschen und dem Design des Studios weitgehend angepasst werden kann.

### I.1 Fader-Block

- Maximal 32 Flachbahnregler in Viererblöcken, die sich in Gruppen zu je 8 oder 16 beliebig links oder rechts eines freien Manuskriptplatzes anordnen lassen, aber auch konventionell aneinander gereiht werden können.
- Pro Kanal je ein zuordnungsfähiger Drehgeber, zwei Tasten und ein vierstelliges Display.
- Quellenanzeige mit 8 alphanumerischen Zeichen.
- Je eine Vorhör-, ON-, SELECT- und TALK BACK-Taste pro Kanal.

### I.2 Zentraler Bedienteil

- Jeder Kanal hat über die SELECT-Taste Zugriff auf den zentralen Bedienteil. Dort können Verstärkung, Filter, Equalizer, Kompressoren Begrenzer und Hilfsausgänge individuell eingestellt werden.
- Die Grundkonfiguration des Pultes erfolgt durch Tasten, benutzerspezifische Einstellungen werden auf einer «Chip Card» gespeichert.
- Die Steuerung der Eingangs-Kreuzschiene sowie die Funktionszuordnung für die Drehgeber und Tasten im Kanalzug geschieht hier.
- Die N-1-Schaltung erlaubt es, jeder Quelle ein Rücksignal zu senden. Während der Vorbereitungsphase und in Gesprächspausen können sich externe Teilnehmer untereinander und mit dem Gesprächsleiter im Studio absprechen, ohne die laufende Sendung zu stören.

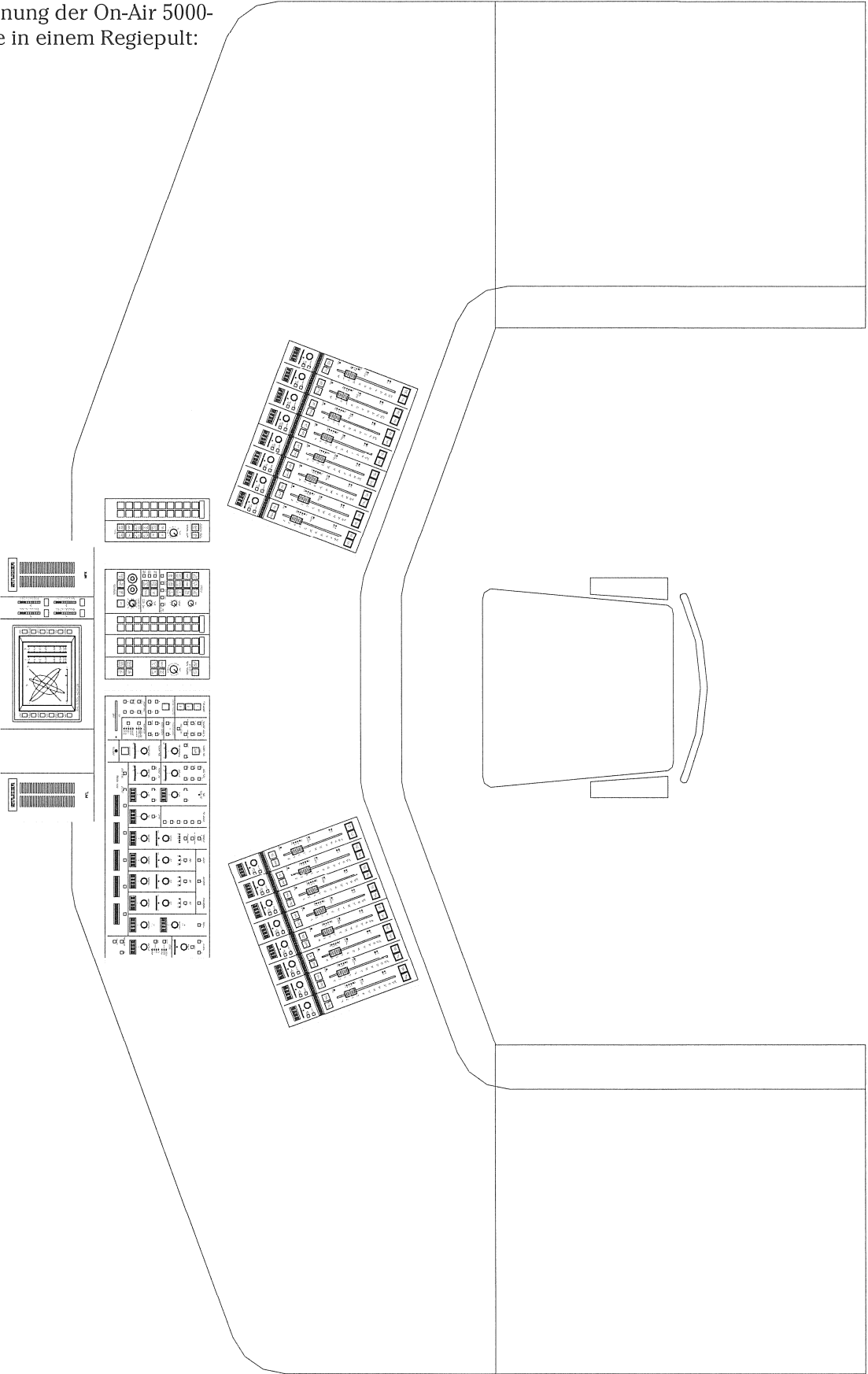
### I.3 Abhören und Meterpanel

Das Abhörfeld und das Meterpanel werden mit Baugruppen aus dem Studer-Mischpultprogramm nach Kundenwunsch bestückt. Weitere Lampen- und Tastensätze für Fernsteuerung, Signalisation und Kommando lassen sich hier integrieren.

### I.4 Systemeinbindung

Die in einem 19-Zoll-Rack untergebrachte Wandler- und Rechnerelektronik erlaubt den direkten Anschluss des Schaltraums über optische MADI-Verbindungen. Zusammen mit einem MADI-Router im Hauptschaltraum ergibt sich eine äusserst flexible, kostengünstige und zukunftssichere Systemlösung.

Mögliche Anordnung der On-Air 5000-Funktionsblöcke in einem Regiepult:



# Studer On-Air 5000

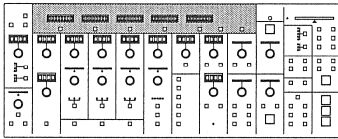
## 2 Funktionsbeschreibung: Zentraler Bedienteil

Der zentrale Bedienteil ist in zwei Hauptfelder gegliedert. Das neun Einheiten breite linke Feld dient zur Beeinflussung eines Eingangskanals, ist also *kanalorientiert*. Sobald auf einer Reglereinheit die SELECT-Taste betätigt wird, übernimmt der zentrale Bedienteil die Steuerung dieses Kanals.

Das rechte Feld des zentralen Bedienteils steuert übergeordnete Funktionen, ist also nicht kanal-, sondern *pultorientiert*. Auf diesem Feld können Summeneinstellungen, generelle Pulteinstellungen und Hilfsfunktionen, z.B. der Tongenerator beeinflusst werden.

### 2.1 Zentraler Bedienteil, kanalorientiertes Feld

#### 2.1.1 INPUT ROUTING

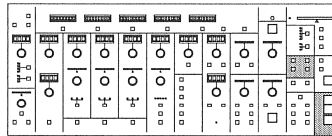


Fünf achtstellige Anzeigefelder zeigen die Labels einer Gruppe von Quellen an, die am Mischpult direkt, oder über den Madi-Router verfügbar sind. Mit der Tasten PAGE UP und PAGE DOWN können die Gruppen durchgeblättert werden. Durch Betätigen der Taste unterhalb eines der Anzeigefelder wird die angezeigte Quelle auf den gewählten Eingangskanal übernommen. Das Label der gewählten Quelle wird nun auch im Reglerblock oberhalb des Kanalreglers angezeigt.

Eine bereits gewählte Quelle wird automatisch abgetrennt und durch die neu gewählte ersetzt.

Es ist zulässig, die gleiche Quelle auf zwei Eingangskanäle parallel aufzuschalten. Die Kontrolle über die Quelle (z.B. Einstellung der Verstärkung des Mikrofon-Vorverstärkers und der Phantomspannung) ist dann von beiden Bedienungen steuerbar. Faderstart wird aktiv, sobald wenigstens einer der Eingangskanäle durchgeschaltet ist.

#### 2.1.2 OUTPUT ROUTING

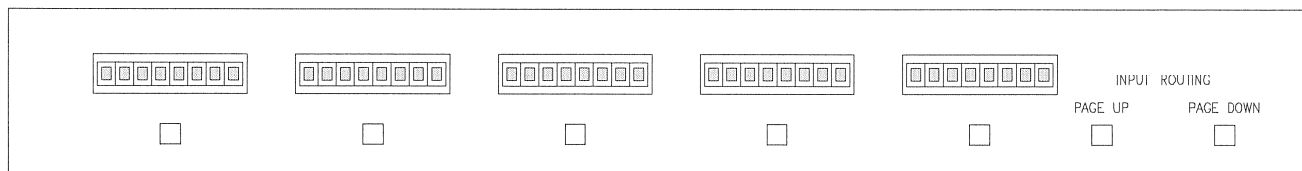
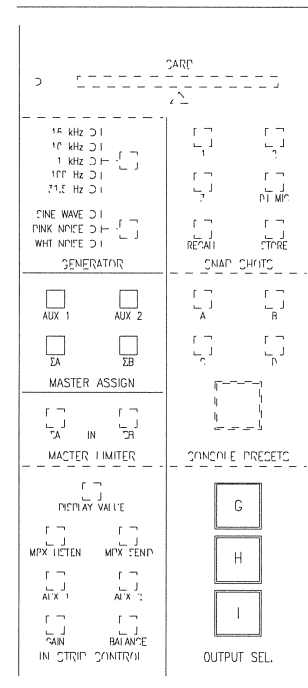


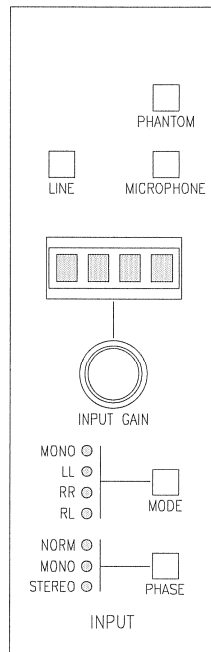
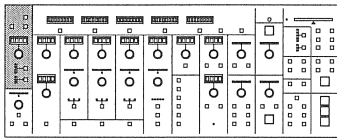
Alle Ausgänge können über die grafische Oberfläche des Pultrechners konfiguriert werden.

Die MPX SEND-Ausgänge sind den Eingangskanälen zugeordnet. Mit der Eingangswahl der Bedienkanäle wird also gleichzeitig auch der zugehörige Multiplex-Ausgang geschaltet. Auch hier kann die Grundkonfiguration über die grafische Oberfläche des Pultrechners eingegeben werden.

Die Tasten OUTPUT SEL G/H/I und die Tasten MASTER ASSIGN im pultorientierten Teil der Bedieneinheit erlauben es, drei Ausgangsleitungen und (als Option) die Summen- und Aux-Kanäle auch über das Routing-Feld des Pultes auf die dort angezeigten Ausgangsleitungen zu schalten.

Jeder Ausgang kann auf beliebig viele Ausgangsleitungen geschaltet werden. Bereits gewählte Ausgangsleitungen können jedoch nicht mit einem zweiten Ausgang belegt werden. Bei der Übernahme wird die vorhergehende Schaltung aufgehoben.





### 2.1.3 Input

Im Input-Feld sind alle Funktionen zusammengefasst, die sich auf den Eingangsteil eines Eingangszugs beziehen. Der Eingangskanal wird immer als Stereokanal betrieben. Monosignale werden parallel auf den linken und rechten Kanal geführt. Default-Werte (Grundeinstellungen) sind im folgenden Text durch Unterstreichung markiert.

#### GAIN

Der INPUT GAIN-Drehgeber

- beeinflusst die Verstärkung des Mikrofon-Vorverstärkers, falls vorhanden; Anzeige im Display oberhalb davon (der interne Gain Trim wird auf 0 dB gesetzt).
- beeinflusst den internen (digitalen) Gain Trim, wenn kein Vorverstärker vorhanden ist.

#### PHANTOM

Schaltet die Phantomspeisung des Mikrofons ein und aus (nur bei vorgeschaltetem Mikrofon-Vorverstärker wirksam)

#### MIC, LINE

Umschaltung MIC/LINE (nur bei vorgeschaltetem Mikrofon-Vorverstärker wirksam)

#### MODE

Mit MODE wird die Zuordnung der beiden Eingänge des nachfolgenden Stereowegs bestimmt. Fünf Zustände werden nacheinander geschaltet:

- NORM (Eingang links auf Ausgang links, Eingang rechts auf Ausgang rechts) wird nicht angezeigt, d.h. alle LEDs sind dunkel.
- **MONO** (linker und rechter Eingang summiert und auf beide Ausgänge geschaltet): rote LED
- **LL** (Eingang L auf beide Ausgänge): rote LED.
- **RR** (Eingang R auf beide Ausgänge): rote LED.
- **RL** (Eingang R auf Ausgang L, Eingang L auf Ausgang R): rote LED.

Die Taste leuchtet, wenn nicht der NORM-Zustand herrscht.

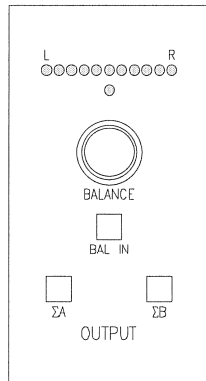
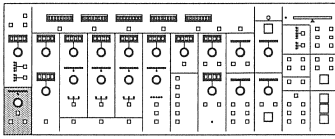
#### PHASE

Es sind drei Zustände möglich:

- NORM – keine Beeinflussung der Phase: grüne LED
- **MONO** – Phase L und R vertauscht: rote LED
- **STEREO** – Phase L vertauscht: rote LED

Mit der PHASE-Taste können die drei Zustände durchgeschaltet werden. Die Taste leuchtet, wenn nicht der NORM-Zustand herrscht.

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## 2.1.4 Output

Alle Funktionen, die sich auf den Hauptausgang und die Buswahl eines Eingangskanals auswirken, sind hier steuerbar.

### BALANCE

Drehgeber, Display und Taste.

- Bei ausgeschalteter Taste BAL IN leuchtet die grüne, zentral angeordnete LED.
- Bei eingeschalteter Taste BAL IN (rot leuchtend) wird mit dem BALANCE-Drehgeber die Richtungsabbildung der Quelle verschoben. Die grüne LED erlischt.
- Die rote LED-Kette zeigt immer, auch bei ausgeschalteter BAL IN-Taste, die virtuelle Abbildungsposition zwischen L(inks) und R(echts) an. Damit ist eine Voreinstellung der Position auch bei ausgeschalteter Funktion möglich.

Balance-Werte für Monoquellen (*wird bei Monoquellen als PAN-Funktion eingesetzt*):

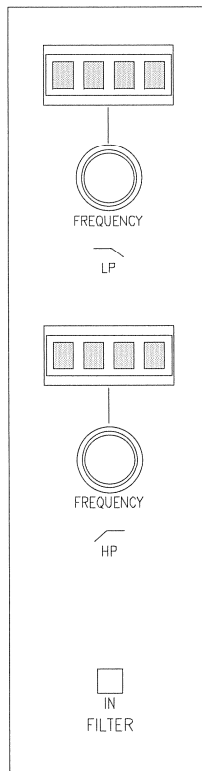
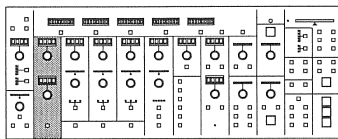
3 dB Abschwächung in beiden Kanälen bei Mittelstellung, und 0 dB Abschwächung für den einen bzw. Abschwächung $\infty$  für den anderen Kanal in den beiden Extremstellungen.

Balance-Werte für Stereoquellen:

0 dB Abschwächung in beiden Kanälen bei Mittelstellung, und 3 dB Verstärkung für den einen, Abschwächung  $\infty$  für den anderen Kanal in den beiden Extremstellungen.

### $\Sigma A$ und $\Sigma B$

Tasten für die Summenausgangswahl für den Stereo-Bus Summe A und/oder den Stereo-Bus Summe B.

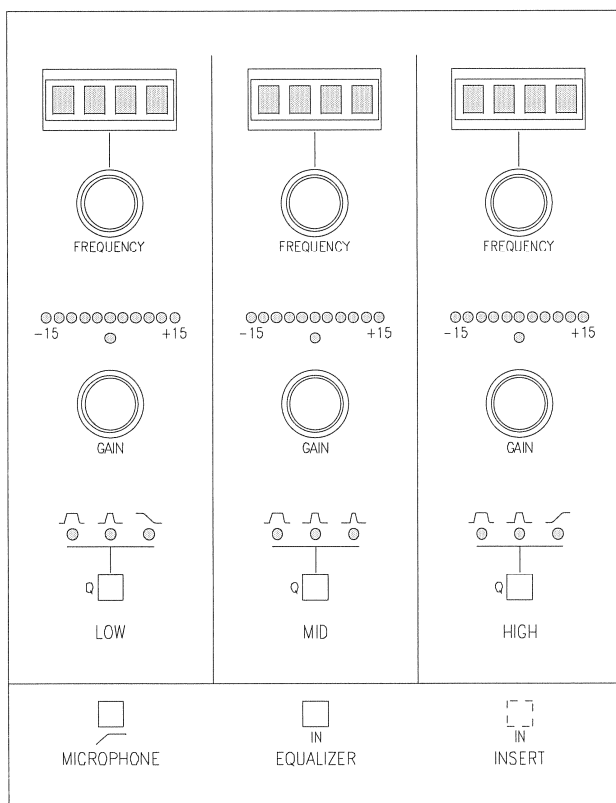
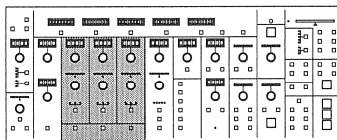


## 2.1.5 Tief- und Hochpass-Filter (LP/HP)

### FILTER IN

Taste zum generellen Ein- und Ausschalten beider Filter.

- Tiefpass-Filter: Flankensteilheit 12 dB/Oktave; Grenzfrequenz einstellbar von 500 Hz bis 16 kHz in 62 Schritten von 1/12 Oktave. Die eingestellte Frequenz wird im vierstelligen Display angezeigt.
- Hochpass-Filter: Flankensteilheit 12 dB/Okt.; Grenzfrequenz einstellbar von 31 Hz bis 1 kHz in 62 Schritten von 1/12 Oktave. Die eingestellte Frequenz wird im vierstelligen Display angezeigt.



## 2.1.6 Equalizer

Dreiband-Entzerrer mit einstellbarer Anhebung und Absenkung von -15 bis +15 dB. Die eingestellte Frequenz wird mit einem vierstelligen Display, die Anhebung oder Absenkung mit einer roten LED-Kette angezeigt. In der neutralen Position (0 dB) leuchtet zusätzlich die zentrale, grüne LED.

### EQUALIZER IN

Taste zum Ein-/Ausschalten des Equalizers.

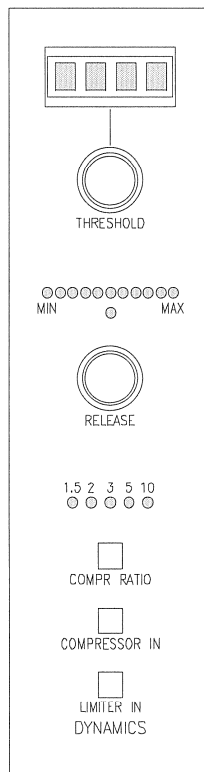
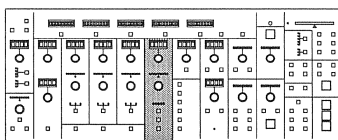
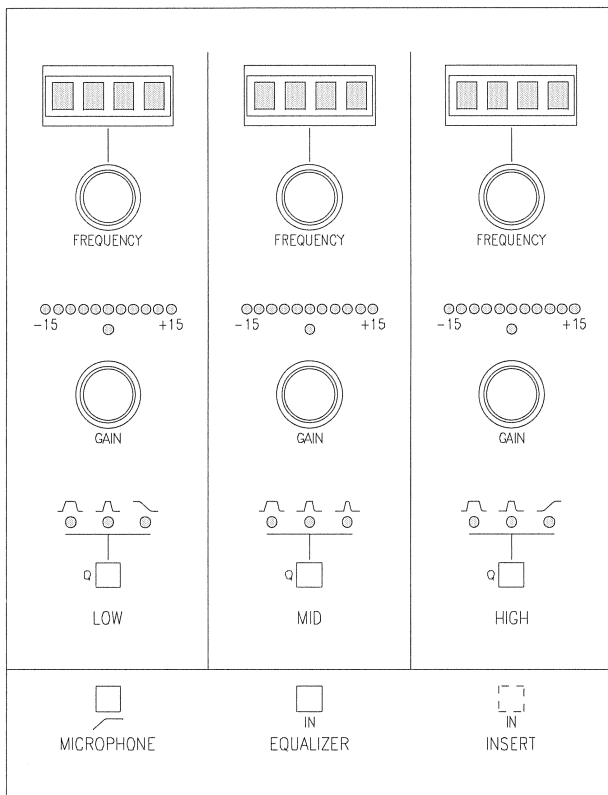
#### LOW

Güte mit Q-Taste umschaltbar: Peaking,  $Q = 0,4$  oder 1, oder shelving («Kuhschwanz-Entzerrer»). Mitten- bzw. Einsatzfrequenz in 62 Schritten von je 1/12 Oktave einstellbar im Bereich von 31 Hz bis 1 kHz; Einstellung mit GAIN-Drehgeber.

#### MID

Güte mit Q-Taste umschaltbar:  $Q = 0,4, 1$  oder 2. Mittenfrequenz in 62 Schritten von je 1/12 Oktave einstellbar im Bereich von 200 Hz bis 6,1 kHz; Einstellung mit GAIN-Drehgeber.

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## HIGH

Güte mit Q-Taste umschaltbar: Peaking,  $Q = 0,4$  oder 1, oder shelving («Kuhschwanz-Entzerrer»). Mitten- bzw. Einsatzfrequenz in 62 Schritten von je 1/12 Oktave einstellbar im Bereich von 500 Hz bis 16 kHz; Einstellung mit GAIN-Drehgeber.

## MICROPHONE

Taste zur Fernsteuerung des im Mikrofon-Vorverstärker eingebauten, analogen Trittschallfilters (Grenzfrequenz 75 Hz, Flankensteilheit 12 dB/Oktave (nur bei vorgeschaltetem Mikrofon-Vorverstärker wirksam).

## 2.1.7 Insert (Option)

Auf Wunsch können die Eingangseinheiten mit einem Einschleifpunkt vor dem Equalizer ausgerüstet werden. Dieser kann mit der Taste INSERT IN (unten rechts im EQUALIZER-Feld) aktiviert werden.

## 2.1.8 Dynamics

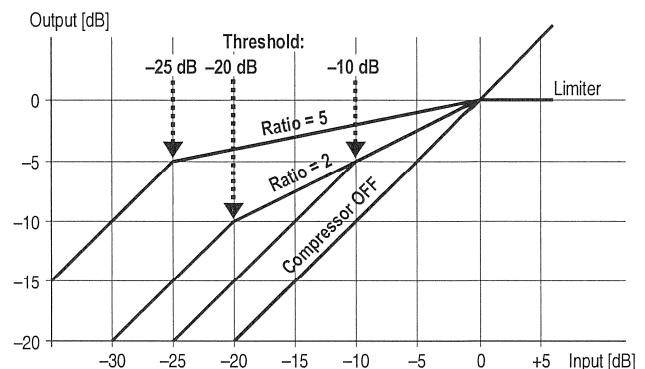
### LIMITER / COMPRESSOR IN

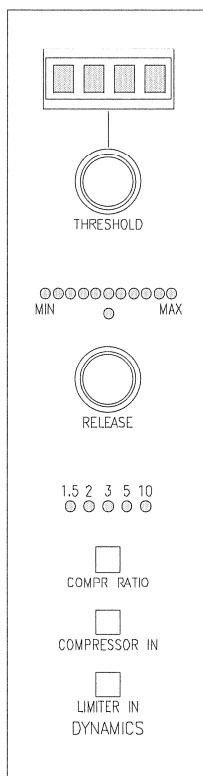
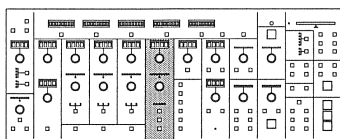
Separate Tasten zum Ein- und Ausschalten der Kompressor- und Limiter-Sektionen.

### THRESHOLD

Drehgeber zur Einstellung der Verstärkung des Kompressors und des Kniepunkts (Threshold = Schwelle) in Funktion des Kompressionsverhältnisses; Einstellbereich von -48 bis 0 dB in Stufen von 1 dB.

Das Kompressionsverhältnis (Ratio) ist mit der COMPR RATIO-Taste auf die Werte 1,5, 2, 3, 5 und 10 schaltbar.



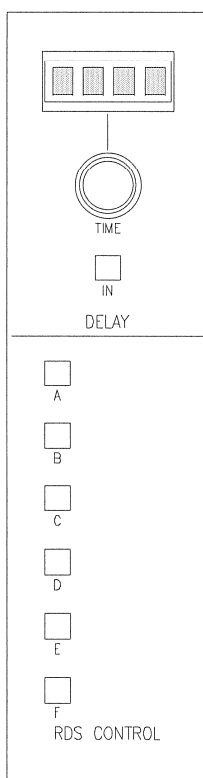
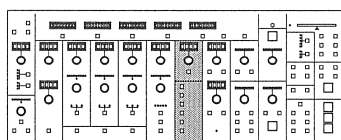


### RELEASE

Drehgeber für die Einstellung der Rücklaufzeit, einstellbar von 100 ms bis 3 s.

### LIMITER

Der Einsatzpunkt des Limiters wird in der Konfigurationsdatei gemäss der vorgegebenen Übersteuerungsreserve (Headroom) fest eingestellt (Einstellbereich:  $-6 \text{ dB}_{\text{FS}}$  bis  $-20 \text{ dB}_{\text{FS}}$ ). Auch die Rücklaufzeit ist im Bereich von 1 bis 5 s konfigurierbar. Haltezeit: 16,6 ms



## 2.1.9 Delay / RDS Control

### DELAY

Variable Verzögerung des Signals im Bereich von einem Sample bis 240 ms. Die Verzögerung wird mit der DELAY IN-Taste aktiviert, die Verzögerungszeit mit dem Drehgeber TIME eingestellt. Anzeige in Samples im Bereich von einem bis 47 Samples; oberhalb davon die Verzögerungszeit von 1 bis 240 ms.

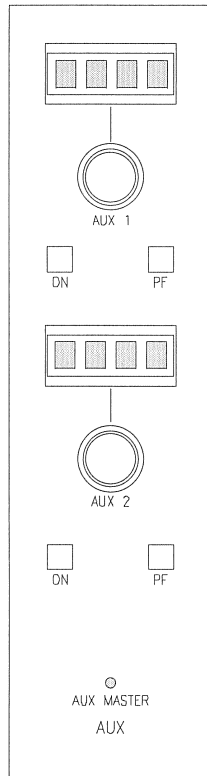
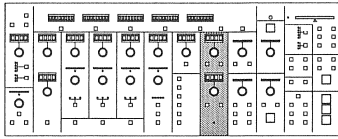
### RDS Control

Die sechs Tasten A bis F (gelb beleuchtet) erlauben es, dem gewählten Eingangskanal eine RDS-Kennung zuzuordnen, (z.B. Music, News, Traffic Announcer, usw). Diese Kennung wird ausserhalb des Regiepults als Kennungsbit zum digitalen Sendesignal gemischt, sobald der entsprechende Kanal auf Sendung geht.

Das Mischpult On-Air 5000 liefert zur Steuerung des RDS-Coders sechs logische Signale an einem separaten Ausgang.



# Studer On-Air 5000



## 2.1.10 AUX

Es stehen zwei Stereo-Hilfskanäle AUX 1 und AUX 2 zur Verfügung.

### AUX 1 / 2 ON

Mit der grünen ON-Taste wird der AUX-Kanal aktiviert.

### PF

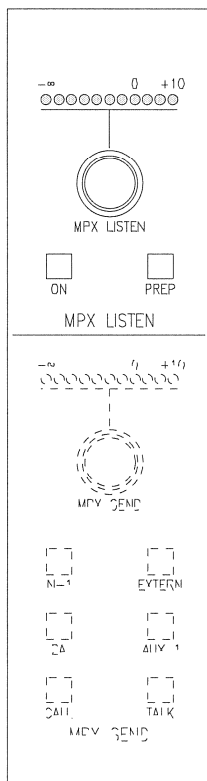
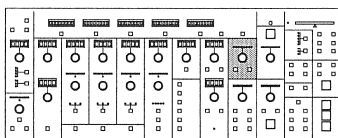
Umschaltung des betreffenden AUX-Abgriffs von «after fader» (hinter Regler) auf «pre fader» (PF, vor Regler) mit der gelben PF-Taste.

### AUX 1 / 2

Drehgeber für den AUX-Send-Pegel; Anzeige im Display in dB.

### AUX MASTER

Wird die hier beschriebene AUX-Sektion über MASTER ASSIGN AUX 1 oder AUX 2 gewählt, so kann mit obigem Drehgeber der Summenpegel des AUX-Ausgangs eingestellt werden. In diesem Zustand leuchtet die rote AUX MASTER LED.



## 2.1.11 MPX LISTEN

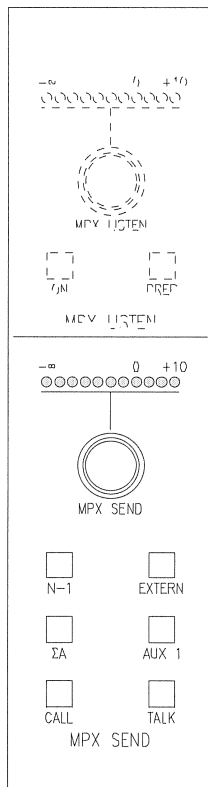
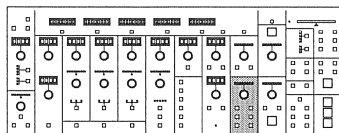
### MPX LISTEN / ON

Zum Aufschalten des Pre Fader-Signals des Eingangskanals auf den MPX LISTEN-Lautsprecher. Am Drehgeber MPX LISTEN wird der Abhörpegel eingestellt; Pegelanzeige mit der zugehörigen LED-Kette. Sobald ein Kanalzug auf Sendung geschaltet wird (Fader offen, Summenbus gewählt, ON-Taste gedrückt) wird der MPX-Listen-Ausgang des betreffenden Kanals stummgeschaltet.

### MPX LISTEN / PREP

Mit der PREP-Taste wird der Kanal vorbereitet, so dass er bei gedrückter MASTER PREPARATION-Taste (siehe MPX MASTER-Feld) in den Vorbereitungs- oder Probe-Status geht.

Im PREP-Modus wird eine Pre Fader-Mischung aller auf PREP geschalteten Kanäle gebildet und diese Mischung an den MPX-Teilnehmer ohne dessen eigenen Beitrag (N-1-Schaltung) zurückgeführt. Alle Teilnehmer können sich damit während der Vorbereitungsphase oder zwischen den Sendungen gegenseitig hören und miteinander absprechen, ohne die laufende Sendung zu beeinflussen.



Sobald ein Teilnehmer auf Sendung geht, wird er vom PREP-Modus in den normalen MPX-Modus zurückgeschaltet. Damit hört er auf seinem Return-Kanal anstelle seiner Kollegen (die nicht auf Sendung sind) die mit MPX SEND gewählte Quelle.

### 2.1.12 MPX SEND

Mit den vier Tasten N-1, EXTERN,  $\Sigma A$ , AUX 1 kann das Returnsignal für jeden Teilnehmer getrennt gewählt und mit dem Drehgeber MPX SEND dessen Pegel eingestellt werden; Pegelanzeige mit der zugehörigen LED-Kette.

#### **N-1**

Sendesignal ( $\Sigma A$ ) ohne den eigenen Beitrag.

#### **$\Sigma A$**

Sendesignal einschliesslich des eigenen Beitrags.

#### **AUX 1**

Das über den Hilfskanal AUX 1 zusammengesetzte Signal.

#### **EXTERN**

Eine beliebige, am Patch-Panel angeschlossene Quelle (normalerweise der Off Air-Empfänger des laufenden Programms).

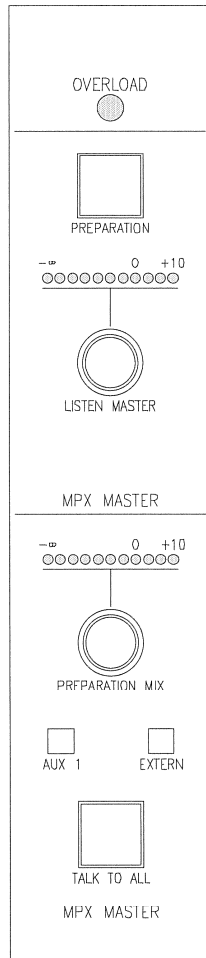
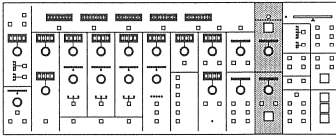
#### **CALL**

Die CALL-Taste schaltet das 1900 Hz-Rufsignal auf den SEND-Ausgang.

#### **TALK**

Die Taste TALK erlaubt die Kommandogabe auf den gewählten SEND-Ausgang. Sie ist der TALK-Taste im Faderblock des betreffenden Eingangskanals parallel geschaltet. Ankommende Rufsignale (1900 Hz) vom Teilnehmer werden durch die LED in der Taste und einen Summer signalisiert. LED und Summer bleiben solange aktiv, bis die zugehörige TALK-Taste betätigt wird.

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## 2.2 Zentraler Bedienteil, pultorientiertes Feld

### 2.2.1 MPX MASTER

#### PREPARATION

Mit dieser Taste werden alle mit MPX LISTEN PREP (siehe weiter vorn) vorgewählten Kanäle in den Vorbereitungs- oder Probe-Modus gebracht. Damit wird eine Gruppe von Teilnehmern gebildet, die sich unabhängig von der laufenden Sendung besprechen können.

#### LISTEN MASTER

Mit diesem Drehgeber wird der Summenpegel aller auf MPX LISTEN geschalteten Kanäle eingestellt; Pegelanzeige mit der zugehörigen LED-Kette.

#### PREPARATION MIX

Der oben beschriebenen PREPARATION-Gruppe kann das laufende Programm oder eine externe Quelle zugemischt werden. Pegeleinstellung mit dem Drehgeber PREPARATION; Pegelanzeige mit der zugehörigen LED-Kette.

Mit den beiden Tasten können folgende Quellen gewählt werden:

#### AUX 1

Das über den Hilfskanal AUX 1 zusammengesetzte Signal.

#### EXTERN

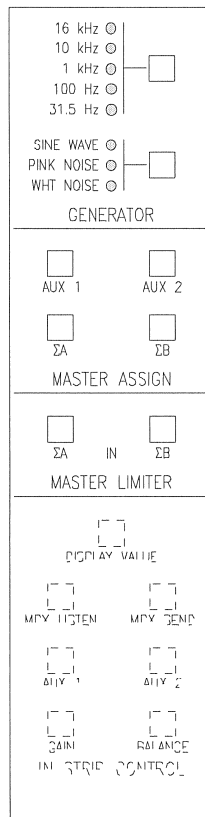
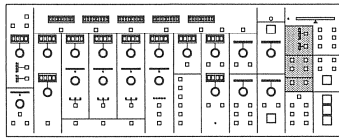
Eine beliebige, am Patch-Panel angeschlossene Quelle (normalerweise der Off Air-Empfänger des laufenden Programms).

#### TALK TO ALL

Über die Taste TALK TO ALL wird gleichzeitig auf alle MPX SEND-Kanäle gesprochen.

### 2.2.2 OVERLOAD

Die rote OVERLOAD-LED leuchtet auf, sobald irgendwo im Pult die fest eingestellte Alarmgrenze überschritten wird.



## 2.2.3 GENERATOR

### MODE

Die untere Taste schaltet um zwischen Weissem und Rosa Rauschen sowie Sinussignal.

### SINE WAVE

Die obere Taste dient zur Frequenzwahl im SINE WAVE-Modus.

Folgende Frequenzen stehen zur Verfügung: 16 kHz, 10 kHz, 1 kHz, 100 Hz und 31,5 Hz.

## 2.2.4 MASTER ASSIGN

Mit den vier MASTER ASSIGN-Tasten kann der kanalorientierte Teil der zentralen Bedieneinheit den MASTER-Kanälen zugeschaltet werden. Sofern dies (kundenspezifisch) so konfiguriert ist, können nun die Summenausgangspegel an den beiden AUX-Drehgebern beeinflusst, Equalizer zugeschaltet, und über die Routing-Wahl die gewünschten Ziele gewählt werden.

Bei AUX 1 und AUX 2 werden die Drehgeber AUX 1 und AUX 2 als Hauptregler aufgeschaltet (AUX MASTER LED leuchtet, siehe Abschnitt AUX weiter vorn), und das OUTPUT ROUTING wird ermöglicht.

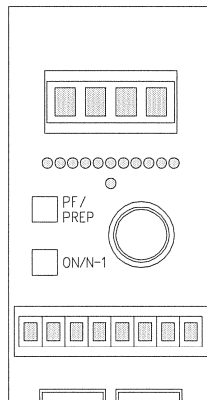
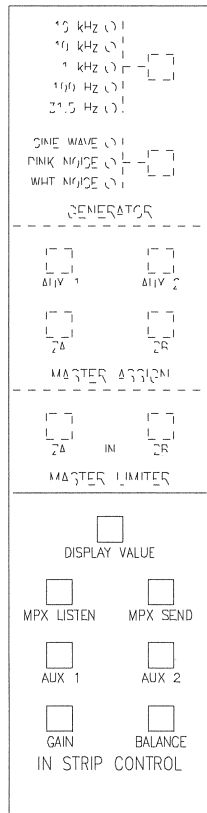
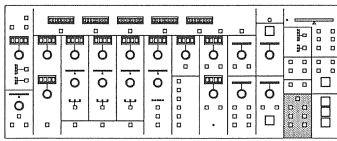
Bei ΣA und ΣB wird nur das OUTPUT ROUTING ermöglicht.

## 2.2.5 Master Limiter

### ΣA IN, ΣB IN

Diese Tasten schalten die den Summenausgängen A und B fix zugeordneten Begrenzer ein und aus. Der eingeschaltete Zustand wird durch die roten LEDs in den Tasten signalisiert.

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## 2.2.6 In Strip Control

Mit den Tasten im IN STRIP CONTROL-Feld werden gewisse Steuerfunktionen vom zentralen Bedienfeld in den oberen Bereich des Faderblocks delegiert. Die pro Eingangskanal eingebauten Drehgeber, die beiden Tasten und das zugehörige vierstellige Display können damit die folgenden Funktionen übernehmen:

### MPX LISTEN

Das obere Bedienfeld aller Eingangskanäle (siehe untere Illustration) übernimmt die MPX LISTEN-Funktionen.

Mit der ON-Taste kann das Pre Fader-Signal des Eingangskanals auf den MPX LISTEN-Lautsprecher geschaltet werden. Am Drehgeber wird der Abhörpegel eingestellt, Anzeige der PegelEinstellung mit der oberhalb davon angeordneten LED-Kette. Die Taste PF/PREP bereitet den betreffenden Kanal so vor, dass er bei gedrückter PREPARATION-Taste im MPX MASTER-Feld in den Vorbereitungs- oder Probe-Status umschaltet.

Sobald ein Kanalzug auf Sendung geschaltet wird (Fader offen, Summenbus gewählt, ON-Taste gedrückt) wird der MPX Listen-Ausgang des betreffenden Kanals stummgeschaltet und der PREP-Status des Kanals ausgeschaltet.

### MPX SEND

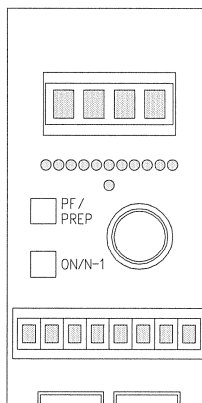
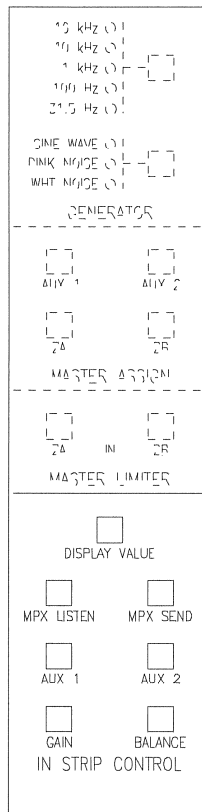
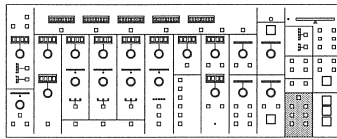
Das obere Bedienfeld aller Eingangskanäle übernimmt die MPX SEND-Funktionen.

Am Drehgeber wird der MPX SEND-Pegel eingestellt, Anzeige der PegelEinstellung mit der oberhalb davon angeordneten LED-Kette. Mit der ON-Taste wird der Return-Ausgang auf N-1 umgeschaltet. Der Taste PF/PREP ist keine Funktion zugeordnet.

### AUX 1 / AUX 2

Das obere Bedienfeld aller Eingangskanäle übernimmt die AUX 1- bzw. AUX 2-Funktionen.

Mit der grünen ON-Taste wird der AUX-Kanal aktiviert. Umschaltung des betreffenden AUX-Abgriffs von «after fader» (hinten Regler) auf «pre fader» (PF, vor Regler) mit der gelben PF/PREP-Taste. Am Drehgeber wird der AUX SEND-Pegel eingestellt, das Display zeigt den Pegel in dB an.



## GAIN

Das obere Bedienfeld aller Eingangskanäle (siehe untere Illustration) übernimmt die INPUT GAIN-Einstellung.

Der Drehgeber

- beeinflusst die Verstärkung des Mikrofon-Vorverstärkers, falls vorhanden; Anzeige im Display oberhalb davon (der interne Gain Trim wird auf 0 dB gesetzt).
- beeinflusst den internen (digitalen) Gain Trim, wenn kein Vorverstärker vorhanden ist.

## BALANCE

Das obere Bedienfeld aller Eingangskanäle übernimmt die BALANCE-Einstellung.

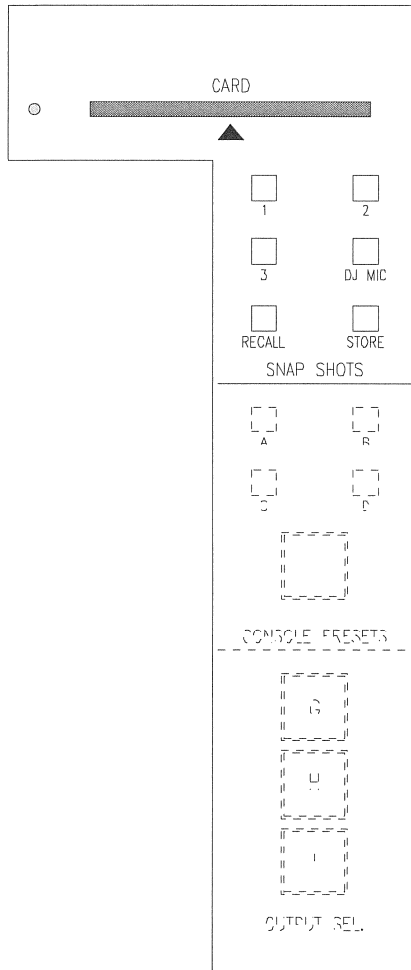
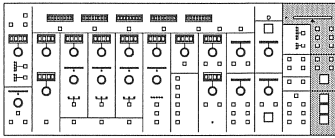
Bei ausgeschalteter Taste ON leuchtet die grüne, zentral angeordnete LED. Bei eingeschalteter Taste ON (grün) wird mit dem Drehgeber die Richtungsabbildung der Quelle verschoben. Die grüne LED erlischt. Die rote LED-Kette zeigt immer, auch bei ausgeschalteter Balance, die virtuelle Abbildungsposition zwischen L(inks) und R(echts) an. Damit ist eine Voreinstellung der Position auch bei ausgeschalteter Funktion möglich.

## DISPLAY VALUE

Diese Taste schaltet die Anzeige des vierstelligen Displays auf dem Faderblock um.

Im Normalfall zeigen die Displays die «In Strip Control Labels», wie sie im Layout des Faderblocks aufgeführt sind. Mit aktivierter Taste DISPLAY VALUE werden bei allen Kanälen die effektiv eingestellten Werte angezeigt.

# Studer On-Air 5000



## 2.2.7 CONSOLE PRESETS

Das CONSOLE PRESETS-Feld teilt sich in einen oberen, dem Benutzer individuell zugänglichen Bereich und in einen unteren, fest vorgegebenen Bereich.

### CARD

In die mit CARD bezeichnete Öffnung kann eine persönliche Kennkarte eingeschoben werden. Diese hat die Funktion eines Schlüssels, der den Zugang zu den unter diesem Schlüssel abgelegten Snap Shot-Speichern öffnet. Je nach Kartenart ist eine Veränderung der gespeicherten Daten gestattet oder verboten.

Ist keine Karte eingeschoben, so wird ein Speicherbereich geöffnet, der allen Benutzern frei zugänglich ist. Er kann dort, über die SNAP SHOTS-Tasten, die ersten vier Pulteinstellung abrufen.

### SNAP SHOTS

In diesem Bereich sind vier gelbe SET-Tasten, eine grüne RECALL- und eine rote STORE-Taste untergebracht.

### SNAP SHOTS / DJ MIC

Diese Taste wirkt sich nur auf den DJ-Mikrofonkanal aus. Sie setzt alle Parameter dieses Kanals gemäss der Einstellung, die für diesen Benutzer gespeichert ist. Es ist damit möglich, jedem Karteninhaber eine individuelle Verstärkungs-, Equalizer- und Filtereinstellung zuzuordnen.

### SNAP SHOTS / 1, 2, 3

Über diese Tasten kann der Karteninhaber drei komplette Pulteinstellungen (Snap Shots) aufrufen und, sofern er dazu berechtigt ist, diese auch speichern.

### SNAP SHOTS / RECALL

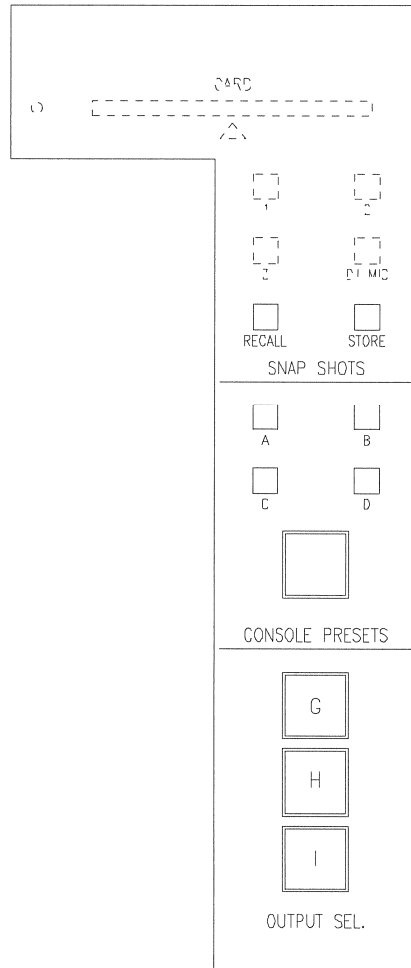
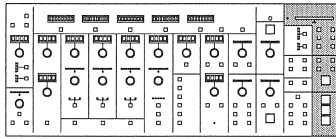
Vorbereitungstaste zum Setzen eines der oben genannten Zustände.

Also z.B.:

**SNAP SHOTS / RECALL** (RECALL-Taste leuchtet grün),

**SNAP SHOTS / 1**; mit einem Doppelklick wird der Snapshot Nr. 1 abgerufen, die vorher gewählte CONSOLE PRESETS-Taste erlischt, und die Taste SNAP SHOTS / 1 leuchtet.

Alle Parameter des Pultes sind damit neu gesetzt.



### SNAP SHOTS / STORE

Vorbereitungstaste zum Speichern des gegenwärtigen Pultzustands.

Der Ablauf ist analog dem RECALL-Vorgang, also:

**SNAP SHOTS / STORE** (rote STORE-Taste leuchtet),

**SNAP SHOTS / 1**; mit einem Doppelklick wird der Speichervorgang ausgelöst, eine allenfalls vorher gewählte CONSOLE PRESETS-Taste erlischt; die Taste SNAP SHOTS / RECALL leuchtet.

Damit ist der gegenwärtige Pultzustand im Speicherbereich «1» des Karteninhabers gespeichert.

### CONSOLE PRESETS (unterer Teil)

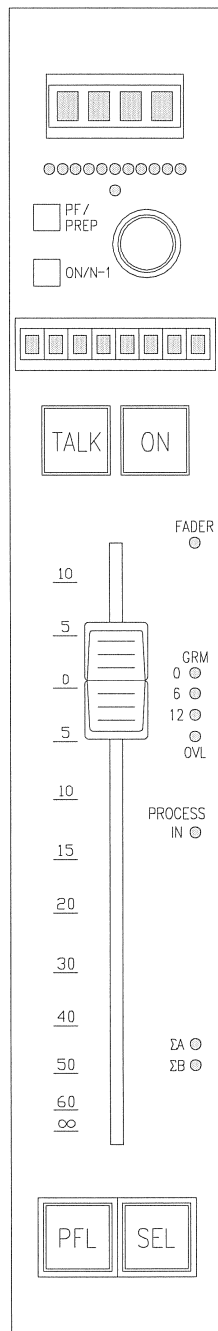
Mit den fünf gelben Tasten können fest vorgegebene Pultzustände (Presets) abgerufen werden. Diese sind allen Benutzern (auch ohne Kennkarte) zugänglich. Änderungen der gespeicherten Einstellungen sind nur durch den Supervisor mit Hilfe der Master-Karte möglich.

### OUTPUT SEL.

Die drei Tasten G, H UND I können zur Um- und Anschaltung eines automatischen Sendeblaufsystems eingesetzt werden, oder aber so konfiguriert werden, dass das OUTPUT ROUTING von drei Leitungen ermöglicht wird.



# Studer On-Air 5000



## 3 Funktionsbeschreibung: Faderblock

Jede Faderblock-Einheit ist mit den Bedienelementen für vier Eingangskanäle ausgerüstet. Je nach Grösse des Pultes werden zwei bis acht solcher Einheiten eingesetzt, was die gleichzeitige Bedienung von 8 bis 32 Eingangskanälen ermöglicht. Hierher

### 3.1 Oberes Feld

Im oberen Feld des Faderblocks sind pro Eingangskanal ein Drehgeber, zwei Tasten und ein vierstelliger Display eingebaut. Die Funktionen dieser Elemente werden durch die Tasten im IN STRIP CONTROL-Feld des zentralen Bedienteils gesteuert.

#### MPX LISTEN

Nach Wahl von MPX LISTEN im Feld IN STRIP CONTROL übernimmt das obere Bedienfeld aller Faderblöcke die MPX LISTEN-Funktionen.

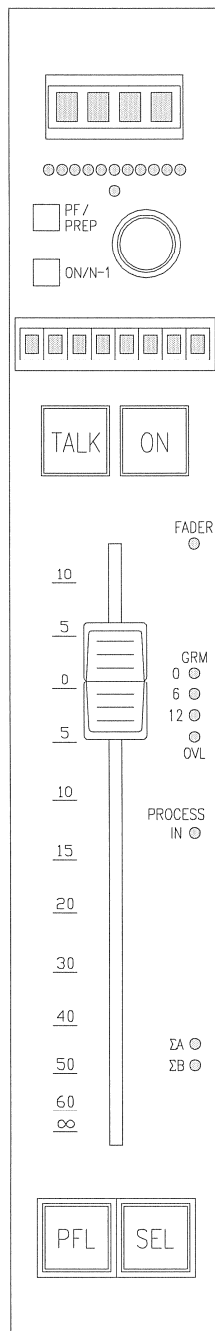
Mit der ON-Taste kann das Pre Fader-Signal des Eingangskanals auf den MPX LISTEN-Lautsprecher geschaltet werden. Am Drehgeber wird der Abhörpegel eingestellt, Anzeige der Pegel-einstellung mit der oberhalb davon angeordneten LED-Kette. Die Taste PF/PREP bereitet den betreffenden Kanal so vor, dass er bei gedrückter PREPARATION-Taste im MPX MASTER-Feld in den Vorbereitungs- oder Probe-Status umschaltet.

Sobald ein Kanalzug auf Sendung geschaltet wird (Fader offen, Summenbus gewählt, ON-Taste gedrückt) wird der MPX Listen-Ausgang des betreffenden Kanals stummgeschaltet und der PREP-Status des Kanals ausgeschaltet.

#### MPX SEND

Nach Wahl von MPX SEND im Feld IN STRIP CONTROL übernimmt das obere Bedienfeld aller Faderblöcke die MPX SEND-Funktionen.

Am Drehgeber wird der MPX SEND-Pegel eingestellt, Anzeige der Pegel-einstellung mit der oberhalb davon angeordneten LED-Kette. Mit der ON-Taste wird der Return-Ausgang auf N-1 umgeschaltet. Der Taste PF/PREP ist keine Funktion zugeordnet.



### AUX 1 / AUX 2

Nach Wahl von AUX 1 oder AUX 2 im Feld IN STRIP CONTROL übernimmt das obere Bedienfeld aller Faderblöcke die AUX 1- oder AUX 2-Funktionen.

Mit der grünen ON-Taste wird der AUX-Kanal aktiviert. Umschaltung des betreffenden AUX-Abgriffs von «after fader» (hinter Regler) auf «pre fader» (PF, vor Regler) mit der gelben PF/PREP-Taste. Am Drehgeber wird der AUX SEND-Pegel eingestellt, das Display zeigt den Pegel in dB an.

### GAIN

Nach Wahl von GAIN im Feld IN STRIP CONTROL übernimmt das obere Bedienfeld aller Faderblöcke die GAIN-Funktionen.

Der Drehgeber

- beeinflusst die Verstärkung des Mikrofon-Vorverstärkers, falls vorhanden; Anzeige im Display oberhalb davon (der interne Gain Trim wird auf 0 dB gesetzt).
- beeinflusst den internen (digitalen) Gain Trim, wenn kein Vorverstärker vorhanden ist.

### BALANCE

Nach Wahl von BALANCE im Feld IN STRIP CONTROL übernimmt das obere Bedienfeld aller Faderblöcke die BALANCE-Funktionen.

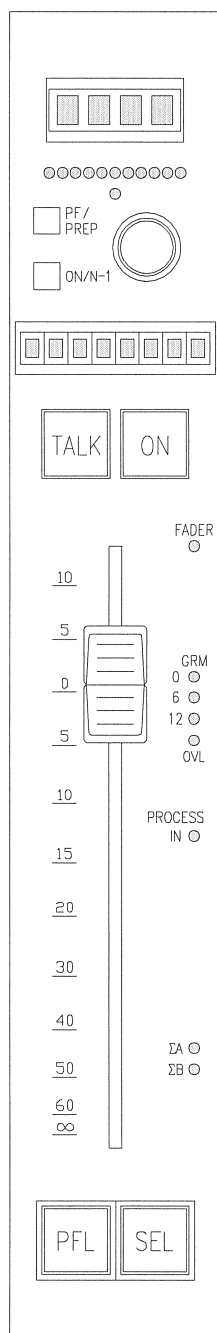
Bei ausgeschalteter Taste ON leuchtet die grüne, zentral angeordnete LED. Bei eingeschalteter Taste ON (grün) wird mit dem Drehgeber die Richtungsabbildung der Quelle verschoben. Die grüne LED erlischt. Die rote LED-Kette zeigt immer, auch bei ausgeschalteter Balance, die virtuelle Abbildungsposition zwischen L(inks) und R(echts) an. Damit ist eine Voreinstellung der Position auch bei ausgeschalteter Funktion möglich.

### DISPLAY VALUE

Diese Taste im Feld IN STRIP CONTROL schaltet die Anzeige des vierstelligen Displays auf dem Faderblock um.

Im Normalfall zeigen die Displays die «In Strip Control Labels», wie sie im Layout des Faderblocks aufgeführt sind. Mit aktivierter Taste DISPLAY VALUE werden bei allen Kanälen die effektiv eingestellten Werte angezeigt.

# Studer On-Air 5000



## 3.2 Achtstelliges Display

Zeigt das Label der angeschlossenen Quelle an. Wird einer Eingangsleitung ein Quellenlabel zugeordnet (z.B. SC BERN), so wird dieses anstelle der Nummer der Eingangsleitung (EL 2) angezeigt.

## 3.3 Select / ON Tasten

### SELECT

Die SELECT-Taste schaltet die zentrale Bedieneinheit auf den entsprechenden Eingangszug.

### ON

Erlaubt das knacksfreie Ein- und Ausschalten des Kanalzugs bei geöffnetem Regler. Löst den Faderstart aus, sofern der Regler geöffnet ist.

## 3.4 Fader und Anzeige-LEDs

Der Fader dient zur PegelEinstellung des Kanals. Der integrierte Endschalter dient, zusammen mit der ON-Taste, zum Starten und Stoppen von fernsteuerbaren Quellen. Ein geöffneter Endschalter aktiviert die grüne FADER-LED.

### GRM- und OVL-LEDs

Bei eingeschaltetem Limiter oder Kompressor zeigen die drei gelben GRM-LEDs die Verstärkungsreduktion an (Gain Reduction Meter). Wird der intern zulässige Pegel überschritten, leuchtet die rote OVL-LED (Overload) auf. Gleichzeitig wird auch die im zentralen Bedienteil untergebrachte Overload-Anzeige aktiviert.

### PROCESS IN

Signalisiert einen eingeschleiften Prozessorblock, der sich auf das Audiosignal auswirkt (z.B. Filter, Equalizer, Delay usw.).

### $\Sigma A$ / $\Sigma B$ -LEDs

zeigen den gewählten Summenausgang an.

## 3.5 PFL- und Talk-Tasten

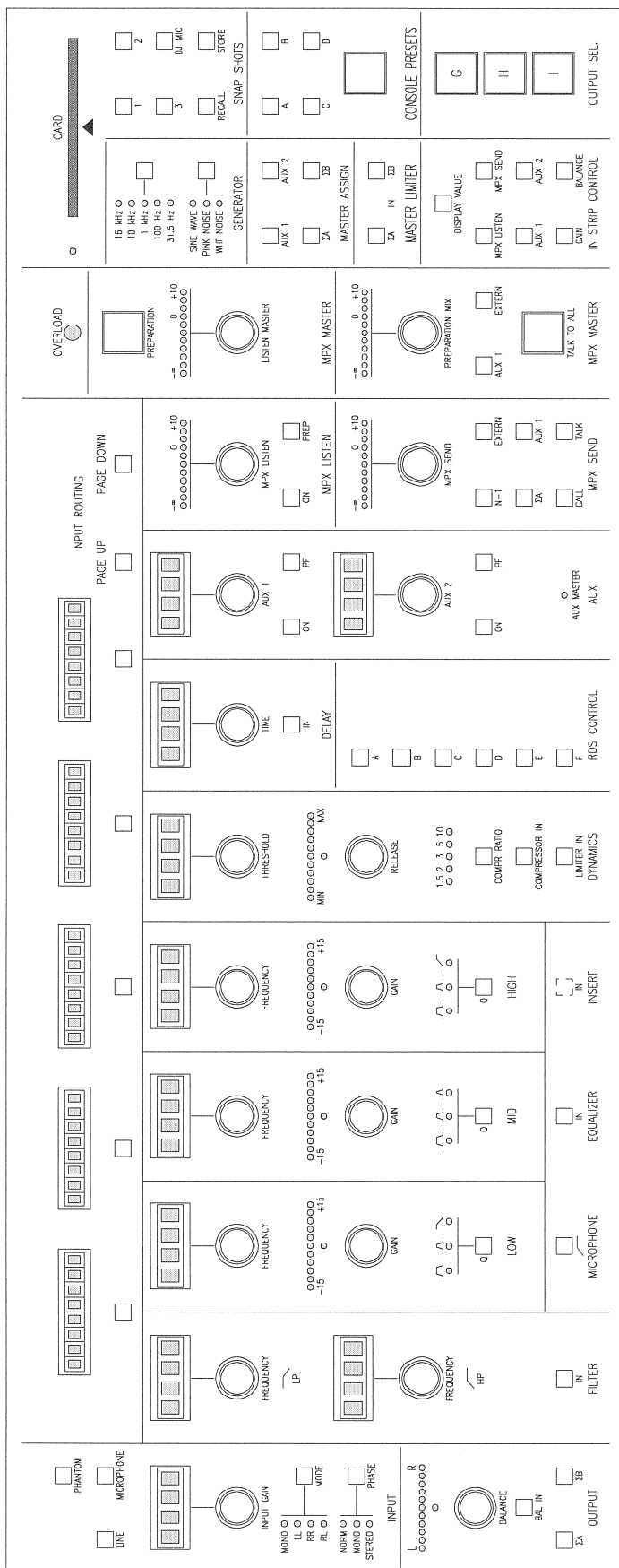
### PFL

Vorhörtaste. Das PFL-Signal wird unterbrochen, sobald der Audioweg durchgeschaltet ist (konfigurierbar).

### TALK

Zur Kommandogabe auf den MPX SEND-Ausgang. Rufsignale (1900 Hz) vom Teilnehmer werden durch die LED in der Taste und einen Summer signalisiert. Beides bleibt aktiv, bis die zugehörige TALK-Taste betätigt wird.

# Zentrale Bedieneinheit:

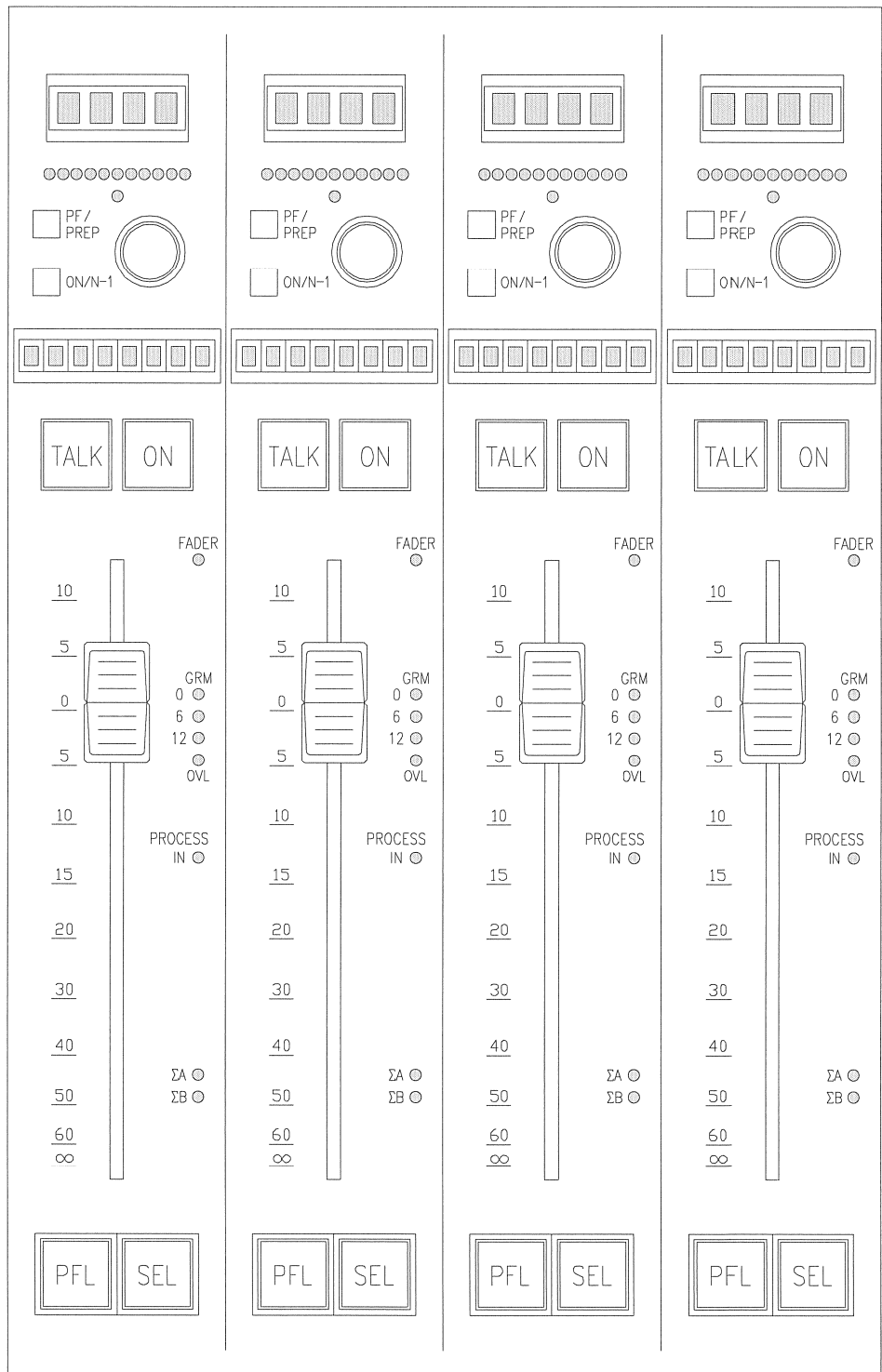


# Studer On-Air 5000

## IN STRIPS LABELS:

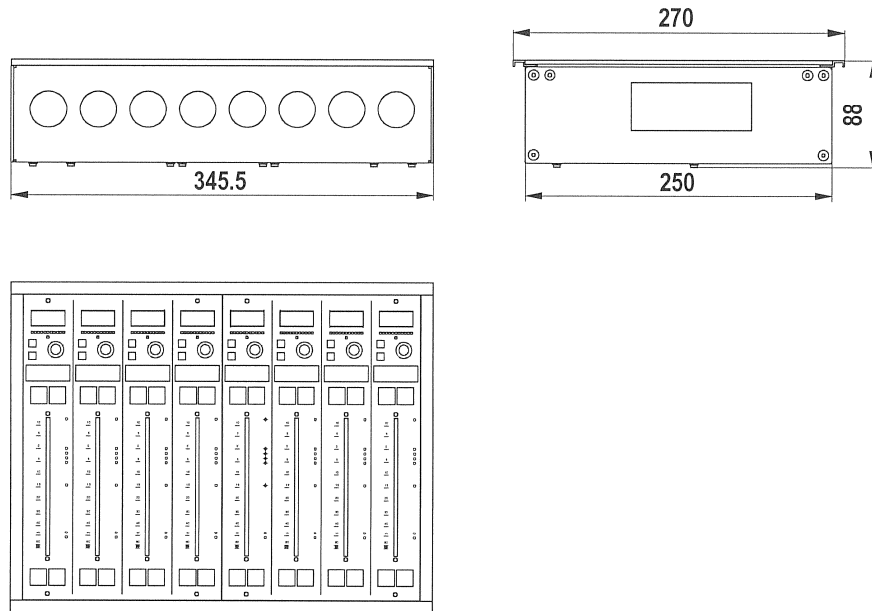
GAIN	BAL	AUX 1	AUX 2	MPXS	MPXL
Mic Gain Line Gain Digital Trim	Balance	Aux 1 Gain	Aux 2 Gain	Multiplex send	Multiplex listen

## Faderblock:

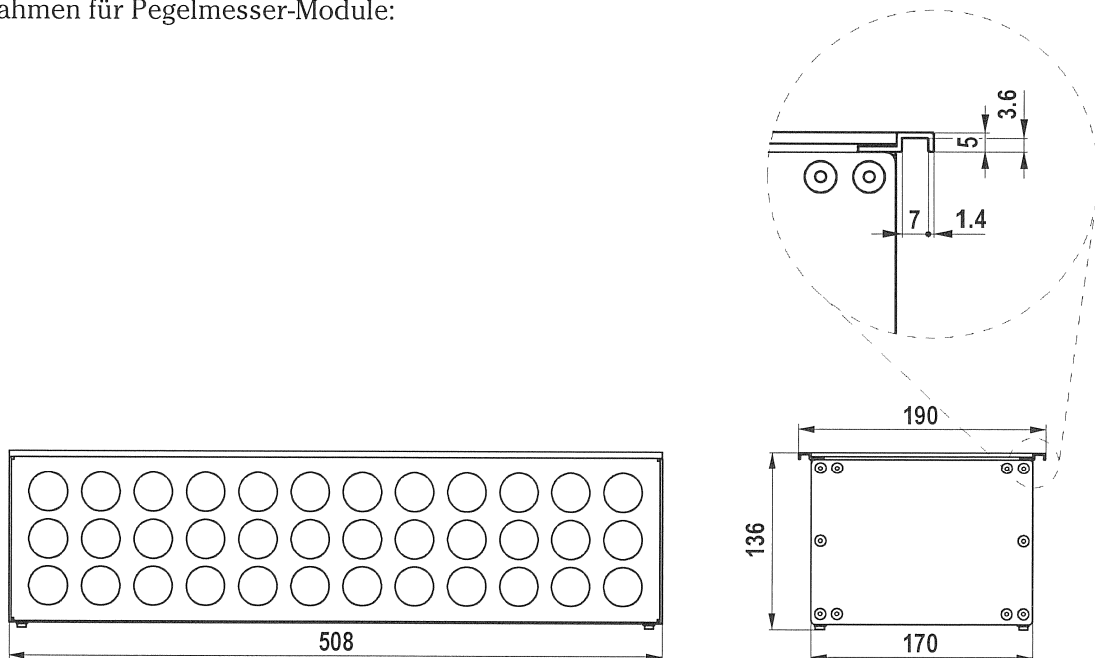


**Abmessungen (in mm):**

Einbaurahmen für zwei Fader-Module mit je vier Fadern (oder für ein Fader-Modul und weitere Einheiten, z.B. Fernsteuerung):

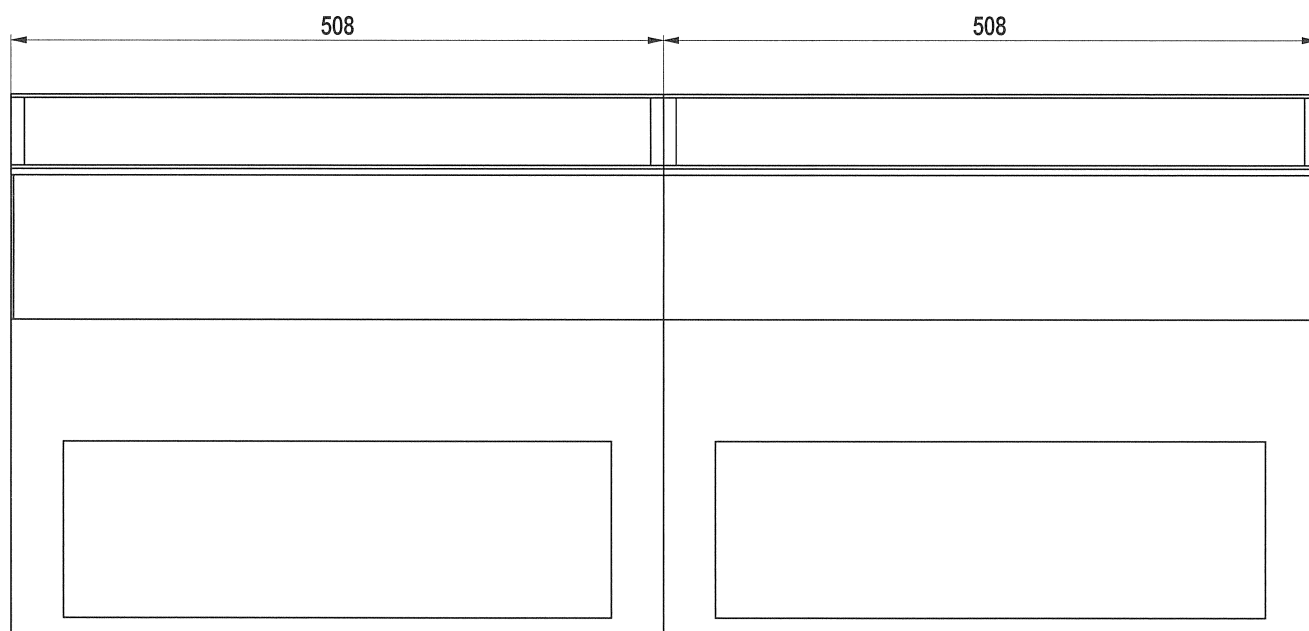
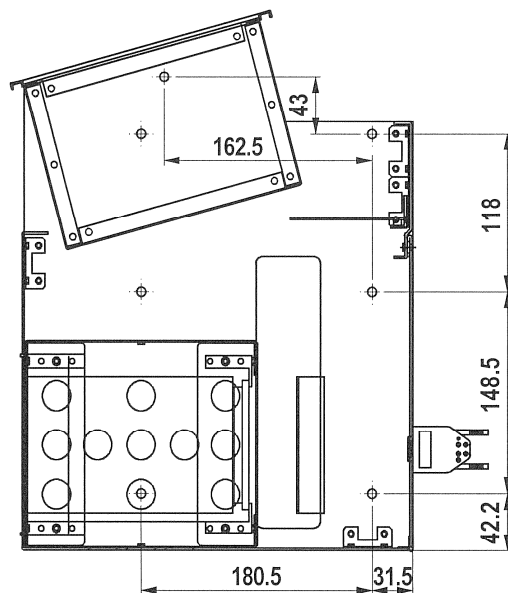


Einbaurahmen für Pegelmesser-Module:



# Studer On-Air 5000

Zentraler Bedienteil und Monitor-Panel:



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# *Digital Mixing System for Broadcast and Production*

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# Studer On-Air 5000

## I Introduction

The advent of DAB (Digital Audio Broadcasting), the transition from analog to digital interconnections between studios and transmitter sites, and the rise of digital audio storage media mean that today's broadcasters need an easy-to-use, flexible and ergonomic mixing console solution with fully-digital audio and data processing.

A user-friendly mixing console is also invaluable for producing actuality, features, and pre-recording combined speech and music programme material.

With its great flexibility and clear functional layout, the new On-Air 5000 mixing console fits the bill for both tasks. Whoever is sitting at the controls – disk jockey, sports reporter, newsreader, broadcast recording engineer – a personal “chip card” configures the console to each user's special needs in a fraction of a second.

The console was designed with a strong emphasis on communication with the outside world: sports reporters, telephone and studio discussions, election results, etc. The console features up to 16 return feeds. Two separate multiplex levels allow a clean-feed to every broadcast participant, while people waiting to go on-air can talk with the programme producer via a second conference level.

EBU-compliant calling tones and incoming call sensors (1900 Hz), plus automatic switching between conference levels when a fader is opened make it easier to communicate with outside sources.

A client/server architecture, with the “Active VMC” (Virtual Mixing Console) as the server, makes for a highly customisable console. Signal processing uses the same DSP core found in the D950 digital console and in the MADI router. This state-of-the-art technology sets new standards of flexibility and sonic quality.

The console is comprised of four functional units with control surfaces and displays. Being mechanically separate, modules may be built-in to a presentation suite using the customer's preferred arrangement, or whatever best matches the studio design.

### I.1 Fader Block

- Maximum 32 linear faders organised in blocks of four, which may be arranged in any desired groups of 8 or 16 each on either side of a central script area, or conventionally in a continuous row.
- One assignable rotary encoder, two keys and a four-character display per channel.
- 8-character alphanumeric source display.
- Separate PFL, ON, SELECT and TALKBACK keys per channel.

### I.2 Central Control Unit

- Each channel's SELECT key accesses the central control unit, where gain, filters, EQ, compressor, limiter, and auxiliary outputs can be individually adjusted.
- Basic console setup keys; user-specific settings are saved on a “chip card”.
- Input matrix control and function assignment for the channel-strip rotary encoders and keys takes place here.
- N-1 clean-feeds send a return signal to every source. External participants can talk amongst themselves and with the studio presenter during preparation and discussion pauses, without disturbing the broadcast programme.

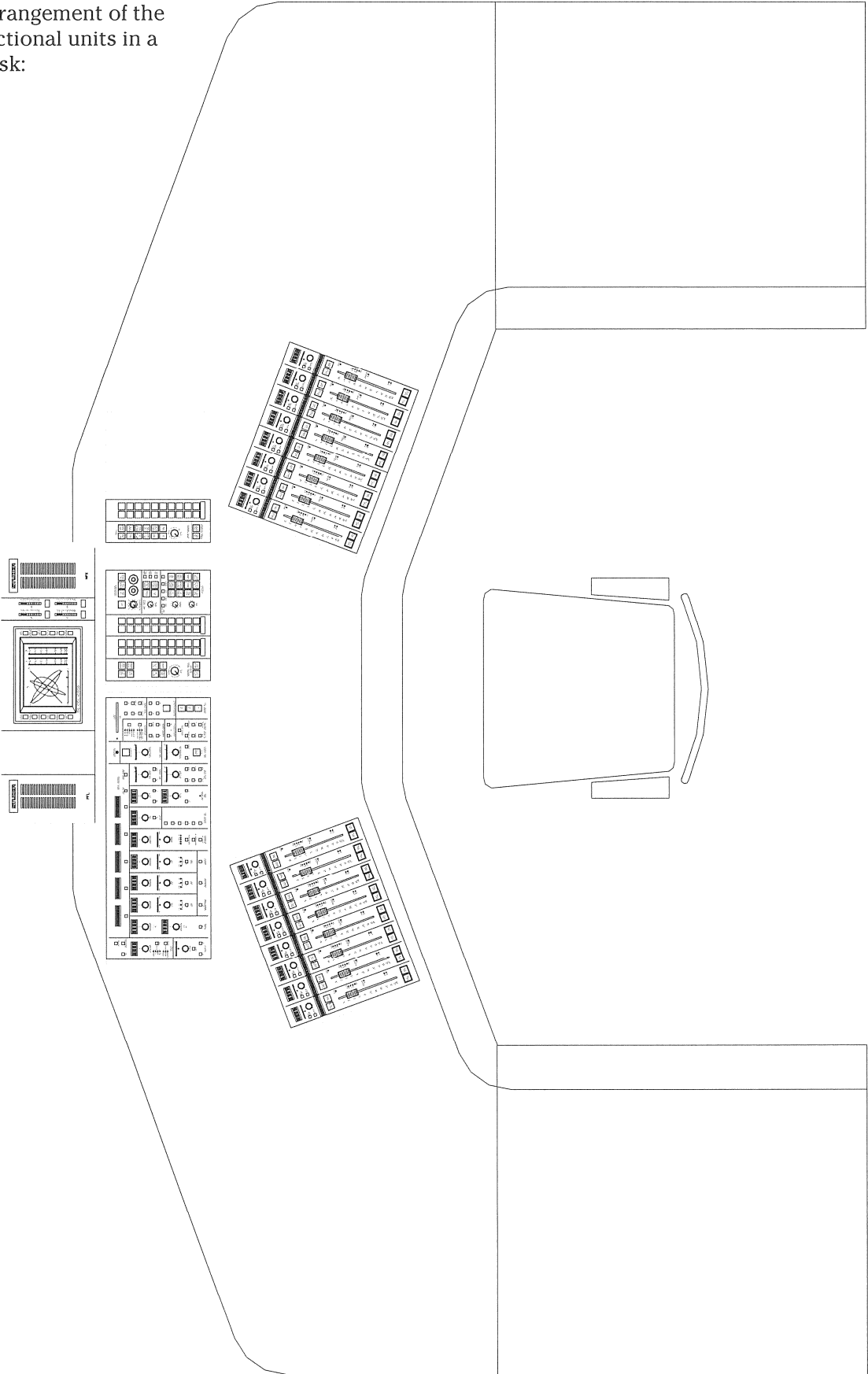
### I.3 Monitoring and Meter Bridge

The monitor area and meter bridge are fitted to customer specifications using standard Studer console modules. Additional lamp and key clusters for remote control, signalling and commands can also be integrated here.

### I.4 System Integration

Converters and digital processing units are housed in a 19-inch rack with facilities for direct connection to a switching centre via optical MADI links. Combined with a MADI router in the main switching centre, this provides an extremely flexible, cost-effective and future-proof solution.

One possible arrangement of the On-Air 5000 functional units in a presentation desk:



# Studer On-Air 5000

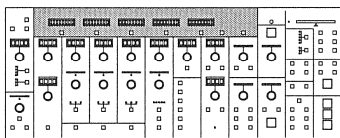
## 2 Functional Description: Central Control Unit

The central control unit has two main areas. The nine-units wide area to the left controls an input channel, i.e. it is *channel-oriented*. Pressing a fader strip's SELECT key allows channel adjustments to be made on the central control unit.

The right hand area of the central control unit handles higher-level functions, i.e. it is *console-oriented*. This area manages bus control, general console settings, and ancillary functions like the test tone generator.

### 2.1 Central Control Unit, Channel-Oriented Area

#### 2.1.1 INPUT ROUTING

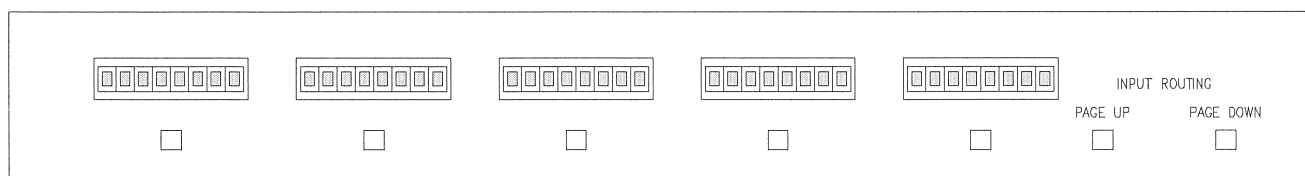


Five 8-character displays label a group of sources connected to the console either directly, or via the MADI router.

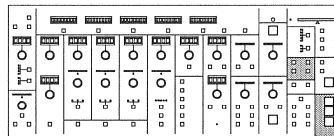
The PAGE UP and PAGE DOWN keys scroll through the groups. Pressing the key below the display assigns the displayed source to the selected input channel. The selected source's label then also appears in the channel strip display above the fader.

Any previously assigned source is automatically disconnected and replaced by the new one.

It is possible to route the same source to two input channels in parallel. Source control (e.g. microphone preamplifier gain and phantom power) may then be effected from either channel. Fader start activates when at least one of the input channels is opened.



#### 2.1.2 OUTPUT ROUTING

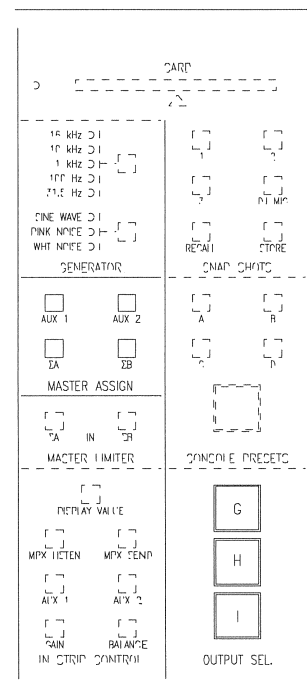


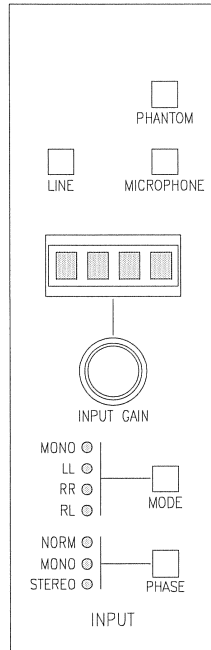
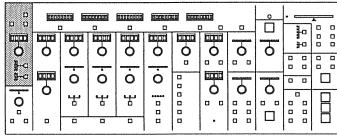
All outputs are configurable via the console computer's graphical interface.

MPX SEND outputs are assigned to input channels. Selecting the channel strip input automatically switches the corresponding multiplex output. Here too, basic configuration can be made via the console computer's graphical interface.

The three OUTPUT SEL G/H/I keys and the MASTER ASSIGN keys in the console-oriented area of the central control unit allow three outputs and (optionally) master and AUX channels to be sent to the displayed outputs via the console's routing matrix.

Each output may be routed to any desired number of output lines. A second output cannot be routed to a previously selected output line. However, doing this clears the previous routing configuration.





### 2.1.3 Input

The input field groups together the functions associated with a channel strip input section. Input channels always operate as stereo pairs; mono signals are routed in parallel to the left and right channels. Default settings are underlined in the following text.

#### GAIN

The INPUT GAIN rotary encoder

- Adjusts the microphone preamplifier gain, if mic preamps are installed. The setting appears in the display above (internal gain trim is set to 0 dB).
- Adjusts the internal (digital) gain trim, if there is no preamplifier.

#### PHANTOM

Switches microphone phantom power on and off (if a microphone preamplifier is present).

#### MIC, LINE

MIC/LINE selection (if a microphone preamplifier is present).

#### MODE

Controls assignment of the stereo input pair. Five options may be selected in sequence:

- NORM (left input to left output, right input to right output): no display, i.e. all LEDs are dark.
- **MONO** (left and right inputs are summed and switched to both outputs): red LED
- **LL** (L input to both outputs): red LED.
- **RR** (R input to both outputs): red LED.
- **RL** (R input to L output, L input to R output): red LED.

The key illuminates when the mode is anything other than NORM.

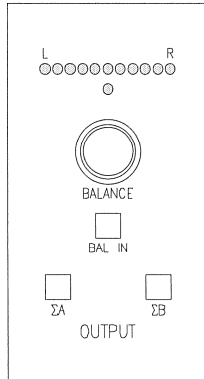
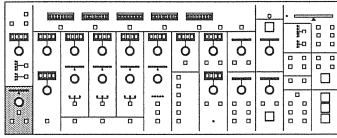
#### PHASE

There are three options:

- NORM – no phase inversion: green LED
- **MONO** – L and R phase inverted: red LED
- **STEREO** – L phase inverted: red LED

Pressing the PHASE key cycles through the three options. The key illuminates when the mode is anything other than NORM.

# Studer On-Air 5000



## 2.1.4 Output

All functions related to the main output and the input channel bus selection are controlled from here.

### BALANCE

Rotary encoder, display and key.

- The green, central LED illuminates when the BAL IN key is “off”.
- The BALANCE rotary encoder positions the source on the stereo soundstage when the BAL IN key is “on” (illuminated red). The green LED is dark.
- The red LED bargraph always indicates the virtual position of the source between L(ef) and R(ight), even when the BAL IN key is switched “off”. This allows source pre-panning even while the balance function is disabled.

Range for mono sources (*for mono sources, this control is used as PAN function*):

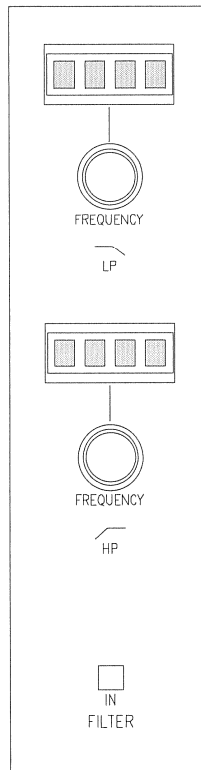
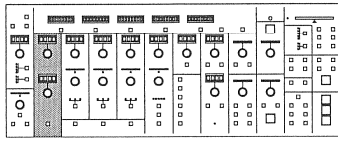
3 dB attenuation of both channels in the mid position, 0 dB or  $\infty$  attenuation of one or the other channel, respectively, at either extreme.

Range for stereo sources:

0 dB attenuation of both channels in the center position, +3 dB gain of one,  $\infty$  attenuation of the other channel at either extreme.

### $\Sigma A$ and $\Sigma B$

Output selectors for stereo master bus A and/or stereo master bus B.

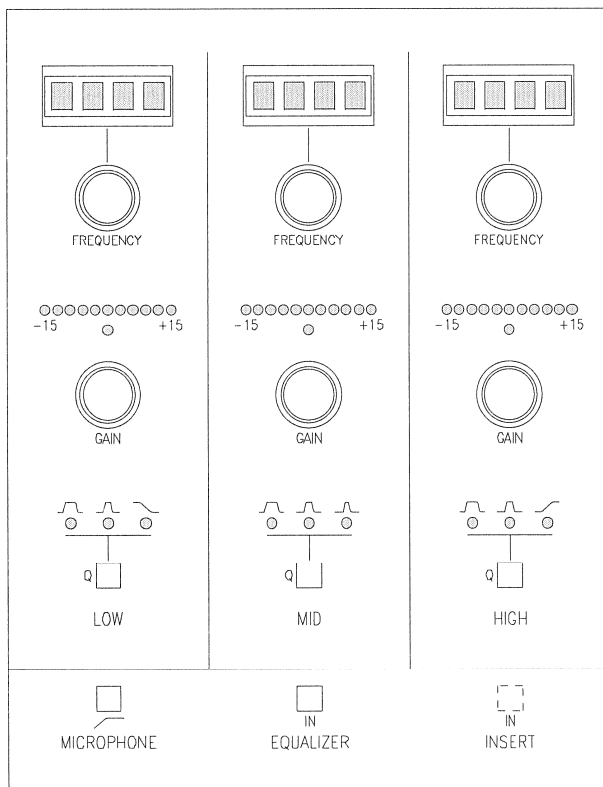
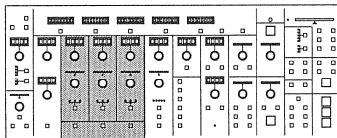


## 2.1.5 Low- and High-Pass Filters

### FILTER IN

Master enable/disable for both filters.

- Low-pass filter: 12 dB/octave rolloff, 62-step cutoff frequency adjustment from 500 Hz to 16 kHz in 1/12-octave increments. The frequency setting appears in the four-digit display.
- High-pass filter: 12 dB/octave rolloff, 62-step cutoff frequency adjustment from 31 Hz to 1 kHz in 1/12-octave increments. The frequency setting appears in the four-digit display.



## 2.1.6 Equalizer

Three-band equalizer with adjustable boost/cut from -15 to +15 dB. The set frequency appears on a four-digit display, a horizontal LED bargraph indicates boost/cut. The central green LED illuminates to indicate the flat position (0 dB).

### EQUALIZER IN

Equalizer enable/disable key.

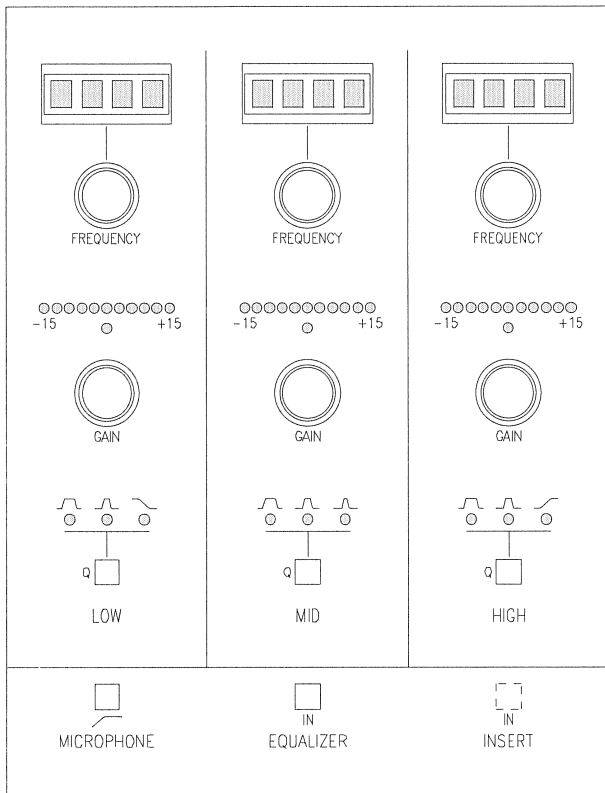
#### LOW

The Q key selects the filter characteristic: peaking,  $Q = 0.4$  or  $1$ , or shelving. 62-step centre/turnover FREQUENCY adjustment from 31 Hz to 1 kHz in 1/12-octave increments; the GAIN rotary encoder controls the boost/cut setting.

#### MID

The Q key selects the filter characteristic:  $Q = 0.4$ ,  $1$  or  $2$ . 62-step centre frequency adjustment from 200 Hz to 6.1 kHz in 1/12-octave increments; the GAIN rotary encoder controls the boost/cut setting.

# Studer On-Air 5000



## HIGH

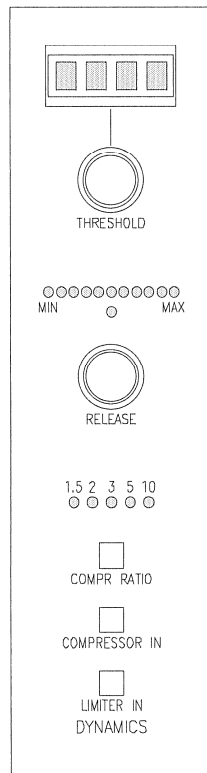
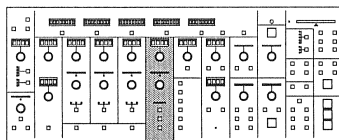
The Q key selects the filter characteristic: peaking,  $Q = 0.4$  or  $1$ , or shelving. 62-step centre/turnover FREQUENCY adjustment from 500 Hz to 16 kHz in 1/12-octave increments; the GAIN rotary encoder controls the boost/cut setting.

## MICROPHONE

This key remotely controls the microphone pre-amplifier's analog subsonic filter (cutoff frequency 75 Hz, 12 dB/octave rolloff). (Effective only if there is a microphone preamplifier.)

### 2.1.7 Insert (Option)

Input channels may include a pre-EQ insert point, if desired. The INSERT IN key (at the bottom right of the EQUALIZER area) activates this feature.



### 2.1.8 Dynamics

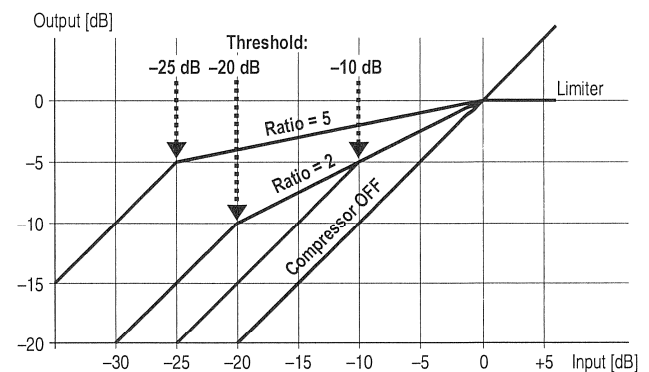
#### LIMITER / COMPRESSOR IN

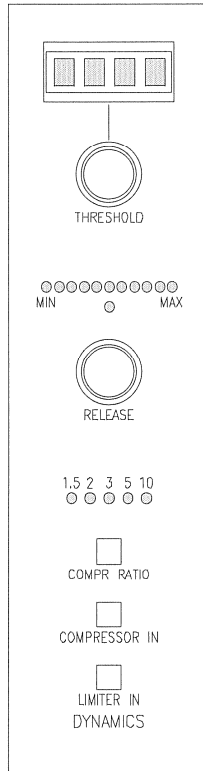
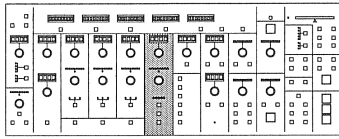
Separate keys switch the compressor and limiter sections on and off.

#### THRESHOLD

Rotary encoder for adjusting compressor gain and knee (threshold) as a function of the compression ratio; adjustment range  $-48$  dB to  $0$  dB in 1 dB increments.

The compression ratio may be set to 1.5, 2, 3, 5 and 10 using the COMPR. RATIO key.



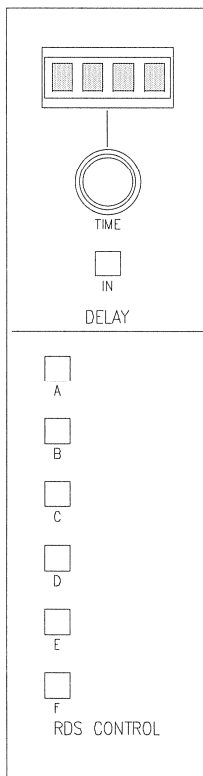
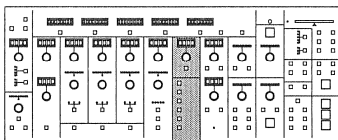


### RELEASE

Rotary encoder for adjusting the compressor release time, adjustable from 100 ms to 3 s.

### LIMITER

The limiter cut-in point is fixed in the configuration file according to the specified headroom (adjustment range:  $-6 \text{ dB}_{\text{FS}}$  to  $-20 \text{ dB}_{\text{FS}}$ ). The release time may also be configured from 1 to 5 s. Hold time: 16.6 ms



## 2.1.9 Delay / RDS Control

### DELAY

Variable signal delay from 1 sample to 240 ms. The DELAY IN key activates the delay, while the TIME rotary encoder adjusts the delay time, which is displayed in samples from 1 to 47 samples, and from 1 ms to 240 ms thereafter.

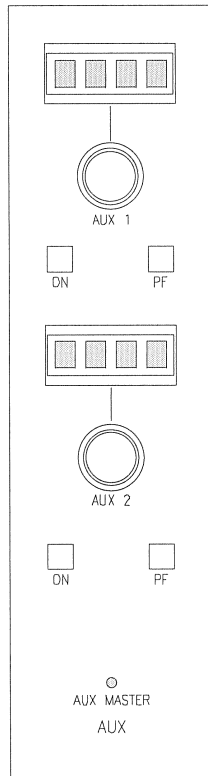
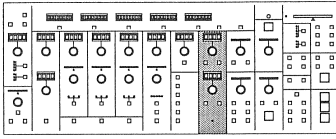
### RDS CONTROL

The six keys labelled A to F (illuminated yellow) allow the selected input channel to be assigned an RDS identification (e.g. music, news, traffic announcement, etc.). This identification is added outside the console as an identification bit in the digital transmission signal, when the corresponding channel goes on-air.

The On-Air 5000 console provides a separate output with 6 logical signals for controlling the RDS coder.



# Studer On-Air 5000



## 2.1.10 AUX

There are two stereo auxiliary channels, AUX 1 and AUX 2.

### AUX 1 / 2 ON

The green ON key activates the AUX channel.

### PF

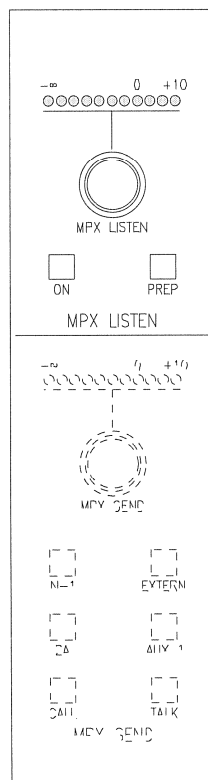
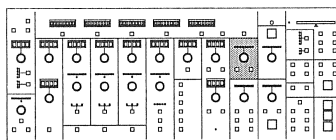
The yellow PF key switches the corresponding AUX tap point from after-fader to pre-fader.

### AUX 1 / 2

Rotary encoder for adjusting the AUX send level, displayed in dB.

### AUX MASTER

This rotary encoder adjusts the AUX output level of the AUX section selected by MASTER ASSIGN AUX 1 or AUX 2. The red AUX MASTER LED lights in this mode.



## 2.1.11 MPX LISTEN

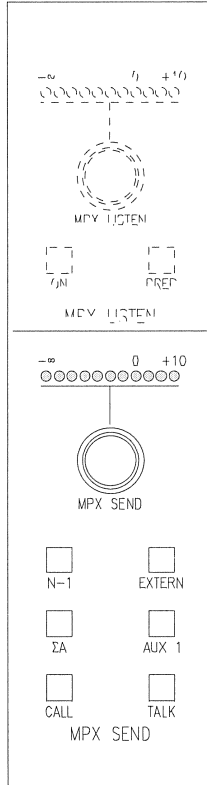
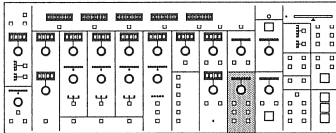
### MPX LISTEN / ON

Switches the input channel's pre-fader signal to the MPX LISTEN loudspeaker. The MPX LISTEN rotary encoder adjusts the monitoring level, which is displayed on the corresponding LED bargraph. The MPX listen output is muted when the channel goes on-air (fader open, bus selected, ON key pressed).

### MPX LISTEN / PREP

The PREP key readies the channel for preparation or rehearsal mode on pressing the MASTER PREPARATION key (see MPX MASTER field).

PREP mode establishes a pre-fader mix of all channels switched to PREP, which is returned to MPX participants minus their own contribution (N-1, clean-feed). This allows all participants to hear and discuss with each other during the preparation phase or between broadcasts, without affecting live transmission.



When one of them goes on-air, this channel exits PREP mode and returns to normal MPX mode. The participant's return channel now carries the source selected by MPX SEND instead of the other, off-air participants.

### 2.1.12 MPX SEND

The four keys N-1, EXTERN,  $\Sigma A$ , AUX 1 select separate return signals for each participant. The return signal level may be adjusted using the MPX SEND rotary encoder. Level is displayed on the corresponding LED bargraph.

#### N-1

Transmission signal ( $\Sigma A$ ) excluding the participant's own contribution.

#### $\Sigma A$

Transmission signal including the participant's own contribution.

#### AUX 1

The mix appearing on the AUX 1 auxiliary channel.

#### EXTERN

Any source connected to the patch panel (usually off-air reception of the current broadcast programme).

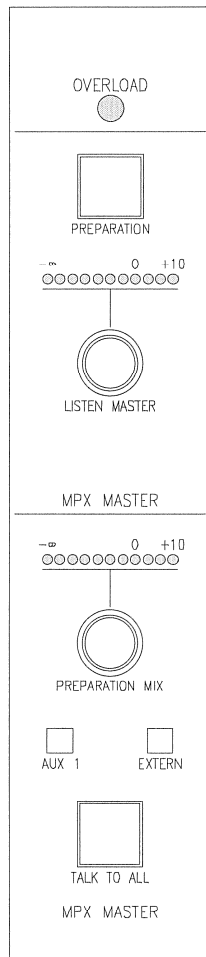
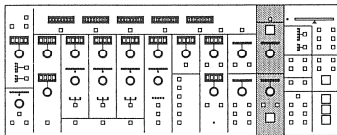
#### CALL

The CALL key applies a 1900 Hz call signal to the SEND output.

#### TALK

The TALK key operates in parallel with the TALK key in the corresponding channel's fader strip, and is used for issuing instructions to the selected SEND output. An LED in the key and a buzzer indicate incoming 1900 Hz call signals from participants. LED and buzzer remain active until the corresponding TALK key is pressed.

# Studer On-Air 5000



## 2.2 Central Control Unit, Console-Oriented Area

### 2.2.1 MPX MASTER

#### PREPARATION

This key places all channels preselected with MPX LISTEN PREP (see above) in preparation or rehearsal mode. This establishes a group of participants who can discuss independently of the live broadcast.

#### LISTEN MASTER

This rotary encoder adjusts the sum level of all channels switched to MPX LISTEN. Level is displayed on the corresponding LED bargraph.

#### PREPARATION MIX

Either the live broadcast or an external source can be mixed with the PREPARATION group described above. The PREPARATION rotary encoder adjusts the level, which is displayed on the corresponding LED bargraph.

The following sources can be selected with the two keys:

#### AUX 1

The mix appearing on the AUX 1 auxiliary channel.

#### EXTERN

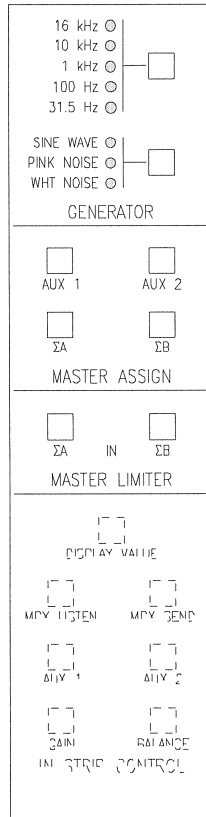
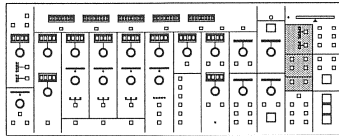
Any source connected to the patch panel (usually off-air reception of the current broadcast programme).

#### TALK TO ALL

This key addresses all MPX SEND channels simultaneously.

### 2.2.2 OVERLOAD

The red OVERLOAD LED illuminates when a fixed alarm threshold is exceeded anywhere within the console.



## 2.2.3 GENERATOR

### MODE

The lower key switches between white and pink noise, or a sine-wave signal.

### SINE WAVE

The upper key selects the frequency in SINE WAVE mode.

The following frequencies are available: 16 kHz, 10 kHz, 1 kHz, 100 Hz and 31.5 Hz.

## 2.2.4 MASTER ASSIGN

The four MASTER ASSIGN keys switch the channel-oriented area of the central control unit to MASTER channels. If configured (customer-specific), it is possible to adjust the master output level at both AUX rotary encoders, insert equalizers, and set up the desired destinations via the routing selector.

The AUX 1 and AUX 2 rotary encoders become the main controls for AUX 1 and AUX 2 (the AUX MASTER LED illuminates, see the AUX paragraph above), and OUTPUT ROUTING is enabled.

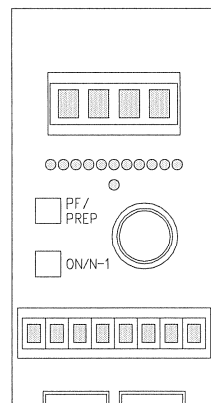
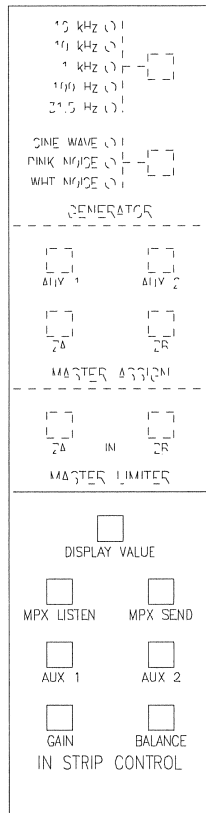
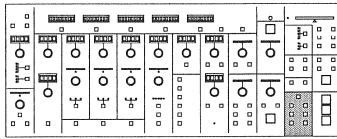
Only OUTPUT ROUTING is enabled for ΣA and ΣB.

## 2.2.5 MASTER LIMITER

### ΣA IN, ΣB IN

These keys enable/disable the permanently assigned limiters in the A and B master outputs. Red LEDs in the keys indicate that the limiter is enabled.

# Studer On-Air 5000



## 2.2.6 In Strip Control

The IN STRIP CONTROL keys delegate certain control functions from the central control unit to the upper portion of the fader strips. The rotary encoder, two keys and the associated four-character display in each input channel are assigned the following functions:

### MPX LISTEN

Assigns the MPX LISTEN functions to the upper portion of all fader strips (see figure below).

The ON key switches the input channel's pre-fader signal to the MPX LISTEN loudspeaker. The rotary encoder adjusts the monitoring level, which is displayed on the LED bargraph immediately above. The PF/PREP key readies the appropriate channel for switching to preparation/rehearsal mode when the PREPARATION key in the MPX MASTER area is pressed.

When a channel strip goes on-air (fader open, master bus selected, ON key pressed), the MPX LISTEN output mutes and the PREP mode is cancelled.

### MPX SEND

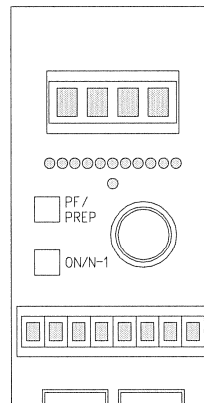
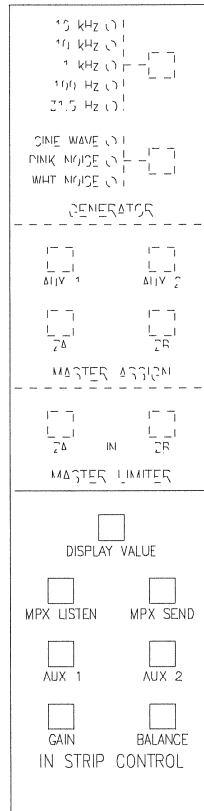
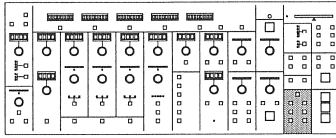
Assigns the MPX SEND functions to the upper portion of all fader strips.

The rotary encoder adjusts the MPX SEND level, which is displayed on the LED bargraph immediately above. Pressing the ON key switches the return output to N-1. There is no function assigned to the PF/PREP key.

### AUX 1 / AUX 2

Assigns the AUX 1 and AUX 2 functions to the portion of all fader strips.

The green ON key activates the AUX channel. The yellow PF/PREP key switches the corresponding AUX tap point from after-fader to pre-fader. The rotary encoder adjusts the AUX SEND level, which is displayed in dB.



### GAIN

Assigns the INPUT GAIN functions to the upper portion of all fader strips.

The rotary encoder

- adjusts the microphone preamplifier gain, if present. The gain setting appears in the display above (internal gain trim is set to 0 dB).
- adjusts the internal (digital) gain trim, when there is no preamplifier available.

### BALANCE

Assigns the BALANCE functions to the upper portion of all fader strips.

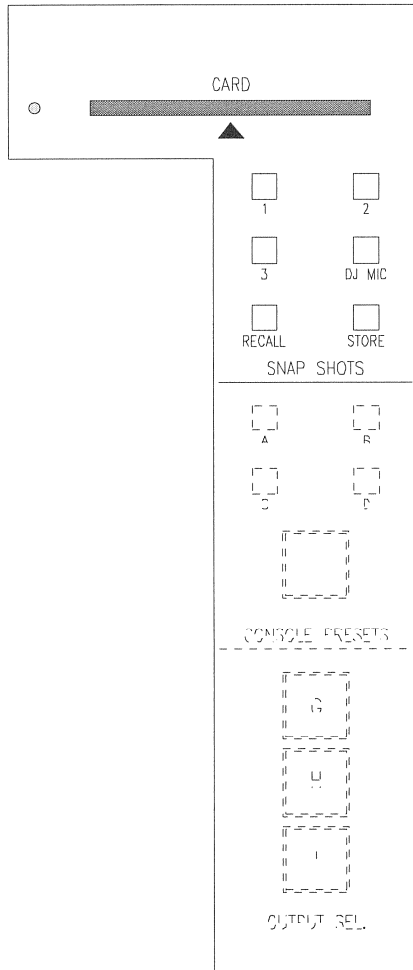
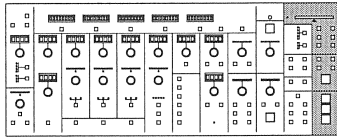
The green central LED illuminates when the ON key is switched off. When the ON key is switched on (green), the rotary encoder positions the source on the stereo soundstage and the green LED extinguishes. The red LED bargraph always indicates the virtual position of the source between L(ef) and R(ight). This allows source pre-panning even while the balance function is disabled.

### DISPLAY VALUE

This key switches the four-character fader strip displays over to indicate the current settings.

Normally, these display the “in strip control labels”, as they appear in the fader strip layout. Activating the DISPLAY VALUE key reveals the values currently set in all channels.

# Studer On-Air 5000



## 2.2.7 CONSOLE PRESETS

The CONSOLE PRESETS area is subdivided into an upper area that users can access individually, and a lower area with fixed functions.

### CARD

The slot labelled CARD accepts a personal identification card. This works like a key, giving access to the snapshot memories stored using this key. Saved data may or may not be modified, depending on the card type.

An empty card slot enables a memory area that is freely accessible to all users. From here, users can recall the first four console setups via the SNAP SHOTS keys.

### SNAP SHOTS

This area comprises four yellow SET keys, a green RECALL key, and a red STORE key.

### SNAP SHOTS / DJ MIC

This key affects only the DJ microphone channel, by setting all its channel parameters to the current user's stored values. This allows individual gain, equalizer and filter settings to be assigned for each cardholder.

### SNAP SHOTS / 1, 2, 3

These keys allow the cardholder to recall three complete console setups (snapshots), and save them if authorised to do so.

### SNAP SHOTS / RECALL

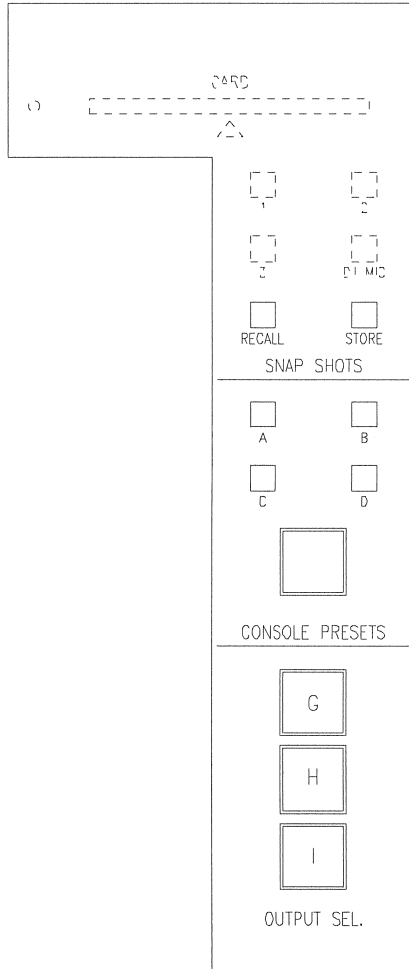
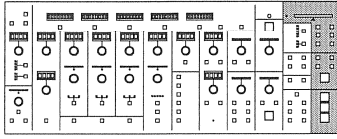
Preparation key to set one of the states described above.

Operating example:

**SNAP SHOTS / RECALL** (RECALL key lights up green),

**SNAP SHOTS / 1**; a double-click recalls snapshot no. 1, the previously selected CONSOLE PRESETS key extinguishes, and the SNAP SHOTS / 1 key illuminates.

This sets all console parameters to new values.



## SNAP SHOTS / STORE

Preparation key to save the current console state.

Operation is similar to the RECALL procedure, i.e.:

**SNAP SHOTS / STORE** (red STORE key illuminates),

**SNAP SHOTS / 1**; double-click to start the save procedure; any previously selected CONSOLE PRESETS key extinguishes; the SNAP SHOTS / RECALL key illuminates.

The current console status is now stored in the cardholder's memory area "1".

## CONSOLE PRESETS (lower area)

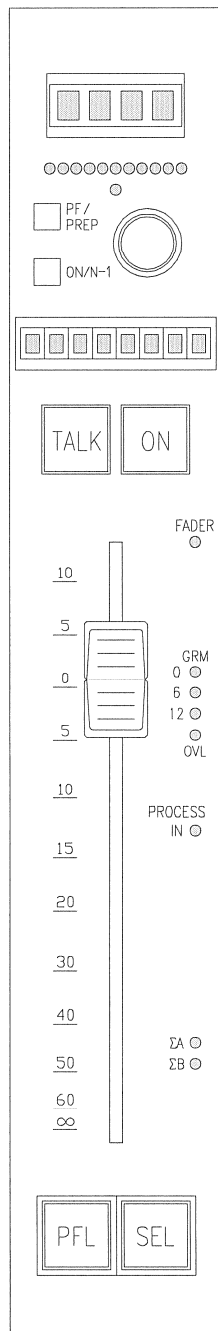
The five yellow keys recall fixed console states (presets) that are accessible by all users (even without an ID card). These presets can only be modified by the supervisor, using the master card.

## OUTPUT SEL.

The G, H and I keys may be used in conjunction with a broadcast automation system, or configured to allow OUTPUT ROUTING of three lines.



# Studer On-Air 5000



## 3 Functional Description: Fader Block

A fader block incorporates controls for four input channels. Two to four blocks may be installed, depending on the size of the console. This represents 8 to 32 simultaneously operable input channels.

### 3.1 Upper Area

The upper area of each fader strip features one rotary encoder, two keys and a four-character display. The functions of these elements are assigned by the keys in the IN STRIP CONTROL area of the central control unit.

#### MPX LISTEN

Selecting MPX LISTEN in the IN STRIP CONTROL area assigns MPX LISTEN functions to the upper portion of all fader strips.

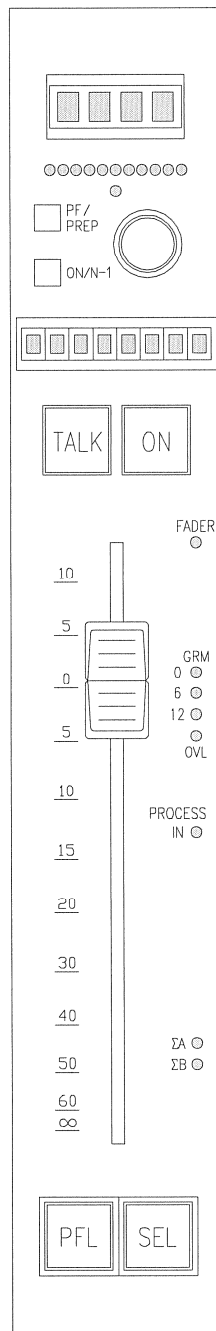
The ON key switches the input channel's pre-fader signal to the MPX LISTEN loudspeaker. The rotary encoder adjusts the monitor level, which is displayed on the LED bargraph immediately above. The PF/PREP key readies the channel for switching to preparation/rehearsal mode when the PREPARATION key in the MPX MASTER area is pressed.

When a channel strip goes on-air (fader open, master bus selected, ON key pressed), the MPX LISTEN output is muted and the PREP mode is canceled.

#### MPX SEND

Selecting MPX SEND in the IN STRIP CONTROL area assigns MPX SEND functions to the upper portion of all fader strips.

The rotary encoder adjusts the MPX SEND level, which is displayed on the LED bargraph immediately above. Pressing the ON key switches the return output to N-1. There is no function assigned to the PF/PREP key.



### AUX 1 / AUX 2

Selecting AUX 1 or AUX 2 in the IN STRIP CONTROL area assigns AUX 1 or AUX 2 functions to the upper portion of all fader strips.

The green ON key activates the AUX channel. The yellow PF/PREP key switches the corresponding AUX tap point from after-fader to pre-fader. The rotary encoder adjusts the AUX SEND level, which is displayed in dB.

### GAIN

Selecting GAIN in the IN STRIP CONTROL area assigns GAIN functions to the upper portion of all fader strips.

The rotary encoder

- adjusts the microphone preamplifier gain, if applicable. The gain setting appears in the display above (internal gain trim is set to 0 dB).
- adjusts the internal (digital) gain trim, when there is no preamplifier.

### BALANCE

Selecting BALANCE in the IN STRIP CONTROL area assigns BALANCE functions to the upper portion of all fader strips.

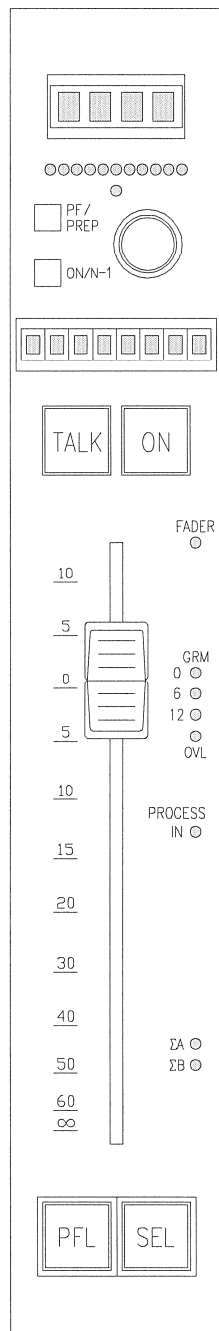
The green central LED lights up when the ON key is switched off. When the ON key is switched on (green), the rotary encoder positions the source on the stereo soundstage and the green LED extinguishes. The red LED bargraph always indicates the virtual position of the source between L(ef) and R(ight). This allows source pre-panning even while the balance function is disabled.

### DISPLAY VALUE

This key switches the contents of the four-character fader strip displays to indicate the current settings.

Normally, these display the “in strip control labels”, as they appear in the fader strip layout. Activating the DISPLAY VALUE key reveals the values currently in effect for all channels.

# Studer On-Air 5000



## 3.2 Eight-Character Display

Displays the label of the connected source. Should a source label be assigned to an input line (e.g. SC BERN), this label is displayed in place of the input line number (e.g. EL 2).

## 3.3 Select / ON Keys

### SELECT

The SELECT key switches the central control unit to the corresponding input channel strip.

### ON

Facilitates click-free channel strip switching while the fader is open. Triggers fader start, provided the fader is open.

## 3.4 Fader and Display LEDs

The fader adjusts the channel level. An integrated end-switch, together with the ON key, serves to start and stop remote-controllable sources. An open end-switch activates the green FADER LED.

### GRM and OVL LEDs

The group of three yellow GRM (Gain Reduction Meter) LEDs shows the amount of gain reduction contributed by the limiter or compressor. The red OVL (overload) LED illuminates should the maximum permissible internal level be exceeded. The overload display in the central control unit activates simultaneously.

### PROCESS IN

Indicates that a signal processing unit is inserted and modifying the audio signal (e.g. filters, equalizer, delay, etc.).

### ΣA / ΣB LEDs

Indicate the selected master output.

## 3.5 PFL and Talk Keys

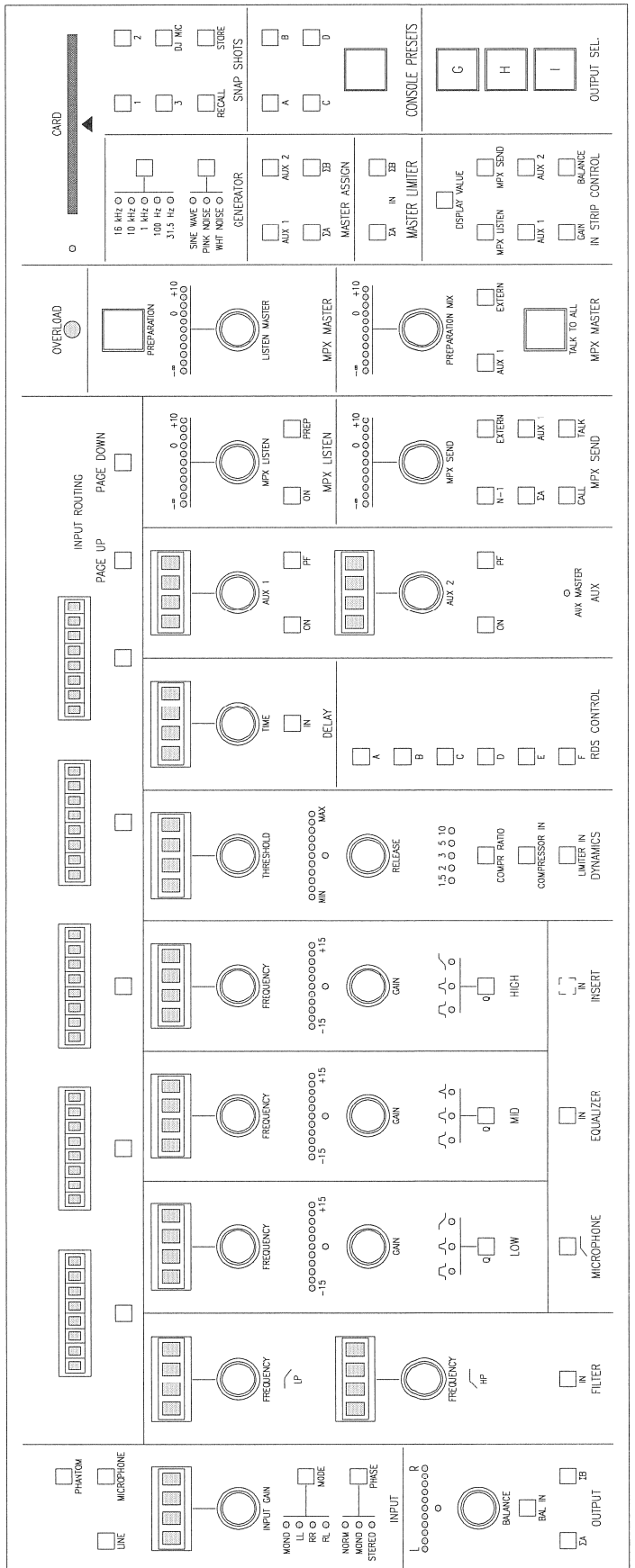
### PFL

Pre-fader listening key. The PFL signal is interrupted as soon as audio is actually routed through (configurable).

### TALK

For issuing instructions to the selected MPX SEND output. An LED in the key and a buzzer indicate incoming 1900 Hz call signals from participants. The LED and buzzer remain active until the corresponding TALK key is pressed.

# Central Control Unit:

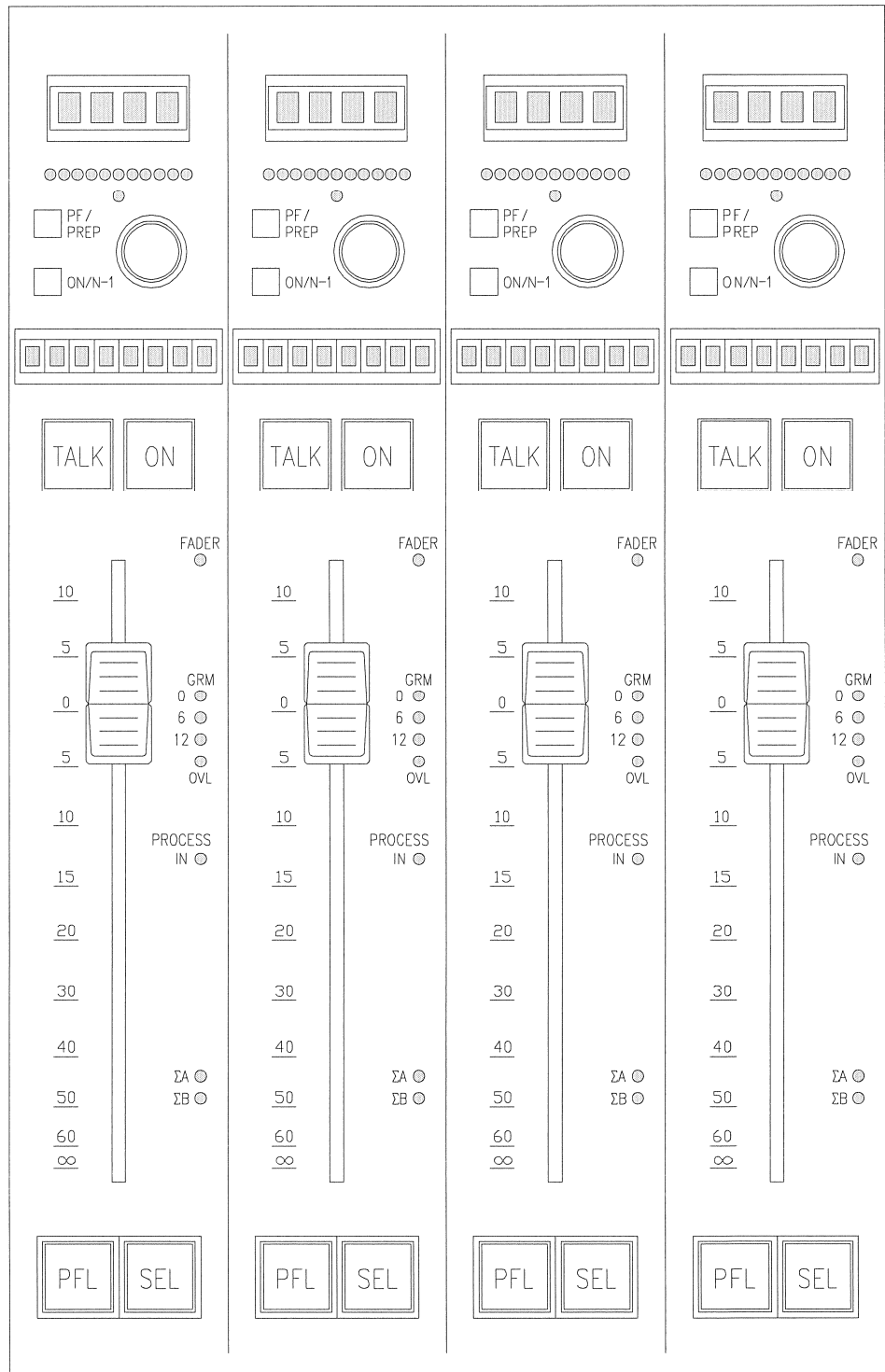


# Studer On-Air 5000

## IN STRIPS LABELS:

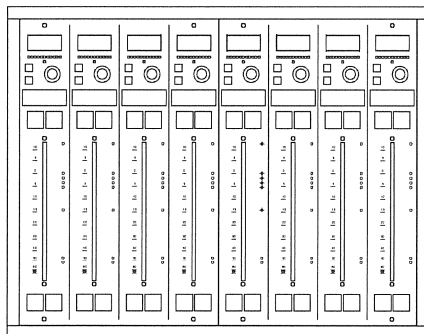
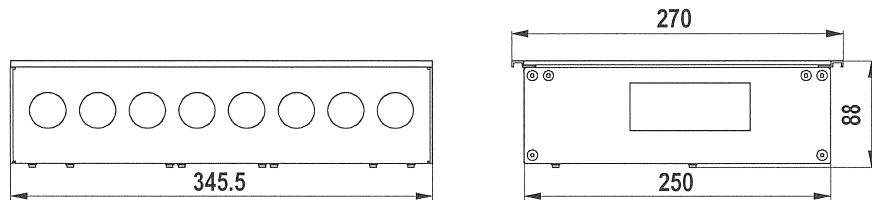
GAIN	BAL	AUX 1	AUX 2	MPXS	MPXL
Mic Gain Line Gain Digital Trim	Balance	Aux 1 Gain	Aux 2 Gain	Multiplex send	Multiplex listen

## Fader Block:

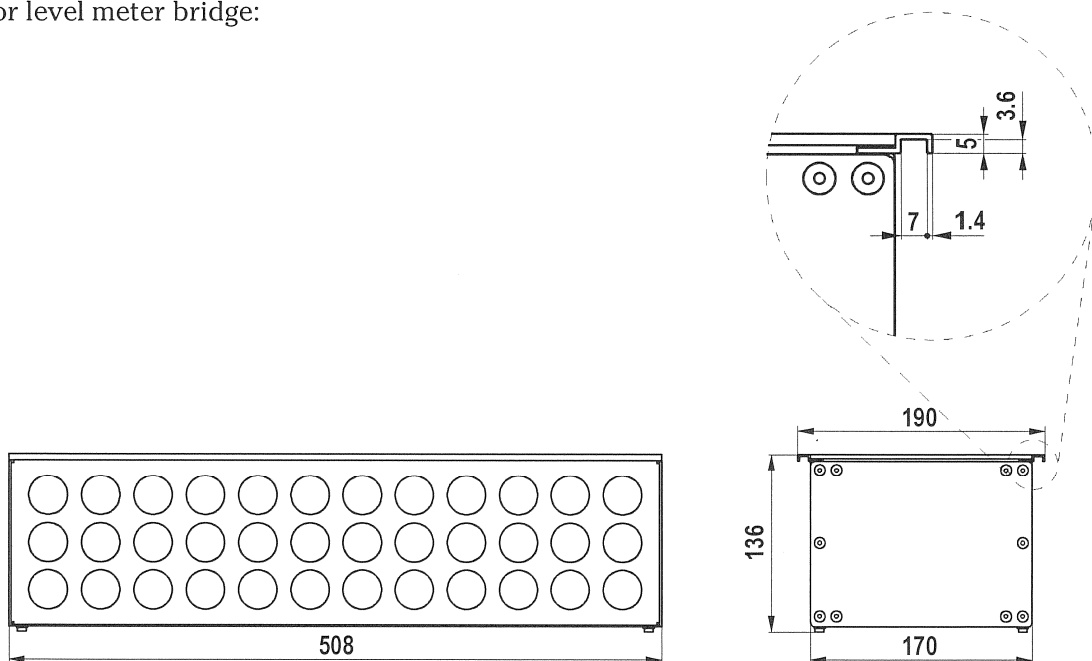


**Dimensions (in mm):**

Frame for two Fader Modules with four faders each (or one Fader Module and other modules, e.g. Remote Control units):

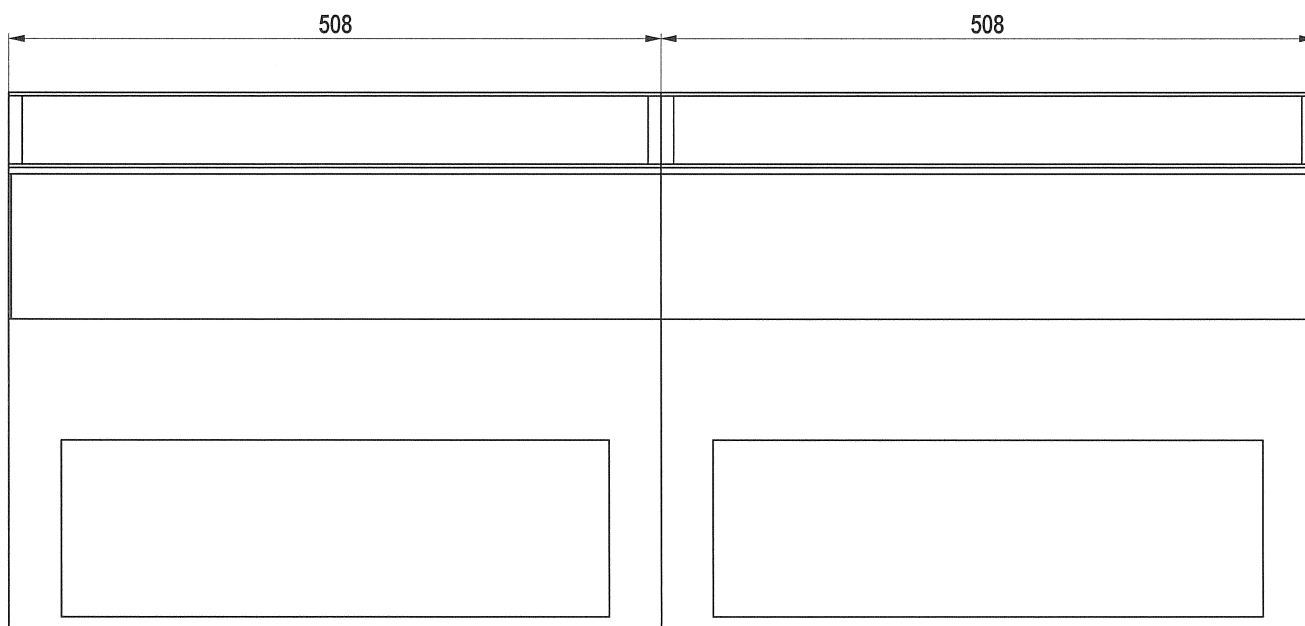
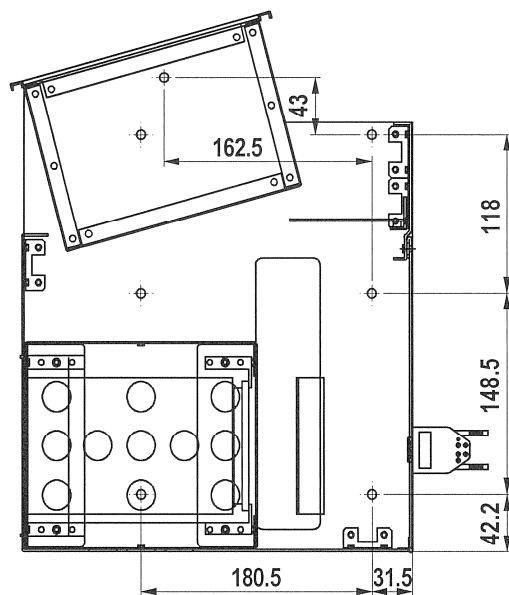


Frame for level meter bridge:



# Studer On-Air 5000

Central Control Unit and Monitoring Unit:



**CIRCUIT DIAGRAMS SECTION 3**

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**Fader Panel Units**

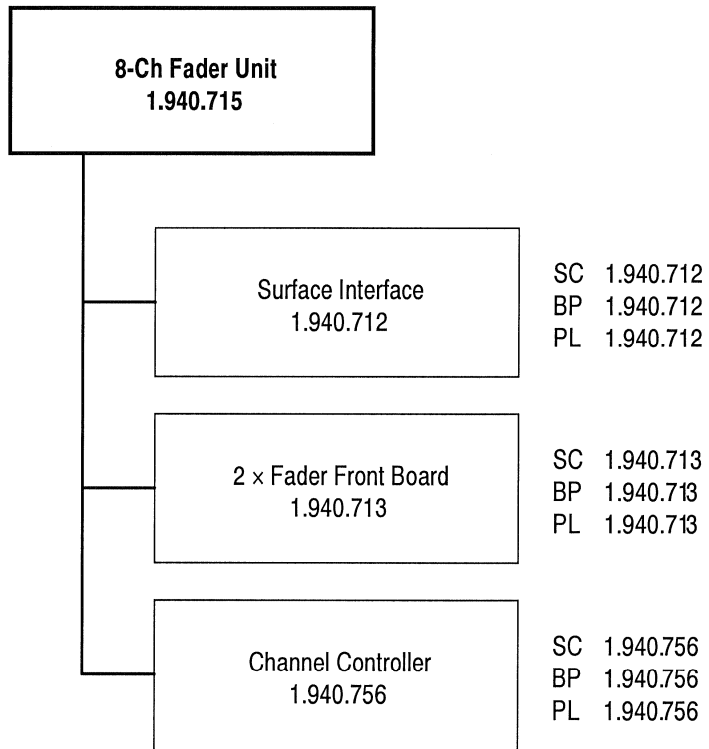
---

8-Channel Fader Unit.....	1.940.715
4-Channel Fader Unit.....	1.940.720
Surface Interface .....	1.940.712
Fader Front Board.....	1.940.713
Channel Controller.....	1.940.756



**8-Channel Fader Unit, Components**

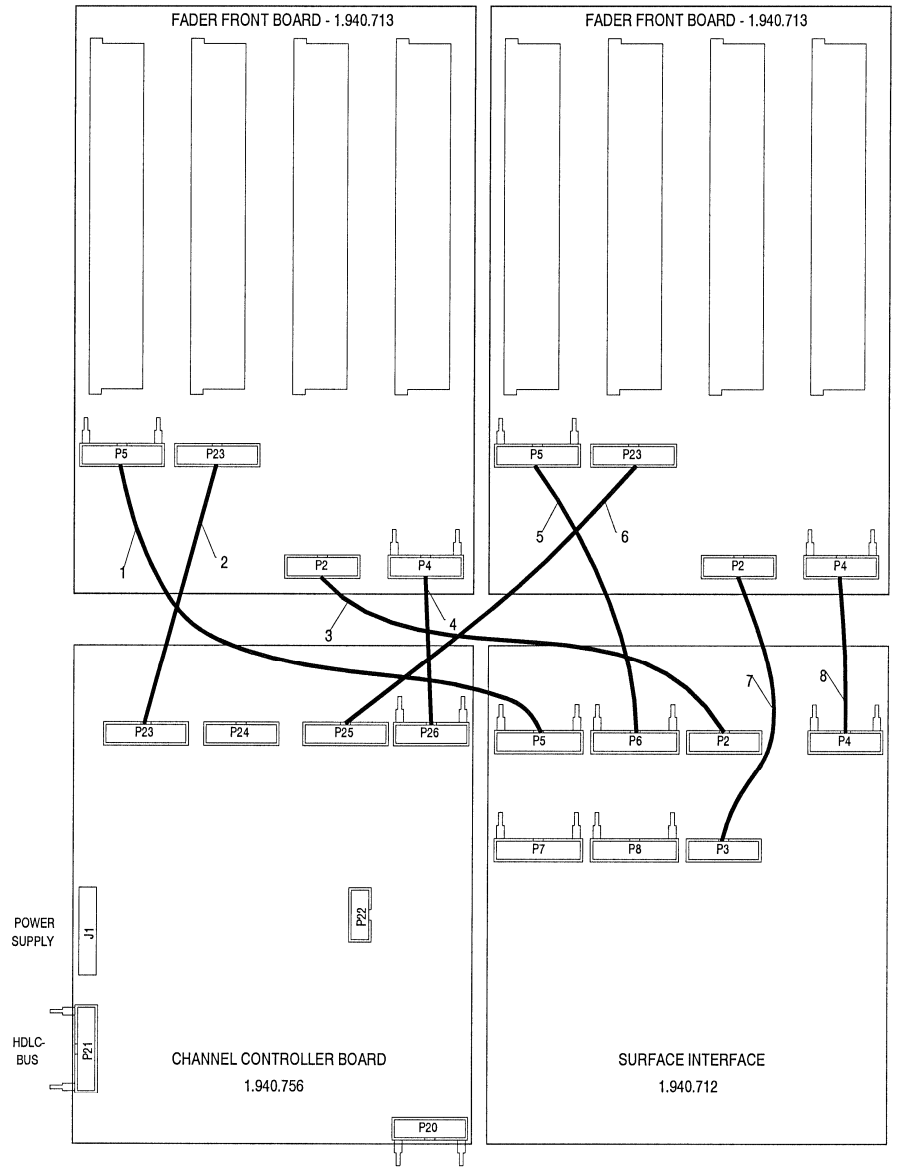
1.940.715



**SC:** Circuit Diagram  
**BP:** Component Placement Diagram  
**PL:** Parts List

**8-Channel Fader Unit, Wiring**

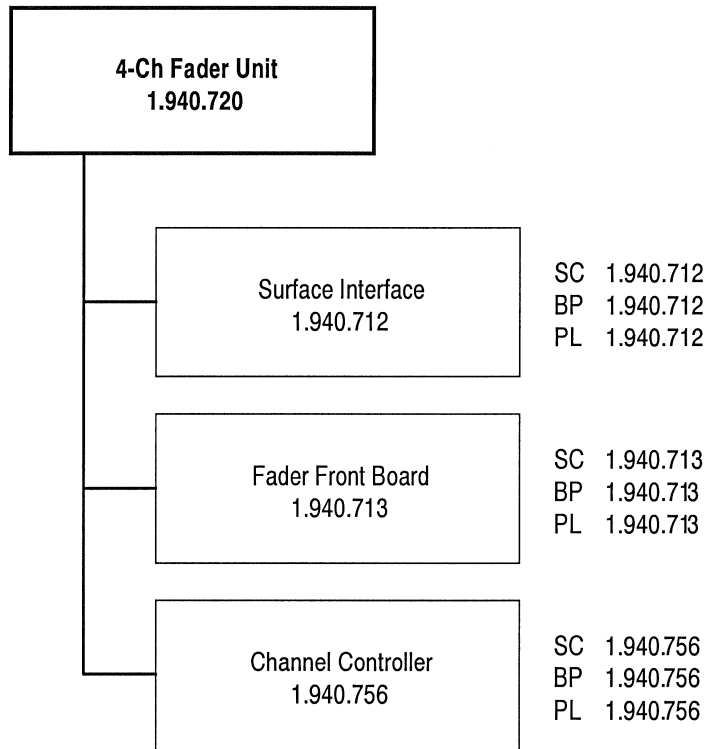
1.940.715



No.	Order no.	Cable	Length
1	1.023.102-22	30 p	25 cm + 2
2	1.023.404-01	HD40 p	14 cm
3	1.023.403-02	HD34 p	22 cm + 2
4	1.023.101-21	16 p	10 cm
5	1.023.102-20	20 p	14 cm + 2
6	1.023.404-02	HD40 p	19 cm + 3
7	1.023.403-01	HD34 p	12 cm
8	1.023.101-21	16 p	10 cm

**4-Channel Fader Unit, Components**

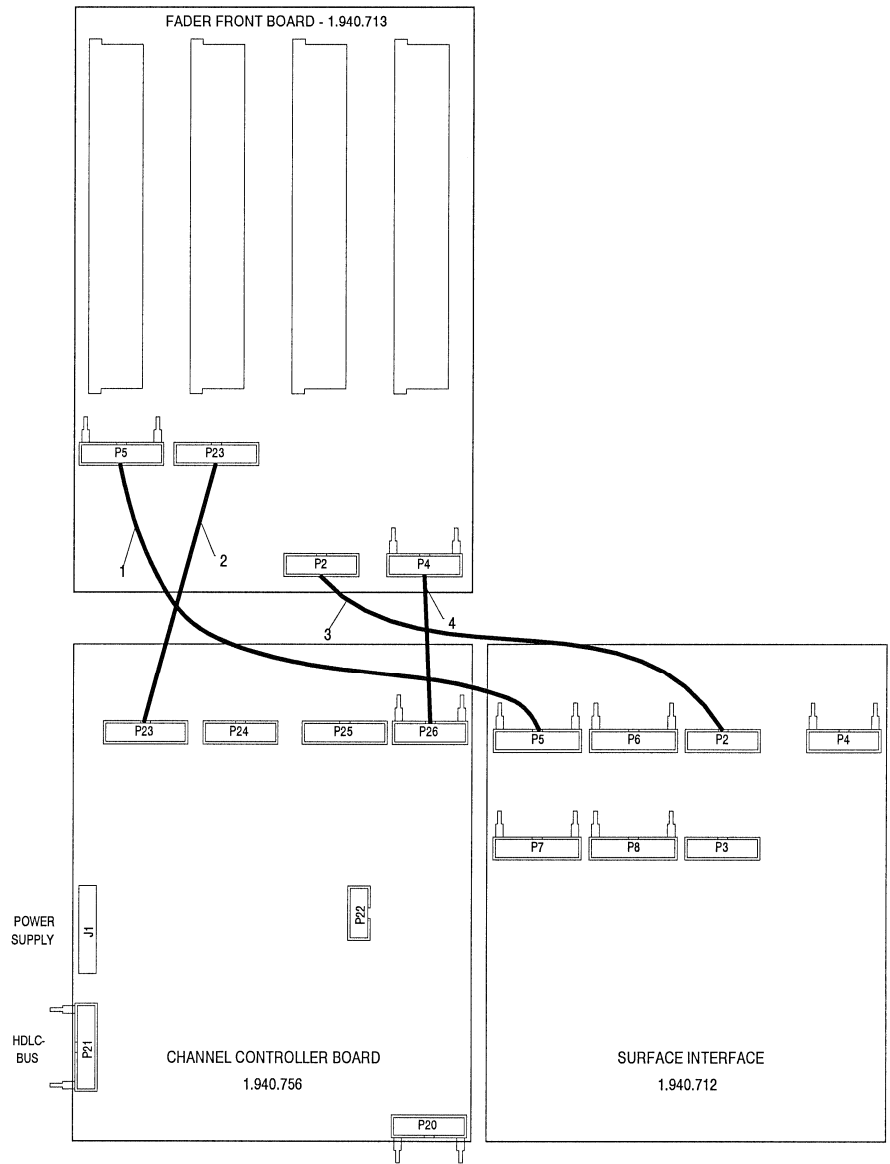
1.940.720



**SC:** Circuit Diagram  
**BP:** Component Placement Diagram  
**PL:** Parts List

**4-Channel Fader Unit, Wiring**

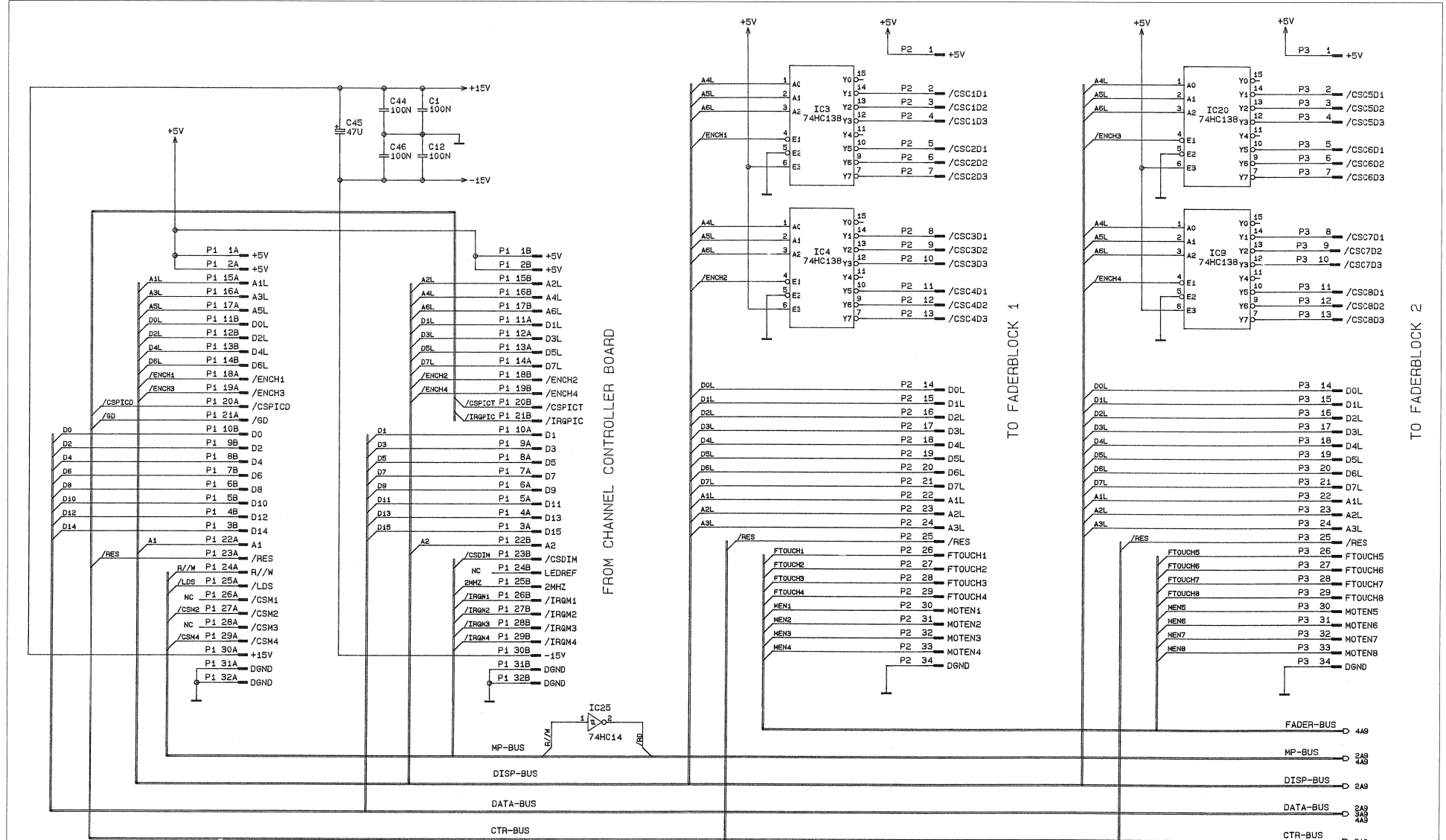
1.940.720



No.	Order no.	Cable	Length
1	1.023.102-22	30 p	25 cm + 2
2	1.023.404-01	HD 40 p	14 cm
3	1.023.403-02	HD 34 p	22 cm + 2
4	1.023.101-21	16 p	10 cm

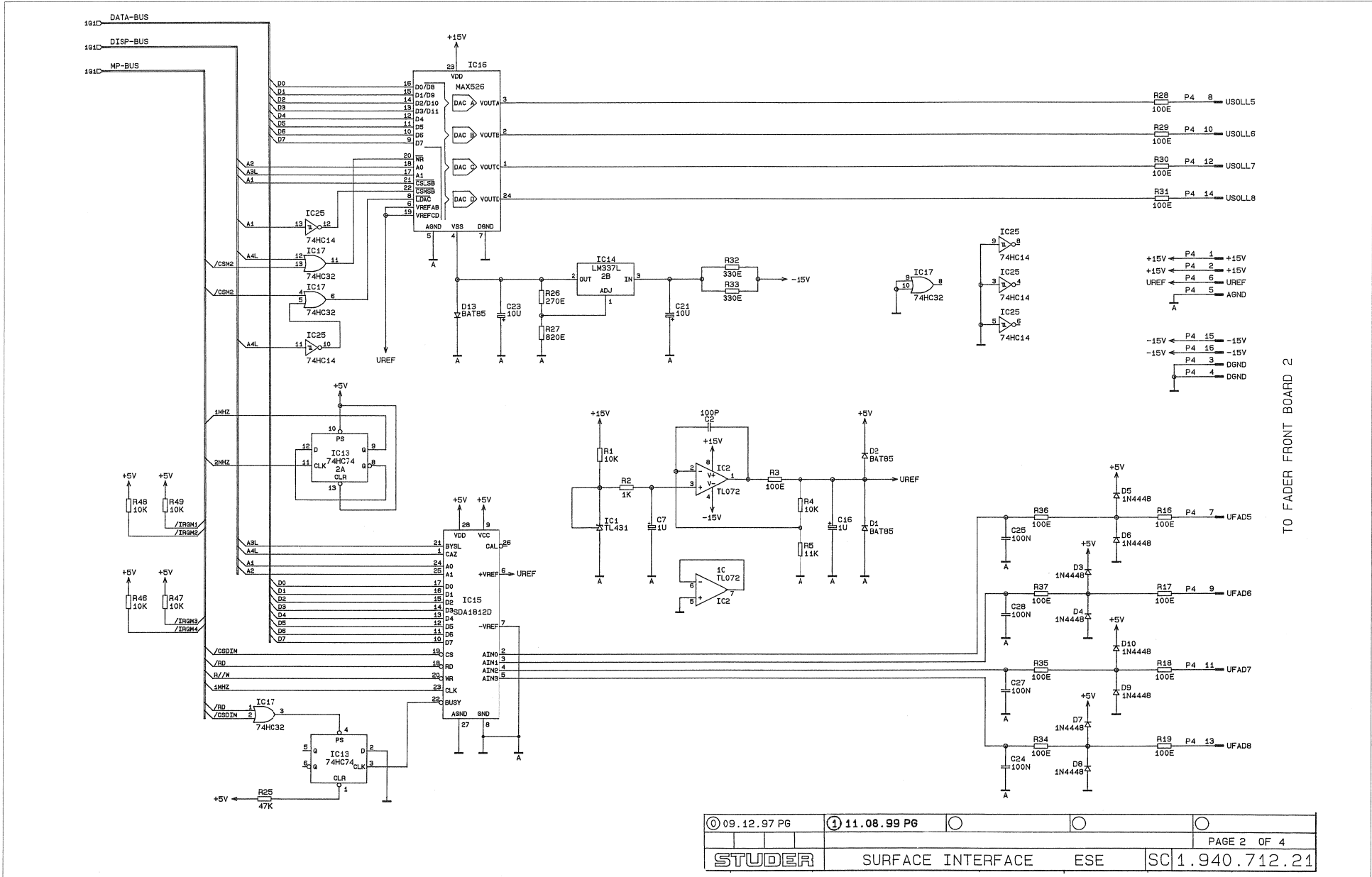


Surface Interface 1.940.712.21





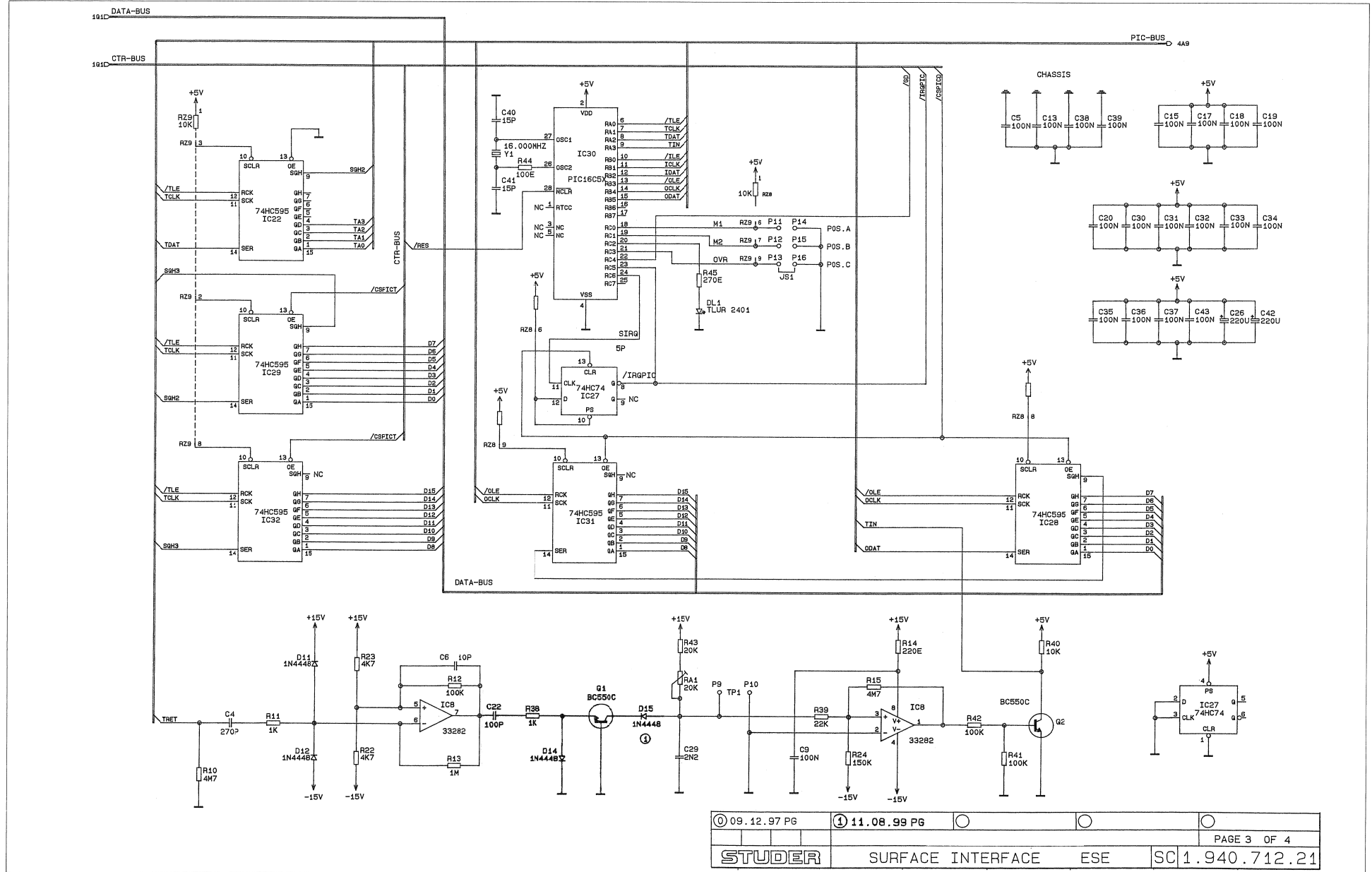
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TO FADER FRONT BOARD 2

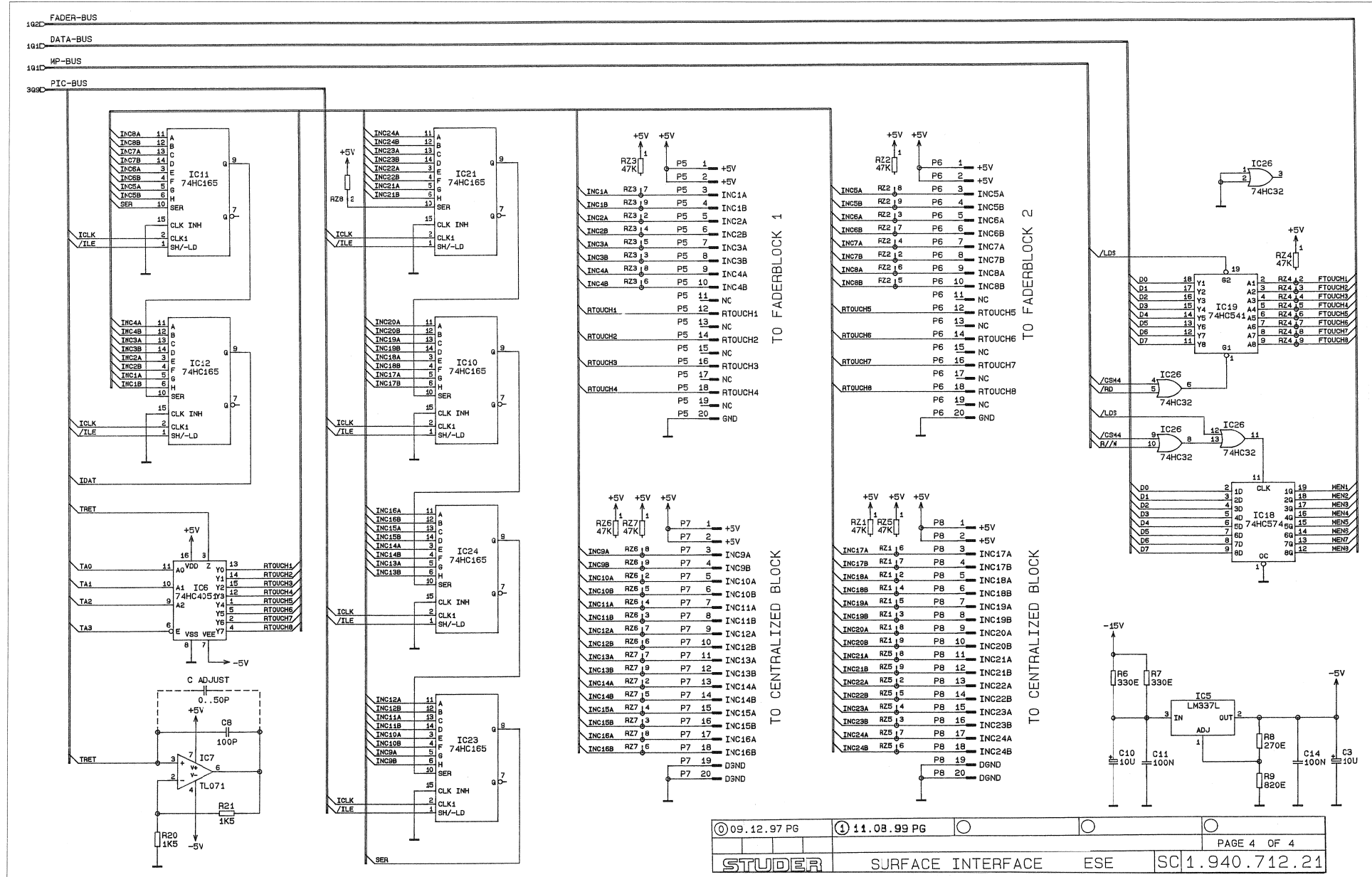


Surface Interface 1.940.712.21





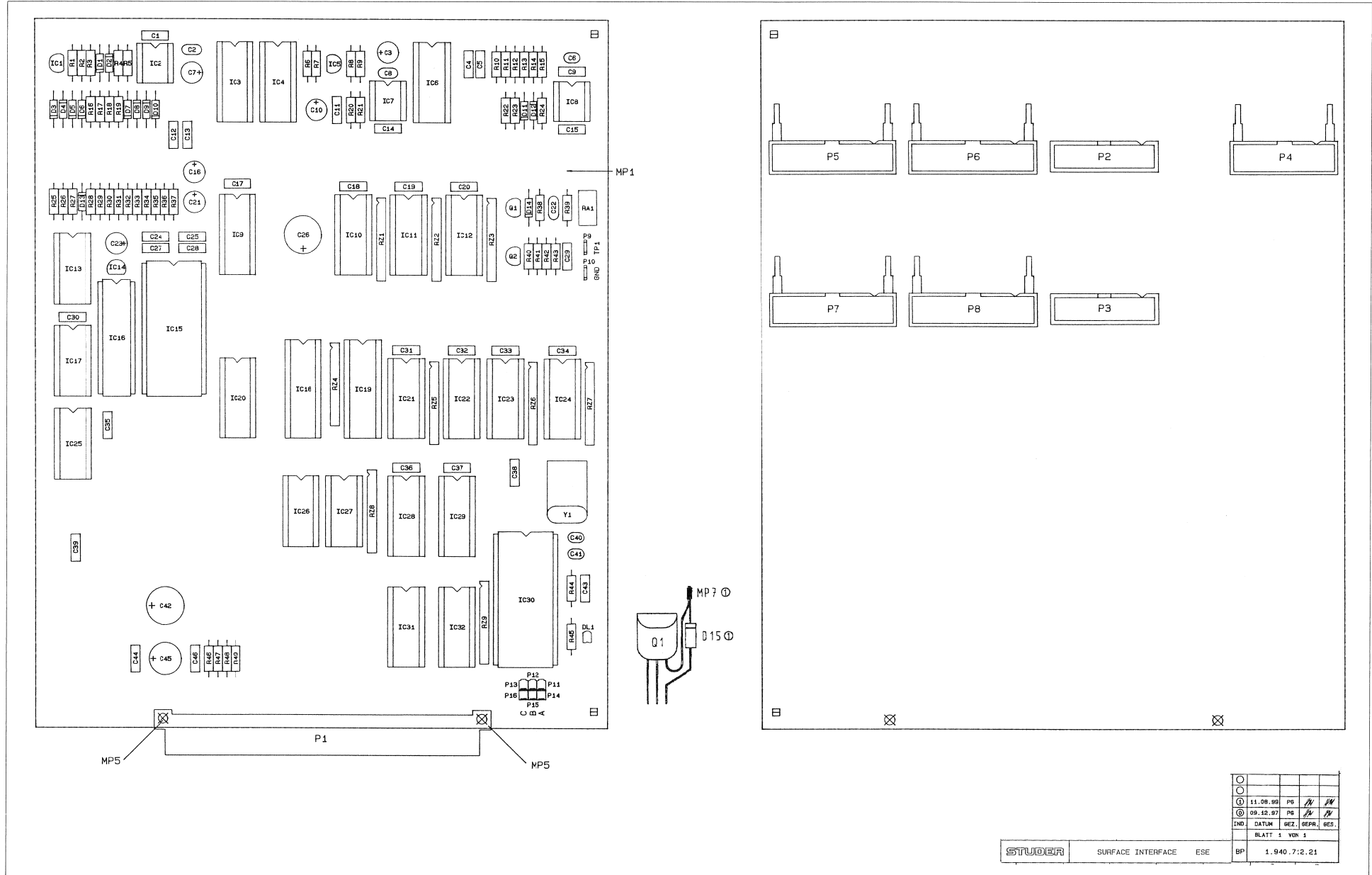
Surface Interface 1.940.712.21







Surface Interface 1.940.712.21



○				
①	11.08.98	PG	/	/
②	09.12.97	PG	/	/
IND	DATUM	GEZ.	GEPR.	RES.
BLATT 1 VON 1				



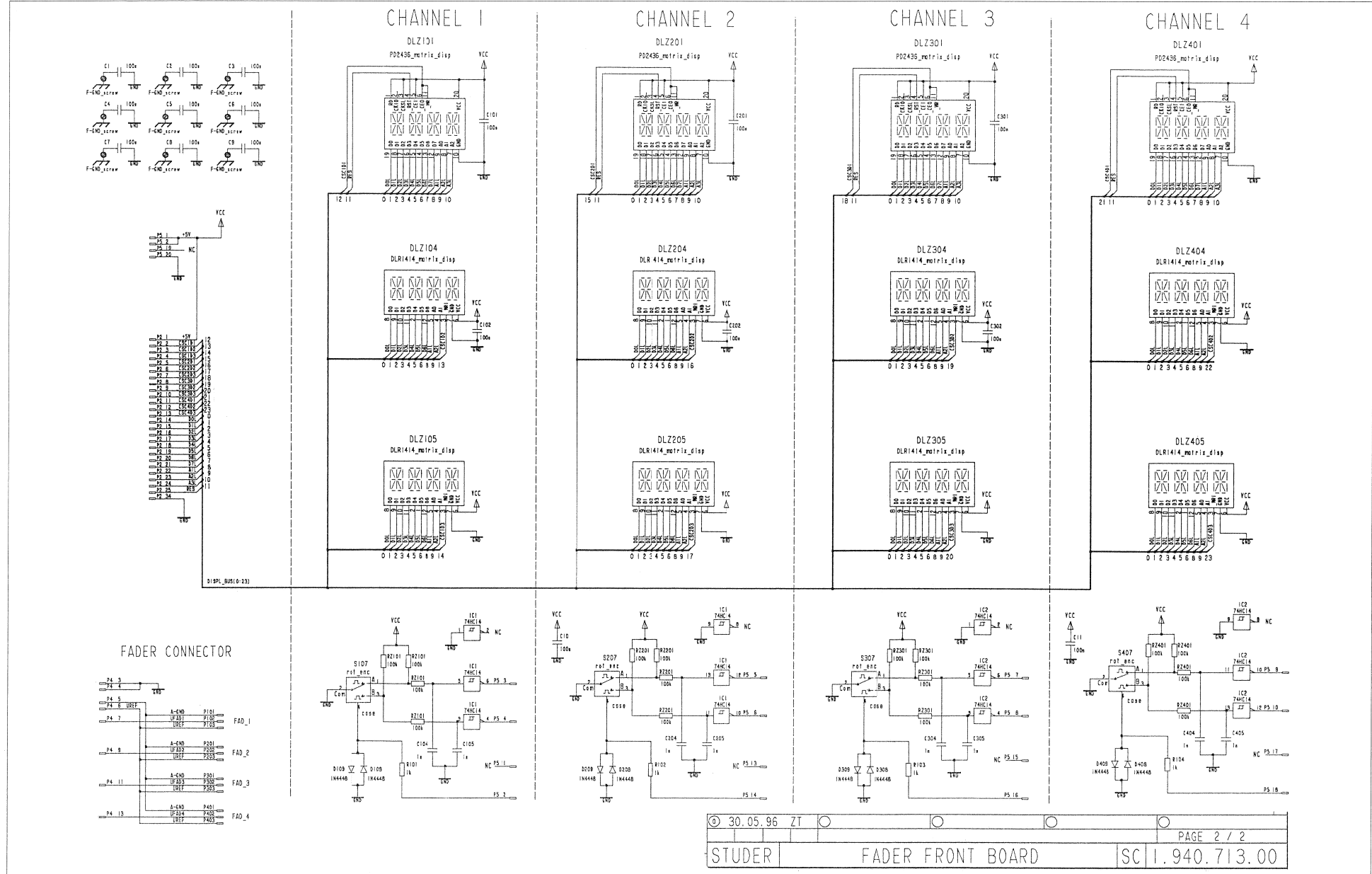
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Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	
0	C 1	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	IC 23	50.17.1165		74HC65	IC ... 74 HC 165 .., A	0	R 42	57.11.3104	100k		MF, 1%, 0207	
0	C 2	59.34.4101	100p		CER 63V, 5%, N750	0	IC 24	50.17.1165		74HC65	IC ... 74 HC 165 .., A	0	R 43	57.11.3203	20k		MF, 1%, 0207	
0	C 3	59.22.6100	10u		EL 35V, 20%, RfMS	0	IC 25	50.17.1014		74HC4	IC ... 74 HC 12 .., A	0	R 44	57.11.3101	100R		MF, 1%, 0207	
0	C 4	59.34.4271	270p		CER 63V, 5%, N750	0	IC 26	50.17.1032		74HC32	IC ... 74 HC 32 .., A	0	R 45	57.11.3271	270R		MF, 1%, 0207	
0	C 5	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	IC 27	50.17.1074		74HC74	IC ... 74 HC 74 .., A	0	R 46	57.11.3103	10k		MF, 1%, 0207	
0	C 6	59.34.1100	10p		CER 63V, 5%, NP 0	0	IC 28	50.17.1595		74HC695	IC ... 74 HC 695 .., A	0	R 47	57.11.3103	10k		MF, 1%, 0207	
0	C 7	59.22.6109	1u		EL 50V, 20%, RfMS	0	IC 29	50.17.1595		74HC695	IC ... 74 HC 695 .., A	0	R 48	57.11.3103	10k		MF, 1%, 0207	
0	C 8	59.34.4101	100p		CER 63V, 5%, N750	0	IC 30	50.19.0301		74HC595	IC PIC 16 C 57-HSIP .., A	0	R 49	57.11.3103	10k		MF, 1%, 0207	
					+>= 0.50µ parallel to CB for adjustment	0	IC 31	50.17.1595		74HC595	IC ... 74 HC 595 .., A							
0	C 9	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	IC 32	50.17.1595		74HC595	IC ... 74 HC 595 .., A	0	RA 1	58.01.9203	20k		Cermet, 10%, 0.5W, vertical	
0	C 10	59.22.6100	10u		EL 35V, 20%, RfMS	0	JS 1	54.01.0021		Jumper	0.63 * 0.63mm	0	RZ 1	57.88.4473	8*47k		2%, SIP 9	
0	C 11	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	MP 1	1.940.712.11	1 pce	SURFACE INTERFACE PCB	/A	0	RZ 2	57.88.4473	8*47k		2%, SIP 9	
0	C 12	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	MP 2	1.940.712.04	1 pce	NR.-ETIKETTE 5 * 20		0	RZ 3	57.88.4473	8*47k		2%, SIP 9	
0	C 13	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	MP 3	43.01.0108	1 pce	Label	ESE-WARNSCHILD	0	RZ 4	57.88.4473	8*47k		2%, SIP 9	
0	C 14	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	MP 4	1.101.001.20	1 pce	Label	TEXT-ETIK. 9*20 HARDWARE -20	0	RZ 5	57.88.4473	8*47k		2%, SIP 9	
0	C 15	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	MP 5	28.99.0119	2 pce		ROHRNETZE D 2.8*0.15" 9	0	RZ 6	57.88.4473	8*47k		2%, SIP 9	
0	C 16	59.22.6109	1u		EL 50V, 20%, RfMS	0	MP 6	65.89.0167	10 mm	Tape	POLYURH. KLEBBAND WS, 9" 3	0	RZ 7	57.88.4473	8*47k		2%, SIP 9	
0	C 17	59.06.0104	100n		PETP, 63V, 10%, RfMS	1	MP 7	28.99.0134	1.8"		Lötspirale Cu Sn	0	RZ 8	57.88.4103	8*10k		2%, SIP 9	
0	C 18	59.06.0104	100n		PETP, 63V, 10%, RfMS	1	MP 8	43.10.0110		A	Revisions-Etikete 5mm h/blau	0	RZ 9	57.88.4103	8*10k		2%, SIP 9	
0	C 19	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 1	54.11.2004		64-P	P EU-B 2 * 32							
0	C 20	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 2	54.16.0534		34p	P 1/40", 34 F, AU, PRINT	0	XIC 15	53.03.0173	28p		DIL 0.6", lot, gerade	
0	C 21	59.22.6100	10u		EL 35V, 20%, RfMS	0	P 3	54.16.0534		34p	P 1/40", 34 F, AU, PRINT	0	XIC 30	53.03.0173	28p		DIL 0.6", lot, gerade	
0	C 22	59.34.2101	100p		CER 63V, 5%, N150	0	P 4	54.14.2102		16p	P STECKER 16 P, AU, V, GERADE	0	Y 1	89.01.1006	16.000MHz		16.000 000 MHz, HC 49/U	
0	C 23	59.22.6100	10u		EL 35V, 20%, RfMS	0	P 5	54.14.2103		20p	P STECKER 20 P, AU, V, GERADE							
0	C 24	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 6	54.14.2103		20p	P STECKER 20 P, AU, V, GERADE							
0	C 25	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 7	54.14.2103		20p	P STECKER 20 P, AU, V, GERADE							
0	C 26	59.22.4221	220u		EL 16V, 20%, RfMS	0	P 8	54.14.2103		20p	P STECKER 20 P, AU, V, GERADE							
0	C 27	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 9	54.02.0320		1p	Flatpin, 2.8*0.8mm							
0	C 28	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 10	54.02.0320		2*3p	Pin 0.63*0.63, RM2.64							
0	C 29	59.06.0222	2n2		PETP, 63V, 10%, RfMS	0	P 12	not used		1p	Pin 0.63*0.63							
0	C 30	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 13	not used		1p	Pin 0.63*0.63							
0	C 31	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 14	not used		1p	Pin 0.63*0.63							
0	C 32	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 15	not used		1p	Pin 0.63*0.63							
0	C 33	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	P 16	not used		1p	Pin 0.63*0.63							
0	C 34	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	Q 1	50.03.0407		BC550C	BC 560 C							
0	C 35	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	Q 2	50.03.0407		BC550C	BC 560 C							
0	C 36	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 1	57.11.3103		10k	MF, 1%, 0207							
0	C 37	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 2	57.11.3102		1k0	MF, 1%, 0207							
0	C 38	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 3	57.11.3101		100R	MF, 1%, 0207							
0	C 39	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 4	57.11.3103		10k	MF, 1%, 0207							
0	C 40	59.34.1150	15p		CER 63V, 5%, NP 0	0	R 5	57.11.3113		11k	MF, 1%, 0207							
0	C 41	59.34.1150	15p		CER 63V, 5%, NP 0	0	R 6	57.11.3331		330R	MF, 1%, 0207							
0	C 42	59.22.4221	220u		EL 16V, 20%, RfMS	0	R 7	57.11.3331		330R	MF, 1%, 0207							
0	C 43	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 8	57.11.3271		270R	MF, 1%, 0207							
0	C 44	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 9	57.11.3821		820R	MF, 1%, 0207							
0	C 45	59.22.8470	47u		EL 63V, 20%, RfMS	0	R 10	57.11.5475		4k7	MF, 5%, 0207							
0	C 46	59.06.0104	100n		PETP, 63V, 10%, RfMS	0	R 11	57.11.3102		1k0	MF, 1%, 0207							
0	D 1	50.04.0127		BAT85	200mA, Schottky	0	R 12	57.11.3104		100k	MF, 1%, 0207							
0	D 2	50.04.0127		BAT85	200mA, Schottky	0	R 13	57.11.3105		1M0	MF, 1%, 0207							
0	D 3	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 14	57.11.3221		220R	MF, 1%, 0207							
0	D 4	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 15	57.11.5475		4M7	MF, 5%, 0207							
0	D 5	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 16	57.11.3101		100R	MF, 1%, 0207							
0	D 6	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 17	57.11.3101		100R	MF, 1%, 0207							
0	D 7	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 18	57.11.3101		100R	MF, 1%, 0207							
0	D 8	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 19	57.11.3101		100R	MF, 1%, 0207							
0	D 9	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 20	57.11.3152		1k5	MF, 1%, 0207							
0	D 10	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 21	57.11.3152		1k5	MF, 1%, 0207							
0	D 11	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 22	57.11.3472		4k7	MF, 1%, 0207							
0	D 12	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 23	57.11.3472		4k7	MF, 1%, 0207							
0	D 13	50.04.0127		BAT85	200mA, Schottky	0	R 24	57.11.3154		150k	MF, 1%, 0207							
0	D 14	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 25	57.11.3473		47k	MF, 1%, 0207							
1	D 15	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	R 26	57.11.3271		270R	MF, 1%, 0207							
0	DL 1	50.04.2121		DL TLUR 2401	RT MATT	0	R 27	57.11.3821		820R	MF, 1%, 0207							
0	IC 1	50.10.0106		TL431	Shunt regulator	0	R 28	57.11.3101		100R	MF, 1%, 0207							
0	IC 2	50.06.0101		TL072	IC TL 072 CN .., A	0	R 29	57.11.3101		100R	MF, 1%, 0207							
0	IC 3	50.17.1138		74HC138	IC ... 74 HC 138 .., A	0	R 30	57.11.3101		100R	MF, 1%, 0207							
0	IC 4	50.17.1138		74HC138	IC ... 74 HC 138 .., A	0	R 31	57.11.3101										



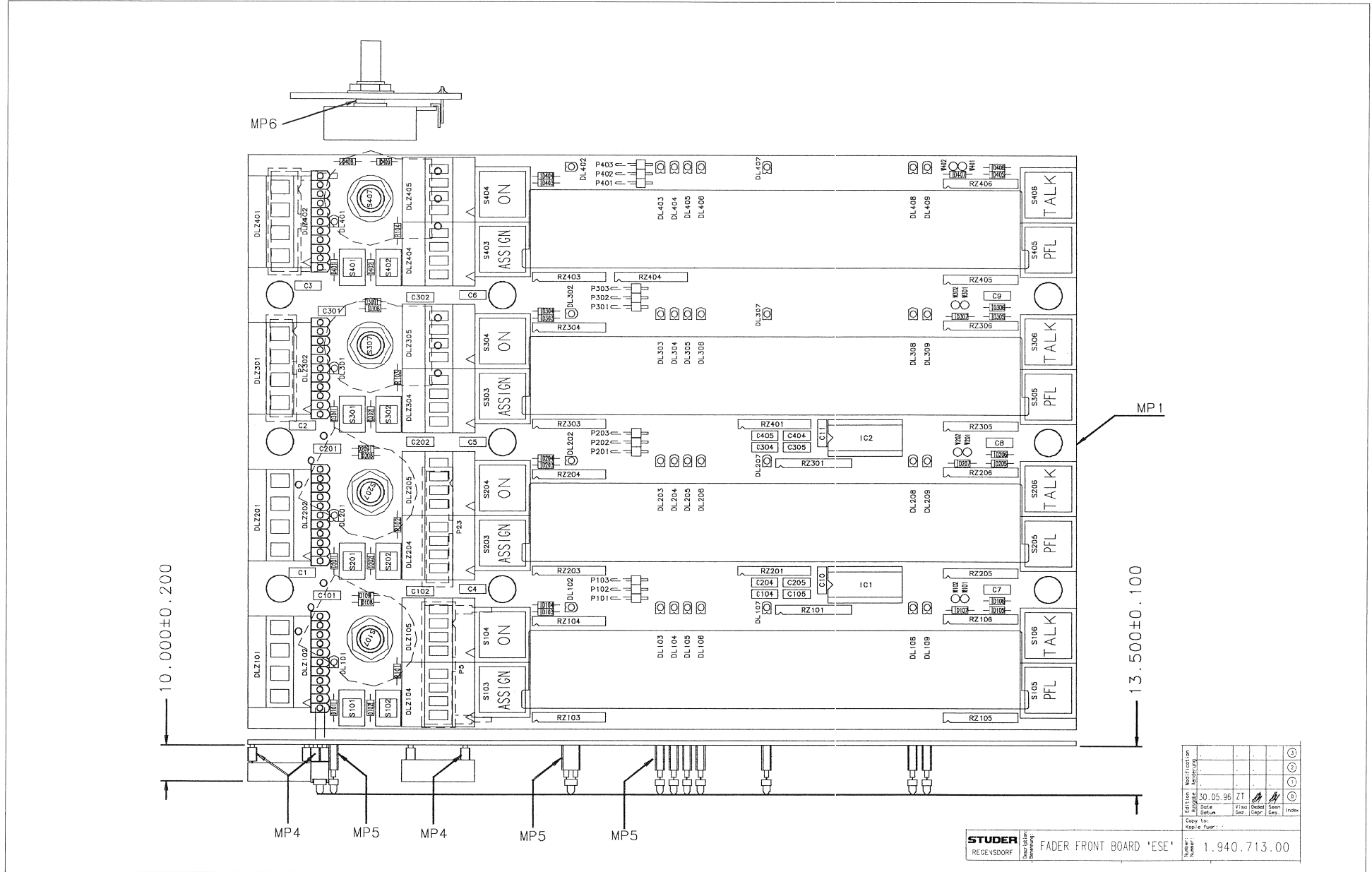


Fader Front Board 1.940.713.00





Fader Front Board 1.940.713.00



Edizione	Modificazione				
30.05.96	ZT				
Autore	Disegnato	Verificato	Disegnato	Verificato	Indice
Copy to:	Nome e Cognome				
Number:	1.940.713.00				

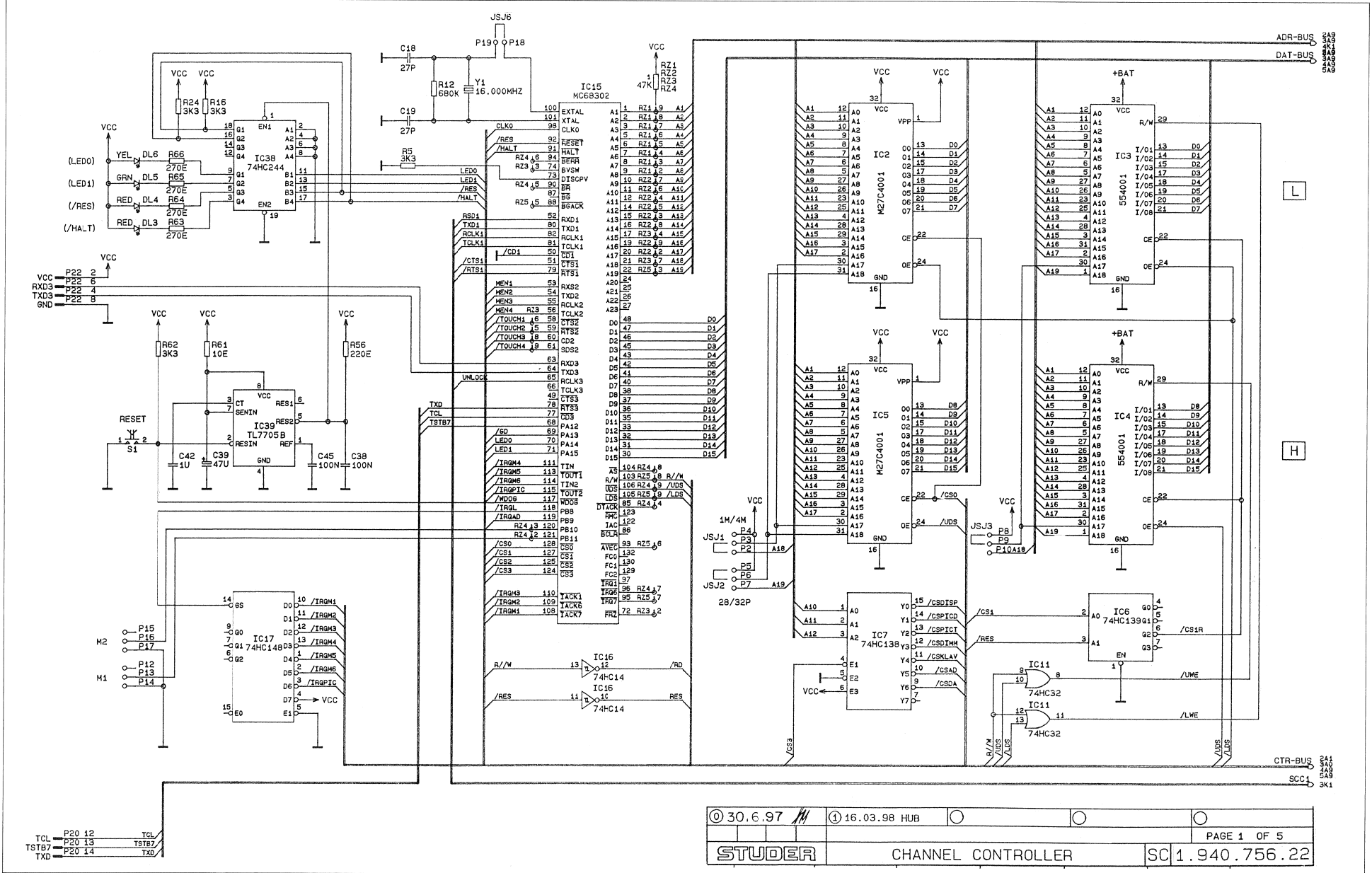
STUDER  
REGESDORF  
FADER FRONT BOARD 'ESE'



Fader Front Board 1.940.713.00

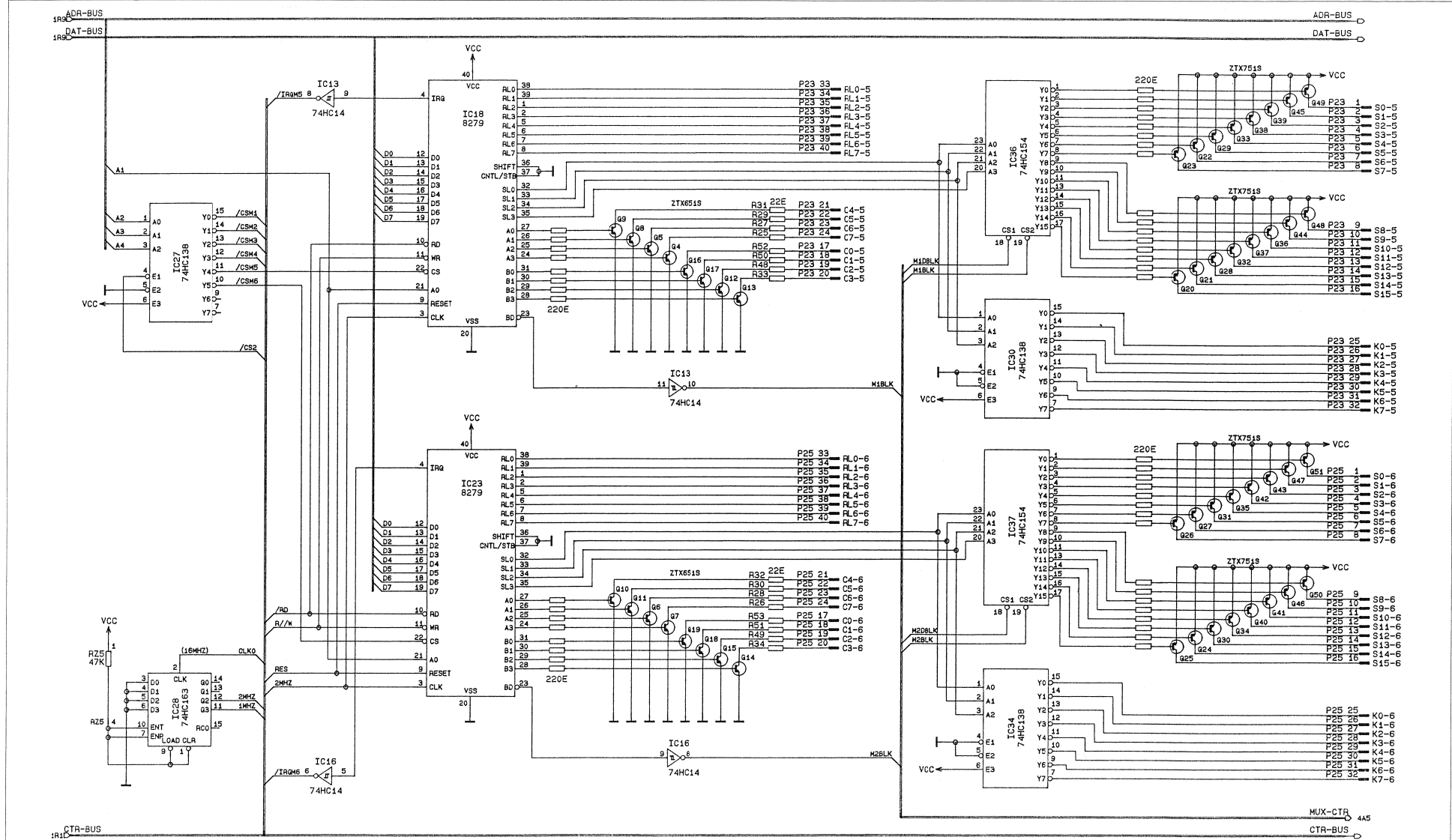
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0	C 1	59 06 0104	100n	PETP, 10%, 63V		0	DL 303	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT	0	RZ 405	57 88 2220	4*22R	2%, SIP 8		
0	C 2	59 06 0104	100n	PETP, 10%, 63V		0	DL 304	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT	0	RZ 406	57 88 2220	4*22R	2%, SIP 8		
0	C 3	59 06 0104	100n	PETP, 10%, 63V		0	DL 305	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT							
0	C 4	59 06 0104	100n	PETP, 10%, 63V		0	DL 306	50 04 2121	TLUR 2401	DL TLUR 2401	RT MATT	0	S 101	55 15 0644	1*1a	S TASTE 1*1A, 5MM, GB/GB		
0	C 5	59 06 0104	100n	PETP, 10%, 63V		0	DL 307	50 04 2121	TLUR 2401	DL TLUR 2401	RT MATT	0	S 102	55 15 0655	1*1a	S TASTE 1*1A, 5MM, GN/GN		
0	C 6	59 06 0104	100n	PETP, 10%, 63V		0	DL 308	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 103	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 7	59 06 0104	100n	PETP, 10%, 63V		0	DL 309	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 104	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 8	59 06 0104	100n	PETP, 10%, 63V		0	DL 401	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 105	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 9	59 06 0104	100n	PETP, 10%, 63V		0	DL 402	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 106	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 10	59 06 0104	100n	PETP, 10%, 63V		0	DL 403	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT	0	S 107	1 940 751 02		ROTARY ENCODER		
0	C 11	59 06 0104	100n	PETP, 10%, 63V		0	DL 404	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT	0	S 201	55 15 0644	1*1a	S TASTE 1*1A, 5MM, GB/GB		
0	C 101	59 06 0104	100n	PETP, 10%, 63V		0	DL 405	50 04 2133	TLUY 2401	DL TLUY 2401	GB MATT	0	S 202	55 15 0655	1*1a	S TASTE 1*1A, 5MM, GN/GN		
0	C 102	59 06 0104	100n	PETP, 10%, 63V		0	DL 456	50 04 2121	TLUR 2401	DL TLUR 2401	RT MATT	0	S 203	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 104	59 06 0102	1n0	PETP, 10%, 63V		0	DL 407	50 04 2121	TLUR 2401	DL TLUR 2401	RT MATT	0	S 204	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 105	59 06 0102	1n0	PETP, 10%, 63V		0	DL 408	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 205	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 201	59 06 0104	100n	PETP, 10%, 63V		0	DL 409	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	S 206	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 202	59 06 0104	100n	PETP, 10%, 63V		0	DLZ 101	73 01 0405		LED DOT MATR-DISP 4 DIG 5X7		0	S 207	1 940 751 02		ROTARY ENCODER		
0	C 204	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 102	50 04 2812		DLZ 11*10 GB		0	S 301	55 15 0644	1*1a	S TASTE 1*1A, 5MM, GB/GB		
0	C 205	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 104	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 302	55 15 0655	1*1a	S TASTE 1*1A, 5MM, GN/GN		
0	C 301	59 06 0104	100n	PETP, 10%, 63V		0	DLZ 105	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 303	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 302	59 06 0104	100n	PETP, 10%, 63V		0	DLZ 201	73 01 0405		LED DOT MATR-DISP 4 DIG 5X7		0	S 304	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 304	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 202	50 04 2812		DLZ 11*10 GB		0	S 305	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
0	C 305	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 204	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 306	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
0	C 404	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 205	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 307	1 940 751 02		ROTARY ENCODER		
0	C 405	59 06 0102	1n0	PETP, 10%, 63V		0	DLZ 301	73 01 0405		LED DOT MATR-DISP 4 DIG 5X7		0	S 401	55 15 0644	1*1a	S TASTE 1*1A, 5MM, GB/GB		
						0	DLZ 302	50 04 2812		DLZ 11*10 GB		0	S 402	55 15 0655	1*1a	S TASTE 1*1A, 5MM, GN/GN		
						0	DLZ 304	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 403	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
						0	DLZ 305	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 404	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
						0	DLZ 401	73 01 0405		LED DOT MATR-DISP 4 DIG 5X7		0	S 405	55 15 0744	1*1a	S TASTE 1*1A, 12MM, GB/GB		
						0	DLZ 402	50 04 2812		DLZ 11*10 GB		0	S 406	55 15 0722	1*1a	S TASTE 1*1A, 12MM, RT/RT		
						0	DLZ 404	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7		0	S 407	1 940 751 02		ROTARY ENCODER		
						0	DLZ 405	73 01 0406		LED DOT MATR-DISP 4 DIG 5X7								
0	D 101	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	IC 1	50 17 1014	74HC14	IC ... 74 HC 14 ...	A	0	W 101	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 102	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	IC 2	50 17 1014	74HC14	IC ... 74 HC 14 ...	A	0	W 102	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 103	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35								0	W 201	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 104	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35								0	W 202	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 105	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 1	1 940 711 11	1 pce	FADER FRONT PCB	/1/	0	W 301	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 106	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 2	43 01 0108	1 pce	Label	ESE-WARNschild	0	W 302	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 107	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 3	1 940 713 04	1 pce	NR-ETIKETTE 5*20		0	W 401	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 108	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 4	53 03 0218	264 pcs	XIC SINGLE IN-LINE 1PIN=15TK		0	W 402	not used	1-P	MP RAST LOEKTAKTAKT	D 1 3	
0	D 109	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 5	53 03 0240	36 pcs	XLED SINGLE LINE 2 POL. PRINT								
0	D 201	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	MP 6	1 010 091 23	4 pcs	DISTANZSCHEIBE D 9.0/12*1.2								
0	D 202	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 2	54 16 0534	34p	P 1/40", 34 P, AU, PRINT		Comments:						
0	D 203	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 4	54 14 2102	16p	P STECKER 16 P, AU, V.R, GERACE								
0	D 204	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 5	54 14 2103	20p	P STECKER 20 P, AU, V.R, GERACE								
0	D 205	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 23	54 16 0540	40p	P 1/40", 40 P, AU, PRINT								
0	D 206	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 101	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 207	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 102	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 208	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 103	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 209	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 201	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 301	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 202	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 302	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 203	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 303	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 301	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 304	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 302	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 305	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 303	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 401	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 401	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 402	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 402	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 403	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	P 403	54 11 0125	1p	P STIFT, WINKEL 1 PIN=1 STK								
0	D 404	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35														
0	D 405	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35														
0	D 406	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35														
0	D 407	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35														
0	D 408	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	R 101	57 10 1102	140	MF, 1%, C204								
0	D 409	50 04 0125	1N4448	75V, 150mA, 4ns, DO-35		0	R 102	57 10 1102	140	MF, 1%, C204								
0	DL 101	50 04 2132	TLUG 2401	DL TLUG 2401	GN MATT	0	R 103	57 10 1102	140	MF, 1%, C204								

Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21





Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21

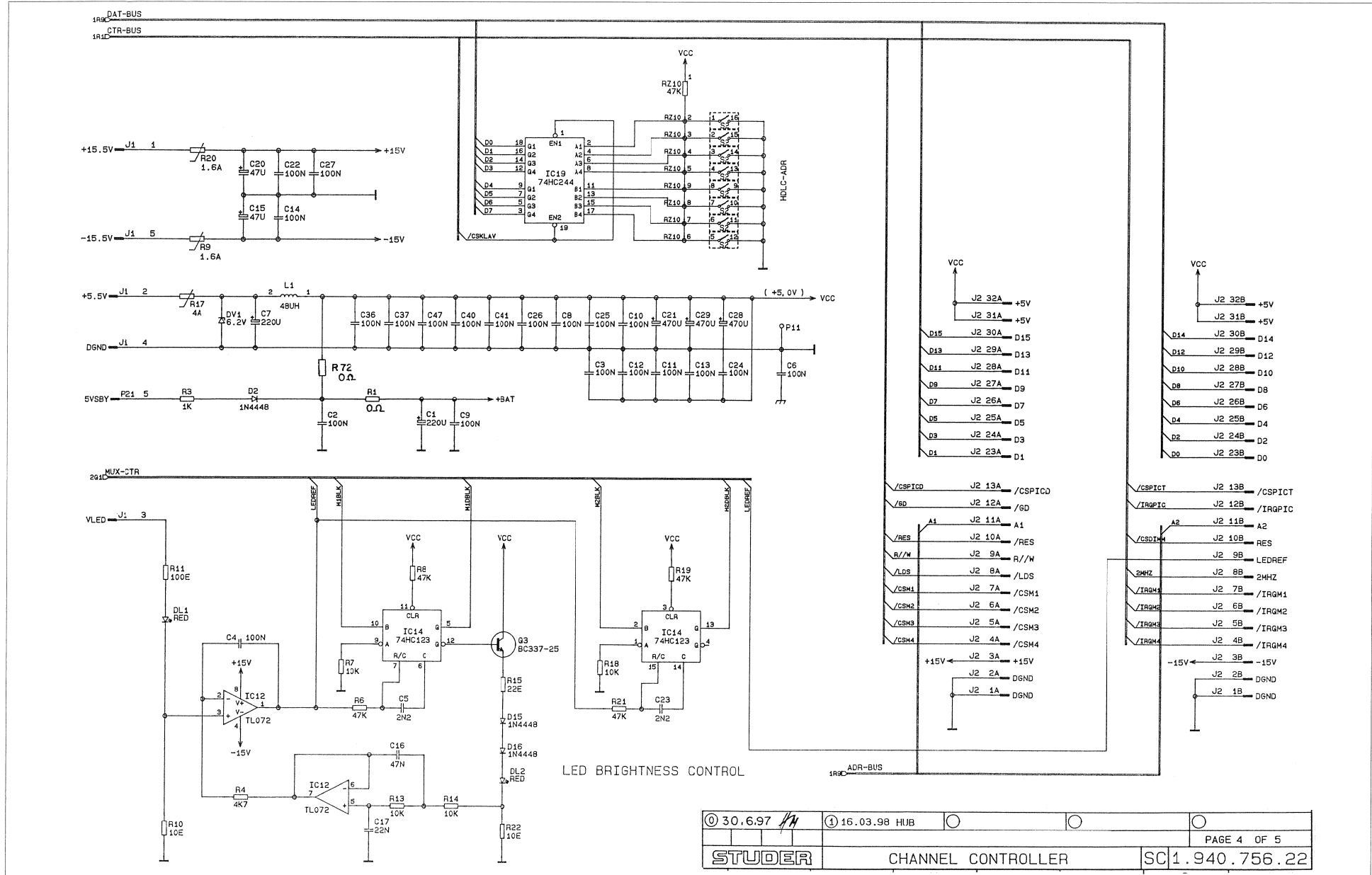






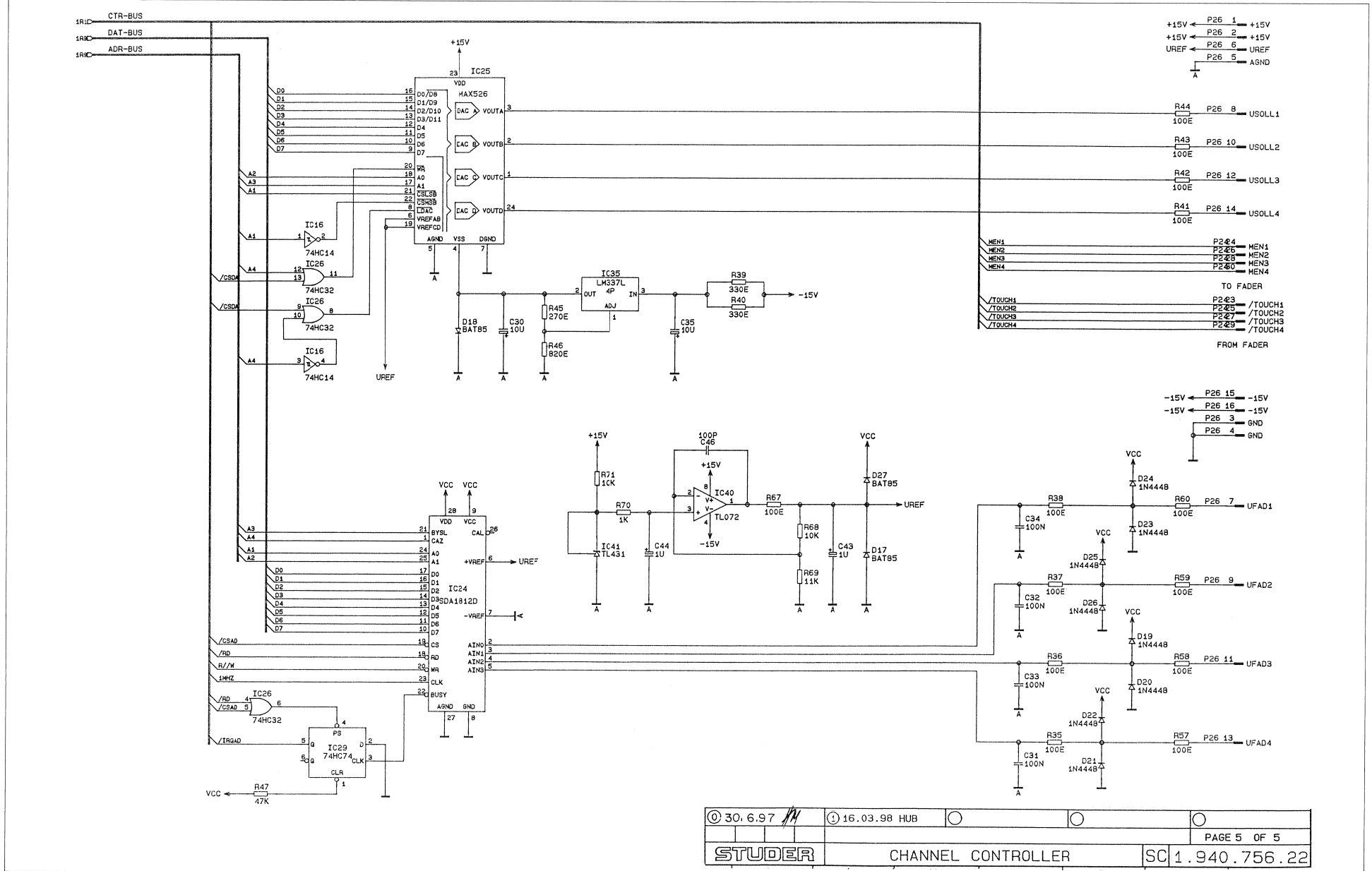


Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21



① 30.6.97 <i>HH</i>	④ 16.03.98 HUB	○	○	○
STUDER			CHANNEL CONTROLLER	SC1.940.756.22
				PAGE 4 OF 5

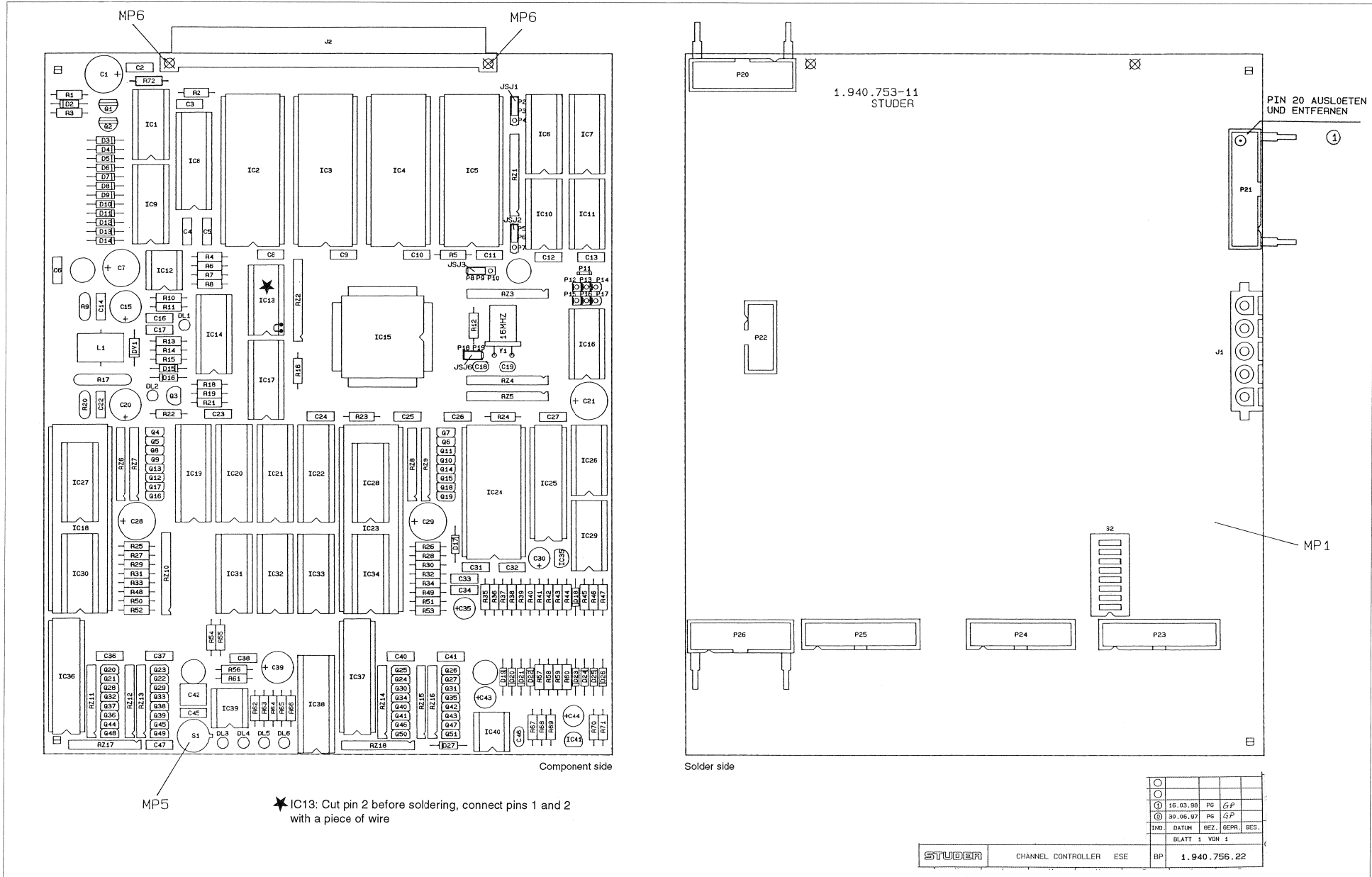
Channel Controller Board 1.940.756.22  
 Channel Controller Board 1.940.764.21



© 30.6.97	© 16.03.98 HUB			
STUDER			CHANNEL CONTROLLER	SC 1.940.756.22
				PAGE 5 OF 5



Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21



★ IC13: Cut pin 2 before soldering, connect pins 1 and 2 with a piece of wire

○				
○				
①	16.03.98	PS	GP	
②	30.06.97	PS	GP	
IND.	DATUM	GEZ.	GEPR.	GES.
BLATT 1 VON 1				
BP	1.940.756.22			

STUDER CHANNEL CONTROLLER ESE



Channel Controller Board 1.940.756.25

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.22.5221	220u		EL 25V, 20%, RM5	0	IC 4	50.14.1010		TC561001-85	SRAM 128K * 8, 85ns
0	C 2	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 5	50.14.2009		27C1001	EPROM 128K * 8
0	C 3	59.06.0104	100n		PETP, 63V, 10%, RM5						SW HDLC EPROM 1.941.710.xx
0	C 4	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 6	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 5	59.06.5222	2n2		PETP, 63V, 5%, RM5	0	IC 7	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 6	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 8	50.18.0100		PLD16V8	16 V 8 D - 25 LP DIP20, SW753 HDLC-GAL (1.940.915.20)
0	C 7	59.22.5221	220u		EL 25V, 20%, RM5	0	IC 9	50.15.0104		MC3486	IC MC 3486 P, DS 3486 N,
0	C 8	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 10	50.17.1002		74HC02	IC ... 74 HC 02 .. ,A
0	C 9	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 11	50.17.1032		74HC32	IC ... 74 HC 32 .. ,A
0	C 10	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 12	50.09.0101		TL072	IC TL 072 CN ,A
0	C 11	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 13	50.17.1014		74HC14	IC ... 74 HC 14 .. ,A
0	C 12	59.06.0104	100n		PETP, 63V, 10%, RM5						SEE COMMENT
0	C 13	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 14	50.17.1123		74HC123	IC ... 74 HC 123 .. ,A
0	C 14	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 15	50.63.0100		MC68302	IC MC 68 302 FC 16 C ,A
0	C 15	59.22.6470	47u		EL 40V, 20%, RM5	0	IC 16	50.17.1014		74HC14	IC ... 74 HC 14 .. ,A
0	C 16	59.06.5473	47n		PETP, 63V, 5%, RM5	0	IC 17	50.17.1148		74HC148	IC ... 74 HC 148 .. ,A
0	C 17	59.06.5223	22n		PETP, 63V, 5%, RM5	0	IC 18	50.16.0111		8279	IC IP 8279-5, ID 8279-5,
0	C 18	59.34.2270	27p		CER 63V, 5%, N150	0	IC 19	50.17.1244		74HC244	IC ... 74 HC 244 .. ,A
0	C 19	59.34.2270	27p		CER 63V, 5%, N150	0	IC 20	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 20	59.22.6470	47u		EL 40V, 20%, RM5	0	IC 21	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 21	59.22.3471	470u		EL 10V, 20%, RM5	0	IC 22	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 22	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 23	50.16.0111		8279	IC IP 8279-5, ID 8279-5,
0	C 23	59.06.5222	2n2		PETP, 63V, 5%, RM5	0	IC 24	50.19.0204		ADS7832	
0	C 24	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 25	50.19.0113		MAX526D	DJA Converter 12 Bit
0	C 25	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 26	50.17.1032		74HC32	IC ... 74 HC 32 .. ,A
0	C 26	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 27	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 27	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 28	50.17.1163		74HC163	IC ... 74 HC 163 .. ,A
0	C 28	59.22.3471	470u		EL 10V, 20%, RM5	0	IC 29	50.17.1074		74HC74	IC ... 74 HC 74 .. ,A
0	C 29	59.22.3471	470u		EL 10V, 20%, RM5	0	IC 30	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 30	59.22.6100	10u		EL 35V, 20%, RM5	0	IC 31	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 31	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 32	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 32	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 33	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 33	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 34	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 34	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 35	50.10.0109		LM337	IC LM 337 LZ,
0	C 35	59.22.6100	10u		EL 35V, 20%, RM5	0	IC 36	50.17.1154		74HC154	4-to16 Line driver, DIP 24-300
0	C 36	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 37	50.17.1154		74HC154	4-to16 Line driver, DIP 24-300
0	C 37	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 38	50.17.1244		74HC244	IC ... 74 HC 244 .. ,A
0	C 38	59.06.5104	100n		PETP, 63V, 5%, RM5	0	IC 39	50.11.0157		TL7705B	IC TL 7705 BCP,
0	C 39	59.22.6470	47u		EL 40V, 20%, RM5	0	IC 40	50.09.0101		TL072	IC TL 072 CN ,A
0	C 40	59.06.0104	100n		PETP, 63V, 10%, RM5	0	IC 41	50.10.0106		TL431	IC TL 431 CLP,
0	C 41	59.06.0104	100n		PETP, 63V, 10%, RM5						
0	C 42	59.06.5105	1u0		PETP, 50V, 5%, RM5	0	J 1	54.25.0005		5p	Buchse, 16A, vertikal, PCB
0	C 43	59.22.8109	1u		EL 50V, 20%, RM5	0	J 2	54.11.0130	32 pcs	2p	P STIFT,2R WNKL 2 PIN=1 STK.
0	C 44	59.22.8109	1u		EL 50V, 20%, RM5	0	JSJ 1	54.01.0021		Jumper	0.63 * 0.63mm
0	C 45	59.06.5104	100n		PETP, 63V, 5%, RM5	0	JSJ 2	54.01.0021		Jumper	0.63 * 0.63mm
0	C 46	59.34.4101	100p		CER 63V, 5%, N750	0	JSJ 3	54.01.0021		Jumper	0.63 * 0.63mm
0	C 47	59.06.0104	100n		PETP, 63V, 10%, RM5	0	JSJ 6	54.01.0021		Jumper	0.63 * 0.63mm
0	D 2	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	L 1	62.03.0010		48uH	2A Toroid Chocke
0	D 3	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 1	1.940.753.11	1 mp		CHANNEL CONTROLLER PCB //A
0	D 4	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 2	1.940.753.04	1 mp		NR-ETIKETTE 5 * 20
0	D 5	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 3	1.101.001.20	1 mp	Label	TEXT-ETIK. 5*20 HARDWARE -20
0	D 6	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 4	43.01.0108	1 mp	Label	ESE-WARNSCHILD
0	D 7	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 5	1.010.015.50	1 mp	Spacer	ISOLIER-SCHEIBE ZU TO 5
0	D 8	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	MP 6	not used	2 mp		ROHRNIETE D 2.5*0.15' 9
0	D 9	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 2	54.01.0020		1p	Pin 0.63*0.63
0	D 10	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 3	54.01.0020		1p	Pin 0.63*0.63
0	D 11	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 4	54.01.0020		1p	Pin 0.63*0.63
0	D 12	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 5	54.01.0020		1p	Pin 0.63*0.63
0	D 13	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 6	54.01.0020		1p	Pin 0.63*0.63
0	D 14	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 7	54.01.0020		1p	Pin 0.63*0.63
0	D 15	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 8	54.01.0020		1p	Pin 0.63*0.63
0	D 16	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 9	54.01.0020		1p	Pin 0.63*0.63
0	D 17	50.04.0127	BAT85		200mA, Schottky	0	P 10	54.01.0020		1p	Pin 0.63*0.63
0	D 18	50.04.0127	BAT85		200mA, Schottky	0	P 11	54.02.0320		1p	Flatpin, 2.8*0.8mm
0	D 19	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 12	54.01.0020		1p	Pin 0.63*0.63
0	D 20	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 13	54.01.0020		1p	Pin 0.63*0.63
0	D 21	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 14	54.01.0020		1p	Pin 0.63*0.63
0	D 22	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 15	54.01.0020		1p	Pin 0.63*0.63
0	D 23	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 16	54.01.0020		1p	Pin 0.63*0.63
0	D 24	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 17	54.01.0020		1p	Pin 0.63*0.63
0	D 25	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 18	54.01.0020		1p	Pin 0.63*0.63
0	D 26	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35	0	P 19	54.01.0020		1p	Pin 0.63*0.63
0	D 27	50.04.0127	BAT85		200mA, Schottky	0	P 20	54.14.2102		16p	P STECKER 16 P,AU,VR,GERADE
0	DL 1	50.04.2129	LS3360		DL LS 3360 , RT DIFF	0	P 21	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	DL 2	50.04.2129	LS3360		DL LS 3360 , RT DIFF	0	P 22	54.14.2001		10p	1/20" Au, gerade, ohne Verrieg
0	DL 3	50.04.2129	LS3360		DL LS 3360 , RT DIFF	0	P 23	54.16.0540		40p	P 1/40", 40 P, AU, PRINT
0	DL 4	50.04.2129	LS3360		DL LS 3360 , RT DIFF	0	P 24	54.16.0534		34p	P 1/40", 34 P, AU, PRINT
0	DL 5	50.04.2131	LG3360		DL LG 3360 , GN DIFF	0	P 25	54.16.0540		40p	P 1/40", 40 P, AU, PRINT
0	DL 6	50.04.2130	LY3360		DL LY 3360 , GB DIFF	0	P 26	54.14.2102		16p	P STECKER 16 P,AU,VR,GERADE
0	DV 1	50.04.1511	6V2		Zener, 5%, 1.3W, DO-41	0	Q 1	50.03.1554		VP0808M	VP 0808 M
0	IC 1	50.17.1086	74HC86		IC ... 74 HC 86 .. ,A	0	Q 2	50.03.1505		VN0808M	VN 0808 M, ZVN 0108 A
0	IC 2	50.14.2009	27C1001		EPROM 128K * 8 SW HDLC EPROM 1.941.710.xx						
0	IC 3	50.14.1010	TC551001-85		SRAM 128K * 8, 85ns						



**Channel Controller Board I.940.756.25**

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	Q 3	50.43.0340			Q BC 337-25,	0	R 38	57.11.3101		100R	MF, 1%, 0207
0	Q 4	50.03.0523		ZTX651	ZTX 651	0	R 39	57.11.3331		330R	MF, 1%, 0207
0	Q 5	50.03.0523		ZTX651	ZTX 651	0	R 40	57.11.3331		330R	MF, 1%, 0207
0	Q 6	50.03.0523		ZTX651	ZTX 651	0	R 41	57.11.3101		100R	MF, 1%, 0207
0	Q 7	50.03.0523		ZTX651	ZTX 651	0	R 42	57.11.3101		100R	MF, 1%, 0207
0	Q 8	50.03.0523		ZTX651	ZTX 651	0	R 43	57.11.3101		100R	MF, 1%, 0207
0	Q 9	50.03.0523		ZTX651	ZTX 651	0	R 44	57.11.3101		100R	MF, 1%, 0207
0	Q 10	50.03.0523		ZTX651	ZTX 651	0	R 45	57.11.3271		270R	MF, 1%, 0207
0	Q 11	50.03.0523		ZTX651	ZTX 651	0	R 46	57.11.3821		820R	MF, 1%, 0207
0	Q 12	50.03.0523		ZTX651	ZTX 651	0	R 47	57.11.3473		47k	MF, 1%, 0207
0	Q 13	50.03.0523		ZTX651	ZTX 651	0	R 48	57.11.3220		22R	MF, 1%, 0207
0	Q 14	50.03.0523		ZTX651	ZTX 651	0	R 49	57.11.3220		22R	MF, 1%, 0207
0	Q 15	50.03.0523		ZTX651	ZTX 651	0	R 50	57.11.3220		22R	MF, 1%, 0207
0	Q 16	50.03.0523		ZTX651	ZTX 651	0	R 51	57.11.3220		22R	MF, 1%, 0207
0	Q 17	50.03.0523		ZTX651	ZTX 651	0	R 52	57.11.3220		22R	MF, 1%, 0207
0	Q 18	50.03.0523		ZTX651	ZTX 651	0	R 53	57.11.3220		22R	MF, 1%, 0207
0	Q 19	50.03.0523		ZTX651	ZTX 651	0	R 54	57.11.3332		3k3	MF, 1%, 0207
0	Q 20	50.03.0352		ZTX751S	ZTX 751 S	0	R 55	57.11.3332		3k3	MF, 1%, 0207
0	Q 21	50.03.0352		ZTX751S	ZTX 751 S	0	R 56	57.11.3221		220R	MF, 1%, 0207
0	Q 22	50.03.0352		ZTX751S	ZTX 751 S	0	R 57	57.11.3101		100R	MF, 1%, 0207
0	Q 23	50.03.0352		ZTX751S	ZTX 751 S	0	R 58	57.11.3101		100R	MF, 1%, 0207
0	Q 24	50.03.0352		ZTX751S	ZTX 751 S	0	R 59	57.11.3101		100R	MF, 1%, 0207
0	Q 25	50.03.0352		ZTX751S	ZTX 751 S	0	R 60	57.11.3101		100R	MF, 1%, 0207
0	Q 26	50.03.0352		ZTX751S	ZTX 751 S	0	R 61	57.11.3100		10R	MF, 1%, 0207
0	Q 27	50.03.0352		ZTX751S	ZTX 751 S	0	R 62	57.11.3332		3k3	MF, 1%, 0207
0	Q 28	50.03.0352		ZTX751S	ZTX 751 S	0	R 63	57.11.3271		270R	MF, 1%, 0207
0	Q 29	50.03.0352		ZTX751S	ZTX 751 S	0	R 64	57.11.3271		270R	MF, 1%, 0207
0	Q 30	50.03.0352		ZTX751S	ZTX 751 S	0	R 65	57.11.3271		270R	MF, 1%, 0207
0	Q 31	50.03.0352		ZTX751S	ZTX 751 S	0	R 66	57.11.3271		270R	MF, 1%, 0207
0	Q 32	50.03.0352		ZTX751S	ZTX 751 S	0	R 67	57.11.3101		100R	MF, 1%, 0207
0	Q 33	50.03.0352		ZTX751S	ZTX 751 S	0	R 68	57.11.3103		10k	MF, 1%, 0207
0	Q 34	50.03.0352		ZTX751S	ZTX 751 S	0	R 69	57.11.3113		11k	MF, 1%, 0207
0	Q 35	50.03.0352		ZTX751S	ZTX 751 S	0	R 70	57.11.3102		1k0	MF, 1%, 0207
0	Q 36	50.03.0352		ZTX751S	ZTX 751 S	0	R 71	57.11.3103		10k	MF, 1%, 0207
0	Q 37	50.03.0352		ZTX751S	ZTX 751 S	0	R 72	57.11.3000		0R0	MF, 0207
0	Q 38	50.03.0352		ZTX751S	ZTX 751 S						
0	Q 39	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 1	57.88.4473		8*47k	2%, SIP 9
0	Q 40	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 2	57.88.4473		8*47k	2%, SIP 9
0	Q 41	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 3	57.88.4473		8*47k	2%, SIP 9
0	Q 42	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 4	57.88.4473		8*47k	2%, SIP 9
0	Q 43	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 5	57.88.4473		8*47k	2%, SIP 9
0	Q 44	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 6	57.88.2221		4*220R	2%, SIP 8
0	Q 45	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 7	57.88.2221		4*220R	2%, SIP 8
0	Q 46	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 8	57.88.2221		4*220R	2%, SIP 8
0	Q 47	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 9	57.88.2221		4*220R	2%, SIP 8
0	Q 48	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 10	57.88.4473		8*47k	2%, SIP 9
0	Q 49	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 11	57.88.2221		4*220R	2%, SIP 8
0	Q 50	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 12	57.88.2221		4*220R	2%, SIP 8
0	Q 51	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 13	57.88.2221		4*220R	2%, SIP 8
0	R 1	57.11.3000		0R0	MF, 0207	0	RZ 14	57.88.2221		4*220R	2%, SIP 8
0	R 2	57.11.3332		3k3	MF, 1%, 0207	0	RZ 15	57.88.2221		4*220R	2%, SIP 8
0	R 3	57.11.3102		1k0	MF, 1%, 0207	0	RZ 16	57.88.2221		4*220R	2%, SIP 8
0	R 4	57.11.3472		4k7	MF, 1%, 0207	0	RZ 17	57.88.2221		4*220R	2%, SIP 8
0	R 5	57.11.3332		3k3	MF, 1%, 0207	0	RZ 18	57.88.2221		4*220R	2%, SIP 8
0	R 6	57.11.3473		47k	MF, 1%, 0207	0	S 1	55.03.0122		1*a	S 1 TASTE, 1*A, PRINT,IMPULS
0	R 7	57.11.3103		10k	MF, 1%, 0207	0	S 2	55.01.0168		8*a	SZ , 8*A, DIL
0	R 8	57.11.3473		47k	MF, 1%, 0207						
0	R 9	57.92.7053		1.6A	POLY- PTC, 30V	0	XIC 2	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 10	57.11.3100		10R	MF, 1%, 0207	0	XIC 3	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 11	57.11.3101		100R	MF, 1%, 0207	0	XIC 4	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 12	57.11.3684		880k	MF, 1%, 0207	0	XIC 5	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 13	57.11.3103		10k	MF, 1%, 0207	0	XIC 8	53.03.0165		20p	DIL 0.3", lot, gerade
0	R 14	57.11.3103		10k	MF, 1%, 0207	0	XIC 9	53.03.0168		16p	DIL 0.3", lot, gerade
0	R 15	57.11.3220		22R	MF, 1%, 0207	0	XIC 18	53.03.0218		1p	single-in-line
0	R 16	57.11.3332		3k3	MF, 1%, 0207	0	XIC 23	53.03.0218		1p	single-in-line
0	R 17	57.92.7058		4.0A	POLY- PTC, 30V	0	XIC 24	53.03.0173		28p	DIL 0.6", lot, gerade
0	R 18	57.11.3103		10k	MF, 1%, 0207	0	XIC 25	53.03.0162		24p	DIL 0.3", lot, gerade
0	R 19	57.11.3473		47k	MF, 1%, 0207						
0	R 20	57.92.7053		1.6A	POLY- PTC, 30V	0	Y 1	89.01.1009		16.000MHz	16.000 000 MHz, HC 49/U
0	R 21	57.11.3473		47k	MF, 1%, 0207						
0	R 22	57.11.3100		10R	MF, 1%, 0207						
0	R 23	57.11.3332		3k3	MF, 1%, 0207						
0	R 24	57.11.3332		3k3	MF, 1%, 0207						
0	R 25	57.11.3220		22R	MF, 1%, 0207						
0	R 26	57.11.3220		22R	MF, 1%, 0207						
0	R 27	57.11.3220		22R	MF, 1%, 0207						
0	R 28	57.11.3220		22R	MF, 1%, 0207						
0	R 29	57.11.3220		22R	MF, 1%, 0207						
0	R 30	57.11.3220		22R	MF, 1%, 0207						
0	R 31	57.11.3220		22R	MF, 1%, 0207						
0	R 32	57.11.3220		22R	MF, 1%, 0207						
0	R 33	57.11.3220		22R	MF, 1%, 0207						
0	R 34	57.11.3220		22R	MF, 1%, 0207						
0	R 35	57.11.3101		100R	MF, 1%, 0207						
0	R 36	57.11.3101		100R	MF, 1%, 0207						
0	R 37	57.11.3101		100R	MF, 1%, 0207						

End of List

**Comments**

IC13:  
BEFORE INSERT, CUT PIN 2.  
CONNECT PIN 1 AND PIN 2 ON SOLDERING SIDE.

**CIRCUIT DIAGRAMS SECTION 4**

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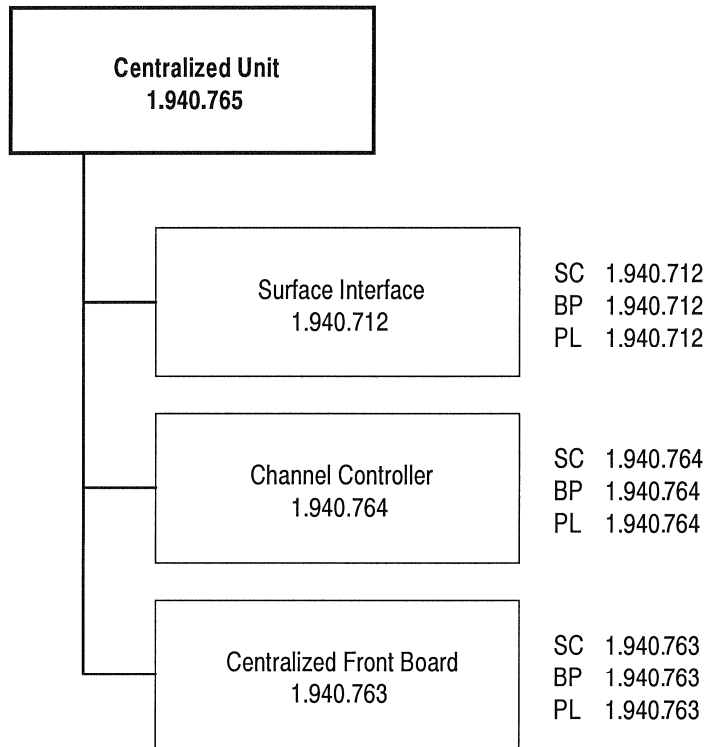
**Centralized Unit**

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Centralized Unit.....	1.940.765
Surface Interface.....	1.940.712
Channel Controller.....	1.940.764
Centralized Front Board.....	1.940.763

**Centralized Unit, Components**

1.940.765

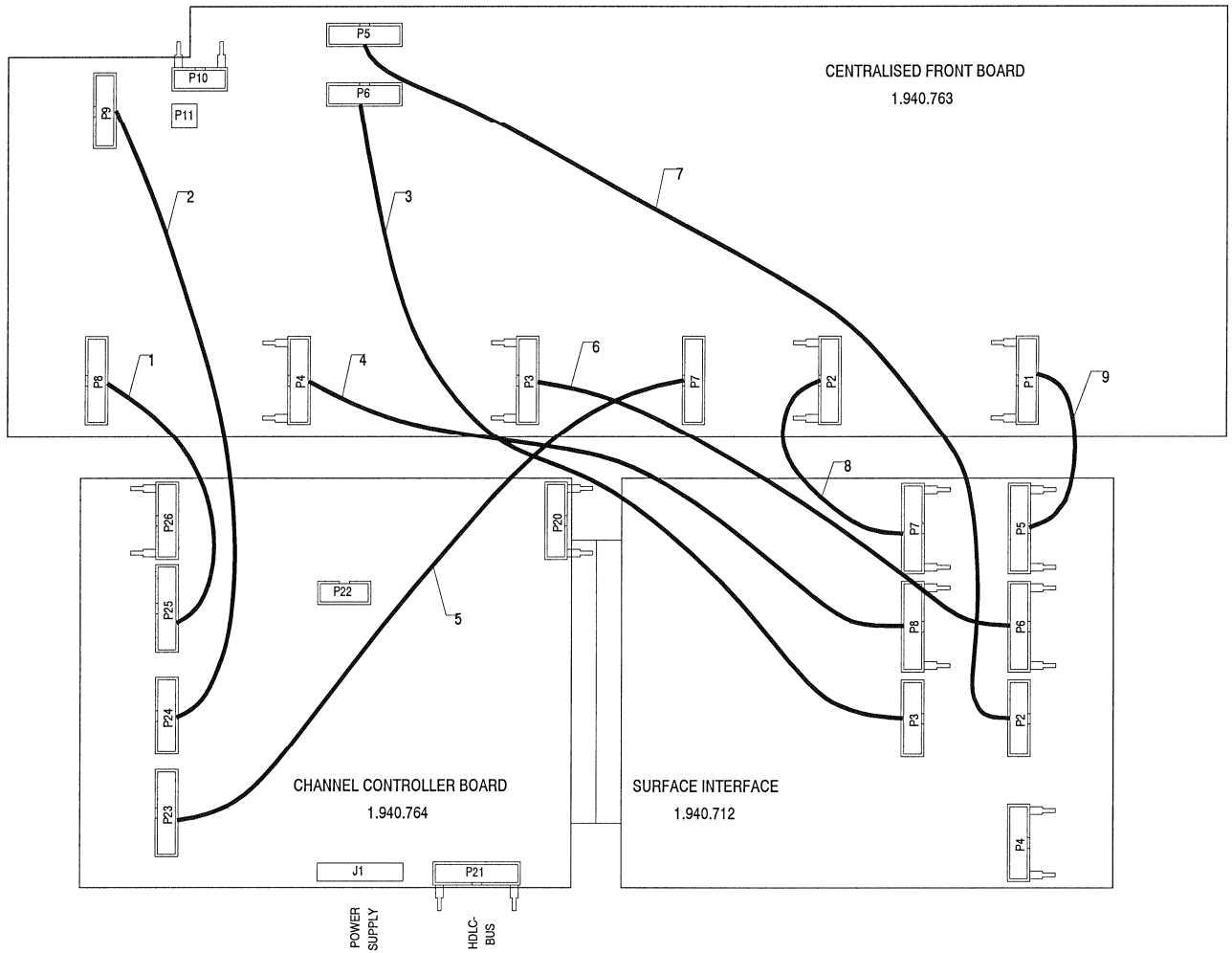


**SC:** Circuit Diagram  
**BP:** Component Placement Diagram  
**PL:** Parts List



**Centralized Unit, Wiring**

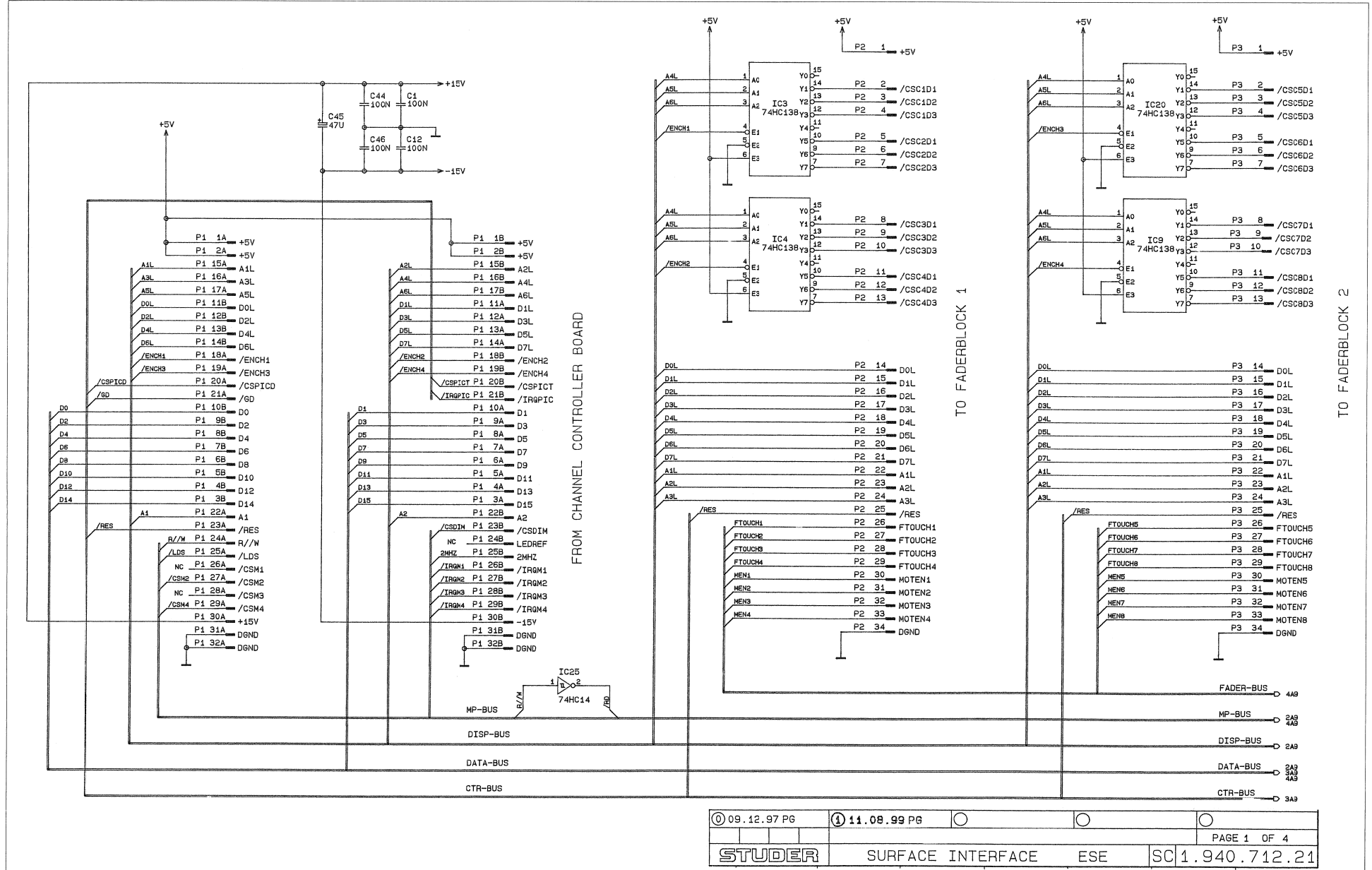
1.940.765



No.	Order no.	Cable	Length
1	1.023.424-01	HD 40 p	22 cm
2	1.023.423-01	HD 34 p	33 cm
3	1.023.423-02	HD 34p	36 cm
4	1.023.102-24	20 p	36 cm
5	1.023.424-02	HD 40 p	33 cm
6	1.023.102-23	20 p	33 cm
7	1.023.423-03	HD 34 p	41 cm
8	1.023.102-21	20 p	24 cm
9	1.023.102-21	20 p	24 cm

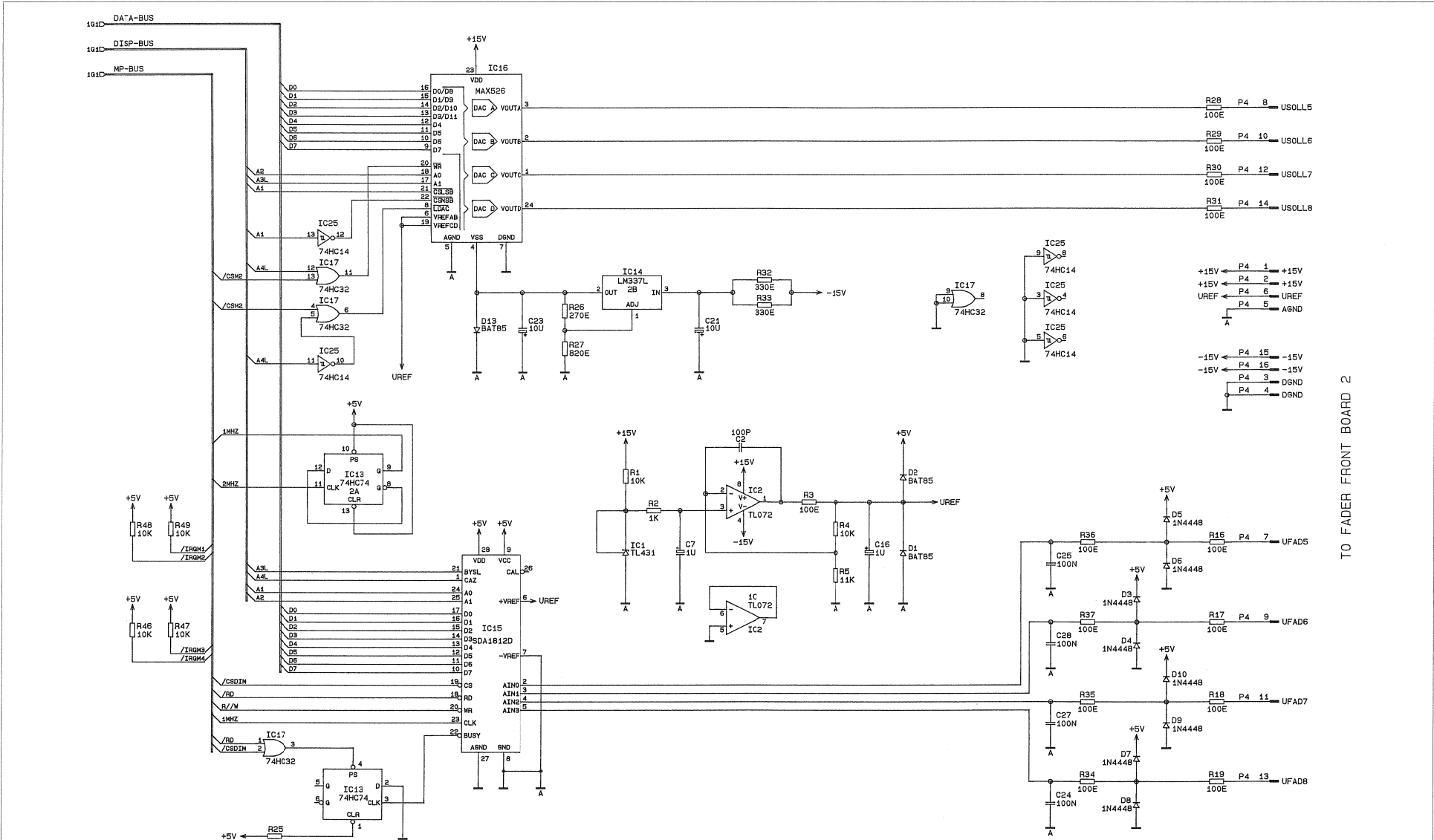


Surface Interface 1.940.712.21





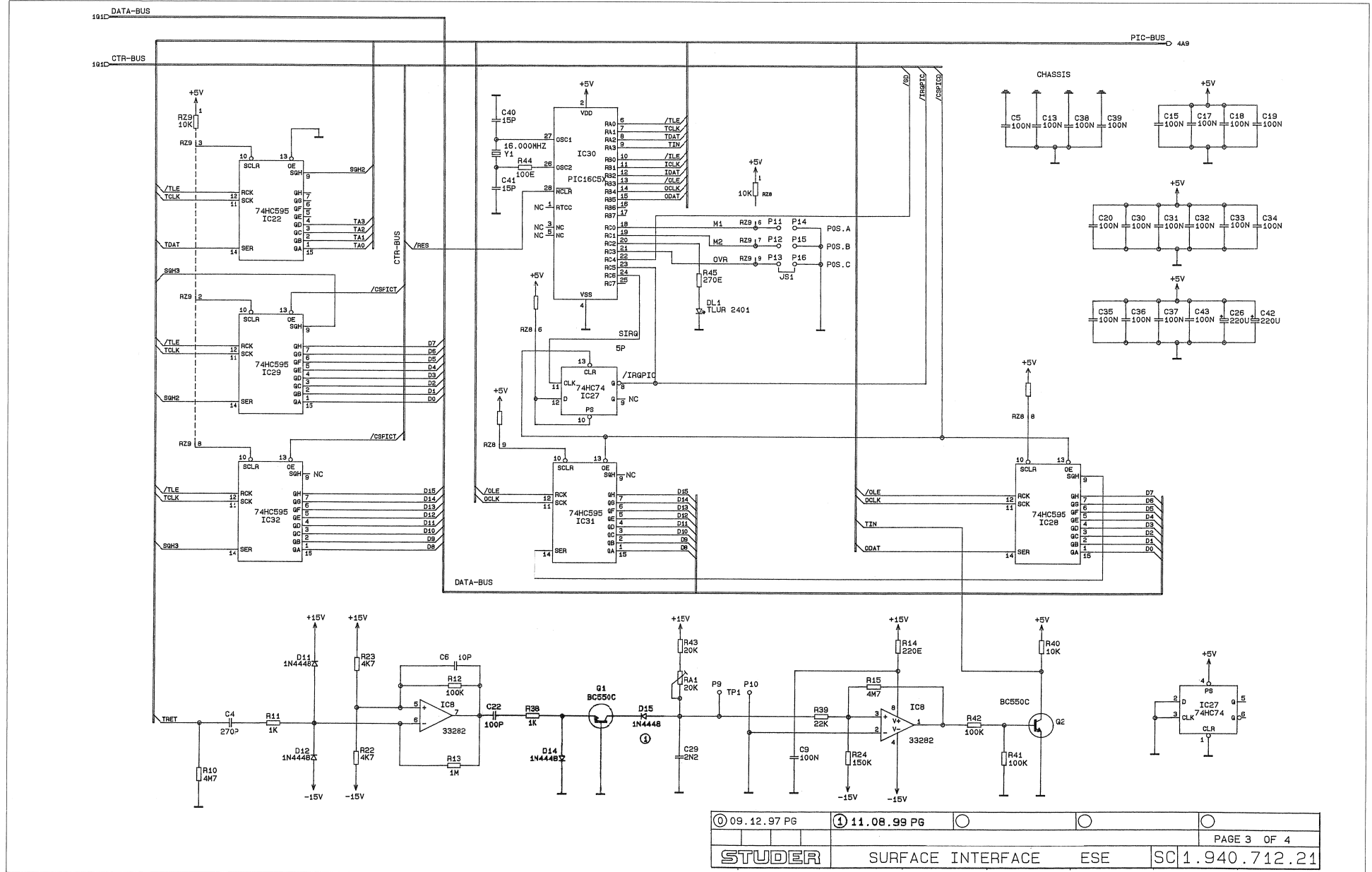
Surface Interface 1.940.712.21



TO FADER FRONT BOARD 2

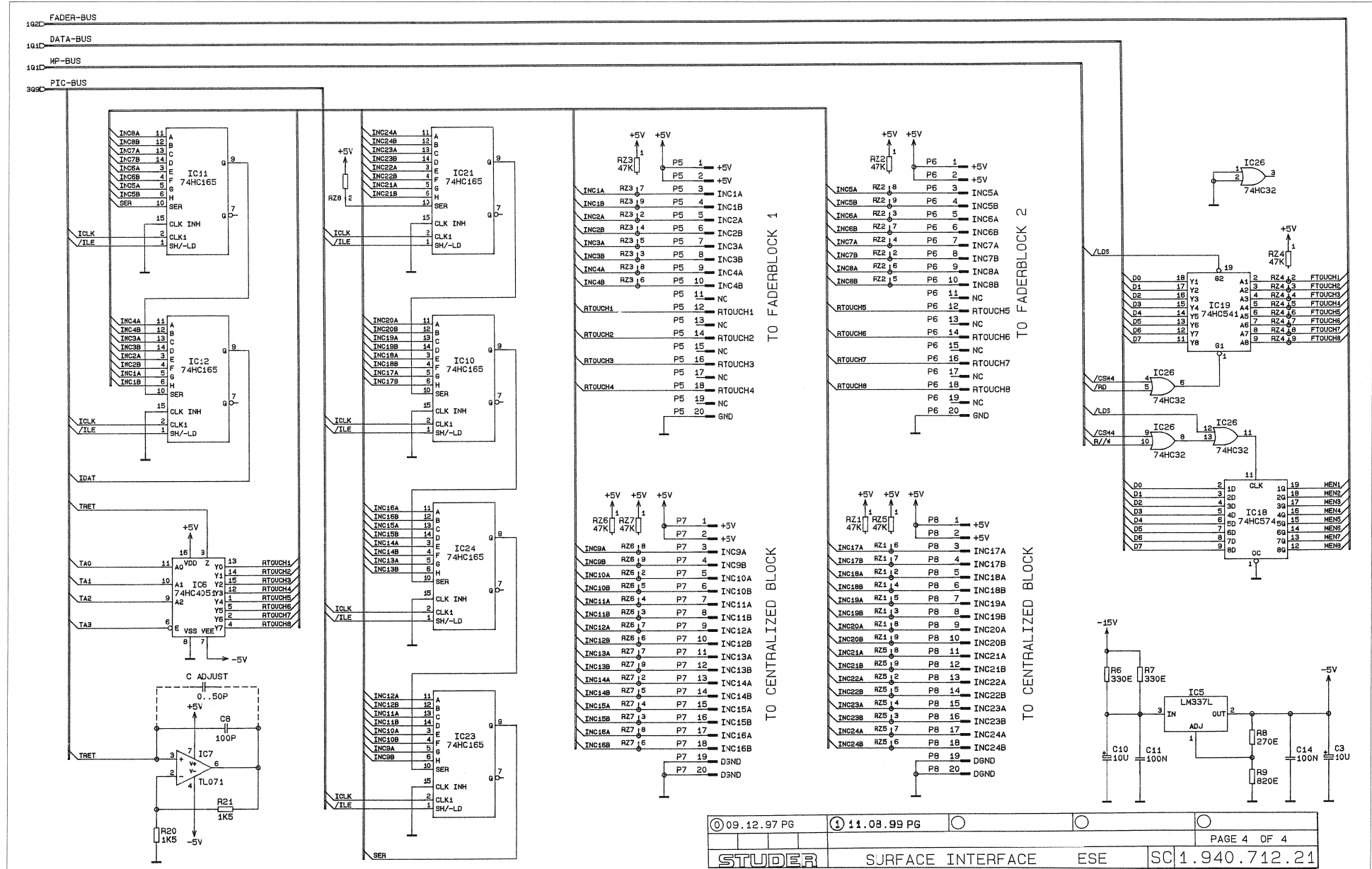


Surface Interface 1.940.712.21



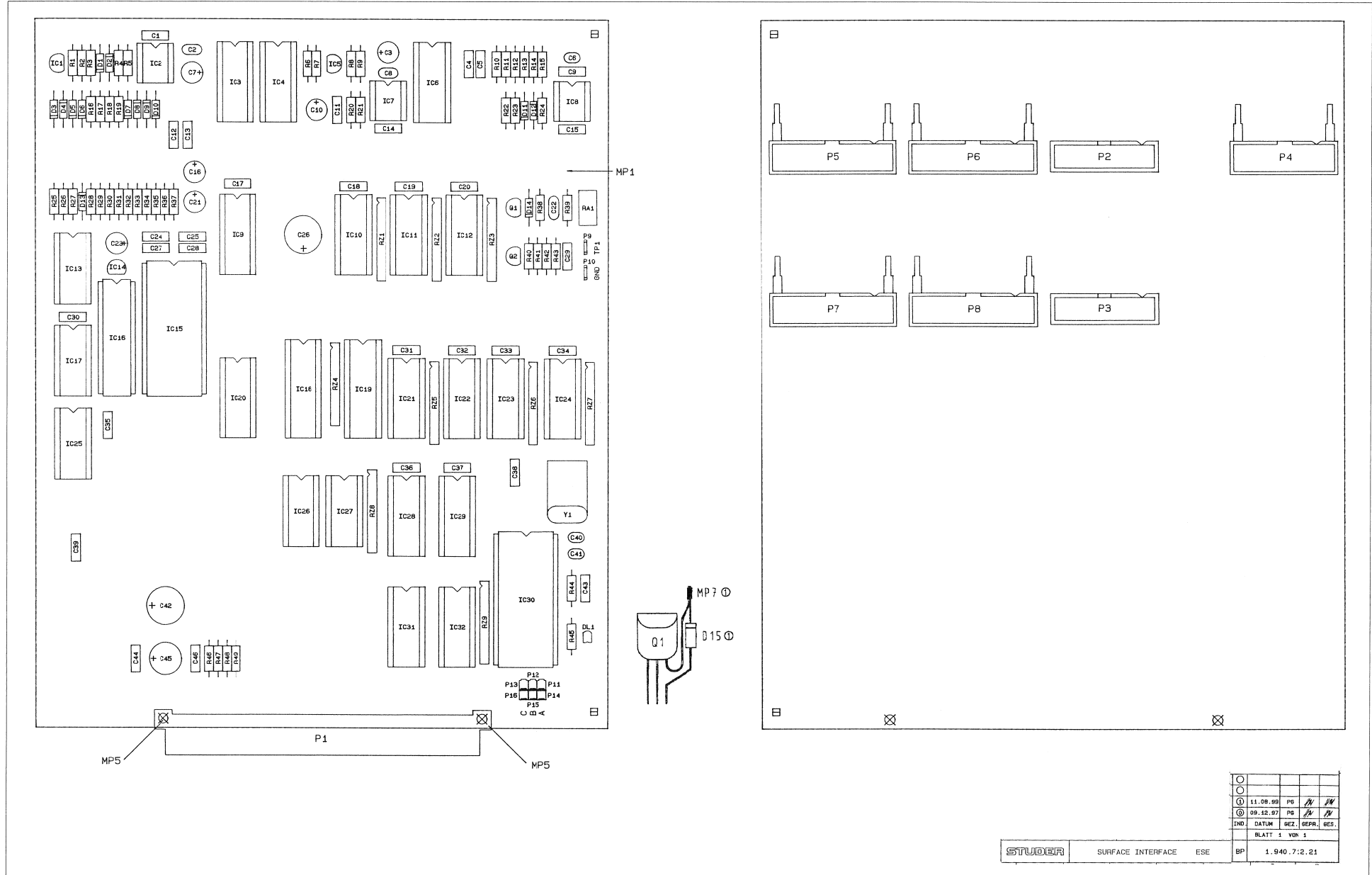


Surface Interface 1.940.712.21





Surface Interface 1.940.712.21



○				
①	11.08.99	PG	/	/
②	09.12.97	PG	/	/
IND	DATUM	GEZ.	GEPR.	RES.
BLATT 1 VON 1				

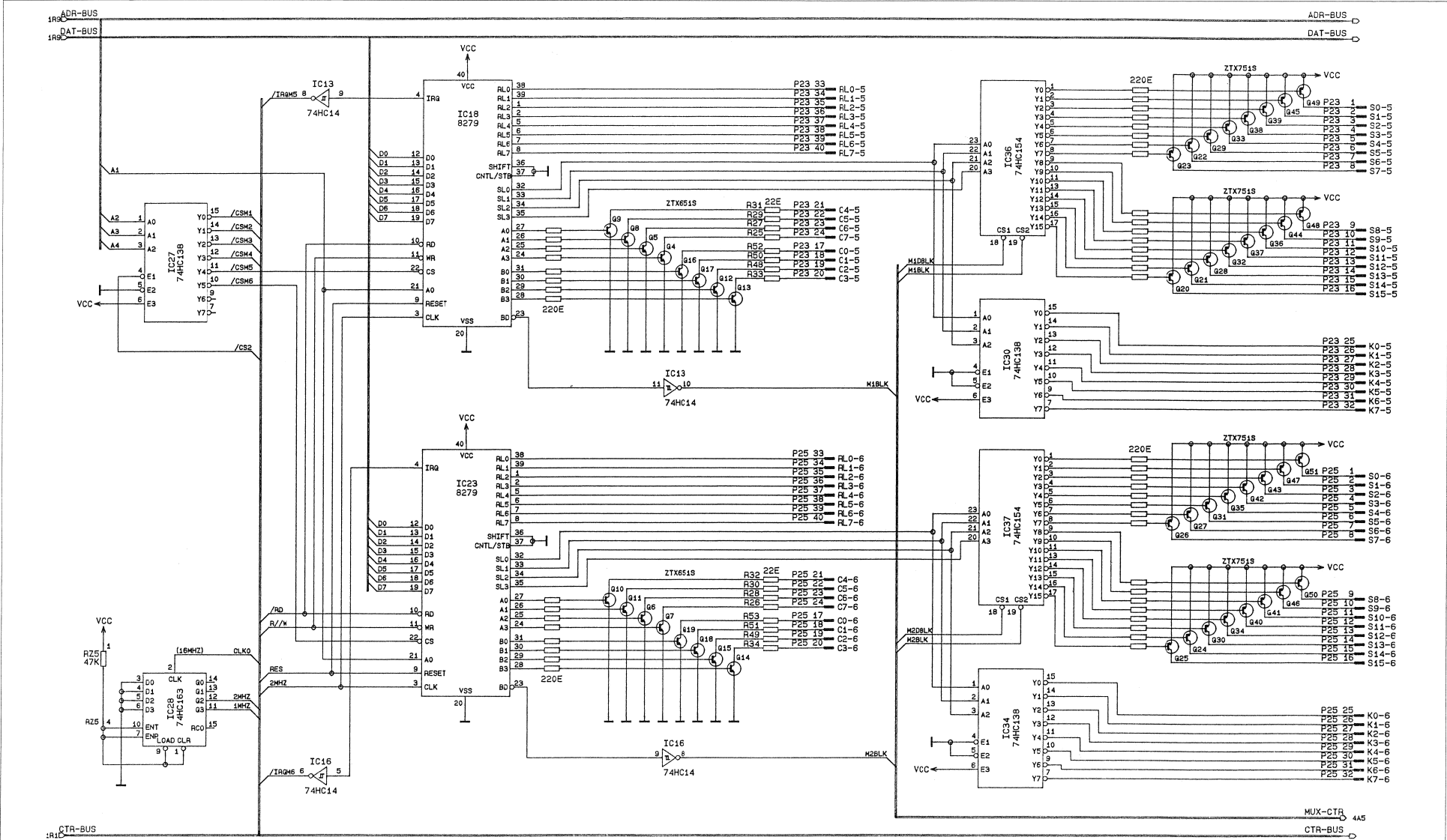








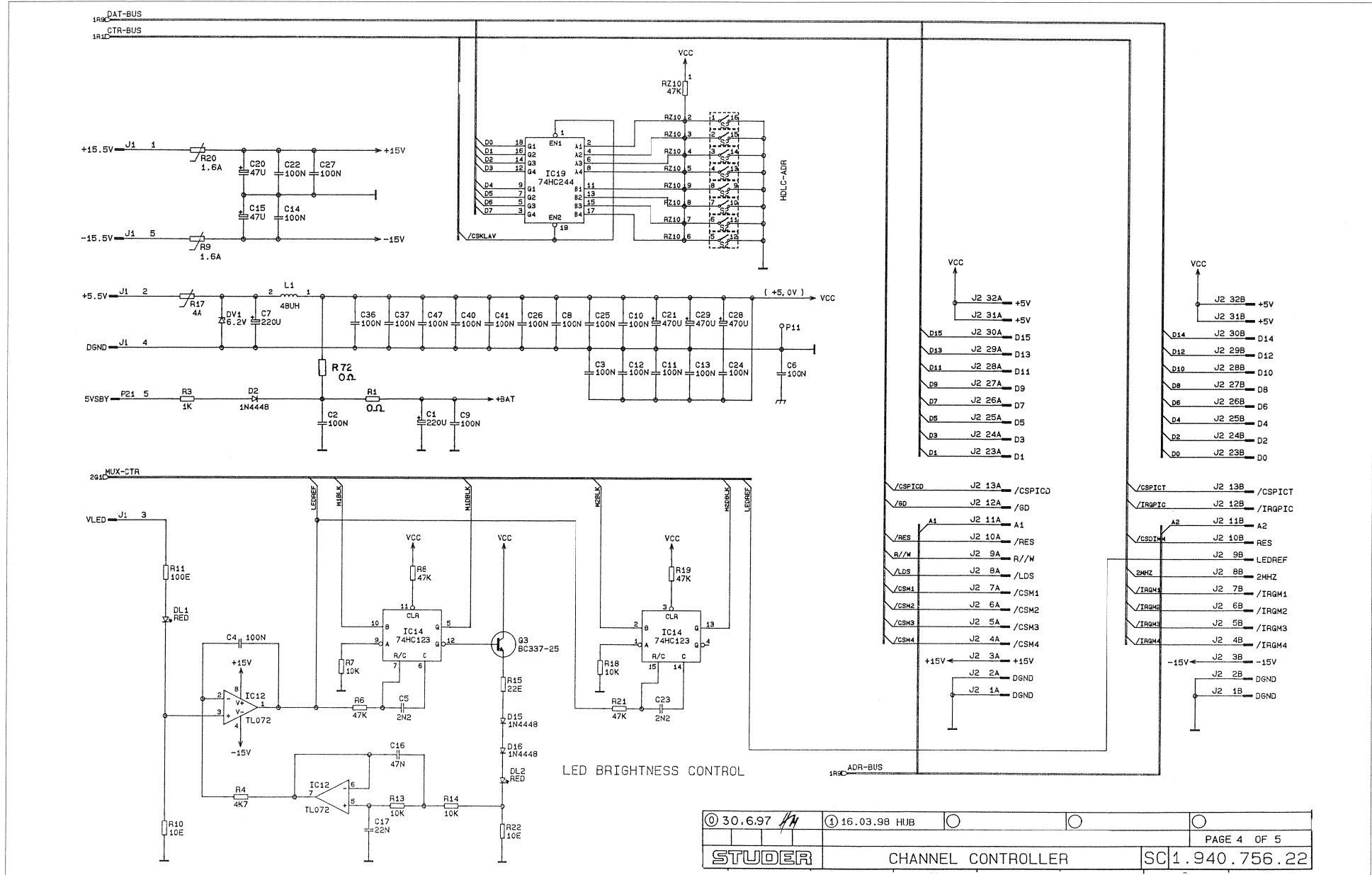
Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21





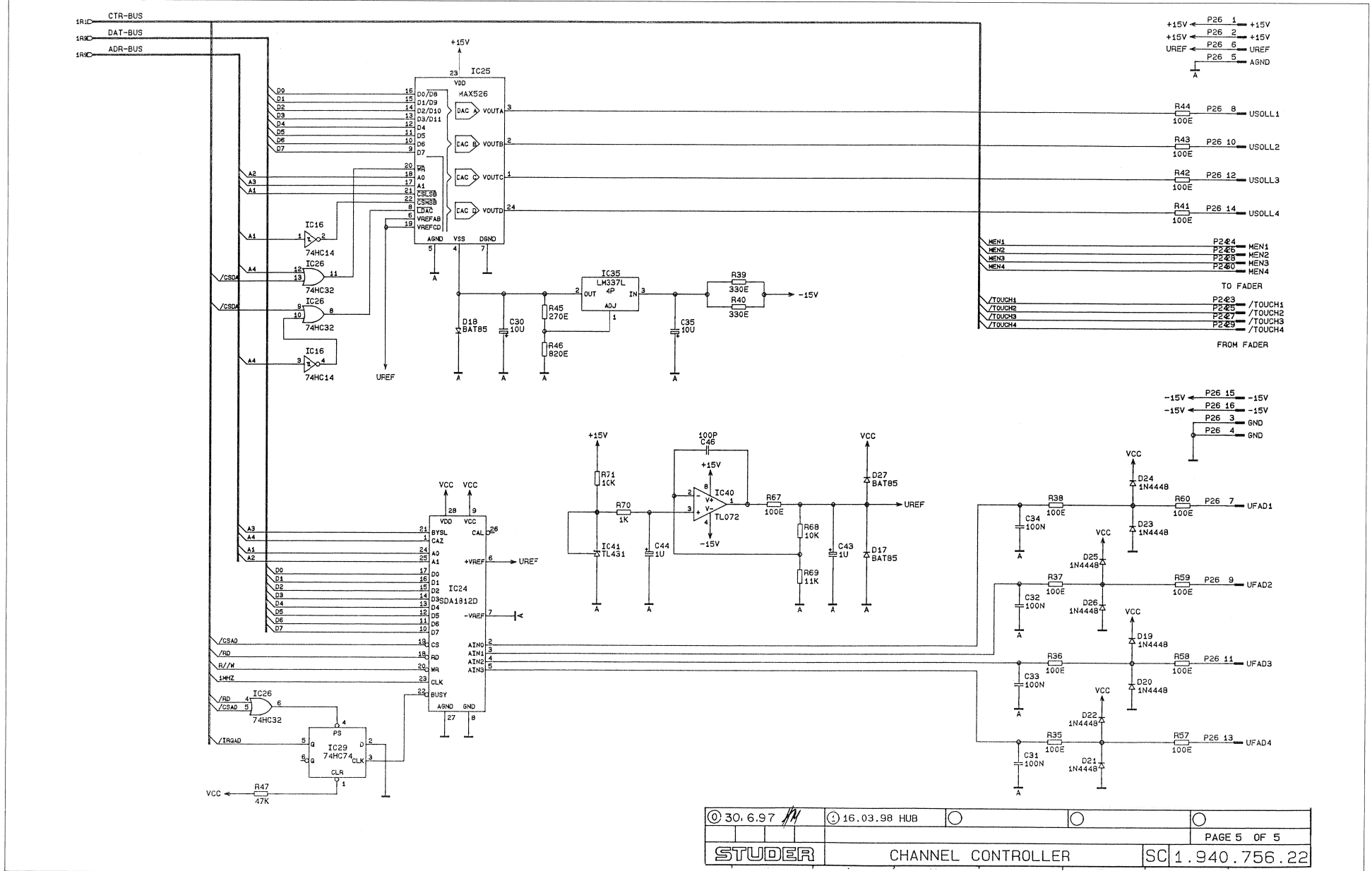


Channel Controller Board 1.940.756.22  
Channel Controller Board 1.940.764.21



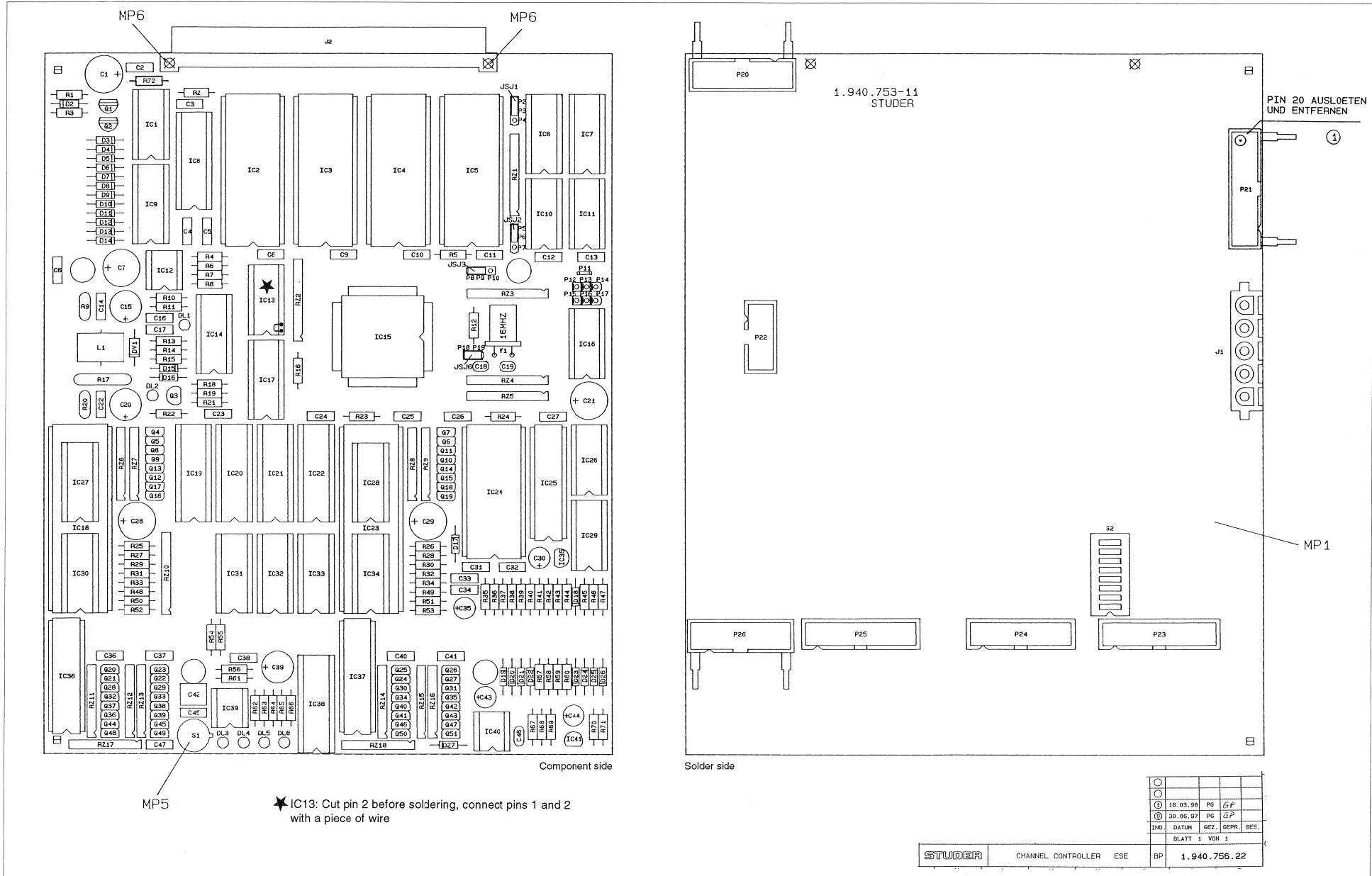
① 30.6.97 <i>HH</i>	④ 16.03.98 HUB	○	○	○
STUDER			CHANNEL CONTROLLER	SC1.940.756.22
				PAGE 4 OF 5

Channel Controller Board 1.940.756.22  
 Channel Controller Board 1.940.764.21





Channel Controller Board 1.940.756.22  
 Channel Controller Board 1.940.764.21





**Channel Controller Board 1.940.764.25**

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.22.5221		220u	EL 25V, 20%, RM5	0	IC 4	50.14.1010		TC551001-85	SRAM 128K * 8, 85ns
0	C 2	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 5	50.14.2009		27C1001	EPROM 128K * 8
0	C 3	59.06.0104		100n	PETP, 63V, 10%, RM5						SW HDLC EPROM 1.941.760.xx
0	C 4	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 6	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 5	59.06.5222		2n2	PETP, 63V, 5%, RM5	0	IC 7	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 6	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 8	50.18.0100		PLD16V8	16 V 8 D - 25 LP
0	C 7	59.22.5221		220u	EL 25V, 20%, RM5						DIP20, SW753 HDLC-GAL (1.940.915.20)
0	C 8	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 9	50.15.0104		MC3486	IC MC 3486 P, DS 3486 N,
0	C 9	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 10	50.17.1002		74HC02	IC ... 74 HC 02 .. ,A
0	C 10	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 11	50.17.1032		74HC32	IC ... 74 HC 32 .. ,A
0	C 11	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 12	50.09.0101		TL072	IC TL 072 CN .. ,A
0	C 12	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 13	50.17.1014		74HC14	IC ... 74 HC 14 .. ,A
0	C 13	59.06.0104		100n	PETP, 63V, 10%, RM5						SEE COMMENT
0	C 14	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 14	50.17.1123		74HC123	IC ... 74 HC 123 .. ,A
0	C 15	59.22.6470		47u	EL 40V, 20%, RM5	0	IC 15	50.63.0100		MC68302	IC MC 68 302 FC 16 C .. ,A
0	C 16	59.06.5473		47n	PETP, 63V, 5%, RM5	0	IC 16	50.17.1014		74HC14	IC ... 74 HC 14 .. ,A
0	C 17	59.06.5223		22n	PETP, 63V, 5%, RM5	0	IC 17	50.17.1148		74HC148	IC ... 74 HC 148 .. ,A
0	C 18	59.34.2270		27p	CER 63V, 5%, N150	0	IC 18	50.16.0111		8279	IC IP 8279-5, ID 8279-5,
0	C 19	59.34.2270		27p	CER 63V, 5%, N150	0	IC 19	50.17.1244		74HC244	IC ... 74 HC 244 .. ,A
0	C 20	59.22.6470		47u	EL 40V, 20%, RM5	0	IC 20	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 21	59.22.3471		470u	EL 10V, 20%, RM5	0	IC 21	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 22	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 22	50.17.1574		74HC574	IC ... 74 HC 574 .. ,A
0	C 23	59.06.5222		2n2	PETP, 63V, 5%, RM5	0	IC 23	50.16.0111		8279	IC IP 8279-5, ID 8279-5,
0	C 24	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 24	50.19.0204		ADS7832	
0	C 25	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 25	50.19.0113		MAX526D	D/A Converter 12 Bit
0	C 26	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 26	50.17.1032		74HC32	IC ... 74 HC 32 .. ,A
0	C 27	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 27	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 28	59.22.3471		470u	EL 10V, 20%, RM5	0	IC 28	50.17.1163		74HC163	IC ... 74 HC 163 .. ,A
0	C 29	59.22.3471		470u	EL 10V, 20%, RM5	0	IC 29	50.17.1074		74HC74	IC ... 74 HC 74 .. ,A
0	C 30	59.22.6100		10u	EL 35V, 20%, RM5	0	IC 30	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 31	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 31	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 32	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 32	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 33	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 33	50.17.1139		74HC139	IC ... 74 HC 139 .. ,A
0	C 34	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 34	50.17.1138		74HC138	IC ... 74 HC 138 .. ,A
0	C 35	59.22.6100		10u	EL 35V, 20%, RM5	0	IC 35	50.10.0109		LM337L	IC LM 337 LZ,
0	C 36	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 36	50.17.1154		74HC154	4-to16 Line driver, DIP 24-300
0	C 37	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 37	50.17.1154		74HC154	4-to16 Line driver, DIP 24-300
0	C 38	59.06.5104		100n	PETP, 63V, 5%, RM5	0	IC 38	50.17.1244		74HC244	IC ... 74 HC 244 .. ,A
0	C 39	59.22.6470		47u	EL 40V, 20%, RM5	0	IC 39	50.11.0157		TL7705B	IC TL 7705 BCP,
0	C 40	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 40	50.09.0101		TL072	IC TL 072 CN .. ,A
0	C 41	59.06.0104		100n	PETP, 63V, 10%, RM5	0	IC 41	50.10.0106		TL431	IC TL 431 CLP,
0	C 42	59.06.5105		1u0	PETP, 50V, 5%, RM5						
0	C 43	59.22.8109		1u	EL 50V, 20%, RM5	0	J 1	54.25.0005		5p	Buchse, 16A, vertikal, PCB
0	C 44	59.22.8109		1u	EL 50V, 20%, RM5	0	J 2	54.11.2010		64p	EU-Q 2*32p
0	C 45	59.06.5104		100n	PETP, 63V, 5%, RM5						
0	C 46	59.34.4101		100p	CER 63V, 5%, N750	0	JSJ 1	54.01.0021		Jumper	0.63 * 0.63mm
0	C 47	59.06.0104		100n	PETP, 63V, 10%, RM5	0	JSJ 2	54.01.0021		Jumper	0.63 * 0.63mm
0	D 2	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	JSJ 3	54.01.0021		Jumper	0.63 * 0.63mm
0	D 3	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	JSJ 6	54.01.0021		Jumper	0.63 * 0.63mm
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	L 1	62.03.0010		48uH	2A Toroid Chocke
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	MP 1	1.940.763.11	1 mp		CHANNEL CONTROLLER PCB /A
0	D 8	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	MP 2	1.940.763.04	1 mp		NR.-ETIKETTE 5 * 20
0	D 9	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	MP 3	1.101.001.20	1 mp	Label	TEXT-ETIK. 5*20 HARDWARE -20
0	D 10	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	MP 4	43.01.0108	1 mp	Label	ESE-WARNschild
0	D 11	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	MP 5	1.010.015.50	1 mp	Spacer	ISOLIER-Scheibe ZU T0 5
0	D 12	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	MP 6	28.99.0119	2 mp		ROHRNIETE D 2.5*0.15* 9
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	P 2	54.01.0020		1p	Pin 0.63*0.63
0	D 15	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 3	54.01.0020		1p	Pin 0.63*0.63
0	D 16	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 4	54.01.0020		1p	Pin 0.63*0.63
0	D 17	50.04.0127		BAT85	200mA, Schottky	0	P 5	54.01.0020		1p	Pin 0.63*0.63
0	D 18	50.04.0127		BAT85	200mA, Schottky	0	P 6	54.01.0020		1p	Pin 0.63*0.63
0	D 19	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 7	54.01.0020		1p	Pin 0.63*0.63
0	D 20	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 8	54.01.0020		1p	Pin 0.63*0.63
0	D 21	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 9	54.01.0020		1p	Pin 0.63*0.63
0	D 22	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 10	54.01.0020		1p	Pin 0.63*0.63
0	D 23	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 11	54.02.0320		1p	Flatpin, 2.8*0.8mm
0	D 24	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 12	54.01.0020		1p	Pin 0.63*0.63
0	D 25	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 13	54.01.0020		1p	Pin 0.63*0.63
0	D 26	50.04.0125		1N4448	75V, 150mA, 4ns, DO-35	0	P 14	54.01.0020		1p	Pin 0.63*0.63
0	D 27	50.04.0127		BAT85	200mA, Schottky	0	P 15	54.01.0020		1p	Pin 0.63*0.63
0	DL 1	50.04.2129		LS3360	DL LS 3360, RT DIFF	0	P 16	54.01.0020		1p	Pin 0.63*0.63
0	DL 2	50.04.2129		LS3360	DL LS 3360, RT DIFF	0	P 17	54.01.0020		1p	Pin 0.63*0.63
0	DL 3	50.04.2129		LS3360	DL LS 3360, RT DIFF	0	P 18	54.01.0020		1p	Pin 0.63*0.63
0	DL 4	50.04.2129		LS3360	DL LS 3360, RT DIFF	0	P 19	54.01.0020		1p	Pin 0.63*0.63
0	DL 5	50.04.2131		LG3360	DL LG 3360, GN DIFF	0	P 20	54.14.2102		16p	P STECKER 16 P,AU,VR,GERADE
0	DL 6	50.04.2130		LY3360	DL LY 3360, GB DIFF	0	P 21	54.14.2103		20p	P STECKER 20 P,AU,VR,GERADE
0	DV 1	50.04.1511		6V2	Zener, 5%, 1.3W, DO-41	0	P 22	54.14.2001		10p	1/20" Au, gerade, ohne Verrieg
0	IC 1	50.17.1086		74HC86	IC ... 74 HC 86 .. ,A	0	P 23	54.16.0540		40p	P 1/40", 40 P, AU, PRINT
0	IC 2	50.14.2009		27C1001	EPROM 128K * 8	0	P 24	54.16.0534		34p	P 1/40", 34 P, AU, PRINT
0	IC 3	50.14.1010		TC551001-85	SRAM 128K * 8, 85ns	0	P 25	54.16.0540		40p	P 1/40", 40 P, AU, PRINT
					SW HDLC EPROM 1.941.760.xx	0	P 26	54.14.2102		16p	P STECKER 16 P,AU,VR,GERADE
						0	Q 1	50.03.1554		VP0808M	VP 0808 M
						0	Q 2	50.03.1505		VN0808M	VN 0808 M, ZVN 0108 A



Channel Controller Board I.940.764.25

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	Q 3	50.43.0340			Q BC 337-25,	0	R 38	57.11.3101		100R	MF, 1%, 0207
0	Q 4	50.03.0523		ZTX651	ZTX 651	0	R 39	57.11.3331		330R	MF, 1%, 0207
0	Q 5	50.03.0523		ZTX651	ZTX 651	0	R 40	57.11.3331		330R	MF, 1%, 0207
0	Q 6	50.03.0523		ZTX651	ZTX 651	0	R 41	57.11.3101		100R	MF, 1%, 0207
0	Q 7	50.03.0523		ZTX651	ZTX 651	0	R 42	57.11.3101		100R	MF, 1%, 0207
0	Q 8	50.03.0523		ZTX651	ZTX 651	0	R 43	57.11.3101		100R	MF, 1%, 0207
0	Q 9	50.03.0523		ZTX651	ZTX 651	0	R 44	57.11.3101		100R	MF, 1%, 0207
0	Q 10	50.03.0523		ZTX651	ZTX 651	0	R 45	57.11.3271		270R	MF, 1%, 0207
0	Q 11	50.03.0523		ZTX651	ZTX 651	0	R 46	57.11.3821		820R	MF, 1%, 0207
0	Q 12	50.03.0523		ZTX651	ZTX 651	0	R 47	57.11.3473		47k	MF, 1%, 0207
0	Q 13	50.03.0523		ZTX651	ZTX 651	0	R 48	57.11.3220		22R	MF, 1%, 0207
0	Q 14	50.03.0523		ZTX651	ZTX 651	0	R 49	57.11.3220		22R	MF, 1%, 0207
0	Q 15	50.03.0523		ZTX651	ZTX 651	0	R 50	57.11.3220		22R	MF, 1%, 0207
0	Q 16	50.03.0523		ZTX651	ZTX 651	0	R 51	57.11.3220		22R	MF, 1%, 0207
0	Q 17	50.03.0523		ZTX651	ZTX 651	0	R 52	57.11.3220		22R	MF, 1%, 0207
0	Q 18	50.03.0523		ZTX651	ZTX 651	0	R 53	57.11.3220		22R	MF, 1%, 0207
0	Q 19	50.03.0523		ZTX651	ZTX 651	0	R 54	57.11.3332		3k3	MF, 1%, 0207
0	Q 20	50.03.0352		ZTX751S	ZTX 751 S	0	R 55	57.11.3332		3k3	MF, 1%, 0207
0	Q 21	50.03.0352		ZTX751S	ZTX 751 S	0	R 56	57.11.3221		220R	MF, 1%, 0207
0	Q 22	50.03.0352		ZTX751S	ZTX 751 S	0	R 57	57.11.3101		100R	MF, 1%, 0207
0	Q 23	50.03.0352		ZTX751S	ZTX 751 S	0	R 58	57.11.3101		100R	MF, 1%, 0207
0	Q 24	50.03.0352		ZTX751S	ZTX 751 S	0	R 59	57.11.3101		100R	MF, 1%, 0207
0	Q 25	50.03.0352		ZTX751S	ZTX 751 S	0	R 60	57.11.3101		100R	MF, 1%, 0207
0	Q 26	50.03.0352		ZTX751S	ZTX 751 S	0	R 61	57.11.3100		10R	MF, 1%, 0207
0	Q 27	50.03.0352		ZTX751S	ZTX 751 S	0	R 62	57.11.3332		3k3	MF, 1%, 0207
0	Q 28	50.03.0352		ZTX751S	ZTX 751 S	0	R 63	57.11.3271		270R	MF, 1%, 0207
0	Q 29	50.03.0352		ZTX751S	ZTX 751 S	0	R 64	57.11.3271		270R	MF, 1%, 0207
0	Q 30	50.03.0352		ZTX751S	ZTX 751 S	0	R 65	57.11.3271		270R	MF, 1%, 0207
0	Q 31	50.03.0352		ZTX751S	ZTX 751 S	0	R 66	57.11.3271		270R	MF, 1%, 0207
0	Q 32	50.03.0352		ZTX751S	ZTX 751 S	0	R 67	57.11.3101		100R	MF, 1%, 0207
0	Q 33	50.03.0352		ZTX751S	ZTX 751 S	0	R 68	57.11.3103		10k	MF, 1%, 0207
0	Q 34	50.03.0352		ZTX751S	ZTX 751 S	0	R 69	57.11.3113		11k	MF, 1%, 0207
0	Q 35	50.03.0352		ZTX751S	ZTX 751 S	0	R 70	57.11.3102		1k0	MF, 1%, 0207
0	Q 36	50.03.0352		ZTX751S	ZTX 751 S	0	R 71	57.11.3103		10k	MF, 1%, 0207
0	Q 37	50.03.0352		ZTX751S	ZTX 751 S	0	R 72	57.11.3000		0R0	MF, 0207
0	Q 38	50.03.0352		ZTX751S	ZTX 751 S						
0	Q 39	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 1	57.88.4473		8*47k	2%, SIP 9
0	Q 40	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 2	57.88.4473		8*47k	2%, SIP 9
0	Q 41	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 3	57.88.4473		8*47k	2%, SIP 9
0	Q 42	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 4	57.88.4473		8*47k	2%, SIP 9
0	Q 43	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 5	57.88.4473		8*47k	2%, SIP 9
0	Q 44	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 6	57.88.2221		4*220R	2%, SIP 8
0	Q 45	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 7	57.88.2221		4*220R	2%, SIP 8
0	Q 46	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 8	57.88.2221		4*220R	2%, SIP 8
0	Q 47	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 9	57.88.2221		4*220R	2%, SIP 8
0	Q 48	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 10	57.88.4473		8*47k	2%, SIP 9
0	Q 49	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 11	57.88.2221		4*220R	2%, SIP 8
0	Q 50	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 12	57.88.2221		4*220R	2%, SIP 8
0	Q 51	50.03.0352		ZTX751S	ZTX 751 S	0	RZ 13	57.88.2221		4*220R	2%, SIP 8
						0	RZ 14	57.88.2221		4*220R	2%, SIP 8
						0	RZ 15	57.88.2221		4*220R	2%, SIP 8
						0	RZ 16	57.88.2221		4*220R	2%, SIP 8
						0	RZ 17	57.88.2221		4*220R	2%, SIP 8
						0	RZ 18	57.88.2221		4*220R	2%, SIP 8
0	R 1	57.11.3000		0R0	MF, 0207	0	S 1	55.03.0122		1*a	S 1 TASTE, 1*A, PRINT,IMPULS
0	R 2	57.11.3332		3k3	MF, 1%, 0207	0	S 2	55.01.0168		8*a	SZ , 8*A, DIL
0	R 3	57.11.3102		1k0	MF, 1%, 0207						
0	R 4	57.11.3472		4k7	MF, 1%, 0207						
0	R 5	57.11.3332		3k3	MF, 1%, 0207						
0	R 6	57.11.3473		47k	MF, 1%, 0207						
0	R 7	57.11.3103		10k	MF, 1%, 0207						
0	R 8	57.11.3473		47k	MF, 1%, 0207						
0	R 9	57.92.7013		0.5A	POLY- PTC, 60V						
0	R 10	57.11.3100		10R	MF, 1%, 0207	0	XIC 2	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 11	57.11.3101		100R	MF, 1%, 0207	0	XIC 3	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 12	57.11.3684		680k	MF, 1%, 0207	0	XIC 4	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 13	57.11.3103		10k	MF, 1%, 0207	0	XIC 5	53.03.0184		32p	DIL 0.6", lot, gerade
0	R 14	57.11.3103		10k	MF, 1%, 0207	0	XIC 8	53.03.0165		20p	DIL 0.3", lot, gerade
0	R 15	57.11.3220		22R	MF, 1%, 0207	0	XIC 9	53.03.0168		16p	DIL 0.3", lot, gerade
0	R 16	57.11.3332		3k3	MF, 1%, 0207	0	XIC 18	53.03.0218		1p	single-in-line
0	R 17	57.92.7058		4.0A	POLY- PTC, 30V	0	XIC 23	53.03.0218		1p	single-in-line
0	R 18	57.11.3103		10k	MF, 1%, 0207	0	XIC 24	53.03.0173		28p	DIL 0.6", lot, gerade
0	R 19	57.11.3473		47k	MF, 1%, 0207	0	XIC 25	53.03.0162		24p	DIL 0.3", lot, gerade
0	R 20	57.92.7013		0.5A	POLY- PTC, 60V						
0	R 21	57.11.3473		47k	MF, 1%, 0207	0	Y 1	89.01.1009		16.000MHz	16.000 000 MHz, HC 49/U
0	R 22	57.11.3100		10R	MF, 1%, 0207						
0	R 23	57.11.3332		3k3	MF, 1%, 0207						
0	R 24	57.11.3332		3k3	MF, 1%, 0207						
0	R 25	57.11.3220		22R	MF, 1%, 0207						
0	R 26	57.11.3220		22R	MF, 1%, 0207						
0	R 27	57.11.3220		22R	MF, 1%, 0207						
0	R 28	57.11.3220		22R	MF, 1%, 0207						
0	R 29	57.11.3220		22R	MF, 1%, 0207						
0	R 30	57.11.3220		22R	MF, 1%, 0207						
0	R 31	57.11.3220		22R	MF, 1%, 0207						
0	R 32	57.11.3220		22R	MF, 1%, 0207						
0	R 33	57.11.3220		22R	MF, 1%, 0207						
0	R 34	57.11.3220		22R	MF, 1%, 0207						
0	R 35	57.11.3101		100R	MF, 1%, 0207						
0	R 36	57.11.3101		100R	MF, 1%, 0207						
0	R 37	57.11.3101		100R	MF, 1%, 0207						

End of List

**Comments**  
 IC13:  
 BEFORE INSERT, CUT PIN 2.  
 CONNECT PIN 1 AND PIN 2 ON SOLDERING SIDE.

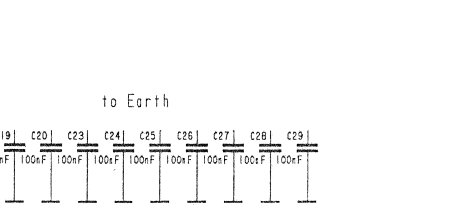
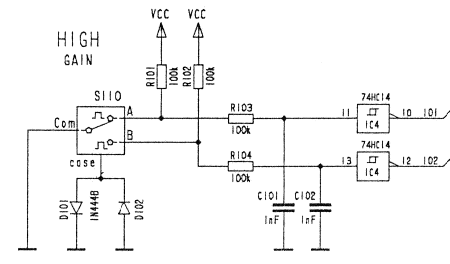
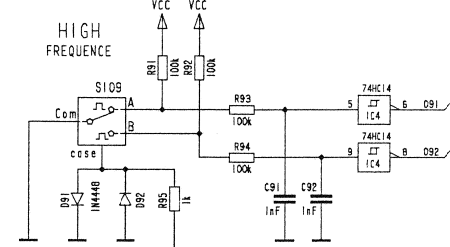
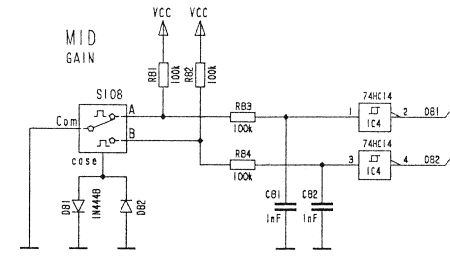
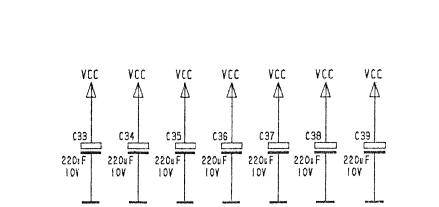
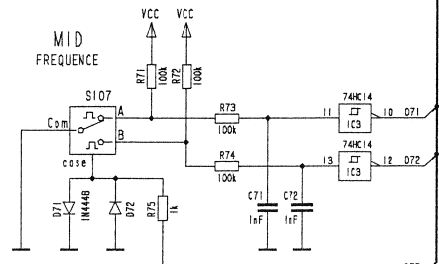
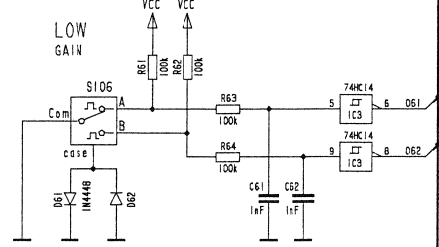
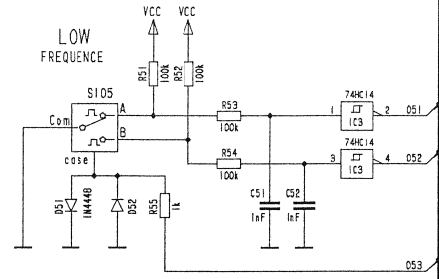
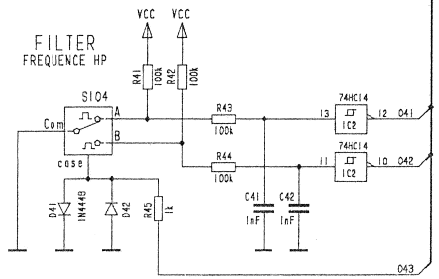
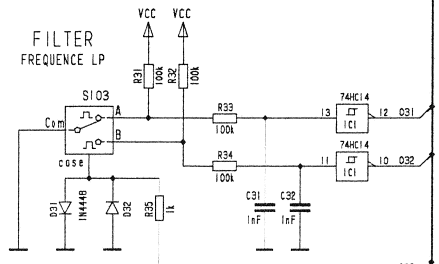
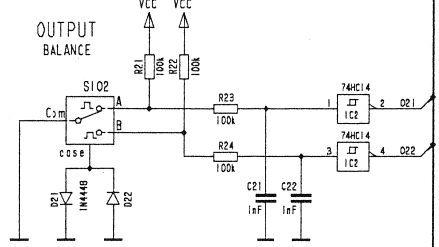
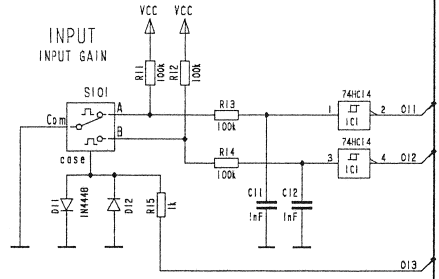


Centralized Front Board 1.940.763.00

SHEET 2 ROTARY(200:010)

VCC P1 1  
VCC P1 2  
INC1A P1 3 R21 2 011  
INC1B P1 4 R21 3 012  
INC2A P1 5 R21 4 021  
INC2B P1 6 R21 5 022  
INC3A P1 7 R21 6 031  
INC3B P1 8 R21 7 032  
INC4A P1 9 R21 8 041  
INC4B P1 10 R21 9 042  
fc P1 11  
RTOUCH1 P1 12 013  
fc P1 13  
RTOUCH2 P1 14 033  
fc P1 15  
RTOUCH3 P1 16 043  
fc P1 17  
RTOUCH4 P1 18 053  
fc P1 19  
RTOUCH5 P1 20  
GND P1 20

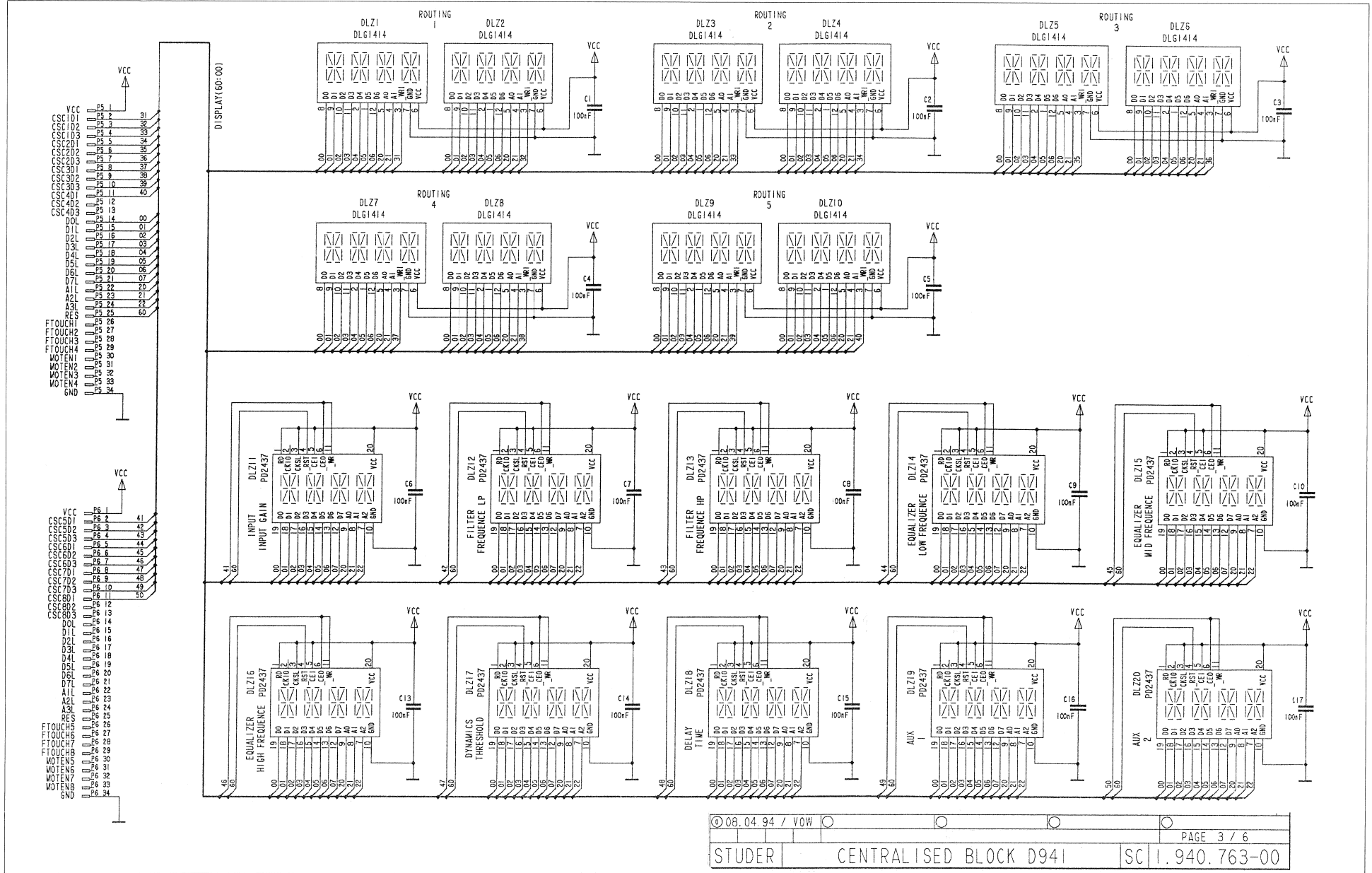
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VCC P2 2  
INC5A P2 3 R22 2 051  
INC5B P2 4 R22 3 052  
INC6A P2 5 R22 4 061  
INC6B P2 6 R22 5 062  
INC7A P2 7 R22 6 071  
INC7B P2 8 R22 7 072  
INC8A P2 9 R22 8 081  
INC8B P2 10 R22 9 082  
INC9A P2 11 R23 2 091  
INC9B P2 12 R23 3 092  
INC10A P2 13 R23 4 101  
INC10B P2 14 R23 5 102  
nc P2 15 R23 6  
nc P2 16 R23 7  
nc P2 17 R23 8  
nc P2 18 R23 9  
GND P2 19  
GND P2 20





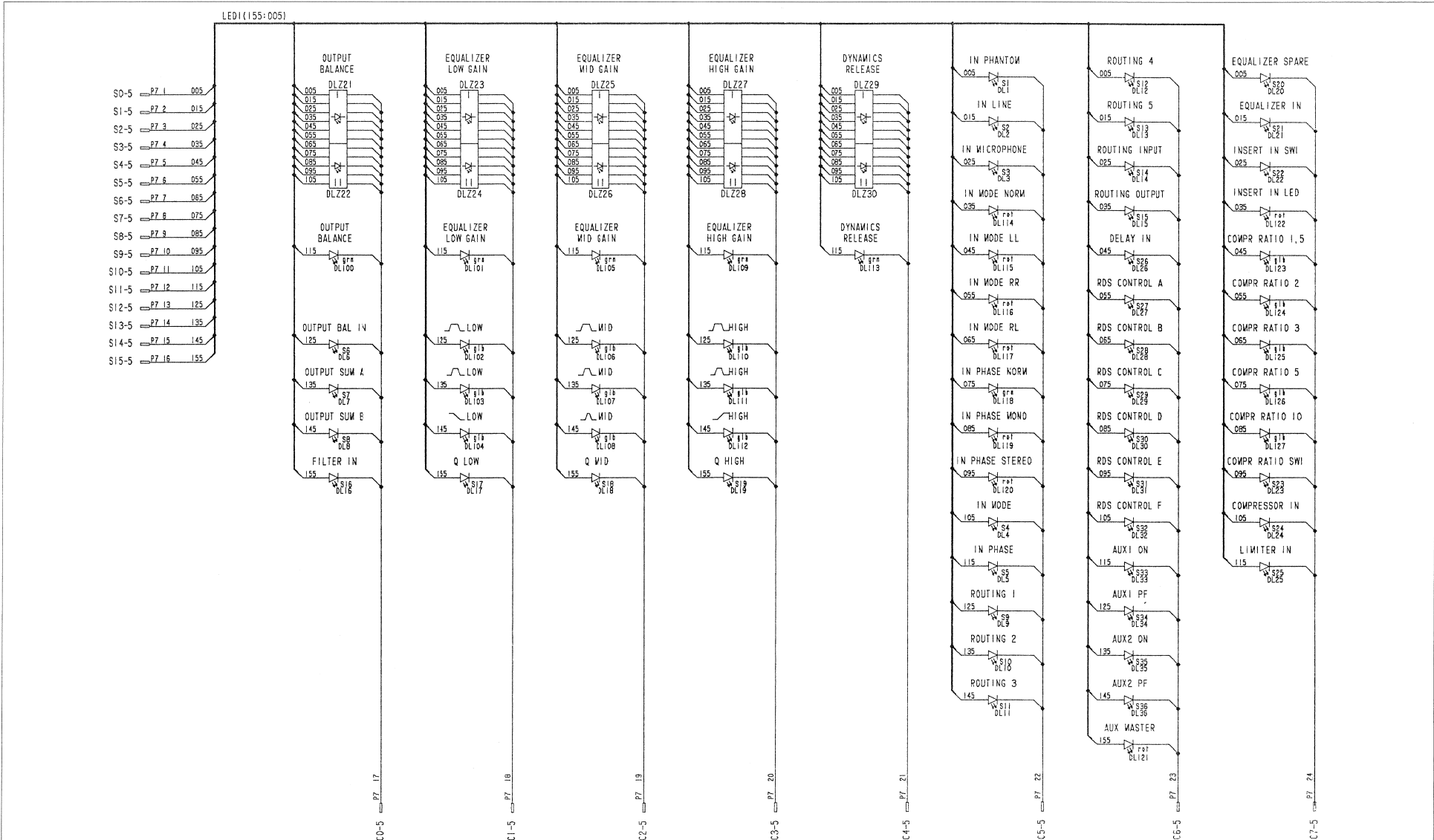


Centralized Front Board 1.940.763.00



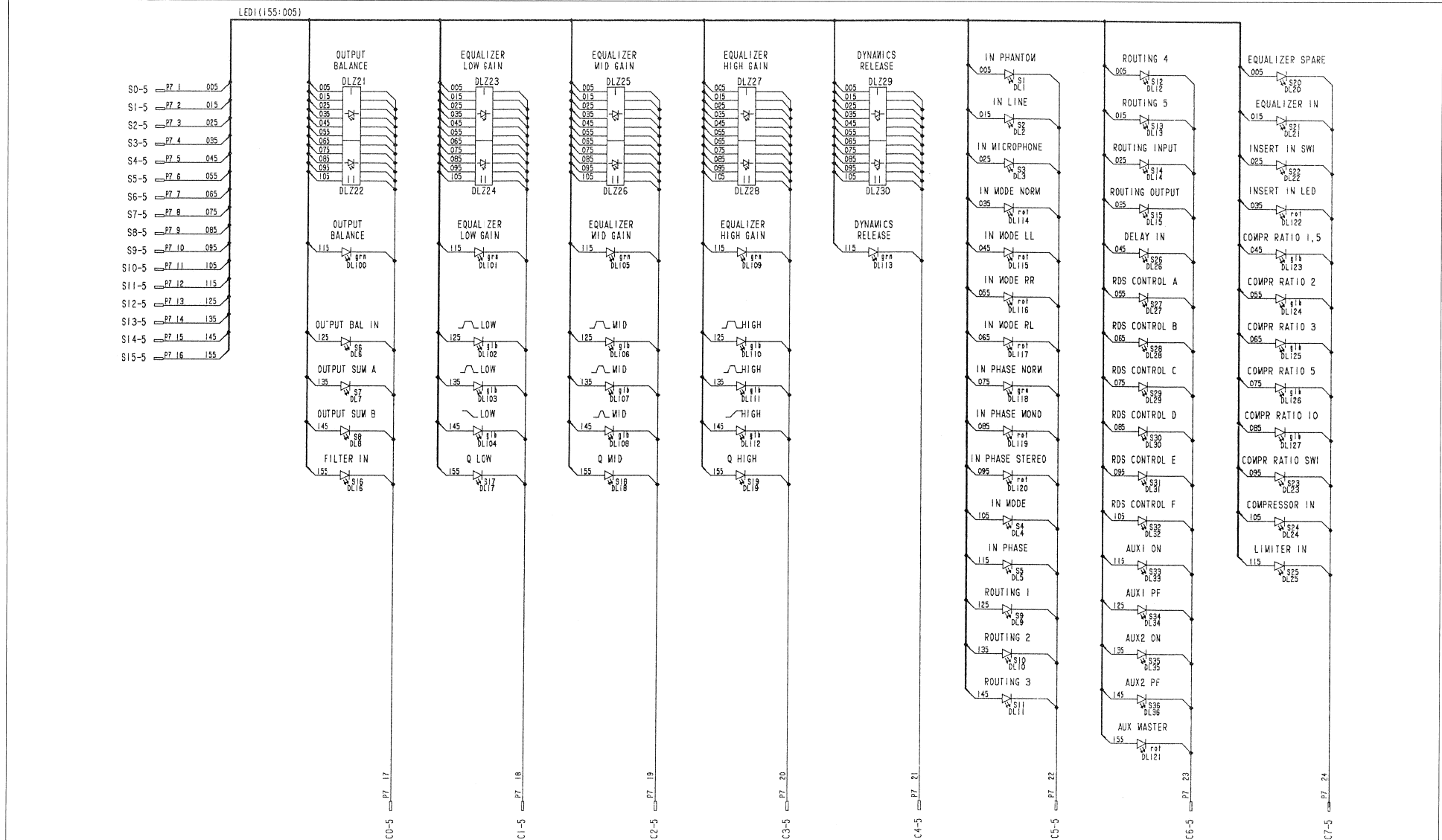


Centralized Front Board 1.940.763.00



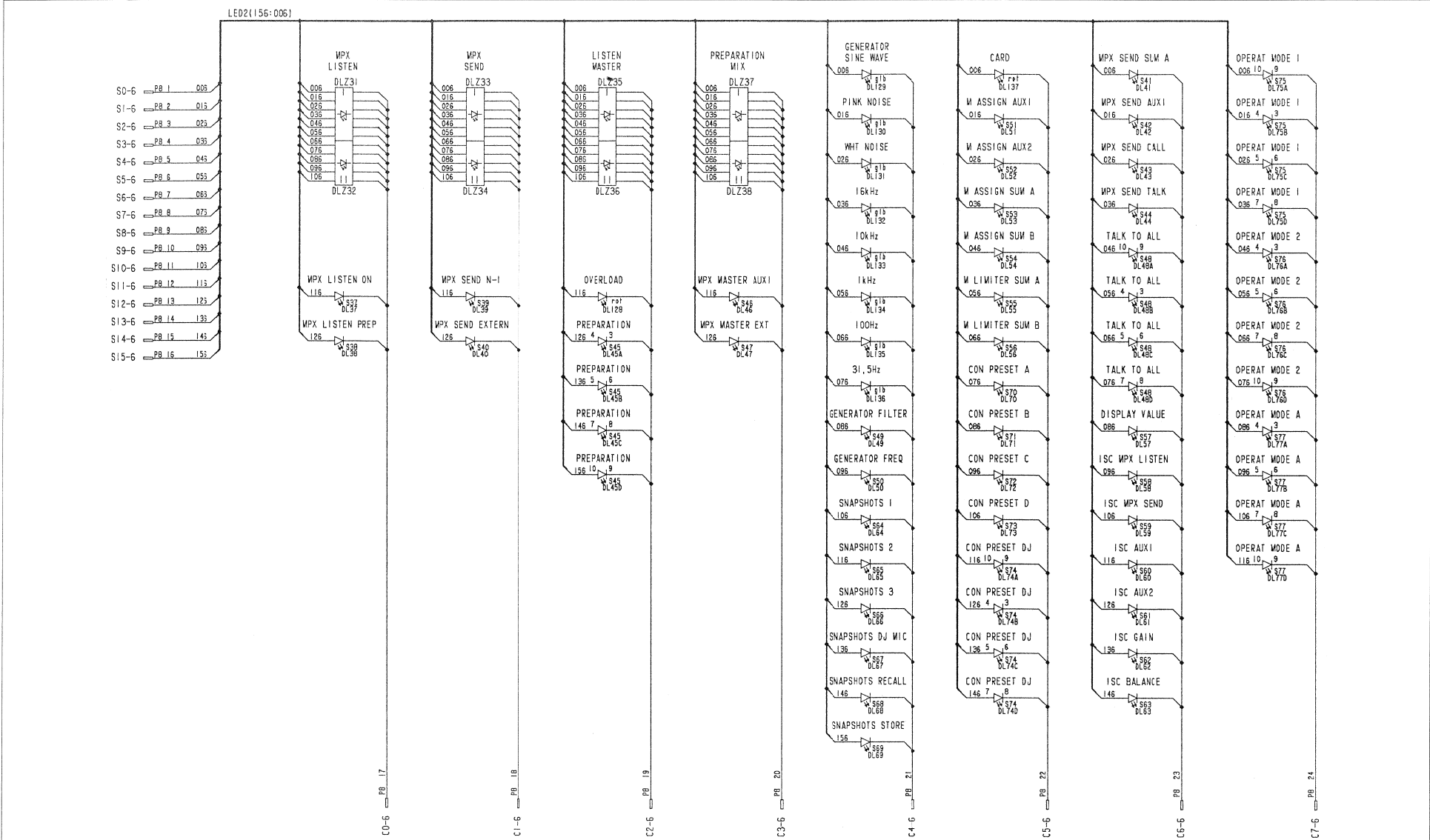


Centralized Front Board 1.940.763.00



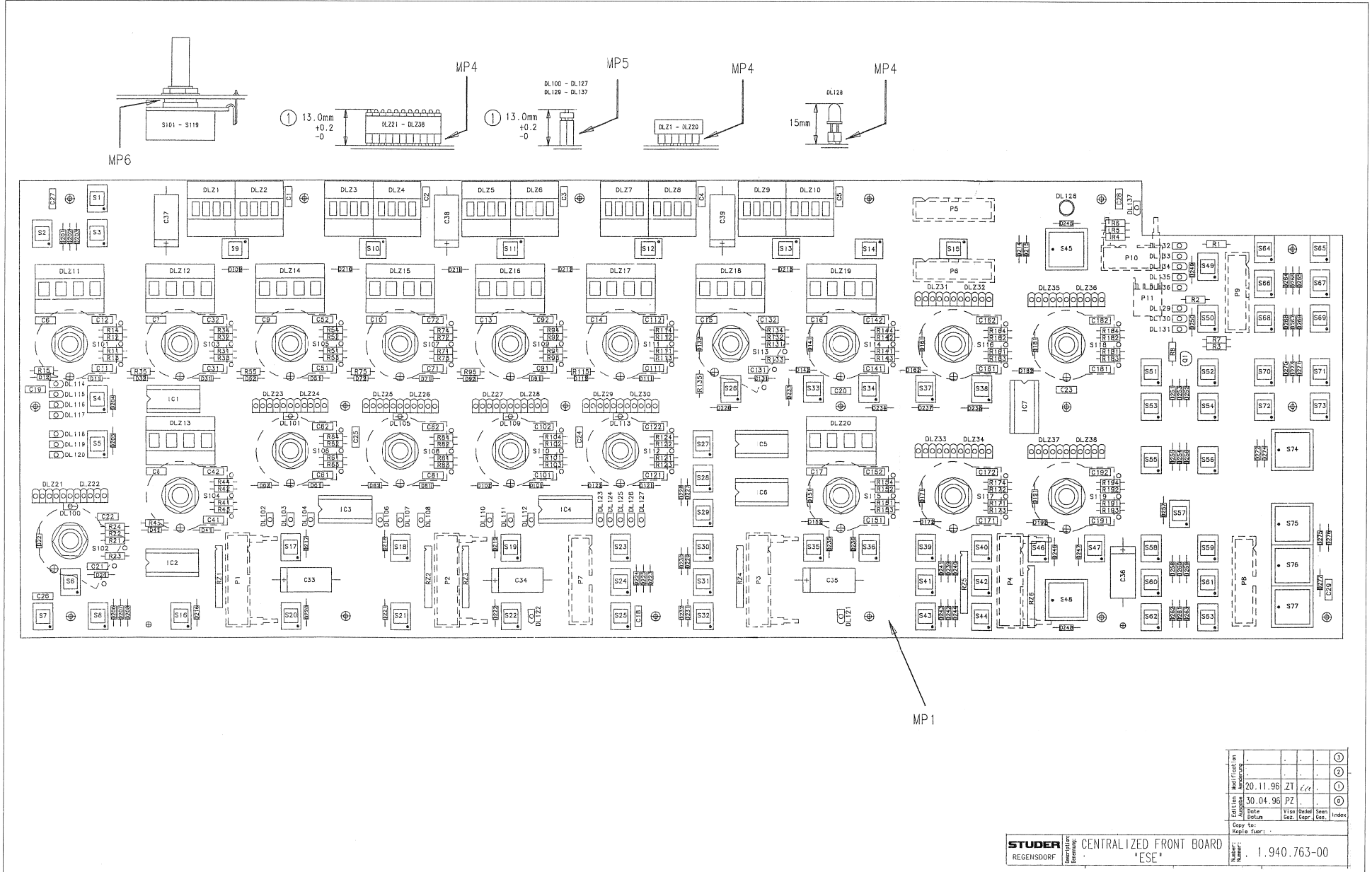


Centralized Front Board 1.940.763.00





Centralized Front Board 1.940.763.00



Mod. Floor in								
Mod. Floor in	20.11.96	ZI	✓					
Ed. in	30.04.96	PZ						
Ed. in								
Copy to:								
Kopie fuer:								
Number:	1.940.763-00							



Centralized Front Board 1.940.763.00

Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description
0 C 1	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 91	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 286	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DLZ 37	80.04.2812				DLZ 11"0 GB	
0 C 2	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 92	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 287	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DLZ 38	not used	not used			not used	
0 C 3	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 101	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 101	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 1	50.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 4	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 102	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 289	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 2	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 5	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 111	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 270	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 3	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 6	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 112	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 271	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 4	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 7	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 121	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 272	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 5	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 8	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 122	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 273	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 6	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 9	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 131	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 274	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 6	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 10	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 132	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 275	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 IC 7	80.17.1014	74HC14	IC ... 74 HC 14 ..	A		
0 C 11	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 141	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 278	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 MP 1	1.940.781.11	1 pce			CENTRALIZED FRONT PCB	
0 C 12	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 142	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 D 277	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	J MP 2	43.01.0109	1 pce	Label		ESE-WARNSHLOD	
0 C 13	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 151	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	J MP 3	1.940.763.04	1 pce		J MP 4	53.03.0218	518 pcs	1p		NR-ETIKETTE 5 * 20	
0 C 14	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 152	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 100	50.04.2132	TLUG 2401	DL TLUG 2401	GN MATT	1 MP 5	53.03.0240	58 pcs			XLED SINGLE LINE, 2 POL. PRINT
0 C 16	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 161	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 101	50.04.2132	TLUG 2401	DL TLUG 2401	GN MATT	0 MP 6	1.010.091.23	19 pcs			DISTANZSCHLEIBE D.9/0.12* 1.2
0 C 16	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 162	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 102	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 1	54.14.2103	20p			P STECKER 20 P, AU, V, R, GERADE
0 C 16	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 171	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 103	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 2	54.14.2103	20p			P STECKER 20 P, AU, V, R, GERADE
0 C 18	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 172	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 104	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 3	54.14.2103	20p			P STECKER 20 P, AU, V, R, GERADE
0 C 18	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 181	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 105	50.04.2132	TLUY 2401	DL TLUY 2401	GN MATT	0 P 4	54.14.2103	20p			P STECKER 20 P, AU, V, R, GERADE
0 C 20	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 182	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 106	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 5	54.16.0534	34p			P 140", 34 P, AU, PRINT
0 C 21	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 191	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 107	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 6	54.16.0540	40p			P 140", 40 P, AU, PRINT
0 C 22	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 192	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 108	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 7	54.16.0540	40p			P 140", 40 P, AU, PRINT
0 C 23	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 201	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 109	50.04.2132	TLUG 2401	DL TLUG 2401	GN MATT	0 P 8	54.16.0534	34p			P 140", 34 P, AU, PRINT
0 C 23	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 202	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 110	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 9	54.16.0534	34p			P 140", 34 P, AU, PRINT
0 C 25	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 203	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 111	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 P 10	54.14.2101	10p			P STECKER 10 P, AU, V, R, GERADE
0 C 26	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 204	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 112	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	2 P 11	54.12.0724	4p			Stecker WINKEL PCB
0 C 27	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 205	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 113	50.04.2132	TLUY 2401	DL TLUY 2401	GN MATT	0 Q 1	59.03.0523	ZTX651			ZTX 651
0 C 28	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 206	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 114	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 1	57.11.3331	330R			MF, 1%, 0207
0 C 29	59.08.0104	100n		PETP, 63V, 10%, RME	0 D 207	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 115	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 2	57.11.3331	330R			MF, 1%, 0207
0 C 31	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 208	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 116	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 3	57.11.3331	330R			MF, 1%, 0207
0 C 32	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 209	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 117	50.04.2132	TLUY 2401	DL TLUY 2401	GB MATT	0 R 4	57.11.3473	47k			MF, 1%, 0207
0 C 33	59.25.2221	220u		C-EL, 20%, 10V	0 D 210	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 118	50.04.2132	TLUY 2401	DL TLUY 2401	GB MATT	0 R 5	57.11.3473	47k			MF, 1%, 0207
0 C 34	59.25.2221	220u		C-EL, 20%, 10V	0 D 211	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 119	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 6	57.11.3472	47k			MF, 1%, 0207
0 C 35	59.25.2221	220u		C-EL, 20%, 10V	0 D 212	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 120	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 7	57.11.3220	22R			MF, 1%, 0207
0 C 36	59.25.2221	220u		C-EL, 20%, 10V	0 D 213	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 121	50.04.2121	TLUR 2401	DL TLUR 2401	RT MATT	0 R 8	57.11.3104	100k			MF, 1%, 0207
0 C 37	59.25.2221	220u		C-EL, 20%, 10V	0 D 214	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	1 DL 122	not used	TLUY 2401	DL TLUY 2401	RT MATT	0 R 9	57.11.3104	100k			MF, 1%, 0207
0 C 38	59.25.2221	220u		C-EL, 20%, 10V	0 D 215	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 123	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 10	57.11.3104	100k			MF, 1%, 0207
0 C 39	59.25.2221	220u		C-EL, 20%, 10V	0 D 216	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 124	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 11	57.11.3102	1k0			MF, 1%, 0207
0 C 41	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 217	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 125	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 12	57.11.3104	100k			MF, 1%, 0207
0 C 42	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 218	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 126	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 13	57.11.3104	100k			MF, 1%, 0207
0 C 51	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 219	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 127	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 14	57.11.3104	100k			MF, 1%, 0207
0 C 52	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 220	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 128	50.04.2502	HLMPT4700	DL HLMPT-4700	RT	0 R 15	57.11.3104	100k			MF, 1%, 0207
0 C 81	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 221	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 129	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 16	57.11.3104	100k			MF, 1%, 0207
0 C 82	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 222	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 130	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 17	57.11.3104	100k			MF, 1%, 0207
0 C 71	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 223	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 131	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 18	57.11.3104	100k			MF, 1%, 0207
0 C 72	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 224	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 132	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 19	57.11.3104	100k			MF, 1%, 0207
0 C 81	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 225	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 133	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 20	57.11.3104	100k			MF, 1%, 0207
0 C 82	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 226	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 134	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 21	57.11.3104	100k			MF, 1%, 0207
0 C 91	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 227	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 135	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 22	57.11.3104	100k			MF, 1%, 0207
0 C 92	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 228	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 136	50.04.2133	TLUY 2401	DL TLUY 2401	GB MATT	0 R 23	57.11.3104	100k			MF, 1%, 0207
0 C 101	59.08.0102	1n0		PETP, 63V, 10%, RME	0 D 229	50.04.0125	1N4448	75V, 150mA, 4ns, DO-35	0 DL 137	59.04.1332	TLUG 2401	DL TLUG 2401	GN MATT						



**Centralized Front Board 1.940.763.00**

Iidx.	Pos.	Part No.	Qty.	Type/Val.	Description	Iidx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 112	57.11.3104	100k		MF, 1%, 0207	0	S 43	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT
0	R 113	57.11.3104	100k		MF, 1%, 0207	0	S 44	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN
0	R 114	57.11.3104	100k		MF, 1%, 0207	0	S 45	55.15.0744	1*a		S TASTE 1*A, 12MM, GB/GB
0	R 115	57.11.3102	1k0		MF, 1%, 0207	0	S 46	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 121	57.11.3104	100k		MF, 1%, 0207	0	S 47	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 122	57.11.3104	100k		MF, 1%, 0207	0	S 48	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 123	57.11.3104	100k		MF, 1%, 0207	0	S 49	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 124	57.11.3104	100k		MF, 1%, 0207	0	S 50	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 131	57.11.3104	100k		MF, 1%, 0207	0	S 51	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 132	57.11.3104	100k		MF, 1%, 0207	0	S 52	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 133	57.11.3104	100k		MF, 1%, 0207	0	S 53	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 134	57.11.3104	100k		MF, 1%, 0207	0	S 54	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 135	57.11.3102	1k0		MF, 1%, 0207	0	S 55	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT
0	R 141	57.11.3104	100k		MF, 1%, 0207	0	S 56	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT
0	R 142	57.11.3104	100k		MF, 1%, 0207	0	S 57	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT
0	R 143	57.11.3104	100k		MF, 1%, 0207	0	S 58	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 144	57.11.3104	100k		MF, 1%, 0207	0	S 59	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 151	57.11.3104	100k		MF, 1%, 0207	0	S 60	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 152	57.11.3104	100k		MF, 1%, 0207	0	S 61	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 153	57.11.3104	100k		MF, 1%, 0207	0	S 62	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 154	57.11.3104	100k		MF, 1%, 0207	0	S 63	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 161	57.11.3104	100k		MF, 1%, 0207	0	S 64	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 162	57.11.3104	100k		MF, 1%, 0207	0	S 65	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 163	57.11.3104	100k		MF, 1%, 0207	0	S 66	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 164	57.11.3104	100k		MF, 1%, 0207	0	S 67	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 171	57.11.3104	100k		MF, 1%, 0207	0	S 68	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN
0	R 172	57.11.3104	100k		MF, 1%, 0207	0	S 69	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT
0	R 173	57.11.3104	100k		MF, 1%, 0207	0	S 70	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 174	57.11.3104	100k		MF, 1%, 0207	0	S 71	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 181	57.11.3104	100k		MF, 1%, 0207	0	S 72	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 182	57.11.3104	100k		MF, 1%, 0207	0	S 73	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB
0	R 183	57.11.3104	100k		MF, 1%, 0207	0	S 74	55.15.0744	1*a		S TASTE 1*A, 12MM, GB/GB
0	R 184	57.11.3104	100k		MF, 1%, 0207	1	S 75	55.15.0722	1*a		S TASTE 1*A, 12MM, RT/RT
0	R 191	57.11.3104	100k		MF, 1%, 0207	1	S 76	55.15.0722	1*a		S TASTE 1*A, 12MM, RT/RT
0	R 192	57.11.3104	100k		MF, 1%, 0207	0	S 77	55.15.0722	1*a		S TASTE 1*A, 12MM, RT/RT
0	R 193	57.11.3104	100k		MF, 1%, 0207	0	S 101	1.940.751.02			ROTARY ENCODER
0	R 194	57.11.3104	100k		MF, 1%, 0207	0	S 102	1.940.751.02			ROTARY ENCODER
0	RZ 1	57.88.4473	8*47k		2%, SIP 9	0	S 103	1.940.751.02			ROTARY ENCODER
0	RZ 2	57.88.4473	8*47k		2%, SIP 9	0	S 104	1.940.751.02			ROTARY ENCODER
0	RZ 3	57.88.4473	8*47k		2%, SIP 9	0	S 105	1.940.751.02			ROTARY ENCODER
0	RZ 4	57.88.4473	8*47k		2%, SIP 9	0	S 106	1.940.751.02			ROTARY ENCODER
0	RZ 5	57.88.4473	8*47k		2%, SIP 9	0	S 107	1.940.751.02			ROTARY ENCODER
0	RZ 6	57.88.4473	8*47k		2%, SIP 9	0	S 108	1.940.751.02			ROTARY ENCODER
0	S 1	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN	0	S 109	1.940.751.02			ROTARY ENCODER
0	S 2	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB	0	S 110	1.940.751.02			ROTARY ENCODER
0	S 3	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB	0	S 111	1.940.751.02			ROTARY ENCODER
0	S 4	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT	0	S 112	1.940.751.02			ROTARY ENCODER
0	S 5	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT	0	S 113	1.940.751.02			ROTARY ENCODER
0	S 6	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT	0	S 114	1.940.751.02			ROTARY ENCODER
0	S 7	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN	0	S 115	1.940.751.02			ROTARY ENCODER
0	S 8	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN	0	S 116	1.940.751.02			ROTARY ENCODER
0	S 9	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB	0	S 117	1.940.751.02			ROTARY ENCODER
0	S 10	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB	0	S 118	1.940.751.02			ROTARY ENCODER
0	S 11	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB	0	S 119	1.940.751.02			ROTARY ENCODER
0	S 12	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						End of List
0	S 13	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 14	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 15	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 16	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 17	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 18	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 19	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
3	S 20	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 21	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 22	not used	not used		not used						
0	S 23	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 24	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 25	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 26	55.15.0622	1*a		S TASTE 1*A, 5MM, RT/RT						
0	S 27	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 28	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 29	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 30	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 31	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 32	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 33	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN						
0	S 34	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 35	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN						
0	S 36	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 37	55.15.0655	1*a		S TASTE 1*A, 5MM, GN/GN						
0	S 38	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 39	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 40	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 41	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						
0	S 42	55.15.0644	1*a		S TASTE 1*A, 5MM, GB/GB						

**Comments:**  
 (01) S75 and S76 additional inserted  
 (02) P11 54.99.0165 changed to 54.12.0724



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**CIRCUIT DIAGRAMS SECTION 5**

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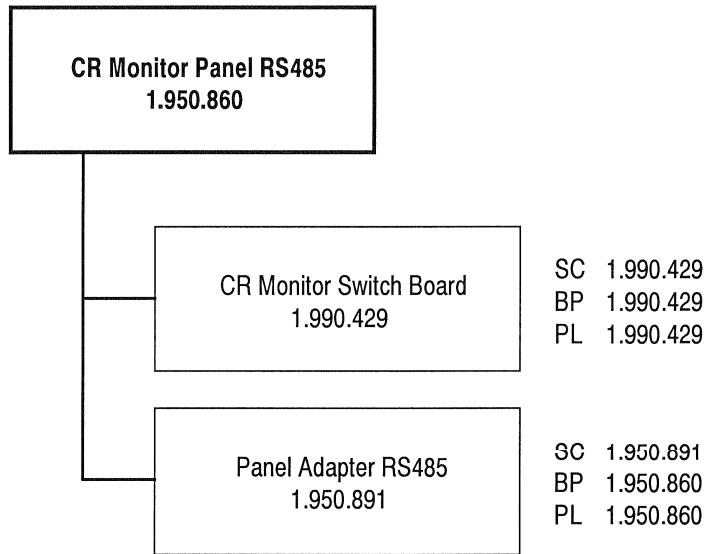
**Monitor Units**

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CR Monitor Panel RS485 .....	1.950.860
<i>consisting of:</i>	
– CR Monitor Switch Board .....	1.990.429
– Panel Adapter RS485 .....	1.950.891
Studio Monitor Panel RS485 .....	1.950.870
<i>consisting of:</i>	
– Studio Monitor Switch Board .....	1.990.439
– Panel Adapter RS485 ( <i>see 1.950.860</i> ) .....	1.950.891
PFL/TB/HP Panel RS485 .....	1.950.880
<i>consisting of:</i>	
– PFL/TB/HP Switch Board .....	1.990.449
– Panel Adapter RS485 ( <i>see 1.950.860</i> ) .....	1.950.891
Source Selector Panel RS485 .....	1.950.890
<i>consisting of:</i>	
– Source Selector Switch Board .....	1.990.499
– Panel Adapter RS485 ( <i>see 1.950.860</i> ) .....	1.950.891
HDLC Bus Board 12A .....	1.992.170
HDLC Bus Board 4A .....	1.992.171

**CR Monitor Panel RS485, Components**

1.950.860

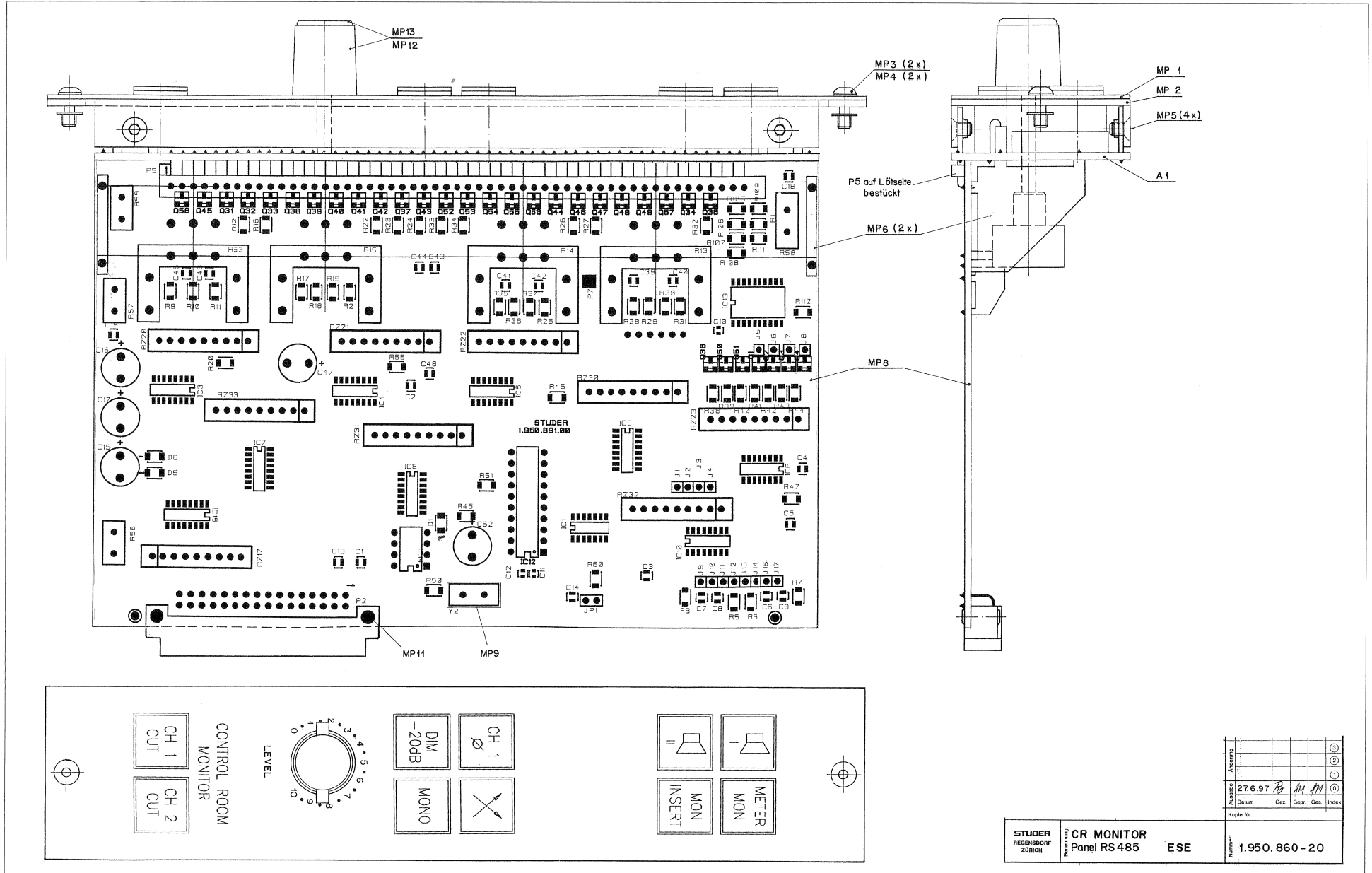


**SC:** Circuit Diagram

**BP:** Component Placement Diagram

**PL:** Parts List

CR Monitor Panel RS 485 1.950.860.20



Prozess:									
Nummer:	27.6.97								
Datum:									
Kopie für:									

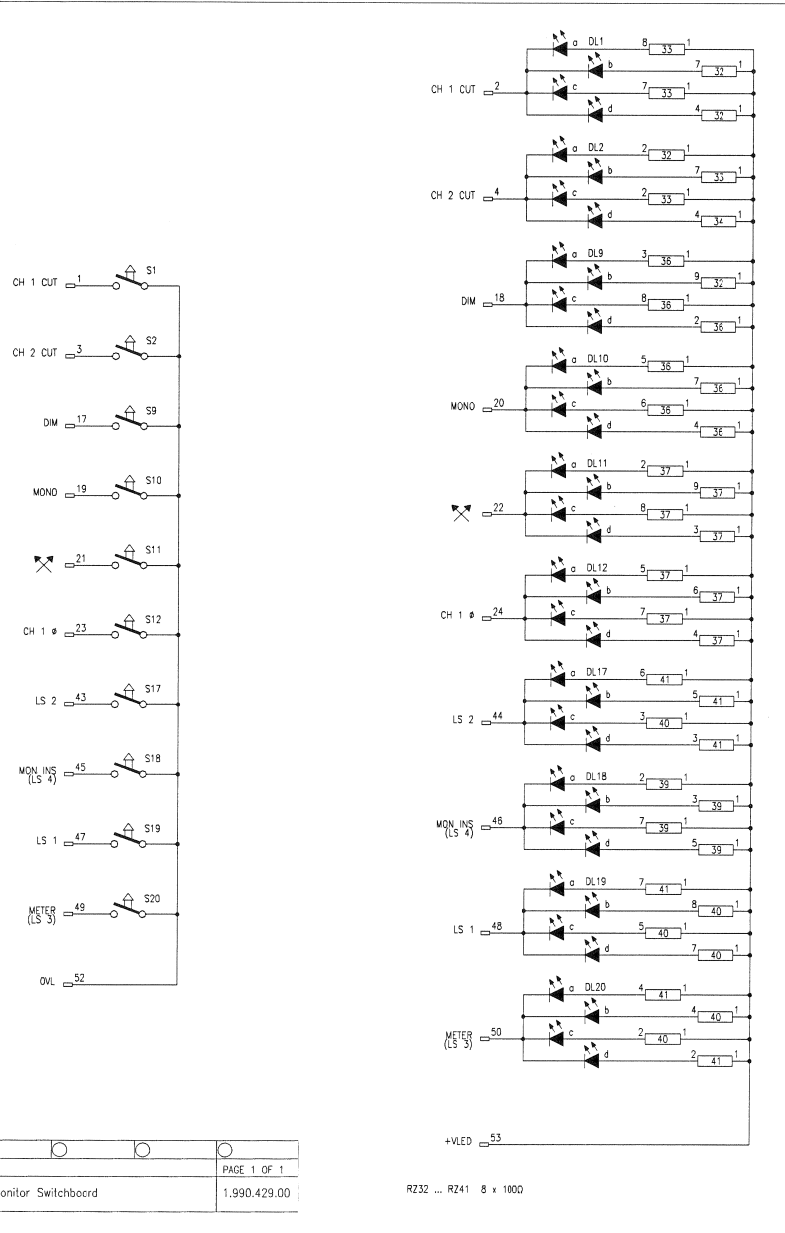
STUDER REGENSDORF ZÜRICH	CR MONITOR Panel RS 485	ESE	1.950.860-20
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CR Monitor Panel RS 485 I.950.860.22

Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description
0 A 1	1.990.429.00	1	pcse	CR MONITOR SWITCH BOARD	0 Q 47	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 XIC 12	53.03.0165	20p		DIL 0.3", lot, gerade
0 C 1	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 Q 48	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 XIC 14	53.03.0166	pcse	8p	DIL 0.3", lot, gerade
0 C 2	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 Q 49	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 Y 2	88.01.1016		22.1184MHz	22.118 400 MHz, HC 49/U
0 C 3	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 Q 51	50.60.0001		BC847B	Q BC 847 B, SOT 23	End of List				
0 C 4	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 Q 52	50.60.0001		BC847B	Q BC 847 B, SOT 23	Comments:				
0 C 5	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 Q 53	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 6	59.60.3317	2n2		CER 50V, 10%, X7R, 8605	0 Q 54	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 7	59.60.3317	2n2		CER 50V, 10%, X7R, 8605	0 Q 55	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 8	59.60.3317	2n2		CER 50V, 10%, X7R, 8605	0 Q 56	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 9	59.60.3317	2n2		CER 50V, 10%, X7R, 8605	0 Q 57	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 10	59.60.2231	18p		CER 50V, 5%, CGO, 3603	0 Q 58	50.60.0001		BC847B	Q BC 847 B, SOT 23					
0 C 11	59.60.2237	33p		CER 50V, 5%, CGO, 3603	0 R 1			not used	0R0	MF				020k
0 C 12	59.60.2237	33p		CER 50V, 5%, CGO, 3603	0 R 5	57.60.1101		103R	MF, 1%, 020k, E24					
0 C 13	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 R 6	57.60.1101		103R	MF, 1%, 020k, E24					
0 C 14	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 R 7	57.60.1101		103R	MF, 1%, 020k, E24					
0 C 15	59.22.4002	100uF		EL 18V, 20%, RM5	0 R 8	57.60.1101		103R	MF, 1%, 020k, E24					
0 C 16	59.22.4002	100uF		EL 18V, 20%, RM5	0 R 9	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 17	59.22.4002	100uF		EL 18V, 20%, RM5	0 R 10	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 18	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 R 11	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 19	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 R 12	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 38	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 13			not used	103K	POT 2 '100 K LIN				
0 C 40	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 14			not used	103K	POT 2 '100 K LIN				
0 C 41	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 15	1.010.039.58				POT 100K,LIN,21 RASTSTELLUNGEN				
0 C 43	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 16	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 44	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 17	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 45	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 18	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 46	59.60.3325	10n		CER 50V, 10%, X7R, 8605	0 R 19	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 47	59.22.6100	10u		EL 35V, 20%, RM5	0 R 20	57.60.1103		10K	MF, 1%, 020k, E24					
0 C 48	59.60.3337	100n		CER 50V, 10%, X7R, 8605	0 R 21	57.60.1882		6K8	MF, 1%, 020k, E24					
0 C 52	59.22.6100	10u		EL 35V, 20%, RM5	0 R 22	57.60.1882		6K8	MF, 1%, 020k, E24					
0 D 1	50.60.8001	4448		D LL 4448	SOD 80	0 R 23	57.60.1882	6K8	MF, 1%, 020k, E24					
0 D 5	50.60.8001	4448		D LL 4448	SOD 80	0 R 24	57.60.1882	6K8	MF, 1%, 020k, E24					
0 D 6	50.60.8001	4448		D LL 4448	SOD 80	0 R 25	57.60.1882	6K8	MF, 1%, 020k, E24					
0 IC 1	50.62.1004		74HC 04	74 HC 04	0 R 26	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 2	50.62.1695		74HC595	74 HC 595	0 R 27	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 4	50.62.1695		74HC595	74 HC 595	0 R 28	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 5	50.62.1695		74HC595	74 HC 595	0 R 29	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 6	50.62.1695		74HC595	74 HC 595	0 R 30	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 7	50.62.1695		74HC595	74 HC 595	0 R 31	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 8	50.62.1695		74HC595	74 HC 595	0 R 32	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 9	50.62.1695		74HC595	74 HC 595	0 R 33	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 10	50.62.1695		74HC595	74 HC 595	0 R 34	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 11	50.62.1695		74HC595	74 HC 595	0 R 35	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 12	1.950.900.22		SW 860 MONITOR (50.16.0313)	0 R 36	57.60.1882		6K8	MF, 1%, 020k, E24						
0 IC 13	50.61.8101		68HC08	A/D Converter 10bit 8ch SO 20	0 R 37	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 14	50.15.0115		75176	IC SN 75176 BP, DS 3665 N,	0 R 38	57.60.1882		6K8	MF, 1%, 020k, E24					
0 IC 15	50.62.1695		74HC165	74 HC 165	0 R 39	57.60.1882		6K8	MF, 1%, 020k, E24					
0 MP 1	1.990.420.01	1	pcse	FRONTSCHILD CR MONITOR	0 R 40	57.60.1882		6K8	MF, 1%, 020k, E24					
0 MP 2	1.990.490.02	1	pcse	TRAEGER SOURCE SELECTOR 20PB	0 R 41	57.60.1882		6K8	MF, 1%, 020k, E24					
0 MP 3	1.010.022.21	2	pcs	M3*8 L-Schraube IS sw spezial	0 R 42	57.60.1882		6K8	MF, 1%, 020k, E24					
0 MP 4	24.18.3023	2	pcs	WELLENSICHERUNG 2.3	0 R 43	57.60.1103		10K	MF, 1%, 020k, E24					
0 MP 5	21.01.2352	4	pcs	M3*4 S - Schraube Zn gb chr	0 R 44	57.60.1103		10K	MF, 1%, 020k, E24					
0 MP 6	1.990.100.01	2	pcs	QUERPRINTSTUETZE	0 R 45	57.60.1103		10K	MF, 1%, 020k, E24					
0 MP 7	1.950.960.04	1	pcse	STUDER NR. ETIKETTE 10x20	0 R 47			0						
0 MP 8	1.950.891.11	1	pcse	PANEL ADAPTER RS 485 PCB	0 R 50	57.60.1103		10K	MF, 1%, 020k, E24					
0 MP 9	89.01.1499	1	pcse	QUARZ - ISOLIERPLATTE	0 R 51	57.60.1101		103R	MF, 1%, 020k, E24					
0 MP 10	43.01.0'08	1	pcse	Label ESE-WARNSCHILD	0 R 53			not used	103K	POT 2 '100K LIN				
0 MP 11	28.99.0'19	2	pcs	Label ROHRNIETE D 2.5*0.15' 0	0 R 55	57.60.1150		15R	MF, 1%, 020k, E24					
0 MP 12	42.01.0233	1	pcse	Label KNEBELKNOFF GR C 18x 4	0 R 56	57.62.1820		94mA	PTC, 60V, 50 Ohm					
0 MP 13	42.01.0257	1	pcse	Label DECKEL HGR ZU KNOFF-D 15	0 R 57	57.62.1820		94mA	PTC, 60V, 50 Ohm					
0 MP 14	1.101.00120	1	pcse	Label TEXT-ETIK. 5*20 HARDWARE-20	0 R 58	57.62.7016		1.6A	POLY-PTC 50V					
0 P 2	54.11.2013	32p		EU-BK 2*16p	0 R 59	57.62.7016		1.6A	POLY-PTC 50V					
0 P 5	54.11.0'25	53	pcs	1p P STIFT/WINKEL 1 PIN=1 STK	0 R 60	57.60.1103		10K	MF, 1%, 020k, E24					
0 Q 1	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 105	57.60.1000		0R0	MF, 020k					
0 Q 2	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 106	57.60.1000		0R0	MF, 020k					
0 Q 3	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 107	57.60.1000		0R0	MF, 020k					
0 Q 4	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 108	57.60.1000		0R0	MF, 020k					
0 Q 31	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 109	57.60.1000		0R0	MF, 020k					
0 Q 32	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 110	57.60.1000		0R0	MF, 020k					
0 Q 33	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 111	57.60.1000		0R0	MF, 020k					
0 Q 34	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 R 112	57.60.1000		0R0	MF, 020k					
0 Q 35	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 17	57.88.4104		8*00K	2%, S1P 9					
0 Q 36	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 18	57.88.4104		8*00K	2%, S1P 9					
0 Q 37	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 19	57.88.4104		8*00K	2%, S1P 9					
0 Q 38	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 20	57.88.4104		8*00K	2%, S1P 9					
0 Q 39	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 21	57.88.4104		8*00K	2%, S1P 9					
0 Q 40	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 22	57.88.4104		8*00K	2%, S1P 9					
0 Q 41	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 23	57.88.4104		8*00K	2%, S1P 9					
0 Q 42	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 24	57.88.4104		8*00K	2%, S1P 9					
0 Q 43	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 25	57.88.4104		8*00K	2%, S1P 9					
0 Q 44	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 26	57.88.4104		8*00K	2%, S1P 9					
0 Q 45	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 27	57.88.4104		8*00K	2%, S1P 9					
0 Q 46	50.60.0001		BC847B	Q BC 847 B, SOT 23	0 RZ 28	57.88.4104		8*00K	2%, S1P 9					

CR Monitor Switch Board 1.990.429.00



① 3.4.98			
990429-S			PAGE 1 OF 1
 REGENSDORF SWITZERLAND	CR Monitor Switchboard	1.990.429.00	

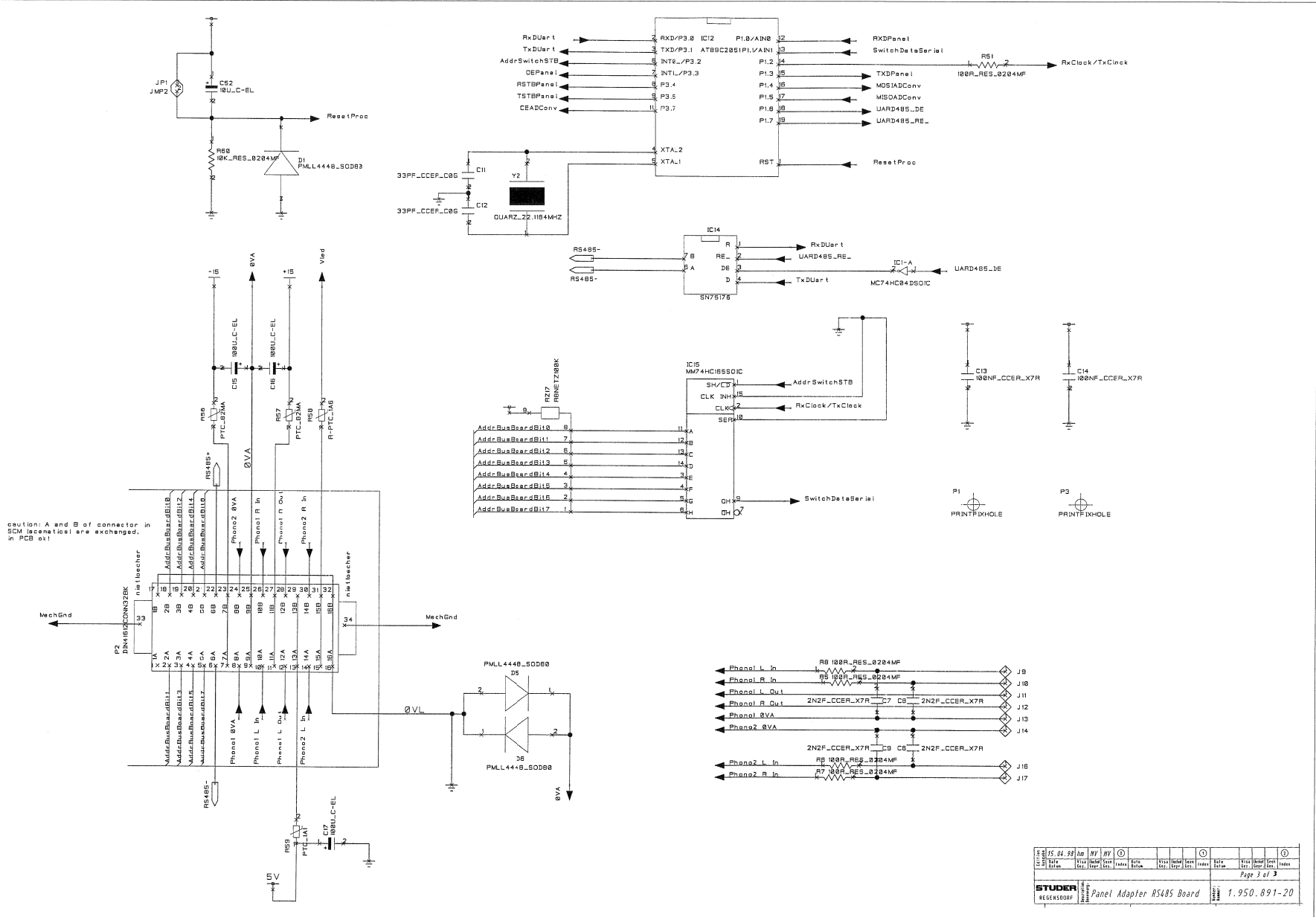






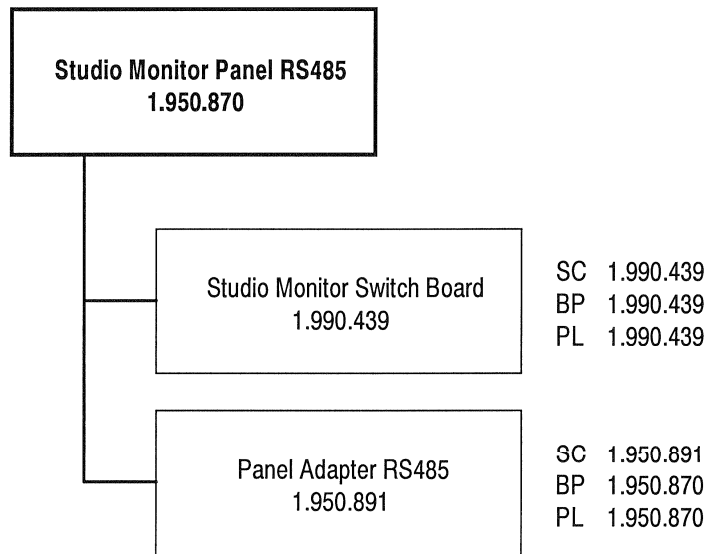


Panel Adapter RS 485 Board 1.950.891.20



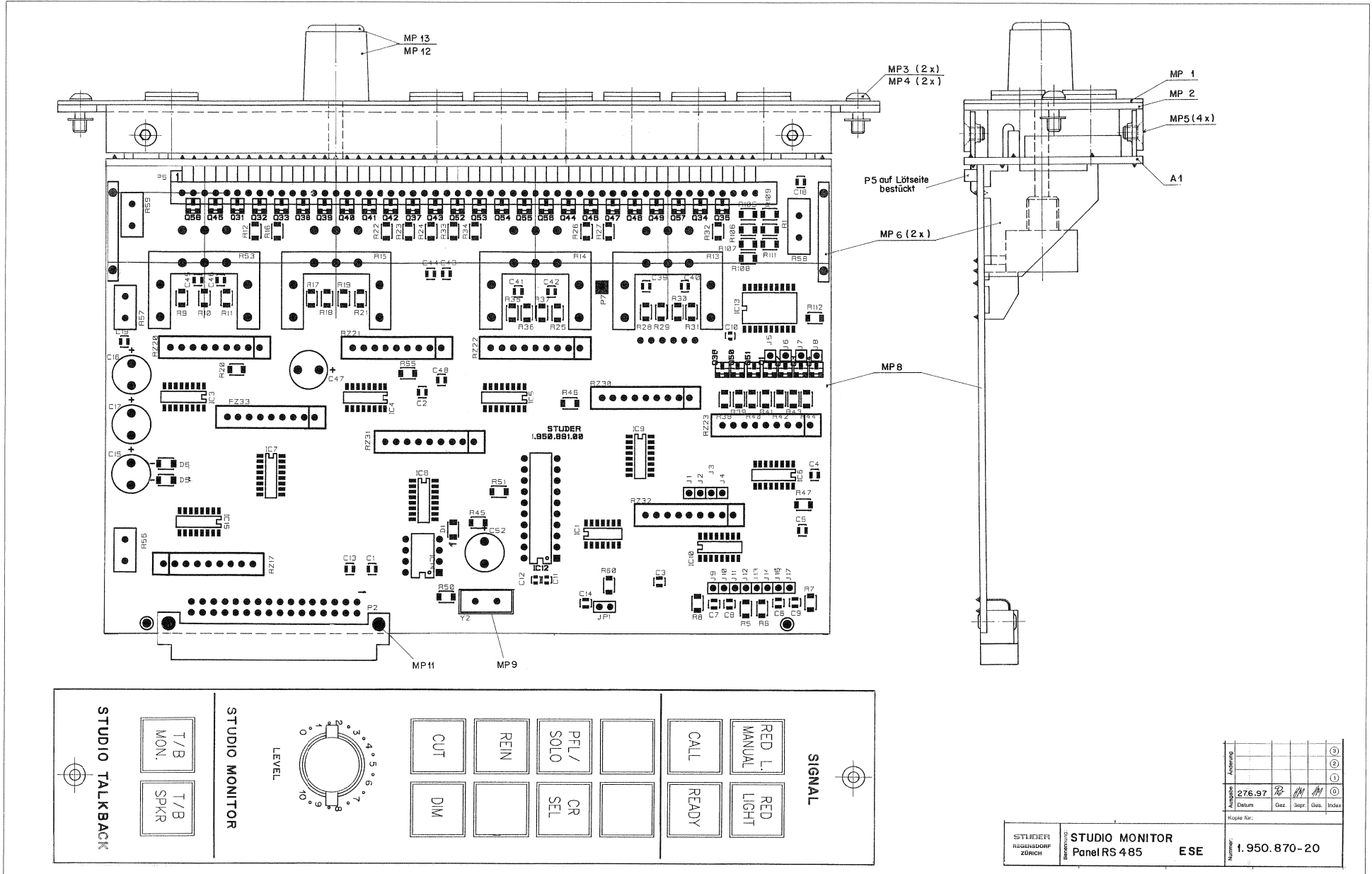
**Studio Monitor Panel RS485, Components**

1.950.870



**SC:** Circuit Diagram  
**BP:** Component Placement Diagram  
**PL:** Parts List

Studio Monitor Panel RS 485 1.950.870.20



STUDER REGENSBRUNN ZÜRICH	STUDIO MONITOR Panel RS 485	ESE
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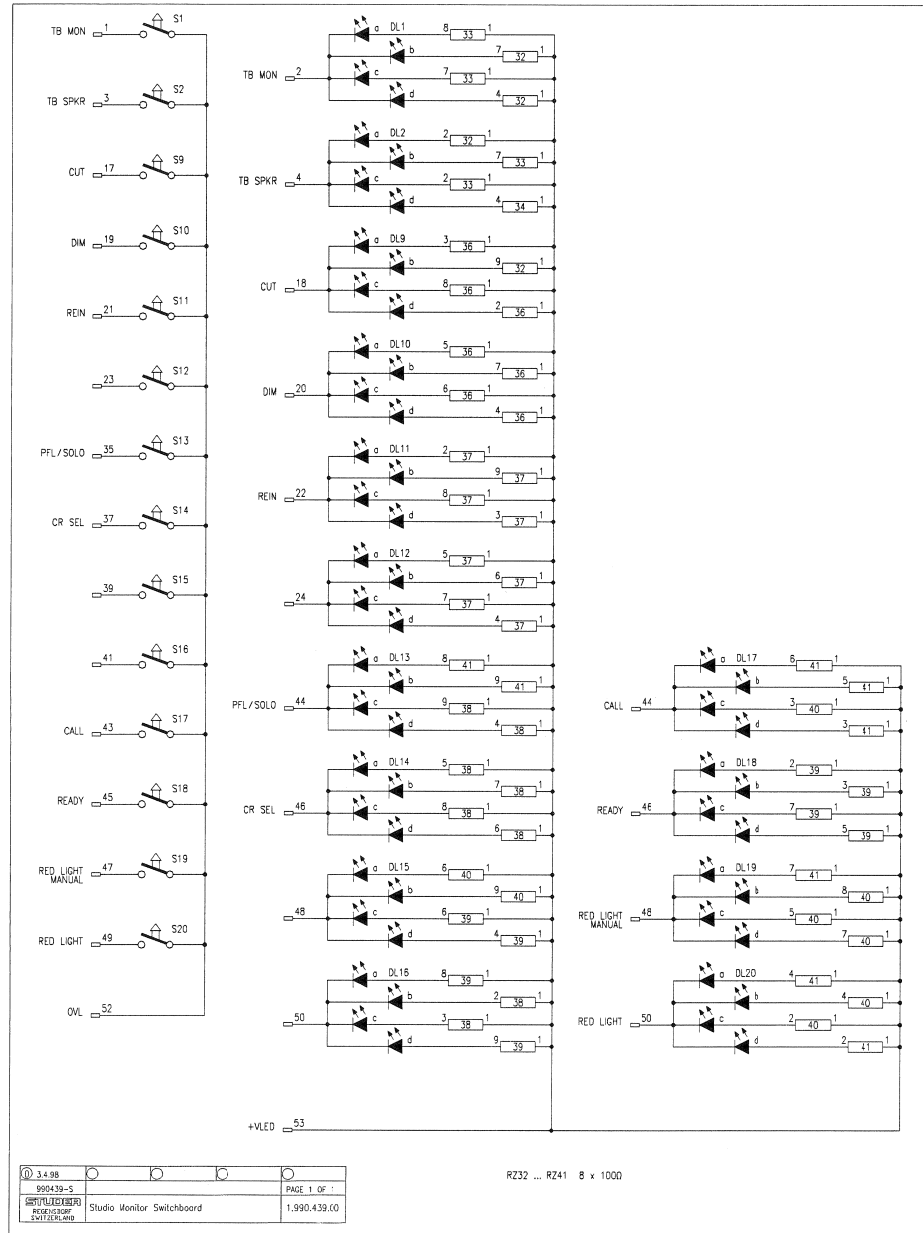
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Kopie für:		
Name:		
Datum:		
Gez.:		
Schr.:		
Gez.:		
Index:		
Number:		1.950.870-20



Studio Monitor Panel RS 485 I.950.870.22

idx.	Pos.	Part No.	Qty.	Type/Val.	Description	idx.	Pos.	Part No.	Qty.	Type/Val.	Description	idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	A 1	1.990.439.00	1	pcse	STUDIO MONITOR SWITCH BOARD	0	Q 49	50.60.0001		BC847B	Q BC 847 B, SOT 23	0	XIC 12	53.03.0165		20p	DIL 0.3", lot, gerade
0	C 1	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 47	50.60.0001		BC847B	Q BC 847 B, SOT 23	0	XIC 14	53.03.0166	pcse	8p	DIL 0.3", lot, gerade
0	C 2	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 48	50.60.0001		BC847B	Q BC 847 B, SOT 23	0	Y 2	89.01.1016		22.11840MHz	22.118 400 MHz, HC 49/U
0	C 3	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 49	50.60.0001		BC847B	Q BC 847 B, SOT 23	-----End of List-----					
0	C 4	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 50	50.60.0001		BC847B	Q BC 847 B, SOT 23	Comments:					
0	C 5	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 51	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 6	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 52	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 7	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 53	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 8	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 54	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 9	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 55	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 10	59.60.2231	18p		CER 50V, 5%, COG, 0903	0	Q 56	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 11	59.60.2237	33p		CER 50V, 5%, COG, 0903	0	Q 57	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 12	59.60.2237	33p		CER 50V, 5%, COG, 0903	0	Q 58	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 13	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 1	not used		0R0	MF, 0204						
0	C 14	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 5	57.60.1101		100R	MF, 1%, 0204, E24						
0	C 15	59.22.40C2	100uF		EL 16V, 20%, RM5	0	R 6	57.60.1101		100R	MF, 1%, 0204, E24						
0	C 16	59.22.40C2	100uF		EL 16V, 20%, RM5	0	R 7	57.60.1101		100R	MF, 1%, 0204, E24						
0	C 17	59.22.40C2	100uF		EL 16V, 20%, RM5	0	R 8	57.60.1101		100R	MF, 1%, 0204, E24						
0	C 18	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 9	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 19	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 10	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 39	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 11	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 40	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 12	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 41	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 13	not used		100k	POT 2 *100 K LIN						
0	C 42	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 14	not used		100k	POT 2 *100 K LIN						
0	C 43	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 15	1.010.039.59			POT 100K/LIN/2 RASTSTELLUNGEN						
0	C 44	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 16	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 45	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 17	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 46	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 18	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 47	59.22.6100	10u		EL 35V, 20%, RM5	0	R 19	57.60.1682		6K8	MF, 1%, 0204, E24						
0	C 48	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 20	57.60.1103		10K	MF, 1%, 0204, E24						
0	C 52	59.22.6100	10u		EL 35V, 20%, RM5	0	R 21	57.60.1682		6K8	MF, 1%, 0204, E24						
0	D 1	50.60.8001	4448		D LL 4448 SOD 30	0	R 22	57.60.1682		6K8	MF, 1%, 0204, E24						
0	D 5	50.60.8001	4448		D LL 4448 SOD 30	0	R 23	57.60.1682		6K8	MF, 1%, 0204, E24						
0	D 8	50.60.8001	4448		D LL 4448 SOD 30	0	R 24	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 1	50.62.1094	74HC 04		74 HC 04	0	R 25	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 3	50.62.1595	74HC266		74 HC 595	0	R 26	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 4	50.62.1595	74HC595		74 HC 595	0	R 27	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 5	50.62.1595	74HC595		74 HC 595	0	R 28	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 6	50.62.1595	74HC595		74 HC 595	0	R 29	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 7	50.62.1165	74HC165		74 HC 165	0	R 30	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 8	50.62.1165	74HC165		74 HC 165	0	R 31	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 9	50.62.1165	74HC165		74 HC 165	0	R 32	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 10	50.62.1165	74HC165		74 HC 165	0	R 33	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 12	1.950.900.22			SW 860 MONITOR (5C.16.0313)	0	R 34	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 13	50.61.8161	68HC68		A/D Converter 10bit 8Ch SO 20	0	R 35	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 14	50.16.01-5	75176		IC SN 75176 BP, DS 3695 N,	0	R 36	57.60.1682		6K8	MF, 1%, 0204, E24						
0	IC 15	50.62.1165	74HC165		74 HC 165	0	R 37	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 1	1.990.430.01	1	pcse	FRONTSCHILD STUDIO MONITOR	0	R 38	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 2	1.990.490.02	1	pcse	TRAEGER SOURCE SELECTOR 20PB	0	R 39	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 3	1.010.022.21	2	pcse	L-Schraube IS sw spezial	0	R 40	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 4	24.16.3023	2	pcse	WELLENSICHERUNG 2.3	0	R 41	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 5	21.01.2352	4	pcse	S - Schraube Z1n gb chr	0	R 42	57.60.1682		6K8	MF, 1%, 0204, E24						
0	MP 6	1.990.100.01	2	pcse	QUIERPUNTSUETZLE	0	R 43	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 7	1.950.870.04	1	pcse	STUDER NR. ETIKETTE 10x20	0	R 44	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 8	1.950.891.11	1	pcse	PANEL ADAPTER RS 485 PCB	0	R 45	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 9	89.01.1499	1	pcse	QUARZ - ISOLIERPLATTE	0	R 46	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 10	43.01.0198	1	pcse	ESE-WARNSCHILD	0	R 47	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 11	28.99.0119	2	pcse	ROHRNIETE D.2.5*0.15" 9	0	R 48	57.60.1103		10K	MF, 1%, 0204, E24						
0	MP 12	42.01.0223	1	pcse	KNEBELKNOPF ER D 16/4	0	R 49	57.92.1620		54mA	PTC, 60V, 50 Ohm						
0	MP 13	42.01.0227	1	pcse	DECKEL HGR. ZU KNOPF-D 15	0	R 50	57.92.1620		64mA	PTC, 60V, 50 Ohm						
0	MP 14	1.101.001.20	1	pcse	TEXT-ETIK. 5*20 HARDWARE 20	0	R 51	57.92.7016		1.6A	POLY-PTC, 50V						
0	P 2	54.11.2013	32p		EU-BK 2*16p	0	R 52	57.92.7016		1.6A	POLY-PTC, 50V						
0	P 5	54.11.0125	53	pcse	P STIFT,WINKEL 1 P N=1 STK.	0	R 53	57.60.1103		10K	MF, 1%, 0204, E24						
0	Q 1	50.60.0001			BC847B	0	R 54	57.60.1103		10K	MF, 1%, 0204, E24						
0	Q 2	50.60.0001			BC847B	0	R 55	57.60.1100		0R0	MF, 0204						
0	Q 3	50.60.0001			BC847B	0	R 56	57.60.1000		0R0	MF, 0204						
0	Q 4	50.60.0001			BC847B	0	R 57	57.60.1000		0R0	MF, 0204						
0	Q 31	50.60.0001			BC847B	0	R 58	57.60.1000		0R0	MF, 0204						
0	Q 32	50.60.0001			BC847B	0	R 59	57.60.1000		0R0	MF, 0204						
0	Q 33	50.60.0001			BC847B	0	R 60	57.60.1000		0R0	MF, 0204						
0	Q 34	50.60.0001			BC847B	0	R 61	57.60.1000		0R0	MF, 0204						
0	Q 35	50.60.0001			BC847B	0	R 62	57.60.1000		0R0	MF, 0204						
0	Q 36	50.60.0001			BC847B	0	R 63	57.60.1000		0R0	MF, 0204						
0	Q 37	50.60.0001			BC847B	0	R 64	57.60.1000		0R0	MF, 0204						
0	Q 38	50.60.0001			BC847B	0	R 65	57.60.1000		0R0	MF, 0204						
0	Q 39	50.60.0001			BC847B	0	R 66	57.60.1000		0R0	MF, 0204						
0	Q 40	50.60.0001			BC847B	0	R 67	57.60.1000		0R0	MF, 0204						
0	Q 41	50.60.0001			BC847B	0	R 68	57.60.1000		0R0	MF, 0204						
0	Q 42	50.60.0001			BC847B	0	R 69	57.60.1000		0R0	MF, 0204						
0	Q 43	50.60.0001			BC847B	0	R 70	57.60.1000		0R0	MF, 0204						
0	Q 44	50.60.0001			BC847B	0	R 71	57.60.1000		0R0	MF, 0204						
0	Q 45	50.60.0001			BC847B	0	R 72	57.60.1000		0R0	MF, 0204						
0	RZ 17	57.88.4104			*100k	2%, SIP 9	0	RZ 17									

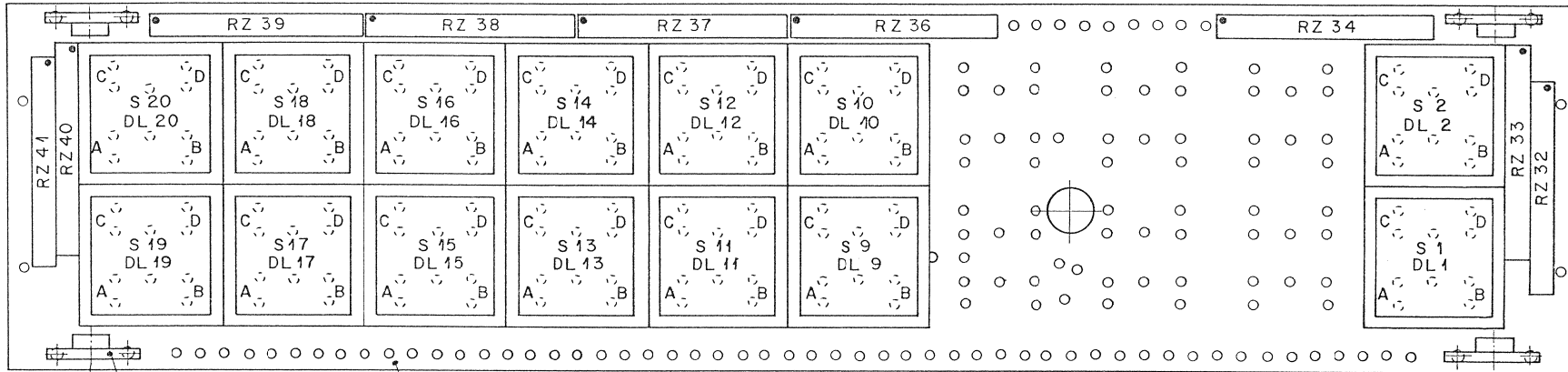
Studio Monitor Switch Board 1.990.439.00



3.4.98			
990439-5			PAGE 1 OF 1
STUDER	Studio Monitor Switchboard		1.990.439.00

RZ32 ... RZ41 8 x 1000

Studio Monitor Switch Board 1.990.439.00



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

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

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

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

1.990.439.00 STUDIO MONITOR SWITCH BOARD SC889/07500

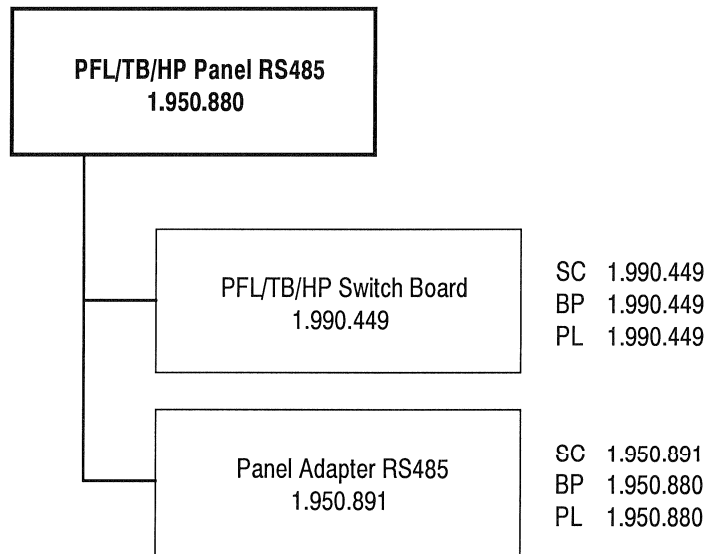
Änderung					⑤
					④
					③
					②
					①
Datum	6.3.90	Gez.	Gaspr.	Gas.	Indrx

Kopie für:

STUDER REGIEMODUL ZÜRICH	STUDIO MONITOR SWITCH BOARD	Nummer: 1.990.439-00
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**PFL/TB/HP Panel RS485, Components**

1.950.880

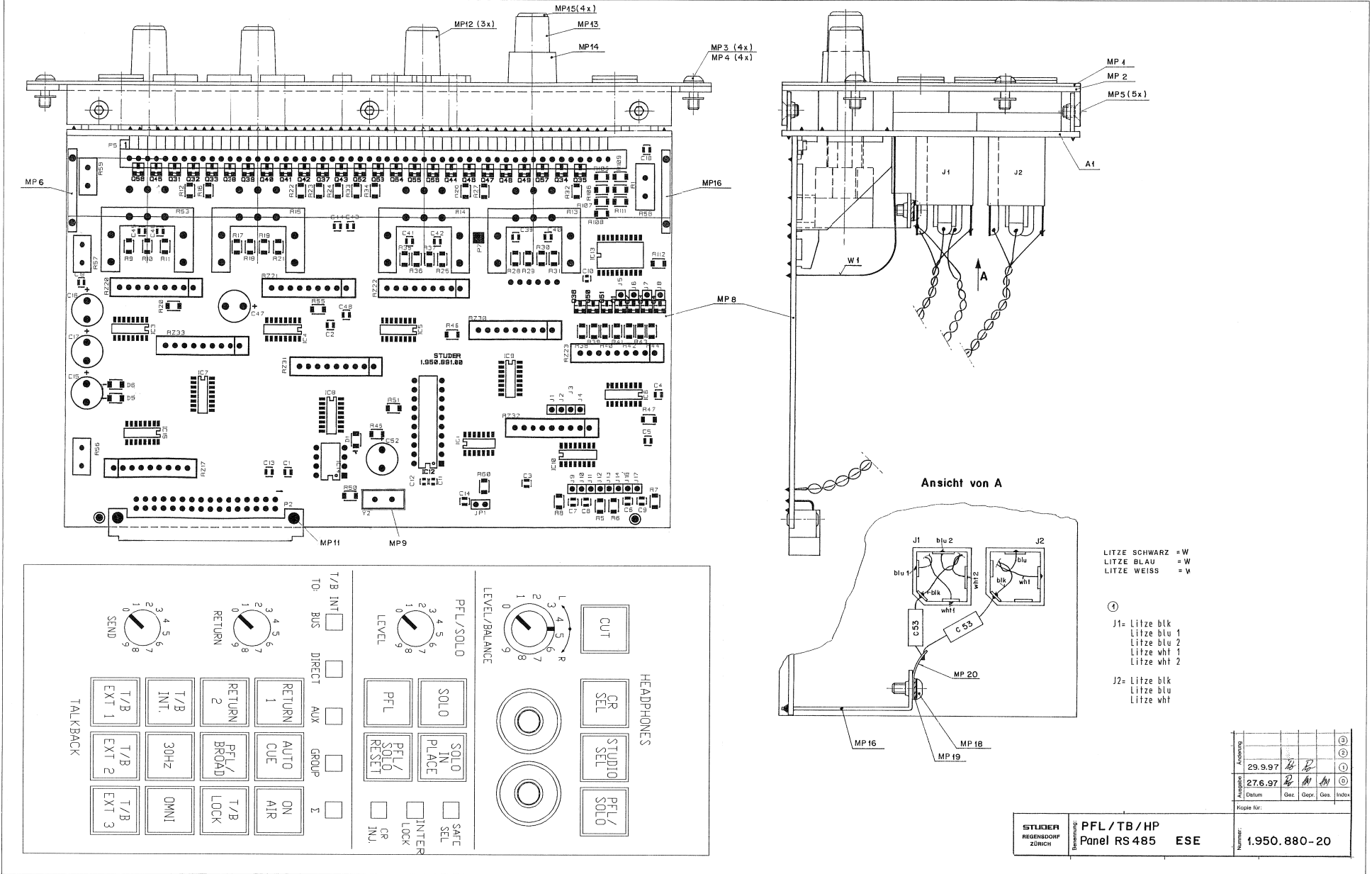


**SC:** Circuit Diagram

**BP:** Component Placement Diagram

**PL:** Parts List

PFL / TB / HP Panel RS 485 1.950.880.20



Abgegeben									
Abgegeben	29.9.97	BB	BB						
Datum	27.8.97	BB	BB	BB	BB				
Kopie für:									

STUDER REGENSDORF ZÜRICH  
 Benennung: PFL / TB / HP Panel RS 485 ESE  
 Nummer: 1.950.880-20

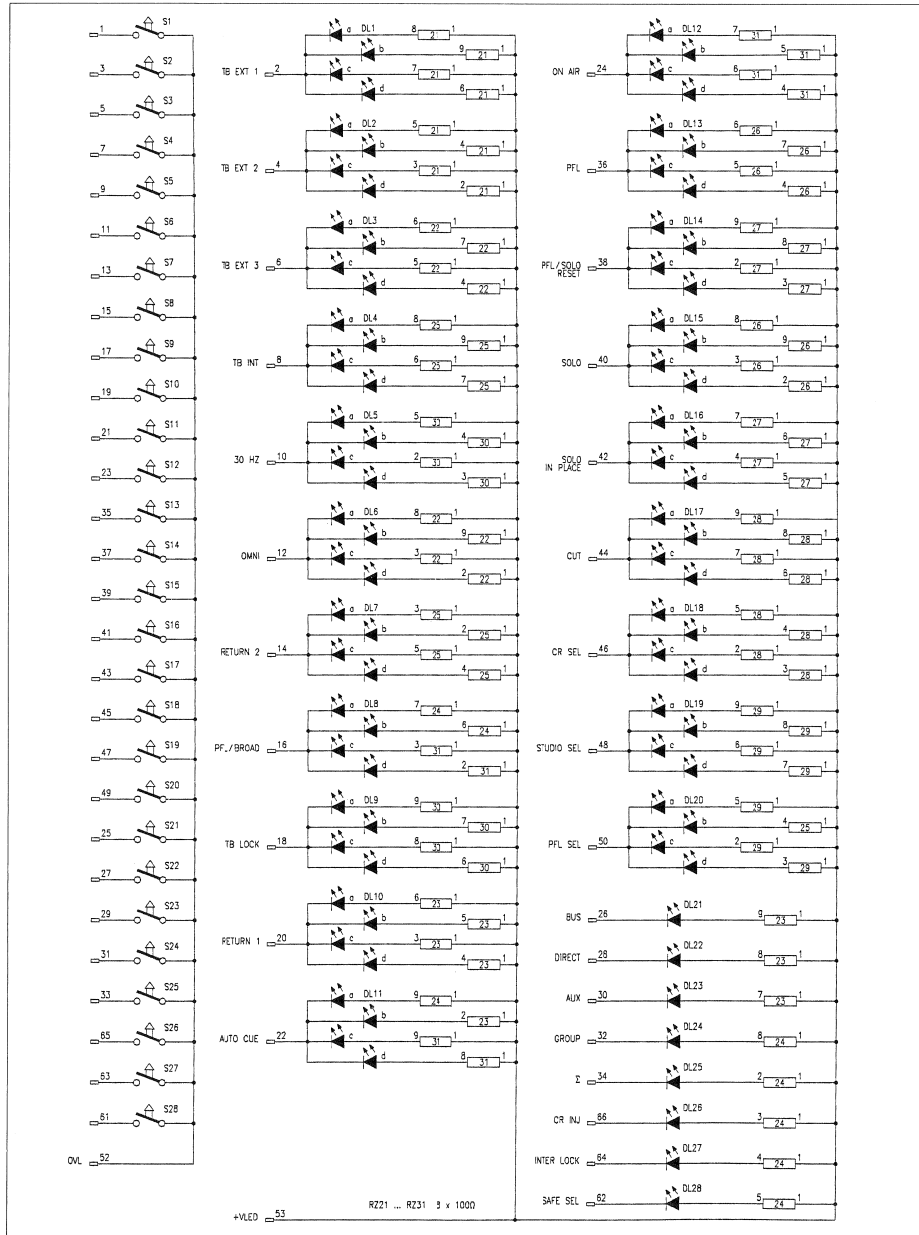




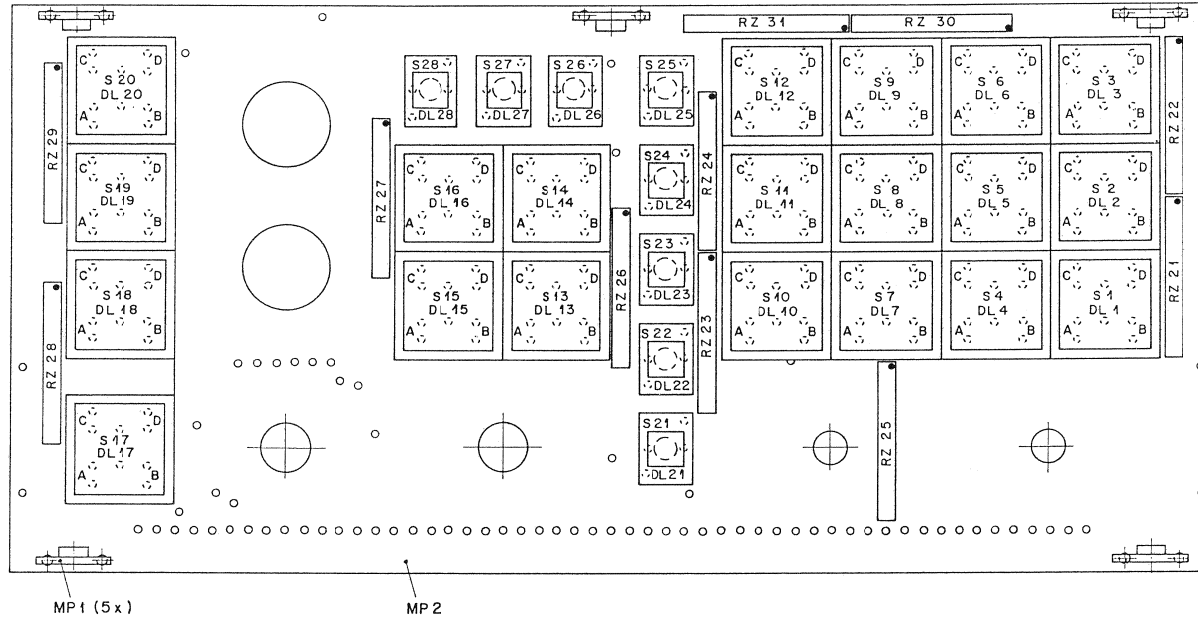
PFL / TB / HP Panel RS 485 1.950.880.22

Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	A 1	1.990.449.00	1 pce		PFL/TB/PHONES SWITCH BOARD	0	Q 35	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 20	57.88.4104	8*100k	2%, SIP 9	
0	C 1	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 36	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 21	57.88.4104	8*100k	2%, SIP 9	
0	C 2	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 37	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 22	57.88.4104	8*100k	2%, SIP 9	
0	C 3	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 38	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 23	57.88.4104	8*100k	2%, SIP 9	
0	C 4	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 39	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 30	57.88.4104	8*100k	2%, SIP 9	
0	C 5	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 40	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 31	57.88.4104	8*100k	2%, SIP 9	
0	C 6	59.60.3337	2n2		CER 50V, 10%, X7R, 0805	0	Q 41	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 32	57.88.4104	8*100k	2%, SIP 9	
0	C 7	59.60.3317	2n2		CER 50V, 10%, X7R, 0805	0	Q 42	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	R2 33	57.88.4104	8*100k	2%, SIP 9	
0	C 8	59.60.3317	2n2		CER 50V, 10%, X7R, 0805	0	Q 44	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	W 1	64.03.0905	1 pce	FLEX-STRIP, 6-POL, L=83.5 MM	
0	C 9	59.60.3317	2n2		CER 50V, 10%, X7R, 0805	0	Q 45	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	W 2	1.0*0.210.64	2 pcs	LITZE SW, 120MM, M.RASTKONTAKT	
0	C 10	59.60.2231	18p		CER 50V, 5%, COG, 0603	0	Q 46	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	W 3	1.0*0.216.64	3 pcs	LITZE BL, 120MM, M.RASTKONTAKT	
0	C 11	59.60.2237	33p		CER 50V, 5%, COG, 0603	0	Q 47	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	W 4	1.0*0.219.64	3 pcs	LITZE WS, 120MM, M.RASTKONTAKT	
0	C 12	59.60.2237	33p		CER 50V, 5%, COG, 0603	0	Q 48	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	XIC 12	53.03.0165	20p	DIL 0.3", lot, gerade	
0	C 13	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 49	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	XIC 14	53.03.0166	pce	DIL 0.3", lot, gerade	
0	C 14	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 50	50.60.0001		3C847B	Q BC 847 B, SOT 23	0	Y 2	89.01.1016	22.1184MHz	22.118 400 MHz, HC 49/U	
0	C 15	59.22.4002	100uF		EL 16V, 20%, RM5	0	Q 51	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 16	59.22.4002	100uF		EL 16V, 20%, RM5	0	Q 52	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 17	59.22.4002	100uF		EL 16V, 20%, RM5	0	Q 53	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 18	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 54	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 19	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	Q 55	50.60.0001		BC847B	Q BC 847 B, SOT 23						
0	C 36	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	Q 56	50.60.0001		3C847B	Q BC 847 B, SOT 23						
0	C 40	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	Q 57	50.60.0001		3C847B	Q BC 847 B, SOT 23						
0	C 41	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	Q 58	50.60.0001		3C847B	Q BC 847 B, SOT 23						
0	C 42	59.60.3325	10n		CER 50V, 10%, X7R, 0805												
0	C 43	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	R 1	not used		JRO	MF, 0204						
0	C 44	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	R 5	57.60.1101		100R	MF, 1%, 3204, E24						
0	C 45	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	R 6	57.60.1101		100R	MF, 1%, 3204, E24						
0	C 46	59.60.3325	10n		CER 50V, 10%, X7R, 0805	0	R 7	57.60.1101		100R	MF, 1%, 3204, E24						
0	C 47	59.22.6130	10u		EL 35V, 20%, RM5	0	R 8	57.60.1101		100R	MF, 1%, 3204, E24						
0	C 48	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	R 9	57.60.1682		3K8	MF, 1%, 3204, E24						
0	C 52	59.22.6130	10u		EL 35V, 20%, RM5	0	R 10	57.60.1682		3K8	MF, 1%, 3204, E24						
0	C 53	59.03.2124	2 pcs		MPETP, 10%, 250V	0	R 11	57.60.1682		3K8	MF, 1%, 3204, E24						
0	D 1	50.60.8021	4448		D LL 4448 SOD 80	0	R 12	57.60.1682		3K8	MF, 1%, 3204, E24						
0	D 5	50.60.8021	4448		D LL 4448 SOD 80	0	R 13	1.010.027.58		100k	POT 2 *100 K LIN						
0	D 6	50.60.8021	4448		D LL 4448 SOD 80	0	R 14	1.010.027.58			POT 100K LIN						
0	D 8	50.60.8021	4448		D LL 4448 SOD 80	0	R 15	1.010.027.58			POT 100K LIN						
0	IC 1	50.62.1004	74HC 04		74 HC 04	0	R 16	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 3	50.62.1595	74HC595		74 HC 595	0	R 17	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 4	50.62.1595	74HC595		74 HC 595	0	R 18	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 5	50.62.1595	74HC595		74 HC 595	0	R 19	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 6	50.62.1595	74HC595		74 HC 595	0	R 20	57.60.1103		10K	MF, 1%, 3204, E24						
0	IC 7	50.62.1165	74HC165		74 HC 165	0	R 21	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 8	50.62.1165	74HC165		74 HC 165	0	R 22	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 9	50.62.1165	74HC165		74 HC 165	0	R 23	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 9	50.62.1165	74HC165		74 HC 165	0	R 24	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 10	50.62.1165	74HC165		74 HC 165	0	R 25	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 12	1.950.900.22			SW 860 MONITOR (EO 18.0313)	0	R 26	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 13	59.01.3161			A/D Converter 10bit Sch SO 20	0	R 27	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 14	50.15.0116			IC SN 75176 BP, DS 3886 N	0	R 28	57.60.1682		3K8	MF, 1%, 3204, E24						
0	IC 1E	50.62.1165	74HC165		74 HC 165	0	R 29	57.60.1682		3K8	MF, 1%, 3204, E24						
0	J 1	54.24.0103	2 pcs		J 3 POL., KLINKE 0.3 MM	0	R 30	57.60.1682		3K8	MF, 1%, 3204, E24						
0	J 1	54.24.0103	2 pcs		J 3 POL., KLINKE 0.3 MM	0	R 31	57.60.1682		3K8	MF, 1%, 3204, E24						
0	J 1	54.24.0103	2 pcs		J 3 POL., KLINKE 0.3 MM	0	R 32	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 1	1.990.440.01	1 pce		FRONTSCHILD PFL/TB/PHONES	0	R 33	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 2	1.990.440.02	1 pce		TRAEGER PFL/TB PHONES	0	R 34	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 2	1.010.022.21	4 pcs		M3*8 L-Schraube IS sw spazial	0	R 35	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 4	24.16.3023	4 pcs		WELLENSICHERUNG 2.3	0	R 36	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 5	21.01.2332	6 pcs		M3*4 S - Schraube Zn gb chr	0	R 37	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 6	1.990.100.01	1 pce		QUERPRINTSTUETZE	0	R 38	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 7	1.950.880.04	1 pce		STUDER NR. ETIKETTE 10x20	0	R 39	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 6	1.950.901.11	1 pce		PANEL ADAPTER RS 485 PCB	0	R 40	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 8	89.01.1409	1 pce		QUARZ ISOLIERPLATTE	0	R 41	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 10	43.01.0108	1 pce		ESE-WARNUNGSSCHILD	0	R 42	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 11	28.99.0119	2 pcs		ROHRRIEPE D 2.9*0.15" 9	0	R 43	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 12	42.01.0228	3 pcs		KNEBELKNOPF GR D 10/4	0	R 44	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 13	42.01.0233	1 pce		DREHKNOPF GR D 10/4	0	R 45	57.60.1103		10K	MF, 1%, 3204, E24						
0	MP 14	1.912.000.33	1 pce		DREHRING D 6.2 / 13	0	R 46	57.60.1103		10K	MF, 1%, 3204, E24						
0	MP 15	42.01.0230	4 pcs		DECKEL HGR. ZU KNOPF-D 10	0	R 47	57.60.1103		10K	MF, 1%, 3204, E24						
0	MP 16	1.990.100.33	1 pce		QUERPRINTSTUETZE RECHTS	0	R 50	57.60.1682		3K8	MF, 1%, 3204, E24						
0	MP 17	1.990.440.33	2 pcs		FUEHRUNGSBUCHSE FUER JACK	0	R 51	57.60.1101		100R	MF, 1%, 3204, E24						
0	MP 18																

PFL / TB / Headphone Switch Board I.990.449.00



PFL / TB / Headphone Switch Board 1.990.449.00



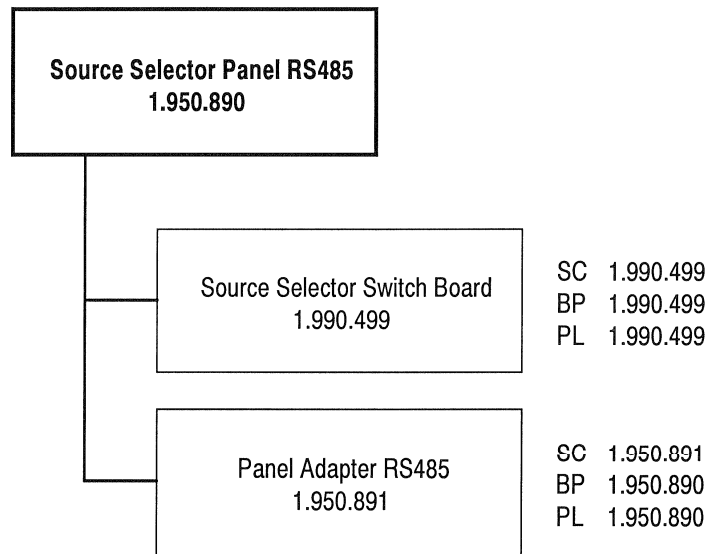
Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER	Ad	..POS..	..REF.No..	DESCRIPTION	MANUFACTURER
DL...	1	0	not used	see S 01	S....	11	55.15.0722	Taste 1*A, 12mm RT/RT	TEST GEN ENABLE
DL...	2	0	not used	see S 02	S....	12	55.15.0704	Taste 1*A, 12mm GB/Trans	LOCK
DL...	3	0	not used	see S 03	S....	13	55.15.0705	Taste 1*A, 12mm GB/Trans	PFL RESET
DL...	4	0	not used	see S 04	S....	14	55.15.0704	Taste 1*A, 12mm GB/Trans	SOLO RESET
DL...	5	0	not used	see S 05	S....	15	55.15.0704	Taste 1*A, 12mm GB/Trans	S.F. SOLO
DL...	6	0	not used	see S 06	S....	16	55.15.0702	Taste 1*A, 12mm RT/Trans	SOLO IN PLACE
DL...	7	0	not used	see S 07	S....	17	55.15.0702	Taste 1*A, 12mm RT/Trans	CUT
DL...	8	0	not used	see S 08	S....	18	55.15.0704	Taste 1*A, 12mm GB/Trans	CR SELECT
DL...	9	0	not used	see S 09	S....	19	55.15.0704	Taste 1*A, 12mm GB/Trans	STUDIO SELECT
DL...	10	0	not used	see S 10	S....	20	55.15.0704	Taste 1*A, 12mm GB/Trans	PFL/SOLO
DL...	11	0	not used	see S 11	S....	21	55.15.0604	Taste 1*A, 5mm GB/Trans	BUS
DL...	12	0	not used	see S 12	S....	22	55.15.0604	Taste 1*A, 5mm GB/Trans	DIRECT
DL...	13	0	not used	see S 13	S....	23	55.15.0604	Taste 1*A, 5mm GB/Trans	AUX
DL...	14	0	not used	see S 14	S....	24	55.15.0604	Taste 1*A, 5mm GB/Trans	GROUP
DL...	15	0	not used	see S 15	S....	25	55.15.0604	Taste 1*A, 5mm GB/Trans	Summe
DL...	16	0	not used	see S 16	S....	26	55.15.0602	Taste 1*A, 5mm RT/Trans	CR 1KJ
DL...	17	0	not used	see S 17	S....	27	55.15.0602	Taste 1*A, 5mm RT/Trans	INTER LOCK
DL...	18	0	not used	see S 18	S....	28	55.15.0605	Taste 1*A, 5mm GB/Trans	SAFE SELECT
DL...	19	0	not used	see S 19					
DL...	20	0	not used	see S 20	RZ...	21	57.88.4101	100 Ohm	2% ,8"
DL...	21	0	not used	see S 21	RZ...	22	57.88.4101	100 Ohm	2% ,8"
DL...	22	0	not used	see S 22	RZ...	23	57.88.4101	100 Ohm	2% ,8"
DL...	23	0	not used	see S 23	RZ...	24	57.88.4101	100 Ohm	2% ,8"
DL...	24	0	not used	see S 24	RZ...	25	57.88.4101	100 Ohm	2% ,8"
DL...	25	0	not used	see S 25	RZ...	26	57.88.4101	100 Ohm	2% ,8"
DL...	26	0	not used	see S 26	RZ...	27	57.88.4101	100 Ohm	2% ,8"
DL...	27	0	not used	see S 27	RZ...	28	57.88.4101	100 Ohm	2% ,8"
DL...	28	0	not used	see S 28	RZ...	29	57.88.4101	100 Ohm	2% ,8"
DL...	28	0	not used	see S 28	RZ...	30	57.88.4101	100 Ohm	2% ,8"
MP...	1	1.990.100.05	5 pcs	Querrinhalter	RZ...	31	57.88.4101	100 Ohm	2% ,8"
MP...	2	1.990.449.11	1 pcs	PFL/TB/PHONES SWITCH PCB					
MP...	3	1.990.449.04	1 pcs	Nr-Etikette					
S....	1	55.15.0722	Taste 1*A, 12mm RT/RT	T/B EXT 1	CER=Ceramic, PE=Polyester				
S....	2	55.15.0722	Taste 1*A, 12mm RT/Trans	T/B SEL.3	MF=Metal Film, FWC=Cermet				
S....	3	55.15.0722	Taste 1*A, 12mm RT/Trans	T/B SEL.4	MANUFACTURER: Ex=Exar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,				
S....	4	55.15.0722	Taste 1*A, 12mm RT/RT	T/B INT	Sig=Signetics, St=Studer.				
S....	5	55.15.0722	Taste 1*A, 12mm RT/Trans	T/B SEL.1	1.990.449.00 PFL/TB/PHONES SWITCH BOARD				
S....	6	55.15.0722	Taste 1*A, 12mm RT/Trans	T/B SEL.2	SCA88/12/1600				
S....	7	55.15.0705	Taste 1*A, 12mm GB/Trans	RETURN 2					
S....	8	55.15.0705	Taste 1*A, 12mm GB/Trans	T/B GROUP SELECT					
S....	9	55.15.0704	Taste 1*A, 12mm GB/Trans	AUTO CUE					
S....	10	55.15.0705	Taste 1*A, 12mm GB/Trans	RETURN 1					

Abgefragt	7.3.90	W. H. S. C. 10	10
Datum		Chr.	Chr.
Zeichner		Chr.	Chr.
Gezeichnet		Chr.	Chr.
Geprüft		Chr.	Chr.
Freigegeben		Chr.	Chr.

STUDER REGENBOGEN ZÜRICH	Part No. PFL / TB / PHONES SWITCH BOARD	Order No. 1.990.449-00
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**Source Selector Panel RS485, Components**

1.950.890



**SC:** Circuit Diagram  
**BP:** Component Placement Diagram  
**PL:** Parts List

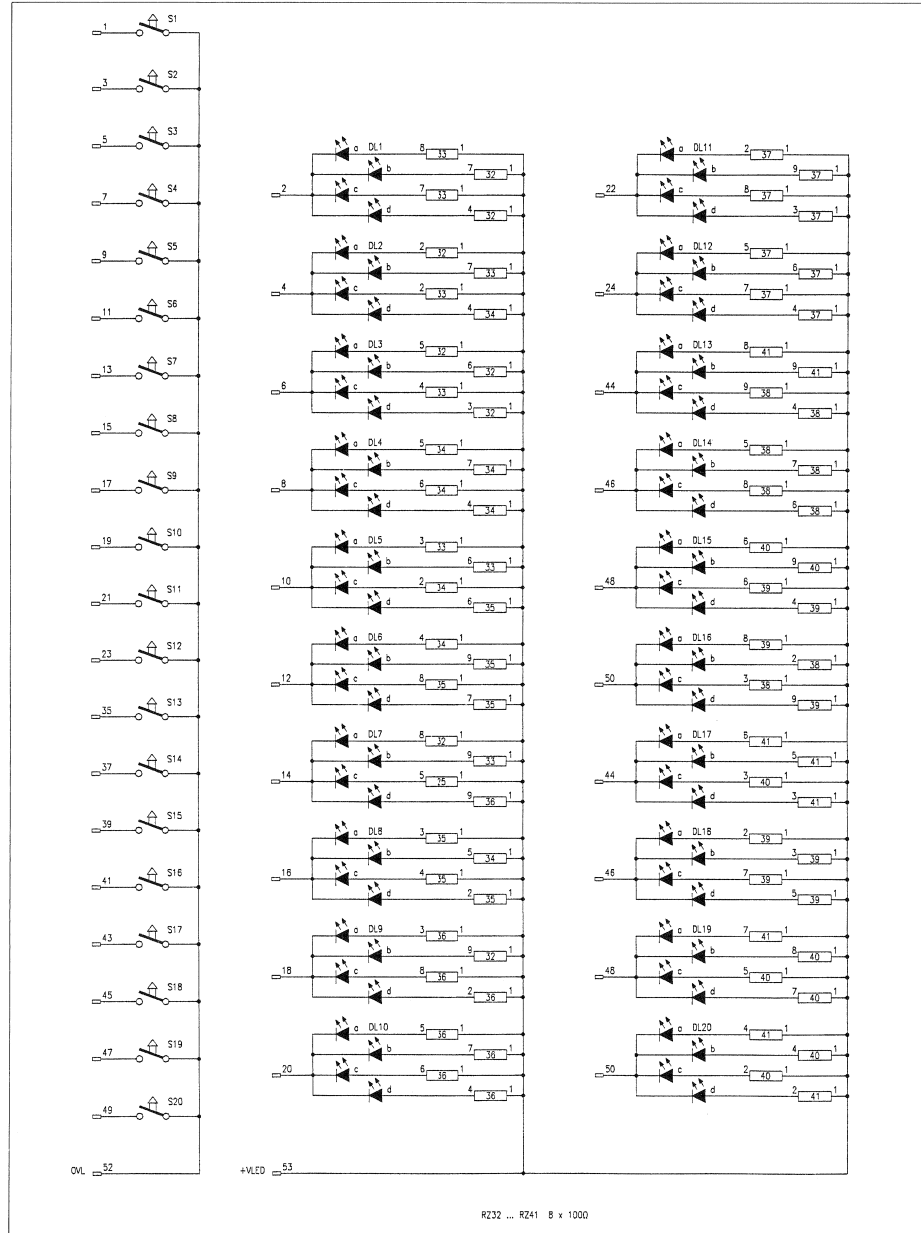




Source Selector Panel RS 485 1.950.890.22

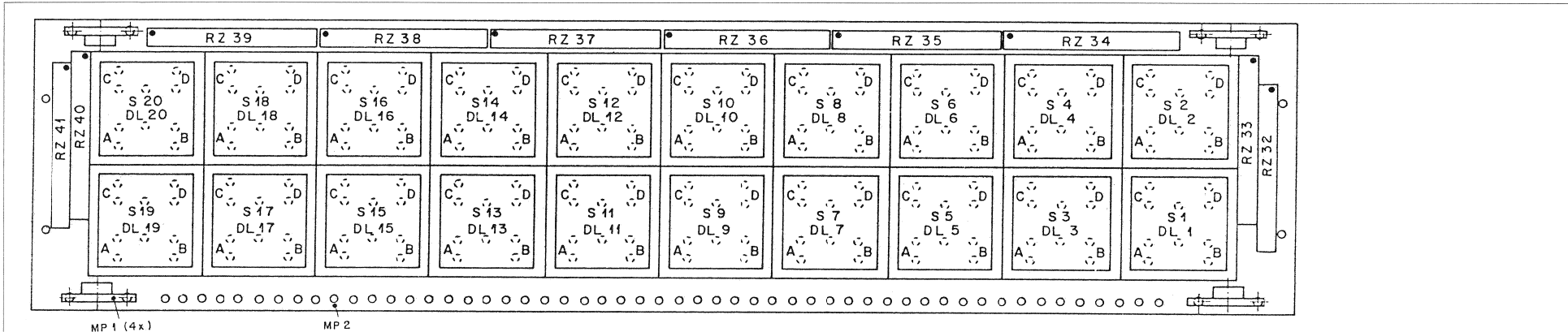
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	Idx.	Pos.	Part No.	Qty.	Type/Val.	Description	
0	A 1	1.990.499.00	1	pcse	SOURCE SELECTOR SWITCH BOARD	0	Q 48	50.60.0001	BC847B	Q	BC 847 B, SOT 23	0	XIC 12	53.03.0185	20p		DIL 0.3", 10t, gerade	
0	C 1	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 49	50.60.0001	BC847B	Q	BC 847 B, SOT 23	0	XIC 14	53.03.0186	pcse	5p	DIL 0.3", 10t, gerade	
0	C 2	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 50	50.60.0001	BC847B	Q	BC 847 B, SOT 23	0	Y 2	89.01.1016	22.1184 MHz	22.118 400 MHz, HC 49U		
0	C 3	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 51	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 4	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 52	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 5	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	Q 53	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 6	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 54	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 7	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 55	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 8	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 56	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 9	59.60.3317	2n2		CER 50V, 10%, X7R, 0905	0	Q 57	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 10	59.60.2251	18p		CER 50V, 5%, COG, 0603	0	Q 58	50.60.0001	BC847B	Q	BC 847 B, SOT 23							
0	C 11	59.60.2257	33p		CER 50V, 5%, COG, 0603	0	R 1	57.60.1000	GR0		MF, 0204							
0	C 12	59.60.2257	33p		CER 50V, 5%, COG, 0603	0	R 5	57.60.1101	100R		MF, 1%, 0204, E24							
0	C 13	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 6	57.60.1101	100R		MF, 1%, 0204, E24							
0	C 14	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 7	57.60.1101	100R		MF, 1%, 0204, E24							
0	C 15	59.22.4062	100uF		EL 16V, 20%, RMS	0	R 8	57.60.1101	100R		MF, 1%, 0204, E24							
0	C 16	59.22.4062	100uF		EL 16V, 20%, RMS	0	R 9	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 17	59.22.4062	100uF		EL 16V, 20%, RMS	0	R 10	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 18	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 11	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 19	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 12	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 39	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 13	not used	100K		POT 2 *100 K LIN							
0	C 40	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 14	not used	100K		POT 2 *100 K LIN							
0	C 41	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 15	not used	100K		POT 2 *100 K LIN							
0	C 42	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 16	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 43	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 17	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 44	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 18	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 45	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 19	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 46	59.60.3325	10n		CER 50V, 10%, X7R, 0905	0	R 20	57.60.1103	10K		MF, 1%, 0204, E24							
0	C 47	59.22.8100	10u		EL 35V, 20%, RMS	0	R 21	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 48	59.60.3337	100n		CER 50V, 10%, X7R, 0905	0	R 22	57.60.1692	6K8		MF, 1%, 0204, E24							
0	C 52	59.22.8100	10u		EL 35V, 20%, RMS	0	R 23	57.60.1692	6K8		MF, 1%, 0204, E24							
0	D 1	50.60.8001	4448		D LL 4448 SOD 80	0	R 25	57.60.1692	6K8		MF, 1%, 0204, E24							
0	D 5	50.60.8001	4448		D LL 4448 SOD 80	0	R 26	57.60.1692	6K8		MF, 1%, 0204, E24							
0	D 6	50.60.8001	4448		D LL 4448 SOD 80	0	R 27	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 1	50.62.1034	74HC 04		74 HC 04	0	R 28	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 3	50.62.1595	74HC595		74 HC 595	0	R 29	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 4	50.62.1595	74HC595		74 HC 595	0	R 30	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 5	50.62.1595	74HC595		74 HC 595	0	R 31	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 6	50.62.1595	74HC595		74 HC 595	0	R 32	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 7	50.62.1185	74HC165		74 HC 165	0	R 33	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 8	50.62.1185	74HC165		74 HC 165	0	R 34	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 9	50.62.1185	74HC165		74 HC 165	0	R 35	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 9	50.62.1185	74HC165		74 HC 165	0	R 36	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 10	50.62.1185	74HC165		74 HC 165	0	R 37	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 12	1.950.900.22	SW 860 MONITOR (50.16.0313)			0	R 38	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 13	50.61.8101	88HC58		A/D Converter 10bit 8C; SO 20	0	R 39	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 14	50.15.0115	75176		IC SN 75176 BP, DS 3959 N	0	R 40	57.60.1692	6K8		MF, 1%, 0204, E24							
0	IC 15	50.62.1185	74HC165		74 HC 165	0	R 41	57.60.1692	6K8		MF, 1%, 0204, E24							
0	MP 1	1.990.490.31	1	pcse	FRONTSCHILD SOURCE SEL. 20PB	0	R 42	57.60.1692	6K8		MF, 1%, 0204, E24							
0	MP 2	1.990.490.32	1	pcse	TRAEGER SOURCE SELECTOR 20PB	0	R 43	57.60.1692	6K8		MF, 1%, 0204, E24							
0	MP 3	1.010.022.21	2	pcse	M3*8 L-Schraube IS sw spezial	0	R 44	57.60.1692	6K8		MF, 1%, 0204, E24							
0	MP 4	24.16.3023	2	pcse	WELLENISCHERUNG 2.3	0	R 45	57.60.1103	10K		MF, 1%, 0204, E24							
0	MP 5	21.01.2352	4	pcse	M3*4 S - Schraube Zn gb ch	0	R 46	57.60.1103	10K		MF, 1%, 0204, E24							
0	MP 6	1.990.100.21	2	pcse	QUERPRINTSUETZE	0	R 47	57.60.1103	10K		MF, 1%, 0204, E24							
0	MP 7	1.950.890.04	1	pcse	STUDER NR. ETIKETTE 10x20	0	R 50	57.60.1101	100R		MF, 1%, 0204, E24							
0	MP 3	1.350.891.11	1	pcse	PANEL ADAPTER RS 485 PCB	0	R 53	not used	100K		POT 2 *100 K LIN							
0	MP 3	89.01.1499	1	pcse	QUARZ - ISOLIERPLATTE	0	R 55	57.60.1150	16R		MF, 1%, 0204, E24							
0	MP 10	43.01.0108	1	pcse	Label ESE-WARNSCHILD	0	R 56	57.92.1820	9mmA		PTC, 60V, 50 Ohm							
0	MP 11	29.99.0119	2	pcse	Label ROHRNITTE D 2.50.18" 9	0	R 57	57.92.1820	9mmA		PTC, 60V, 50 Ohm							
0	MP 12	1.101.001.20	1	pcse	Label "TEXT"-ETIK. 5*20 HARDWARE -20	0	R 59	57.92.7016	15A		POLY-PTC, 50V							
0	P 2	54.11.2013	32p		EU-BK 2*16p	0	R 60	57.60.1103	10K		MF, 1%, 0204, E24							
0	P 5	54.11.0125	83	pcse	1p P STIFT,WINKEL 1 FIN=1 STK.	0	R 105	57.60.1000	GR0		MF, 0204							
0	Q 1	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 106	57.60.1000	GR0		MF, 0204							
0	Q 2	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 107	57.60.1000	GR0		MF, 0204							
0	Q 3	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 108	57.60.1000	GR0		MF, 0204							
0	Q 4	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 109	57.60.1000	GR0		MF, 0204							
0	Q 31	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 111	57.60.1000	CR0		MF, 0204							
0	Q 32	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	R 112	57.60.1000	CR0		MF, 0204							
0	Q 33	50.60.0001	BC847B		Q BC 847 B, SOT 23	0	RZ 17	57.8										

**Source Selector Switch Board 1.990.499.00**



3.4.98			
990499-S			PAGE 1 OF 1
<b>STUDER</b> REGENSBURG SWITZERLAND	Source Selector Switchboard		1.990.499.00

Source Selector Switch Board 1.990.499.00



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

DL...1	. . .	0	not used	see S 01
DL...2	. . .	0	not used	see S 02
DL...3	. . .	0	not used	see S 03
DL...4	. . .	0	not used	see S 04
DL...5	. . .	0	not used	see S 05
DL...6	. . .	0	not used	see S 06
DL...7	. . .	0	not used	see S 07
DL...8	. . .	0	not used	see S 08
DL...9	. . .	0	not used	see S 09
DL...10	. . .	0	not used	see S 10
DL...11	. . .	0	not used	see S 11
DL...12	. . .	0	not used	see S 12
DL...13	. . .	0	not used	see S 13
DL...14	. . .	0	not used	see S 14
DL...15	. . .	0	not used	see S 15
DL...16	. . .	0	not used	see S 16
DL...17	. . .	0	not used	see S 17
DL...18	. . .	0	not used	see S 18
DL...19	. . .	0	not used	see S 19
DL...20	. . .	0	not used	see S 20
MP...1	1.990.429.11	1	pcs	CR MONITOR SWITCH PCB
MP...2	1.990.100.05	4	pcs	Querprintstuetze
MP...3	1.990.499.00	1	pcs	NR-Schleife
S....1	55.15.0704			Taste 1*A, 12mm gelb/trans
S....2	55.15.0704			Taste 1*A, 12mm gelb/trans
S....3	55.15.0704			Taste 1*A, 12mm gelb/trans
S....4	55.15.0704			Taste 1*A, 12mm gelb/trans
S....5	55.15.0704			Taste 1*A, 12mm gelb/trans
S....6	55.15.0704			Taste 1*A, 12mm gelb/trans
S....7	55.15.0704			Taste 1*A, 12mm gelb/trans
S....8	55.15.0704			Taste 1*A, 12mm gelb/trans
S....9	55.15.0704			Taste 1*A, 12mm gelb/trans
S....10	55.15.0704			Taste 1*A, 12mm gelb/trans
S....11	55.15.0704			Taste 1*A, 12mm gelb/trans
S....12	55.15.0704			Taste 1*A, 12mm gelb/trans
S....13	55.15.0704			Taste 1*A, 12mm gelb/trans
S....14	55.15.0704			Taste 1*A, 12mm gelb/trans
S....15	55.15.0704			Taste 1*A, 12mm gelb/trans
S....16	55.15.0704			Taste 1*A, 12mm gelb/trans
S....17	55.15.0704			Taste 1*A, 12mm gelb/trans
S....18	55.15.0704			Taste 1*A, 12mm gelb/trans
S....19	55.15.0704			Taste 1*A, 12mm gelb/trans
S....20	55.15.0704			Taste 1*A, 12mm gelb/trans
RZ...32	57.88.4101	100	Ohm	2% ,8"
RZ...33	57.88.4101	100	Ohm	2% ,8"
RZ...34	57.88.4101	100	Ohm	2% ,8"
RZ...35	57.88.4101	100	Ohm	2% ,8"
RZ...36	57.88.4101	100	Ohm	2% ,8"
RZ...37	57.88.4101	100	Ohm	2% ,8"
RZ...38	57.88.4101	100	Ohm	2% ,8"
RZ...39	57.88.4101	100	Ohm	2% ,8"
RZ...40	57.88.4101	100	Ohm	2% ,8"
RZ...41	57.88.4101	100	Ohm	2% ,8"

CER=Ceramic, PE=Polyester  
 MF=Metal Film, PMG=Cermet  
 MANUFACTURER: Ex=Esar, NEC=Nippon Electric Corp., Ph=Philips, Ra=Raytheon,  
 Sig=Signetics, St=Studer.  
 1.990.499.00 SOURCE SELECTOR SWITCH BOARD SC88/12/1800

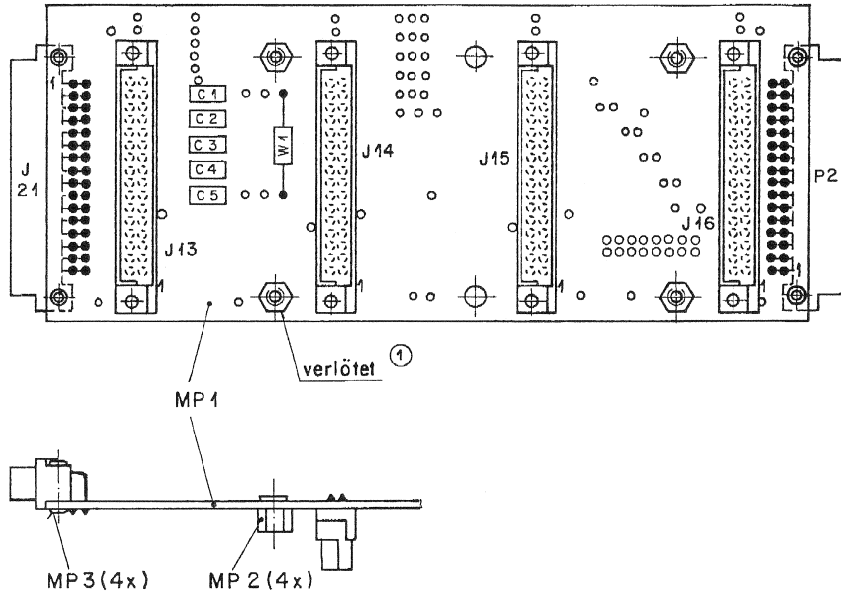
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Checked:									
Approved:									
Date:	6.3.90	14	15	5d	11				
Drawn:									
Exec:									
Gen:									
Dist:									
Index:									

STUDER REGENERATOR ZÜRICH	Source Selector SWITCH BOARD	1.990.499-00
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**HDLC Bus Board A4 1.992.171.00**



Idx	Pos.	Part No.	Qty.	Type/Val.	Description
1	C 1	not used		68n	PETP, 63V, 10%, RM5
1	C 2	not used		68n	PETP, 63V, 10%, RM5
1	C 3	not used		68n	PETP, 63V, 10%, RM5
1	C 4	not used		68n	PETP, 63V, 10%, RM5
1	C 5	not used		68n	PETP, 63V, 10%, RM5
0	J 13	54.11.2014		2*16p	EU-BK 2*16p female
0	J 14	54.11.2014		2*16p	EU-BK 2*16p female
0	J 15	54.11.2014		2*16p	EU-BK 2*16p female
0	J 16	54.11.2014		2*16p	EU-BK 2*16p female
2	J 21	not used		32p	EU-QK 2*16p
0	MP 1	1.992.171.13	1 pce		HDLC BUS PCB 4B
0	MP 2	1.010.014.22	4 pcs	3*4,5	NIETMUTTER SW 6 M 3 *4,5
2	MP 3	not used	4 pcs		ROHRNIETE D 2.5*0.15* 9
0	MP 4	1.992.171.04	1 pce		NR.-ETIKETTE 5 * 20
2	P 2	not used		2*16p	EU-BK 2*16p male
0	P 3	not used		2*16p	EU-BK 2*16p male
1	W 1	not used		not used	not used

End of List

**Comments:**  
 (01) 12.02.89 C1...C5, W1 not used  
 (02) J21, MP3, P2 not used

Account									
3.9.90	94	al	16						
22.11.89									
Datum	Gez.	Grp.	Ges.	Insv.					

STUDER REGENSDORF ZÜRICH	Stammkunde	HDLC BUS BOARD 4 A	Number:	1.992.171-00
		Kopie für:		

**CIRCUIT DIAGRAMS SECTION 6**

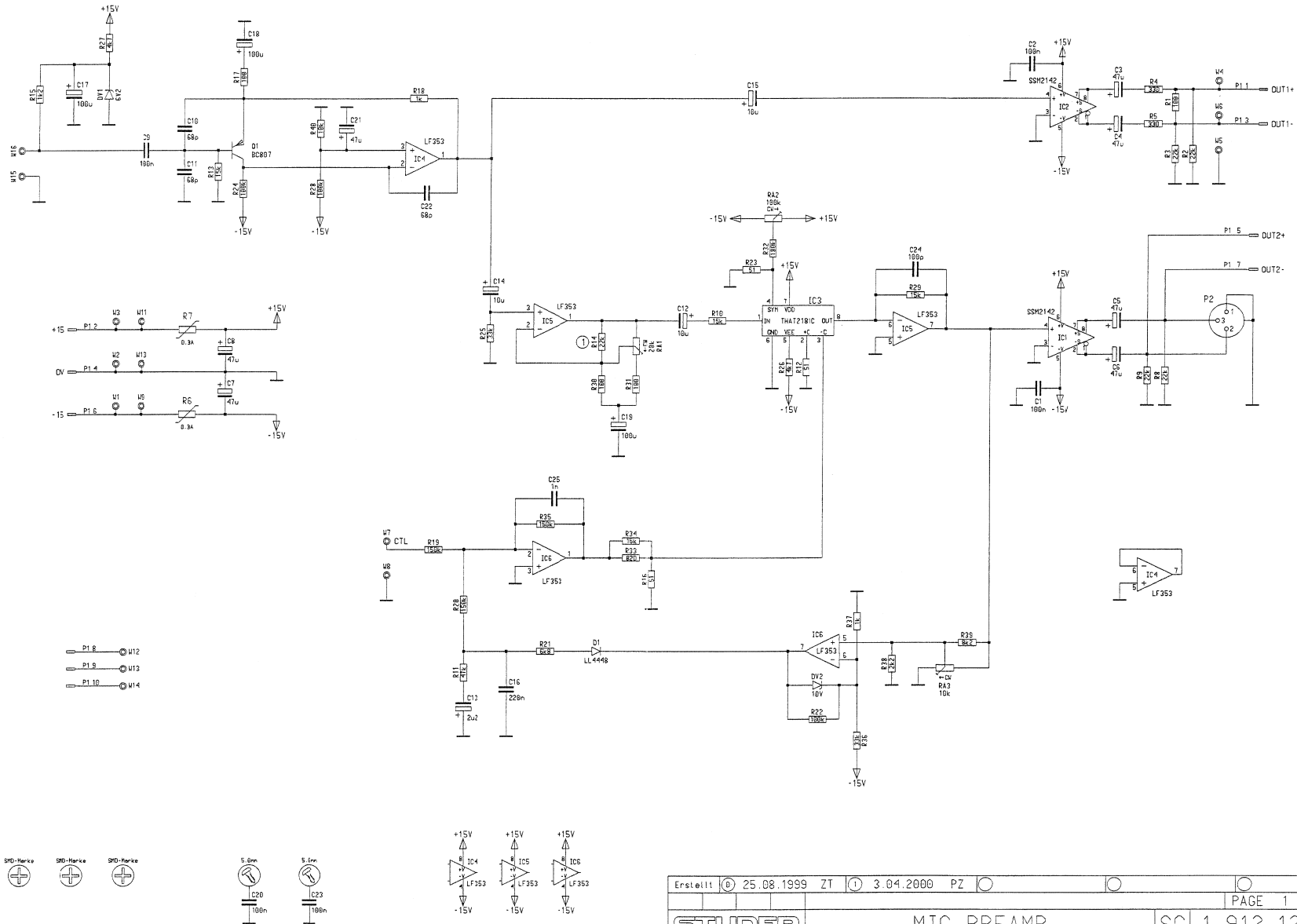
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**Meter Panel Units**

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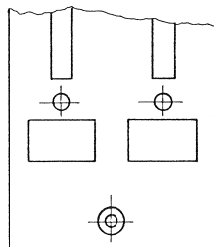
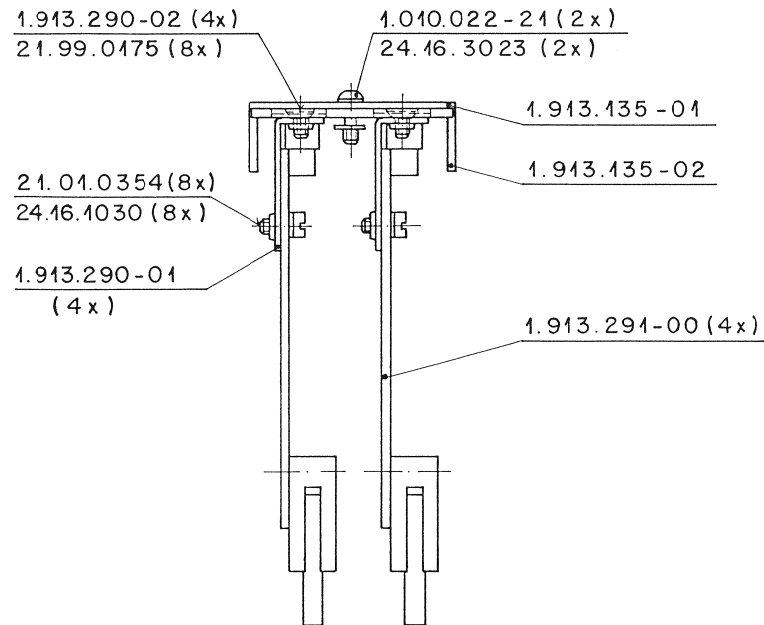
TB Mic Unit.....	1.913.128
<i>consisting of:</i>	
– Mic Pre-Amplifier.....	1.913.127
AUX Indicator 4 × LED .....	1.913.135
LED PPM Meter .....	1.913.291
PFL Amplifier.....	1.913.200
PFL Amplifier with Volume & Headphone Jack .....	1.913.202

Mic Pre-Amplifier 1.913.127.00





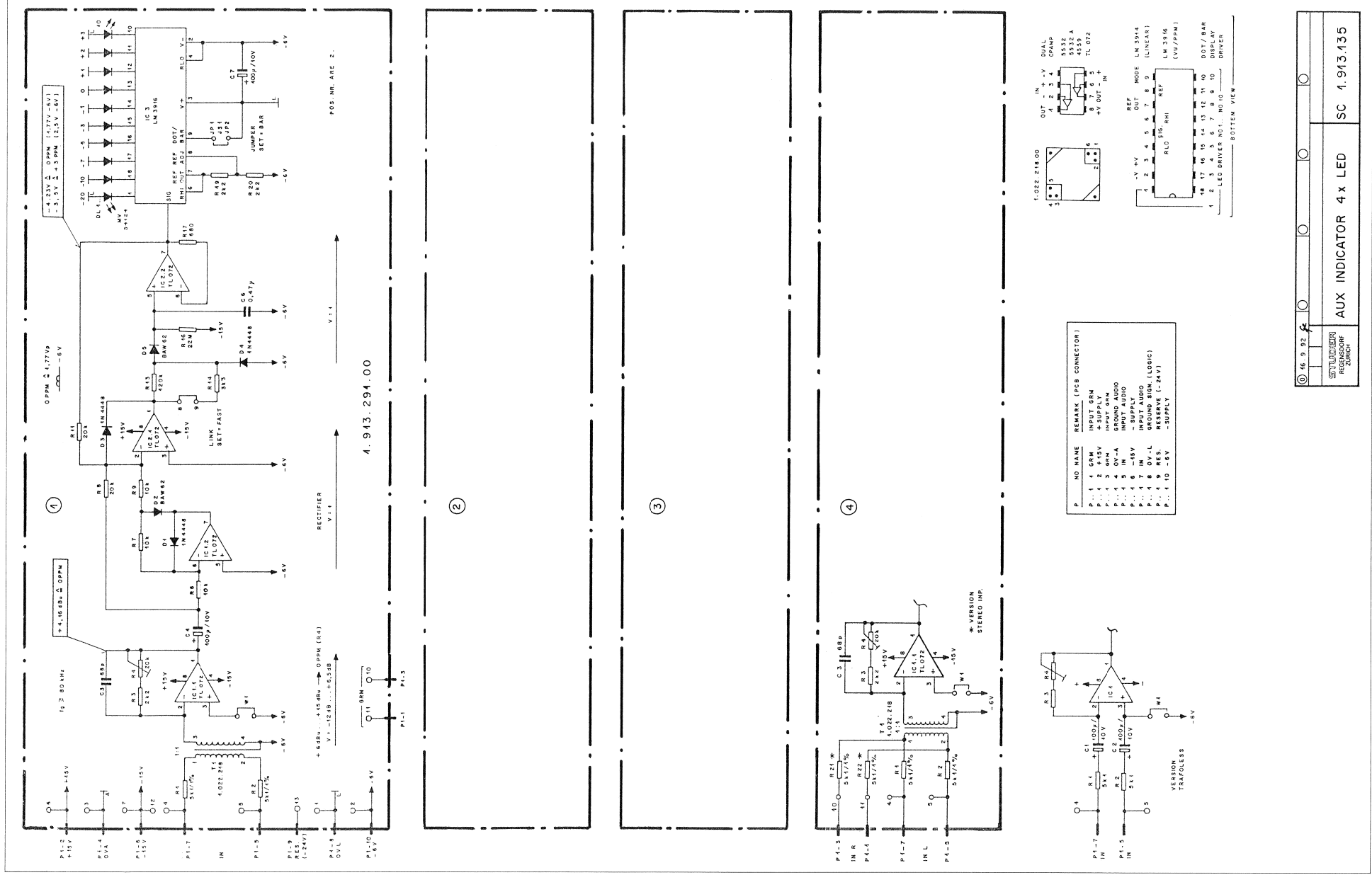
**Aux Indicator 4x LED 1.913.135.00**



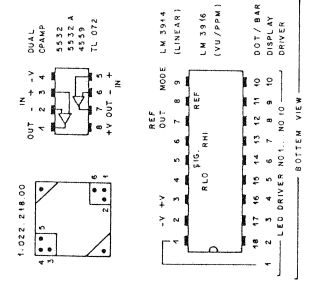
Abgegeben						(5)
						(2)
						(1)
Datum	14.2.90	Gez	Gez	Gez	Index	(4)

STUDER RIEGENSDORF ZÜRICH	Baubestand	AUX INDICATOR 4x LED		1.913.135-00
		Kopie für		

Aux Indicator 4x LED 1.913.135.00



P	NO	NAME	REMARK (PCB CONNECTOR)
P...	1	GRN	INPUT GRN
P...	2	R15V	R-SUPPLY
P...	3	GRN	INPUT GRN
P...	4	OV-A	GROUND AUDIO
P...	5	OV-A	GROUND AUDIO
P...	6	-15V	-SUPPLY
P...	7	IN	INPUT AUDIO
P...	8	OV-L	GROUND SIGNAL (LOGIC)
P...	9	OV-L	GROUND SIGNAL (LOGIC)
P...	10	-5V	-SUPPLY

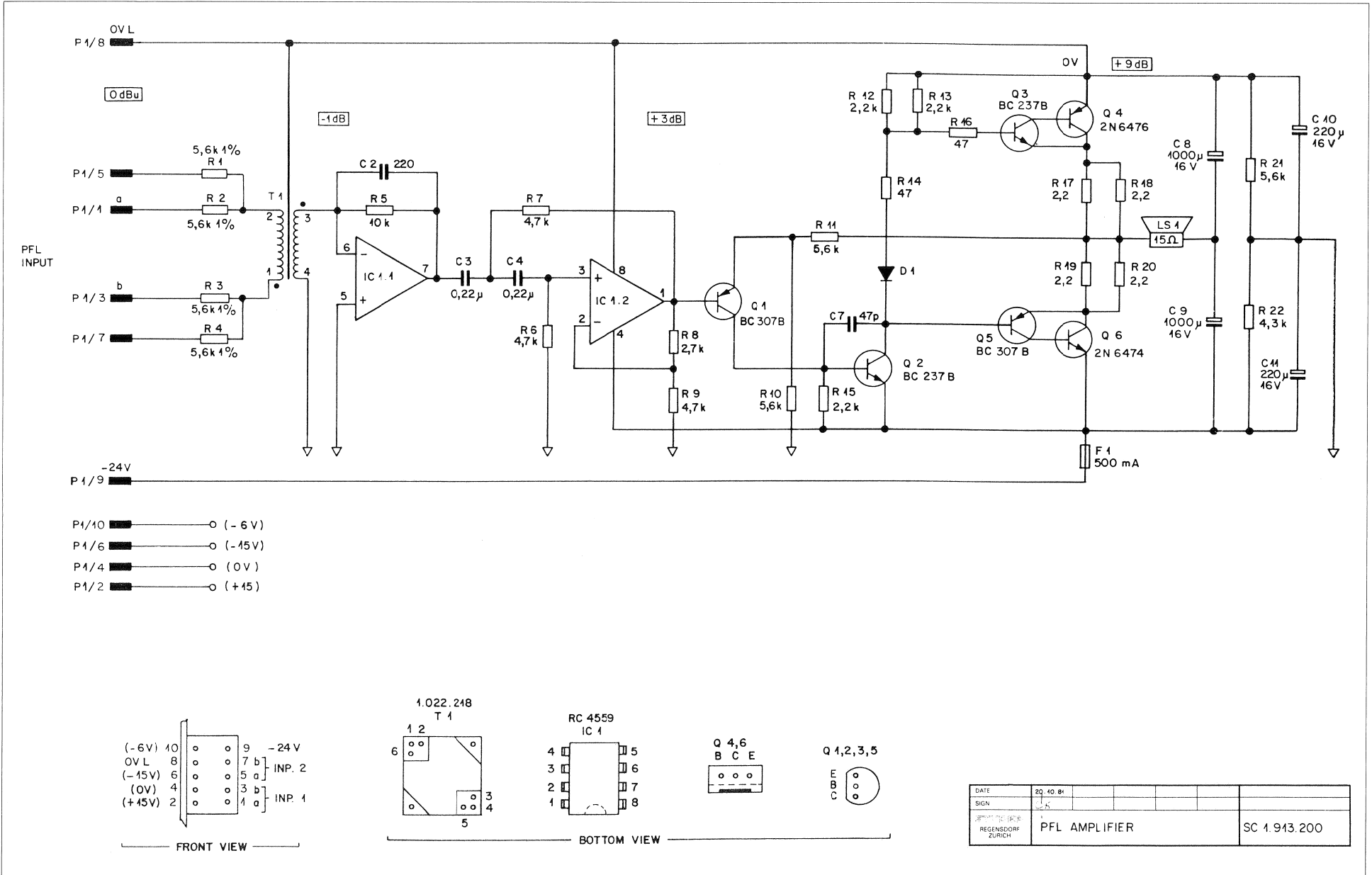


STUDER 1.913.135.00 AUX INDICATOR 4 x LED		SC 1.913.135
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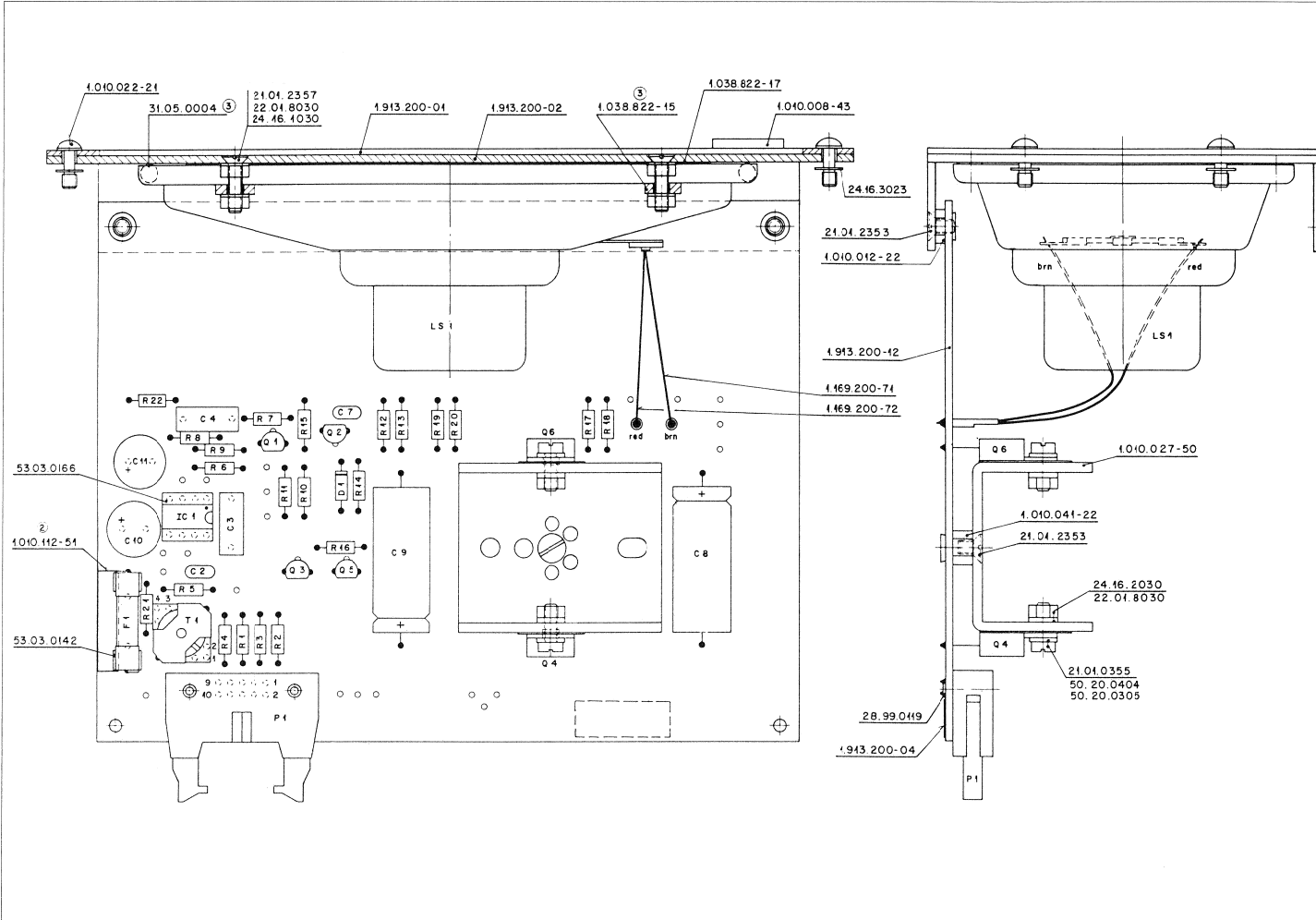




PFL Amplifier 1.913.200.00



PFL Amplifier 1.913.200.00



IND POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
C 1				
C 2	59.34.4221	220 pF		CER
C 3	59.42.2224	0,22 μF	5%	PE
C 4	59.42.2224	0,22 μF	5%	PE
C 5				
C 6				
C 7	59.34.2470	470 pF		CER
C 8	59.25.3418	1000 μF	16V	EL
C 9	59.25.3418	1000 μF	16V	EL
C 10	59.22.4224	220 μF	16V	EL
Q 1	59.22.4224	220 μF	16V	EL
Q 1	59.04.0175	1N4148		SI
F 1	51.01.0114	500 nA	5B	
VC 1	50.09.0101	KC 4553	DUAL	OPA
LS 1	41.01.0105	15 D	3W	Rel. Ph.
Q 1	59.03.0515	BC 307B	PNP	LF all purpose SI
Q 2	59.03.0436	BC 239B	NPN	LF all purpose SI
Q 3	59.03.0436	BC 239B	NPN	LF all purpose SI
Q 4	59.03.0345	2N6476	PNP	Power TO 220 SI
Q 5	59.03.0515	BC 307B	PNP	LF all purpose SI
Q 6	59.03.0344	2N6474	NPN	Power TO 220 R
R 1	57.11.3562	5,6k	1%	
R 2	57.11.3562	5,6k	1%	
R 3	57.11.3562	5,6k	1%	
R 4	57.11.3562	5,6k	1%	
R 5	57.11.4403	10k		
R 6	57.11.4472	4,9k	2%	

IND	DATE	NAME	
①			CER - Ceramic Ph - Philips
②			PE - Polyester R - RCA
③			EL - Electrolytic R - Raytheon
④	14.11.84	Uji	
⑤	14.8.81	Uji	
STUDER			PFL - AMPLIFIER 1.913.200.00 PAGE 1 OF 2

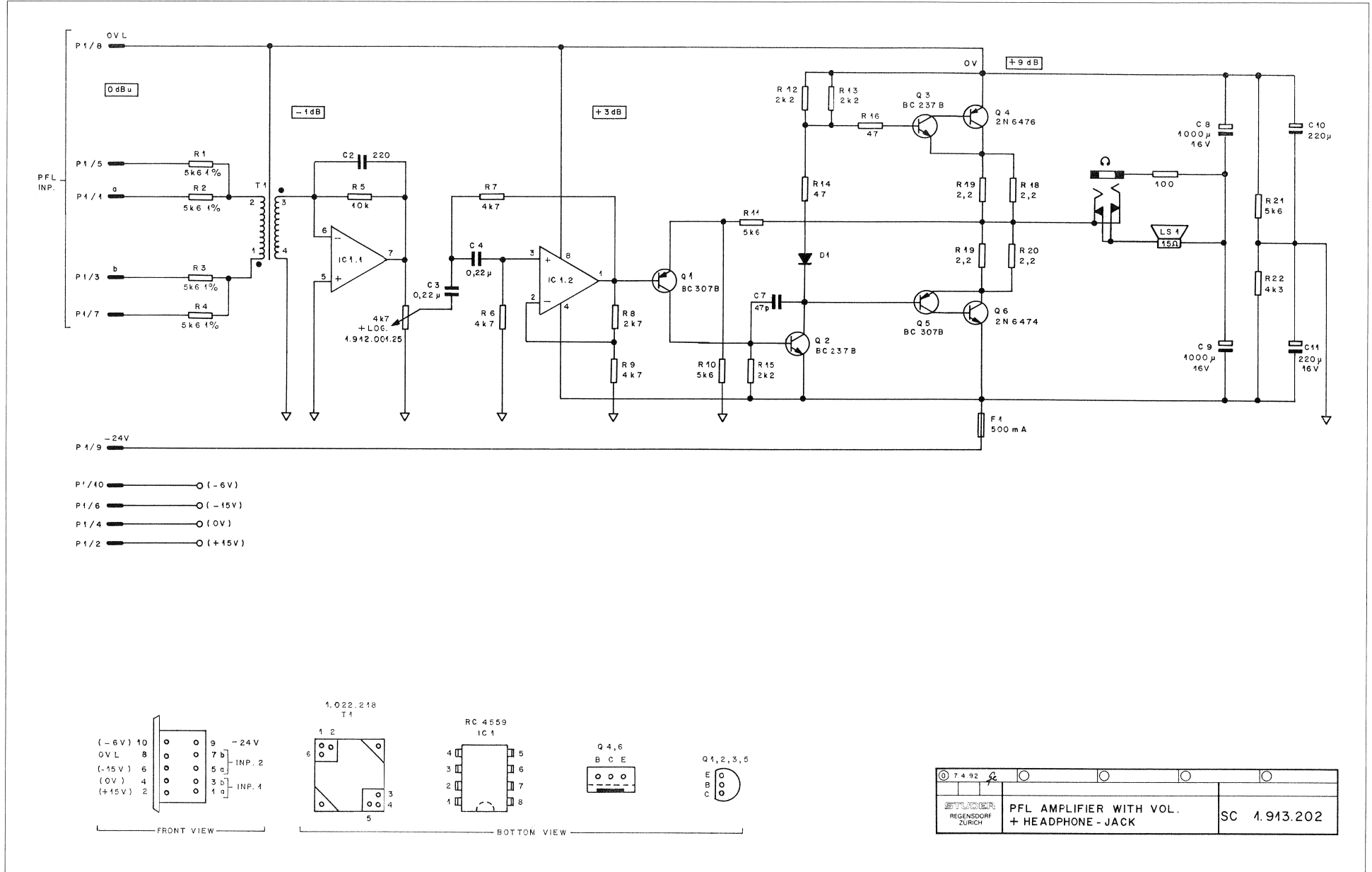
IND POS NO	PART NO	VALUE	SPECIFICATIONS/EQUIVALENT	MFR
R 7	57.11.4472	4,7k	2%	
R 8	57.11.4472	2,7k	2%	
R 9	57.11.4472	4,7k	2%	
R 10	57.11.3562	5,6k		
R 11	57.11.3562	5,6k		
R 12	57.11.4222	2,2k		
R 13	57.11.4222	2,2k		
R 14	57.11.4470	4,7k		
R 15	57.11.4223	2,2k		
R 16	57.11.4470	4,7k		
R 17	57.11.4229	2,2k		
R 18	57.11.4229	2,2k		
R 19	57.11.4229	2,2k		
R 20	57.11.4229	2,2k		
R 21	57.11.3562	5,6k	1%	
R 22	57.11.3432	4,3k	1%	
T 1	1.022.218	A: A	Input Trasn.	ST

IND	DATE	NAME	
①			ST - STUDER
②			
③			
④	14.8.81	Uji	
STUDER			PFL AMPLIFIER 1.913.200.00 PAGE 2 OF 2

20.3.87	Uji	14	14	①
1.6.85	A.Ho	14	14	②
5.11.84	A.Ho	14	14	③
4.1.84	A.Ho	14	14	④
29.11.82	A.Ho	14	14	⑤

STUDER	Bemessung	PFL - Amplifier	Number	1.913.200-00
REGENSDORF	ZÜRICH			

PFL Amplifier with Vol. + Headphone - Jack 1.913.202.00



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**CIRCUIT DIAGRAMS SECTION 7**

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**Euro Card Units, Power Supply**

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Power Supply 3V...6V .....	1.915.111
Power Supply 5V/20A .....	1.940.601
±15V/3.4A .....	1.940.602
24V/4.2A .....	1.940.603

**Euro Card Units, Monitoring**

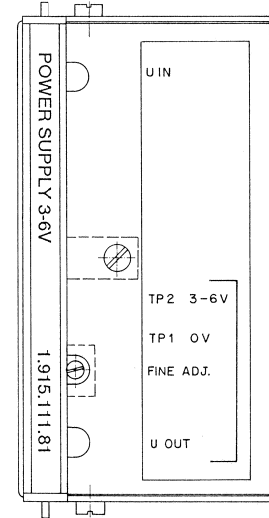
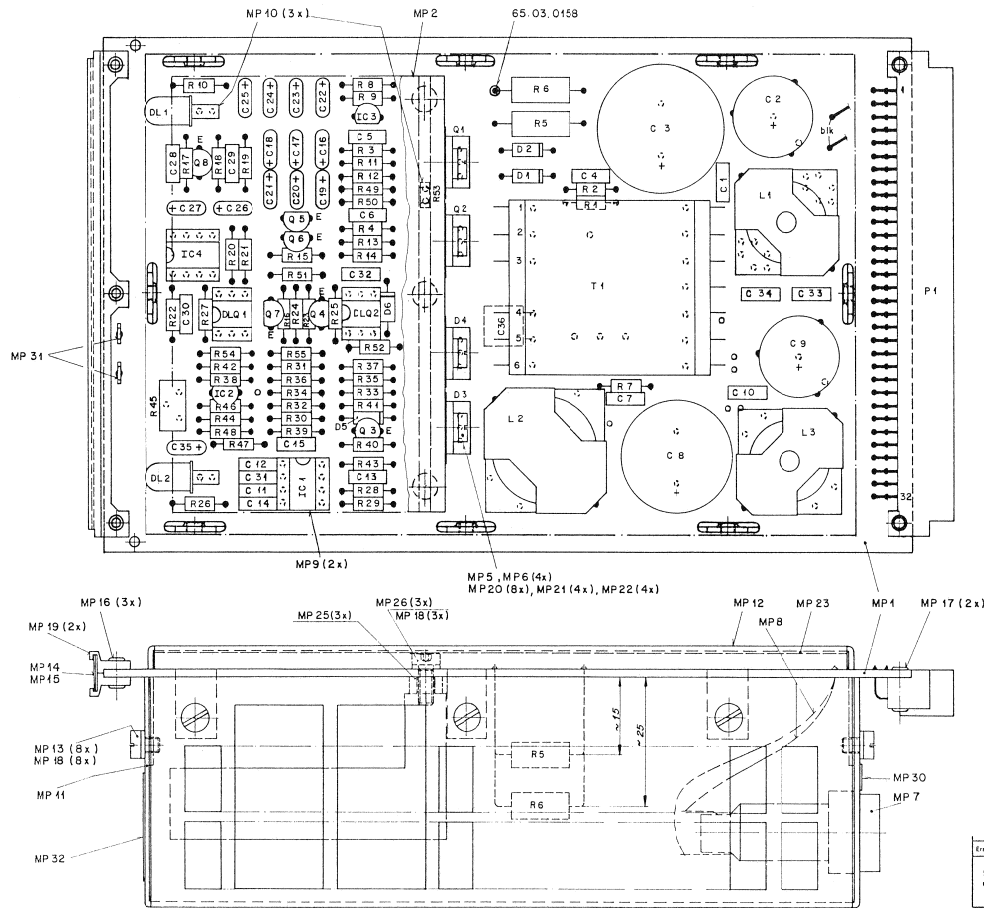
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Analog Source Selector .....	1.917.400
Monitor Group Selector .....	1.917.410
Insert Router Board.....	1.917.415
Talkback Selector .....	1.917.420
Talkback Sel Sideboard .....	1.917.421
Signaling IN 24CH Board.....	1.917.425.22
Signaling OUT 16CH Board.....	1.917.426.22
Dual Headphone Amp. Board.....	1.917.430.23





Power Supply 3V...6V 1.915.111.81



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

C.....1	59.05.0104	100 nF	PE
C.....2	59.22.6102	1000 uF	ALU 40V
C.....3	59.29.4472	4700 uF	EL 40V
C.....4	59.05.0153	15 nF	PE
C.....5	59.05.0222	2.2 nF	PE
C.....6	59.05.0222	2.2 nF	PE
C.....7	59.05.0222	2.2 nF	PE
C.....8	59.29.1103	10000 uF	EL 10V
C.....9	59.22.6102	1000 uF	ALU
C.....10	59.05.0104	100 nF	PE
C.....11	59.05.0104	100 nF	PE
C.....12	59.05.0104	100 nF	PE
C.....13	59.05.0104	100 nF	PE
C.....14	59.05.0104	100 nF	PE
C.....15	59.05.0104	100 nF	PE
C.....16	59.25.2150	15 uF	ALU 16V dry
C.....17	59.25.2150	15 uF	ALU 16V dry
C.....18	59.25.2150	15 uF	ALU 16V dry
C.....19	59.25.2150	15 uF	ALU 16V dry
C.....20	59.25.2150	15 uF	ALU 16V dry
C.....21	59.25.2150	15 uF	ALU 16V dry
C.....22	59.25.2150	15 uF	ALU 16V dry
C.....23	59.25.2150	15 uF	ALU 16V dry
C.....24	59.25.2150	15 uF	ALU 16V dry
C.....25	59.25.2150	15 uF	ALU 16V dry
C.....26	59.25.2150	15 uF	ALU 16V dry
C.....27	59.25.2150	15 uF	ALU 16V dry
C.....28	59.05.0222	2.2 nF	PE
C.....29	59.34.4181	180 pF	CER
C.....30	59.05.0104	100 nF	PE
C.....31	59.05.0104	100 nF	PE
C.....32	59.05.0103	10 nF	PE
C.....33	59.05.0334	330 nF	PE
C.....34	59.05.0334	330 nF	PE
C.....35	59.25.2150	15 uF	ALU 16V dry
C.....36	59.05.0104	100 nF	PE
D.....1	50.04.0138	UF4004	
D.....2	50.04.0138	UF4004	
D.....3	50.04.0517	8VY 32	dual diode 2*10A
D.....4	50.04.0517	8VY 32	dual diode 2*10A
D.....5	50.04.0125	1W448	
D.....6	50.04.1108	Z 5.6V	
DL.....1	50.04.2113	MV5453	LED 5mm green
DL.....2	50.04.2111	MV5753	LED 5mm red
DLQ.....1	50.04.3200	CN17	single optoisolator
DLQ.....2	50.04.3200	CN17	single optoisolator
F.....1	51.01.0125	6.3A	fuse
IC.....1	50.05.0283	LM393	dual comparator
IC.....2	50.10.0106	TL431C	shunt voltage regulator
IC.....3	50.10.0108	LM317	series voltage regulator
IC.....4	50.10.0113	UC3843	current mode PWM controller
L.....1	1.022.540.00	38 uH	5A
L.....2	1.022.541.00	22 uH	dual coil 2*5A
L.....3	1.022.542.00	1.6 mH	dual coil 2*10A
MP.....1	1.915.111.12	1 pcs	Power Supply Led 3-6V PCB
MP.....2	50.20.3005	1 pcs	heat-sink black 1.8 K/W
MP.....3	0	not used	
MP.....4	0	not used	
MP.....5	50.20.0305	4 pcs	Glimmerscheibe
MP.....6	50.20.0404	4 pcs	Isolierdurchfuehrung
MP.....7	53.03.0106	1 pcs	fuse holder 10A
MP.....8	1.915.111.93	1 pcs	LL Power Supply Led 3-6V
MP.....9	53.03.0166	2 pcs	IC-socket 8 pins
MP.....10	1.010.012.50	3 pcs	LED-clip (2LED 1NTC)
MP.....11	1.915.111.01	1 pcs	Abdeckhaube Bestuecksseite
MP.....12	1.915.111.02	1 pcs	Abdeckhaube Loetseite
MP.....13	21.53.0352	8 pcs	Z Schraube IS M3*4 (Abdeckhaube)
MP.....14	1.915.111.04	1 pcs	Bez. Streifen 6,3*91
MP.....15	1.010.095.49	1 pcs	Klarschichtschilde
MP.....16	1.08.21.1380	3 pcs	Rohrnierte D2,25*6,5
MP.....17	28.99.0319	2 pcs	Rohrnierte D 2,5*9
MP.....18	24.15.1030	11 pcs	Rippenschlitze M3
MP.....19	1.010.005.33	2 pcs	Griffhaelchen
MP.....20	37.01.0101	8 pcs	Tellerfueder
MP.....21	21.01.0356	4 pcs	Z Schraube M3*10 (Halbleitern.)
MP.....22	1.010.098.27	4 pcs	Distanzhulsen D 3.17*2.3
MP.....23	1.915.111.03	1 pcs	Isolation 138*89 selbstklebend
MP.....24	1.010.085.27	3 pcs	Distanzhulsen D 3.277 * 35
MP.....25	21.53.0357	3 pcs	Z -Schraube M3*12
MP.....26	0	not used	
MP.....27	65.03.0158	23 mm	Isolierschlauch (R6)
MP.....28	1.010.123.51	1 pcs	Text-Etikette 5*20 (T 6.3A)
MP.....29	54.02.0320	2 pcs	Flachstecker (Tp1 Tp2)
MP.....30	1.915.111.05	1 pcs	Klebschild (Pot1 Led Tp)
P.....1	54.11.2004	32 pins	Eurocard connector
Q.....1	50.03.1509	IRF 540	power MOS-FET
Q.....2	50.03.1509	IRF 540	power MOS-FET
Q.....3	50.03.0340	BC 337	NPN standard
Q.....4	50.03.0351	BC 327	PNP standard
Q.....5	50.03.0523	ZTX 651	NPN 2A
Q.....6	50.03.0352	ZTX 751	PNP 2A
Q.....7	50.03.0340	BC 337	NPN standard

Erstellt von:	Erstellt durch:	Kennzeichen:
STUEBBER RECHENBERG ZURICH	POWER SUPPLY LED 3-6V ESE	1.915.111-81



**Power Supply 3V...6V 1.915.111.81**

Ad	..POS..	..REF.No..	DESCRIPTION.....	MANUFACTURER
Q.....8	50.03.0340	BC 337	NPN standard	
R.....1	57.11.3102	1 kOhm		
R.....2	57.11.3102	1 kOhm		
R.....3	57.11.3220	22 Ohm		
R.....4	57.11.3220	22 Ohm		
R.....5	57.56.2020	20 mOhm	3W small L (10nH)	
R.....6	57.56.2050	50 mOhm	3W small L (10nH)	
R.....7	57.11.3120	12 Ohm		
R.....8	57.11.3102	1 kOhm	5%	
R.....9	57.11.3103	10 kOhm	5%	
R.....10	57.11.3362	3.6 kOhm		
R....11	57.11.3220	22 Ohm		
R....12	57.11.3682	6.8 kOhm		
R....13	57.11.3220	22 Ohm		
R....14	57.11.3682	6.8 kOhm		
R....15	57.11.3561	560 Ohm		
R....16	57.11.3682	6.8 kOhm		
R....17	57.11.3103	10 kOhm	5%	
R....18	57.11.3684	680 kOhm	5%	
R....19	57.11.3103	10 kOhm		
R....20	57.11.3102	1 kOhm		
R....21	57.11.3102	1 kOhm		
R....22	57.11.3104	100 kOhm		
R....23	57.11.3162	1.6 kOhm		
R....24	57.11.3391	390 Ohm		
R....25	57.11.3104	100 kOhm		
R....26	57.11.3561	560 Ohm		
R....27	57.11.3241	240 Ohm		
R....28	57.11.3682	6.8 kOhm		
R....29	57.11.3000	0 Ohm		
R....30	57.11.3682	6.8 kOhm		
R....31	57.11.3682	6.8 kOhm	1%	
R....32	57.11.3162	1.6 kOhm	1%	
R....33	57.11.3181	180 Ohm	1%	
R....34	57.11.3202	2 kOhm	1%	
R....35	57.11.3151	150 Ohm	1%	
R....36	57.11.3362	3.6 kOhm	1%	
R....37	57.11.3561	560 Ohm	1%	
R....38	57.11.3682	6.8 kOhm	1%	
R....39	57.11.3563	56 kOhm	1%	
R....40	57.11.3682	6.8 kOhm		
R....41	57.11.3682	6.8 kOhm		
R....42	57.11.3241	240 Ohm		
R....43	57.11.3682	6.8 kOhm		
R....44	57.11.3682	6.8 kOhm	1%	
R....45	58.01.9102	1 kOhm	trimmer	
R....46	57.11.3682	6.8 kOhm	1%	
R....47	57.11.3104	100 kOhm	1%	
R....48	57.11.3104	100 kOhm	1%	
R....49	57.11.3202	2 kOhm		
R....50	57.11.3202	2 kOhm		
R....51	57.11.3102	1 kOhm		
R....52	57.11.3151	150 Ohm		
R....53	57.99.0220	16 kOhm	NTC	
R....54	57.11.3102	1 kOhm		
R....55	57.11.3102	1 kOhm		

T.....1 1.022.639.00 Schalttrafo Power Supply 3 - 6V STUDER

PE=Polyester, EL=Electrolytic, ALU=Aluminium, CER=Ceramic

MANUFACTURER: NS=National Semiconductors, TI=Texas Instrument  
 GI=General Instruments, UN=Unitrod,  
 GE=General Electric,

1.915.111.81 POWER SUPPLY LED 3-6V SE 92/01/2400

## **+5 V, ±15 V, +24 V POWER SUPPLY UNITS**

**General** For the power supply of the On-Air 5000 mixing system, standard 19" units with wide-range input and power factor correction are used, equipped with a Studer front panel.

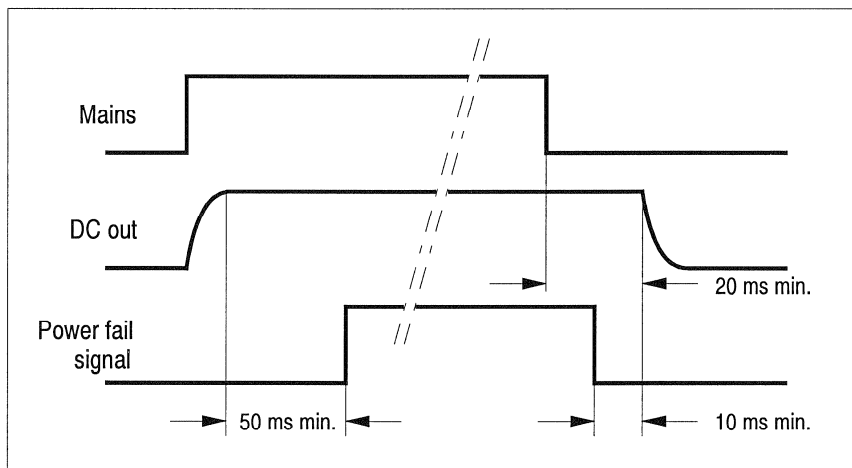
Studer Part No.	Description
1.940.601.81	Power Supply 5 V/20 A
1.940.602.81	Power Supply ±15 V/3.4 A
1.940.603.81	Power Supply 24 V/4.2 A



**Important** As the power supply units are safety-relevant parts, they may be serviced only by authorized personnel using original spare parts. For replacement or repair, contact your nearest Studer representative.

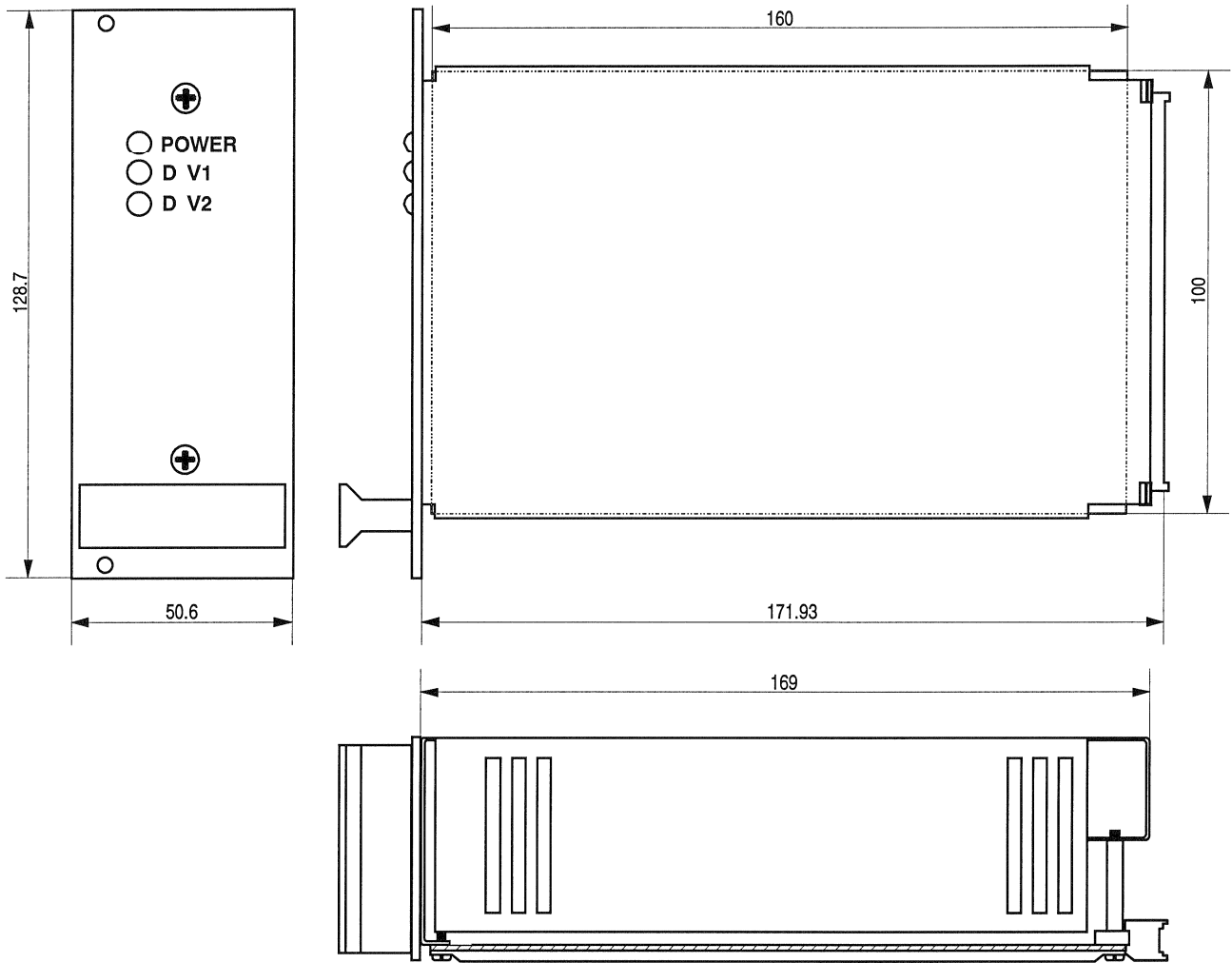
## **Specifications**

- Mains Voltages** 100...240 VAC
- Mains Frequency** 47...440 Hz
- Efficiency** typ. 75%
- Output Power** 100 W total
- Output(s)** short-circuit protected, main output(s) overload protected (110%)
- Power Down (Logic Inhibit)** Control input, TTL compatible, active high (5 V/1.6 mA)
- Power Fail** Output, open collector, TTL compatible, active low (max. 30 V/16 mA) (see diagram below).

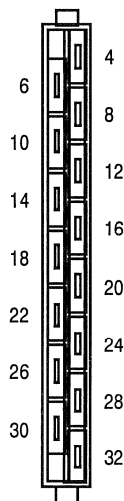




**Dimensions (mm)**



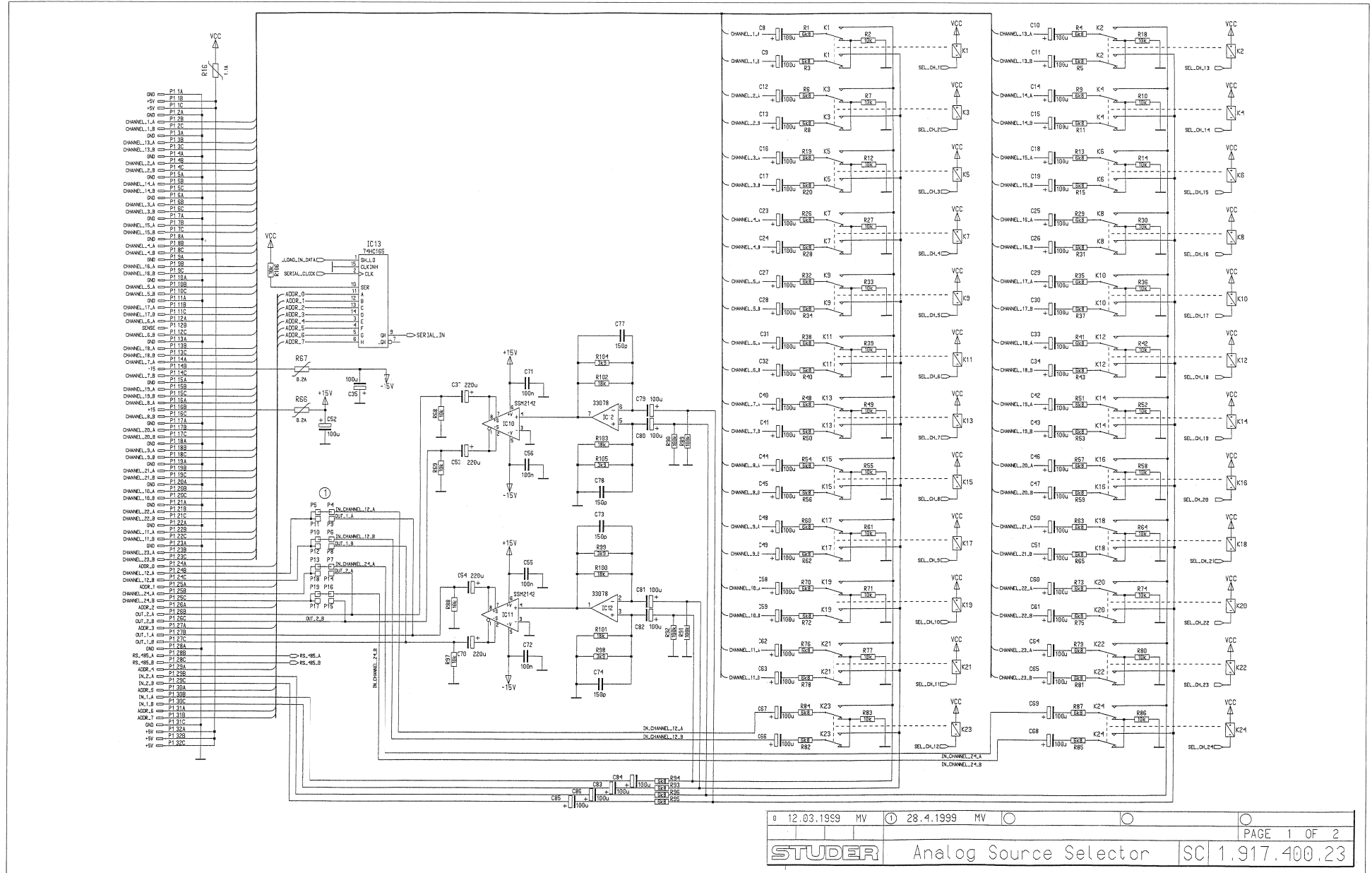
**Pin Assignment**



Pin	Single Output	Dual Output
4	V1 +	V1 +
6	V1 +	V1 GND
8	Sense +	V2 -
10	Sense GND	V2 GND
12	V1 GND	n.c.
14	V1 GND	n.c.
16	n.c.	n.c.
18	n.c.	n.c.
20	Logic inhibit	Logic inhibit
22	Power fail	Power fail
24	n.c.	n.c.
26	n.c.	n.c.
28	AC live	AC live
30	AC neutral	AC neutral
32	Protective earth	Protective earth

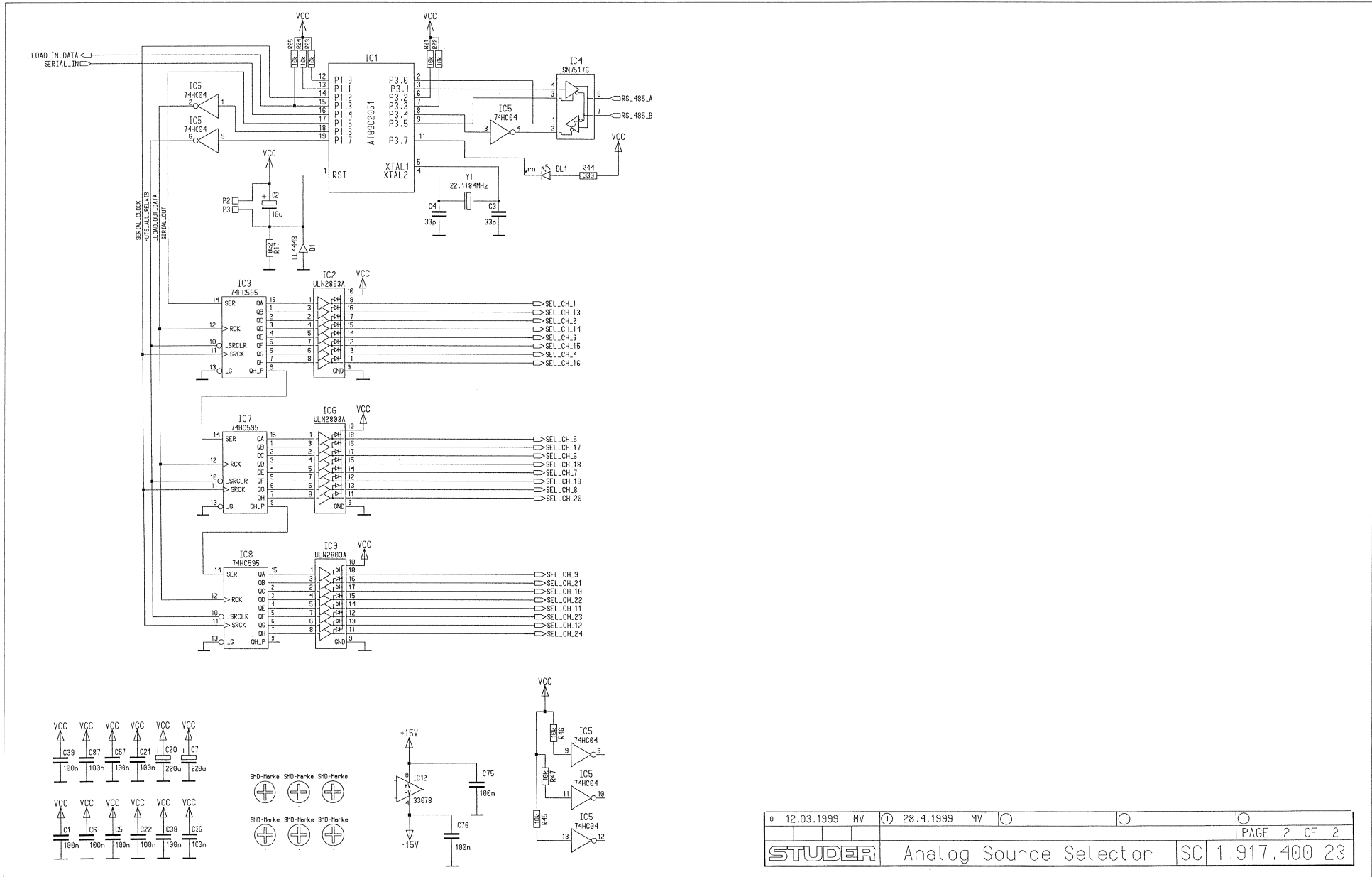


Analog Source Selector 1.917.400.23



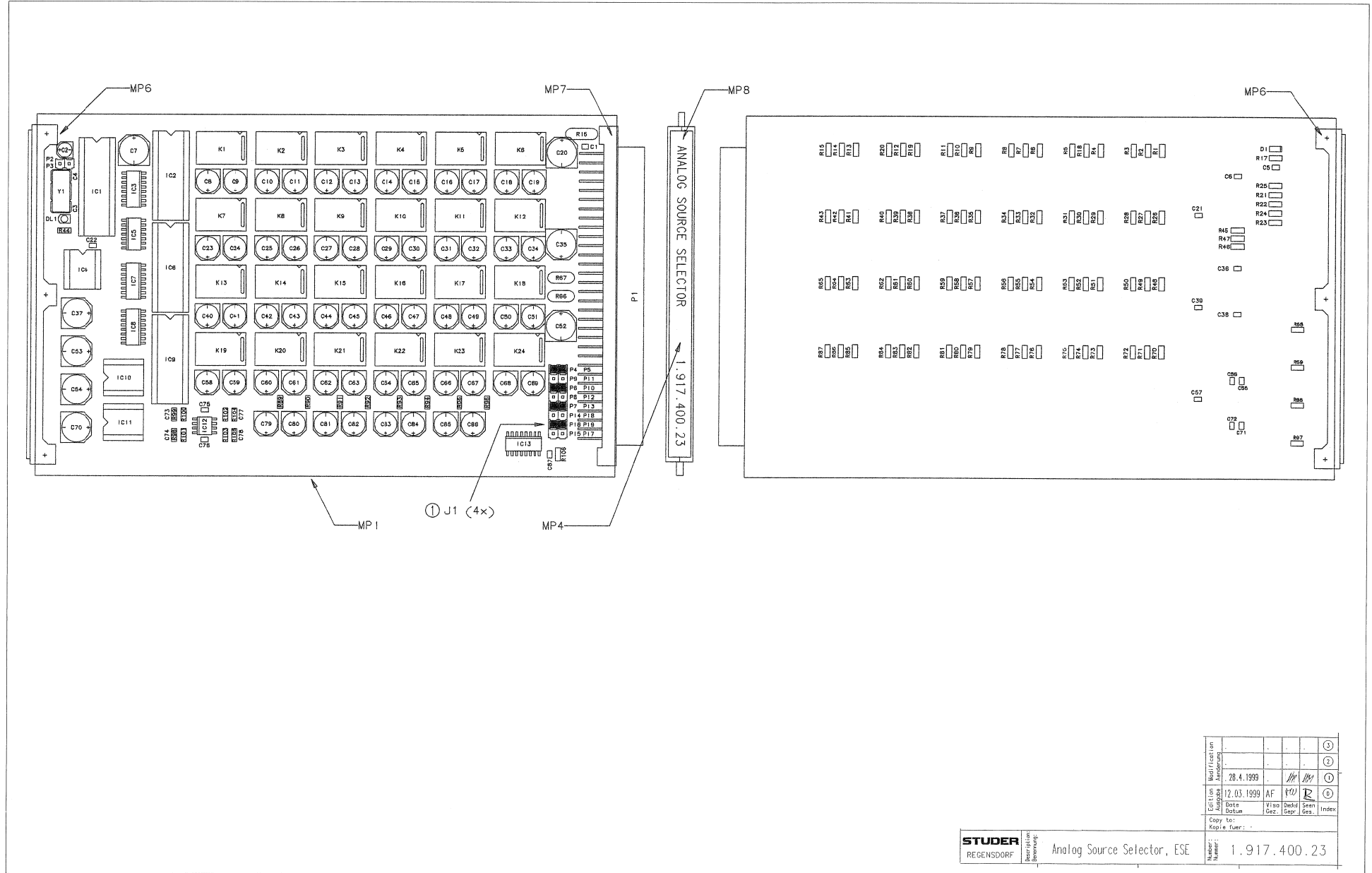


Analog Source Selector 1.917.400.23





Analog Source Selector 1.917.400.23



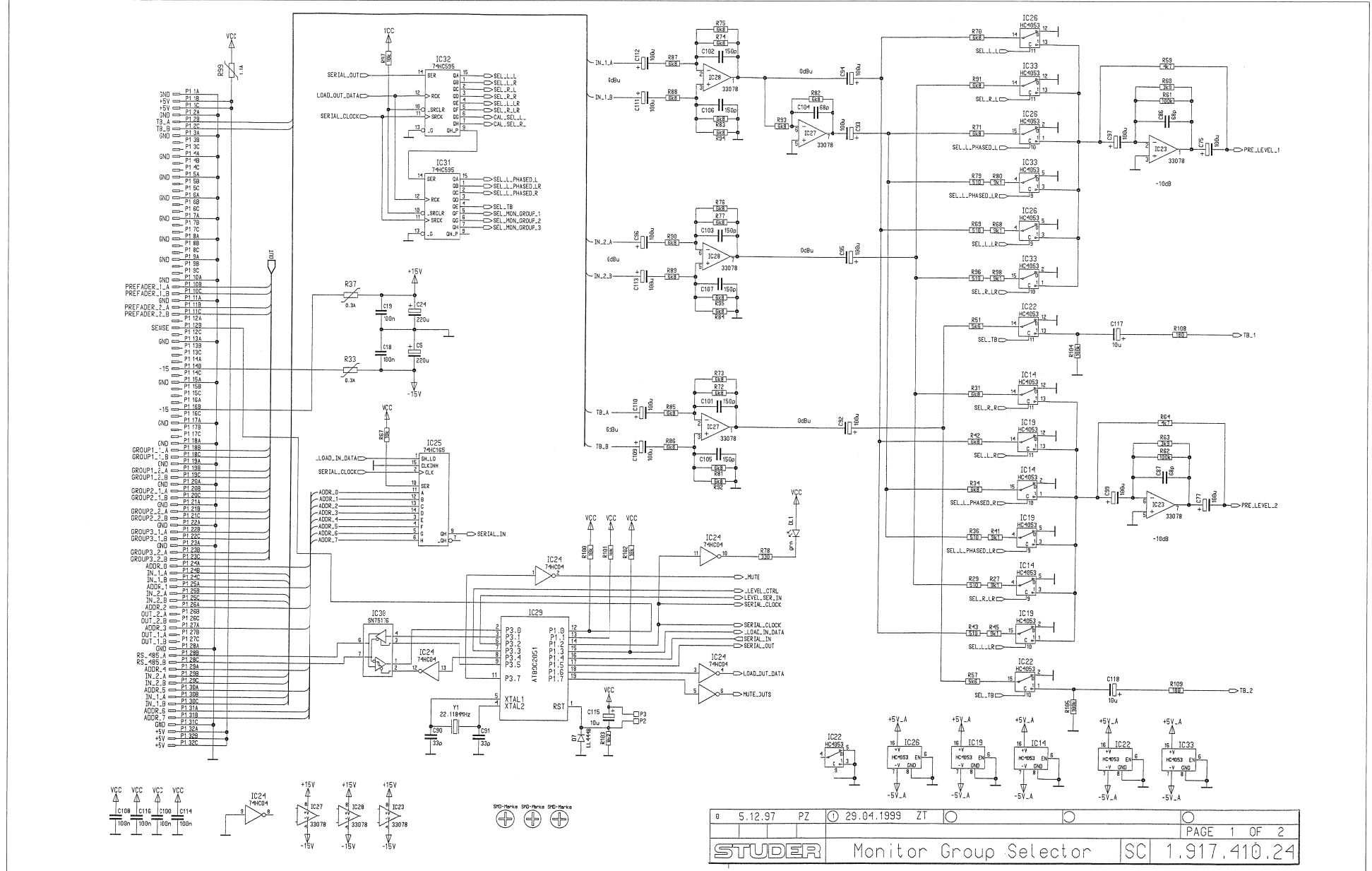
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Date	28.4.1999								
Datum	12.03.1999	AF	100	R					
Wiss. Dez.									
Techn. Dez.									
Spez. Dez.									
Index									



Analog Source Selector 1.917.400.23

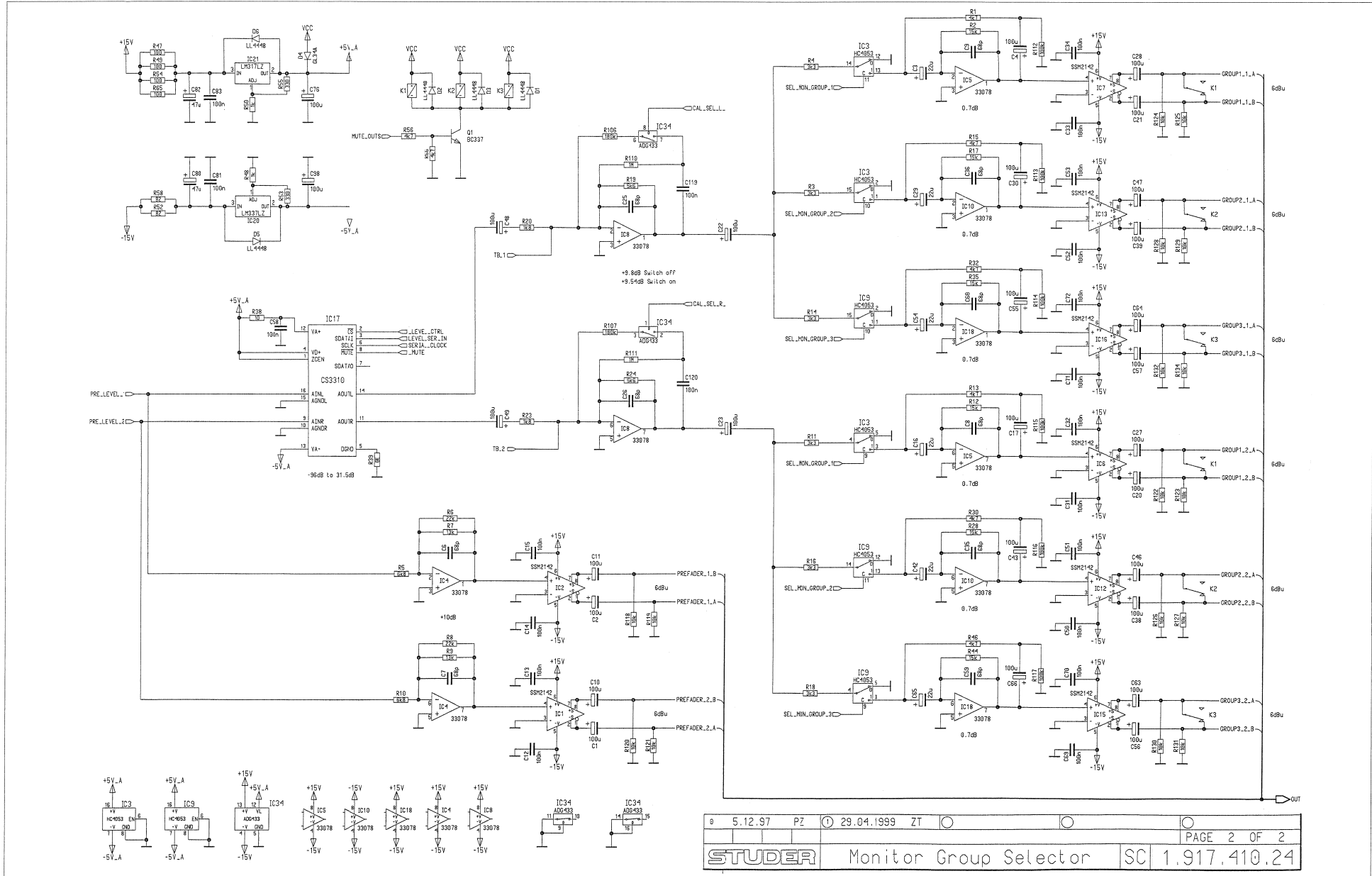
Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	D 1	50.60.8001	4448	200mA	75V 4ns SOD 80	0	R 15	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 103	57.60.1183	18k	MF, 1%, 0204, E24		
0	C 2	59.69.0095	10u	C-EL	16V, 4.0*3.7	0	DL 1	50.04.2132	TLUG	2401	GN MATT	0	R 16	57.60.7051	1.1A	POLY, PTC, 30V	0	R 104	57.60.1392	3K9	MF, 1%, 0204, E24		
0	C 3	59.60.2237	33p	CER	50V, 5%, COG, 0803	0	IC 1	1.950.910.22	SW9	917400	ATMEL1 (50.16.0313)	0	R 17	57.60.1622	6K2	MF, 1%, 0204, E24	0	R 105	57.60.1392	3K9	MF, 1%, 0204, E24		
0	C 4	59.60.2237	33p	CER	50V, 5%, COG, 0803	0	IC 2	50.15.0119	JLN2803	Octal peripheral Driver, o.c.	0	R 18	57.60.1103	10K	MF, 1%, 0204, E24	0	R 106	57.60.1103	10K	MF, 1%, 0204, E24			
0	C 5	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 3	50.62.1595	74HC595	8bit shift/cutput register	0	R 19	57.60.1682	6K8	MF, 1%, 0204, E24	0	XIC 1	53.03.0165	20p	DIL 0.3", lot, Gerate			
0	C 6	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 4	50.15.0119	JLN2803	Octal peripheral Driver, o.c.	0	R 20	57.60.1682	6K8	MF, 1%, 0204, E24	0	Y 1	89.60.1004	22.1184MHz	SMD Quartz			
0	C 7	59.68.0031	220u	C-EL	6V, 8.0*6.3	0	IC 5	50.62.1595	74HC595	8bit shift/cutput register	0	R 21	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 8	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 6	50.15.0115	75178	Hex Inverter	0	R 22	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 9	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 7	50.62.1004	74HC04	Hex Inverter	0	R 23	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 10	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 8	50.15.0119	JLN2803	Octal peripheral Driver, o.c.	0	R 24	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 11	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 9	50.62.1595	74HC595	8bit shift/cutput register	0	R 25	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 12	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 10	50.62.1595	74HC595	8bit shift/cutput register	0	R 26	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 13	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 11	50.15.0119	JLN2803	Octal peripheral Driver, o.c.	0	R 27	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 14	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 12	50.09.0124	2142	IC SSM 2142 P	0	R 28	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 15	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	IC 13	50.09.0124	2142	IC SSM 2142 P	0	R 29	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 16	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 1	50.09.0124	2142	IC SSM 2142 P	0	R 30	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 17	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 2	50.61.0204	MC33078	Dual Op-amp low noise	0	R 31	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 18	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 3	50.62.1165	74HC165	8bit shift register	0	R 32	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 19	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	J 1	54.01.0021	4 pcs	Jumper	0.63 * 0.63mm	0	R 33	57.60.1103	10K	MF, 1%, 0204, E24							
0	C 20	59.68.0031	220u	C-EL	6V, 8.0*6.3	0	K 4	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 34	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 21	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	K 5	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 35	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 22	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	K 6	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 36	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 23	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 7	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 37	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 24	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 8	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 38	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 25	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 9	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 39	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 26	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 10	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 40	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 27	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 11	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 41	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 28	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 12	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 42	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 29	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 13	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 43	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 30	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 14	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 44	57.60.1331	330R	MF, 1%, 0204, E24								
0	C 31	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 15	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 45	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 32	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 16	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 46	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 33	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 17	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 47	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 34	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 18	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 48	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 35	59.68.0115	100u	C-EL	35V, 8.0*10.7	0	K 19	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 49	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 36	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	K 20	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 50	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 37	59.68.0073	220u	C-EL	16V, 8.0*10.7	0	K 21	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 51	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 38	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	K 22	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 52	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 39	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	K 23	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 53	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 40	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 24	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 54	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 41	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 25	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 55	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 42	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 26	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 56	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 43	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 27	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 57	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 44	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 28	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 58	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 45	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 29	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 59	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 46	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 30	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 60	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 47	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 31	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 61	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 48	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 32	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 62	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 49	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 33	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 63	57.60.1682	6K8	MF, 1%, 0204, E24								
0	C 50	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 34	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 64	57.60.1103	10K	MF, 1%, 0204, E24								
0	C 51	59.68.0029	100u	C-EL	6V, 6.3*5.7	0	K 35	59.04.0198	2u	5V 125V 2A Ag/Au	0	R 65	57.60										

Monitor Group Selector 1.917.410.24



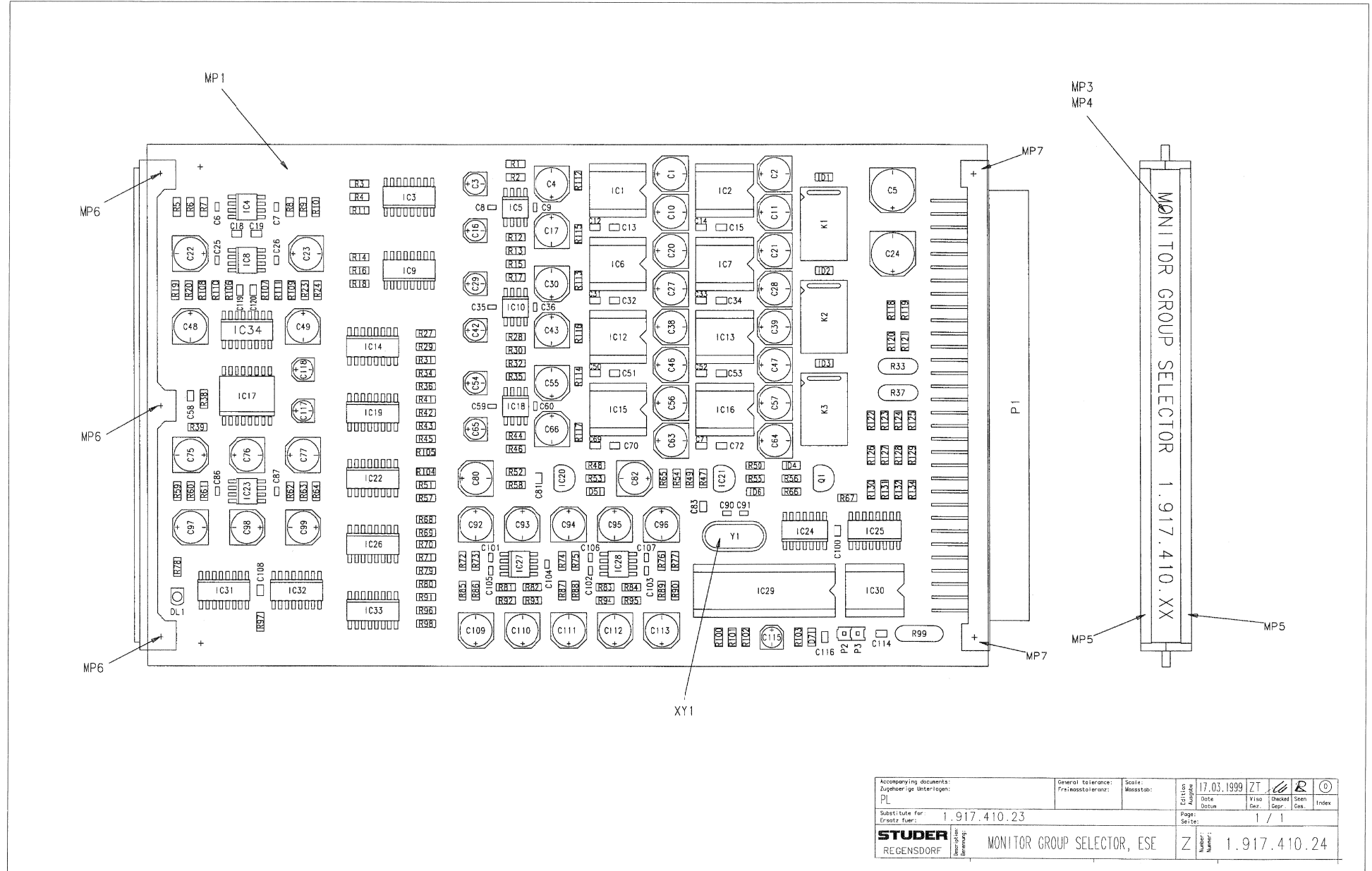


Monitor Group Selector 1.917.410.24





Monitor Group Selector 1.917.410.24



Accompanying documents: Zugehörige Unterlagen: PL	General tolerance: Fristtoleranz:	Scale: Maßstab:	Edition Ausgabe	17.03.1999	ZT					
Substitute for: Ersatz fuer:	1.917.410.23		Date Datum	17.03.1999	Visa Bes.	Checked Gepr.	Seen Ges.	Index		
<b>STUDER</b> REGENSDORF	MONITOR GROUP SELECTOR, ESE		Page: Seite:	1 / 1		Number: Nummer:	1.917.410.24			





Monitor Group Selector 1.917.410.24

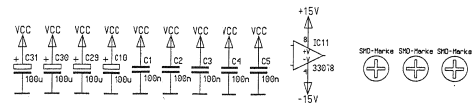
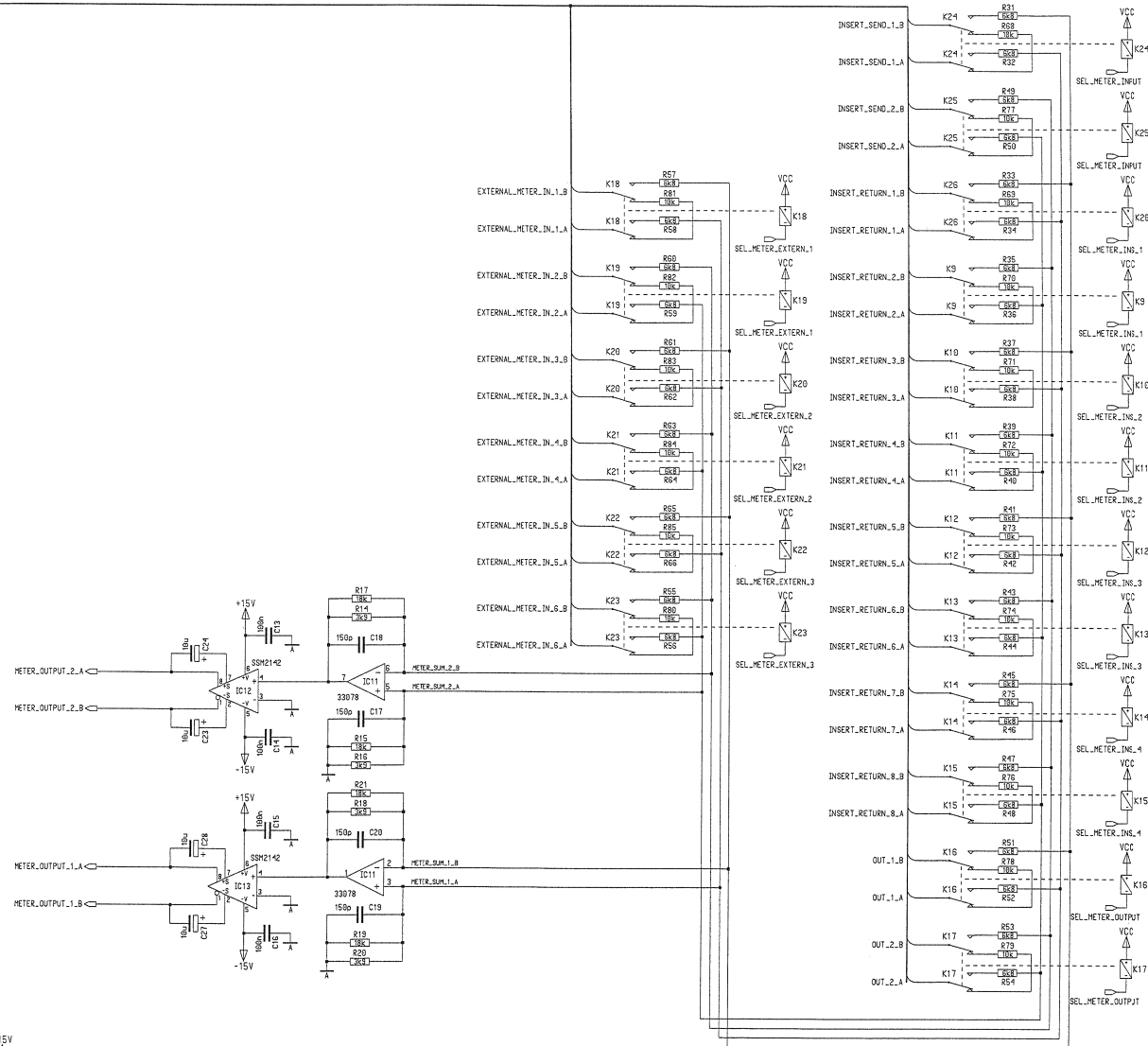
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0	C 1	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 104	59.80.2245	86p	CER	50V, 5%, COG, 0603	0	R 5	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 98	57.60.1511	510R	MF, 1%, 0204, E24		
0	C 2	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 105	59.80.2253	150p	CER	50V, 5%, COG, 0603	0	R 6	57.60.1223	22K	MF, 1%, 0204, E24	0	R 97	57.60.1103	10K	MF, 1%, 0204, E24		
1	C 3	59.88.0025	22u	C-EL	6V, 4.0*5.7	0	C 106	59.80.2263	150p	CER	50V, 5%, COG, 0603	0	R 7	not used			0	R 98	57.60.1192	9K1	MF, 1%, 0204, E24		
0	C 4	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 107	59.80.2283	150p	CER	50V, 5%, COG, 0603	0	R 8	57.60.1223	22K	MF, 1%, 0204, E24	0	R 99	57.62.7051	1.1A	POLY-PTC, 30V		
0	C 5	59.88.0073	220u	C-EL	16V, 8.0*10.7	0	C 108	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	R 9	not used			0	R 100	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 6	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	C 109	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	R 10	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 101	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 7	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	C 110	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	R 11	57.60.1332	3K3	MF, 1%, 0204, E24	0	R 102	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 8	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	C 111	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	R 12	57.60.1153	15K	MF, 1%, 0204, E24	0	R 103	57.60.1822	8K2	MF, 1%, 0204, E24		
0	C 9	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	C 112	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	R 13	57.60.1472	4K7	MF, 1%, 0204, E24	0	R 104	57.60.1104	100K	MF, 1%, 0204, E24		
0	C 10	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 113	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	R 14	57.60.1332	3K3	MF, 1%, 0204, E24	0	R 105	57.60.1104	100K	MF, 1%, 0204, E24		
0	C 11	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 114	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	R 15	57.60.1472	4K7	MF, 1%, 0204, E24	0	R 106	57.60.1184	180K	MF, 1%, 0204, E24		
0	C 12	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	C 115	59.88.0066	10u	C-EL	16V, 4.0*5.7	0	R 16	57.60.1332	3K3	MF, 1%, 0204, E24	0	R 107	57.60.1184	180K	MF, 1%, 0204, E24		
0	C 13	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	C 116	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	R 17	57.60.1153	15K	MF, 1%, 0204, E24	0	R 108	57.60.1181	180R	MF, 1%, 0204, E24		
0	C 14	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	C 117	59.88.0066	10u	C-EL	16V, 4.0*5.7	0	R 18	57.60.1332	3K3	MF, 1%, 0204, E24	0	R 109	57.60.1181	180R	MF, 1%, 0204, E24		
0	C 15	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	C 118	59.88.0066	10u	C-EL	16V, 4.0*5.7	0	R 19	57.60.1562	5K6	MF, 1%, 0204, E24	1	R 110	57.60.1105	1M	MF, 1%, 0204, E24		
1	C 16	59.88.0025	22u	C-EL	6V, 4.0*5.7	0	C 119	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	R 20	57.60.1182	1K8	MF, 1%, 0204, E24	1	R 111	57.60.1105	1M	MF, 1%, 0204, E24		
0	C 17	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	C 120	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	R 23	57.60.1182	1K8	MF, 1%, 0204, E24	0	R 112	57.60.1104	100K	MF, 1%, 0204, E24		
0	C 18	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	D 1	50.60.8001	4448	200mA	75V	4ns	SOD 80	1	R 24	57.60.1562	5K6	MF, 1%, 0204, E24	0	R 113	57.60.1104	100K	MF, 1%, 0204, E24
0	C 19	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	D 2	50.60.8001	4448	200mA	75V	4ns	SOD 80	0	R 27	57.60.1912	9K1	MF, 1%, 0204, E24	0	R 114	57.60.1104	100K	MF, 1%, 0204, E24
0	C 20	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	D 3	50.60.8001	4448	200mA	75V	4ns	SOD 80	1	R 28	57.60.1153	15K	MF, 1%, 0204, E24	0	R 115	57.60.1104	100K	MF, 1%, 0204, E24
0	C 21	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	D 4	not used					0	R 29	57.60.1511	510R	MF, 1%, 0204, E24	0	R 116	57.60.1104	100K	MF, 1%, 0204, E24	
0	C 22	59.88.0029	100u	C-EL	6V, 6.3*5.7	2	D 4	not used					1	R 30	57.60.1472	4K7	MF, 1%, 0204, E24	0	R 117	57.60.1104	100K	MF, 1%, 0204, E24	
0	C 23	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	D 5	50.60.8001	4448	200mA	75V	4ns	SOD 80	0	R 31	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 118	57.60.1103	10K	MF, 1%, 0204, E24
0	C 24	59.88.0073	220u	C-EL	16V, 8.0*10.7	0	D 6	50.60.8001	4448	200mA	75V	4ns	SOD 80	1	R 32	57.60.1472	4K7	MF, 1%, 0204, E24	0	R 119	57.60.1103	10K	MF, 1%, 0204, E24
0	C 25	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	D 7	50.60.8001	4448	200mA	75V	4ns	SOD 80	0	R 33	57.60.1912	0.3A	POLY-PTC, 60V	0	R 120	57.60.1103	10K	MF, 1%, 0204, E24
0	C 26	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	DL 1	50.04.2132	TLUG 2401	DL	TLUG 2401	GN MATT	0	R 34	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 121	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 27	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 1	50.09.0124	2142	Audio	balanced line driver		1	R 35	57.60.1153	15K	MF, 1%, 0204, E24	0	R 122	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 28	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 2	50.09.0124	2142	Audio	balanced line driver		0	R 38	57.60.1511	510R	MF, 1%, 0204, E24	0	R 123	57.60.1104	100K	MF, 1%, 0204, E24	
1	C 29	59.88.0025	22u	C-EL	6V, 4.0*5.7	0	IC 3	50.62.8053	HC4053	Tripple 2ch analog mux/demux		0	R 39	57.60.1000	0R0	MF, 0204	0	R 124	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 30	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 4	50.61.0204	MC33078	Dual Op-Amp low noise		0	R 41	57.60.1912	9K1	MF, 1%, 0204, E24	0	R 125	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 31	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 5	50.61.0204	MC33078	Dual Op-Amp low noise		0	R 42	57.60.1682	6K8	MF, 1%, 0204, E24	0	R 126	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 32	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 6	50.09.0124	2142	Audio	balanced line driver		0	R 43	57.60.1511	510R	MF, 1%, 0204, E24	0	R 127	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 33	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	IC 7	50.09.0124	2142	Audio	balanced line driver		1	R 44	57.60.1153	15K	MF, 1%, 0204, E24	0	R 128	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 34	59.80.2245	68p	CER	50V, 5%, COG, 0603	0	IC 8	50.61.0204	MC33078	Dual Op-Amp low noise		0	R 45	57.60.1912	9K1	MF, 1%, 0204, E24	0	R 129	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 35	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 9	50.62.8053	HC4053	Tripple 2ch analog mux/demux		1	R 46	57.60.1472	4K7	MF, 1%, 0204, E24	0	R 130	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 36	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 10	50.61.0204	MC33078	Dual Op-Amp low noise		0	R 47	57.60.1101	100R	MF, 1%, 0204, E24	0	R 131	57.60.1103	10K	MF, 1%, 0204, E24		
1	C 42	59.88.0025	22u	C-EL	6V, 4.0*5.7	0	IC 12	50.09.0124	2142	Audio	balanced line driver		0	R 48	57.60.1102	1K	MF, 1%, 0204, E24	0	R 132	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 43	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 13	50.09.0124	2142	Audio	balanced line driver		0	R 49	57.60.1101	100R	MF, 1%, 0204, E24	0	R 133	57.60.1103	10K	MF, 1%, 0204, E24	
0	C 44	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 14	50.62.8053	HC4053	Tripple 2ch analog mux/demux		0	R 50	57.60.1102	1K	MF, 1%, 0204, E24	0	R 134	57.60.1103	10K	MF, 1%, 0204, E24		
0	C 47	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 15	50.09.0124	2142	Audio	balanced line driver		0	R 51	57.60.1562	5K6	MF, 1%, 0204, E24	0	XIC 6	53.03.0166	8p	DIL 0.3"/lot, gerade	
0	C 48	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 16	50.09.0124	2142	Audio	balanced line driver		0	R 52	57.60.1620	62R	MF, 1%, 0204, E24	0	XIC 7	53.03.0166	8p	DIL 0.3"/lot, gerade	
0	C 49	59.88.0029	100u	C-EL	6V, 6.3*5.7	0	IC 17	50.61.8301	CS3310	Dlg volume control ste SO16		0	R 53	57.60.1331	330R	MF, 1%, 0204, E24	0	XIC 8	53.03.0166	8p	DIL 0.3"/lot, gerade		
0	C 50	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 18	50.61.0204	MC33078	Dual Op-Amp low noise		0	R 54	57.60.1101	100R	MF, 1%, 0204, E24	0	XIC 9	53.03.0166	8p	DIL 0.3"/lot, gerade		
0	C 51	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 19	50.62.8053	HC4053	Tripple 2ch analog mux/demux		0	R 56	57.60.1331	330R	MF, 1%, 0204, E24	0	XIC 10	53.03.0166	8p	DIL 0.3"/lot, gerade		
0	C 52	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 20	50.10.0109	LM337L	IC LM 337 LZ		0	R 57	57.60.1472	4K7	MF, 1%, 0204, E24	0	XIC 11	53.03.0166	8p	DIL 0.3"/lot, gerade		
0	C 53	59.80.3337	100u	CER	50V, 10%, XTR, 0805	0	IC 21	50.10.0108	LM317L	IC LM 317 LZ		0	R 58	57.60.1562	5K6	MF,							





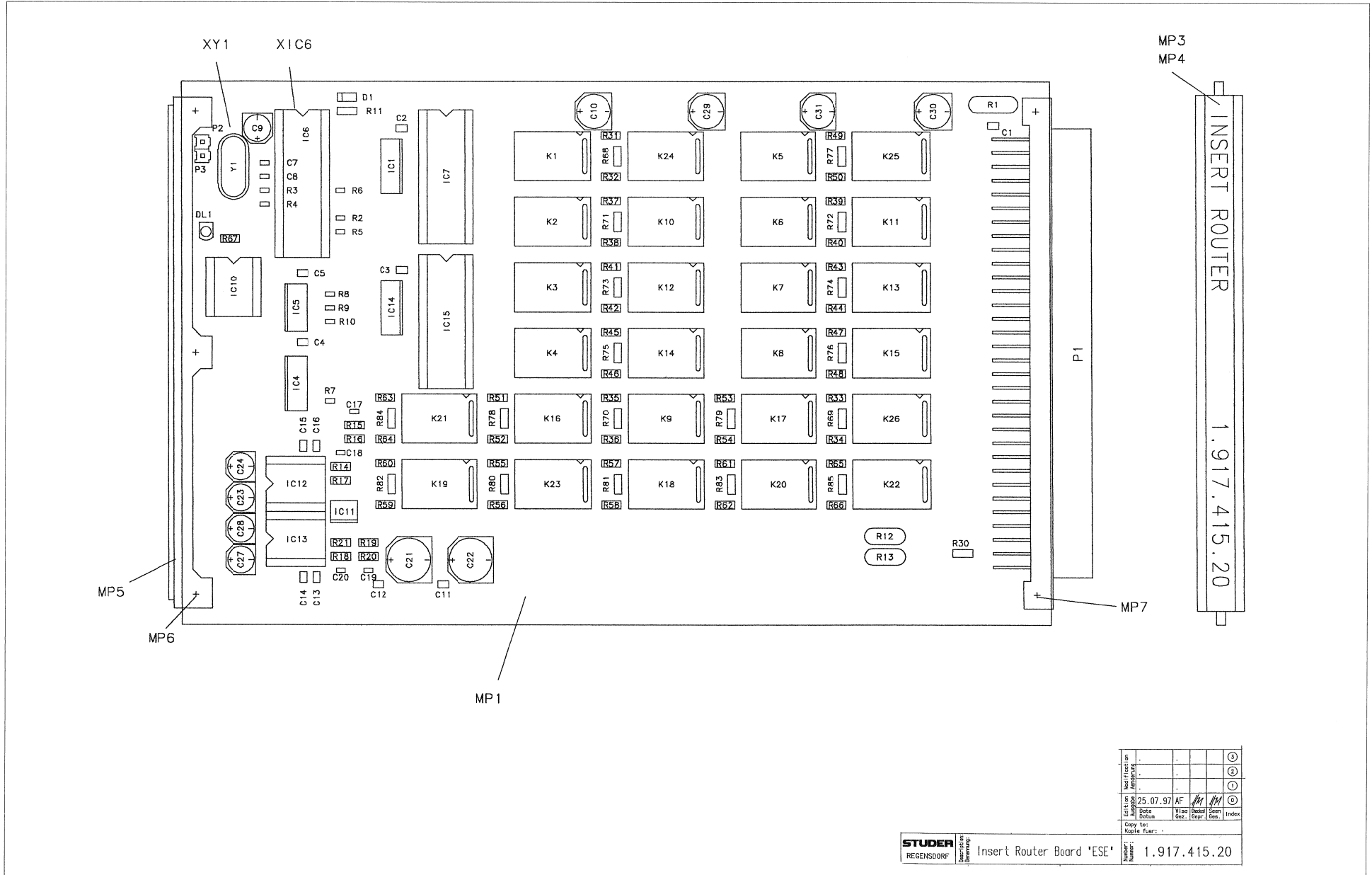
Insert Router Board 1.917.415.20

AUD IO





**Insert Router Board 1.917.415.20**



Act. Line	Head of Function						
Approved	Approved						
Date	25.07.97	AF					
Drawn							
Checked							
Design							
Index							

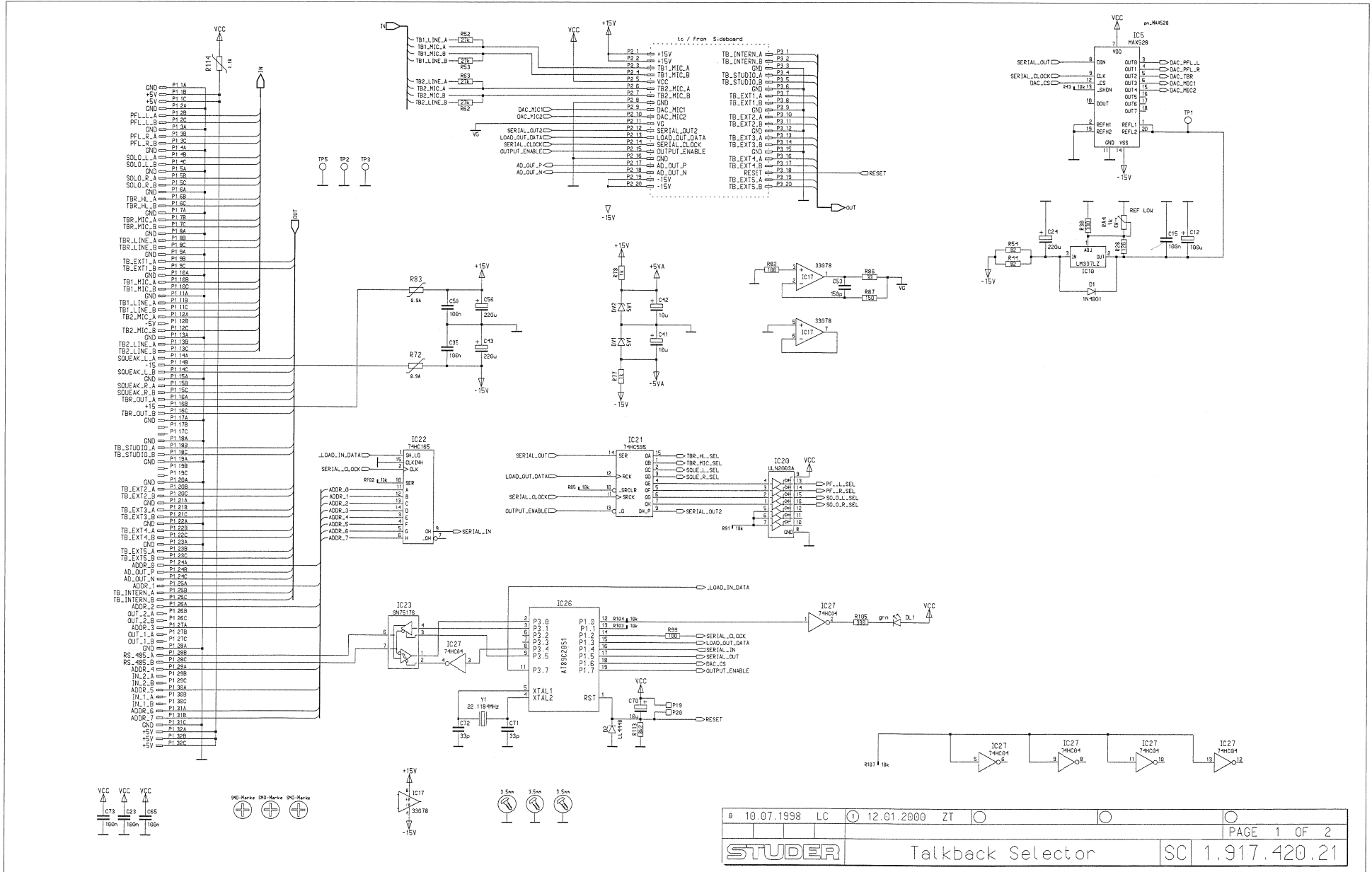


Insert Router Board 1.917.415.22

Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description
0 C 1	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 1	57.92.7051	1:1A		POLY- PTC, 30V
0 C 2	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 2	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 3	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 3	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 4	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 4	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 5	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 5	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 7	59.60.2237	33p		CER 50V, 5%, COG, 0603	0 R 6	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 8	59.60.2237	33p		CER 50V, 5%, COG, 0603	0 R 7	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 9	59.68.0109	10u		C-EL 35V, 5.0*5.7	0 R 8	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 10	59.68.0C29	100u		C-EL 6V, 6.3*5.7	0 R 9	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 11	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 10	57.69.1097	10k		Chip 0603, 5%, carbon
0 C 12	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 11	57.60.1322	3K2		MF, 1%, 0204, E24
0 C 13	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 12	57.92.7011	3.2A		POLY- PTC, 60V
0 C 14	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 R 13	57.92.7011	3.2A		POLY- PTC, 60V
0 C 15	59.60.3337	100n		CER 50V, 10%, X7R, 0805	1 R 14	57.60.1392	3K9		MF, 1%, 0204, E24
0 C 16	59.60.3337	100n		CER 50V, 10%, X7R, 0805	1 R 15	57.60.1183	18K		MF, 1%, 0204, E24
0 C 17	59.60.2253	150p		CER 50V, 5%, COG, 0803	1 R 16	57.60.1392	3K9		MF, 1%, 0204, E24
0 C 18	59.60.2253	150p		CER 50V, 5%, COG, 0803	1 R 17	57.60.1183	18K		MF, 1%, 0204, E24
0 C 19	59.60.2253	150p		CER 50V, 5%, COG, 0803	1 R 18	57.60.1392	3K9		MF, 1%, 0204, E24
0 C 20	59.60.2253	150p		CER 50V, 5%, COG, 0803	1 R 19	57.60.1183	18K		MF, 1%, 0204, E24
0 C 21	59.68.0115	100u		C-EL 35V, 8.0*10.7	1 R 20	57.60.1392	3K9		MF, 1%, 0204, E24
0 C 22	59.68.0115	100u		C-EL 35V, 8.0*10.7	1 R 21	57.60.1183	18K		MF, 1%, 0204, E24
0 C 23	59.68.0109	10u		C-EL 35V, 6.0*5.7	0 R 30	57.60.1000	DR0		MF, 0204
0 C 24	59.68.0109	10u		C-EL 35V, 6.0*5.7	0 R 31	57.60.1682	8K8		MF, 1%, 0204, E24
0 C 27	59.68.0109	10u		C-EL 35V, 6.0*5.7	0 R 32	57.60.1682	8K8		MF, 1%, 0204, E24
0 C 28	59.68.0109	10u		C-EL 35V, 6.0*5.7	0 R 33	57.60.1682	8K8		MF, 1%, 0204, E24
0 C 29	59.68.0028	100u		C-EL 6V, 6.3*5.7	0 R 34	57.60.1682	8K8		MF, 1%, 0204, E24
0 C 30	59.68.0028	100u		C-EL 6V, 6.3*5.7	0 R 35	57.60.1682	8K8		MF, 1%, 0204, E24
0 C 31	59.68.0028	100u		C-EL 6V, 6.3*5.7	0 R 36	57.60.1682	8K8		MF, 1%, 0204, E24
					0 R 37	57.60.1682	8K8		MF, 1%, 0204, E24
					0 R 38	57.60.1682	8K8		MF, 1%, 0204, E24
0 D 1	50.60.8001	4448	D LL 4448	SOD 80	0 R 39	57.60.1682	8K8		MF, 1%, 0204, E24
					0 R 40	57.60.1682	8K8		MF, 1%, 0204, E24
0 DL 1	50.04.2132	TLUG 2401	DL TLUG 2401	GN MATT	0 R 41	57.60.1682	8K8		MF, 1%, 0204, E24
					0 R 42	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 1	50.62.1995	74HC595	74 HC 595		0 R 43	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 4	50.62.1995	74HC595	74 HC 595		0 R 44	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 5	50.62.1994	74HC 04	74 HC 04		0 R 45	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 6	50.18.0313	89C2051	MicroController 24MHz		0 R 46	57.60.1682	8K8		MF, 1%, 0204, E24
			1.950.912.20 SW 917415 ATMEL3		0 R 47	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 7	50.15.0119	ULN2803	Octal peripheral Driver, o.c.		0 R 48	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 10	50.15.0115	75176	IC SN 75176 BP, DS 3895 N,		0 R 49	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 11	50.01.0204	MC33078	IC MC 33078 P		0 R 50	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 12	50.09.0124	2142	IC SSM 2142 P		0 R 51	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 13	50.09.0124	2142	IC SSM 2142 P		0 R 52	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 14	50.62.1995	74HC595	74 HC 595		0 R 53	57.60.1682	8K8		MF, 1%, 0204, E24
0 IC 15	50.15.0119	ULN2803	Octal peripheral Driver, o.c.		0 R 54	57.60.1682	8K8		MF, 1%, 0204, E24
					0 R 55	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 1	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 56	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 2	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 57	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 3	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 58	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 4	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 59	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 5	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 60	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 6	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 61	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 7	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 62	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 8	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 63	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 9	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 64	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 10	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 65	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 11	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 66	57.60.1682	8K8		MF, 1%, 0204, E24
0 K 12	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 67	57.60.1331	330R		MF, 1%, 0204, E24
0 K 13	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 68	57.60.1103	10K		MF, 1%, 0204, E24
0 K 14	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 69	57.60.1103	10K		MF, 1%, 0204, E24
0 K 15	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 70	57.60.1103	10K		MF, 1%, 0204, E24
0 K 16	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 71	57.60.1103	10K		MF, 1%, 0204, E24
0 K 17	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 72	57.60.1103	10K		MF, 1%, 0204, E24
0 K 18	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 73	57.60.1103	10K		MF, 1%, 0204, E24
0 K 19	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 74	57.60.1103	10K		MF, 1%, 0204, E24
0 K 20	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 75	57.60.1103	10K		MF, 1%, 0204, E24
0 K 21	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 76	57.60.1103	10K		MF, 1%, 0204, E24
0 K 22	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 77	57.60.1103	10K		MF, 1%, 0204, E24
0 K 23	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 78	57.60.1103	10K		MF, 1%, 0204, E24
0 K 24	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 79	57.60.1103	10K		MF, 1%, 0204, E24
0 K 25	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 80	57.60.1103	10K		MF, 1%, 0204, E24
0 K 26	56.04.0198	2u	5V, 125V/2A, AG/AU		0 R 81	57.60.1103	10K		MF, 1%, 0204, E24
					0 R 82	57.60.1103	10K		MF, 1%, 0204, E24
0 MP 1	1.917.415.11	1 pcs		INSERT ROUTER PCB	0 R 83	57.60.1103	10K		MF, 1%, 0204, E24
0 MP 2	43.01.C108	1 pcs	Label	ESE-WARNSCHILD	0 R 84	57.60.1103	10K		MF, 1%, 0204, E24
0 MP 3	1.917.415.01	1 pcs		BEZ. STREIFEN 6.3x91	0 R 85	57.60.1103	10K		MF, 1%, 0204, E24
0 MP 4	1.010.096.49	1 pcs	-	KLARSICHTSCHILD					
0 MP 5	1.010.006.33	2 pcs	Handle	GRIFFHAELFTE					
0 MP 6	28.21.1380	3 pcs		ROHRNIETE, D22*5 6.6	0 XIC 6	53.03.0165	20p		DIL 0.3", lot, gerade
0 MP 7	28.99.C119	2 pcs		ROHRNIETE D 2.5*0.15* 6					
0 MP 8	1.101.001.20	1 pcs	Label	TEXT-ETIK. 5*20 HARDWARE -20	0 XY 1	89.01.1499			QUARZ - ISOLIERPLATTE
					0 Y 1	89.01.1016	22.1184MHz	22.118 400 MHz, HC 49/U	
0 P 1	54.11.2009	96p		EU-R 3*32p					
0 P 2	54.01.0020	1p		Pin 0.63*0.63					
0 P 3	54.01.0020	1p		Pin 0.63*0.63					

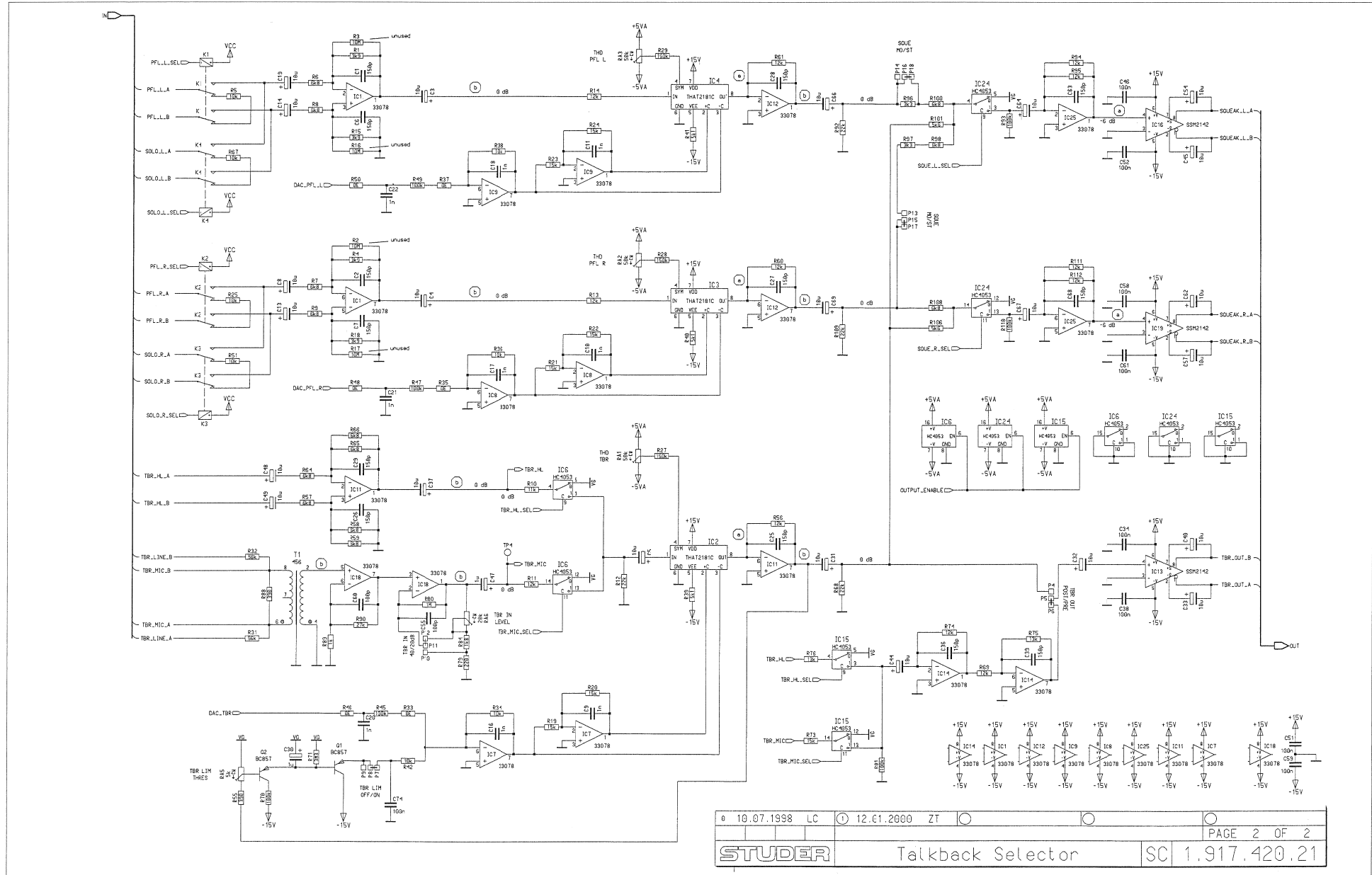
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Comments: (1) 23.12.97 Adaptation of gain

Talback Selector 1.917.420.22



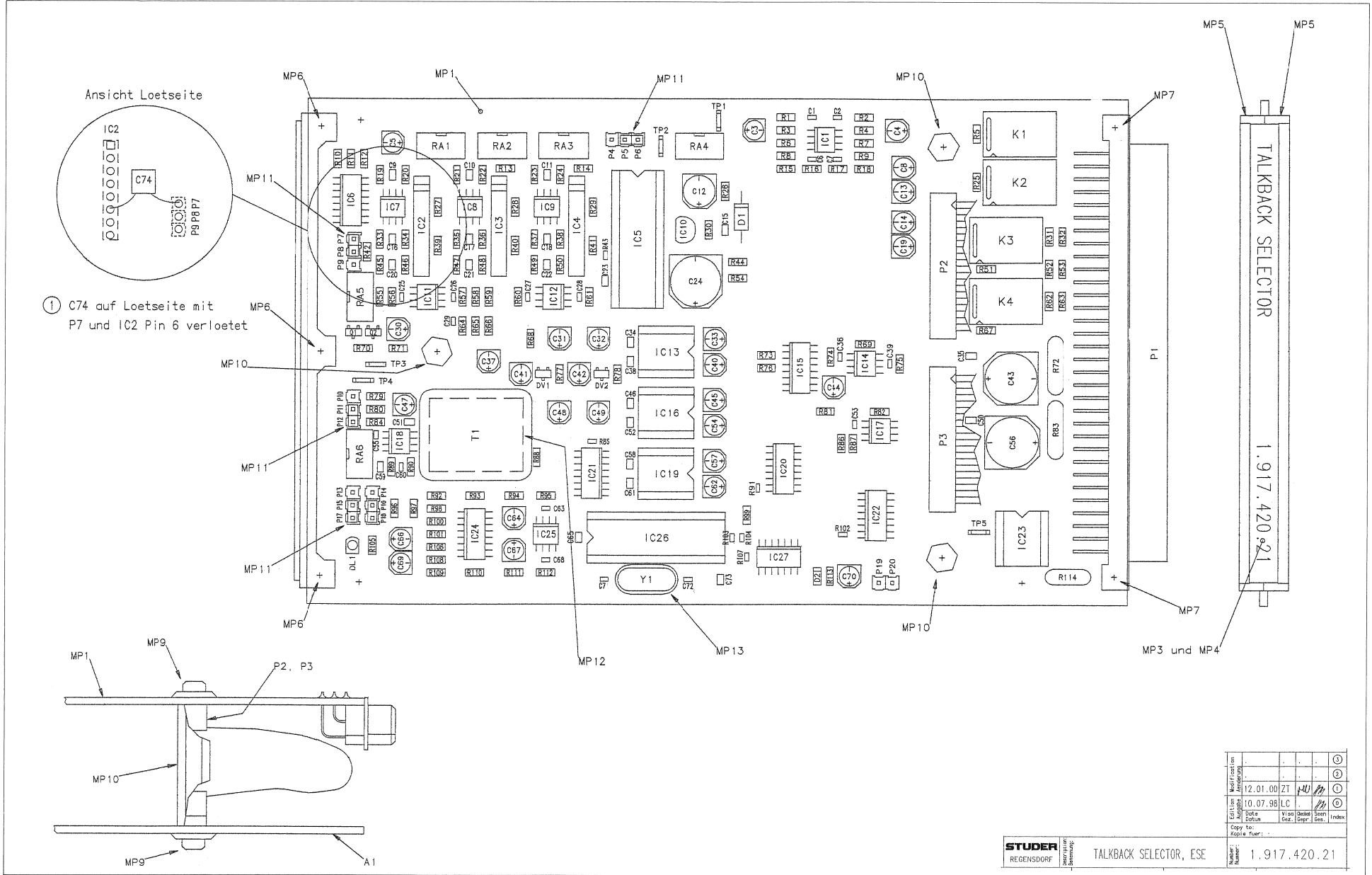


Talback Selector 1.917.420.22

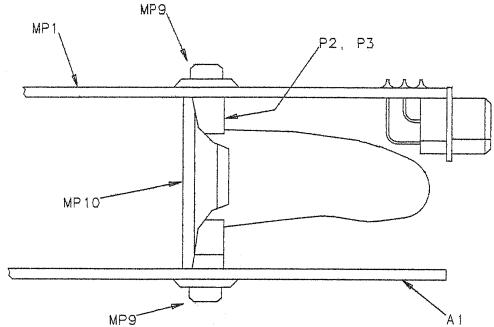




**Talback Selector 1.917.420.22**



① C74 auf Loetseite mit P7 und IC2 Pin 6 verlotet



Version	12.01.00	ZT				
Issue	10.07.98	LC				
Date						
Author						
Checked						
Drawn						
Index						

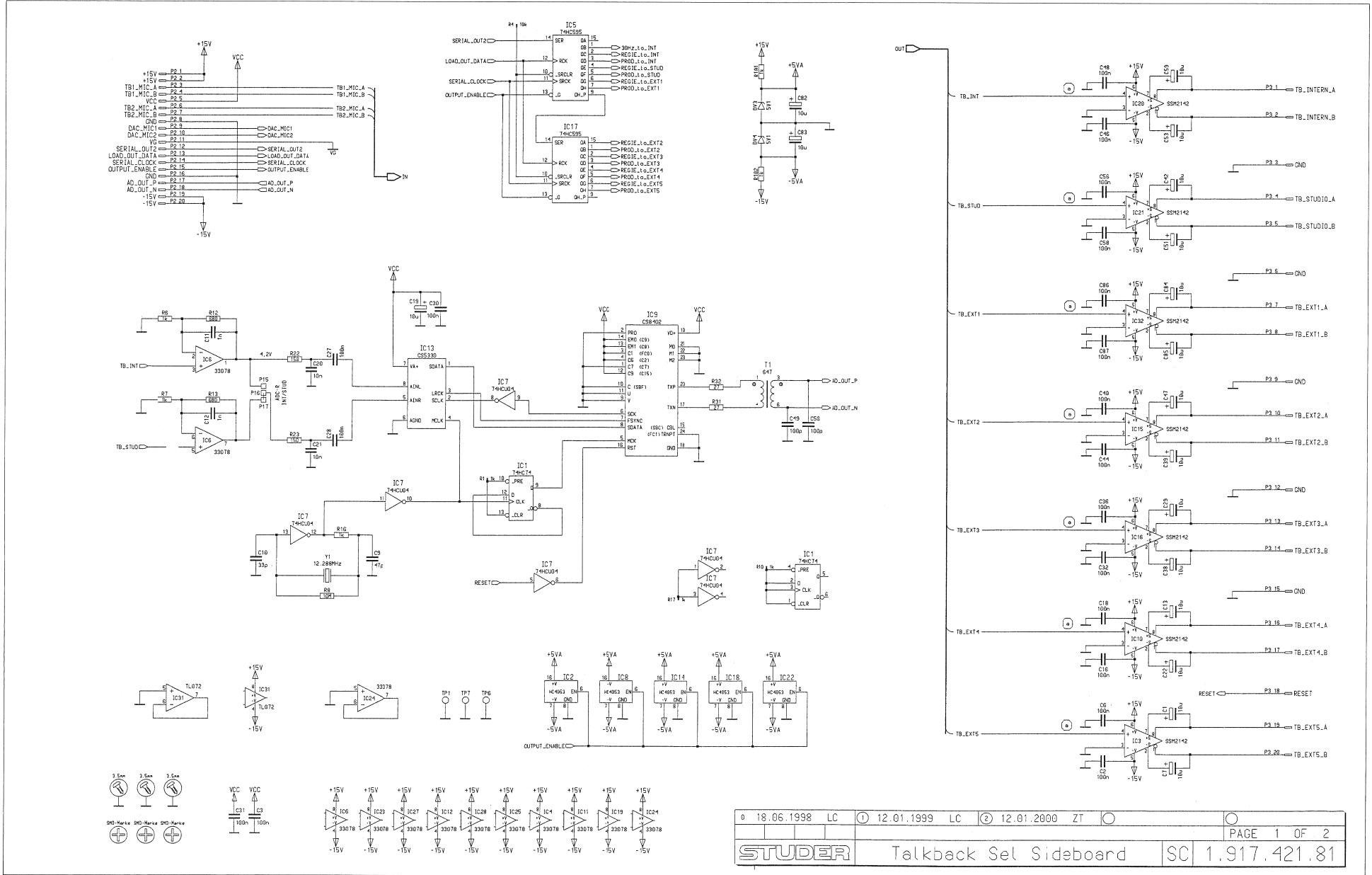




Talback Selector 1.917.420.22

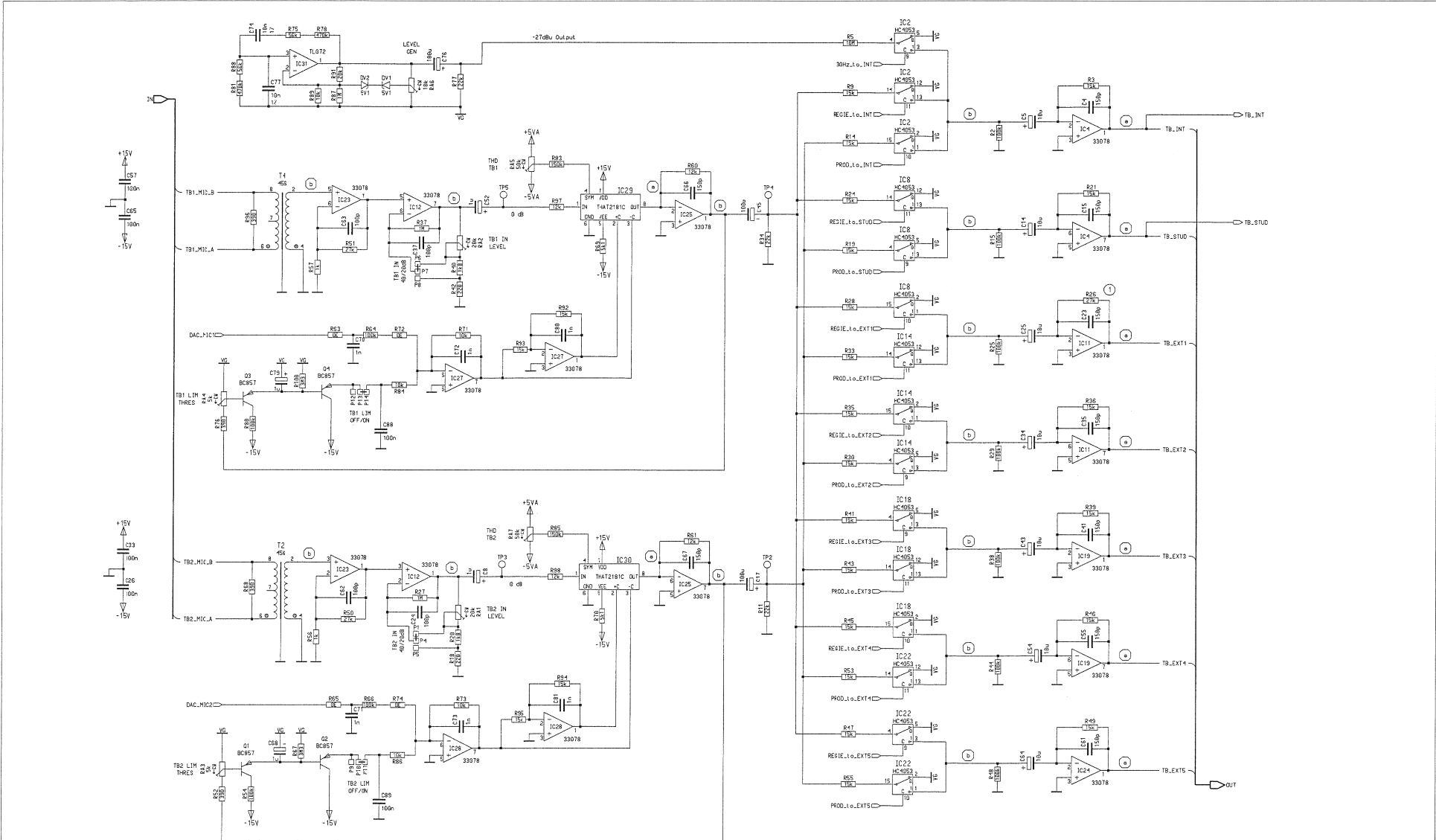
Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	
0	A 1	1.917.421.81			TALKBAC SEL SIDEBOARD A	0	IC 1	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 13	57.60.1123		12K	MF, 1%, 0204, E24	
0	C 1	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 2	50.11.0140		T-HAT2181C	IC VCA THAT 2181C	0	R 14	57.60.1123		12K	MF, 1%, 0204, E24	
0	C 2	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 3	50.11.0140		T-HAT2181C	IC VCA THAT 2181C	0	R 15	57.60.1392		3K3	MF, 1%, 0204, E24	
0	C 3	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 4	50.11.0140		T-HAT2181C	IC VCA THAT 2181C	0	R 16	not used				
0	C 4	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 5	50.19.0115		MAX528D	D/A Converter 8Bit octal	0	R 17	not used				
0	C 5	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 6	50.82.8053		HC4053	Tripple 2ch analog mux/demux	0	R 18	57.60.1392		3K9	MF, 1%, 0204, E24	
0	C 6	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 7	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 19	57.60.1155		15K	MF, 1%, 0204, E24	
0	C 7	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 8	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 20	57.60.1155		15K	MF, 1%, 0204, E24	
0	C 8	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 9	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 21	57.60.1155		15K	MF, 1%, 0204, E24	
0	C 9	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 10	50.10.0109		LM337L	Series regulator 100mA....37V	0	R 22	57.60.1153		15K	MF, 1%, 0204, E24	
0	C 10	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 11	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 23	57.60.1153		15K	MF, 1%, 0204, E24	
0	C 11	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 12	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 24	57.60.1153		15K	MF, 1%, 0204, E24	
0	C 12	59.68.0029	1000u		EL 16V, 8.3*5.7	0	IC 13	50.09.0124		2142	Audio balanced line driver	0	R 25	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 13	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 14	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 26	57.60.1121		120R	MF, 1%, 0204, E24	
0	C 14	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 15	50.62.8053		HC4053	Tripple 2ch analog mux/demux	0	R 27	57.60.1154		150K	MF, 1%, 0204, E24	
0	C 15	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	IC 16	50.09.0124		2142	Audio balanced line driver	0	R 28	57.60.1154		150K	MF, 1%, 0204, E24	
0	C 16	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 17	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 29	57.60.1154		150K	MF, 1%, 0204, E24	
0	C 17	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 18	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 30	57.60.1391		330R	MF, 1%, 0204, E24	
0	C 18	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 19	50.09.0124		2142	Audio balanced line driver	0	R 31	57.60.1563		59K	MF, 1%, 0204, E24	
0	C 19	59.68.0065	100u		EL 16V, 4.0*5.7	0	IC 20	50.62.0130		LM2003	7*Darlington driver	2	R 32	57.60.1563		10K	CF 5% 0603	
0	C 20	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 21	50.82.1595		74HC595	8bit shift/tpout register	0	R 33	57.60.1000		0R0	MF, 0204	
0	C 21	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 22	50.82.1165		74HC165	8bit shift register	0	R 34	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 22	59.60.2373	1n0		CER 50V, 5%, COG, 0805	0	IC 23	50.15.0115		75178	IC SN 75178 BP, DS 3695 N	0	R 35	57.60.1000		0R0	MF, 0204	
0	C 23	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	IC 24	50.82.8053		HC4053	Tripple 2ch analog mux/demux	0	R 36	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 24	59.68.0117	2200u		EL 35V, 10*10.7	0	IC 25	50.61.0204		MC33078	Dual Op-Amp low noise	0	R 37	57.60.1000		0R0	MF, 0204	
0	C 25	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 26	1.959.915.22		SW 917420 TB SEL (50.16.0313)		0	R 38	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 26	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	IC 27	50.32.1004		74HC 04	Hex inverter	0	R 39	57.60.1512		5K1	MF, 1%, 0204, E24	
0	C 27	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	K 1	56.34.0198		2u	5V 125V 2A Ag/Au	0	R 40	57.60.1512		5K1	MF, 1%, 0204, E24	
0	C 28	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	K 2	56.34.0198		2u	5V 125V 2A Ag/Au	0	R 41	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 29	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	K 3	56.34.0198		2u	5V 125V 2A Ag/Au	0	R 42	57.60.1103		10K	MF, 1%, 0204, E24	
0	C 30	59.68.0127	1u0		EL 5V, 4.0*5.7	0	K 4	56.34.0198		2u	5V 125V 2A Ag/Au	0	R 43	57.68.1097		10K	CF 5% 0603	
0	C 31	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 1	1.917.420.11	1 pce		TALKBAC SELECTOR PCB	0	R 44	57.60.1820		82R	MF, 1%, 0204, E24	
0	C 32	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 2	43.31.0108	1 pce		Label	ESE-SWARSCHILD	0	R 45	57.60.1104		100K	MF, 1%, 0204, E24
0	C 33	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 3	1.917.420.01	1 pce			BEZ. STREIFEN 6,3x91	0	R 46	57.60.1000		0R0	MF, 0204
0	C 34	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	MP 4	1.010.096.49	1 pce			KLARSICHTSCHILD	0	R 47	57.60.1104		100K	MF, 1%, 0204, E24
0	C 35	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	MP 5	1.010.006.33	2 pcs		Handle	GRIFFHAELFTE	0	R 48	57.60.1000		0R0	MF, 0204
0	C 36	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	MP 6	28.21.1380	3 pcs		2.25*6.5	ROHMiete Ms blank	0	R 49	57.60.1104		100K	MF, 1%, 0204, E24
0	C 37	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 7	28.99.0119	2 pcs		MP76	ROHRNIETE D 2.5*0.15* 9	0	R 50	57.60.1000		0R0	MF, 0204
0	C 38	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	MP 8	1.101.001.21	1 pce			TEXT-ETIK 5*20 HARDWARE -21	1	R 51	57.60.1103		10K	MF, 1%, 0204, E24
0	C 39	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	MP 9	21.33.9354	6 pcs			Z-Schraube Inbus-Ripp Zn gb ch	1	R 52	57.60.1273		27K	MF, 1%, 0204, E24
0	C 40	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 10	1.010.024.27	3 pcs			MUTTERBOLZEN M 3 * 20	0	R 53	57.60.1273		27K	MF, 1%, 0204, E24
0	C 41	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 11	54.31.0021	4 pcs			0.83 x 0.3mm	0	R 54	57.60.1820		82R	MF, 1%, 0204, E24
0	C 42	59.68.0065	100u		EL 16V, 4.0*5.7	0	MP 12	1.022.400.03	1 pce			ISOLATION	0	R 55	57.60.1391		390R	MF, 1%, 0204, E24
0	C 43	59.68.0117	2200u		EL 35V, 10*10.7	0	MP 13	89.01.1499	1 pce			QUARZ - ISOLIERPLATTE	0	R 56	57.60.1123		12K	MF, 1%, 0204, E24
0	C 44	59.68.0065	100u		EL 16V, 4.0*5.7	2	MP 14	43.10.0110			A	Revisions-Etikette 5mm h/blau	0	R 57	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 45	59.68.0065	100u		EL 16V, 4.0*5.7	0	P 1	54.11.2009			96p	EU-R 3*32p	0	R 58	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 46	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	P 2	1.023.392.08				FLACHKABEL 20 POL. 0.08M	0	R 59	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 47	59.68.0127	1u0		EL 50V, 4.0*5.7	0	P 3	1.023.392.08				FLACHKABEL 20 POL. 0.08M	0	R 60	57.60.1123		12K	MF, 1%, 0204, E24
0	C 48	59.68.0065	100u		EL 16V, 4.0*5.7	0	P 4	54.01.0020		1p		Pin 0.83*0.63	1	R 61	57.60.1123		12K	MF, 1%, 0204, E24
0	C 49	59.68.0065	100u		EL 16V, 4.0*5.7	0	P 5	54.01.0020		1p		Pin 0.83*0.63	1	R 62	57.60.1273		27K	MF, 1%, 0204, E24
0	C 50	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	P 6	54.01.0020		1p		Pin 0.83*0.63	1	R 63	57.60.1273		27K	MF, 1%, 0204, E24
0	C 51	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	P 7	54.01.0020		1p		Pin 0.83*0.63	0	R 64	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 52	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	P 8	54.01.0020		1p		Pin 0.83*0.63	0	R 65	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 53	59.60.2253	150p		CER 50V, 5%, COG, 0603	0	P 9	54.01.0020		1p		Pin 0.83*0.63	0	R 66	57.60.1822		6K8	MF, 1%, 0204, E24
0	C 54	59.68.0065	100u		EL 16V, 4.0*5.7	0	P 10	54.01.0020		1p		Pin 0.83*0.63	0	R 67	57.60.1103		10K	MF, 1%, 0204, E24
0	C 55	59.60.2249	100p		CER 50V, 5%, COG, 0603	0	P 11	54.01.0020		1p		Pin 0.83*0.63	0	R 68	57.60.1223		22K	MF, 1%, 0204, E24
0	C 56	59.68.0117	2200u		EL 35V, 10*10.7	0	P 12	54.01.0020		1p		Pin 0.83*0.63	0	R 69	57.60.1123		12K	MF, 1%, 0204, E24
0	C 57	59.68.0065	100u		EL 16V, 4.0*5.7	0	P 13	54.01.0020		1p		Pin 0.83*0.63	0	R 70	57.60.1104		100K	MF, 1%, 0204, E24
0	C 58	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0	P 14	54.01.0020		1p		Pin 0.83*0.63</						

Talkback Sel Sideboard 1.917.421.81





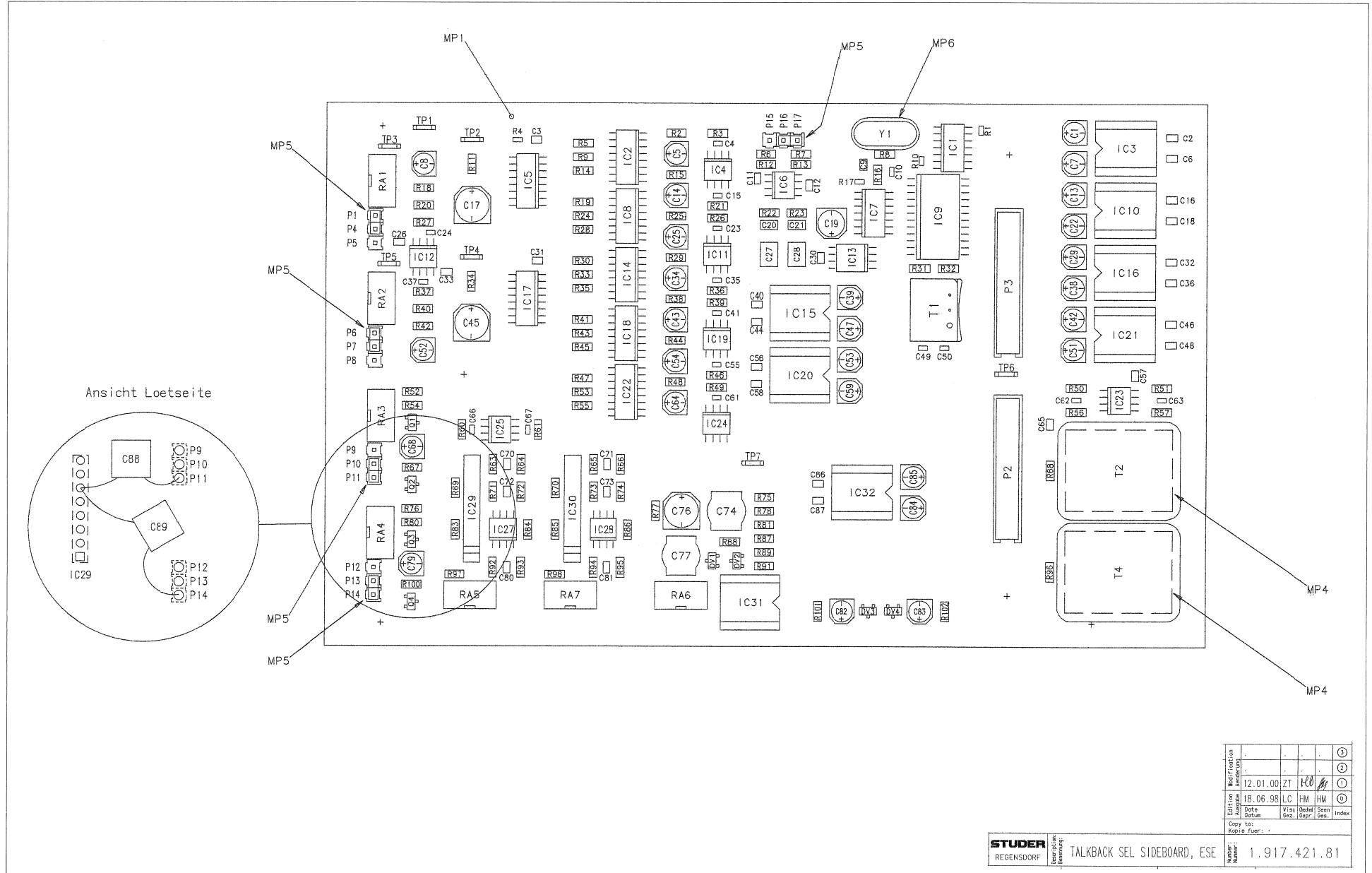
Talkback Sel Sideboard 1.917.421.81



0	18.06.1998	LC	1	12.01.1999	LC	2	12.01.2000	ZT	
<b>STUDER</b> Talkback Sel Sideboard SC 1.917.421.81									
								PAGE 2 OF 2	



Talkback Sel Sideboard 1.917.421.81



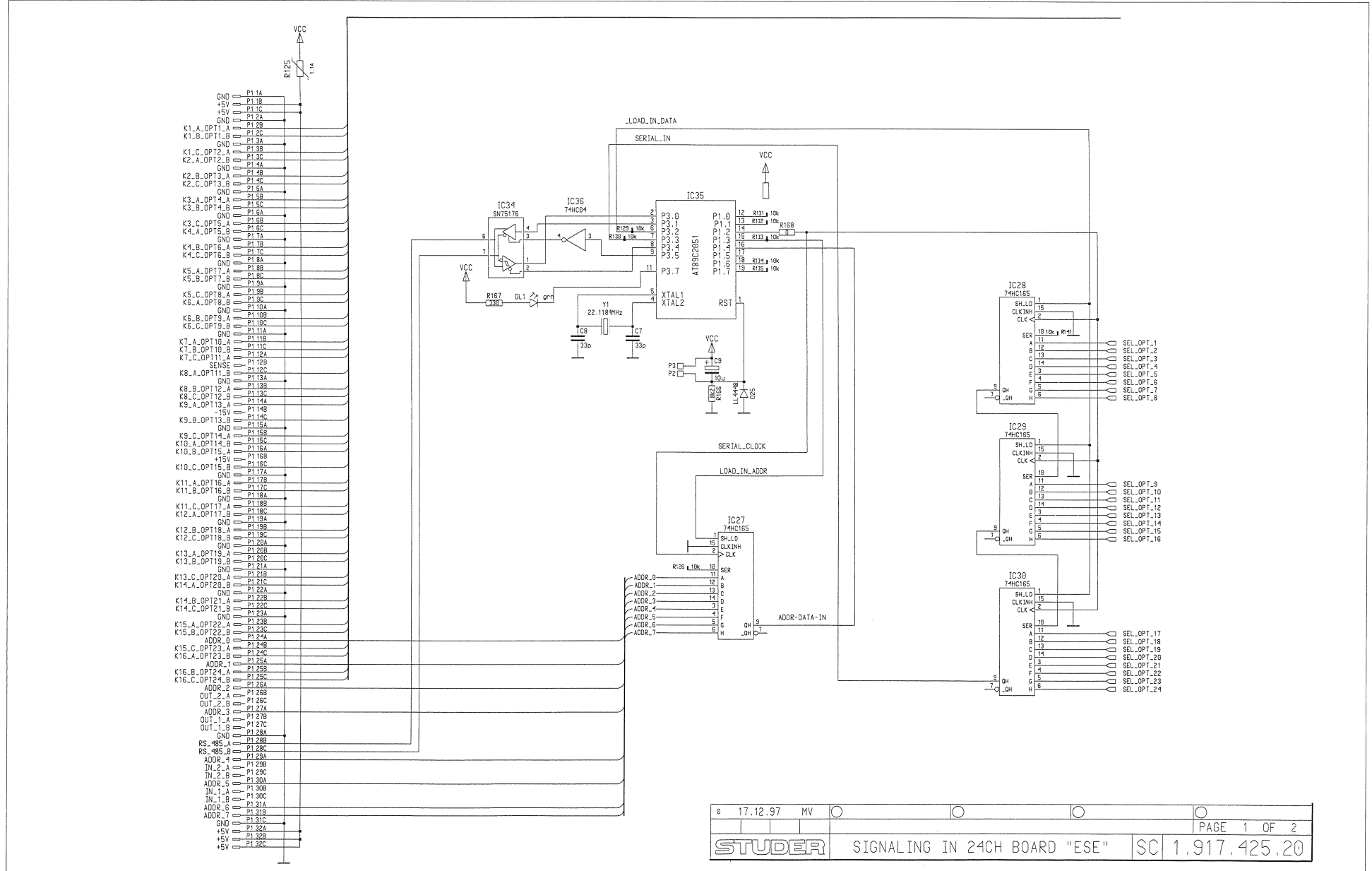


Talkback Sel Sideboard 1.917.421.81

Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.68.0065	10u	EL	16V, 4.0*5.7	0	C 87	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	R 13	57.60.1031	880R	MF, 1%, 0204, E24	0	R 91	57.60.1203	20K	MF, 1%, 0204, E24		
0	C 2	59.60.3337	100n	CER	50V, 10%, X7R, 0805	3	C 88	59.40.0104	100n	PETP, 83V, 10%, RMS	0	R 14	57.60.1153	15K	MF, 1%, 0204, E24	0	R 92	57.60.1153	15K	MF, 1%, 0204, E24			
0	C 3	59.60.3337	100n	CER	50V, 10%, X7R, 0805	3	C 89	59.40.0104	100n	PETP, 83V, 10%, RMS	0	R 15	57.60.1154	100K	MF, 1%, 0204, E24	0	R 93	57.60.1153	15K	MF, 1%, 0204, E24			
0	C 4	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	DV 1	50.60.8010	5V1	5%, 0.2W, SOT 23	0	R 16	57.60.1102	1K	MF, 1%, 0204, E24	0	R 94	57.60.1153	15K	MF, 1%, 0204, E24			
0	C 5	59.68.0065	10u	EL	16V, 4.0*5.7	0	DV 2	50.60.9010	5V1	5%, 0.2W, SOT 23	0	R 17	57.69.1073	1K0	CF 5% 0603	0	R 95	57.60.1153	15K	MF, 1%, 0204, E24			
0	C 6	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	DV 3	50.60.9010	5V1	5%, 0.2W, SOT 23	0	R 18	57.60.1221	220R	MF, 1%, 0204, E24	0	R 96	57.60.1991	390R	MF, 1%, 0204, E24			
0	C 7	59.68.0065	10u	EL	16V, 4.0*5.7	0	DV 4	50.60.9010	5V1	5%, 0.2W, SOT 23	0	R 19	57.60.1153	15K	MF, 1%, 0204, E24	0	R 97	57.60.1123	12K	MF, 1%, 0204, E24			
0	C 8	59.68.0127	1u0	EL	50V, 4.0*5.7	0	IC 1	59.62.1074	74HC 74	Dual D-type FF, preset clear	0	R 20	57.60.1132	1K8	MF, 1%, 0204, E24	0	R 98	57.60.1123	12K	MF, 1%, 0204, E24			
0	C 9	59.60.2241	47p	CER	50V, 5%, COG, 0805	0	IC 2	59.62.8053	HC4053	Tripple 2ch analog mux/demux	0	R 21	57.60.1153	15K	MF, 1%, 0204, E24	0	R 99	57.60.1123	3M3	MF, 1%, 0204, E24			
0	C 10	59.60.2237	33p	CER	50V, 5%, COG, 0603	0	IC 3	50.09.0124	2142	Audio balanced line driver	0	R 22	57.60.1151	150R	MF, 1%, 0204, E24	0	R 100	57.60.1123	3M3	MF, 1%, 0204, E24			
0	C 11	59.60.2373	1n0	CER	50V, 5%, COG, 0805	0	IC 4	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 23	57.60.1151	150R	MF, 1%, 0204, E24	0	R 101	57.60.1102	1K	MF, 1%, 0204, E24			
0	C 12	59.60.2373	1n0	CER	50V, 5%, COG, 0805	0	IC 5	50.62.1595	74HC595	8bit shift/output register	0	R 24	57.60.1153	15K	MF, 1%, 0204, E24	0	R 102	57.60.1102	1K	MF, 1%, 0204, E24			
0	C 13	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 6	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 25	57.60.1104	100K	MF, 1%, 0204, E24	0	RA 1	58.01.9203	20k	Cermet, 10%, 0.5W, vertical			
0	C 14	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 7	50.61.0204	MC33078	Dual Op-Amp low noise	1	R 26	57.60.1153	15K	MF, 1%, 0204, E24	0	RA 2	58.01.9203	20k	Cermet, 10%, 0.5W, vertical			
0	C 15	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	IC 8	50.62.1904	74HC104	Hex inverter unbuffered	0	R 27	57.60.1105	1M	MF, 1%, 0204, E24	0	RA 3	58.01.9502	5k	Cermet, 10%, 0.5W, vertical			
0	C 16	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 9	50.62.8053	HC4053	Tripple 2ch analog mux/demux	0	R 28	57.60.1153	15K	MF, 1%, 0204, E24	0	RA 4	58.01.9502	5k	Cermet, 10%, 0.5W, vertical			
0	C 17	59.68.0029	100u	EL	6V, 6.3*5.7	0	IC 10	50.62.0910	CS8402A	Dig audio interface transmitt	0	R 29	57.60.1104	100K	MF, 1%, 0204, E24	0	RA 5	58.01.9503	50k	Cermet, 10%, 0.5W, vertical			
0	C 18	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 11	50.09.0124	2142	Audio balanced line driver	0	R 30	57.60.1153	15K	MF, 1%, 0204, E24	0	RA 6	58.01.9103	10k	Cermet, 10%, 0.5W, vertical			
0	C 19	59.68.0109	10u	EL	35V, 5.0*5.7	0	IC 12	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 31	57.60.1270	27R	MF, 1%, 0204, E24	0	RA 7	58.01.9503	50k	Cermet, 10%, 0.5W, vertical			
0	C 20	59.63.0113	10n	PEN	50V, 5%, 1206	0	IC 13	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 32	57.60.1270	27R	MF, 1%, 0204, E24	0	T 1	1.022.047.00	1:1.4	OUTPUT TRAF0 AES/EBU			
0	C 21	59.63.0113	10n	PEN	50V, 5%, 1206	0	IC 14	50.61.8102	CS5330A	A/D Converter 18bit Ste SO 8	0	R 33	57.60.1153	15K	MF, 1%, 0204, E24	0	T 2	1.022.456.00	1:2.24	EINGANGSTRAFO 1:2.24			
0	C 22	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 15	50.62.8053	HC4053	Tripple 2ch analog mux/demux	0	R 34	57.60.1223	22K	MF, 1%, 0204, E24	0	T 4	1.022.456.00	1:2.24	EINGANGSTRAFO 1:2.24			
0	C 23	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	IC 16	50.09.0124	2142	Audio balanced line driver	0	R 35	57.60.1153	15K	MF, 1%, 0204, E24	0	TP 1	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 24	59.60.2249	100p	CER	50V, 5%, COG, 0603	0	IC 17	50.62.1595	74HC595	8bit shift/output register	0	R 36	57.60.1153	15K	MF, 1%, 0204, E24	0	TP 2	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 25	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 18	50.62.8053	HC4053	Tripple 2ch analog mux/demux	0	R 37	57.60.1105	1M	MF, 1%, 0204, E24	0	TP 3	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 26	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 19	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 38	57.60.1104	100K	MF, 1%, 0204, E24	2	TP 4	not used	2.8*0.8	PCB-Flachstecker, gerade			
0	C 27	59.63.0125	100n	PEN	50V, 5%, 1812	0	IC 20	50.09.0124	2142	Audio balanced line driver	0	R 39	57.60.1153	15K	MF, 1%, 0204, E24	0	TP 5	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 28	59.63.0125	100n	PEN	50V, 5%, 1812	0	IC 21	50.09.0124	2142	Audio balanced line driver	0	R 40	57.60.1182	1K8	MF, 1%, 0204, E24	0	TP 6	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 29	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 22	50.62.8053	HC4053	Tripple 2ch analog mux/demux	0	R 41	57.60.1153	15K	MF, 1%, 0204, E24	0	TP 7	54.33.8010	2.8*0.8	PCB-Flachstecker, gerade			
0	C 30	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 23	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 42	57.60.1221	220R	MF, 1%, 0204, E24	0	Y 1	89.01.1015	12.288MHz	XTAL HC 49U			
0	C 31	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 24	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 43	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 32	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 25	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 44	57.60.1104	100K	MF, 1%, 0204, E24								
0	C 33	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 26	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 45	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 34	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 27	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 46	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 35	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	IC 28	50.61.0204	MC33078	Dual Op-Amp low noise	0	R 47	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 36	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	IC 29	50.11.0140	THAT2181C	IC VCA THAT 2181C	0	R 48	57.60.1104	100K	MF, 1%, 0204, E24								
0	C 37	59.60.2249	100p	CER	50V, 5%, COG, 0603	0	IC 30	50.11.0140	THAT2181C	IC VCA THAT 2181C	0	R 49	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 38	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 31	50.09.0101	TL072	IC TL 072 CN A	0	R 50	57.60.1273	27K	MF, 1%, 0204, E24								
0	C 39	59.68.0065	10u	EL	16V, 4.0*5.7	0	IC 32	50.09.0124	2142	Audio balanced line driver	0	R 51	57.60.1273	27K	MF, 1%, 0204, E24								
0	C 40	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	MP 1	1.917.421.12		TALKBACK SEL SIDEBOARD PCB	0	R 52	57.60.1391	390R	MF, 1%, 0204, E24								
0	C 41	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	MP 2	43.01.0108		ESE-WARNSCHILD	0	R 53	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 42	59.68.0065	10u	EL	16V, 4.0*5.7	0	MP 3	1.917.421.04		Label	0	R 54	57.60.1104	100K	MF, 1%, 0204, E24								
0	C 43	59.68.0065	10u	EL	16V, 4.0*5.7	0	MP 4	1.022.400.23	2 pcs		0	R 55	57.60.1153	15K	MF, 1%, 0204, E24								
0	C 44	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	MP 5	54.01.0021	5 pcs	Jumper	0	R 56	57.60.1102	1K	MF, 1%, 0204, E24								
0	C 45	59.68.0029	100u	EL	6V, 6.3*5.7	0	MP 6	89.01.1499		QUARZ - ISOLIERPLATTE	0	R 57	57.60.1102	1K	MF, 1%, 0204, E24								
0	C 46	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	MP 7	43.10.0110		A	0	R 58	57.60.1123	12K	MF, 1%, 0204, E24								
0	C 47	59.68.0065	10u	EL	16V, 4.0*5.7	3	MP 7	43.10.0110		A	0	R 61	57.60.1123	12K	MF, 1%, 0204, E24								
0	C 48	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	P 1	54.01.0020	1p	Pin 0.63*0.33	0	R 63	57.60.1000	0R0	MF, 0204								
0	C 49	59.60.2249	100p	CER	50V, 5%, COG, 0603	0	P 2	54.14.5520	20p	PCB-Buchse gerade	0	R 64	57.60.1104	100K	MF, 1%, 0204, E24								
0	C 50	59.60.2249	100p	CER	50V, 5%, COG, 0603	0	P 3	54.14.5520	20p	PCB-Buchse gerade	0	R 65	57.60.1000	0R0	MF, 0204								
0	C 51	59.68.0065	10u	EL	16V, 4.0*5.7	0	P 4	54.01.0020	1p	Pin 0.63*0.33	0	R 66	57.60.1104	100K	MF, 1%, 0204, E24								
0	C 52	59.68.0127	1u0	EL	50V, 4.0*5.7	0	P 5	54.01.0020	1p	Pin 0.63*0.33	0	R 67	57.60.1335	3M3	MF, 1%, 0204, E24								
0	C 53	59.68.0065	10u	EL	16V, 4.0*5.7	0	P 6	54.01.0020	1p	Pin 0.63*0.33	0	R 68	57.60.1391	390R	MF, 1%, 0204, E24								
0	C 54	59.68.0065	10u	EL	16V, 4.0*5.7	0	P 7	54.01.0020	1p	Pin 0.63*0.33	0	R 69	57.60.1512	5K1	MF, 1%, 0204, E24								
0	C 55	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	P 8	54.01.0020	1p	Pin 0.63*0.33	0	R 70	5										

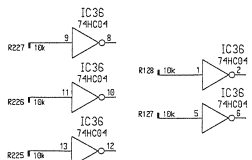
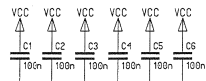
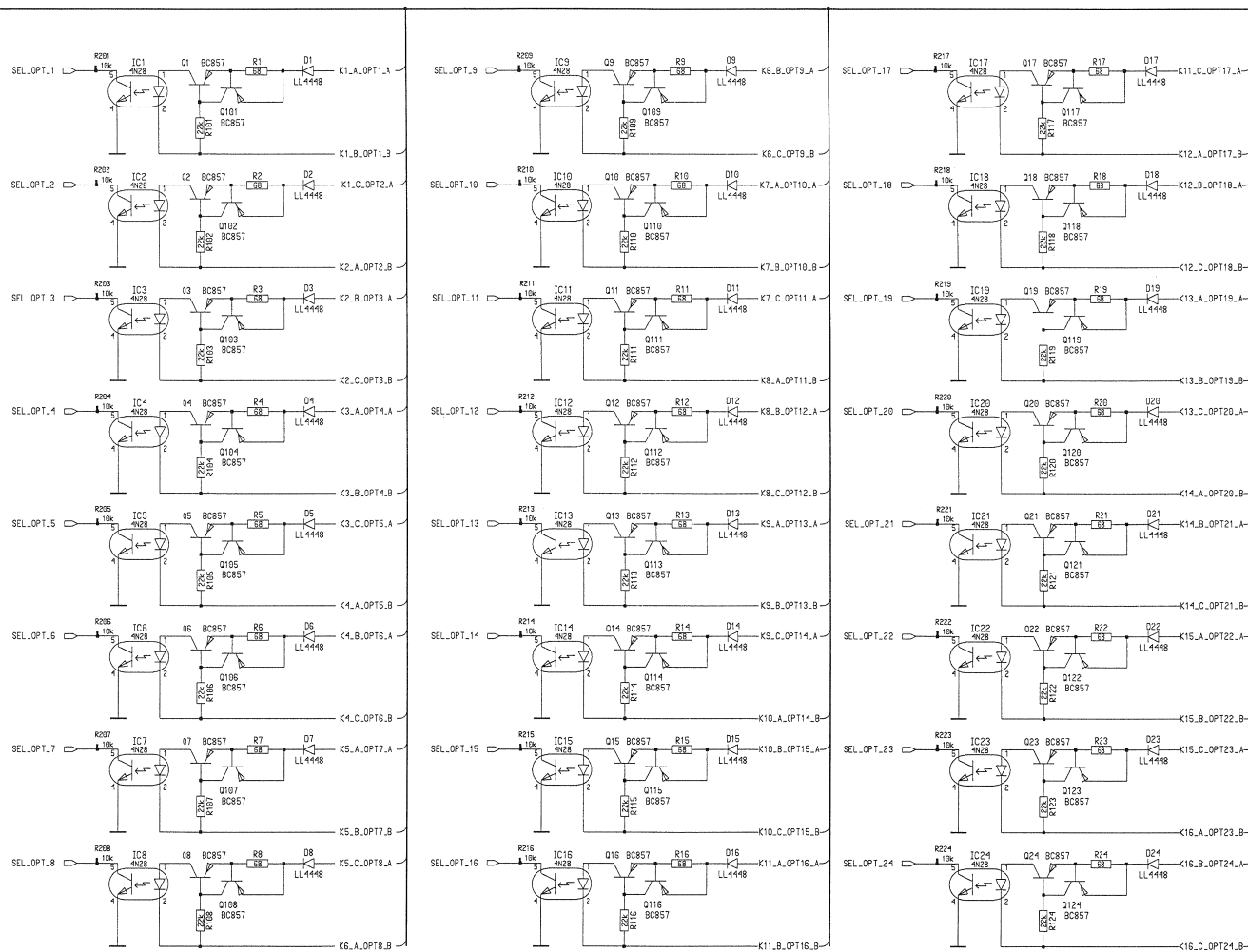


Signaling IN 24CH Board 1.917.425.20





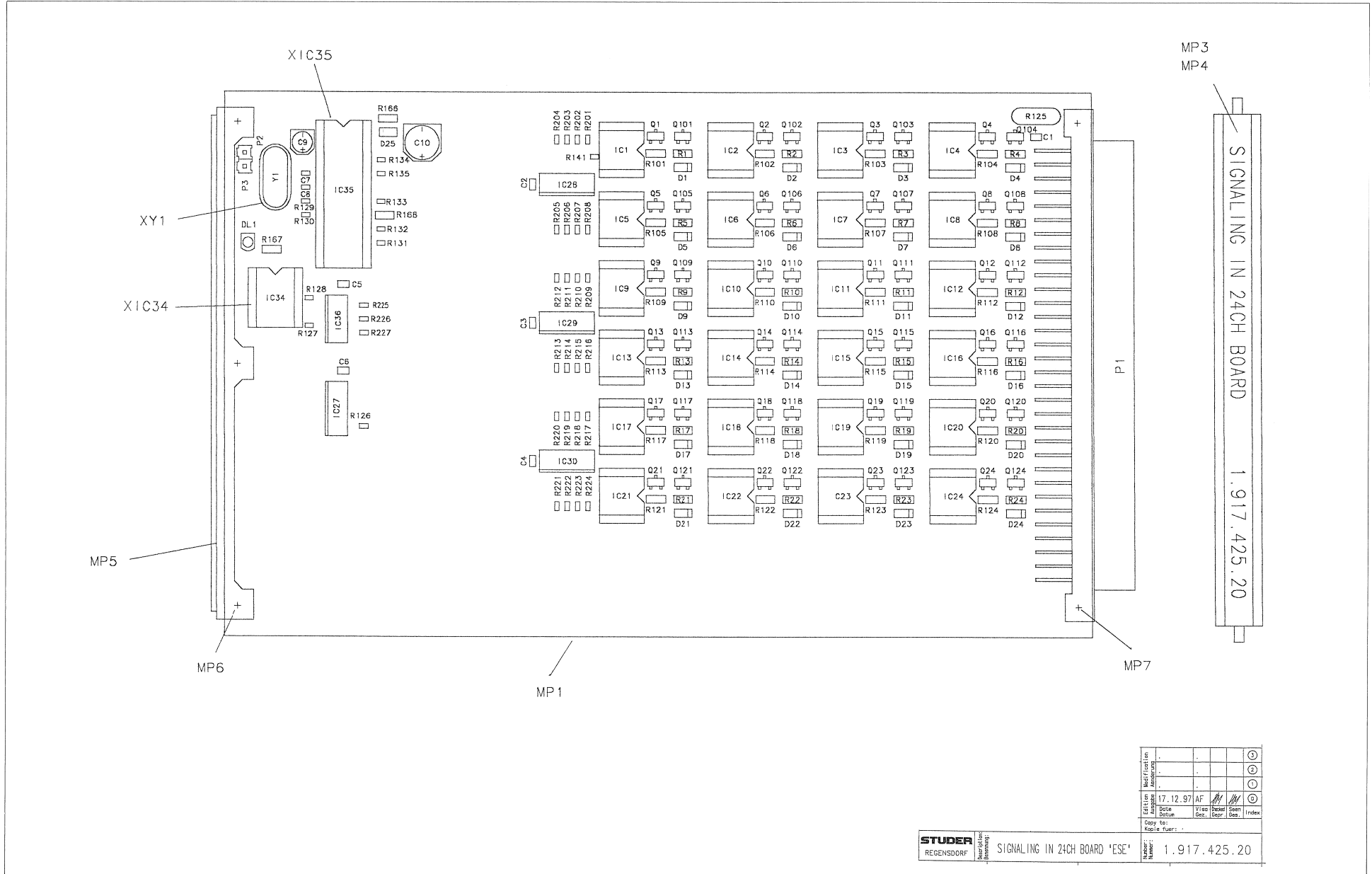
Signaling IN 24CH Board 1.917.425.20



0	17.12.97	MV						PAGE 2 OF 2
<b>STUDER</b> SIGNALING IN 24CH BOARD "ESE" SC 1.917.425.20								



Signaling IN 24CH Board 1.917.425.20



Edi	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
17.12.97	AF								
Scale	Vis	Draw	Gen	Index					
1/100									



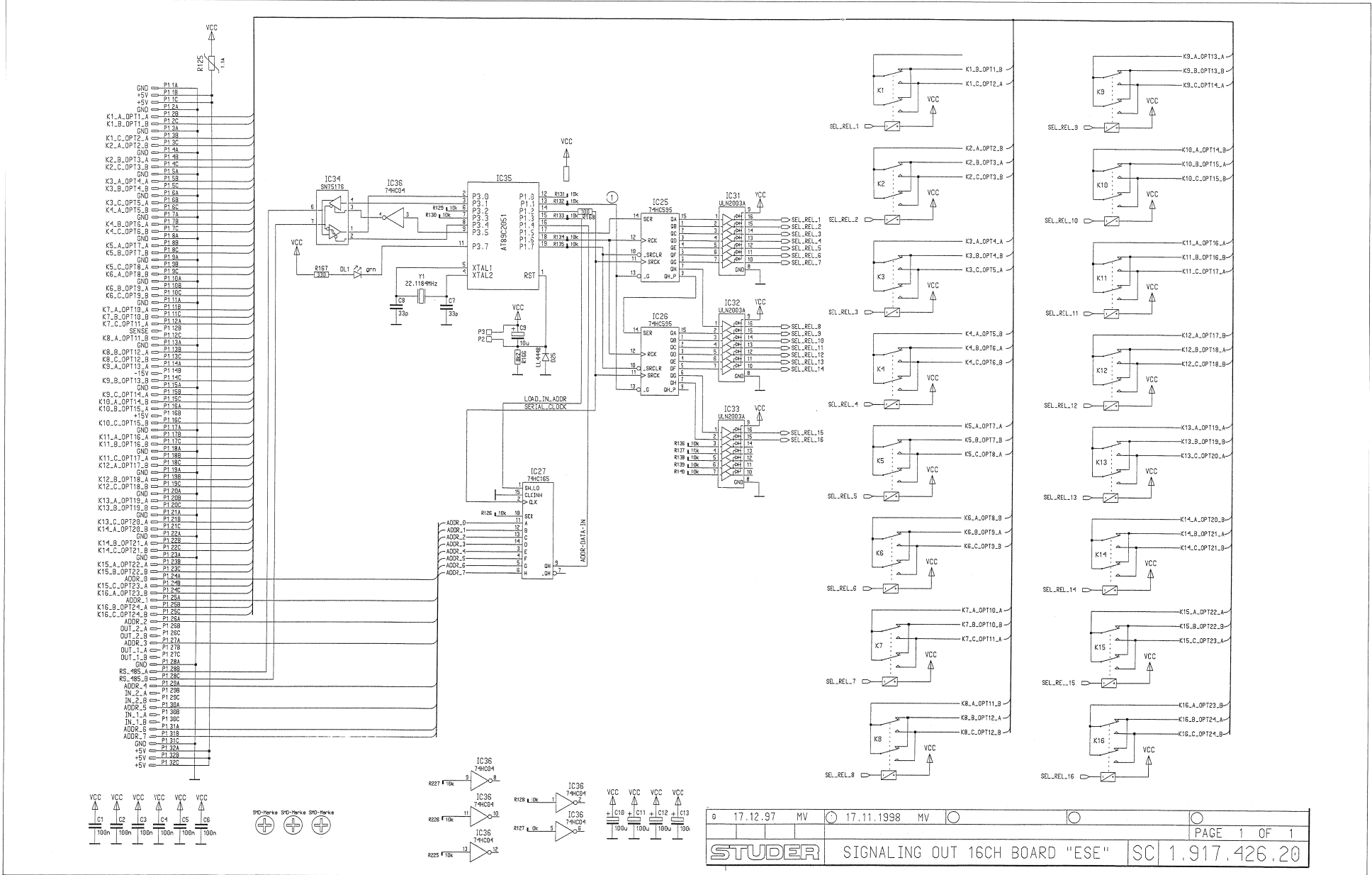


Signaling IN 24CH Board 1.917.425.22

Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description	Idx. Pos.	Part No.	Qty.	Type/Val.	Description
0 C 1	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 P 2	54.01.0020	1p		Pin 0.63*0.33	0 R 108	57.60.1223	22K		MF, 1%, 0204, E24
0 C 2	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 P 3	54.01.0020	1p		Pin 0.63*0.33	0 R 107	57.60.1223	22K		MF, 1%, 0204, E24
0 C 3	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 Q 1	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 108	57.60.1223	22K		MF, 1%, 0204, E24
0 C 4	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 Q 2	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 109	57.60.1223	22K		MF, 1%, 0204, E24
0 C 5	59.60.3337	100n		CER 50V, 10%, X7R, 0805	0 Q 3	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 110	57.60.1223	22K		MF, 1%, 0204, E24
0 C 6	59.60.2237	33p		CER 50V, 5%, COG 0803	0 Q 4	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 111	57.60.1223	22K		MF, 1%, 0204, E24
0 C 7	59.60.2237	33p		CER 50V, 5%, COG 0803	0 Q 5	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 112	57.60.1223	22K		MF, 1%, 0204, E24
0 C 8	59.60.2237	33p		CER 50V, 5%, COG 0803	0 Q 6	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 113	57.60.1223	22K		MF, 1%, 0204, E24
0 C 9	59.68.0065	10u		C-EL 16V, 4.0*5.7	0 Q 7	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 114	57.60.1223	22K		MF, 1%, 0204, E24
0 C 10	59.68.0029	100u		C-EL 5V, 6.3*5.7	0 Q 8	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 115	57.60.1223	22K		MF, 1%, 0204, E24
0 D 1	50.60.8001	4448		D LL 4448 SOD 80	0 Q 9	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 116	57.60.1223	22K		MF, 1%, 0204, E24
0 D 2	50.60.8001	4448		D LL 4448 SOD 80	0 Q 10	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 117	57.60.1223	22K		MF, 1%, 0204, E24
0 D 3	50.60.8001	4448		D LL 4448 SOD 80	0 Q 11	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 118	57.60.1223	22K		MF, 1%, 0204, E24
0 D 4	50.60.8001	4448		D LL 4448 SOD 80	0 Q 12	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 119	57.60.1223	22K		MF, 1%, 0204, E24
0 D 5	50.60.8001	4448		D LL 4448 SOD 80	0 Q 13	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 120	57.60.1223	22K		MF, 1%, 0204, E24
0 D 6	50.60.8001	4448		D LL 4448 SOD 80	0 Q 14	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 121	57.60.1223	22K		MF, 1%, 0204, E24
0 D 7	50.60.8001	4448		D LL 4448 SOD 80	0 Q 15	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 122	57.60.1223	22K		MF, 1%, 0204, E24
0 D 8	50.60.8001	4448		D LL 4448 SOD 80	0 Q 16	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 123	57.60.1223	22K		MF, 1%, 0204, E24
0 D 9	50.60.8001	4448		D LL 4448 SOD 80	0 Q 17	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 124	57.60.1223	22K		MF, 1%, 0204, E24
0 D 10	50.60.8001	4448		D LL 4448 SOD 80	0 Q 18	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 125	57.62.7051	1.1A		POLY- PTC, 30V
0 D 11	50.60.8001	4448		D LL 4448 SOD 80	0 Q 19	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 126	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 12	50.60.8001	4448		D LL 4448 SOD 80	0 Q 20	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 127	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 13	50.60.8001	4448		D LL 4448 SOD 80	0 Q 21	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 128	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 14	50.60.8001	4448		D LL 4448 SOD 80	0 Q 22	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 129	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 15	50.60.8001	4448		D LL 4448 SOD 80	0 Q 23	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 130	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 16	50.60.8001	4448		D LL 4448 SOD 80	0 Q 24	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 131	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 17	50.60.8001	4448		D LL 4448 SOD 80	0 Q 25	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 132	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 18	50.60.8001	4448		D LL 4448 SOD 80	0 Q 101	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 133	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 19	50.60.8001	4448		D LL 4448 SOD 80	0 Q 102	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 134	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 20	50.60.8001	4448		D LL 4448 SOD 80	0 Q 103	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 135	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 21	50.60.8001	4448		D LL 4448 SOD 80	0 Q 104	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 141	57.69.1097	10k		Chip 0803, 5%, carbon
0 D 22	50.60.8001	4448		D LL 4448 SOD 80	0 Q 105	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 166	57.60.1822	8K2		MF, 1%, 0204, E24
0 D 23	50.60.8001	4448		D LL 4448 SOD 80	0 Q 106	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 167	57.60.1331	330R		MF, 1%, 0204, E24
0 D 24	50.60.8001	4448		D LL 4448 SOD 80	0 Q 107	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 168	57.60.1000	0R0		MF, 0204
0 D 25	50.60.8001	4448		D LL 4448 SOD 80	0 Q 108	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 201	57.69.1097	10k		Chip 0803, 5%, carbon
					0 Q 109	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 202	57.69.1097	10k		Chip 0803, 5%, carbon
					0 Q 110	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 203	57.69.1097	10k		Chip 0803, 5%, carbon
0 DL 1	50.04.2132		TLUG 2401	DL TLUG 2401 GN MATT	0 Q 111	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 204	57.69.1097	10k		Chip 0803, 5%, carbon
					0 Q 112	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 205	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 1	50.99.0126	4N26		Optocoupler	0 Q 113	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 206	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 2	50.99.0126	4N26		Optocoupler	0 Q 114	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 207	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 3	50.99.0126	4N26		Optocoupler	0 Q 115	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 208	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 4	50.99.0126	4N26		Optocoupler	0 Q 116	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 209	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 5	50.99.0126	4N26		Optocoupler	0 Q 117	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 210	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 6	50.99.0126	4N26		Optocoupler	0 Q 118	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 211	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 7	50.99.0126	4N26		Optocoupler	0 Q 119	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 212	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 8	50.99.0126	4N26		Optocoupler	0 Q 120	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 213	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 9	50.99.0126	4N26		Optocoupler	0 Q 121	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 214	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 10	50.99.0126	4N26		Optocoupler	0 Q 122	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 215	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 11	50.99.0126	4N26		Optocoupler	0 Q 123	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 216	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 12	50.99.0126	4N26		Optocoupler	0 Q 124	50.60.1001		BC857B	Q BC 857 B, SOT 23	0 R 217	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 13	50.99.0126	4N26		Optocoupler	0 R 1	57.60.1880	68R		MF, 1%, 0204, E24	0 R 218	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 14	50.99.0126	4N26		Optocoupler	0 R 2	57.60.1880	68R		MF, 1%, 0204, E24	0 R 219	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 15	50.99.0126	4N26		Optocoupler	0 R 3	57.60.1880	68R		MF, 1%, 0204, E24	0 R 220	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 16	50.99.0126	4N26		Optocoupler	0 R 4	57.60.1880	68R		MF, 1%, 0204, E24	0 R 221	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 17	50.99.0126	4N26		Optocoupler	0 R 5	57.60.1880	68R		MF, 1%, 0204, E24	0 R 222	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 18	50.99.0126	4N26		Optocoupler	0 R 6	57.60.1880	68R		MF, 1%, 0204, E24	0 R 223	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 19	50.99.0126	4N26		Optocoupler	0 R 7	57.60.1880	68R		MF, 1%, 0204, E24	0 R 224	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 20	50.99.0126	4N26		Optocoupler	0 R 8	57.60.1880	68R		MF, 1%, 0204, E24	0 R 225	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 21	50.99.0126	4N26		Optocoupler	0 R 9	57.60.1880	68R		MF, 1%, 0204, E24	0 R 226	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 22	50.99.0126	4N26		Optocoupler	0 R 10	57.60.1880	68R		MF, 1%, 0204, E24	0 R 227	57.69.1097	10k		Chip 0803, 5%, carbon
0 IC 23	50.99.0126	4N26		Optocoupler	0 R 11	57.60.1880	68R		MF, 1%, 0204, E24					
0 IC 24	50.99.0126	4N26		Optocoupler	0 R 12	57.60.1880	68R		MF, 1%, 0204, E24	0 XIC 34	53.03.0166	8p		DIL 0.3", lot, gerade
0 IC 27	50.62.1165	74HC165		74 HC 165	0 R 13	57.60.1880	68R		MF, 1%, 0204, E24	0 XIC 35	53.03.0166	20p		DIL 0.3", lot, gerade
0 IC 28	50.62.1165	74HC165		74 HC 165	0 R 14	57.60.1880	68R		MF, 1%, 0204, E24					
0 IC 29	50.62.1165	74HC165		74 HC 165	0 R 15	57.60.1880	68R		MF, 1%, 0204, E24	0 XY 1	89.01.1469	</		

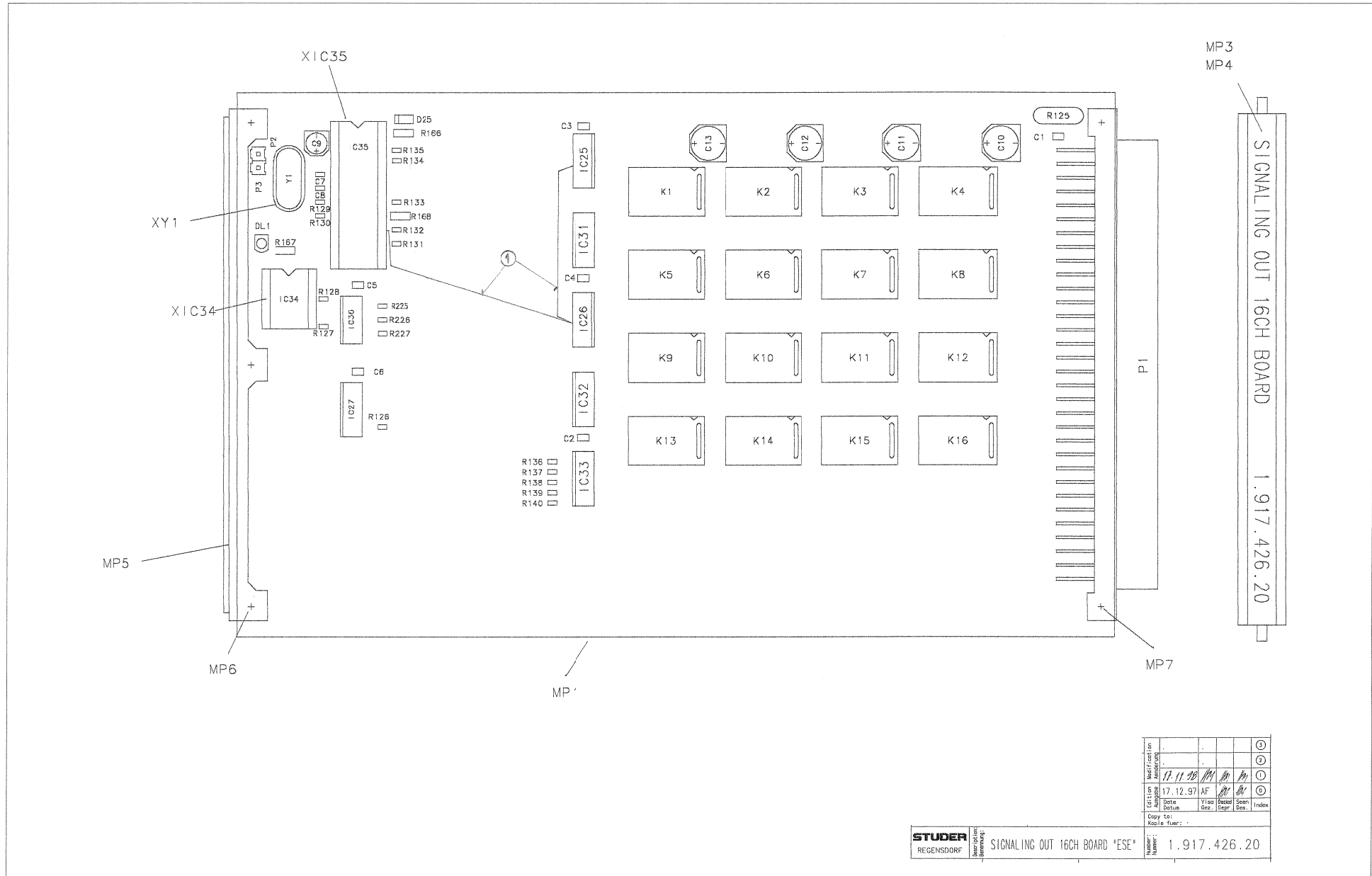


Signaling OUT 16CH Board I.917.426.20





Signaling OUT 16CH Board 1.917.426.20



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17.12.97	AF			
Date	Y	Month	Day	Index
17.12.97	AF			
Copy to:	Kopie fuer:			

STUDER REGENSDORF  
 SIGNALING OUT 16CH BOARD "ESE"  
 Number: 1.917.426.20



**Signaling OUT 16CH Board I.917.426.22**

Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.60.3337		100n	CER 50V, 10%, X7R, 0805	0	XIC 34	53.03.0166		8p	DIL 0.3", lot, gerade
0	C 2	59.60.3337		100n	CER 50V, 10%, X7R, 0805	0	XIC 35	53.03.0165		20p	DIL 0.3", lot, gerade
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	59.60.2237		33p	CER 50V, 5%, C0G, 0603						
0	C 8	59.60.2237		33p	CER 50V, 5%, C0G, 0603						
0	C 9	59.68.0065		10u	C-EL 16V, 4.0*5.7						
0	C 10	59.68.0029		100u	C-EL 6V, 6.3*5.7						
0	C 11	59.68.0029		100u	C-EL 6V, 6.3*5.7						
0	C 12	59.68.0029		100u	C-EL 6V, 6.3*5.7						
0	C 13	59.68.0029		100u	C-EL 6V, 6.3*5.7						
0	D 25	50.60.8001		4448	200mA 75V 4ns SOD 80						
0	DL 1	50.04.2132		TLUG 2401	DL TLUG 2401 GN MATT						
0	IC 25	50.62.1595		74HC595	8bit shift/output register						
0	IC 26	50.62.1595		74HC595	8bit shift/output register						
0	IC 27	50.62.1165		74HC165	8bit shift register						
0	IC 31	50.62.0130		ULN2003	7*Darlington driver						
0	IC 32	50.62.0130		ULN2003	7*Darlington driver						
0	IC 33	50.62.0130		ULN2003	7*Darlington driver						
0	IC 34	50.15.0115		75176	IC SN 75176 BP, DS 3695 N,						
0	IC 35	1.950.914.22			SW 917426 SIG OUT (50.16.0313)						
0	IC 36	50.62.1004		74HC 04	Hex inverter						
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	K 3	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 4	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 5	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 6	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 7	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 8	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 9	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 10	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 11	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 12	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 13	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 14	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 15	56.04.0198		2u	5V 125V 2A Ag/Au						
0	K 16	56.04.0198		2u	5V 125V 2A Ag/Au						
1	MP 1	1.917.426.12	1 pce		SIGNALING OUT 16CH PCB						
0	MP 2	43.01.0108	1 pce	Label	ESE-WARNSCHILD						
0	MP 3	1.917.426.01	1 pce		BEZ. STREIFEN 6.3x91						
0	MP 4	1.010.098.49	1 pce	-	KLARSICHTSCHILD						
0	MP 5	1.010.008.33	2 pcs	Handle	GRIFFHAELE						
0	MP 6	28.21.1380	3 pcs	2.25*6.5	Rohrmete Ms blank						
0	MP 7	28.99.0119	2 pcs		ROHRNIETE D 2.5*0.15* 9						
1	MP 8	1.101.001.22	1 pce		TEXT-ETIK. 5*20 HARDWARE -22						
0	P 1	54.11.2009		96p	EU-R 3*32p						
0	P 2	54.01.0020		1p	Pin 0.63*0.63						
0	P 3	54.01.0020		1p	Pin 0.63*0.63						
0	R 125	57.92.7051		1.1A	POLY- PTC, 30V						
0	R 126	57.69.1097		10k	CF 5% 0603						
0	R 127	57.69.1097		10k	CF 5% 0603						
0	R 128	57.69.1097		10k	CF 5% 0603						
0	R 129	57.69.1097		10k	CF 5% 0603						
0	R 130	57.69.1097		10k	CF 5% 0603						
0	R 131	57.69.1097		10k	CF 5% 0603						
0	R 132	57.69.1097		10k	CF 5% 0603						
0	R 133	57.69.1097		10k	CF 5% 0603						
0	R 134	57.69.1097		10k	CF 5% 0603						
0	R 135	57.69.1097		10k	CF 5% 0603						
0	R 136	57.69.1097		10k	CF 5% 0603						
0	R 137	57.69.1097		10k	CF 5% 0603						
0	R 138	57.69.1097		10k	CF 5% 0603						
0	R 139	57.69.1097		10k	CF 5% 0603						
0	R 140	57.69.1097		10k	CF 5% 0603						
0	R 166	57.60.1822		8K2	MF, 1%, 0204, E24						
0	R 167	57.60.1331		330R	MF, 1%, 0204, E24						
0	R 168	57.60.1000		0R0	MF, 0204						
0	R 225	57.69.1097		10k	CF 5% 0603						
0	R 226	57.69.1097		10k	CF 5% 0603						
0	R 227	57.69.1097		10k	CF 5% 0603						

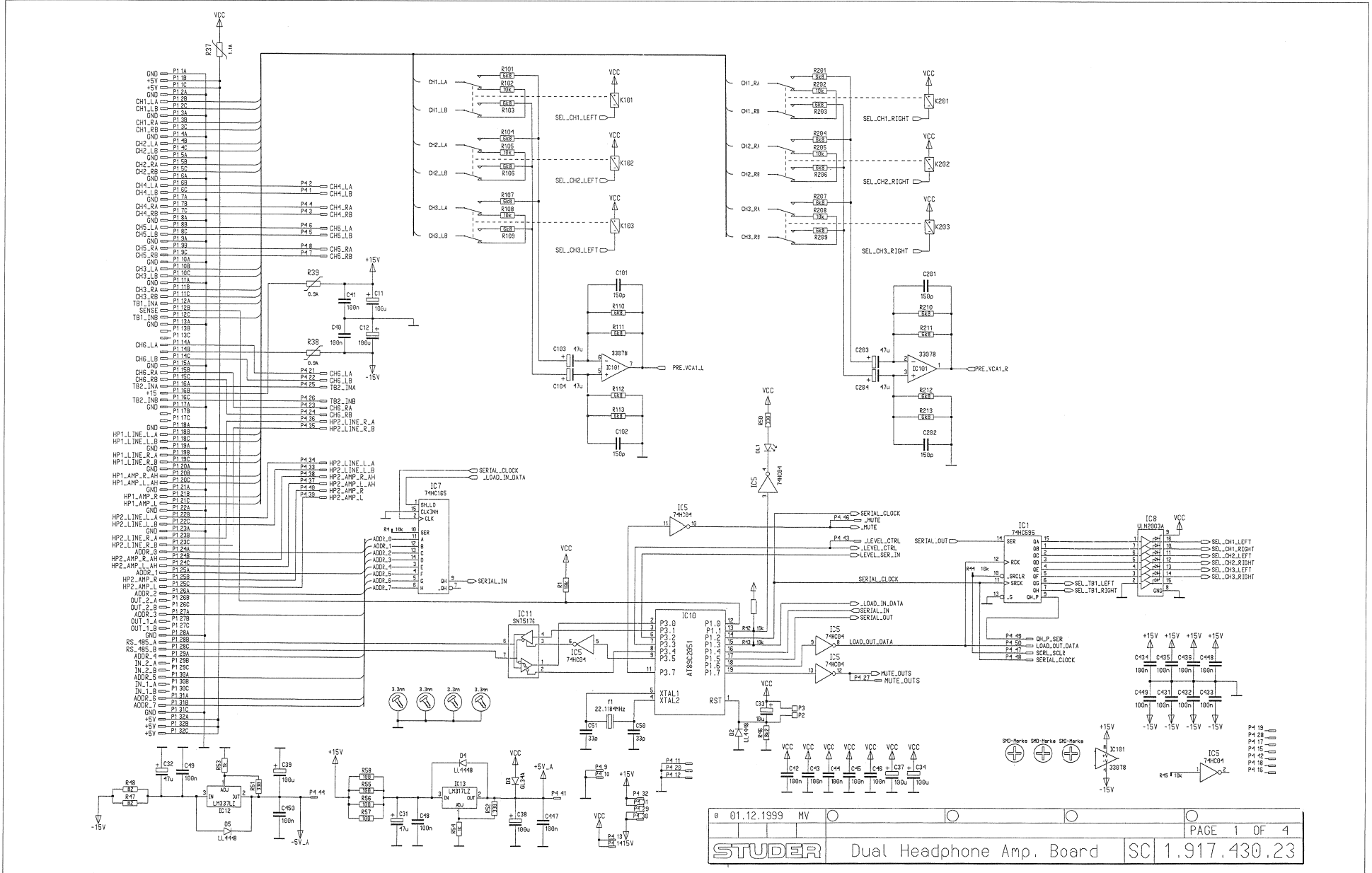
End of List

**Comments**

(1) 17.11.1998 PCB has been improved

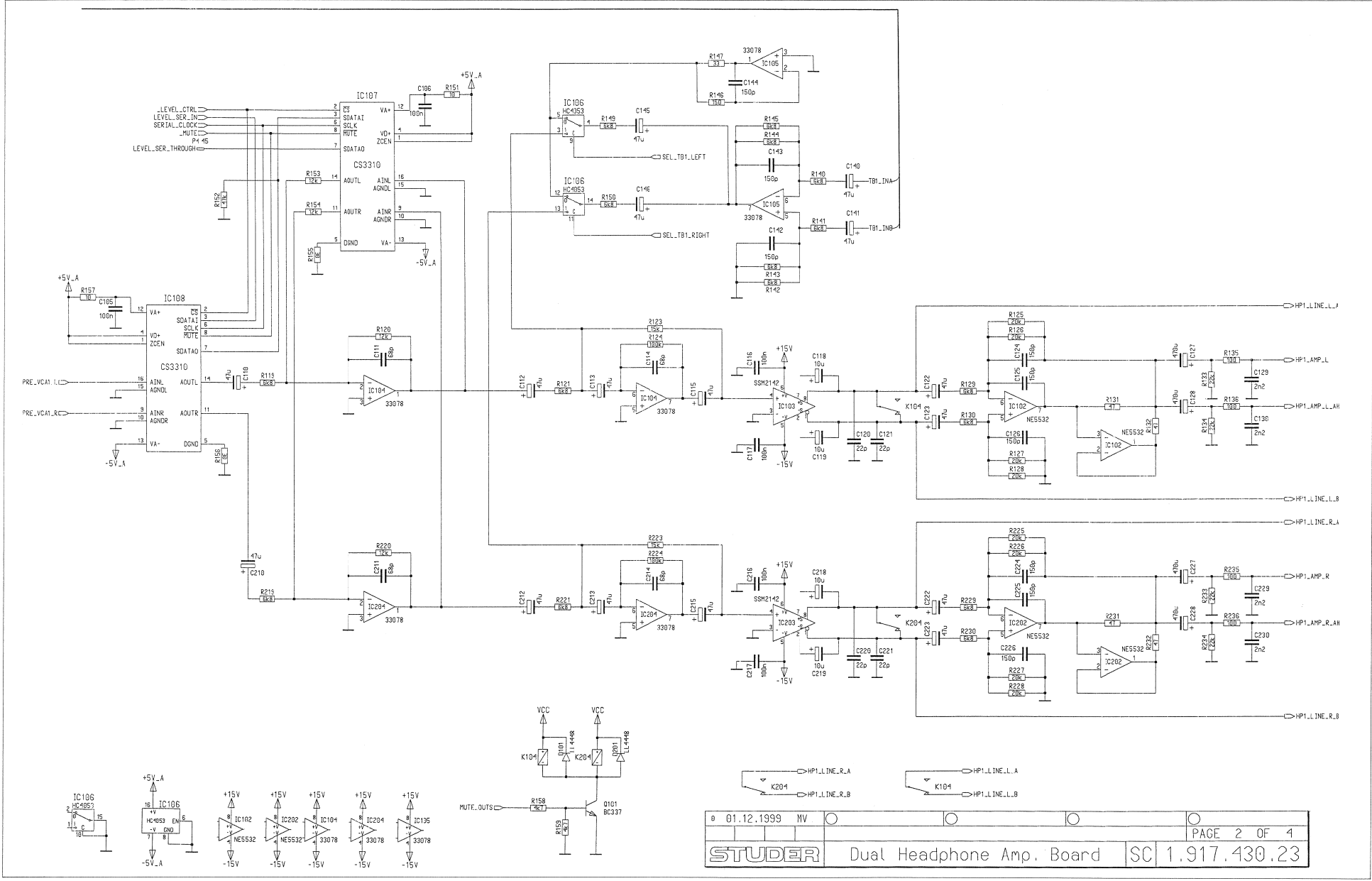


Dual Headphone Amplifier Board 1.917.430.23



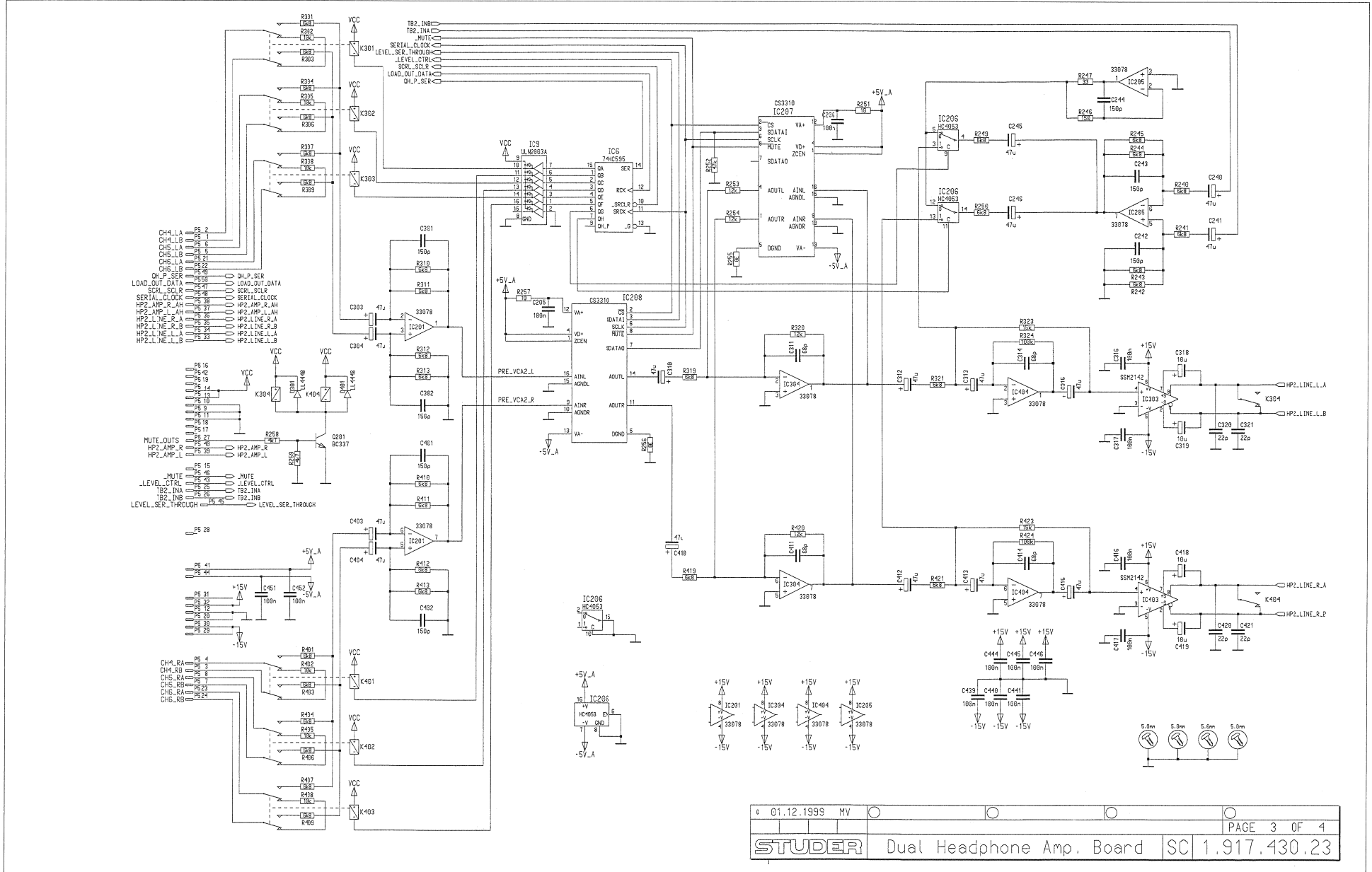


Dual Headphone Amplifier Board 1.917.430.23



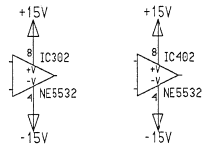
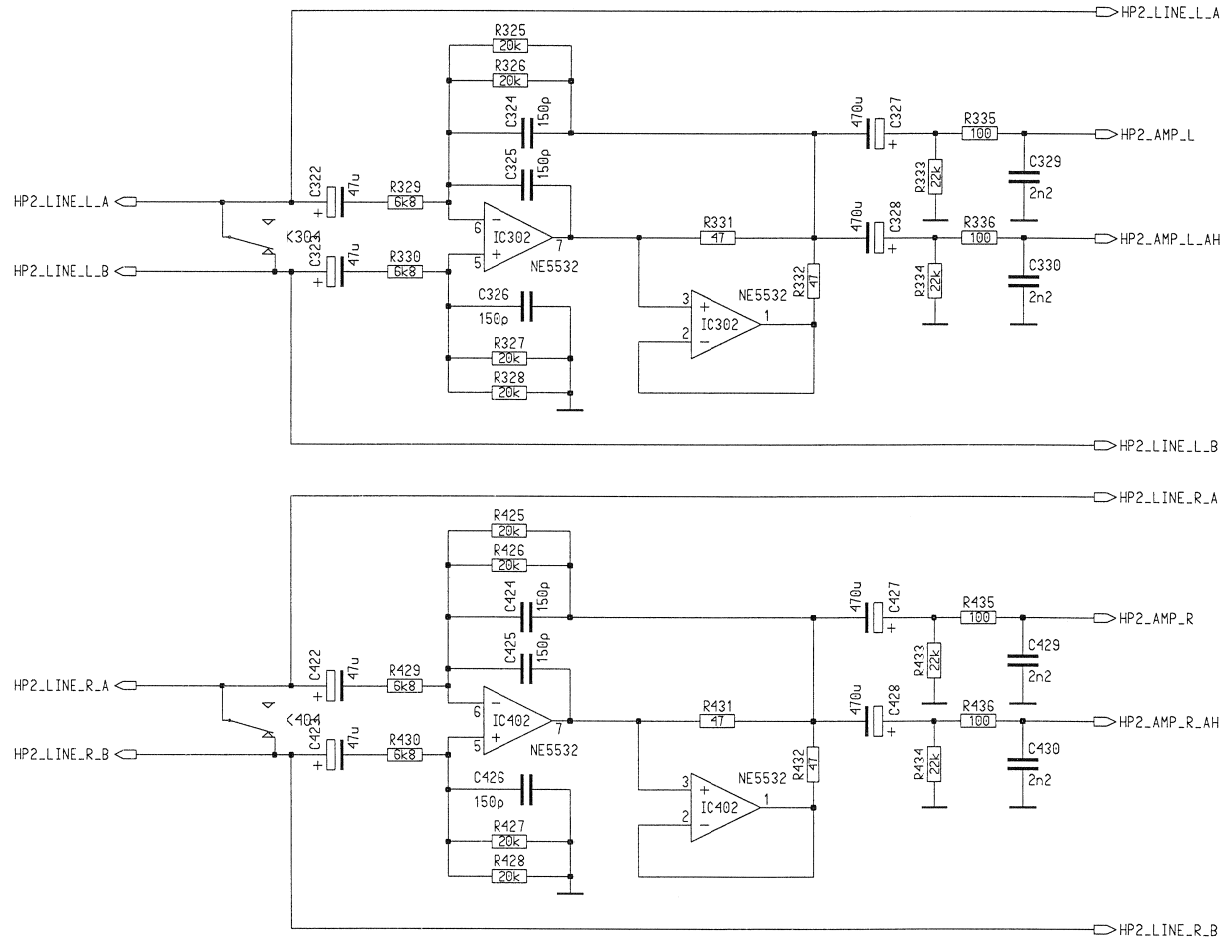


Dual Headphone Amplifier Board 1.917.430.23





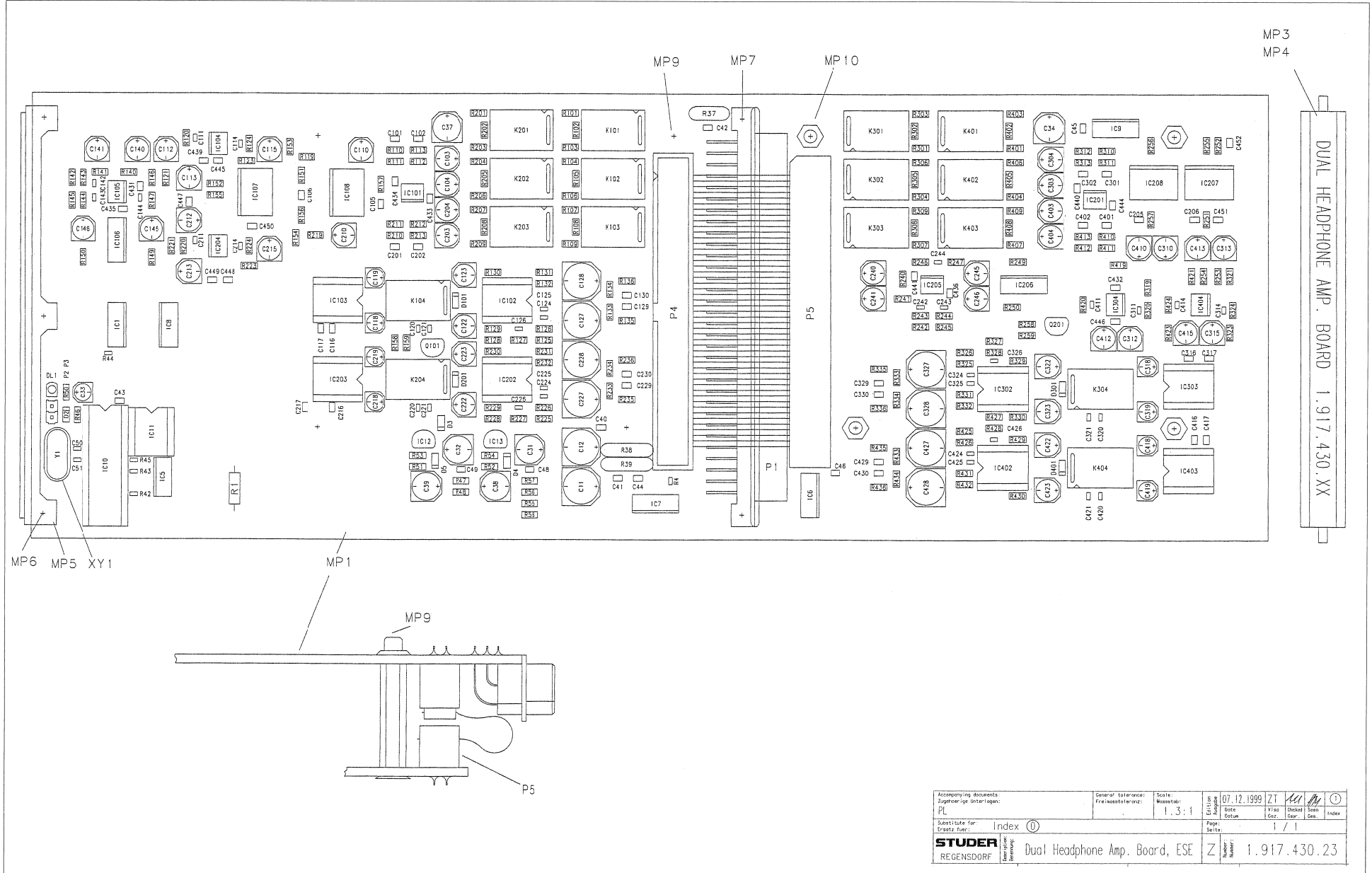
Dual Headphone Amplifier Board 1.917.430.23







Dual Headphone Amplifier Board 1.917.430.23



Accompanying documents: Zugehörige Unterlagen: PL	General tolerances: Fraßmaßtoleranzen:	Scale: Maßstab:	07.12.1999	ZT				
Substitute for: Ersatz fuer:	Index	1:3:1	Date Datum:	Viso Gez.:	Checked Gepr.:	Seen Geseh.:	Index	
STUDER REGENSDORF			Page Seite:	1 / 1		Number: 1.917.430.23		



Dual Headphone Amplifier Board 1.917.430.23

Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 11	59.68.0115	100u	EL	35V, 8.0*10.7	0	C 242	59.60.2253	150p	CER 50V, 5%, COG, 0603	0	IC 1	50.62.1595	74HC595	8bit shift/output register	0	R 52	57.60.1331	330R	MF, 1%, 0204, E24			
0	C 12	59.68.0115	100u	EL	35V, 8.0*10.7	0	C 243	59.60.2253	150p	CER 50V, 5%, COG, 0603	0	IC 5	50.62.1004	74HC 04	Hex inverter	0	R 53	57.60.1102	1K	MF, 1%, 0204, E24			
0	C 31	59.68.0069	47u	EL	16V, 6.3*5.7	0	C 244	59.60.2253	150p	CER 50V, 5%, COG, 0603	0	IC 6	50.62.1595	74HC595	8bit shift/output register	0	R 54	57.60.1102	1K	MF, 1%, 0204, E24			
0	C 32	59.68.0069	47u	EL	16V, 6.3*5.7	0	C 245	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 7	50.62.1165	74HC165	8bit shift register	0	R 55	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 33	59.68.0065	10u	EL	16V, 4.0*5.7	0	C 246	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 8	50.62.0139	ULN2003	7*Darlington driver	0	R 56	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 34	59.68.0029	100u	EL	6V, 6.3*5.7	0	C 301	59.60.2353	150p	CER 50V, 5%, COG, 0805	0	IC 9	50.62.0139	ULN2003	7*Darlington driver	0	R 57	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 37	59.68.0029	100u	EL	6V, 6.3*5.7	0	C 302	59.60.2353	150p	CER 50V, 5%, COG, 0805	0	IC 10	1.950.916.22	SV 917430 DUALHEAD (50 16.0313		0	R 58	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 38	59.68.0029	100u	EL	6V, 6.3*5.7	0	C 303	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 11	50.15.0115	75176	IC SN 75175 BR DS 3899 N.	0	R 101	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 39	59.68.0029	100u	EL	6V, 6.3*5.7	0	C 304	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 12	50.10.0109	LM337L	Series regulator 100mA...-37V	0	R 102	57.60.1103	10K	MF, 1%, 0204, E24			
0	C 40	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 310	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 13	50.10.0108	LM317L	Series regulator 100mA...-37V	0	R 103	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 41	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 311	59.60.2245	68p	CER 50V, 5%, COG, 0603	0	IC 101	50.01.0204	MC33078	Dual Op-Amp low noise	0	R 104	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 42	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 312	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 102	50.09.0106	5532AN	IC NE 5532 AN, NE 5532 AN, A	0	R 105	57.60.1103	10K	MF, 1%, 0204, E24			
0	C 43	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 313	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 103	50.09.0124	2142	Audio balanced line driver	0	R 106	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 44	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 314	59.60.2245	68p	CER 50V, 5%, COG, 0603	0	IC 104	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 107	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 45	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 315	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 105	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 108	57.60.1103	10K	MF, 1%, 0204, E24			
0	C 46	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 319	59.60.3337	100n	CER 50V, 10%, X7R, 0805	0	IC 106	50.82.0665	HC4053	Tripple 2oh analog mux/demux	0	R 109	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 48	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 317	59.60.3337	100n	CER 50V, 10%, X7R, 0805	0	IC 107	50.81.0301	C53310	Dig volume control set SO16	0	R 110	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 49	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 318	59.68.0065	10u	EL 16V, 4.0*5.7	0	IC 108	50.81.8301	C53310	Dig volume control set SO16	0	R 111	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 50	59.60.2237	33p	CER	50V, 5%, COG, 0603	0	C 319	59.68.0065	10u	EL 16V, 4.0*5.7	0	IC 201	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 112	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 51	59.60.2237	33p	CER	50V, 5%, COG, 0603	0	C 320	59.60.2233	22p	CER 50V, 5%, COG, 0603	0	IC 202	50.09.0106	5532AN	IC NE 5532 AN, NE 5532 AN, A	0	R 113	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 101	59.60.2353	150p	CER	50V, 5%, COG, 0805	0	C 321	59.60.2233	22p	CER 50V, 5%, COG, 0603	0	IC 203	50.09.0124	2142	Audio balanced line driver	0	R 119	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 102	59.60.2353	150p	CER	50V, 5%, COG, 0805	0	C 322	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 204	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 120	57.60.1123	12K	MF, 1%, 0204, E24			
0	C 103	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 323	59.68.0027	47u	EL 6V, 5.0*5.7	0	IC 205	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 121	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 104	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 324	59.60.2293	150p	CER 50V, 5%, COG, 0603	0	IC 206	50.82.0665	HC4053	Tripple 2oh analog mux/demux	0	R 123	57.60.1153	15K	MF, 1%, 0204, E24			
0	C 105	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 325	59.60.2253	150p	CER 50V, 5%, COG, 0603	0	IC 207	50.81.8301	C53310	Dig volume control set SO16	0	R 124	57.60.1104	100K	MF, 1%, 0204, E24			
0	C 106	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 328	59.60.2253	150p	CER 50V, 5%, COG, 0603	0	IC 208	50.81.8301	C53310	Dig volume control set SO16	0	R 125	57.60.1203	20K	MF, 1%, 0204, E24			
0	C 110	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 327	59.68.0033	47u	EL 6V, 8.0*10.7	0	IC 209	50.09.0106	5532AN	IC NE 5532 AN, NE 5532 AN, A	0	R 128	57.60.1203	20K	MF, 1%, 0204, E24			
0	C 111	59.60.2245	68p	CER	50V, 5%, COG, 0603	0	C 328	59.68.0033	47u	EL 6V, 8.0*10.7	0	IC 304	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 128	57.60.1203	20K	MF, 1%, 0204, E24			
0	C 112	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 329	59.60.3317	2n2	CER 50V, 10%, X7R, 0805	0	IC 302	50.09.0106	5532AN	IC NE 5532 AN, NE 5532 AN, A	0	R 129	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 113	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 330	59.60.3317	2n2	CER 50V, 10%, X7R, 0805	0	IC 304	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 129	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 114	59.60.2245	68p	CER	50V, 5%, COG, 0603	0	C 401	59.60.2353	150p	CER 50V, 5%, COG, 0805	0	IC 403	50.09.0124	2142	Audio balanced line driver	0	R 130	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 115	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 402	59.60.2353	150p	CER 50V, 5%, COG, 0805	0	IC 404	50.81.0204	MC33078	Dual Op-Amp low noise	0	R 131	57.60.1470	47R	MF, 1%, 0204, E24			
0	C 116	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 403	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 101	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 132	57.60.1470	47R	MF, 1%, 0204, E24			
0	C 117	59.60.3337	100n	CER	50V, 10%, X7R, 0805	0	C 404	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 102	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 133	57.60.1223	22K	MF, 1%, 0204, E24			
0	C 118	59.68.0065	10u	EL	16V, 4.0*5.7	0	C 410	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 103	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 134	57.60.1223	22K	MF, 1%, 0204, E24			
0	C 119	59.68.0065	10u	EL	16V, 4.0*5.7	0	C 411	59.60.2245	68p	CER 50V, 5%, COG, 0603	0	K 104	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 135	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 120	59.60.2233	22p	CER	50V, 5%, COG, 0603	0	C 412	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 201	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 136	57.60.1101	100R	MF, 1%, 0204, E24			
0	C 121	59.60.2233	22p	CER	50V, 5%, COG, 0603	0	C 413	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 202	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 140	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 122	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 414	59.60.2245	68p	CER 50V, 5%, COG, 0603	0	K 203	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 141	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 123	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 415	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 204	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 142	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 124	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	C 416	59.60.3337	100n	CER 50V, 10%, X7R, 0805	0	K 301	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 143	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 125	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	C 417	59.60.3337	100n	CER 50V, 10%, X7R, 0805	0	K 302	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 144	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 126	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	C 418	59.68.0065	10u	EL 16V, 4.0*5.7	0	K 303	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 145	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 127	59.68.0033	47u	EL	6V, 8.0*10.7	0	C 419	59.68.0065	10u	EL 16V, 4.0*5.7	0	K 304	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 146	57.60.1151	150R	MF, 1%, 0204, E24			
0	C 128	59.68.0033	47u	EL	6V, 8.0*10.7	0	C 421	59.68.0033	47u	EL 6V, 5.0*5.7	0	K 401	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 147	57.60.1330	33R	MF, 1%, 0204, E24			
0	C 129	59.60.3317	2n2	CER	50V, 10%, X7R, 0805	0	C 420	59.60.2233	22p	CER 50V, 5%, COG, 0603	0	K 402	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 149	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 130	59.60.3317	2n2	CER	50V, 10%, X7R, 0805	0	C 422	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 403	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 150	57.60.1682	6K8	MF, 1%, 0204, E24			
0	C 140	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 423	59.68.0027	47u	EL 6V, 5.0*5.7	0	K 404	56.04.0198	2u	SV 125V 2A Ag/Au	0	R 151	57.60.1100	10R	MF, 1%, 0204, E24			
0	C 141	59.68.0027	47u	EL	6V, 5.0*5.7	0	C 424	59.60.2253	150p	CER 50V, 5%, COG, 0603	1	MP 1	1.917.430.12	1 pce	DUAL HEADPHONES AMP PCB	0	R 152	57.60.1473	47K	MF, 1%, 0204, E24			
0	C 142	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	C 425	59.60.2253	150p	CER 50V, 5%, COG, 0805	0	MP 2	43.01.0108	1 pce	Label	0	R 153	57.60.1123	12K	MF, 1%, 0204, E24			
0	C 143	59.60.2253	150p	CER	50V, 5%, COG, 0603	0	C 426	59.60															



**Dual Headphone Amplifier Board 1.917.430.23**

Idx	Pos.	Part No.	Qty.	Type/Val.	Description	Idx	Pos.	Part No.	Qty.	Type/Val.	Description
0	R 230	57.60.1682		6K8	MF, 1%, 0204, E24	0	R 434	57.60.1223		22K	MF, 1%, 0204, E24
0	R 231	57.60.1470		47R	MF, 1%, 0204, E24	0	R 435	57.60.1101		100R	MF, 1%, 0204, E24
0	R 232	57.60.1470		47R	MF, 1%, 0204, E24	0	R 436	57.60.1101		100R	MF, 1%, 0204, E24
0	R 233	57.60.1223		22K	MF, 1%, 0204, E24	1	W 1	not used			WIRE WRAP DRAHT D .25 L= 70
0	R 234	57.60.1223		22K	MF, 1%, 0204, E24	0	XIC 10	53.03.0165	1 pce	20p	DIL 0.3", löf, gerade
0	R 235	57.60.1101		100R	MF, 1%, 0204, E24	0	XIC 11	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 236	57.60.1101		100R	MF, 1%, 0204, E24	0	XIC 102	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 240	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 103	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 241	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 202	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 242	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 203	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 243	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 302	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 244	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 303	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 245	57.60.1682		6K8	MF, 1%, 0204, E24	0	XIC 402	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 246	57.60.1151		150R	MF, 1%, 0204, E24	0	XIC 403	53.03.0166	1 pce	8p	DIL 0.3", löf, gerade
0	R 247	57.60.1330		33R	MF, 1%, 0204, E24	0	XY 1	89.01.1499	1 pce		QUARZ - ISOLIERPLATTE
0	R 249	57.60.1682		6K8	MF, 1%, 0204, E24	0	Y 1	89.01.1016		22.1184MHz	XTAL HC 49/U
0	R 250	57.60.1682		6K8	MF, 1%, 0204, E24	End of List					
0	R 251	57.60.1100		10R	MF, 1%, 0204, E24	<b>Comments</b>					
0	R 252	57.60.1473		47K	MF, 1%, 0204, E24	(01) Production simplification					
0	R 253	57.60.1123		12K	MF, 1%, 0204, E24	(02) D3 not used; MP11 Revision-label "A"->"B"					
0	R 254	57.60.1123		12K	MF, 1%, 0204, E24						
0	R 255	57.60.1000		0R0	MF, 0204						
0	R 256	57.60.1000		0R0	MF, 0204						
0	R 257	57.60.1100		10R	MF, 1%, 0204, E24						
0	R 258	57.60.1472		4K7	MF, 1%, 0204, E24						
0	R 259	57.60.1472		4K7	MF, 1%, 0204, E24						
0	R 301	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 302	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 303	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 304	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 305	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 306	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 307	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 308	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 309	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 310	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 311	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 312	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 313	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 319	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 320	57.60.1123		12K	MF, 1%, 0204, E24						
0	R 321	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 323	57.60.1153		15K	MF, 1%, 0204, E24						
0	R 324	57.60.1104		100K	MF, 1%, 0204, E24						
0	R 325	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 326	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 327	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 328	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 329	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 330	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 331	57.60.1470		47R	MF, 1%, 0204, E24						
0	R 332	57.60.1470		47R	MF, 1%, 0204, E24						
0	R 333	57.60.1223		22K	MF, 1%, 0204, E24						
0	R 334	57.60.1223		22K	MF, 1%, 0204, E24						
0	R 335	57.60.1101		100R	MF, 1%, 0204, E24						
0	R 336	57.60.1101		100R	MF, 1%, 0204, E24						
0	R 401	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 402	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 403	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 404	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 405	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 406	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 407	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 408	57.60.1103		10K	MF, 1%, 0204, E24						
0	R 409	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 410	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 411	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 412	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 413	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 419	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 420	57.60.1123		12K	MF, 1%, 0204, E24						
0	R 421	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 423	57.60.1153		15K	MF, 1%, 0204, E24						
0	R 424	57.60.1104		100K	MF, 1%, 0204, E24						
0	R 425	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 426	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 427	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 428	57.60.1203		20K	MF, 1%, 0204, E24						
0	R 429	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 430	57.60.1682		6K8	MF, 1%, 0204, E24						
0	R 431	57.60.1470		47R	MF, 1%, 0204, E24						
0	R 432	57.60.1470		47R	MF, 1%, 0204, E24						
0	R 433	57.60.1223		22K	MF, 1%, 0204, E24						

**CIRCUIT DIAGRAMS SECTION 8**

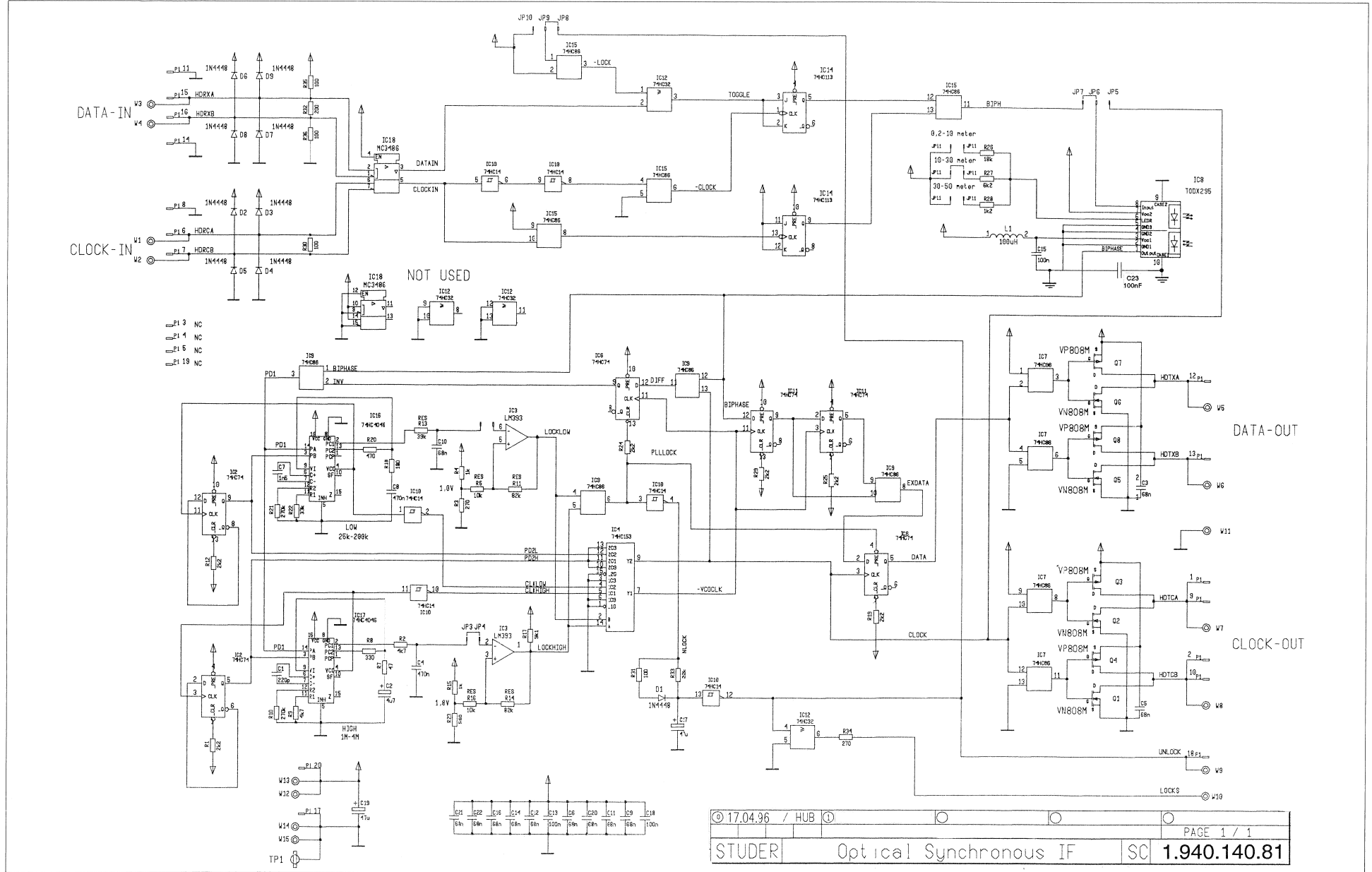
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**Connector Panels**

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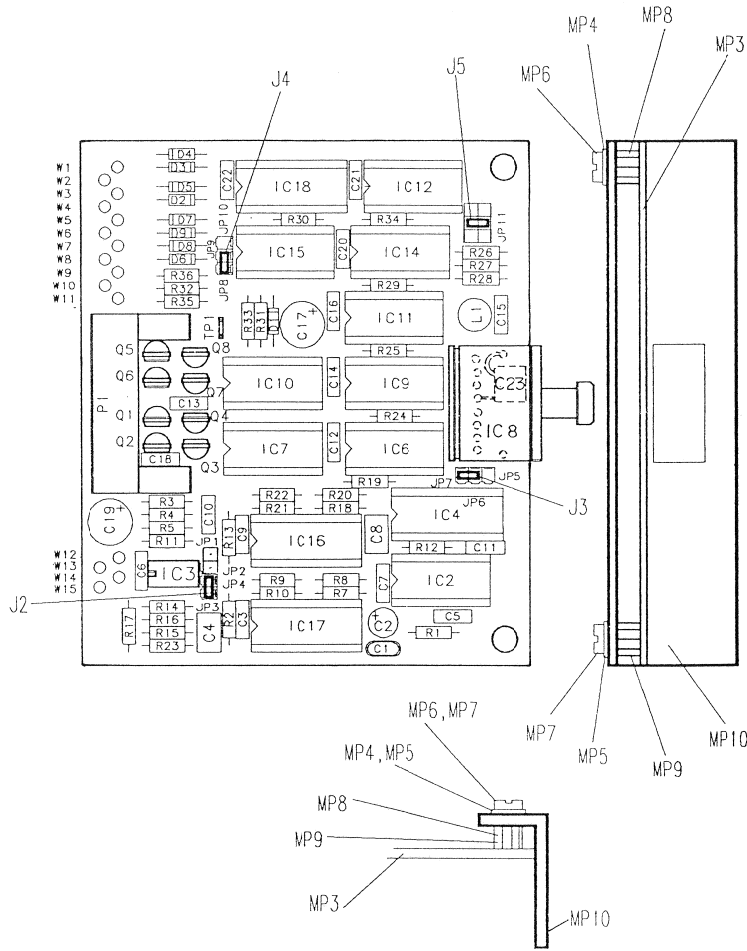
Optical Synchronous IF .....	1.940.140
XLR Connection Unit (male) .....	1.980.720
XLR Connection Unit (female) .....	1.980.721
Siemens 39-pin Connection Unit (male), gold contacts .....	1.940.609
Siemens 39-pin Connection Unit (male).....	1.940.610
37-pin D-Type Connection Unit (female).....	1.980.761

Optical Synchronous Interface 1.940.140.81





Optical Synchronous Interface 1.940.140.81



Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.34.4221	220p		C 220 P, 5%, N750, CER
0	C 2	59.22.8470	4u7		EL 50V, 20%, rad RMS
0	C 3	59.06.0683	68n		PETP, 10%, 63V
0	C 4	59.06.0474	470n		PETP, 10%, 63V
0	C 5	59.06.0683	68n		PETP, 10%, 63V
0	C 6	59.06.0683	68n		PETP, 10%, 63V
0	C 7	59.06.0152	1n5		PETP, 10%, 63V
0	C 8	59.06.0474	470n		PETP, 10%, 63V
0	C 9	59.06.0683	68n		PETP, 10%, 63V
0	C 10	59.06.0683	68n		PETP, 10%, 63V
0	C 11	59.06.0683	68n		PETP, 10%, 63V
0	C 12	59.06.0683	68n		PETP, 10%, 63V
0	C 13	59.06.0104	100n		PETP, 10%, 63V
0	C 14	59.06.0683	68n		PETP, 10%, 63V
0	C 15	59.06.0104	100n		PETP, 10%, 63V
0	C 16	59.06.0683	68n		PETP, 10%, 63V
0	C 17	59.22.6470	47u		EL 40V, 20%, rad RMS
0	C 18	59.06.0104	100n		PETP, 10%, 63V
0	C 19	59.22.6470	47u		EL 40V, 20%, rad RMS
0	C 20	59.06.0683	68n		PETP, 10%, 63V
0	C 21	59.06.0683	68n		PETP, 10%, 63V
0	C 22	59.06.0683	68n		PETP, 10%, 63V
0	C 23	59.06.0104	100n		PETP, 10%, 63V
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	D 9	50.04.0125	1N4448		75V, 150mA, 4ns, DO-35
0	IC 2	50.17.1074	74HC74		IC ... 74 HC 74 ... A
0	IC 3	50.05.0203	LM393		Dual Comparat...
0	IC 4	50.17.1153	74HC153		IC ... 74 HC 153 ... A
0	IC 6	50.17.1074	74HC74		IC ... 74 HC 74 ... A
0	IC 7	50.17.1086	74HC86		IC ... 74 HC 86 ... A
0	IC 8	89.10.0101	TODX 295		...
0	IC 9	50.17.1086	74HC86		IC ... 74 HC 86 ... A
0	IC 10	50.17.1074	74HC14		IC ... 74 HC 14 ... A
0	IC 11	50.17.1074	74HC74		IC ... 74 HC 74 ... A
0	IC 12	50.17.1032	74HC32		IC ... 74 HC 32 ... A
0	IC 14	50.17.1113	74HC113		IC ... 74 HC 113 ... A
0	IC 15	50.17.1086	74HC86		IC ... 74 HC 86 ... A
0	IC 16	50.17.4046	IC ... 74 HC 4046 ... A		IC ... 74 HC 4046 ... A
0	IC 17	50.17.4046	IC ... 74 HC 4046 ... A		IC ... 74 HC 4046 ... A
0	IC 18	50.15.0104	MC3486		IC MC 3486 P, DS 3486 N,
0	J 2	54.01.0021	Jumper		0.63 * 0.63mm
0	J 3	54.01.0021	Jumper		0.63 * 0.63mm
0	J 4	54.01.0021	Jumper		0.63 * 0.63mm
0	J 5	54.01.0021	Jumper		0.63 * 0.63mm
0	JP 1	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 2	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 3	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 4	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 5	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 6	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 7	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 8	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 9	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 10	54.01.0020	1-P		P STIFT 63*63, H=5.8/3.4
0	JP 11	54.11.0136	2*3p		Pin 0.63*0.63, RM2.54
0	L 1	62.02.3101	100uH		L 100 U, 10%, RAD., RM 5
0	MP 1	43.01.0108	pce	Label	ESE-WARNschild
0	MP 2	1.940.140.04	pce		NR-ETIKETTE 5 * 20
0	MP 3	1.940.140.11	pce		OPTICAL SYNCHRONOUS PCB
0	MP 4	24.16.1030	pce		RIPPENScheIBE D 3.2/5.5
0	MP 5	24.16.1030	pce		RIPPENScheIBE D 3.2/5.5
0	MP 6	21.53.0354	pce		Z-SCHR. IS, ZN, M 3 * 6
0	MP 7	21.53.0354	pce		Z-SCHR. IS, ZN, M 3 * 6
0	MP 8	1.010.014.22	pce	3*4.5	NIETMUTTER SW 6 M 3 *4,5
0	MP 9	1.010.014.22	pce	3*4.5	NIETMUTTER SW 6 M 3 *4,5
0	MP 10	1.940.140.01	pce		PRINTHALTER
0	P 1	54.14.2103	20-P		P STECKER 20 P.AU.VR.GERADE

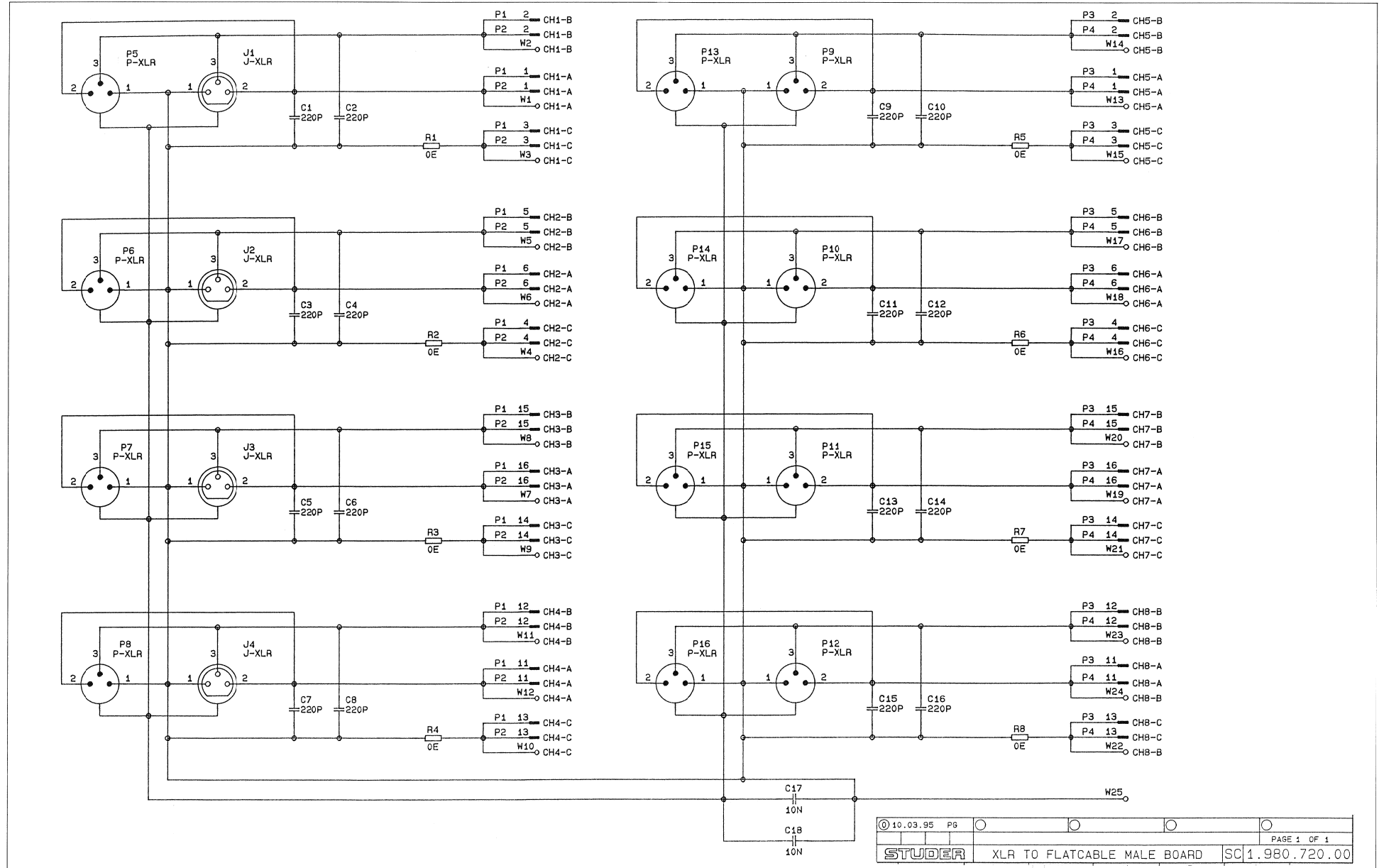
Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	Q 1	50.03.1505	VN0808M		VN 0808 M, ZVN 0108 A
0	Q 2	50.03.1505	VN0808M		VN 0808 M, ZVN 0108 A
0	Q 3	50.03.1554	VP0808M		VP 0808 M
0	Q 4	50.03.1554	VP0808M		VP 0808 M
0	Q 5	50.03.1505	VN0808M		VN 0808 M, ZVN 0108 A
0	Q 6	50.03.1505	VN0808M		VN 0808 M, ZVN 0108 A
0	Q 7	50.03.1554	VP0808M		VP 0808 M
0	Q 8	50.03.1554	VP0808M		VP 0808 M
0	R 1	57.11.3222	2k2		MF, 1%, 0207
0	R 2	57.11.3472	4k7		MF, 1%, 0207
0	R 3	57.11.3271	270R		MF, 1%, 0207
0	R 4	57.11.3102	1k0		MF, 1%, 0207
0	R 5	57.11.3103	10k		MF, 1%, 0207
0	R 6	not used			9k1
0	R 7	57.11.3470	47R		MF, 1%, 0207
0	R 8	57.11.3331	330R		MF, 1%, 0207
0	R 9	57.11.3472	4k7		MF, 1%, 0207
0	R 10	57.11.3274	270k		MF, 1%, 0207
0	R 11	57.11.3823	82k		MF, 1%, 0207
0	R 12	57.11.3222	2k2		MF, 1%, 0207
0	R 13	57.11.3393	39k		MF, 1%, 0207
0	R 14	57.11.3823	82k		MF, 1%, 0207
0	R 15	57.11.3102	1k0		MF, 1%, 0207
0	R 16	57.11.3103	10k		MF, 1%, 0207
0	R 17	57.11.3912	9k1		MF, 1%, 0207
0	R 18	57.11.3181	180R		MF, 1%, 0207
0	R 19	57.11.3222	2k2		MF, 1%, 0207
0	R 20	57.11.3471	470R		MF, 1%, 0207
0	R 21	57.11.3274	270k		MF, 1%, 0207
0	R 22	57.11.3333	33k		MF, 1%, 0207
0	R 23	57.11.3561	560R		MF, 1%, 0207
0	R 24	57.11.3222	2k2		MF, 1%, 0207
0	R 25	57.11.3222	2k2		MF, 1%, 0207
0	R 26	57.11.3183	18k		MF, 1%, 0207
0	R 27	57.11.3622	6k2		MF, 1%, 0207
0	R 28	57.11.3122	1k2		MF, 1%, 0207
0	R 29	57.11.3222	2k2		MF, 1%, 0207
0	R 30	57.11.3101	100R		MF, 1%, 0207
0	R 31	57.11.3101	100R		MF, 1%, 0207
0	R 32	57.11.3201	200R		MF, 1%, 0207
0	R 33	57.11.3223	22k		MF, 1%, 0207
0	R 34	57.11.3271	270R		MF, 1%, 0207
0	R 35	57.11.3101	100R		MF, 1%, 0207
0	R 36	57.11.3101	100R		MF, 1%, 0207
0	TP 1	54.02.0320	1p		Flatpin, 2.8*0.8mm

End of List

Comments

STUDER OPTICAL SYNCHRONOUS INTER-FACE ESE  
 REGENSDORF  
 Edition: 17.4.96  
 1.940.140-81

XLR TO FLATCABLE MALE BOARD 1.980.720.00



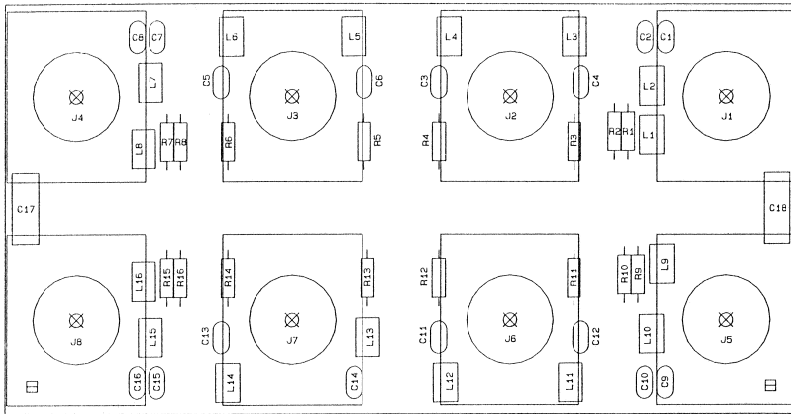




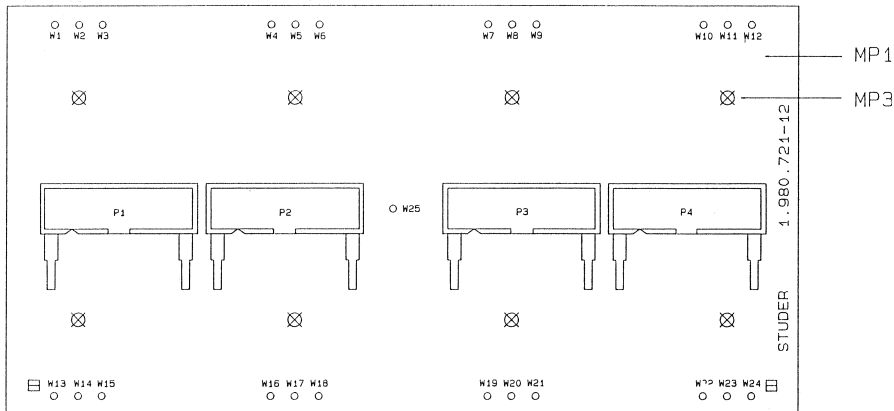


XLR TO FLATCABLE FEMALE BOARD 1.980.721.81

COMPONENT SIDE



SOLDER SIDE

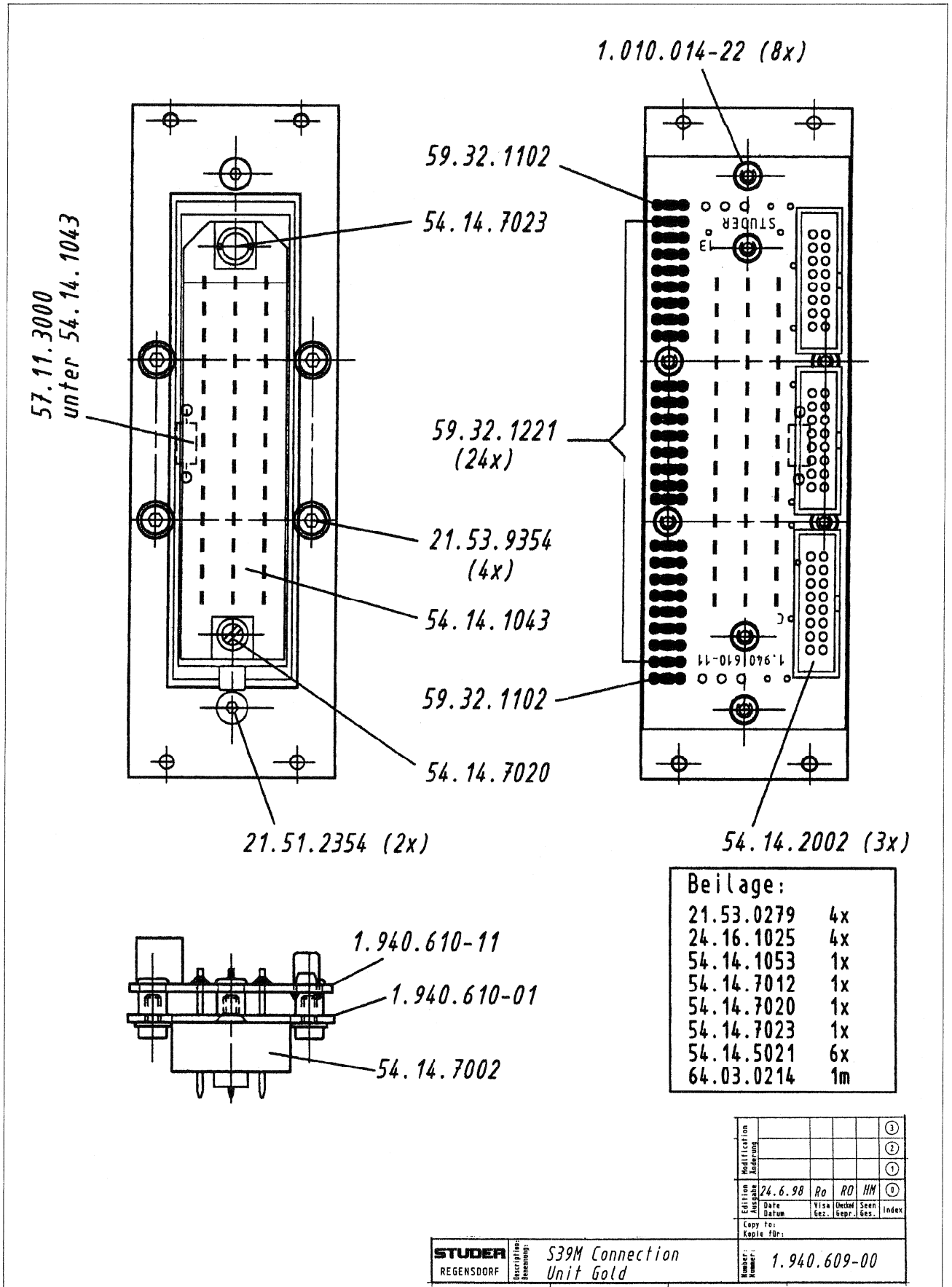


Idx.	Pos.	Part No.	Qty.	Type/Val.	Description
0	C 1	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 2	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 3	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 4	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 5	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 6	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 7	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 8	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 9	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 10	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 11	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 12	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 13	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 14	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 15	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 16	59.32.1221		220p	C 220 P , 10%, 400V , CER
0	C 17	59.05.6103		10n	C .01 U , 10%, 400V , MPP
0	C 18	59.05.6103		10n	C .01 U , 10%, 400V , MPP
0	MP 1	1.980.721.12	1 pce		XLR to Flatcable fem Board PCB
0	MP 2	1.980.721.04	1 pce		NR.-ETIKETTE 5 * 20
0	P 1	54.14.2102		16-P	P STECKER 16 P,AU,VR,GERADE
0	R 1	57.11.3000		0R0	R 0 , 0207 , MF
0	R 2	57.11.3000		0R0	R 0 , 0207 , MF
0	R 3	57.11.3000		0R0	R 0 , 0207 , MF
0	R 4	57.11.3000		0R0	R 0 , 0207 , MF
0	R 5	57.11.3000		0R0	R 0 , 0207 , MF
0	R 6	57.11.3000		0R0	R 0 , 0207 , MF
0	R 7	57.11.3000		0R0	R 0 , 0207 , MF
0	R 8	57.11.3000		0R0	R 0 , 0207 , MF
0	R 9	57.11.3000		0R0	R 0 , 0207 , MF
0	R 10	57.11.3000		0R0	R 0 , 0207 , MF
0	R 11	57.11.3000		0R0	R 0 , 0207 , MF
0	R 12	57.11.3000		0R0	R 0 , 0207 , MF
0	R 13	57.11.3000		0R0	R 0 , 0207 , MF
0	R 14	57.11.3000		0R0	R 0 , 0207 , MF
0	R 15	57.11.3000		0R0	R 0 , 0207 , MF
0	R 16	57.11.3000		0R0	R 0 , 0207 , MF

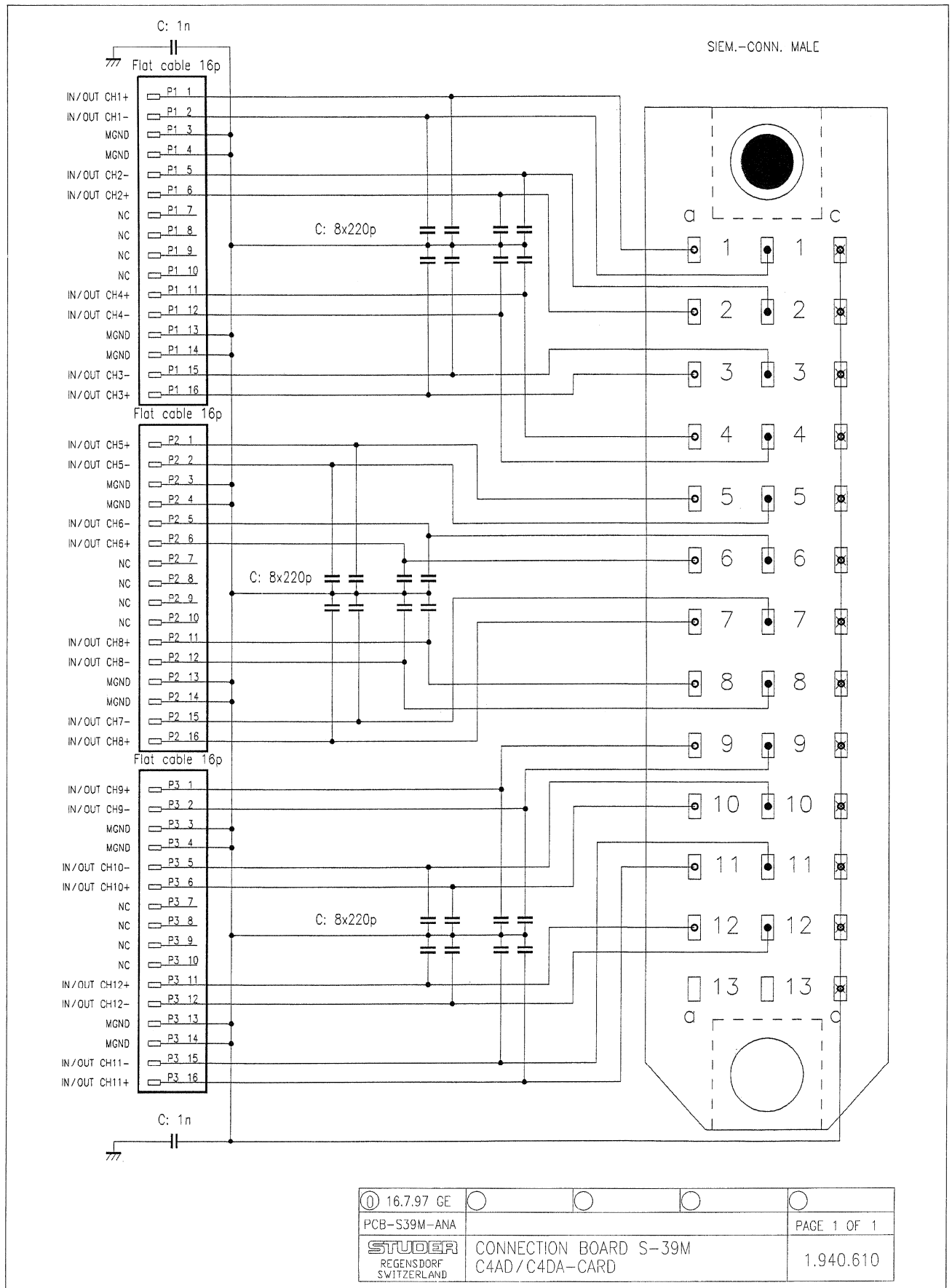
End of List

○					
○					
○					
○	09.06.95	PG	PG	HM	
IND	DATUM	GEZ.	GEPR.	GES.	
BLATT 1 VON 1					
STUDER	XLR TO FLATCABLE FEMALE BOARD	BP	1.980.721.81		

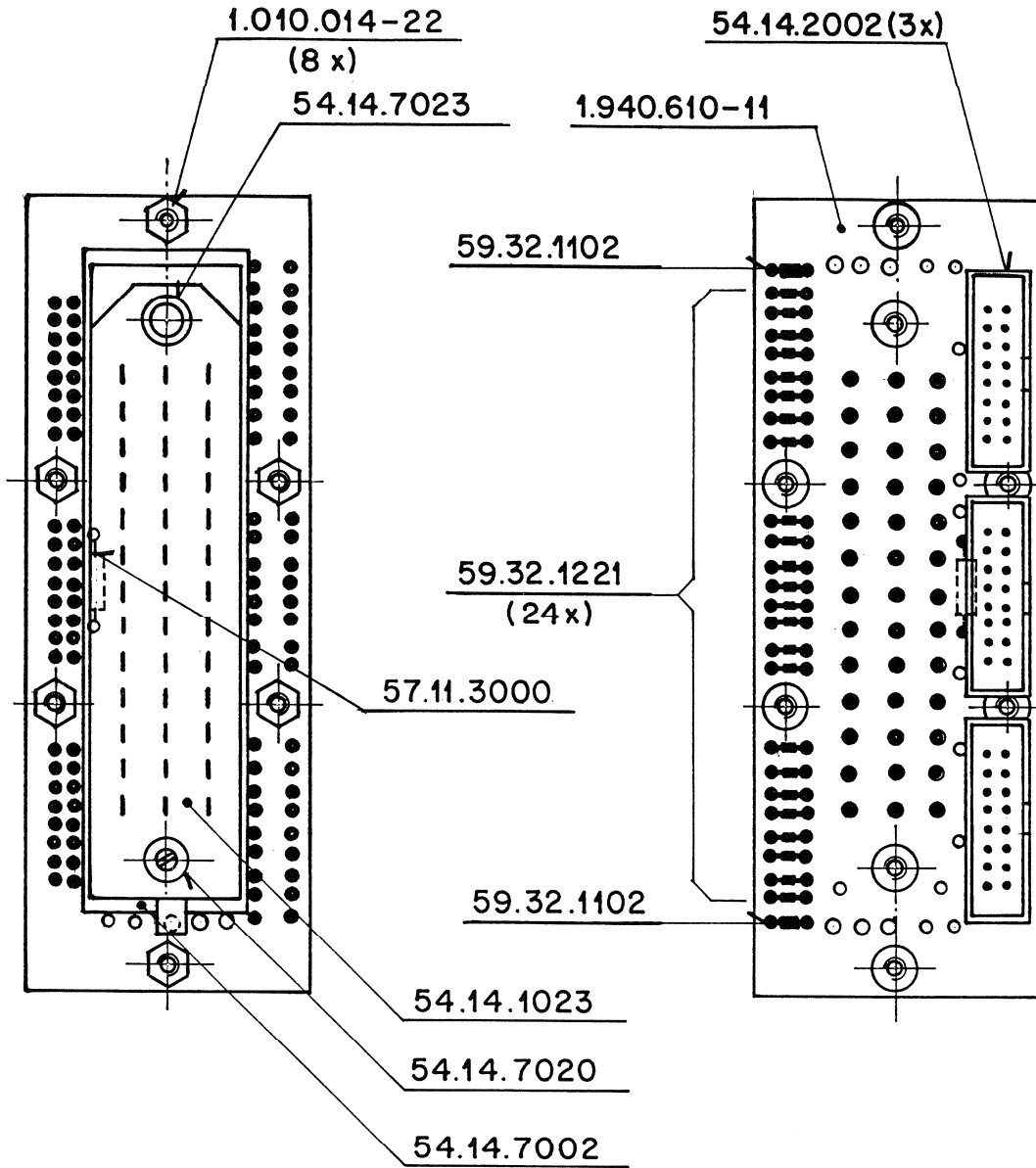
**Siemens 39-pin Connection Unit (male), gold contacts 1.940.609.00**



**Connection Board S-39M C4AD / C4DA-Card 1.940.610.00**



**Connection Board S-39M C4AD / C4DA-Card 1.940.610.00**

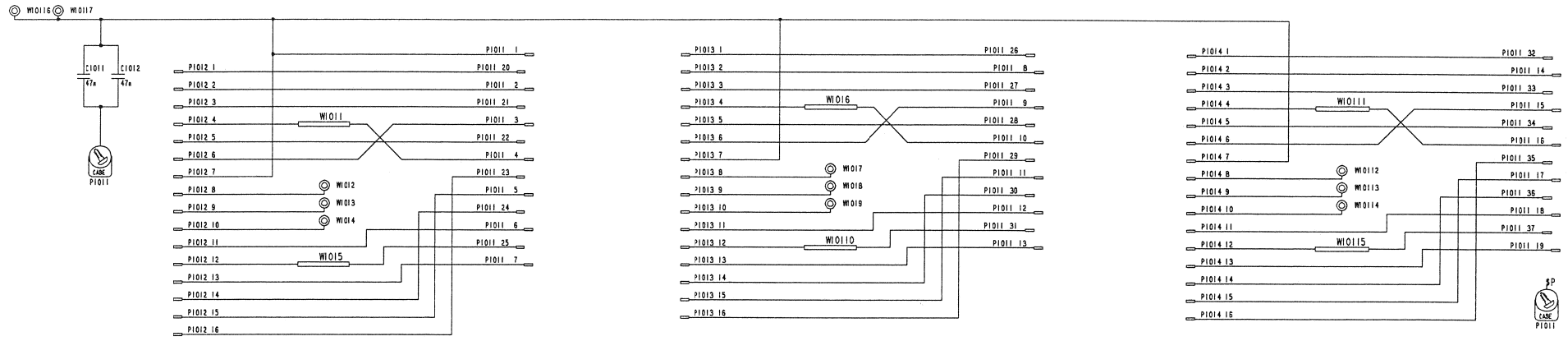


Ausgabe	19.2.97	2	14	0	0
Datum					
Gez.					
Gepr.					
Ges.					
Index					

Kopie für:

STUDER REGENSDORF ZÜRICH	Bezeichnung: <b>S 39 M CONNECTION UNIT</b>	Nummer:	<b>1.940.610 - 00</b>

3 x 16-PINTO 37-PIN D-TYPE BOARD 1.980.761.00



Ad	_POS_	_REF.No_	DESCRIPTION	MANUFACTURER
C1011	59.06.0473	47 nF	33V	C-PETP
C1012	59.02.5473	47 nF	250V	
P1011	54.13.0074	37 Pin	PCB D-Buchse winkel	
P1012	54.14.2102	16 Pin	PCB Stecker gerade	
P1013	54.14.2102	16 Pin	PCB Stecker gerade	
P1014	54.14.2102	16 Pin	PCB Stecker gerade	
MP101	1.980.761.11	EMPTY	PCB	

1.980.761.00 3x 16P TO 37D TYP PCB ZT 05/03/21