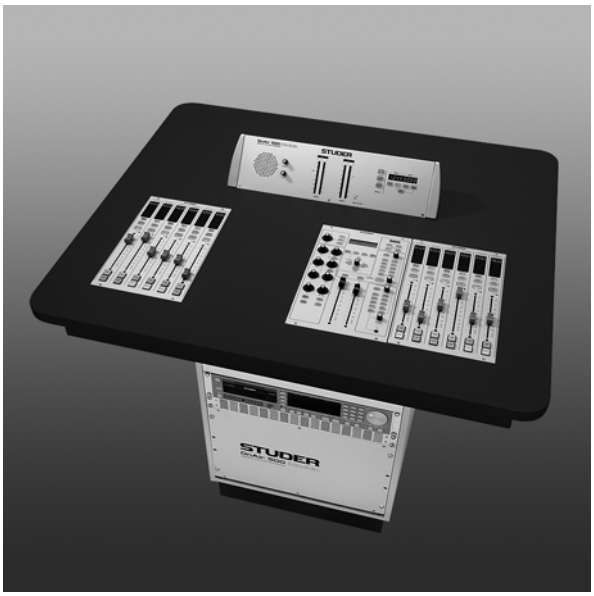
STUDER
professional audio equipment



# OnAir 500 Modulo

*Digital Mixing Console*

**Installation and Service Instructions**

Prepared and edited by
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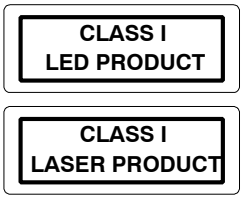
Subject to change

# A Safety Information

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

## A1 First Aid

**In Case of Electric Shock:**

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

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

***Warning!*** ***Do not touch the person or his clothing before the power is turned off, otherwise you stand the risk of suffering an electric shock as well!***

**If the Person is Unconscious:**

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

# B General Installation Instructions

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

## B1 Unpacking

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

## B2 Installation Site

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

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

## B3 Earthing and Power Supply

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

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

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

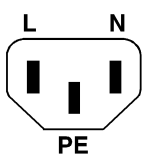
If the earthing connection can be interrupted, for example, by unplugging the mains plug of an external power supply unit, an additional, permanent earthing connection must be installed using the provided earth terminal.

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

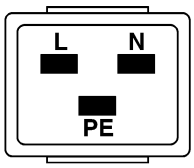
**Class I Equipment (Mains Operation)**

Should the equipment be delivered without a matching mains cable, the latter has to be prepared by a trained person using the attached female plug (IEC320/C13 or IEC320/C19) with respect to the applicable regulations in your country.
Before connecting the equipment to the AC power outlet, check that the local line voltage matches the equipment rating (voltage, frequency) within the admissible tolerance. The equipment fuses must be rated in accordance with the specifications on the equipment.
Equipment supplied with a 3-pole appliance inlet (protection conforming to class I equipment) *must* be connected to a 3-pole AC power outlet so that the equipment cabinet is connected to the protective earth.
For information on mains cable strain relief please refer to Appendix 2.

**Female Plugs (IEC320), Front-Side View:**




**IEC 320 / C13**




**IEC 320 / C19**

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

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

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

## B4 Electromagnetic Compatibility (EMC)

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

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

The unit has been tested and conforms to the EMC standards of the specified electromagnetic environment, as listed in the following declaration. The limits of these standards ensure protection of the environment and corresponding noise immunity of the equipment with appropriate probability. However, a professional installation and integration within the system are imperative prerequisites for operation without EMC problems.
For this purpose, the following measures must be followed:

- Install the equipment in accordance with the operating instructions. Use the supplied accessories.
- In the system and in the vicinity where the equipment is installed, use only components (systems, equipment) that also fulfill the EMC standards for the given environment.
- Use a system grounding concept that satisfies the safety requirements (class I equipment must be connected with a protective ground conduc-

tor) and that also takes into consideration the EMC requirements. When deciding between radial, surface, or combined grounding, the advantages and disadvantages should be carefully evaluated in each case.
- Use shielded cables where shielding is specified. The connection of the shield to the corresponding connector terminal or housing should have a large surface and be corrosion-proof. Please note that a cable shield connected only single-ended can act as a transmitting or receiving antenna within the corresponding frequency range.
- Avoid ground loops or reduce their adverse effects by keeping the loop surface as small as possible, and reduce the noise current flowing through the loop by inserting an additional impedance (e.g. common-mode choke).
- Reduce electrostatic discharge (ESD) of persons by installing an appropriate floor covering (e.g. a carpet with permanent electrostatic filaments) and by keeping the relative humidity above 30%. Further measures (e.g. conducting floor) are usually unnecessary and only effective if used together with corresponding personal equipment.
- When using equipment with touch-sensitive operator controls, please take care that the surrounding building structure allows for sufficient capacitive coupling of the operator. This coupling can be improved by an additional, conducting surface in the operator's area, connected to the equipment housing (e.g. metal foil underneath the floor covering, carpet with conductive backing).

## C Maintenance

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

## D Electrostatic Discharge during Maintenance and Repair

**Caution:**

Observe the precautions for handling devices sensitive to electrostatic discharge!
Many semiconductor components are sensitive to electrostatic discharge (ESD). The life-span of assemblies containing such components can be drastically reduced by improper handling during maintenance and repair work. Please observe the following rules when handling ESD sensitive components:
- ESD sensitive components should only be stored and transported in the packing material specifically provided for this purpose.
- *When performing a repair by replacing complete assemblies, the removed assembly must be sent back to the supplier in the same packing*

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

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

## E Repair

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

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

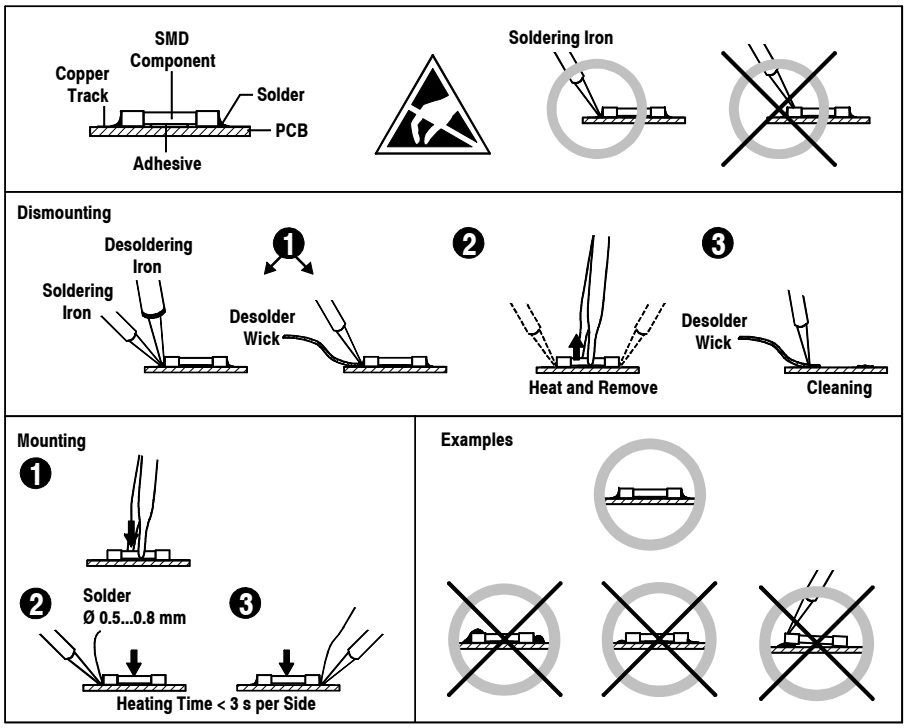
Certain components pose additional hazards:

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

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

## E1 SMD Components

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




# F Disposal

**Disposal of Packing Materials**

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

**Disposal of Used Equipment**

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

# G Declarations of Conformity

## G1 Class A Equipment - FCC Notice

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

***Caution:*** *Any changes or modifications not expressly approved by the manufacturer vant information in this manual.*

## G2 CE Declaration of Conformity

We,
**Studer Professional Audio GmbH,**
**CH-8105 Regensdorf,**
declare under our sole responsibility that the product
**Studer OnAir 500 Modulo, Digital Mixing Console**
**(starting with serial no. 1059)**
to which this declaration relates, according to following regulations of EU directives and amendments

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

is in conformity with the following standards or normative documents:

- Safety:
  EN 60950-1:2001 (Class I equipment)
- Safety of laser products:
  EN 60825-1:2004 + A11 + A2, EN60825-2:2000
- EMC:
  EN 55103-1/-2:1996, electromagnetic environments E2 and E4.

Regensdorf, October 26, 2004

B. Hochstrasser, President M. Lienert, Manager R&D

# Appendix 1: Air Temperature and Humidity

## General

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

## Ambient Temperature

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

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

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

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

## Frost and Dew

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

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

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

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

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

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

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

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

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

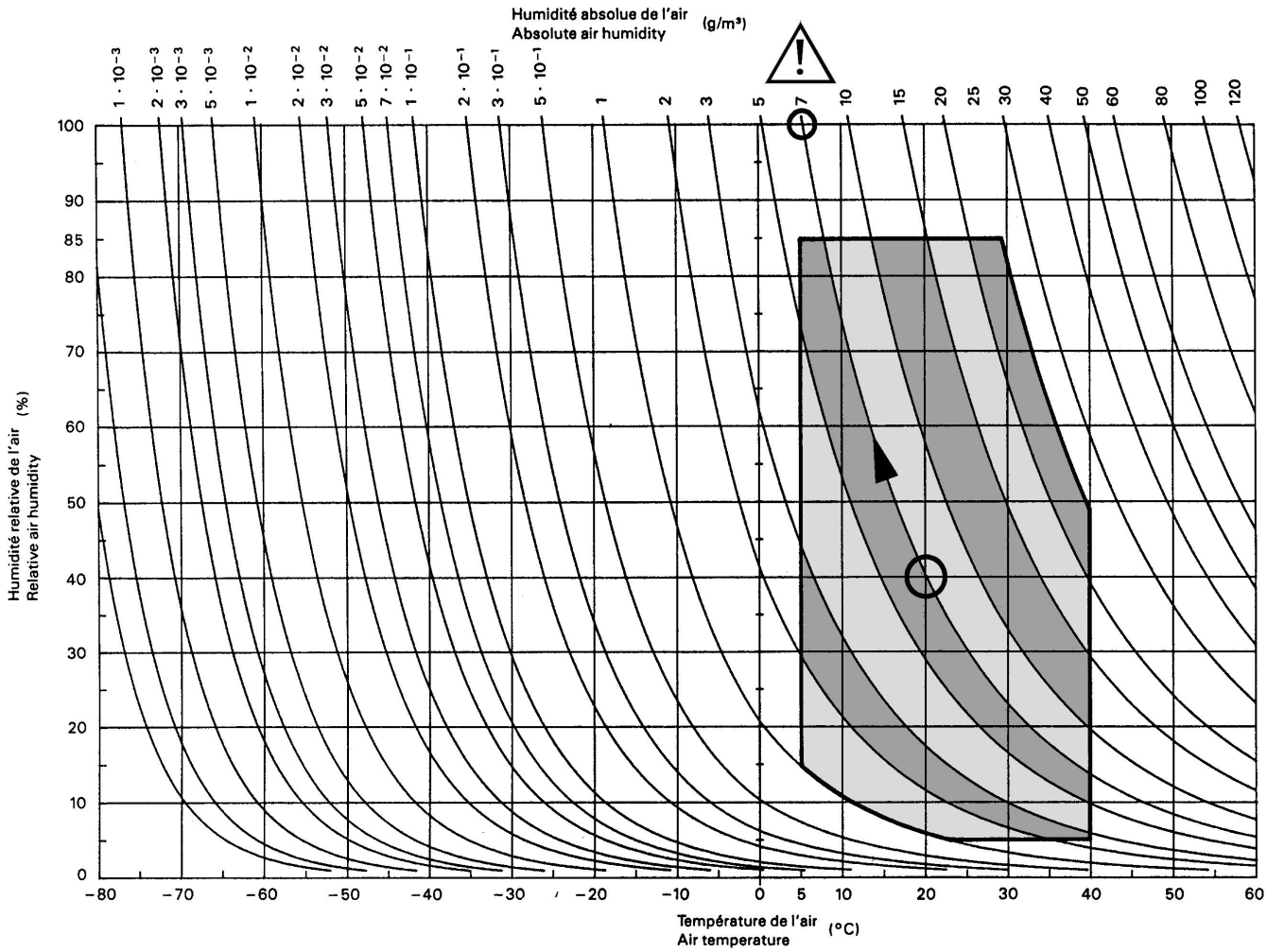


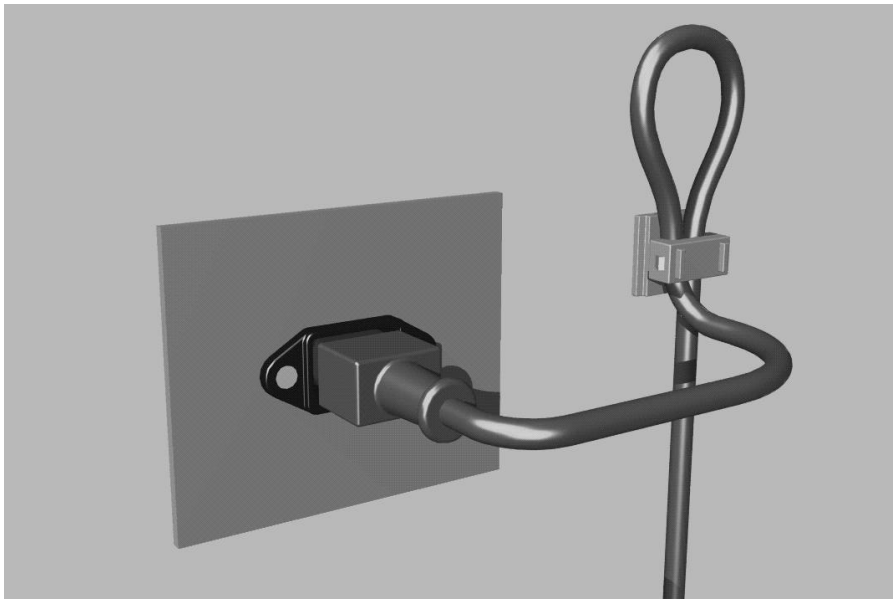

**Figure B.3 – Climatogramme pour catégorie 3K3**

**Climatogram for class 3K3**

721-3-3 © CEI:1994

## Appendix 2: Mains Connector Strain Relief

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



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

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

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## Warranty, Disclaimer, and Liability

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

# CONTENTS

# 1 INTRODUCTION


The OnAir 500 Modulo is virtually identical with Studer's well-known OnAir 500 digital mixing console, except that it adds a new degree in flexibility due to its modular surface design. This allows the studio designer to arrange the desk components to the user's convenience, and to distance the I/Os and processor from the desk if desired. In addition, a 12-fader version is available as well.

The technical specifications, configurations and options as well as the operation are the same as with the standard Studer OnAir 500 digital mixing console. *For operation and/or service, please consult the respective manuals.* An OnAir 500 operating manual is shipped together with each OnAir 500 Modulo console.

This manual describes only the differences to the standard Studer OnAir 500 console.

The picture above shows a typical OnAir 500 Modulo configuration, installed in a compact custom table.

# 2 GENERAL

## 2.1 Utilization for the Purpose Intended

The OnAir 500 Modulo mixing console is intended for professional use.
It is presumed that the unit is operated only by trained personnel. Servicing is reserved to skilled technicians.

The electrical connections may be connected only to the voltages and signals designated in this manual or in the respective OnAir 500 manuals.

## 2.2 First Steps

### 2.2.1 Unpacking and Inspection

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

### 2.2.2 Installation

**General Precautions:**

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

*When installing the processor frame, free air flow has to be assured. If the rack is closed at the top and/or the bottom, the 1U air vent panels shipped with the unit **must** be installed above and/or below the processor frame; refer to the drawing in chapter 3.3 for details.*

**Primary Voltage:**

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

**Power Connection:**

The attached female IEC 320/C13 mains cable socket has to be connected to an appropriate mains cable by a trained technician, respecting your local regulations. Refer to the “Installation, Operation, and Waste Disposal” chapter at the beginning of this manual.
In case of 24 $V_{DC}$ operation, use an appropriate connection to the external DC supply unit or battery, equipped on one end with the attached 10-pole cable socket.

*For DC operation it is mandatory that a UL approved, external fuse is in series with one of the supply lines (T 5 A H 250 V UL/CSA).*
For pin assignment of the 24 $V_{DC}$ connector please refer to chapter 12.2.5 of the OnAir 500 Operating Instructions manual.

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

**DC Operation:**

The console can be operated from a 24 $V_{DC}$ source (battery, external supply unit, UPS) through the respective 24 $V_{DC}$ connector provided on the rear panel.

*For DC operation it is mandatory that a UL approved, external fuse is in series with one of the supply lines* ***(T 5 A H 250 V UL/CSA).***
*The power switch next to the power inlet only switches the mains voltage; for DC operation, an external power switch has to be foreseen by the installer.*

**Earthing:**

*This equipment must be earthed, due to the mains input filter network being connected to the mains earth. Also in case of DC operation, earthing of the unit is mandatory.*
Some consideration must be given to the earthing arrangement of the system, at the center of which is the processor frame. The processor frame is earthed to the mains earth via the power supply and/or the dedicated earth connection bolt. Ground loops may occur where signal processing equipment, patched to the console, has its signal earth commoned to the equipment chassis.

**Wiring:**

*Please note that the connecting cables from the processor frame to the individual modules (see chapter 4.2) must by no means be connected or unplugged while power is on - no hot-plugging is supported by the OnAir 500 Modulo!*

## 2.2.3 Adjustments, Repair, Cleaning

**Danger:**

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

**Replacing the Supply Unit:**

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

**Cleaning:**

Do not use any liquids to clean the exterior of the unit. A soft, dry cloth or brush will usually do.
For cleaning the display windows, most of the commercially available window or computer/TV screen cleaners are suited. *Use only a slightly damp (never wet) cloth. Never use any solvent!*

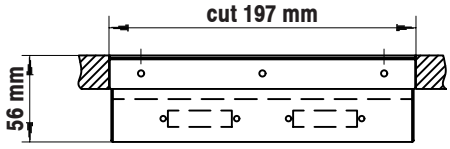
# 3 HARDWARE

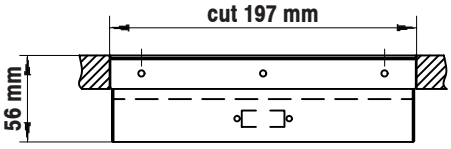
## 3.1 Fader Module

The fader module includes six channel faders with **ON**, **OFF** and **CUE**, **SELECT** and **INPUT 2** keys. A four-character display at the top of the channel status window indicates the source name. A second source can be selected by the **INPUT 2** key directly below the status window. In this window also bus assignments, EQ or dynamics being active and cleanfeed and talkback status are displayed. The **SELECT** key assigns this respective channel to the master module. The console can be equipped with one or two fader modules, giving a total of 6 or 12 faders. (For a dimensions drawing refer to chapter 3.2)
Module weight: 1.8 kg

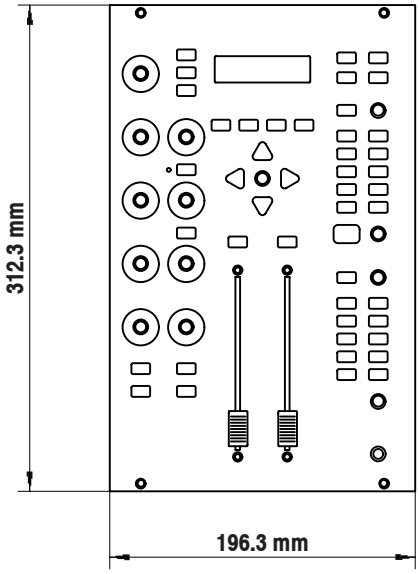
## 3.2 Master Module

The master module provides two stereo master faders for the main buses, which can also be de-assigned if desired, AUX send controls and EQ, dynamics and high-pass filter controls. In addition, an LC display gives access to menus for setting up the console dynamics, storing presets and configuring the console. Direct access to the input router is also given by these menus. Comprehensive monitoring and talkback facilities for the control room and one studio are provided in the right-hand part of the master module. Also a CR headphones jack socket is located there.
Module weight: 1.7 kg

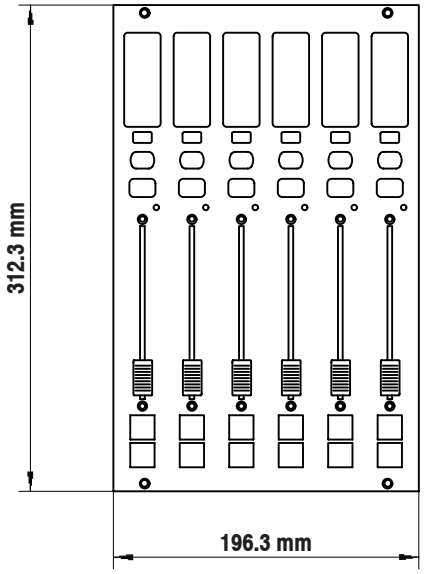


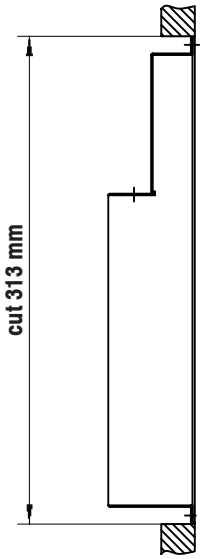




**Master Module**



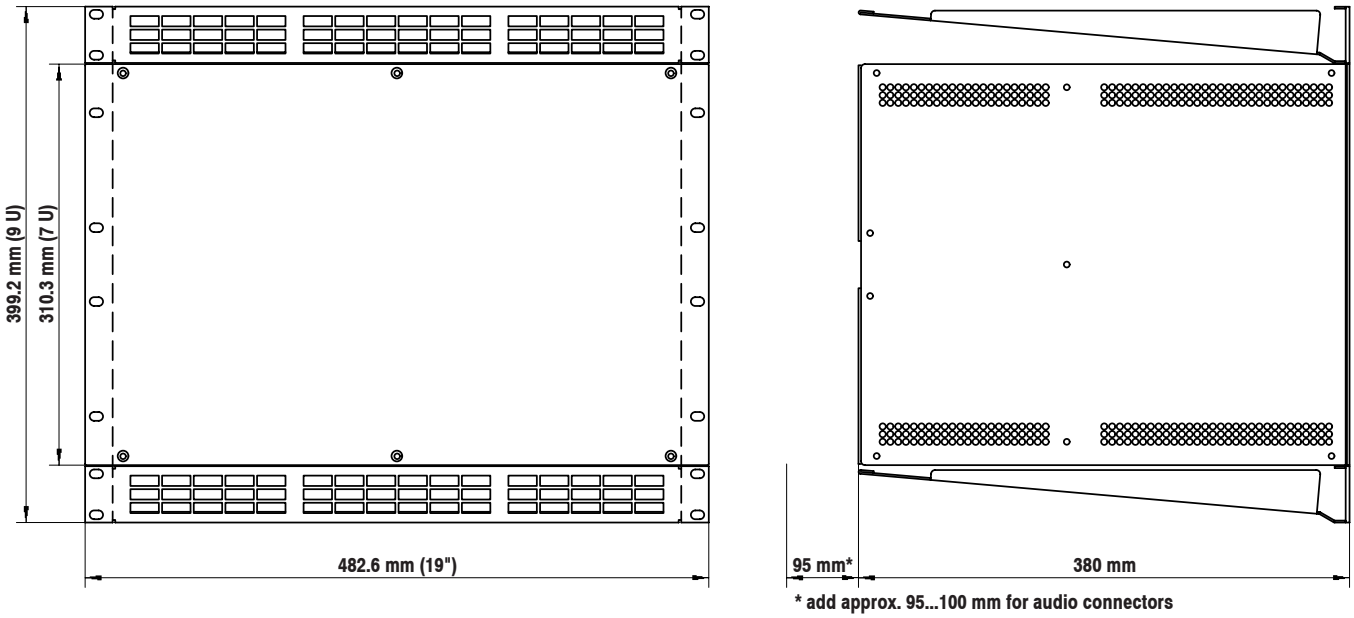

**Fader Module**



## 3.3 19” Processor Frame

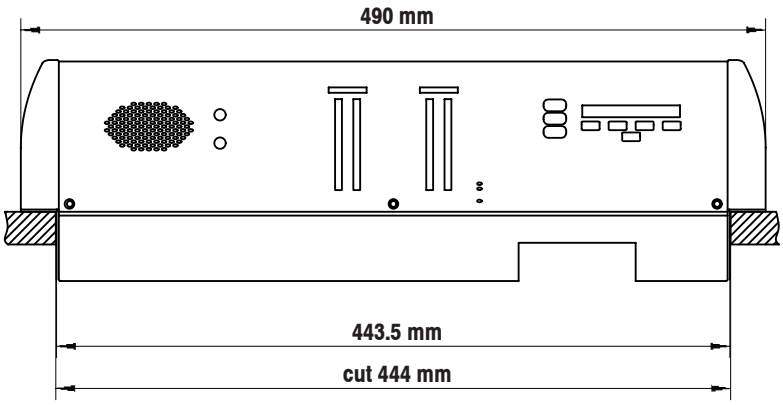
The 19” processor frame includes the DSP and the control CPU, the input and output electronics and the power supply. Each desk module is connected to the 19” processor frame via a dedicated cable, except the meter module which is connected directly to the master module.
Processor frame weight: approx. 12 kg, depending on version
(Left: rear view of a processor frame for a 12-fader OnAir 500 Modulo console).

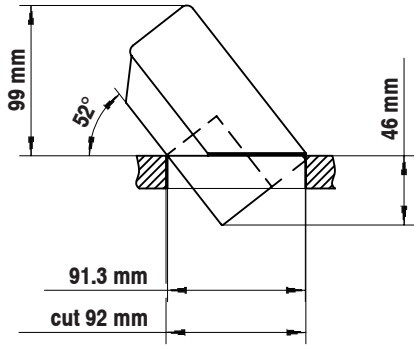



**Redundant Power Supply Option:** In contrast to the OnAir 500 fixed-frame version, a second primary power supply unit can be factory-installed within the OnAir 500 Modulo’s 19” processor frame (order no. 1.942.458.00). A second mains inlet will then be provided at the frame’s rear panel, in addition to the 24 $V_{DC}$ connector.

## 3.4 Meter Module


The meter module has two 30-LED stereo bargraph meters, each with a phase correlation indicator, in the center. On the right are two digital timers which can be controlled by adjacent keys or from selected fader channels, and on the left of the meters is the cue speaker and its controls. As the OnAir 500 Modulo is available with an optional first-level power supply redundancy feature, an indicator on the front panel of the meter module signals the correct functioning of the power supplies or the failure of one of them. In addition, the console can also be operated by any external 24 $V_{DC}$ source such as a battery.
Module weight: 1.9 kg




## 3.5 Differences from the OnAir 500 Fixed-Frame Version

Most of the OnAir 500 Modulo's electronics assemblies are identical with the ones of the OnAir 500 fixed-frame version, with the following exceptions:

| Description | Replaced Assembly | New Assembly | Additional Assembly |
|---|---|---|---|
| 24 V Power Supply Unit | (89.20.2011) | 89.20.2015 | – |
| Power Supply PCB | (1.942.470) | 1.942.471 | – |
| Master Backplane PCB | (1.942.483) | 1.942.489 | – |
| Extension Backplane PCB | – | – | 1.942.454 |
| Backplane Modulo PCB (line driver IF in Processor Frame) | – | – | 1.942.472 |
| Input Interface PCB (line driver IF in Fader Module) | – | – | 1.942.473 |
| Master Interface PCB (line driver IF in Master Module) | – | – | 1.942.474 |
| Level Meter Interface PCB (line driver IF in Meter Module) | – | – | 1.942.477 |

Diagrams of the new and the additional assemblies listed above are given in chapter 5.

**12-Fader Version:** The OnAir 500 Modulo 12-fader version has a second Dual SPE Module PCB 1.942.486 plugged to the Master Backplane PCB, also refer to the diagram in chapter 4.1. In addition, there is a second Input Plug-In Unit in the upper part of the processor frame, consisting of Mic Input Unit, Analog Input Unit, and AES-S/PDIF Unit.
*Please note that there is a minor difference in wiring between the 6-fader and the 12-fader versions - refer to the illustration in chapter 4.1.*

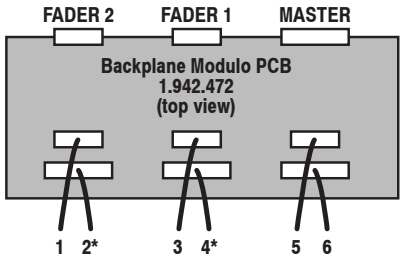
# 4 WIRING

*Please note that the connecting cables from the processor frame to the individual modules (see chapter 4.2) must by no means be connected or unplugged while power is on – no hot-plugging is supported by the OnAir 500 Modulo!*

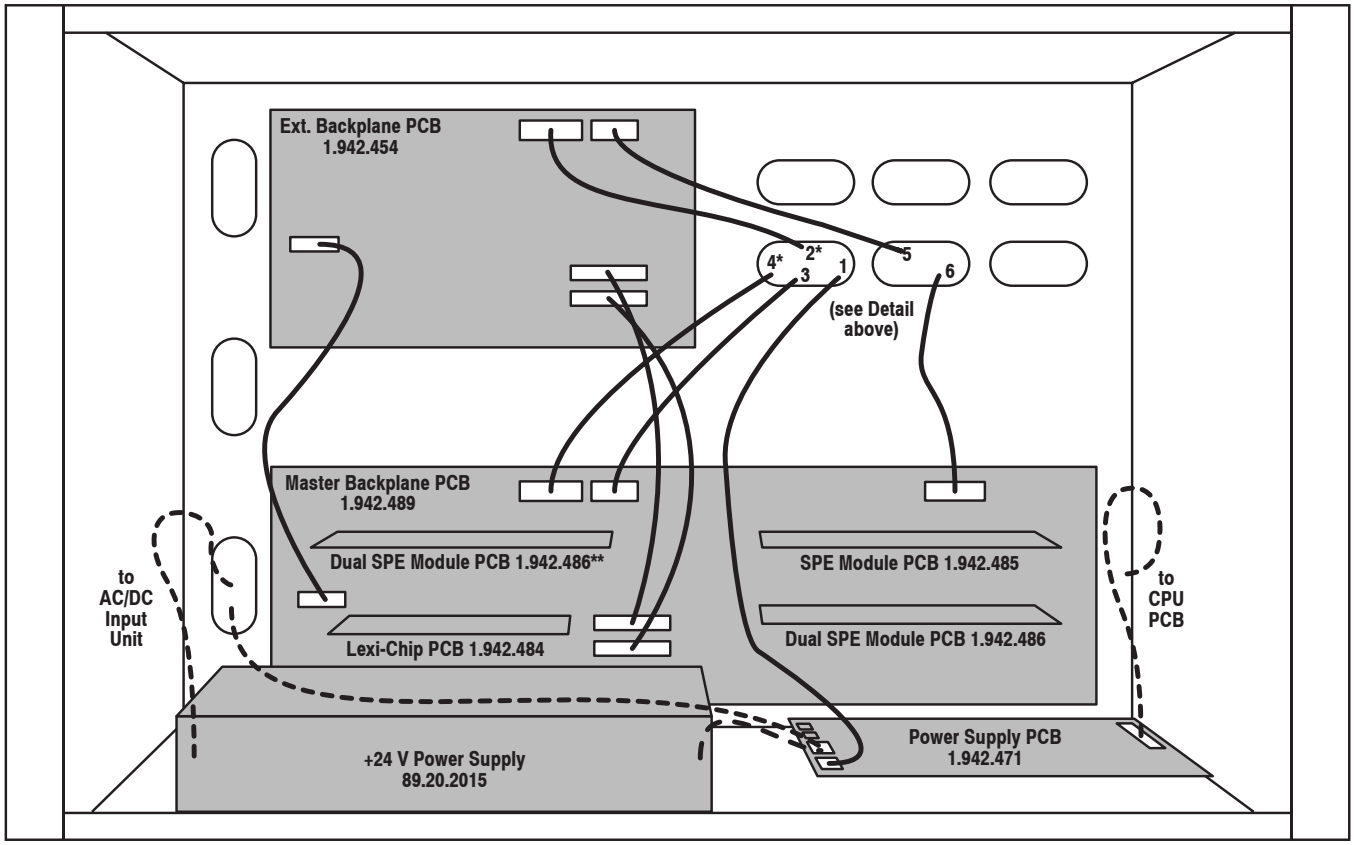
The 15- and 25-pin connecting cables all are pin-to-pin connections with one male and one female D-type connector. They are available in different lengths and must, therefore, be ordered separately; refer to the table below.

| Application | Type | Length | Order no. |
|---|---|---|---|
| Connection from the Processor Frame to the Fader Modules | 15-pin | 2 m | 1.942.456.25 |
| | | 10 m | 1.942.456.26 |
| | | 30 m | 1.942.456.27 |
| Connection from the Processor Frame to the Master Module; connection from the Master Module to the Meter Module *(please note that usually a 2 m cable is sufficient for this connection)* | 25-pin | 2 m | 1.942.456.35 |
| | | 10 m | 1.942.456.36 |
| | | 30 m | 1.942.456.37 |

## 4.1 Processor Frame Wiring

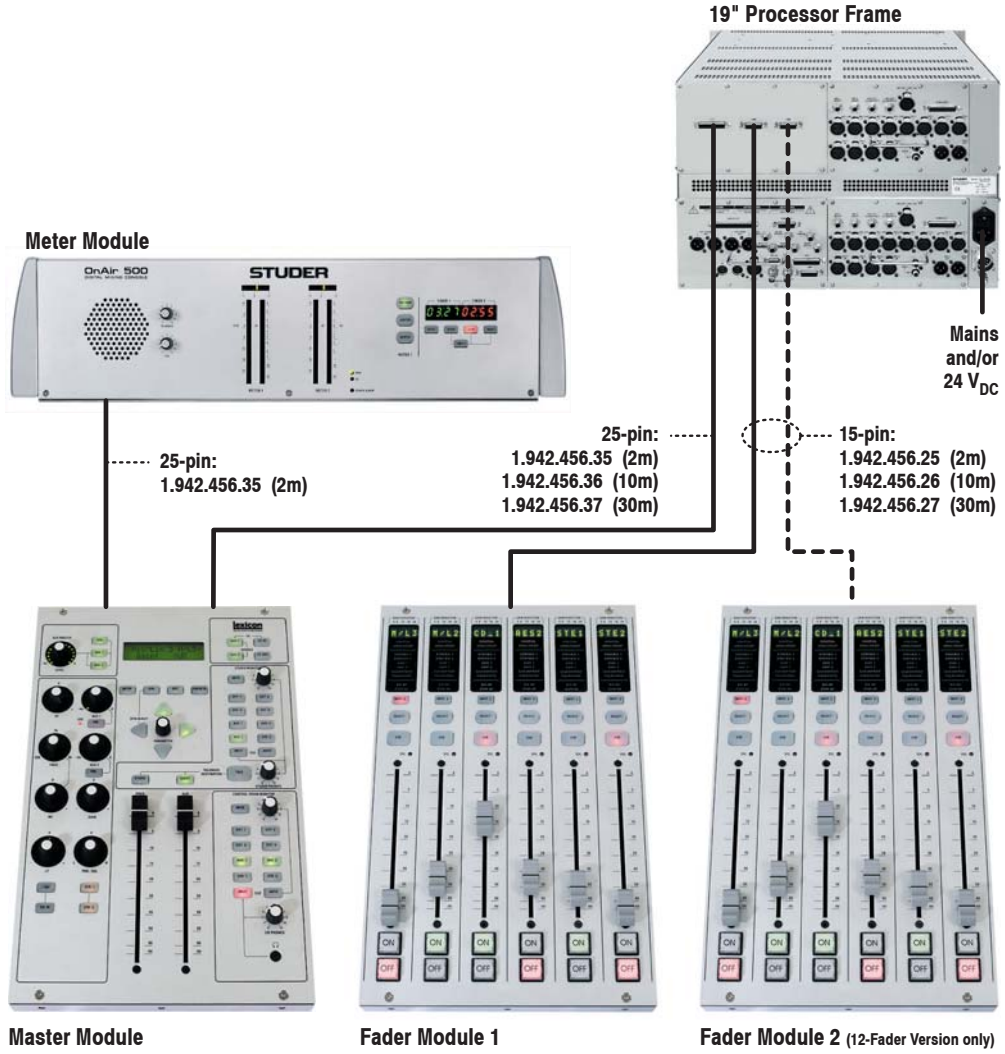



**NOTE:**
**This PCB is located behind the rear panel of the Processor Frame and not visible in the diagram below. Cables 1...6 correspond to the ones in the diagram below.**




*** IMPORTANT: This illustration shows the internal wiring of a 12-fader version. *In 6-fader versions, the cables no. 2 and 4 are swapped.***
**** Used for 12-fader version only.**

## 4.2 System Wiring




## 4.3 Connector Pin Assignments

Core – Fader Mod.:

| Pin | Signal |
|---|---|
| 1 | DGND |
| 2 | Input A RX+ |
| 3 | +24 V |
| 4 | Input A TX+ |
| 5 | +24 V |
| 6 | Input A RST+ |
| 7 | DGND |
| 8 | DGND |
| 9 | DGND |
| 10 | Input A RX– |
| 11 | +24 V |
| 12 | Input A TX– |
| 13 | +24 V |
| 14 | Input A RST– |
| 15 | DGND |

(15-pin D-type; Conn. on core: female; on master module: male)

Core – Master Module:

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | Master DGND | 16 | +24 V |
| 2 | Meter A WCK+ | 17 | Meter A D1– |
| 3 | +24 V | 18 | Meter A D2– |
| 4 | Meter A D1+ | 19 | Meter B D1– |
| 5 | Meter A D2+ | 20 | Master TX– |
| 6 | Meter B D1+ | 21 | Master RST– |
| 7 | Master TX+ | 22 | Master RX– |
| 8 | Master RST+ | 23 | +24 V |
| 9 | Master RX+ | 24 | Master HP– |
| 10 | Alarm | 25 | Master DGND |
| 11 | Master HP+ | | |
| 12 | Master DGND | | |
| 13 | Master DGND | | |
| 14 | Master DGND | | |
| 15 | Meter A WCK– | | |

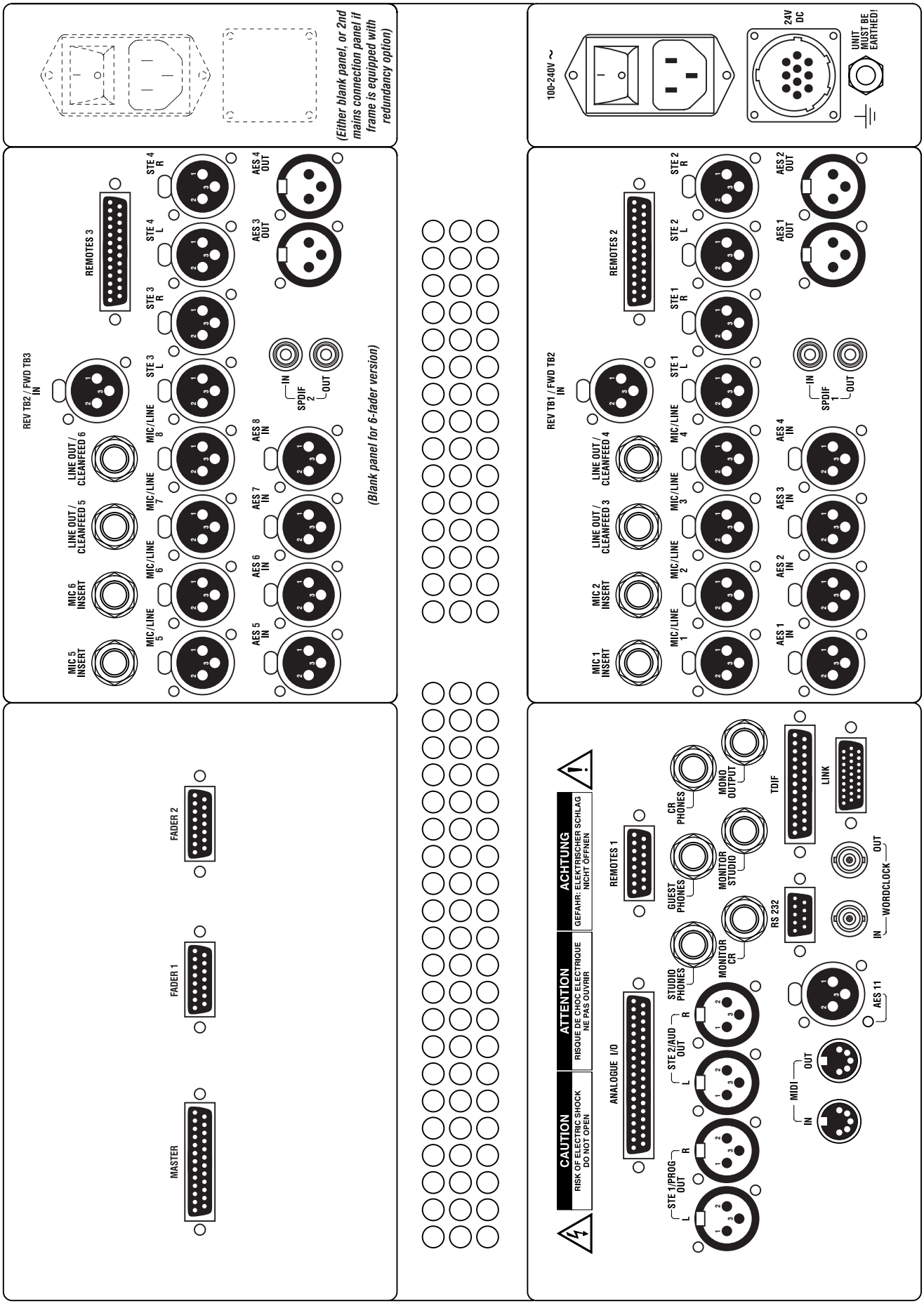
(25-pin D-type; Connector on core: female, on master module: male)

Master Module – Meter Module:

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | Master DGND | 16 | +24 V |
| 2 | Meter A WCK+ | 17 | Meter A D1– |
| 3 | +24 V | 18 | Meter A D2– |
| 4 | Meter A D1+ | 19 | Meter B D1– |
| 5 | Meter A D2+ | 20 | Master Timer SDO– |
| 6 | Meter B D1+ | 21 | Master Timer DE– |
| 7 | Master Timer SDO+ | 22 | Master Timer CS– |
| 8 | Master Timer DE+ | 23 | +24 V |
| 9 | Master Timer CS+ | 24 | Master Timer SCK– |
| 10 | Alarm | 25 | Master Timer SDI– |
| 11 | Master Timer SCK+ | | |
| 12 | Master Timer SDI+ | | |
| 13 | Master DGND | | |
| 14 | Master DGND | | |
| 15 | Meter A WCK– | | |

(25-pin D-type; Connector on master module: female, on meter module: male)

## 4.4 Connector Panel



# 5 UPGRADE FROM 6- TO 12-FADER VERSION

Upgrading a 6-fader OnAir 500 Modulo version to 12 faders can easily be performed in the field. In order to do this, you need the following material:

- 1 fader module, order no. 1.942.452
- 1 input plug-in unit, order no. 1.942.456 (consisting of: Mic Input Unit, Analog Input Unit, and AES/SPDIF Unit)
- 1 Dual SPE Module PCB, order no. 1.942.486, and
- 1 15-pin connecting cable (*different lengths available*).
  2 m: order no. 1.942.456.25
  10 m: order no. 1.942.456.26
  30 m: order no. 1.942.456.27

**Proceed as follows:**

**1.** Switch the console OFF and disconnect the supply (mains and/or DC) from the 19" processor frame.

**2.** Remove the blank panel located above the lower input plug-in unit on the rear of the 19" processor frame (8 screws, Allen key no. 2).

**3.** Carefully insert the new, second input plug-in unit until the three multi-pin plugs are properly seated in the corresponding sockets on the Extension Backplane PCB. Fix the unit with the 8 oval-head screws.

**4.** Remove the 19" processor frame's front panel (6 screws, Allen key no. 2.5).

**5.** Referring to the drawing in chapter 4.1, swap the two flat cables no. 2 and 4 that are marked with "*****".

**6.** Insert the Dual SPE Module PCB into the empty socket (CN10, marked with "******" in the drawing in chapter 4.1). In order to do this, first press the retaining clips of the socket outward to unlock. Align the PCB in the socket such that the notches on the PCB match the breaks in the socket. Firmly insert the PCB into the socket until the retaining clips snap back in place and the PCB is properly seated.

**7.** Reinstall the 19" processor frame's front panel.

**8.** Connect the additional fader module to the 19" processor frame with the 15-pin cable (dashed line in the illustration in chapter 4.2).

**9.** Re-connect the supply. Your console is now ready to operate.

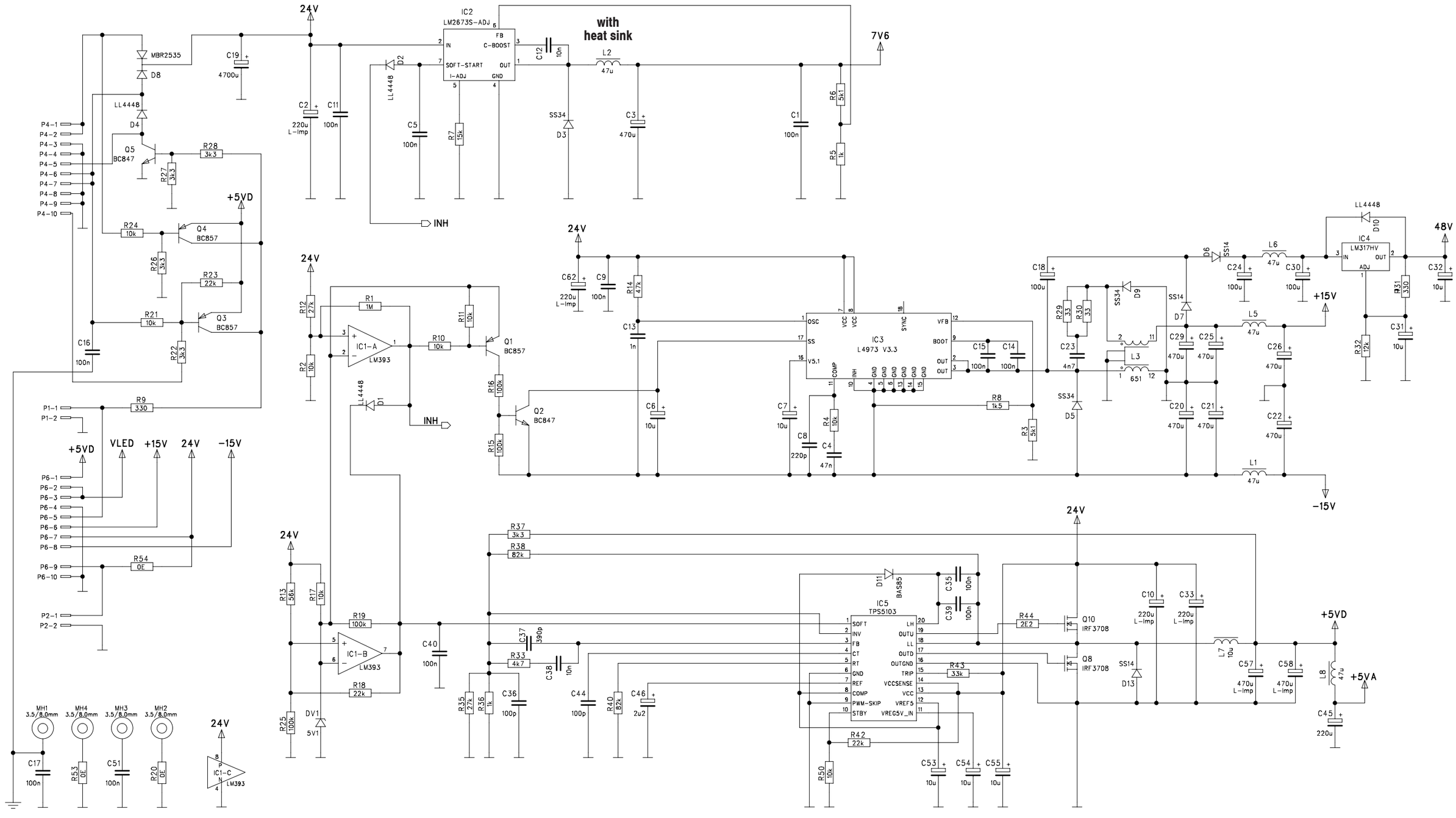
# 6 DIAGRAMS

**Note:** Due to the fact that some of the OnAir 500 Modulo's electronics assemblies are identical with the ones of the OnAir 500 fixed-frame version, please consult the OnAir 500 Service Instructions Manual (Order No. 10.27.5080) for servicing.
For information on the PCB locations and the wiring within the Processor Frame, please refer to the diagram in chapter 4.1.
The assemblies listed below are only used for the OnAir 500 Modulo; information on them is given on the following pages.

| Assembly | Part no. |
|---|---|
| Power Supply PCB | 1.942.471 |
| Master Backplane PCB | 1.942.489 |
| Extension Backplane PCB | 1.942.454 |
| Backplane Modulo PCB (line driver IF in Processor Frame) | 1.942.472 |
| Input Interface PCB (line driver IF in Fader Module) | 1.942.473 |
| Master Interface PCB (line driver IF in Master Module) | 1.942.474 |
| Level Meter Interface PCB (line driver IF in Meter Module) | 1.942.477 |

**Power Supply PCB 1.942.471.00 ( 0)**



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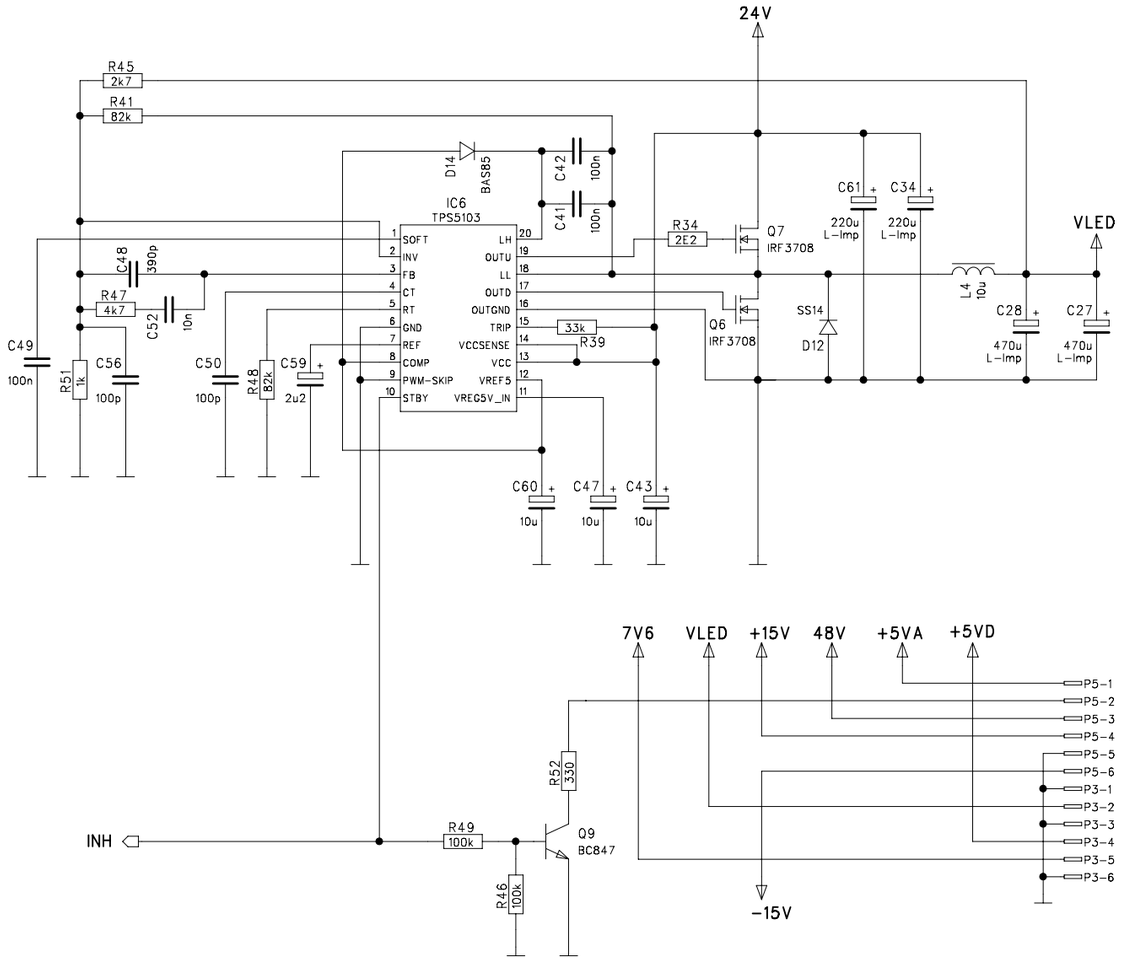
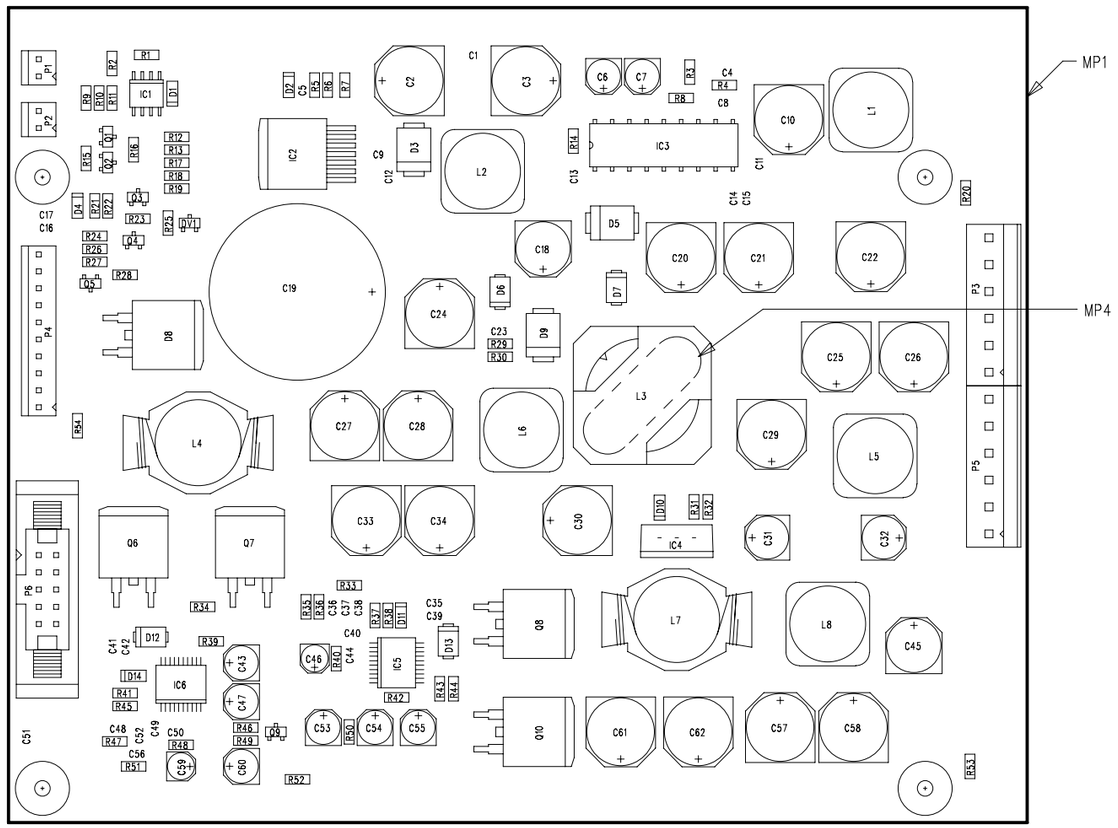
| STUDER | POWER SUPPLY OA500 | | 1.942.470.81 | |

Date printed: 25.10.04

**Power Supply PCB 1.942.471.00 ( 0)**



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# POWER SUPPLY OA500 Modulo 1.942.471.00 ( 0)

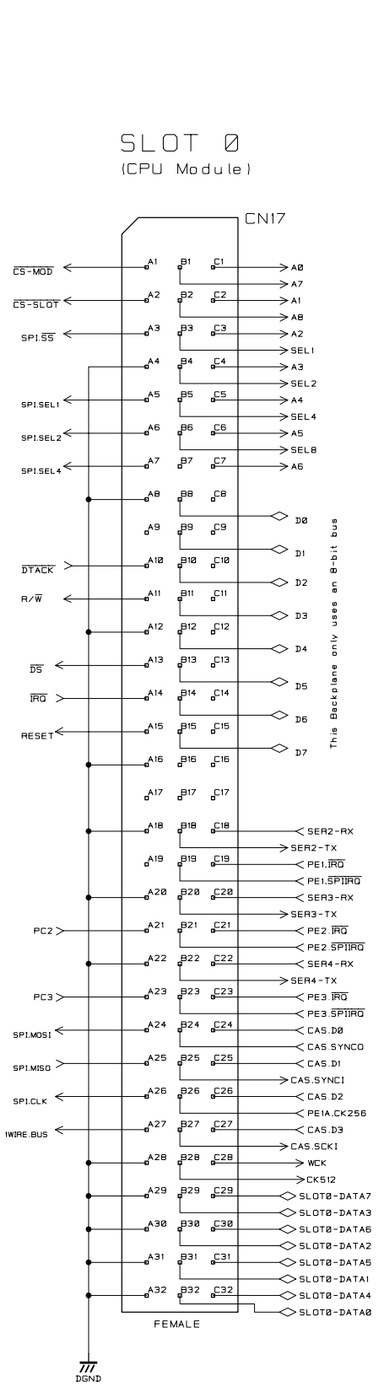


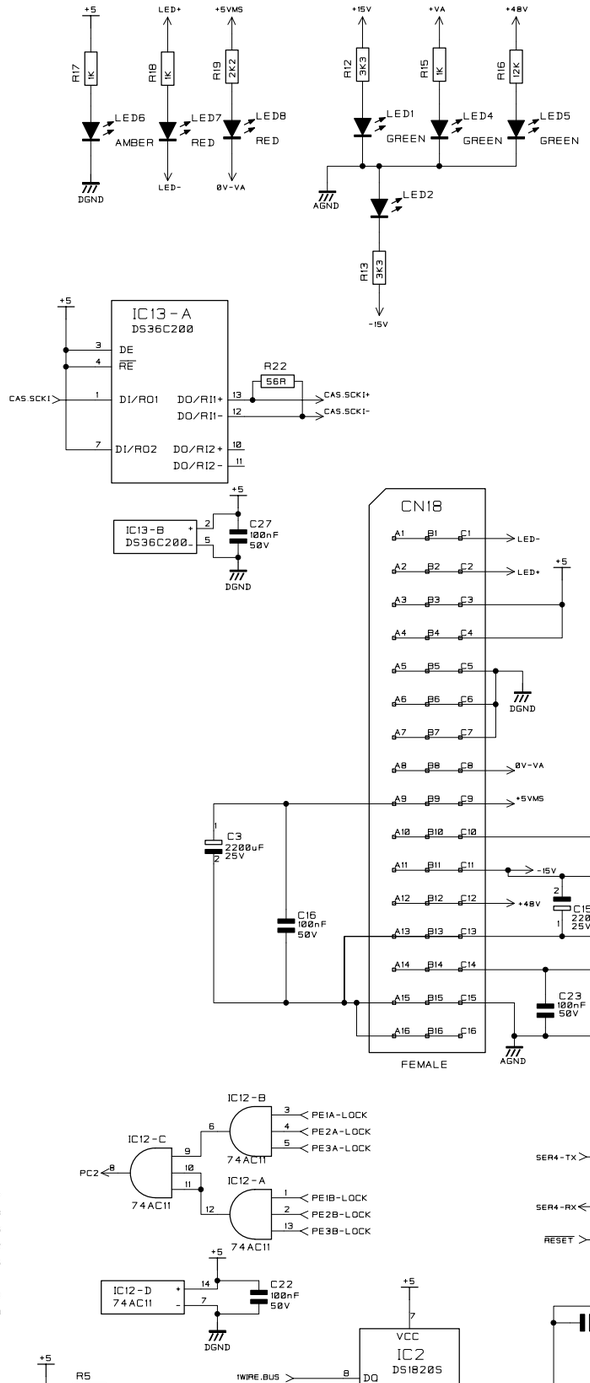
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C 1 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 2 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 3 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 4 | 59.60.3333 | 1 pce | 47n | CER 50V, 10%, X7R, 0805 |
| 0 | C 5 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 6 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 7 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 8 | 59.60.2357 | 1 pce | 220p | CER 50V, 5%, C0G, 0805 |
| 0 | C 9 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 10 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 11 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 12 | 59.60.3325 | 1 pce | 10n | CER 50V, 10%, X7R, 0805 |
| 0 | C 13 | 59.60.2373 | 1 pce | 1n0 | CER 50V, 5%, C0G, 0805 |
| 0 | C 14 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 15 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 16 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 17 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 18 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 19 | 59.29.4472 | 1 pce | 4m7 | EL 35V RM10 radial 105 |
| 0 | C 20 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 21 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 22 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 23 | 59.60.3321 | 1 pce | 4n7 | CER 50V, 10%, X7R, 0805 |
| 0 | C 24 | 59.68.0165 | 1 pce | 100u | EL 63V, 10*10.7 |
| 0 | C 25 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 26 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 27 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 28 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 29 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 30 | 59.68.0165 | 1 pce | 100u | EL 63V, 10*10.7 |
| 0 | C 31 | 59.68.0133 | 1 pce | 10u | EL 50V, 6.3*5.7 |
| 0 | C 32 | 59.68.0133 | 1 pce | 10u | EL 50V, 6.3*5.7 |
| 0 | C 33 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 34 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 35 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 36 | 59.60.2349 | 1 pce | 100p | CER 50V, 5%, C0G, 0805 |
| 0 | C 37 | 59.60.2363 | 1 pce | 390p | CER 50V, 5%, C0G, 0805 |
| 0 | C 38 | 59.60.3325 | 1 pce | 10n | CER 50V, 10%, X7R, 0805 |
| 0 | C 39 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 40 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 41 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 42 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 43 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 44 | 59.60.2349 | 1 pce | 100p | CER 50V, 5%, C0G, 0805 |
| 0 | C 45 | 59.68.0031 | 1 pce | 220u | EL 6V, 8.0*6.3 |
| 0 | C 46 | 59.68.0129 | 1 pce | 2u2 | EL 50V, 4.0*5.7 |
| 0 | C 47 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 48 | 59.60.2363 | 1 pce | 390p | CER 50V, 5%, C0G, 0805 |
| 0 | C 49 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 50 | 59.60.2349 | 1 pce | 100p | CER 50V, 5%, C0G, 0805 |
| 0 | C 51 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 52 | 59.60.3325 | 1 pce | 10n | CER 50V, 10%, X7R, 0805 |
| 0 | C 53 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 54 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 55 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 56 | 59.60.2349 | 1 pce | 100p | CER 50V, 5%, C0G, 0805 |
| 0 | C 57 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 58 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 59 | 59.68.0129 | 1 pce | 2u2 | EL 50V, 4.0*5.7 |
| 0 | C 60 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 61 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 62 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | D 1 | 50.60.8001 | 1 pce | 4448 | 200mA 75V 4ns SOD 80 |
| 0 | D 2 | 50.60.8001 | 1 pce | 4448 | 200mA 75V 4ns SOD 80 |
| 0 | D 3 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 4 | 50.60.8001 | 1 pce | 4448 | 200mA 75V 4ns SOD 80 |
| 0 | D 5 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 6 | 50.60.8103 | 1 pce | SS14 | 1A 40V Schottky |
| 0 | D 7 | 50.60.8103 | 1 pce | SS14 | 1A 40V Schottky |
| 0 | D 8 | 50.60.8180 | 1 pce | MBRB2535 | 2*15A 30V Schottky |
| 0 | D 9 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 10 | 50.60.8001 | 1 pce | 4448 | 200mA 75V 4ns SOD 80 |
| 0 | D 11 | 50.60.8101 | 1 pce | BAS85 | 200mA 30V Schottky SOD 80 |
| 0 | D 12 | 50.60.8103 | 1 pce | SS14 | 1A 40V Schottky |
| 0 | D 13 | 50.60.8103 | 1 pce | SS14 | 1A 40V Schottky |
| 0 | D 14 | 50.60.8101 | 1 pce | BAS85 | 200mA 30V Schottky SOD 80 |
| 0 | DV 1 | 50.60.9010 | 1 pce | 5V1 | 5%, 0.2W, SOT 23 |
| 0 | IC 1 | 50.61.9001 | 1 pce | LM393 | Dual voltage comp. SO 8 |
| 0 | IC 2 | 50.61.2005 | 1 pce | LM2673ADJ | Step down converter |
| 0 | IC 3 | 50.10.0127 | 1 pce | 4973V3.3 | Switching Reg 3.3V 3.5A |
| 0 | IC 4 | 50.10.0116 | 1 pce | LM317HV | IC IP 317 HVT, LM 317 HVT |
| 0 | IC 5 | 50.61.2004 | 1 pce | TPS 5103 | Sync step down converter |
| 0 | IC 6 | 50.61.2004 | 1 pce | TPS 5103 | Sync step down converter |
| 0 | L 1 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 2 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 3 | 1.022.651.00 | 1 pce | 250uH | Storage Inductor 2*250UH |
| 0 | L 4 | 62.60.0510 | 1 pce | 10uH | SMD 6.5A 8860 |
| 0 | L 5 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 6 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 7 | 62.60.0510 | 1 pce | 10uH | SMD 6.5A 8860 |
| 0 | L 8 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | MP 1 | 1.942.470.12 | 1 pce | | POWER SUPPLY PCB |
| 0 | MP 2 | 1.942.470.10 | 1 pce | | Nr. Etikette 5 x 20 |
| 0 | MP 3 | 43.01.0108 | 1 pce | Label | ESE-Warnschild |
| 0 | MP 4 | 1.010.002.61 | 1 pce | RM8 | Insulation-washer |
| 0 | P 1 | 54.12.0702 | 1 pce | 2p | Stecker gerade PCB |
| 0 | P 2 | not used | 1 pce | 2p | Stecker gerade PCB |
| 0 | P 3 | 54.12.0506 | 1 pce | 6p | Power-Pin Stecker |
| 0 | P 4 | 54.12.0710 | 1 pce | 10p | Stecker gerade PCB |
| 0 | P 5 | 54.12.0506 | 1 pce | 6p | Power-Pin Stecker |
| 0 | P 6 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | Q 1 | 50.60.1001 | 1 pce | BC857B | PNP 45V 100mA SOT 23 |
| 0 | Q 2 | 50.60.0001 | 1 pce | BC847B | NPN 45V 100mA SOT 23 |
| 0 | Q 3 | 50.60.1001 | 1 pce | BC857B | PNP 45V 100mA SOT 23 |
| 0 | Q 4 | 50.60.1001 | 1 pce | BC857B | PNP 45V 100mA SOT 23 |
| 0 | Q 5 | 50.60.0001 | 1 pce | BC847B | NPN 45V 100mA SOT 23 |
| 0 | Q 6 | 50.60.2202 | 1 pce | IRF3708 | PowerMOS N-Ch 30V, 50A |
| 0 | Q 7 | 50.60.2202 | 1 pce | IRF3708 | PowerMOS N-Ch 30V, 50A |
| 0 | Q 8 | 50.60.2202 | 1 pce | IRF3708 | PowerMOS N-Ch 30V, 50A |
| 0 | Q 9 | 50.60.0001 | 1 pce | BC847B | NPN 45V 100mA SOT 23 |
| 0 | Q 10 | 50.60.2202 | 1 pce | IRF3708 | PowerMOS N-Ch 30V, 50A |
| 0 | R 1 | 57.60.1105 | 1 pce | 1M0 | MF, 1%, 0204, E24 |
| 0 | R 2 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 3 | 57.60.1512 | 1 pce | 5k1 | MF, 1%, 0204, E24 |
| 0 | R 4 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 5 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 6 | 57.60.1512 | 1 pce | 5k1 | MF, 1%, 0204, E24 |
| 0 | R 7 | 57.60.1153 | 1 pce | 15k | MF, 1%, 0204, E24 |
| 0 | R 8 | 57.60.1152 | 1 pce | 1k5 | MF, 1%, 0204, E24 |
| 0 | R 9 | 57.60.1331 | 1 pce | 330R | MF, 1%, 0204, E24 |
| 0 | R 10 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 11 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 12 | 57.60.1273 | 1 pce | 27k | MF, 1%, 0204, E24 |
| 0 | R 13 | 57.60.1563 | 1 pce | 56k | MF, 1%, 0204, E24 |
| 0 | R 14 | 57.60.1473 | 1 pce | 47k | MF, 1%, 0204, E24 |
| 0 | R 15 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 16 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 17 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 18 | 57.60.1223 | 1 pce | 22k | MF, 1%, 0204, E24 |
| 0 | R 19 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 20 | 57.60.1000 | 1 pce | 0R0 | MF, 0204 |
| 0 | R 21 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 22 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 23 | 57.60.1223 | 1 pce | 22k | MF, 1%, 0204, E24 |
| 0 | R 24 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 25 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 26 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 27 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 28 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 29 | 57.60.1330 | 1 pce | 33R | MF, 1%, 0204, E24 |
| 0 | R 30 | 57.60.1330 | 1 pce | 33R | MF, 1%, 0204, E24 |
| 0 | R 31 | 57.60.1331 | 1 pce | 330R | MF, 1%, 0204, E24 |
| 0 | R 32 | 57.60.1123 | 1 pce | 12k | MF, 1%, 0204, E24 |
| 0 | R 33 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 34 | 57.60.1229 | 1 pce | 2R2 | MF, 1%, 0204, E24 |
| 0 | R 35 | 57.60.1273 | 1 pce | 27k | MF, 1%, 0204, E24 |
| 0 | R 36 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 37 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 38 | 57.60.1823 | 1 pce | 82k | MF, 1%, 0204, E24 |
| 0 | R 39 | 57.60.1333 | 1 pce | 33k | MF, 1%, 0204, E24 |
| 0 | R 40 | 57.60.1823 | 1 pce | 82k | MF, 1%, 0204, E24 |
| 0 | R 41 | 57.60.1823 | 1 pce | 82k | MF, 1%, 0204, E24 |
| 0 | R 42 | 57.60.1223 | 1 pce | 22k | MF, 1%, 0204, E24 |
| 0 | R 43 | 57.60.1333 | 1 pce | 33k | MF, 1%, 0204, E24 |
| 0 | R 44 | 57.60.1229 | 1 pce | 2R2 | MF, 1%, 0204, E24 |
| 0 | R 45 | 57.60.1272 | 1 pce | 2k7 | MF, 1%, 0204, E24 |
| 0 | R 46 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 47 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 48 | 57.60.1823 | 1 pce | 82k | MF, 1%, 0204, E24 |
| 0 | R 49 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 50 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 51 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 52 | 57.60.1331 | 1 pce | 330R | MF, 1%, 0204, E24 |
| 0 | R 53 | 57.60.1000 | 1 pce | 0R0 | MF, 0204 |
| 0 | R 54 | 57.60.1000 | 1 pce | 0R0 | MF, 0204 |

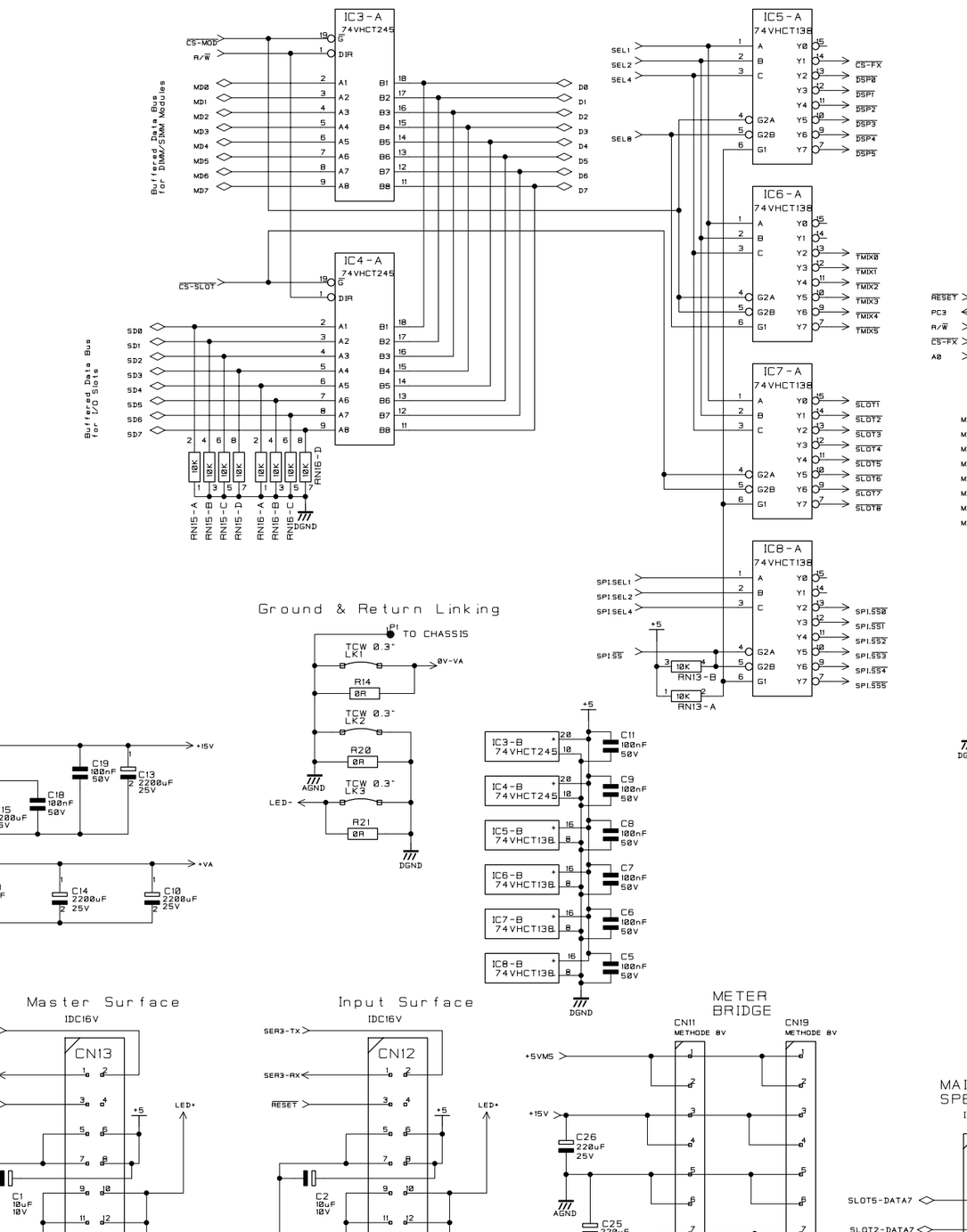
End of List

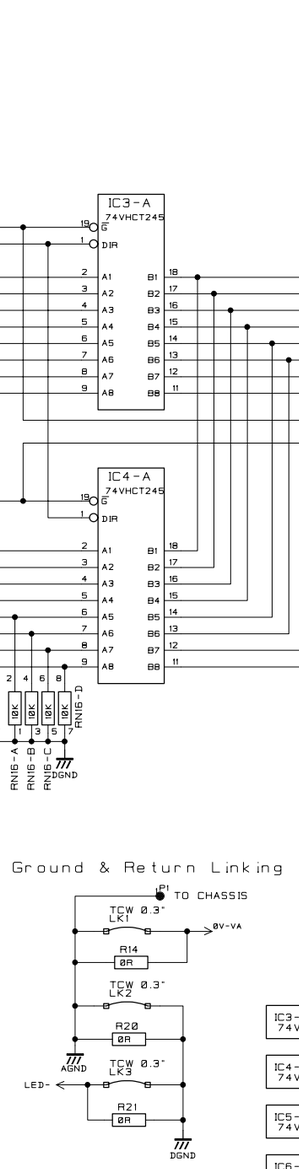
## Master Backplane PCB 1.942.489.00 ( 0)





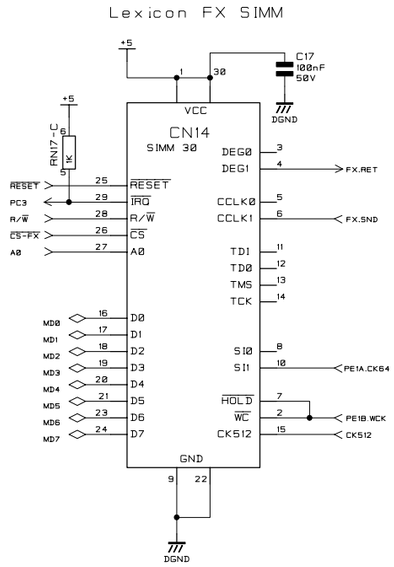



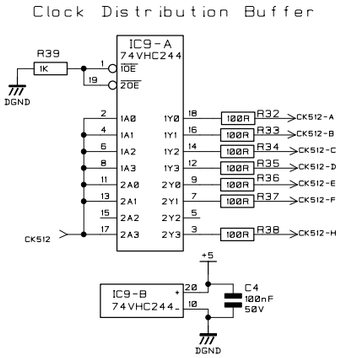



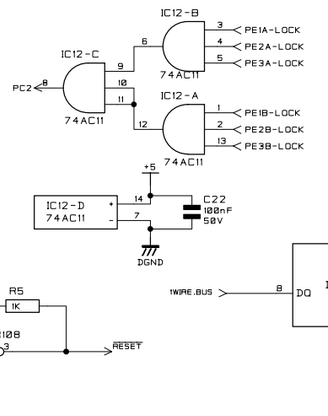


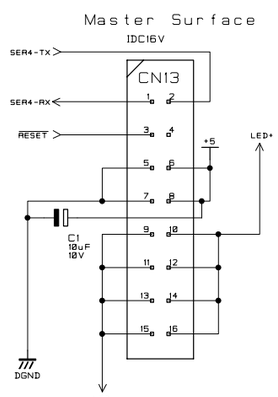


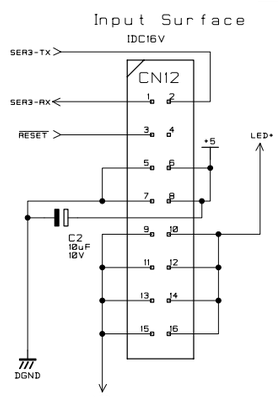


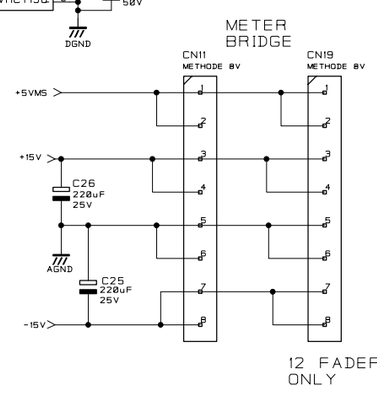



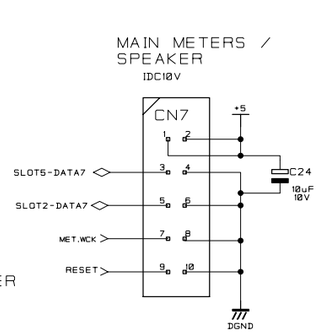



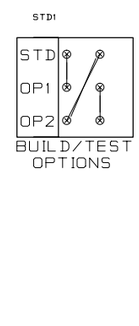



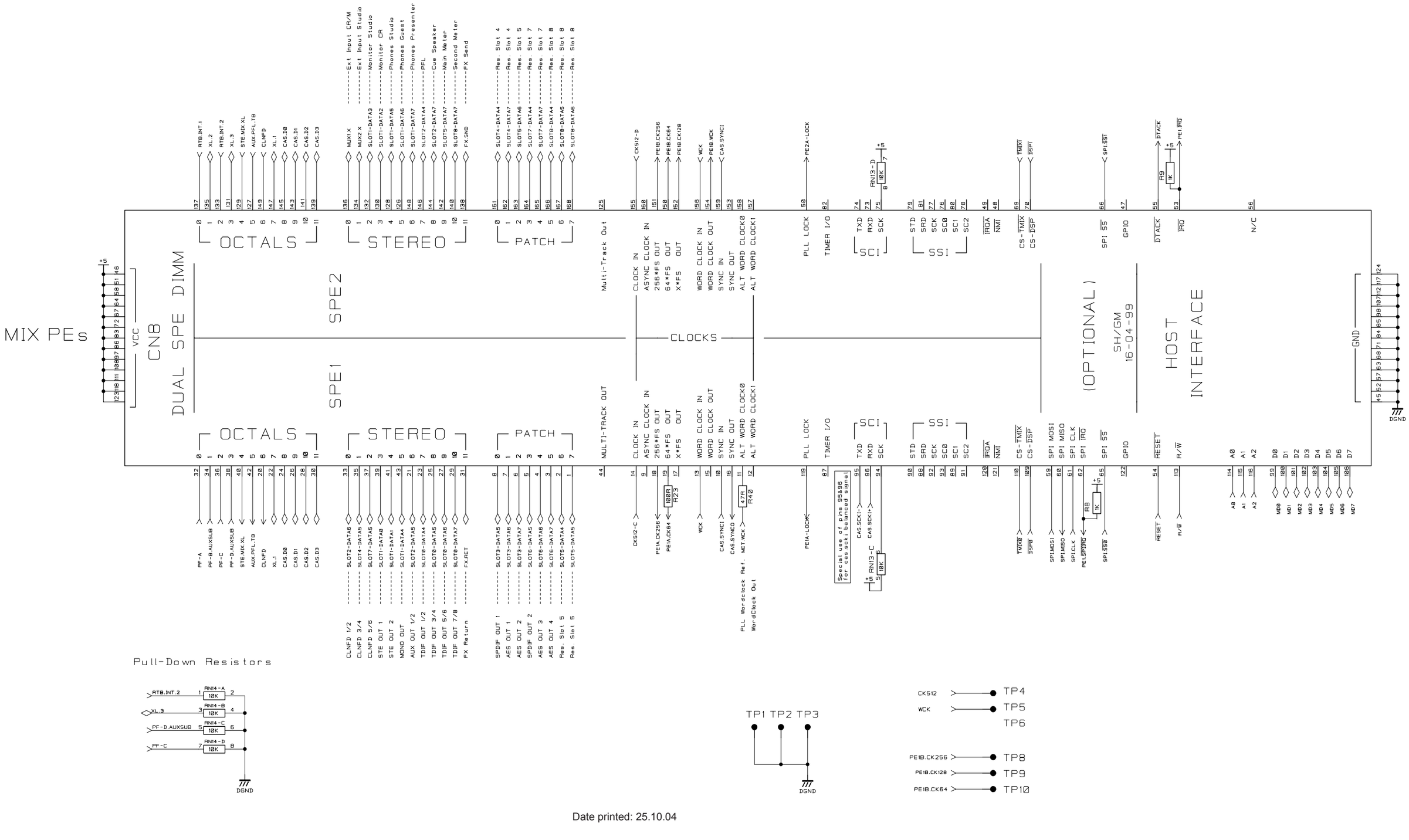




Date printed: 25.10.04

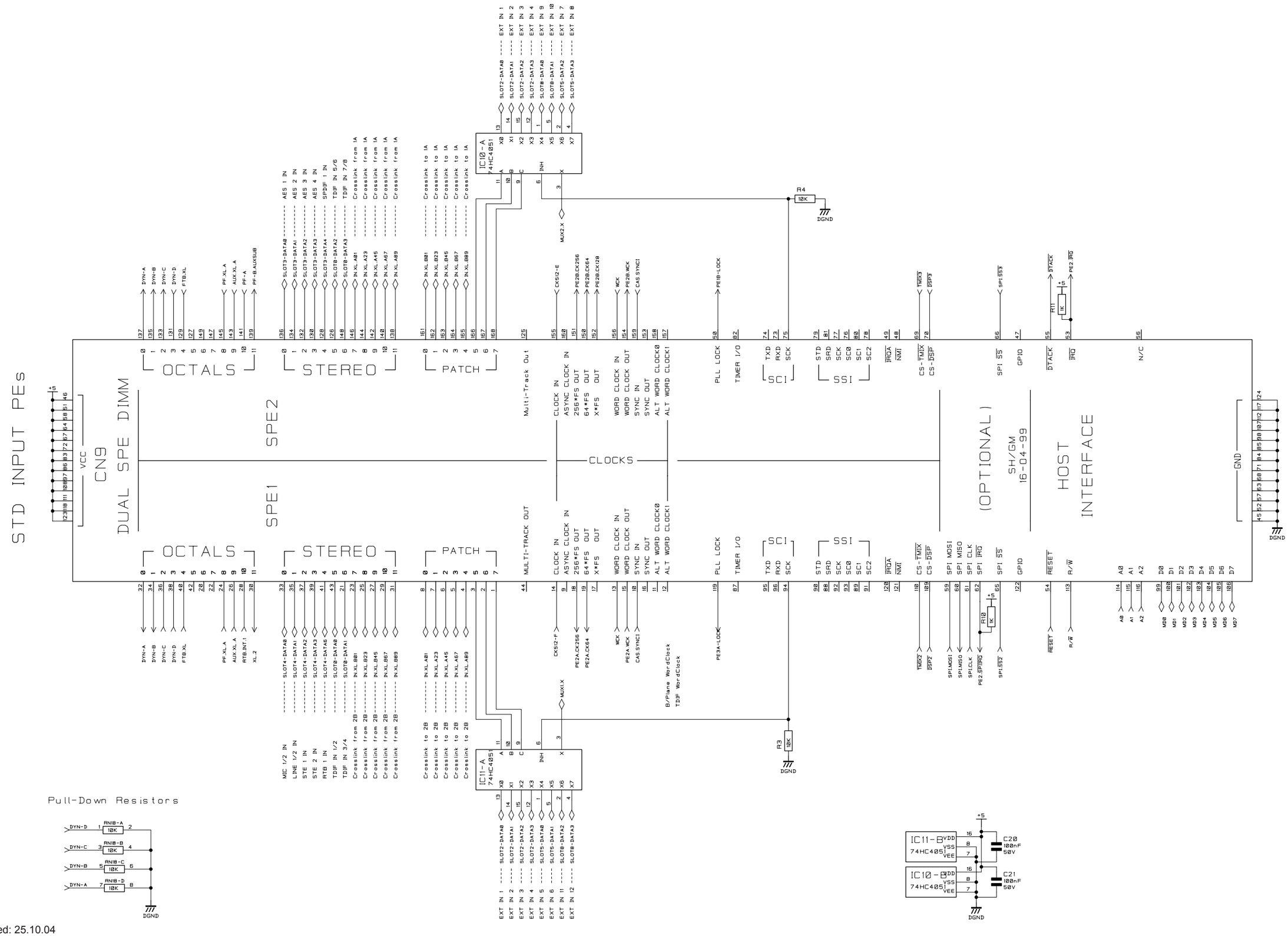
**Master Backplane PCB 1.942.489.00 ( 0)**





**Master Backplane PCB 1.942.489.00 ( 0)**

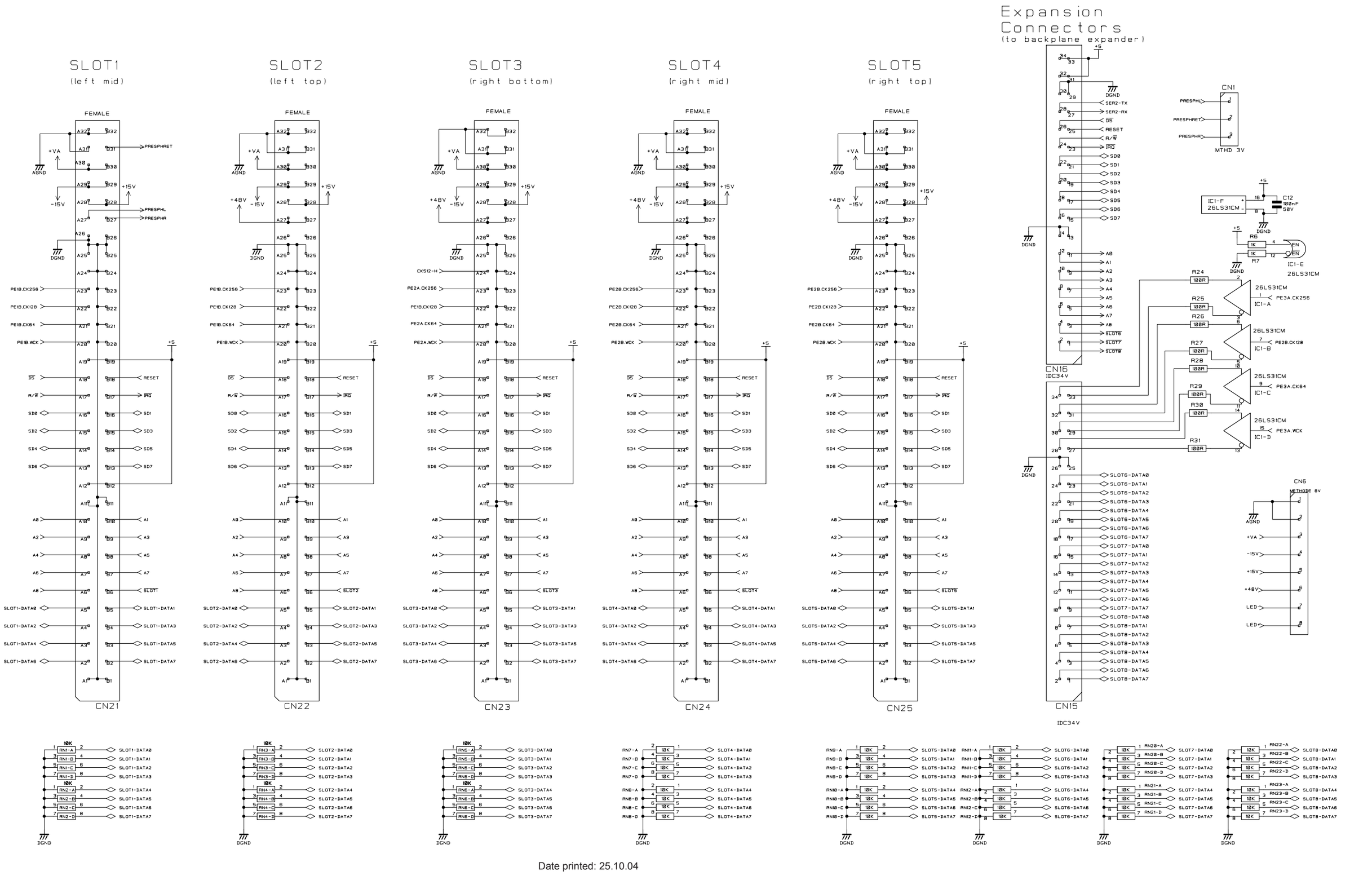





Date printed: 25.10.04

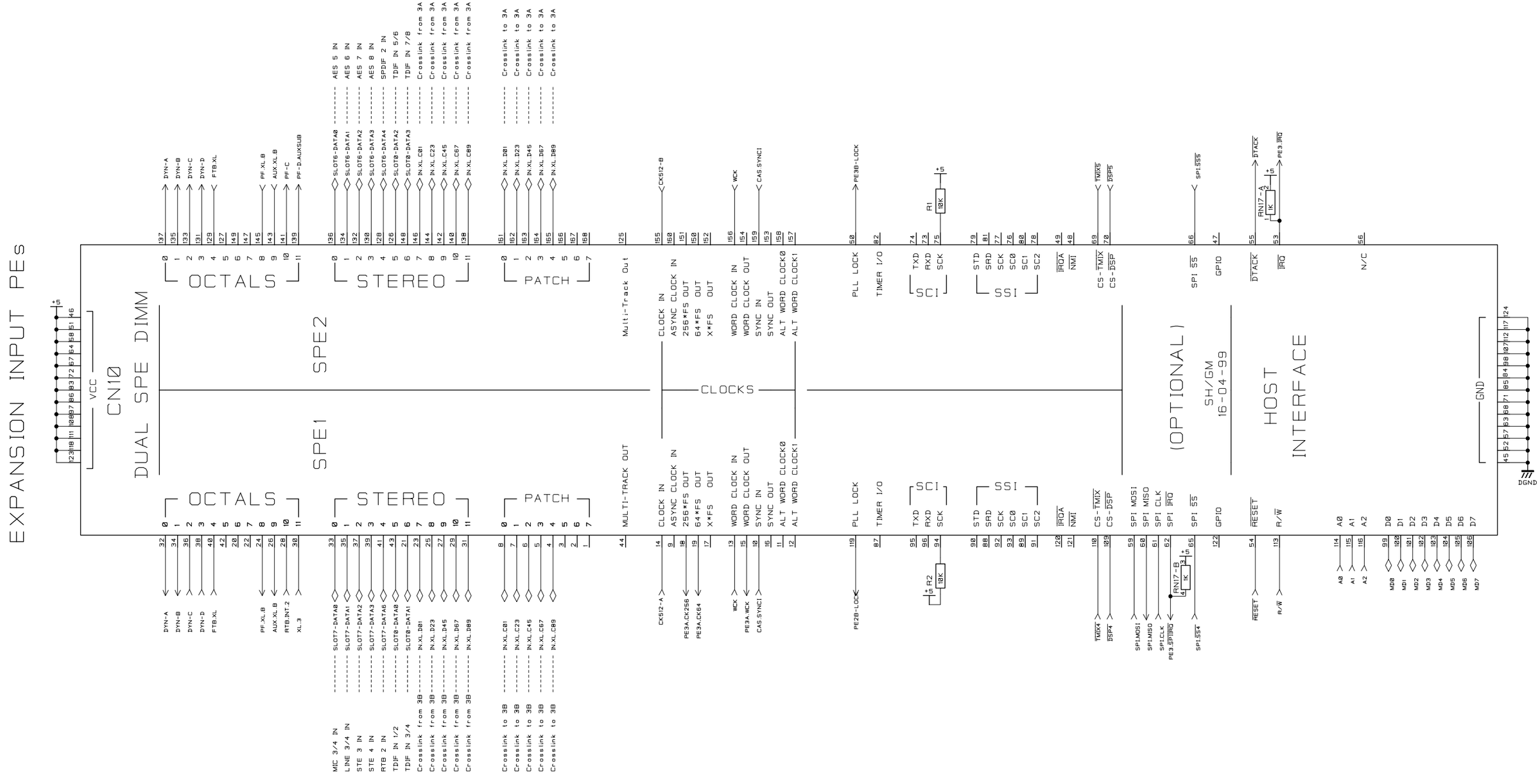
## Master Backplane PCB 1.942.489.00 ( 0)



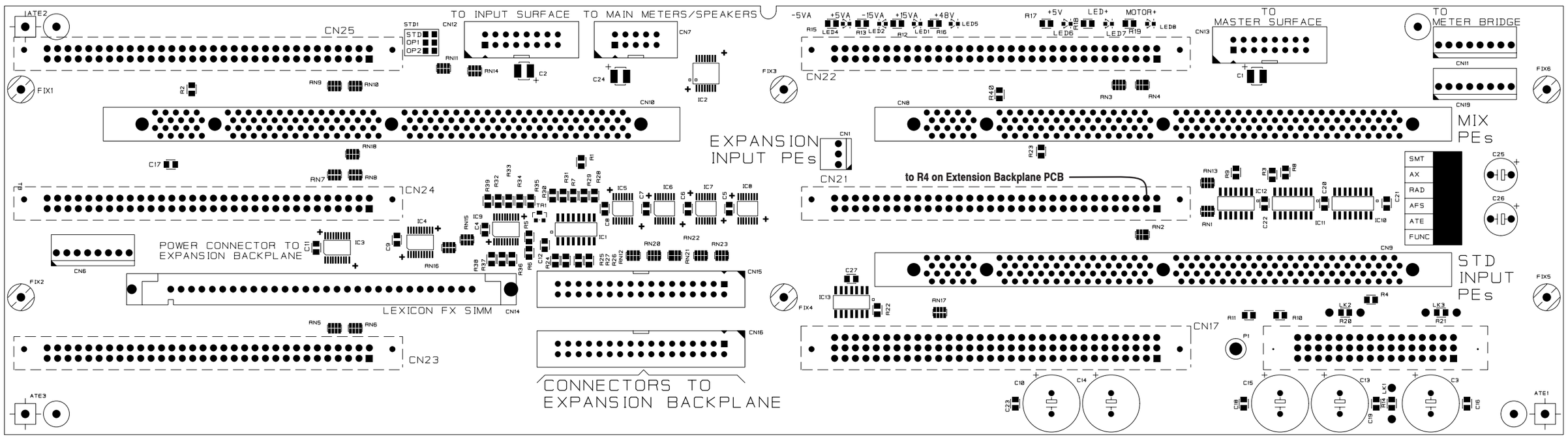


**Master Backplane PCB 1.942.489.00 ( 0)**



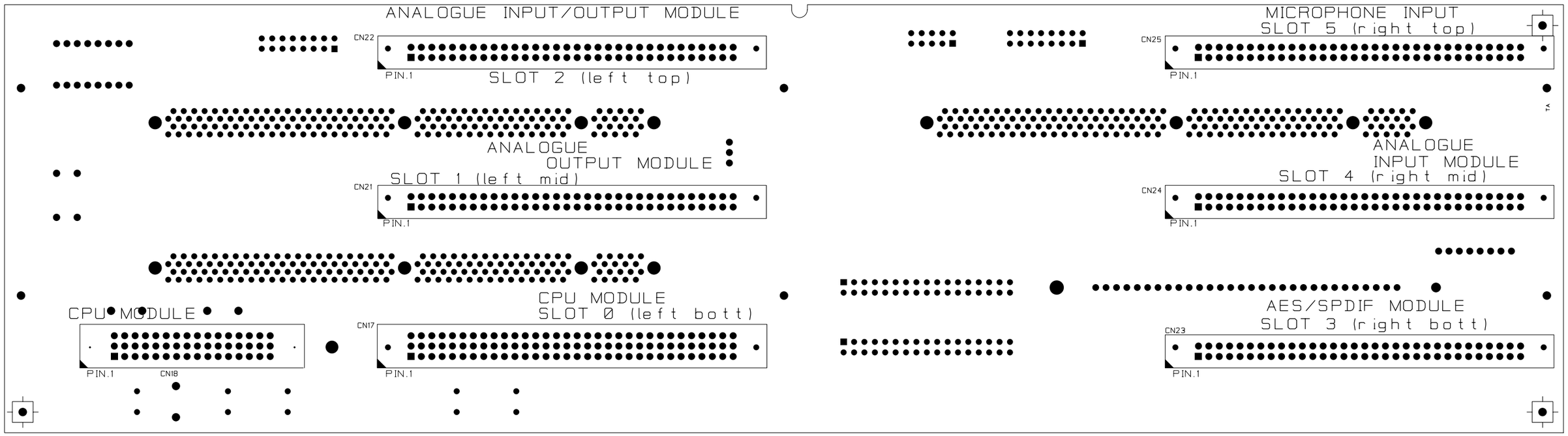


## Master Backplane PCB 1.942.489.00 ( 0)




**Component Side**

**Solder Side**



# Master Backplane PCB 1.942.489.00 ( 0)



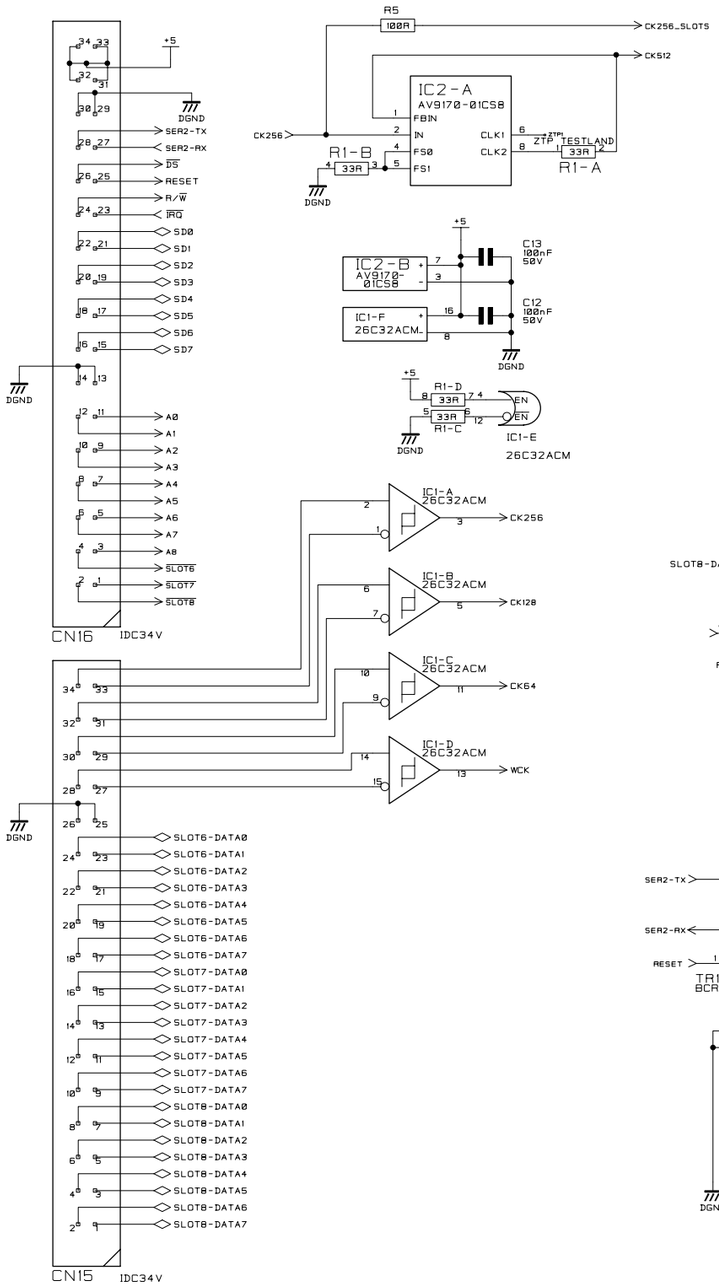
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C1 | | 1 pce | 10uF | TANT 10V CASE B |
| 0 | C2 | | 1 pce | 10uF | TANT 10V CASE B |
| 0 | C4 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C5 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C6 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C7 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C8 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C9 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C11 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C12 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C16 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C17 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C18 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C19 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C20 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C21 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C22 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C23 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | C24 | | 1 pce | 10uF | TANT 10V CASE B |
| 0 | C27 | | 1 pce | 100nF | CRMC 10% 50V X7R |
| 0 | CN1 | | 1 pce | | MTHD 3WY .1" ML LCKG PLRSD HDR |
| 0 | CN6 | | 1 pce | | MTHD 8WY .1" ML LCKG PLRSD HDR |
| 0 | CN7 | | 1 pce | | T&B CON IDC 10WY LW PRF VRT ML |
| 0 | CN8 | | 1 pce | | DIMM 168WY UNBV 3.3V J1.27MM |
| 0 | CN9 | | 1 pce | | DIMM 168WY UNBV 3.3V J1.27MM |
| 0 | CN10 | | 1 pce | | DIMM 168WY UNBV 3.3V J1.27MM |
| 0 | CN11 | | 1 pce | | MTHD 8WY.1" ML LCKNG PLRSD HDR |
| 0 | CN12 | | 1 pce | | T&B CON IDC 16WY LW PRF VRT ML |
| 0 | CN13 | | 1 pce | | T&B CON IDC 16WY LW PRF VRT ML |
| 0 | CN14 | | 1 pce | | SIMM 30WY VRT SKT METAL LATCH |
| 0 | CN15 | | 1 pce | | IDC 34WY LW PFRL VERT ML HDR |
| 0 | CN16 | | 1 pce | | IDC 34WY LW PFRL VERT ML HDR |
| 0 | CN17 | | 1 pce | | DIN41612 PRESSFIT ABC 96WY FML |
| 0 | CN18 | | 1 pce | | DIN41612 PRESSFIT A+C 48WY FML |
| 0 | CN21 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN22 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN23 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN24 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN25 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | IC1 | | 1 pce | 26LS31CM | SM QD RS22 TX |
| 0 | IC3 | | 1 pce | 74HC245A | OCTAL TRANSCEIVER |
| 0 | IC4 | | 1 pce | 74HC245A | OCTAL TRANSCEIVER |
| 0 | IC5 | | 1 pce | 74HC138 | 3-8 LINE DECODER |
| 0 | IC6 | | 1 pce | 74HC138 | 3-8 LINE DECODER |
| 0 | IC7 | | 1 pce | 74HC138 | 3-8 LINE DECODER |
| 0 | IC8 | | 1 pce | 74HC138 | 3-8 LINE DECODER |
| 0 | IC9 | | 1 pce | 74HC244 | OCTAL BUFFER |
| 0 | IC10 | | 1 pce | 74HC4051 | 8-1 ANALOG MUX SM |
| 0 | IC11 | | 1 pce | 74HC4051 | 8-1 ANALOG MUX SM |
| 0 | IC12 | | 1 pce | 74AC11 | SM TRIPLE 3I/P AND GATE |
| 0 | IC13 | | 1 pce | DS36C200M | DUAL LVDS DIFF TX/RX |
| 0 | LED1 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED2 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED4 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED5 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED6 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED7 | | 1 pce | 0603 | LED GRN SMT |
| 0 | LED8 | | 1 pce | 0603 | LED GRN SMT |
| 0 | PCB | | 1 pce | | Backplane PCB 4209 |
| 0 | R1 | | 1 pce | 10k | SM0805 1% 0.1W T200 |
| 0 | R2 | | 1 pce | 10k | SM0805 1% 0.1W T200 |
| 0 | R3 | | 1 pce | 10k | SM0805 1% 0.1W T200 |
| 0 | R4 | | 1 pce | 10k | SM0805 1% 0.1W T200 |
| 0 | R5 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R6 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R7 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R8 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R9 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R10 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R11 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R12 | | 1 pce | 3k3 | SM0805 1% 0.1W T200 |
| 0 | R13 | | 1 pce | 3k3 | SM0805 1% 0.1W T200 |
| 0 | R14 | | 1 pce | 0R | SM0805 1% 0.1W T200 |
| 0 | R15 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R16 | | 1 pce | 12k | SM0805 1% 0.1W T200 |
| 0 | R17 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R18 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R19 | | 1 pce | 2k2 | SM0805 1% 0.1W T200 |
| 0 | R22 | | 1 pce | 56R | SM0805 1% 0.1W T200 |
| 0 | R23 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R24 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R25 | | 1 pce | 100R | SM0805 1% 0.1W T200 |

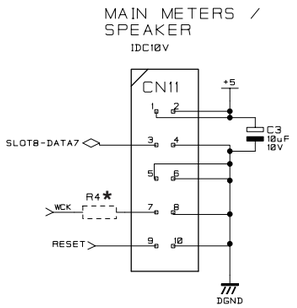
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | R26 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R27 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R28 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R29 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R30 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R31 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R32 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R33 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R34 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R35 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R36 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R37 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R38 | | 1 pce | 100R | SM0805 1% 0.1W T200 |
| 0 | R39 | | 1 pce | 1k | SM0805 1% 0.1W T200 |
| 0 | R40 | | 1 pce | 47R | SM0805 1% 0.1W T200 |
| 0 | RN1 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN2 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN3 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN4 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN5 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN6 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN7 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN8 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN9 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN10 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN11 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN12 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN13 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN14 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN15 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN16 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN17 | | 1 pce | 1k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN18 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN20 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN21 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN22 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | RN23 | | 1 pce | 10k | SM0603 4-RES 5% 62MW T200 |
| 0 | TR1 | | 1 pce | BCR108 | NPN DIG. SM |

**End of List**

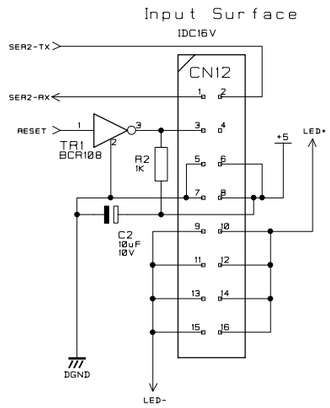
## Extension Backplane PCB 1.942.454.00 ( 0)

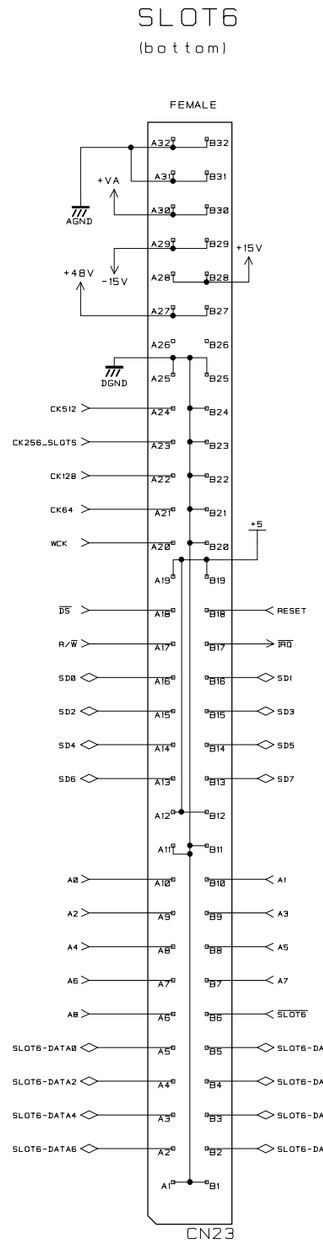


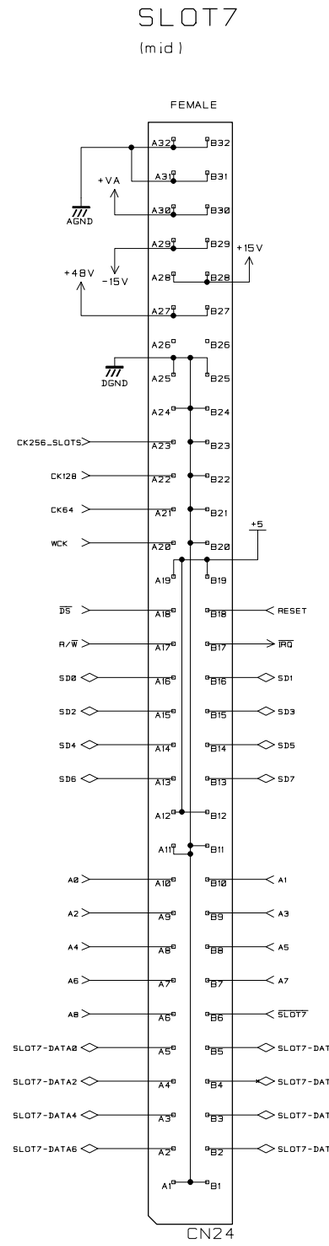


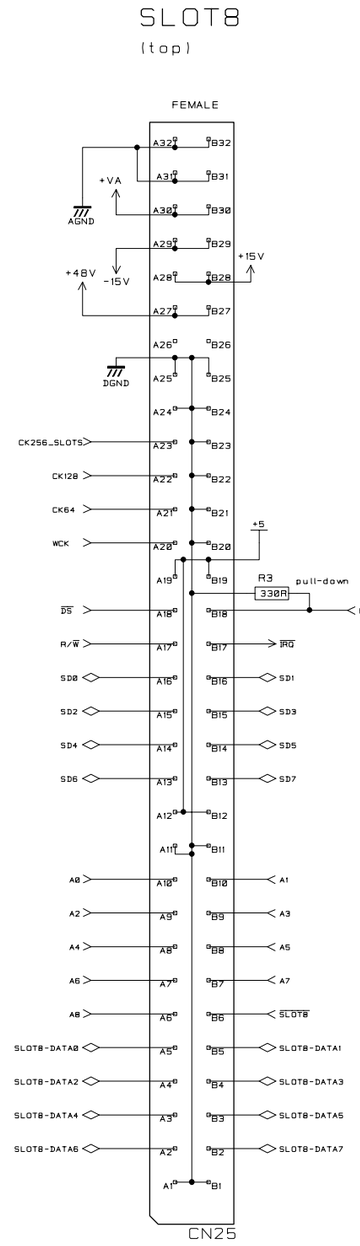



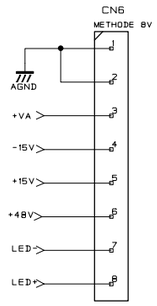

* not used



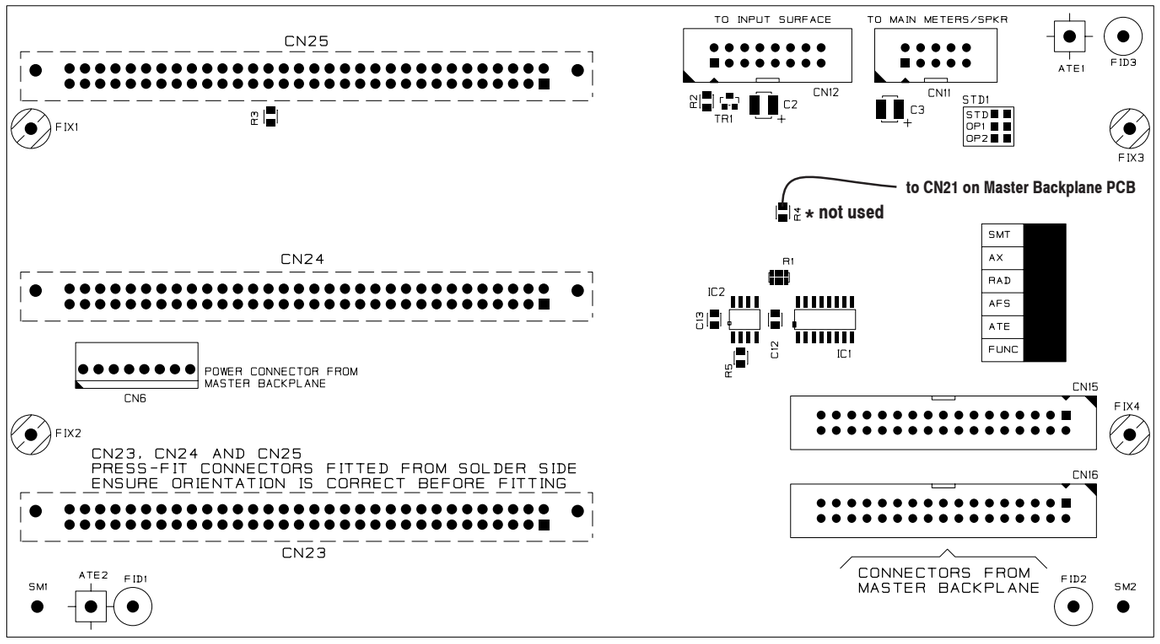







Date printed: 25.10.04

## Extension Backplane PCB 1.942.454.00 ( 0)




## Extension Backplane PCB 1.942.454.00 ( 0)



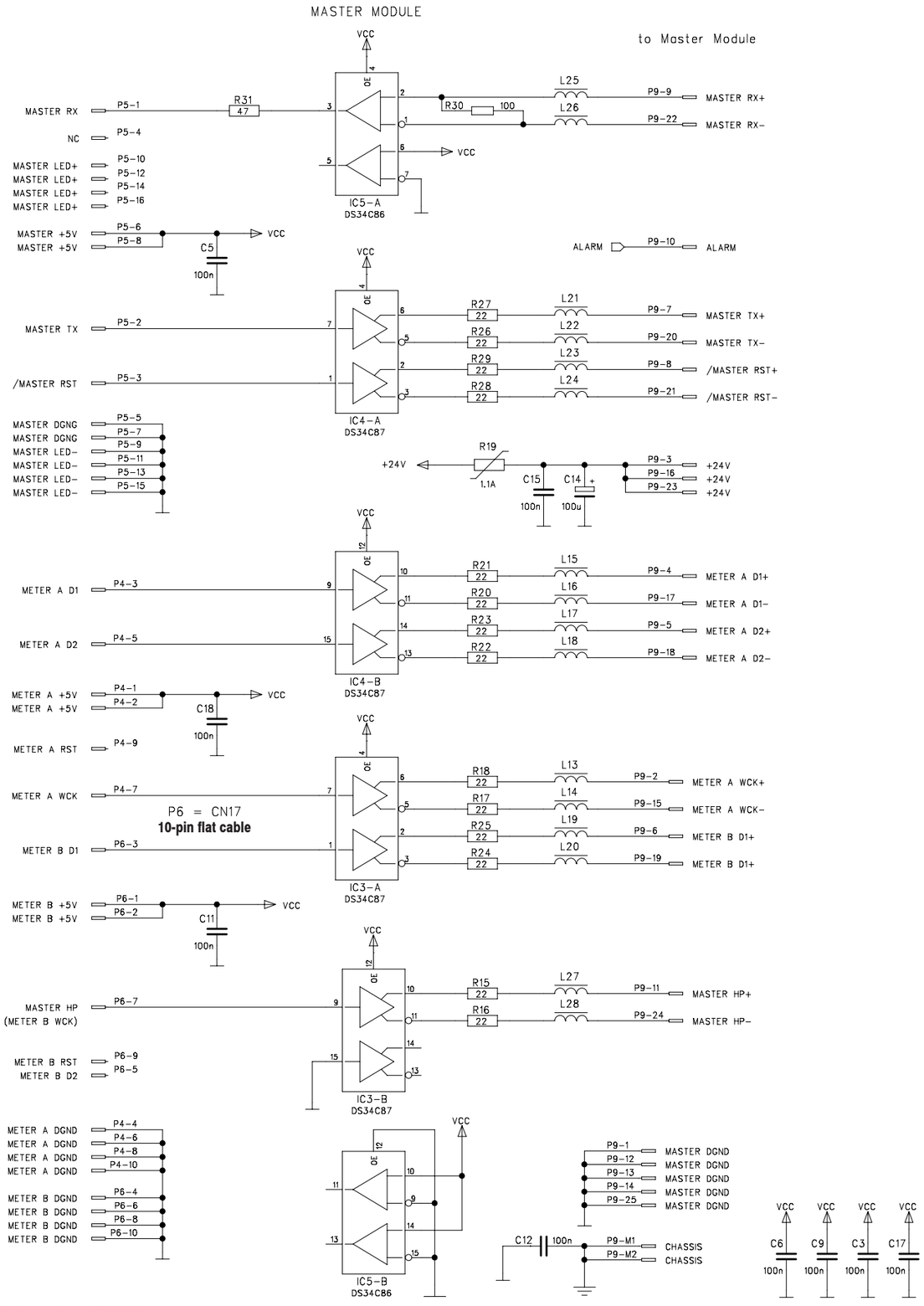
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C2 | | 1 pce | 10uF | TANT 10V CASE B |
| 0 | C3 | | 1 pce | 10uF | TANT 10V CASE B |
| 0 | C12 | | 1 pce | 100nF | CAP CRMC 10% 50V X7R |
| 0 | C13 | | 1 pce | 100nF | CAP CRMC 10% 50V X7R |
| 0 | CN6 | | 1 pce | | MTHD 8WY.1" ML LCKNG PLRSD HDR |
| 0 | CN11 | | 1 pce | | T&B CON IDC 10WY LW PRF VRT ML |
| 0 | CN12 | | 1 pce | | T&B CON IDC 16WY LW PRF VRT ML |
| 0 | CN15 | | 1 pce | | IDC 34WY LW PRFL VERT ML HDR |
| 0 | CN16 | | 1 pce | | IDC 34WY LW PRFL VERT ML HDR |
| 0 | CN23 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN24 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | CN25 | | 1 pce | | DIN41612 PRESSFIT AB 64WY FML |
| 0 | IC1 | | 1 pce | DS26C32ACM | SM QD RS422 LNE RX |
| 0 | IC2 | | 1 pce | AV9170 | PLL |
| 0 | PCB | | 1 pce | | Backplane PCB 3962 |
| 0 | R1 | | 1 pce | 33R | SM0603 4-RES 5% 62MW T200 |
| 0 | R2 | | 1 pce | 1k | SM0805 RES 1% 0.1W T200 |
| 0 | R3 | | 1 pce | 330R | SM0805 RES 330R 1% 0.1W T200 |
| 0 | R4 | | | not used | |
| 0 | R5 | | 1 pce | 100R | SM0805 RES 100R 1% 0.1W T200 |
| 0 | TR1 | | 1 pce | BCR108 | NPN DIG TRAN 2K2/47K SM |

**End of List**

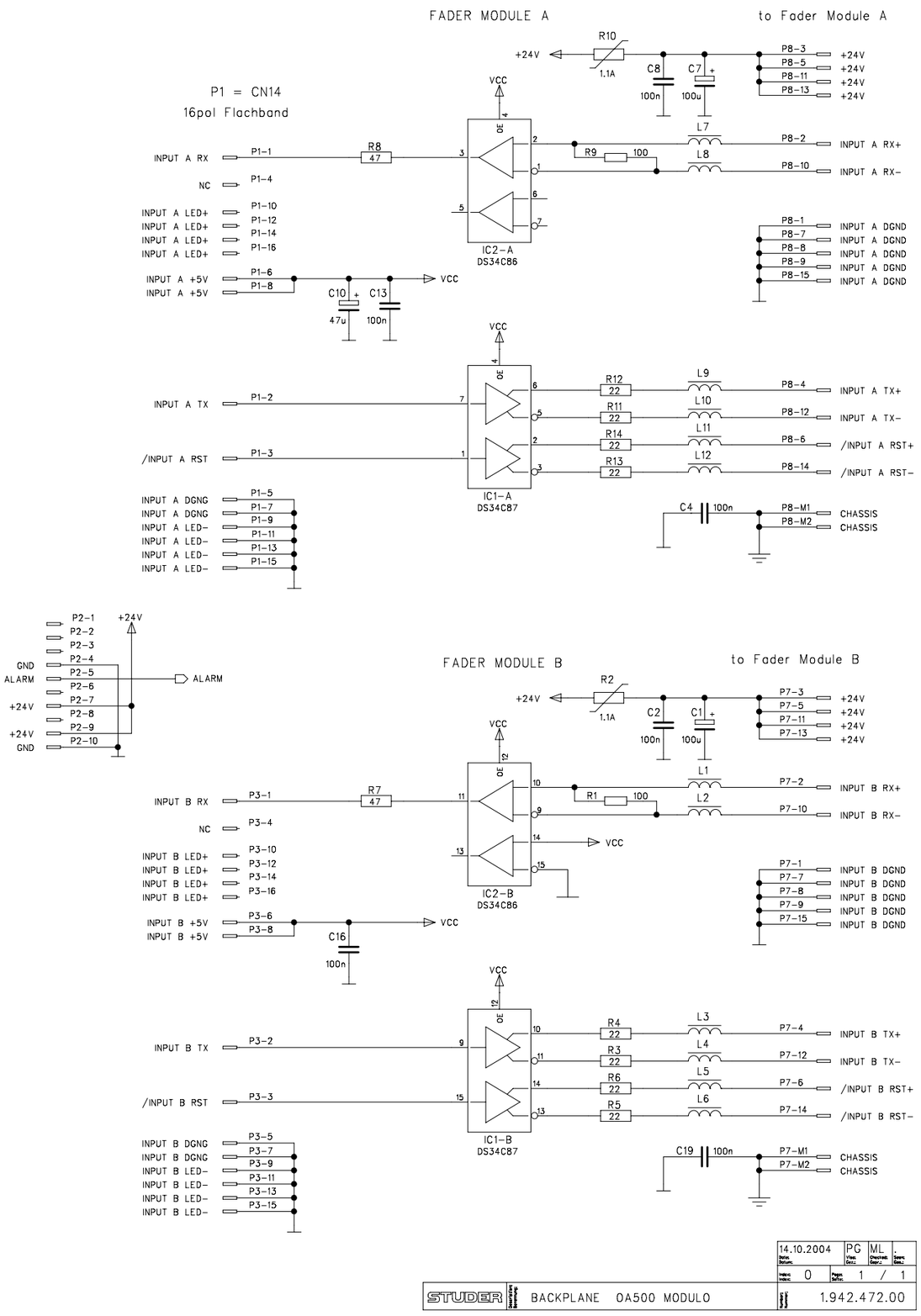
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|

# Backplane Modulo PCB 1.942.472.00 ( 0)



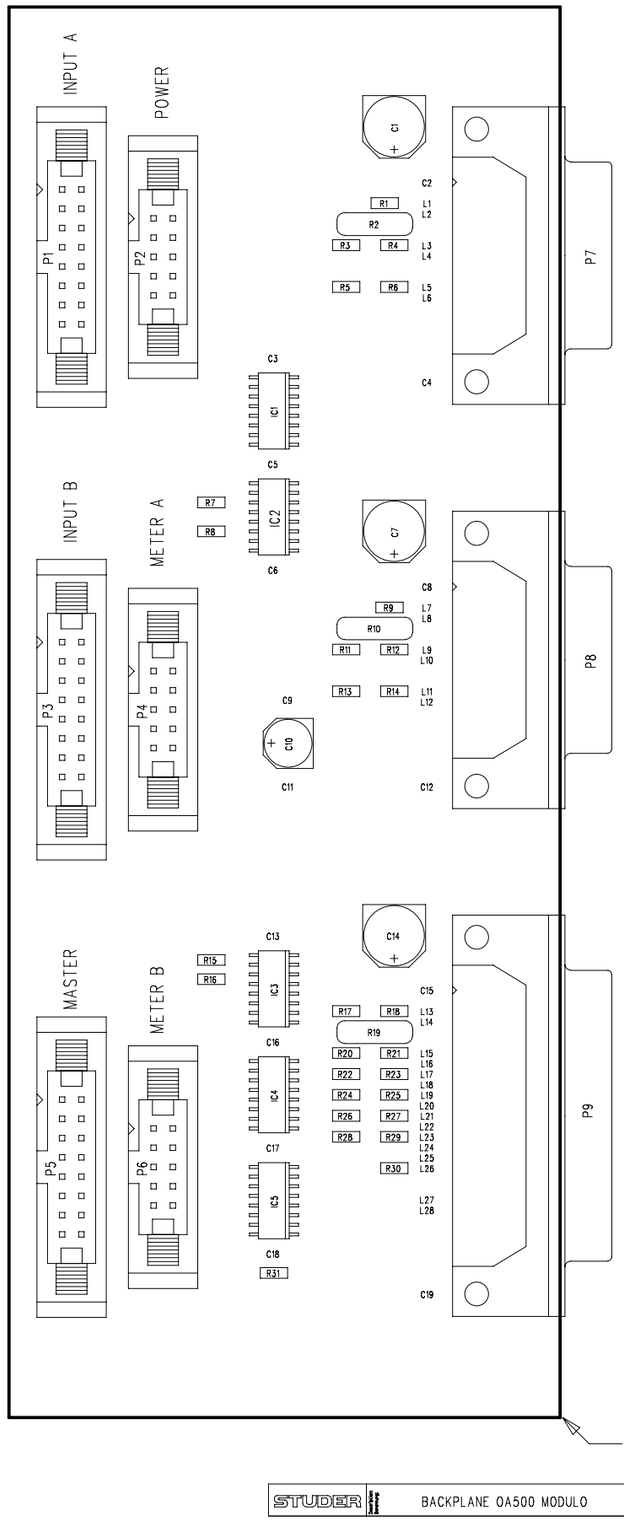



Date printed: 25.10.04



## Backplane Modulo PCB 1.942.472.00 ( 0)






Date printed: 25.10.04

## Backplane Modulo PCB 1.942.472.00 ( 0)

Page: 1 of 1

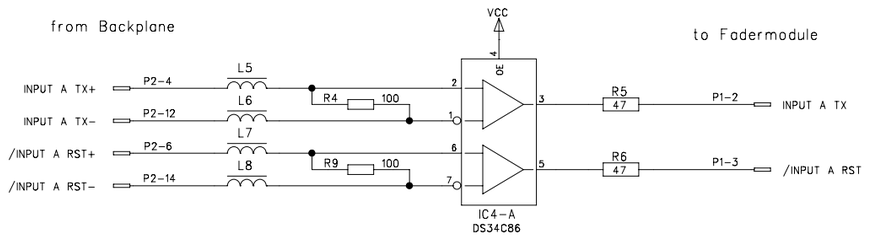
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C 1 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 2 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 3 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 4 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 5 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 6 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 7 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 8 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 9 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 10 | 59.68.0069 | 1 pce | 47u | EL 16V, 6.3*5.7 |
| 0 | C 11 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 12 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 13 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 14 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 15 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 16 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 17 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 18 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 19 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | IC 1 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 2 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | IC 3 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 4 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 5 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | L 1 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 2 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 3 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 4 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 5 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 6 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 7 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 8 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 9 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 10 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 11 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 12 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 13 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 14 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 15 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 16 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 17 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 18 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 19 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 20 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 21 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 22 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 23 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 24 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 25 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 26 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 27 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 28 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | MP 1 | 1.942.472.11 | 1 pce | | Backplane OA 500 PCB |
| 0 | MP 2 | 1.942.472.10 | 1 pce | | Nr. Etikette 5 x 20 |
| 0 | MP 3 | 43.01.0108 | 1 pce | Label | ESE-Warnschild |
| 0 | P 1 | 54.14.2052 | 1 pce | 16p | Stecker gerade Au |
| 0 | P 2 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 3 | 54.14.2052 | 1 pce | 16p | Stecker gerade Au |
| 0 | P 4 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 5 | 54.14.2052 | 1 pce | 16p | Stecker gerade Au |
| 0 | P 6 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 7 | 54.13.0072 | 1 pce | 15p | D-Sub, PCB, Winkel |
| 0 | P 8 | 54.13.0072 | 1 pce | 15p | D-Sub, PCB, Winkel |
| 0 | P 9 | 54.13.0073 | 1 pce | 25p | D-Sub, PCB, Winkel |
| 0 | R 1 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 2 | 57.92.7051 | 1 pce | 1.1A | PTC 30V |
| 0 | R 3 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 4 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 5 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 6 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 7 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 8 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 9 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 10 | 57.92.7051 | 1 pce | 1.1A | PTC 30V |
| 0 | R 11 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 12 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 13 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 14 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 15 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 16 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 17 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 18 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 19 | 57.92.7051 | 1 pce | 1.1A | PTC 30V |
| 0 | R 20 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 21 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 22 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 23 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 24 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 25 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 26 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 27 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 28 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 29 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 30 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 31 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |

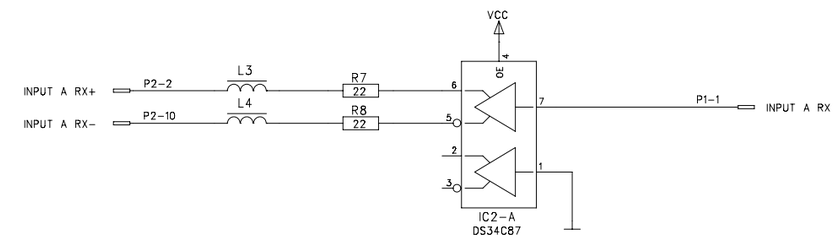
End of List

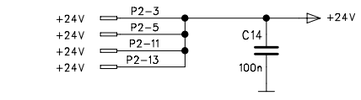
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|

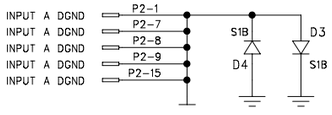
## Input Interface PCB 1.942.473.00 ( 0)

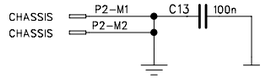


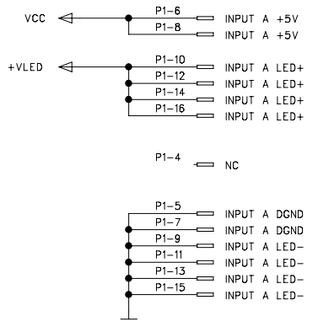


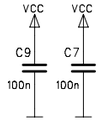



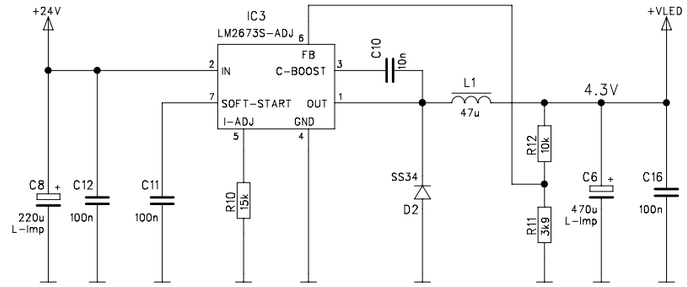



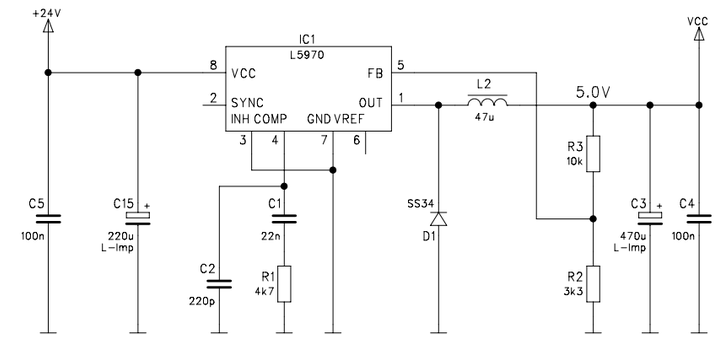



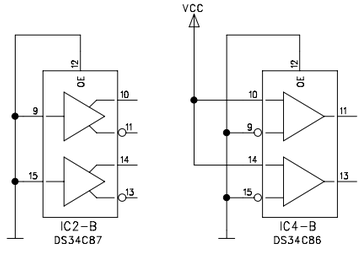



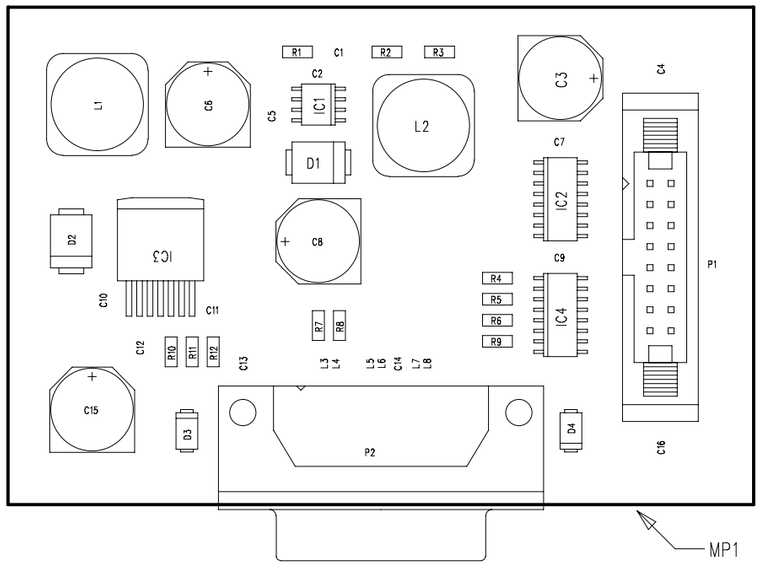




| | | | | |
|---|---|---|---|---|
| 14.10.2004 | PG | ML | | |
| 0 | 1 / 1 | | | |
| STUDER | INPUT INTERFACE | | 1.942.473.00 | |

Date printed: 25.10.04

## Input Interface PCB 1.942.473.00 ( 0)






## Input Interface PCB 1.942.473.00 ( 0)



| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C 1 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 2 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 3 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 4 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 5 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 6 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 7 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 8 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 9 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 10 | 59.60.3325 | 1 pce | 10n | CER 50V, 10%, X7R, 0805 |
| 0 | C 11 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 12 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 13 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 14 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 15 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 16 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | D 1 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 2 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 3 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 4 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | IC 1 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | IC 2 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 3 | 50.61.2005 | 1 pce | LM2673ADJ | Step down converter |
| 0 | IC 4 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | L 1 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 2 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 3 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 4 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 5 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 6 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 7 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 8 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | MP 1 | 1.942.473.11 | 1 pce | | Input Interface PCB |
| 0 | MP 2 | 1.942.473.10 | 1 pce | | Nr. Etikette 5 x 20 |
| 0 | MP 3 | 43.01.0108 | 1 pce | Label | ESE-Warnschild |
| 0 | P 1 | 54.14.2052 | 1 pce | 16p | Stecker gerade Au |
| 0 | P 2 | 54.13.0077 | 1 pce | 15p | D-Sub, PCB, Winkel |
| 0 | R 1 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 2 | 57.60.1332 | 1 pce | 3k3 | MF, 1%, 0204, E24 |
| 0 | R 3 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 4 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 5 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 6 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 7 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 8 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 9 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 10 | 57.60.1153 | 1 pce | 15k | MF, 1%, 0204, E24 |
| 0 | R 11 | 57.60.1392 | 1 pce | 3k9 | MF, 1%, 0204, E24 |
| 0 | R 12 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |

End of List

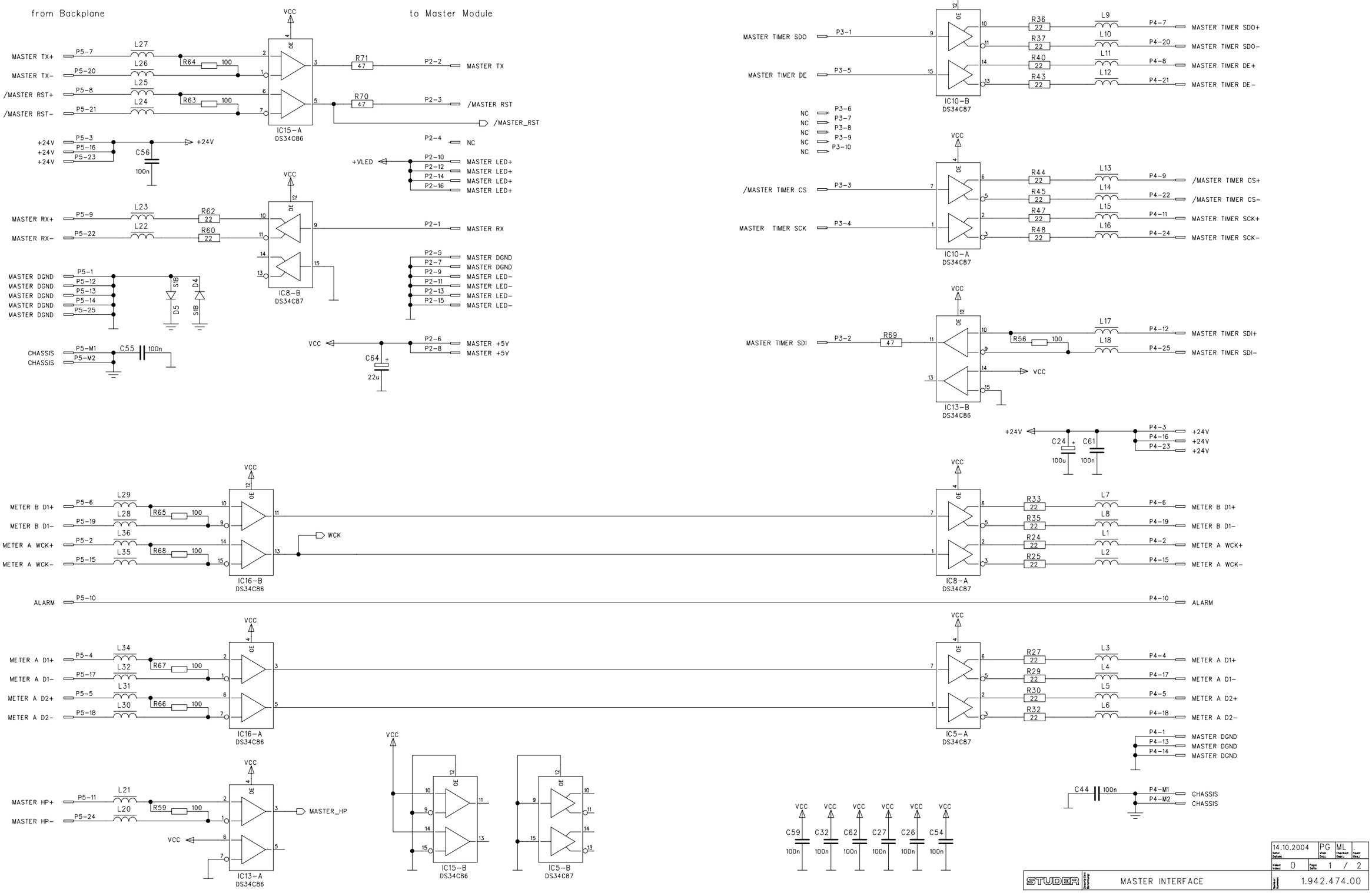
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|

| | | | |
|---|---|---|---|
| 14.10.2004 | PG | ML | |
| Index 0 | Page 1 / 1 | | |
| STUDER | INPUT INTERFACE | 1.942.473.00 | |

Date printed: 25.10.04

## Master Interface PCB 1.942.474.00 ( 0)

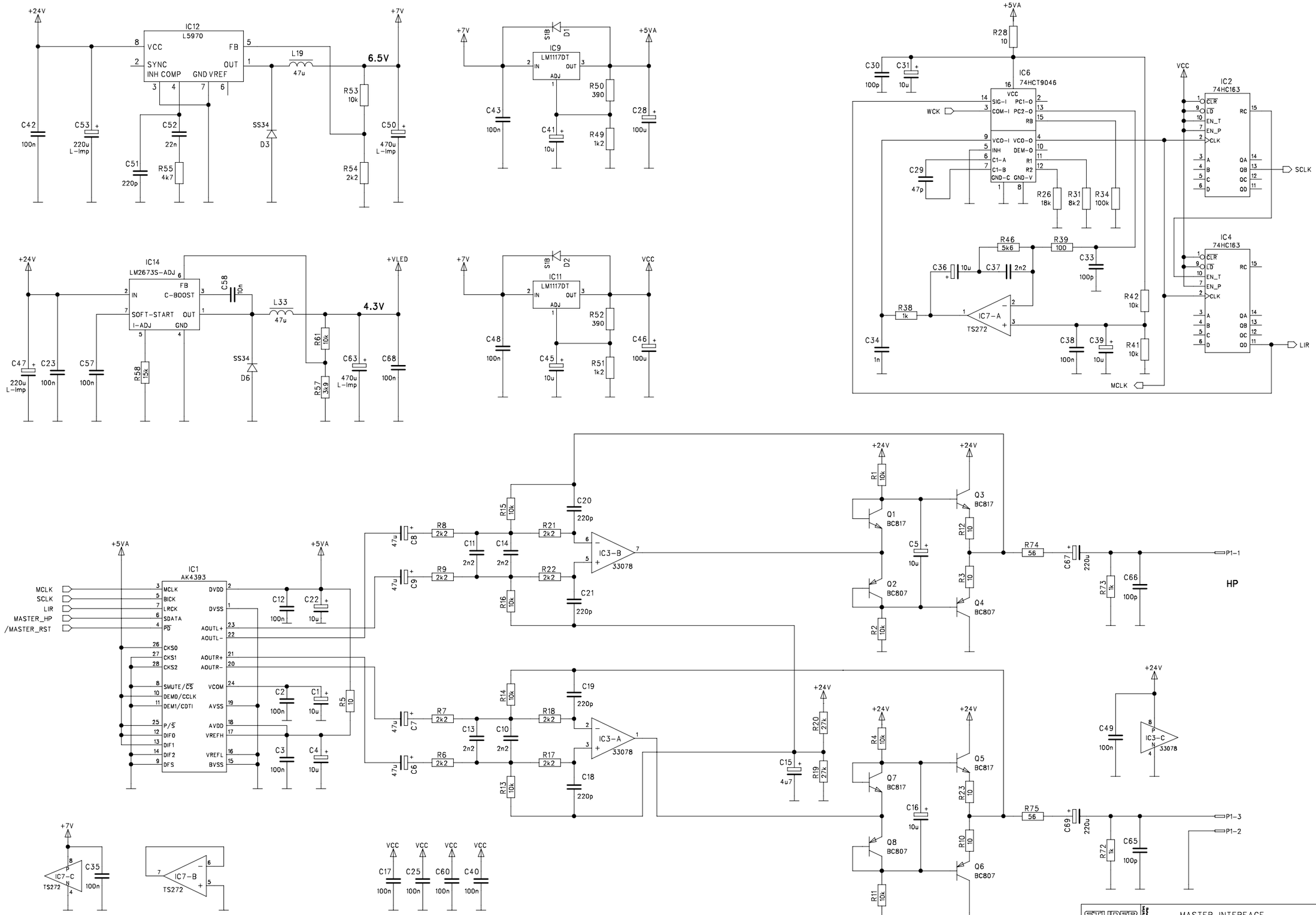





Date printed: 24.08.05

## Master Interface PCB 1.942.474.00 ( 0)

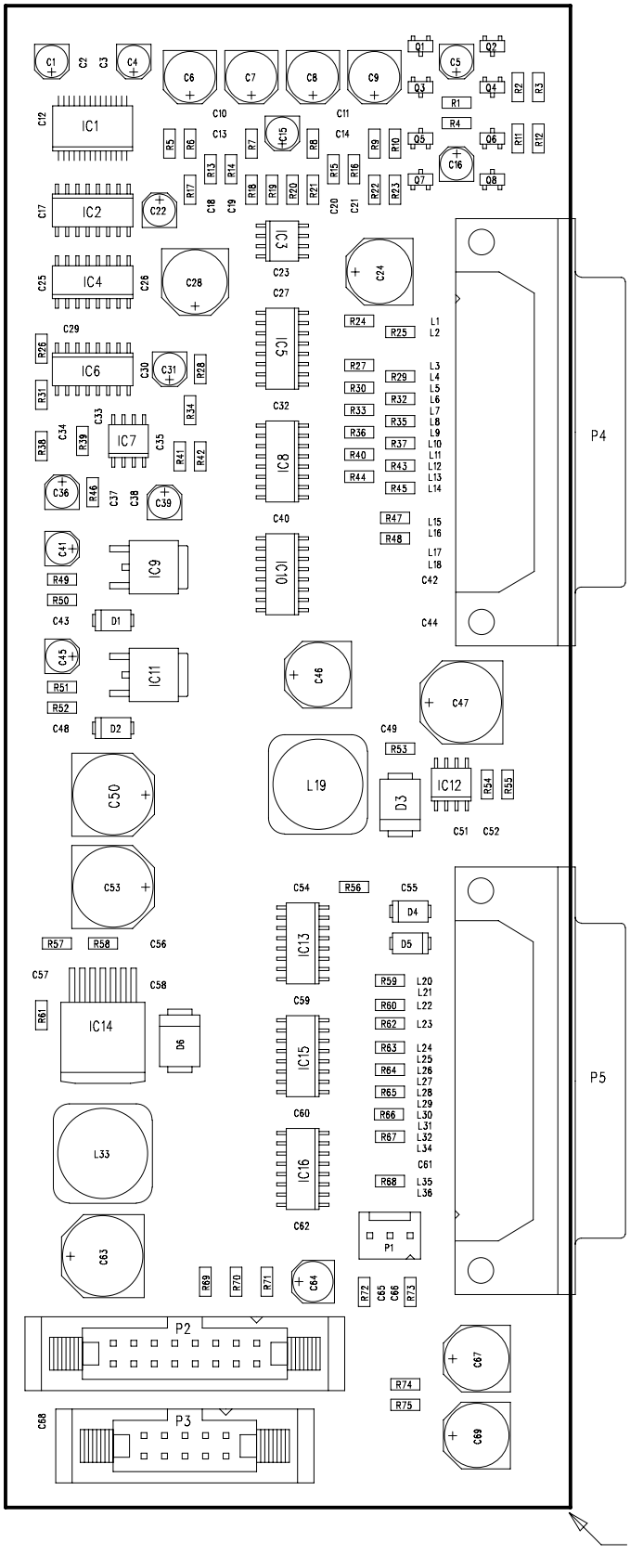





Date printed: 25.10.04

| | | | |
|---|---|---|---|
| 14.10.2004 | PG | ML | |
| Index: 0 | Pages Total: 2 | / 2 | |
| STUDER | MASTER INTERFACE | 1.942.474.00 | |

# Master Interface PCB 1.942.474.00 ( 0)




| | | | | |
|---|---|---|---|---|
| 14.10.2004 | PG | ML | | |
| 0 | 1 / 1 | | | |
| STUDER | MASTER INTERFACE | 1.942.474.00 | | |

# Master Interface 1.942.474.00 ( 0)



| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C 1 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 2 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 3 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 4 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 5 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 6 | 59.68.0069 | 1 pce | 47u | EL 16V, 6.3*5.7 |
| 0 | C 7 | 59.68.0069 | 1 pce | 47u | EL 16V, 6.3*5.7 |
| 0 | C 8 | 59.68.0069 | 1 pce | 47u | EL 16V, 6.3*5.7 |
| 0 | C 9 | 59.68.0069 | 1 pce | 47u | EL 16V, 6.3*5.7 |
| 0 | C 10 | 59.60.3317 | 1 pce | 2n2 | CER 50V, 10%, X7R, 0805 |
| 0 | C 11 | 59.60.3317 | 1 pce | 2n2 | CER 50V, 10%, X7R, 0805 |
| 0 | C 12 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 13 | 59.60.3317 | 1 pce | 2n2 | CER 50V, 10%, X7R, 0805 |
| 0 | C 14 | 59.60.3317 | 1 pce | 2n2 | CER 50V, 10%, X7R, 0805 |
| 0 | C 15 | 59.68.0107 | 1 pce | 4u7 | EL 35V, 4.0*5.7 |
| 0 | C 16 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 17 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 18 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 19 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 20 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 21 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 22 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 23 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 24 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 25 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 26 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 27 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 28 | 59.68.0071 | 1 pce | 100u | EL 16V, 8.0*6.3 |
| 0 | C 29 | 59.60.2241 | 1 pce | 47p | CER 50V, 5%, C0G, 0603 |
| 0 | C 30 | 59.60.2249 | 1 pce | 100p | CER 50V, 5%, C0G, 0603 |
| 0 | C 31 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 32 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 33 | 59.60.2249 | 1 pce | 100p | CER 50V, 5%, C0G, 0603 |
| 0 | C 34 | 59.60.2373 | 1 pce | 1n0 | CER 50V, 5%, C0G, 0805 |
| 0 | C 35 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 36 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 37 | 59.60.3317 | 1 pce | 2n2 | CER 50V, 10%, X7R, 0805 |
| 0 | C 38 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 39 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 40 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 41 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 42 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 43 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 44 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 45 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 46 | 59.68.0071 | 1 pce | 100u | EL 16V, 8.0*6.3 |
| 0 | C 47 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 48 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 49 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 50 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 51 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 52 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 53 | 59.68.0317 | 1 pce | 220u | EL 35V, 10 *10.7 lowESR |
| 0 | C 54 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 55 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 56 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 57 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 58 | 59.60.3325 | 1 pce | 10n | CER 50V, 10%, X7R, 0805 |
| 0 | C 59 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 60 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 61 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 62 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 63 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 64 | 59.68.0067 | 1 pce | 22u | EL 16V, 5.0*5.7 |
| 0 | C 65 | 59.60.2249 | 1 pce | 100p | CER 50V, 5%, C0G, 0603 |
| 0 | C 66 | 59.60.2249 | 1 pce | 100p | CER 50V, 5%, C0G, 0603 |
| 0 | C 67 | 59.68.0073 | 1 pce | 220u | EL 16V, 8.0*10.7 |
| 0 | C 68 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 69 | 59.68.0073 | 1 pce | 220u | EL 16V, 8.0*10.7 |
| 0 | D 1 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 2 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 3 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 4 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 5 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 6 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | IC 1 | 50.61.8005 | 1 pce | AK4393 | D/A Converter 24bit DS SOP28 |
| 0 | IC 2 | 50.62.1163 | 1 pce | 74HC163 | Synchr preset 4bit counter bin |
| 0 | IC 3 | 50.61.0204 | 1 pce | MC33078 | Dual Op-Amp low noise |
| 0 | IC 4 | 50.62.1163 | 1 pce | 74HC163 | Synchr preset 4bit counter bin |
| 0 | IC 5 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 6 | 50.62.4946 | 1 pce | 74HCT9046 | PLL with bandgap contr VCO |
| 0 | IC 7 | 50.61.0205 | 1 pce | TS272CD | Dual Op-Amp CMOS SO 8 |
| 0 | IC 8 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 9 | 50.61.2003 | 1 pce | LM1117 | Lin Reg 800mA adj |
| 0 | IC 10 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 11 | 50.61.2003 | 1 pce | LM1117 | Lin Reg 800mA adj |
| 0 | IC 12 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | IC 13 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | IC 14 | 50.61.2005 | 1 pce | LM2673ADJ | Step down converter |
| 0 | IC 15 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | IC 16 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | L 1 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 2 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 3 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 4 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 5 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 6 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 7 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 8 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 9 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 10 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 11 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 12 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 13 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 14 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 15 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 16 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 17 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 18 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 19 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 20 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 21 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 22 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 23 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 24 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 25 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 26 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 27 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 28 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 29 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 30 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 31 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 32 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 33 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 34 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 35 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 36 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | MP 1 | 1.942.474.11 | 1 pce | | Master Interface PCB |
| 0 | MP 2 | 1.942.474.10 | 1 pce | | Nr. Etikette 5 x 20 |
| 0 | MP 3 | 43.01.0108 | 1 pce | Label | ESE-Warnschild |
| 0 | P 1 | not used | 1 pce | 3p | Stecker gerade PCB<br>*Insert Molex Order Number 20-27-2031* |
| 0 | P 2 | 54.14.2052 | 1 pce | 16p | Stecker gerade Au |
| 0 | P 3 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 4 | 54.13.0073 | 1 pce | 25p | D-Sub, PCB, Winkel |
| 0 | P 5 | 54.13.0078 | 1 pce | 25p | D-Sub, PCB, Winkel |
| 0 | Q 1 | 50.60.0050 | 1 pce | BC817-25 | NPN 45V 800mA SOT 23 |
| 0 | Q 2 | 50.60.1050 | 1 pce | BC807-25 | PNP 45V 800mA SOT 23 |
| 0 | Q 3 | 50.60.0050 | 1 pce | BC817-25 | NPN 45V 800mA SOT 23 |
| 0 | Q 4 | 50.60.1050 | 1 pce | BC807-25 | PNP 45V 800mA SOT 23 |
| 0 | Q 5 | 50.60.0050 | 1 pce | BC817-25 | NPN 45V 800mA SOT 23 |
| 0 | Q 6 | 50.60.1050 | 1 pce | BC807-25 | PNP 45V 800mA SOT 23 |
| 0 | Q 7 | 50.60.0050 | 1 pce | BC817-25 | NPN 45V 800mA SOT 23 |
| 0 | Q 8 | 50.60.1050 | 1 pce | BC807-25 | PNP 45V 800mA SOT 23 |
| 0 | R 1 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 2 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 3 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 4 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 5 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 6 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 7 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 8 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 9 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 10 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 11 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 12 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 13 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 14 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 15 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 16 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 17 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 18 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 19 | 57.60.1273 | 1 pce | 27k | MF, 1%, 0204, E24 |
| 0 | R 20 | 57.60.1273 | 1 pce | 27k | MF, 1%, 0204, E24 |
| 0 | R 21 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 22 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 23 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 24 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 25 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 26 | 57.60.1183 | 1 pce | 18k | MF, 1%, 0204, E24 |
| 0 | R 27 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 28 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 29 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 30 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 31 | 57.60.1822 | 1 pce | 8k2 | MF, 1%, 0204, E24 |
| 0 | R 32 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 33 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 34 | 57.60.1104 | 1 pce | 100k | MF, 1%, 0204, E24 |
| 0 | R 35 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 36 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 37 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 38 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 39 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 40 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 41 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 42 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 43 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 44 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 45 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 46 | 57.60.1562 | 1 pce | 5k6 | MF, 1%, 0204, E24 |
| 0 | R 47 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 48 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 49 | 57.60.1122 | 1 pce | 1k2 | MF, 1%, 0204, E24 |
| 0 | R 50 | 57.60.1391 | 1 pce | 390R | MF, 1%, 0204, E24 |
| 0 | R 51 | 57.60.1122 | 1 pce | 1k2 | MF, 1%, 0204, E24 |
| 0 | R 52 | 57.60.1391 | 1 pce | 390R | MF, 1%, 0204, E24 |
| 0 | R 53 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 54 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 55 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 56 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 57 | 57.60.1392 | 1 pce | 3k9 | MF, 1%, 0204, E24 |
| 0 | R 58 | 57.60.1153 | 1 pce | 15k | MF, 1%, 0204, E24 |
| 0 | R 59 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 60 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 61 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |

# Master Interface 1.942.474.00 ( 0)



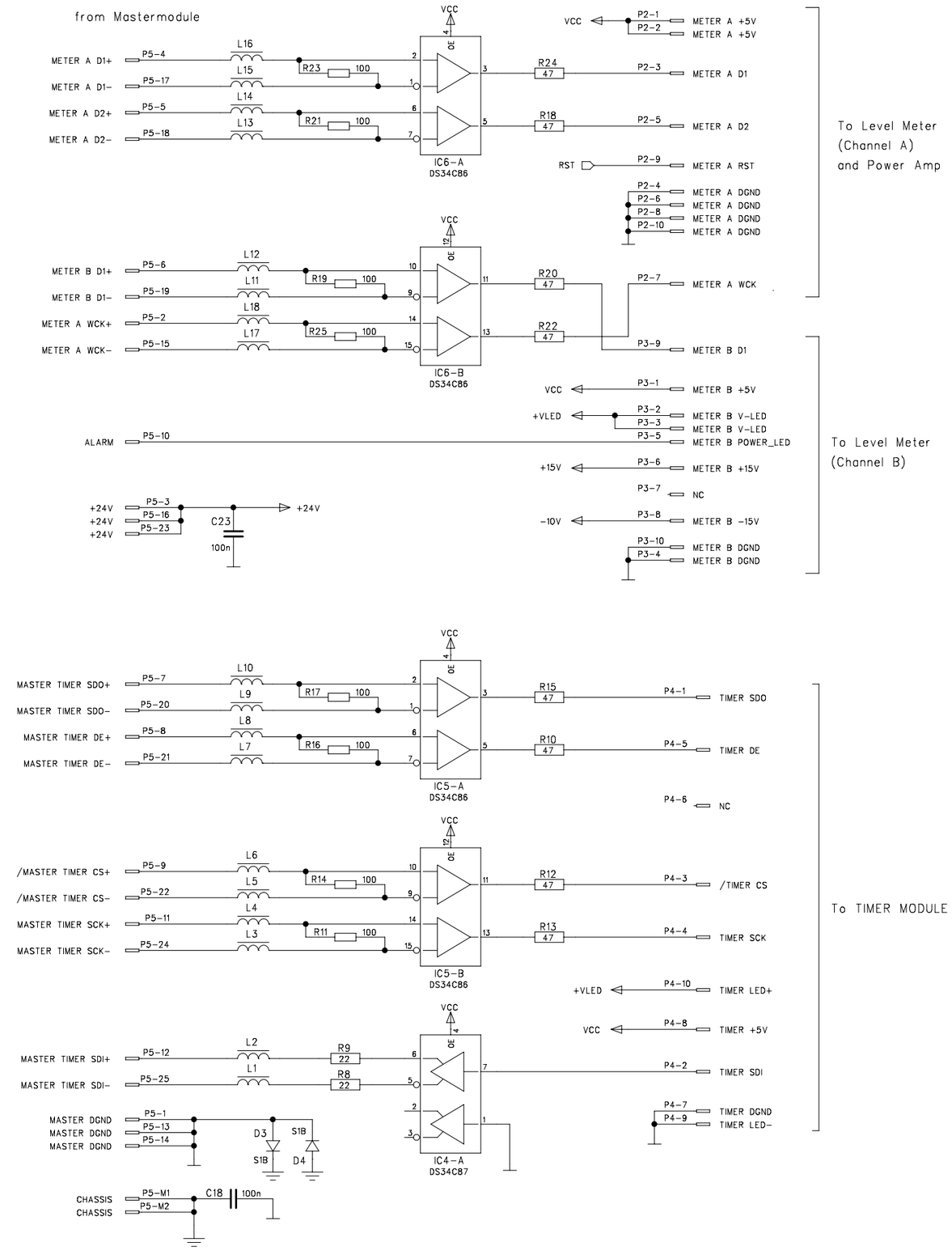
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | R 62 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 63 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 64 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 65 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 66 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 67 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 68 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 69 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 70 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 71 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 72 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 73 | 57.60.1102 | 1 pce | 1k0 | MF, 1%, 0204, E24 |
| 0 | R 74 | 57.60.1560 | 1 pce | 56R | MF, 1%, 0204, E24 |
| 0 | R 75 | 57.60.1560 | 1 pce | 56R | MF, 1%, 0204, E24 |

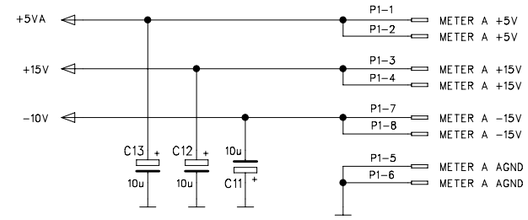
End of List

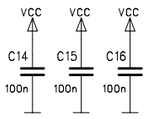
| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|

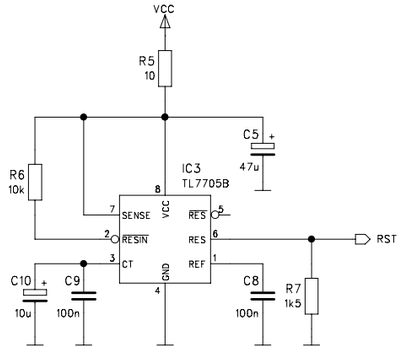
# Level Meter Interface PCB 1.942.477.00 ( 0)

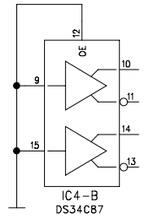


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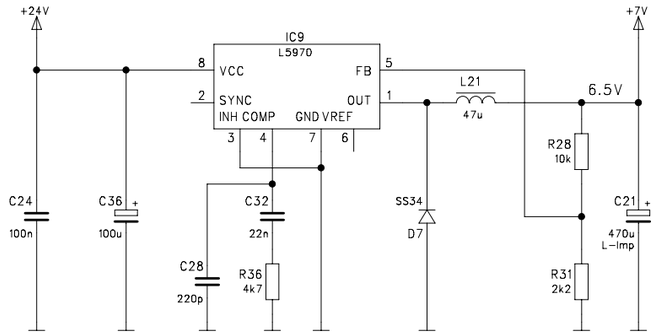
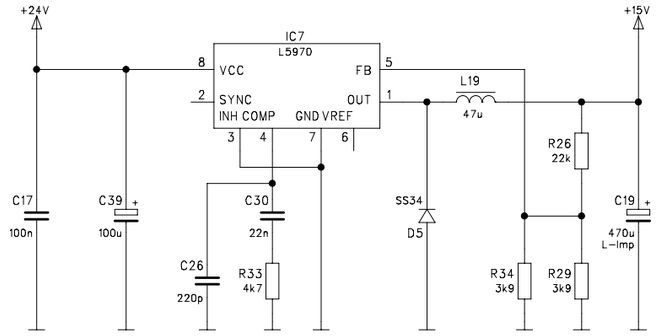
| | | Number: | 1.942.477.00 |

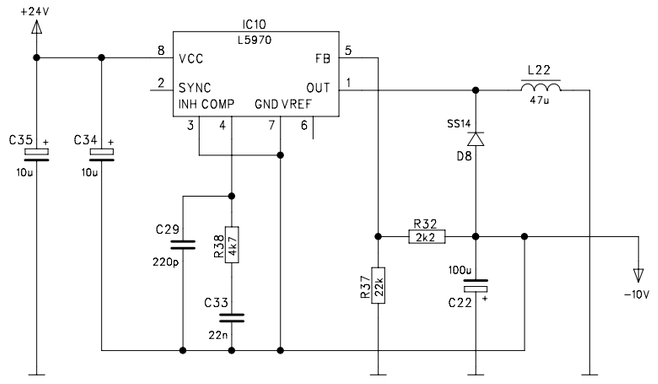
Date printed: 25.10.04

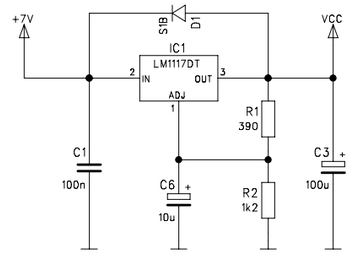
## Level Meter Interface PCB 1.942.477.00 ( 0)

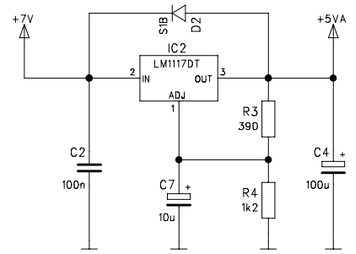


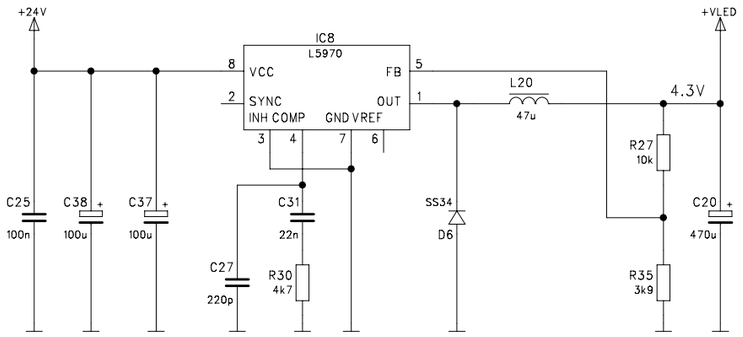
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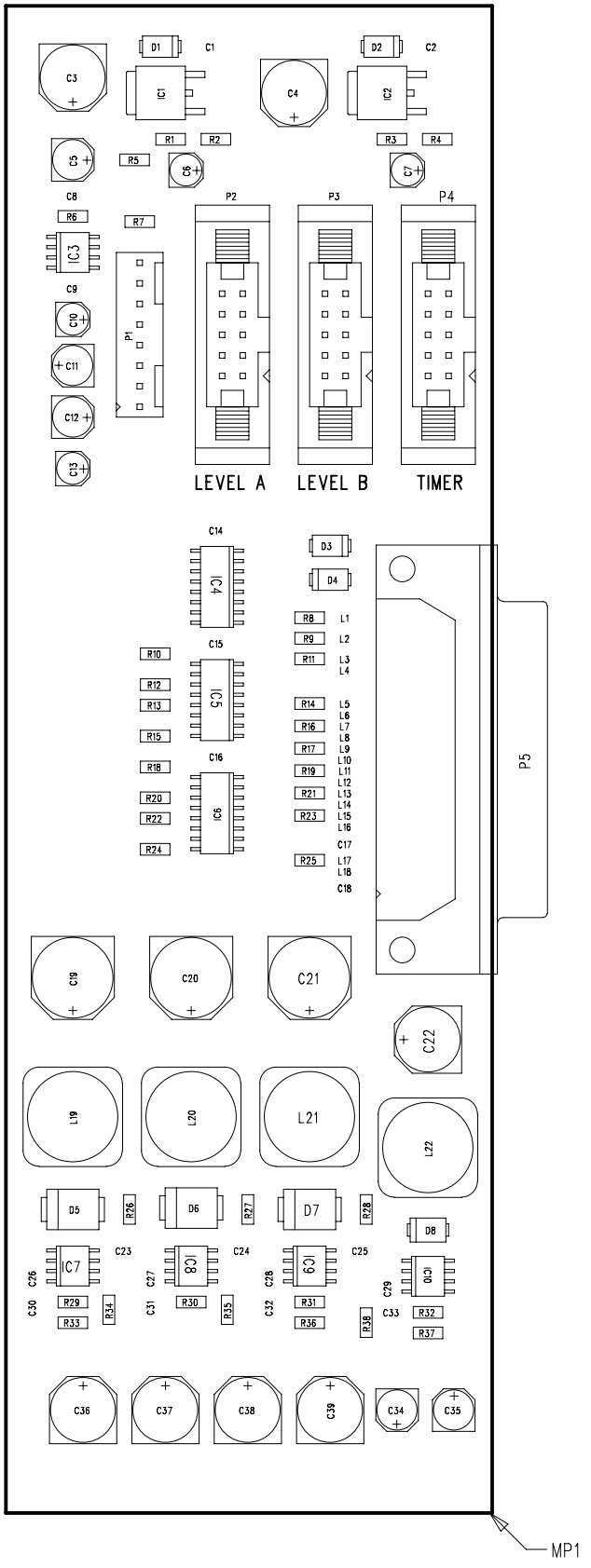
# Level Meter Interface PCB 1.942.477.00 ( 0)

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| STUDER | LEVEL METER INTERFACE | | 1.942.477.00 |

# Level Meter Interface 1.942.477.00 ( 0)



| Idx. | Pos. | Part No. | Qty. | Type/Val. | Description |
|---|---|---|---|---|---|
| 0 | C 1 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 2 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 3 | 59.68.0071 | 1 pce | 100u | EL 16V, 8.0*6.3 |
| 0 | C 4 | 59.68.0071 | 1 pce | 100u | EL 16V, 8.0*6.3 |
| 0 | C 5 | 59.68.0027 | 1 pce | 47u | EL 6V, 5.0*5.7 |
| 0 | C 6 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 7 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 8 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 9 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 10 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 11 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 12 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 13 | 59.68.0065 | 1 pce | 10u | EL 16V, 4.0*5.7 |
| 0 | C 14 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 15 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 16 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 17 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 18 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 19 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 20 | 59.68.0075 | 1 pce | 470u | EL 16V, 10 *10.7 |
| 0 | C 21 | 59.68.0275 | 1 pce | 470u | EL 16V, 10 *10.7 lowESR |
| 0 | C 22 | 59.68.0071 | 1 pce | 100u | EL 16V, 8.0*6.3 |
| 0 | C 23 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 24 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 25 | 59.60.3337 | 1 pce | 100n | CER 50V, 10%, X7R, 0805 |
| 0 | C 26 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 27 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 28 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 29 | 59.60.2257 | 1 pce | 220p | CER 50V, 5%, C0G, 0603 |
| 0 | C 30 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 31 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 32 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 33 | 59.60.3329 | 1 pce | 22n | CER 50V, 10%, X7R, 0805 |
| 0 | C 34 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 35 | 59.68.0109 | 1 pce | 10u | EL 35V, 5.0*5.7 |
| 0 | C 36 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 37 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 38 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | C 39 | 59.68.0115 | 1 pce | 100u | EL 35V, 8.0*10.7 |
| 0 | D 1 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 2 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 3 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 4 | 50.60.8003 | 1 pce | S1B | 1000mA 100V DO 214AC |
| 0 | D 5 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 6 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 7 | 50.60.8102 | 1 pce | SS34 | 3A 40V Schottky |
| 0 | D 8 | 50.60.8103 | 1 pce | SS14 | 1A 40V Schottky |
| 0 | IC 1 | 50.61.2003 | 1 pce | LM1117 | Lin Reg 800mA adj |
| 0 | IC 2 | 50.61.2003 | 1 pce | LM1117 | Lin Reg 800mA adj |
| 0 | IC 3 | 50.63.2001 | 1 pce | 7705B | Reset Generator |
| 0 | IC 4 | 50.62.0464 | 1 pce | DS34C87 | 4*RS 422 Line Driver |
| 0 | IC 5 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | IC 6 | 50.62.0463 | 1 pce | DS34C86 | 4*RS 422 Line Receiver |
| 0 | IC 7 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | IC 8 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | IC 9 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | IC 10 | 50.61.2006 | 1 pce | L5970D | Step down switching regulator |
| 0 | L 1 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 2 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 3 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 4 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 5 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 6 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 7 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 8 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 9 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 10 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 11 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 12 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 13 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 14 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 15 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 16 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 17 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 18 | 62.60.0903 | 1 pce | Z600R | SMD Bead 100mA, 0R45 |
| 0 | L 19 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 20 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 21 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | L 22 | 62.60.0518 | 1 pce | 47uH | SMD 2.5A |
| 0 | MP 1 | 1.942.477.11 | 1 pce | | Level Meter Interface PCB |
| 0 | MP 2 | 1.942.477.10 | 1 pce | | Nr. Etikette 5 x 20 |
| 0 | MP 3 | 43.01.0108 | 1 pce | Label | ESE-Warnschild |
| 0 | P 1 | not used | 1 pce | 8p | Stecker gerade PCB |
| | | | | *Insert Molex Order Number 20-27-2081* | |
| 0 | P 2 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 3 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 4 | 54.14.2051 | 1 pce | 10p | Stecker gerade Au |
| 0 | P 5 | 54.13.0078 | 1 pce | 25p | D-Sub, PCB, Winkel |
| 0 | R 1 | 57.60.1391 | 1 pce | 390R | MF, 1%, 0204, E24 |
| 0 | R 2 | 57.60.1122 | 1 pce | 1k2 | MF, 1%, 0204, E24 |
| 0 | R 3 | 57.60.1391 | 1 pce | 390R | MF, 1%, 0204, E24 |
| 0 | R 4 | 57.60.1122 | 1 pce | 1k2 | MF, 1%, 0204, E24 |
| 0 | R 5 | 57.60.1100 | 1 pce | 10R | MF, 1%, 0204, E24 |
| 0 | R 6 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 7 | 57.60.1152 | 1 pce | 1k5 | MF, 1%, 0204, E24 |
| 0 | R 8 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 9 | 57.60.1220 | 1 pce | 22R | MF, 1%, 0204, E24 |
| 0 | R 10 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 11 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 12 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 13 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 14 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 15 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 16 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 17 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 18 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 19 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 20 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 21 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 22 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 23 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 24 | 57.60.1470 | 1 pce | 47R | MF, 1%, 0204, E24 |
| 0 | R 25 | 57.60.1101 | 1 pce | 100R | MF, 1%, 0204, E24 |
| 0 | R 26 | 57.60.1223 | 1 pce | 22k | MF, 1%, 0204, E24 |
| 0 | R 27 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 28 | 57.60.1103 | 1 pce | 10k | MF, 1%, 0204, E24 |
| 0 | R 29 | 57.60.1392 | 1 pce | 3k9 | MF, 1%, 0204, E24 |
| 0 | R 30 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 31 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 32 | 57.60.1222 | 1 pce | 2k2 | MF, 1%, 0204, E24 |
| 0 | R 33 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 34 | 57.60.1392 | 1 pce | 3k9 | MF, 1%, 0204, E24 |
| 0 | R 35 | 57.60.1392 | 1 pce | 3k9 | MF, 1%, 0204, E24 |
| 0 | R 36 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |
| 0 | R 37 | 57.60.1223 | 1 pce | 22k | MF, 1%, 0204, E24 |
| 0 | R 38 | 57.60.1472 | 1 pce | 4k7 | MF, 1%, 0204, E24 |

**End of List**