

Service Manual

HiFi

V 21

Grundig Service

Holline Deutschland...
...Mo.-Fr. 8.00-16.30 Uhr

Technik:

| | |
|-------------------|---------------|
| TV/SAT | 0180/52318-41 |
| VCR/LiveCam | 0180/52318-42 |
| HiFi/Audio | 0180/52318-43 |
| Car Audio | 0180/52318-44 |
| Telekommunikation | 0180/52318-45 |

Fax: 0180/52318-51

Ersatzteil-Bestellannahme:

| | |
|----------|---------------|
| Telefon: | 0180/52318-40 |
| Fax: | 0180/52318-50 |



Zusätzlich erforderliche
Unterlagen für den Komplettservice

Additionally required
Service Manuals for the Complete Service

**Service
Manual**

V 21

Sach-Nr./Part No.
72010-755.45

**Service
Manual**

**Sicherheit
Safety**

Sach-Nr./Part No.
72010-800.00

Btx * 32700 #

Sachnummer
Part Number 72010-755.45

Änderungen vorbehalten
Subject to alteration

Printed in Germany
VK233 0997

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.

D Inhaltsverzeichnis

| | Seite |
|--|-------------------------|
| Allgemeiner Teil | 1 - 2 ... 1 - 6 |
| Meßgeräte / Meßmittel | 1 - 2 |
| Technische Daten | 1 - 2 |
| Ausbauhinweise | 1 - 3 |
| Bedienhinweise | 1 - 5 |
| Abgleich | 2 - 1 |
| Platinenabbildungen und Schaltpläne | 3 - 1 ... 3 - 10 |
| Verdrahtungsplan | 3 - 1 |
| Bauteilhinweise | 3 - 6 |
| Schaltplan | 3 - 3 |
| Druckplattenabbildungen | 3 - 7 |
| Ersatzteilliste und Explosionszeichnung | 4 - 1 ... 4 - 2 |

Allgemeiner Teil

Meßgeräte / Meßmittel

Digitalvoltmeter

Beachten Sie bitte das GRUNDIG Meßtechnik-Programm, das Sie unter folgender Adresse erhalten:

GRUNDIG Instruments
Test- und Meßsysteme GmbH
 Würzburger Str. 150, D-90766 Fürth/Bay
 Tel. 0911/703-4118, Fax 0911/703-4130

Technische Daten

| | |
|--|--------------------|
| Ausgangsleistung (acc. DIN 45500) | |
| Musikleistung 4Ω | 2 x 95W |
| Sinusleistung 4Ω | 2 x 50W |
| Sinusleistung 8Ω | 2 x 40W |
| Eingangsempfindlichkeit/Impedanz | |
| Line in | 180mV / 47kΩ |
| Phono MM | 1,8mV / 4,7kΩ |
| Klirrfaktor Sinusleistung -1dB, 8Ω, 1kHz | ≤ 0,01% |
| Geräuschspannungsabstand | ≥ 94dB |
| Leistungsbandbreite | < 10Hz ... > 70kHz |
| Übertragungsbereich | |
| Line in (-3dB) | < 10Hz ... > 90kHz |
| Phono MM | 20Hz ... 30kHz |
| Stereo crosstalk 10kHz | > 60dB |
| Dämpfungsfaktor 8Ω, 1kHz | ≥ 50 |
| Spannungsversorgung | |
| Betriebsspannung | 230V~ |
| Frequenz | 50/60Hz |
| max. Leistungsaufnahme | < 250W |
| Leistungsaufnahme in Standby | ca. 1W |
| Abmessungen und Gewicht | |
| B x H x T | 435 x 125 x 300mm |
| Gewicht | ca. 7kg |

GB Table of Contents

| | Page |
|--|-------------------------|
| General Section | 1 - 2 ... 1 - 7 |
| Test Equipment / Aids | 1 - 2 |
| Specifications | 1 - 2 |
| Disassembly Instructions | 1 - 3 |
| Operating Hints | 1 - 6 |
| Adjustment Procedures | 2 - 1 |
| Layout of the PCBs and Circuit Diagrams | 3 - 1 ... 3 - 10 |
| Wiring Diagram | 3 - 1 |
| Note of Components | 3 - 6 |
| Circuit Diagram | 3 - 3 |
| Layout of PCBs | 3 - 7 |
| Spare Parts List and Exploded View | 4 - 1 ... 4 - 2 |

General Section

Test Equipment / Aids

Digital voltmeter

Please note the Grundig Catalog "Test and Measuring Equipment" obtainable from:

GRUNDIG Instruments
Test- und Meßsysteme GmbH
 Würzburger Str. 150, D-90766 Fürth/Bay
 Tel. 0911/703-4118, Fax 0911/703-4130

Specifications

| | |
|--------------------------------------|--------------------|
| Output power (acc. DIN 45500) | |
| Music 4Ω | 2 x 95W |
| Nominal 4Ω | 2 x 50W |
| Nominal 8Ω | 2 x 40W |
| Input sensitivity / impedance | |
| Line in | 180mV / 47kΩ |
| Phono MM | 1.8mV / 4.7kΩ |
| Distortion Nom. -1dB, 8Ω, 1kHz | ≤ 0.01% |
| Signal-to-noise ratio | ≥ 94dB |
| Power bandwidth | < 10Hz ... > 70kHz |
| Frequency response | |
| Line in (-3dB) | < 10Hz ... > 90kHz |
| Phono MM | 20Hz ... 30kHz |
| Stereo crosstalk 10kHz | > 60dB |
| Damping factor 8Ω, 1kHz | ≥ 50 |
| Power supply | |
| Voltage | 230V~ |
| Frequenz | 50/60Hz |
| Max. power consumption | < 250W |
| Standby power consumption | approx. 1W |
| Dimensions & weight | |
| W x H x D | 435 x 125 x 300mm |
| Weight | approx. 7kg |



Ausbauhinweise

1. Öffnen des Gehäuses

- Die 4 Schrauben (A) (Fig. 1) und die 2 Schrauben (B) (Fig. 2) herausschrauben.
- Den Deckel abheben.

2. Ausbau der Frontplatte

- Schraube (C) (Fig. 3) herausschrauben.
- Die Rastung (D) der Netztaсте ausrasten (Fig. 1).
- Die 2 Füße (E) (Fig. 3) abschrauben.
- Die 3 Rastnasen (F) (Fig. 3) ausrasten.
- Beim Zusammenbau auf richtigen Sitz des Steckverbinders (G) (Fig. 1) achten.

3. Ausbau der Hauptplatte

- Frontplatte ausbauen (Pkt. 2).
- Die 5 Schrauben (H) (Fig. 1) und die 7 Schrauben (J) (Fig. 2) herausschrauben.
- Die Platte herausheben, dabei Steckverbinder nach Bedarf öffnen.

4. Ausbau der Trafoplatte

- Die Rastung (D) der Netztaсте ausrasten (Fig. 1).
- Die 4 Schrauben (K) (Fig. 2) und die 5 Schrauben (L) (Fig. 3) herausschrauben.
- Trafoplatte mit AC-Outlet-Platte herausheben, Steckverbinder nach Bedarf öffnen.

Disassembly Instructions

1. Opening the Cabinet

- Undo the 4 screws (A) (Fig. 1) and the 2 screws (B) (Fig. 2).
- Remove the top of the cabinet.

2. Removing the Front Panel

- Undo screw (C) (Fig. 3).
- Disengage the mains button (D) (Fig. 1).
- Undo 2 feet (E) (Fig. 3).
- Disengage the 3 catches (F) (Fig. 1).
- When mounting the board, look for the correct position of connector (G) (Fig. 1).

3. Removing the Main Board

- Remove the Front Panel (para 2).
- Undo the 5 screws (H) (Fig. 1) and the 7 screws (J) (Fig. 2).
- The main board can now be removed. Open connectors if necessary.

4. Removing the Power Supply Board

- Disengage the mains button (D) (Fig. 1).
- Undo the 4 screws (K) (Fig. 2) and the 5 screws (L) (Fig. 3).
- Remove Power Supply Board together with the AC Outlet Board, open connectors if necessary

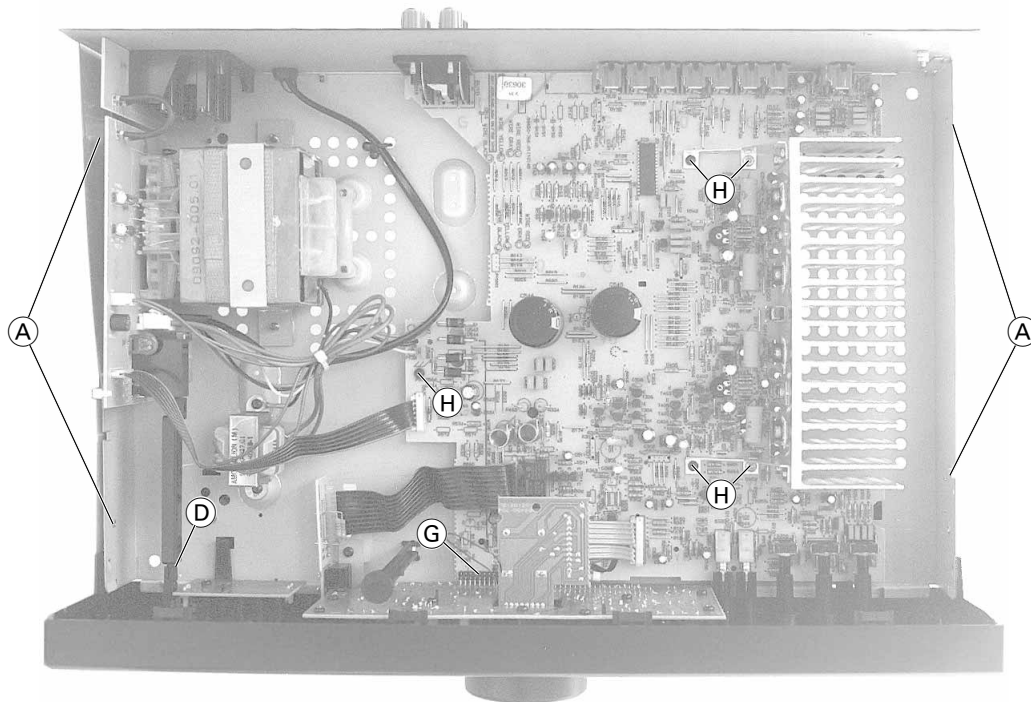


Fig. 1

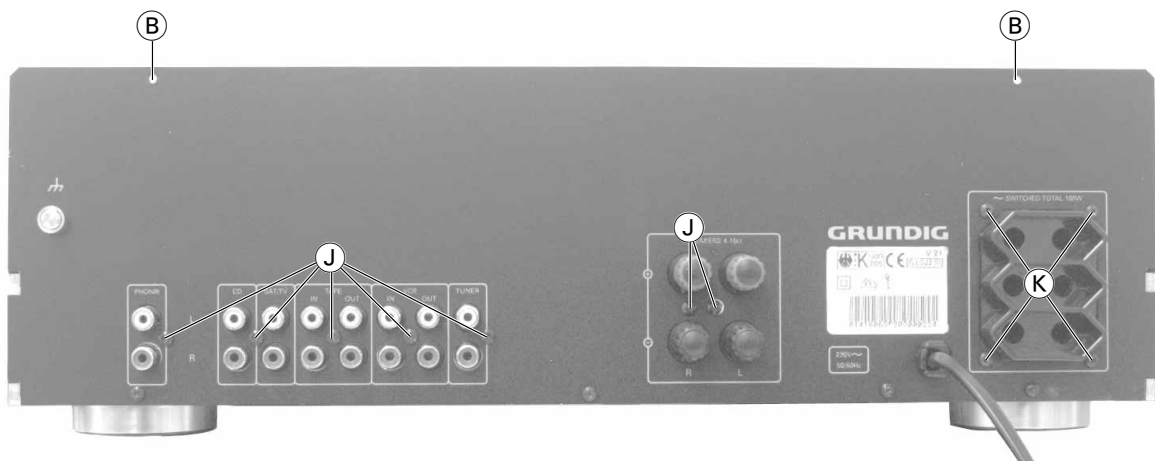


Fig. 2





5. Ausbau der Potiplatte (Fig. 4)

- Lautstärkeknoh abziehen.
- Die Mutter (M) losschrauben.
- Die Potiplatte kann jetzt nach innen herausgezogen werden. Bei Bedarf die Kabel (N) ablöten.

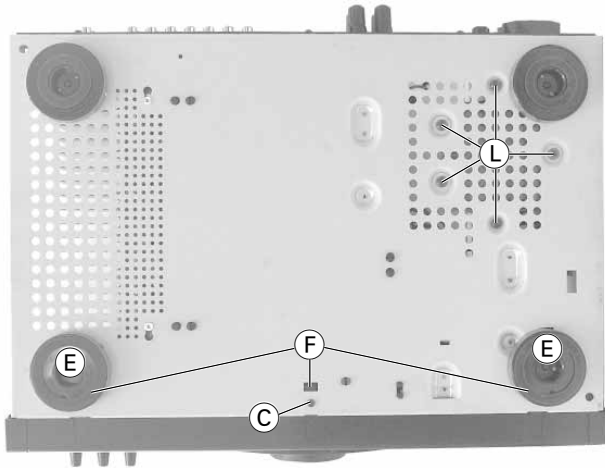


Fig. 3

5. Disassembling of the Potentiometer Board (Fig. 4)

- Pull off the volume knob.
- Disengage the nut (M).
- The PCB can now be removed. If necessary unsolder the wires (N).



Fig. 4

6. Zerlegen der Frontplatte (Fig. 5)

- Frontplatte ausbauen (Pkt. 2).
- Potiplatte ausbauen (Pkt. 5).
- Die 9 Schrauben (O) (Fig. 5) herausschrauben.
- Die Leiterplatte (P) kann jetzt abgenommen werden.

6. Disassembling of the Front Panel (Fig. 5)

- Remove the Front Board (para 2).
- Remove the potentiometer board (para 5).
- Undo 9 screws (O) (Fig. 5).
- The PCB (P) can now be removed.

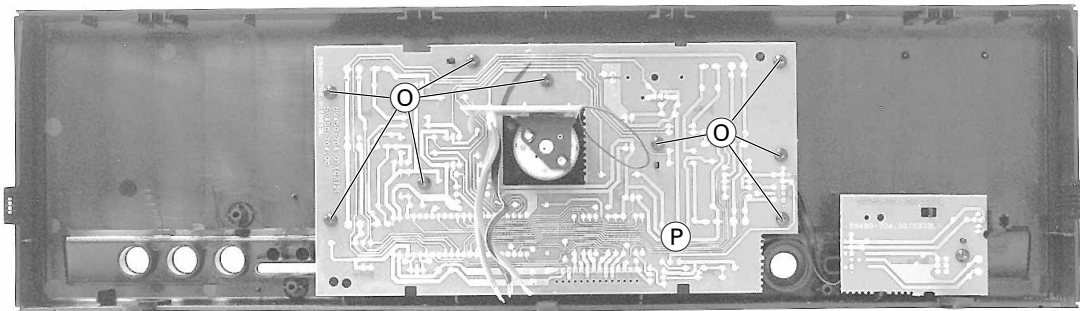


Fig. 5

7. Ausbau der Eingangswahltaeten (Fig. 6)

- Frontplatte zerlegen (Pkt. 6).
- Rastnase (R) austrasten und die Taste herausnehmen.

7. Disassemble the Input Selection Buttons (Fig. 6)

- Disassemble the front panel (para 6).
- Disengage the catch (R) and pull out the button.

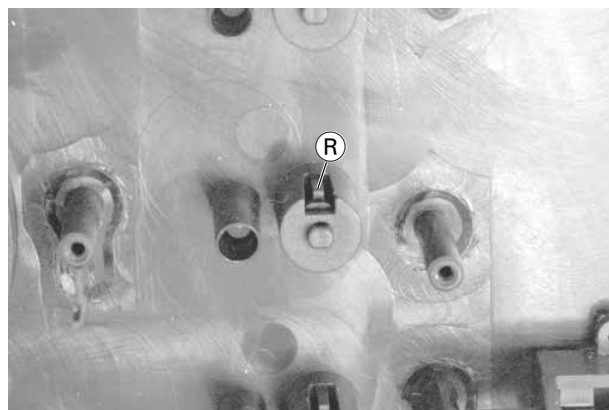


Fig. 6

OPERATION



Switching on and off

- When you want to switch your amplifier on, press the **POWER** button.
- The yellow LED in the middle of the button indicates that the unit is on.
- To deactivate the amplifier, press the yellow button marked **POWER OFF**.
- The standby mode will be selected when the power is switched on.
- When you want to activate your amplifier, press the **POWER** button.
- When you want to deactivate your amplifier, press the **POWER OFF** button.
- Note:** In order to keep power consumption at about 1W a stand-by function has been built in. This also disconnects any units connected to the AC outputs from the power supply. Active LED in the middle of the **POWER** button.
- When you want to switch your system on again, simply press one of the input selection buttons on the unit or on the remote control.

Stand by

- You can switch the system to **STAND BY** with the **O** button on the system remote control.
- This also disconnects any units connected to the AC outputs from the power supply. Active LED in the middle of the **POWER** button.
- When you want to switch your system on again, simply press one of the input selection buttons on the unit or on the remote control.



Note: In order to keep power consumption at about 1W a stand-by function has been built in. This also disconnects any units connected to the AC outputs from the power supply. Active LED in the middle of the **POWER** button.

Source selection

- To select a listening source, press either the corresponding button on the unit or the corresponding button on the remote control.
- The yellow LED next to the respective button on the amplifier comes on.



VOLUME

- The volume can be adjusted with the rotary **VOLUME** knob.
 - The volume knob can be controlled via the remote control with the **VOLUME +/-** buttons.
 - An illuminated dot in the **VOLUME** knob indicates the respective adjustment position.
- MUTING**
- The volume can be completely muted by pressing the **M** button on the remote control. This is useful, for example, if you want to take a break from the TV.
 - The muting function is used when recording a tape. This has no effect on the subsequent recording volume level as only the speakers are muted.
 - The click you hear when you press the **M** button comes from the relay which makes the muting function active.
 - The LED in the volume knob blinks when the **MUTING** function is active.
 - The **MUTING** function can be deactivated by pressing the **M** button again or by pressing the **VOLUME +/-** button on the remote control or any one of the input selection buttons.

SOUND CONTROL



BASS, TREBLE

- The **BASS** and **TREBLE** controllers can be used to individually adjust the higher and lower frequencies of the sound.
- In this way, you can compensate for surrounding acoustic irregularities which may be caused, for example, by sound reflection behaviour on walls with relatively large, empty surface areas, or "damping" caused by furniture or other objects.

BALANCE

- For effective stereo playback, it is important that the sound emanates equally from both speakers.
- Acoustic equilibrium can be distorted by furniture groups or the listener's position in a room, thus distorting the impression of stereo.
- The **BALANCE** controller can compensate for such situations.

LOUDNESS

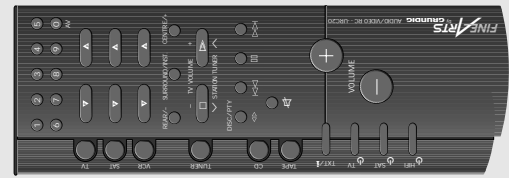
- Pressing the **LOUDNESS** button slightly accentuates the lower and higher frequencies during playback at a low volume.
- The effectiveness depends in part on the setting of the volume knob. This sound is thus optimally adapted to human hearing sensitivity, which is also dependent on the respective volume.
- If you have connected speakers which exhibit a great deal of bass, **LOUDNESS** should always remain off. In this way, you compensate for the emphasis of the lower frequencies.

DEFEAT

- The **DEFEAT** function bypasses all tone controls, bringing the sound unchanged to the speakers.
- This means that the influence of the **LOUDNESS**, **BASS** and **TREBLE** controls is removed from the signal path.

Note: **LOUDNESS** and **DEFEAT** can not be switched on at the same time.

SYSTEM REMOTE CONTROL



Changing the batteries

If the range of your infrared remote control seems to decrease, or if certain individual functions can no longer be carried out, the batteries may need to be replaced. To change the batteries, open the compartment on the back of the remote control. Ensure that the batteries are inserted properly (note the markings in the compartment).

In the interest of the environment: Remember that batteries must always be disposed of properly.

General controls

- O** HFI - To switch the HFI system to **STAND BY**.
- VOLUME +/-** - Controlling the volume of the amplifier.
- M** - Muting the speakers (provided the HFI-TV/VCR switch is in position HFI).

REAR - SURROUND - CENTRE INSTANT - / +

These controls are only used for Dolby Pro Logic amplifiers. For selecting and adapting the different surround modes.

TUNER

For selecting the tuner (radio) and to assign the RC commands to tuner keys.

10-button keypad - for directly selecting stations

- V** - for selecting next or previous TV stations.
- NUM** - To enter the station name input mode.
- 1-9** - To enter the station name input mode.

TX/1 - To change the information shown in the display or to enter the station name input mode.

PTY - For selecting the programme type (PTY) mode.

CD - For selecting the CD player and to assign the RC commands to CD keys.

10-button keypad for directly selecting tracks

- 1-9** - To switch the CD player to STOP.
- 0** - To start and restart playback of the CD player.
- ▶** - To select next or previous tracks on a CD.
- ◀** - To select next or previous tracks on a CD.

TX/1 - To change the information shown in the display (not useful for Grundig CD players CD21/22/23).

DISC - To enter disc selection mode when using a CD changer.

TAPE

▶ - For selecting the cassette deck and to assign the RC commands to TAPE keys.

- ▶** - To start playback.
- ▶** - To switch the cassette deck to STOP.
- ◀** - For fast winding of the tape in forward or reverse direction or to search for next or previous tracks during playback.
- <>** - For selecting the tape travel direction.

TV

For selecting the TV set (when connected to the SAT/TV input).

O TV - To switch the TV to **STAND BY**.

- V** - For selecting next or previous TV stations.
- NUM** - To enter the station name input mode.
- 1-9** - To enter the station name input mode.

TX/1 - For selecting direct selecting stations.

M - For muting the speakers.

TV VOLUME +/- - For controlling the volume of the TV.

SAT

For selecting the satellite receiver (when connected to the SAT/TV input).

O SAT - To switch the satellite receiver to **STAND BY**.

- V** - For selecting next or previous VCR stations.
- NUM** - To enter the station name input mode.
- 1-9** - To enter the station name input mode.

TX/1 - To change the information shown in the display (not useful for Grundig CD players CD21/22/23).

DISC - To enter disc selection mode when using a CD changer.

VCR

▶ - For selecting the video recorder (when connected to the VCR input).

- V** - For selecting next or previous VCR stations.
- NUM** - To enter the station name input mode.
- 1-9** - To enter the station name input mode.

SYSTEM REMOTE CONTROL

Operation of other brands

This remote control can be used to operate also other brands of TVs, Satellite receivers and Video recorders. The codes for these other brands have already been programmed into the remote control.

For TV sets you can select 5 different presets for Satellite receivers 3 and for Video recorders 10 different presets.

How to select the right presets?

- Keep the TV button pressed and press one of the numeric keys 1...5 of the numeric keys for approx. 6 seconds.
- To control if you have selected the right code, press e.g. one of the **V** buttons on the remote control, the light preset.
- If you TV does not react, try to select another preset.

For Satellite receivers

- Keep the SAT button pressed and press number 1, 2 or 3 of the numeric keys for approx. 6 seconds.
- To control if you have selected the right code, press e.g. one of the **V** buttons.
- If your Satellite receiver reacts to this command you have selected the right preset.
- If you Satellite receiver does not react, try to select another preset.

For Video recorders

- Keep the VCR button pressed and press one of the numeric keys 1...10 for approx. 6 seconds.
- To control if you have selected the right code, press e.g. one of the **V** buttons.
- If your VCR reacts to this command you have selected the right preset.
- If your VCR does not react, try to select another preset.

D

Abgleichvorschriften

Meßgeräte: Digitalvoltmeter

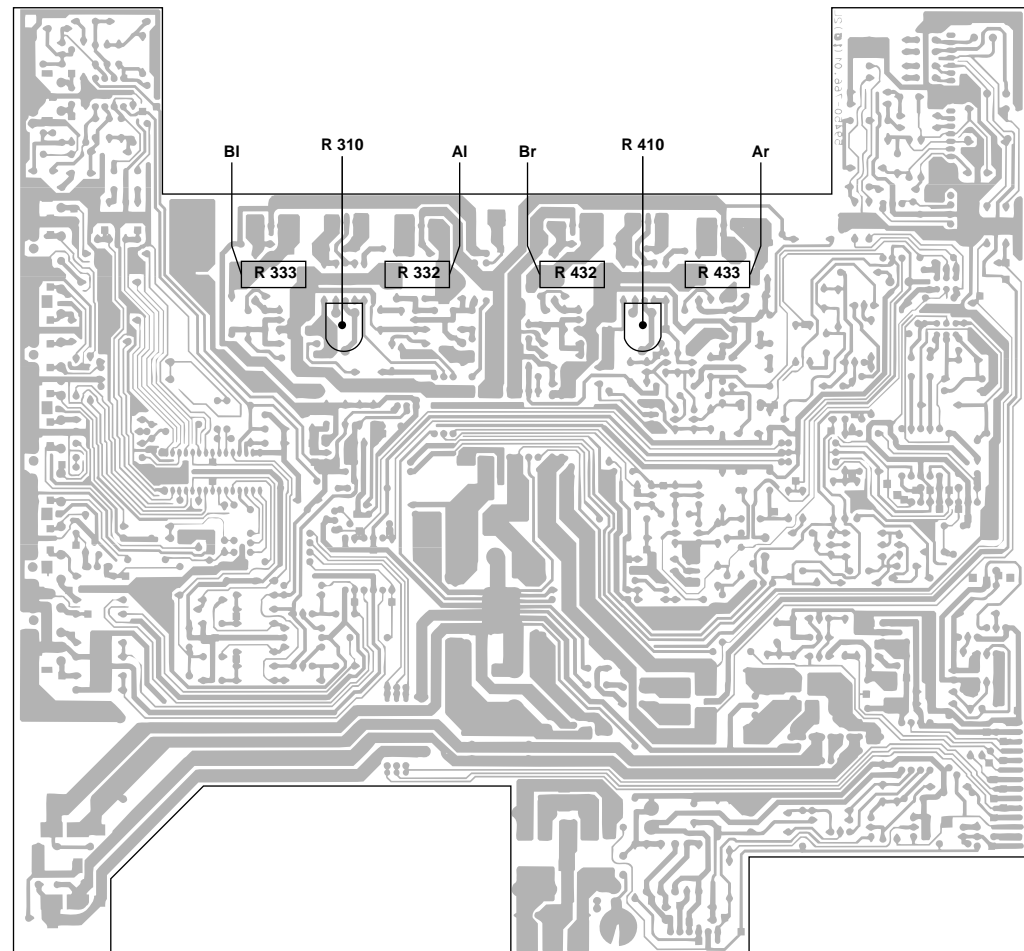
| Abgleich | Vorbereitung | Abgleichprozedur |
|-----------|--|---|
| Ruhestrom | Kein Eingangssignal. Lautstärke auf Null. Gerät mindestens 2 min warmlaufen lassen. Linker Kanal: Digitalvoltmeter zwischen Meßpunkte AI und BI. Rechter Kanal: Digitalvoltmeter zwischen Meßpunkte Ar und Br. | Linker Kanal: Mit R 310 auf 6,0mV ± 0,5mV einstellen. Rechter Kanal: Mit R 410 auf 6,0mV ± 0,5mV einstellen. |

GB

Adjustment Procedures

Test equipment: Digital voltmeter

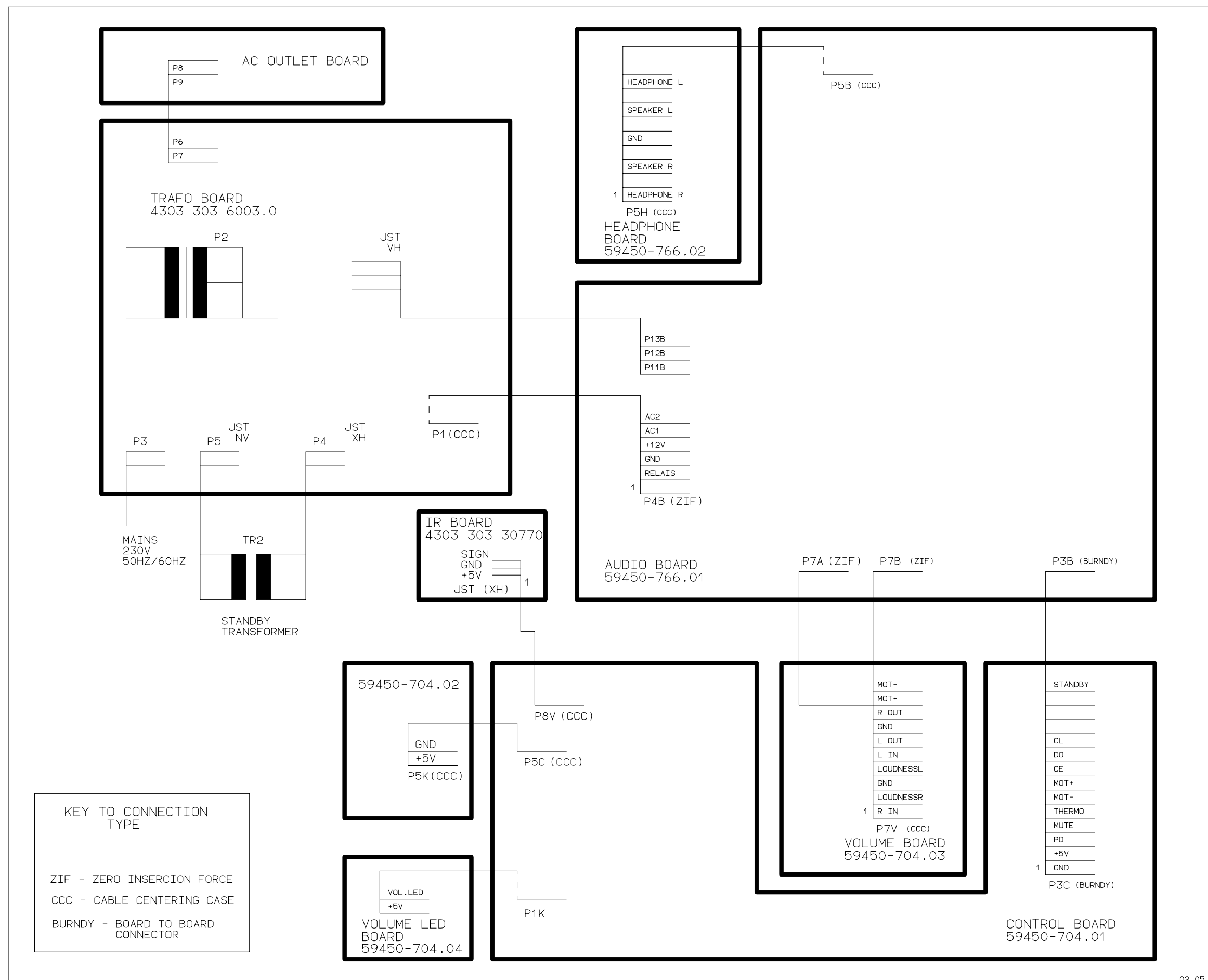
| Adjustment | Preparation | Adjustment Procedure |
|-------------------|--|---|
| Quiescent current | No Input Signal. Volume to Minimum. Turn on the set for at least 2 minutes. Left channel: Digitalvoltmeter between testpoints AI and BI. Right channel: Digitalvoltmeter between testpoints Ar and Br. | Left channel: Adjust with R 310 for 6.0mV ± 0.5mV . Right channel: Adjust with R 410 for 6.0mV ± 0.5mV . |





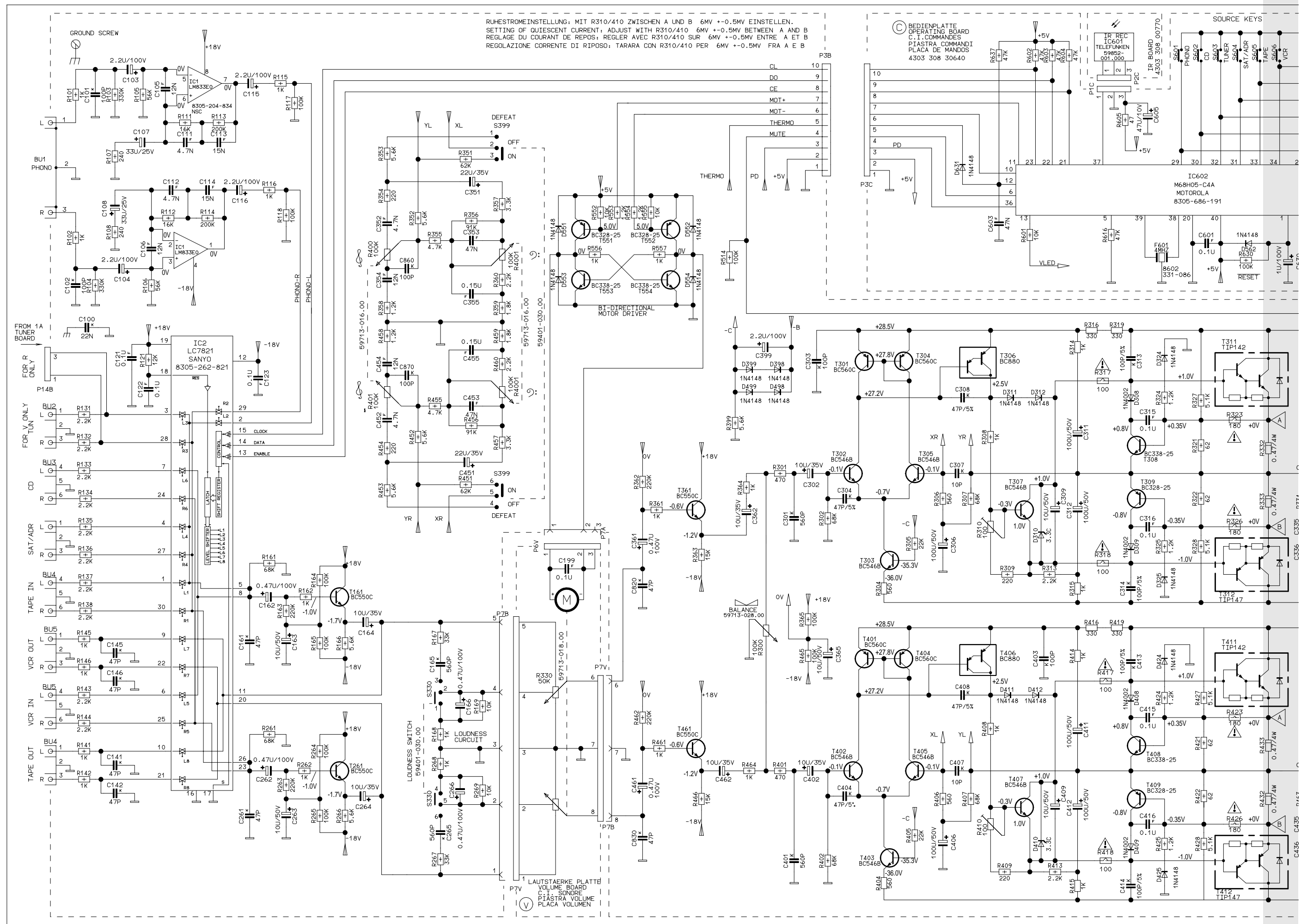
Schaltpläne und Druckplattenabbildungen / Circuit Diagrams and Layout of PCBs

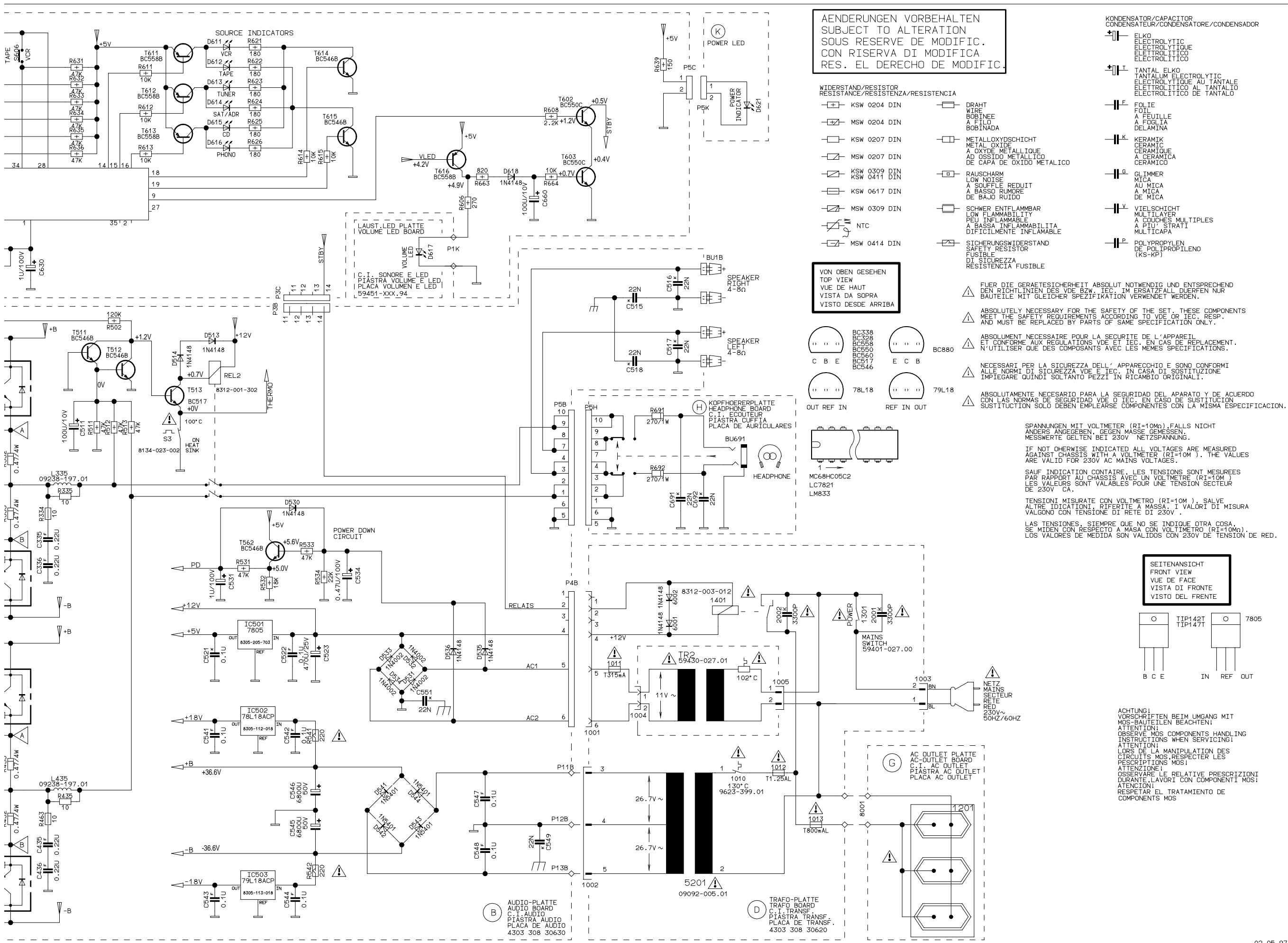
Verdrahtungsplan / Wiring Diagram



02.05.97





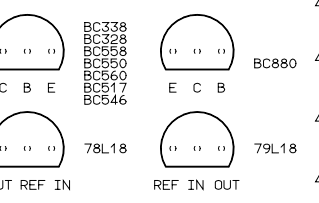


AENDERUNGEN VORBEHALTEN
 SUBJECT TO ALTERATION
 SOUS RESERVE DE MODIFIC.
 CON RISERVA DI MODIFICA
 RES. EL DERECHO DE MODIFIC.

- WIDERSTAND/RESISTOR
 RESISTANCE/RESISTENZA/RESISTENCIA
- KSW 0204 DIN
 - MSW 0204 DIN
 - KSW 0207 DIN
 - MSW 0207 DIN
 - KSW 0309 DIN
 - KSW 0411 DIN
 - KSW 0617 DIN
 - MSW 0309 DIN
 - NTC
 - MSW 0414 DIN
- DRAHT WIRE BOBINÉE A FILO BOBINADA
- METALLOXYDSCHICHT METAL OXIDE A OXYDE METALLIQUE AD OSSIDO METALLICO DE CAPA DE OXIDO METALICO
- RAUSCHARM LOW NOISE A SOUFFLE REDUIT A BASSO RUMORE DE BAJO RUIDO
- SCHWER ENTFLAMMBAR LOW FLAMMABILITY PEU INFLAMMABLE A BASSA INFLAMMABILITA DIFFICILMENTE INFLAMMABLE
- SICHERUNGSWIDERSTAND SAFETY RESISTOR FUSIBLE DI SICUREZZA RESISTENCIA FUSIBLE

- KONDENSATOR/CAPACITOR
 CONDENSATEUR/CONDENSATORE/CONDENSADOR
- ELKO ELECTROLYTIC ELECTROLYTIQUE ELETROLITICO ELECTROLITICO
 - TANTAL ELKO TANTALUM ELECTROLYTIC ELECTROLYTIQUE AU TANTALE ELETROLITICO AL TANTALIO ELECTROLITICO DE TANTALO
 - FOLIE FOIL A FEUILLE A FOGLIA DELAMINA
 - KERAMIK CERAMIC CERAMIQUE A CERAMICA CERAMICO
 - GLIMMER MICA AU MICA A MICA DE MICA
 - VIELSCHICHT MULTILAYER A COUCHES MULTIPLES A PIU' STRATI MULTICAPPA
 - POLYPROPYLEN DE POLIPROPILENO (KS-KP)

VON OBEN GESEHEN
 TOP VIEW
 VUE DE HAUT
 VISTA DA SOPRA
 VISTO DESDE ARRIBA



FUER DIE GERAETESICHERHEIT ABSOLUT NOTWENDIG UND ENTSPRECHEND DEN RICHTLINIEN DES VDE BZW. IEC. IM ERSATZFALL DUERFEN NUR BAUTEILE MIT GLEICHER SPEZIFIKATION VERWENDET WERDEN.

ABSOLUTELY NECESSARY FOR THE SAFETY OF THE SET. THESE COMPONENTS MEET THE SAFETY REQUIREMENTS ACCORDING TO VDE OR IEC RESP. AND MUST BE REPLACED BY PARTS OF SAME SPECIFICATION ONLY.

ABSOLUMENT NECESSAIRE POUR LA SECURITE DE L'APPAREIL ET CONFORME AUX REGULATIONS VDE ET IEC. EN CAS DE REMPLACEMENT, N'UTILISER QUE DES COMPOSANTS AVEC LES MEMES SPECIFICATIONS.

NECESSARI PER LA SICUREZZA DELL' APPARECCHIO E SONO CONFORMI ALLE NORME DI SICUREZZA VDE E IEC. IN CASA DI SOSTITUZIONE IMPIEGARE QUINDI SOLTANTO PEZZI IN RICAMBIO ORIGINALI.

ABSOLUTAMENTE NECESARIO PARA LA SEGURIDAD DEL APARATO Y DE ACUERDO CON LAS NORMAS DE SEGURIDAD DE O IEC. EN CASO DE SUSTITUCION SUSTITUCION SOLO DEBEN EMPLEARSE COMPONENTES CON LA MISMA ESPECIFICACION.

SPANNUNGEN MIT VOLTMETR (RI=10M Ω) FALLS NICHT ANDERS ANGEZEIGT, GEGEN MASSE GEMESSEN. MESSWERTE GELTEN BEI 230V NETZSPANNUNG.

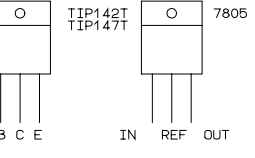
IF NOT OTHERWISE INDICATED ALL VOLTAGES ARE MEASURED AGAINST CHASSIS WITH A VOLTMETER (RI=10M Ω). THE VALUES ARE VALID FOR 230V AC MAINS VOLTAGES.

SAUF INDICATION CONTRAIRE, LES TENSIONS SONT MESUREES PAR RAPPORT AU CHASSIS AVEC UN VOLTMETRE (RI=10M Ω). LES VALEURS SONT VALABLES POUR UNE TENSION SECTEUR DE 230V CA.

TENSIONI MISURATE CON VOLTMETRO (RI=10M Ω). SALVE ALTRE IDICAZIONI, RIFERITE A MASSA. I VALORI DI MISURA VALGONO CON TENSIONE DI RETE DI 230V.

LAS TENSIONES, SIEMPRE QUE NO SE INDIQUE OTRA COSA, SE MIDEN CON RESPECTO A MASA CON VOLTMETRO (RI=10M Ω). LOS VALORES DE MEDIDA SON VALIDOS CON 230V DE TENSION DE RED.

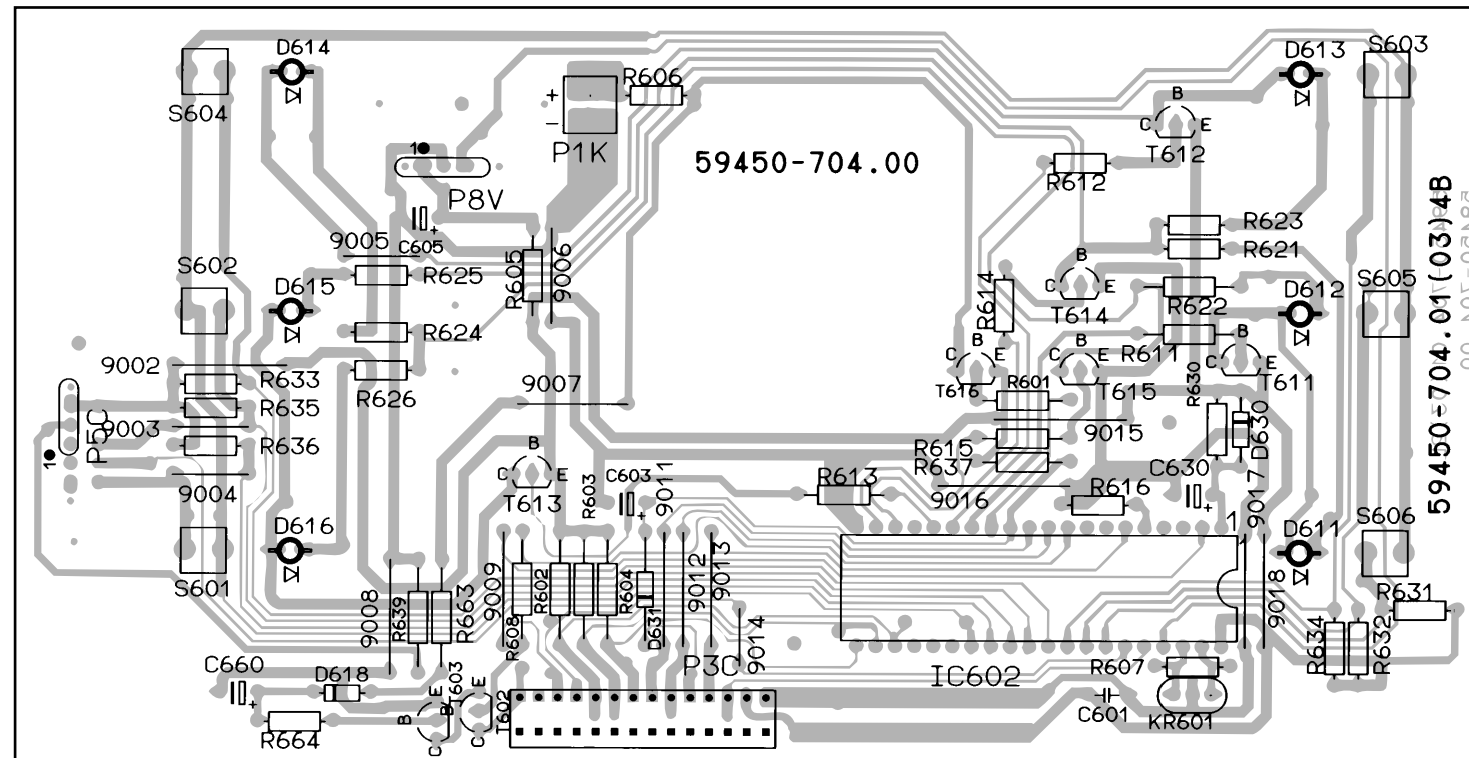
SEITENANSICHT
 FRONT VIEW
 VUE DE FACE
 VISTA DI FRONTE
 VISTO DEL FRENTE



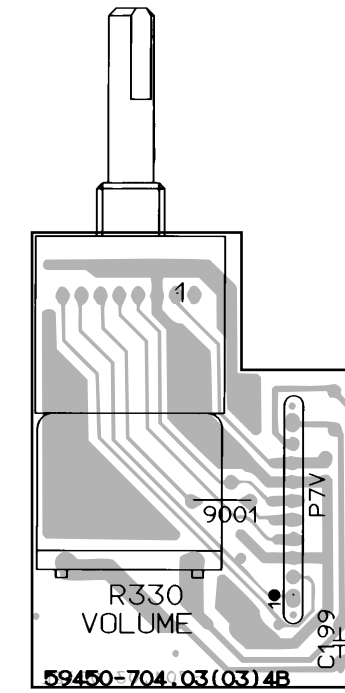
ACHTUNG! VORSCHRIFTEN BEIM UMGANG MIT MOS-BAUTEILEN BEACHTEN!
 ATTENTION! OBSERVE MOS COMPONENTS HANDLING INSTRUCTIONS WHEN SERVICING!
 ATTENTION! LORS DE LA MANIPULATION DES CIRCUITS MOS, RESPECTER LES PRESCRIPTIONS MOS!
 ATTENZIONE! OSSERVARE LE RELATIVE PRESCRIZIONI DURANTE I LAVORI CON COMPONENTI MOS!
 ATENCION! RESPETAR EL TRATAMIENTO DE COMPONENTS MOS



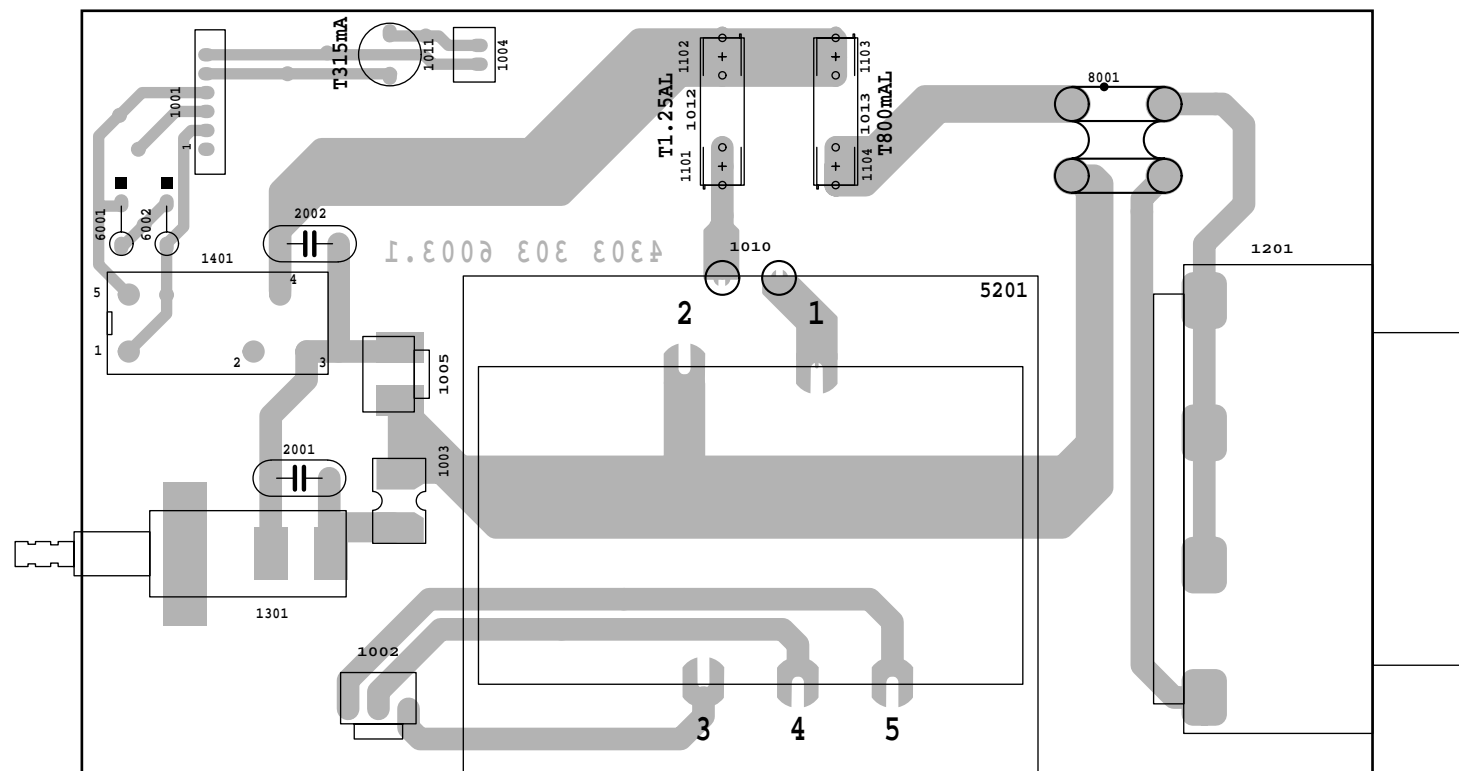
Bedienplatte / Operating Board



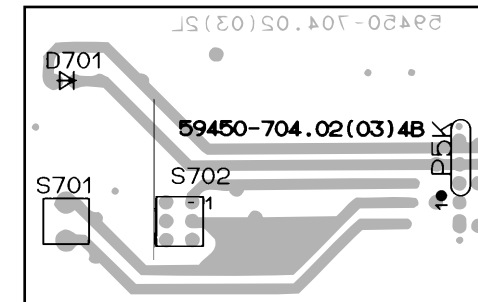
Lautstärke-Platte / Volume Board



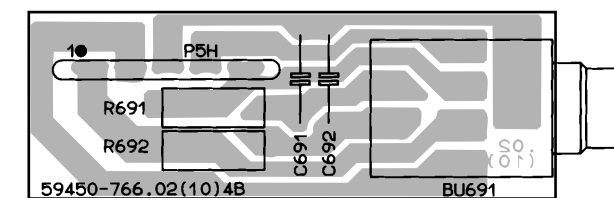
Trafo-Platte / Transformer Board



Tasten-Platte / Button Board

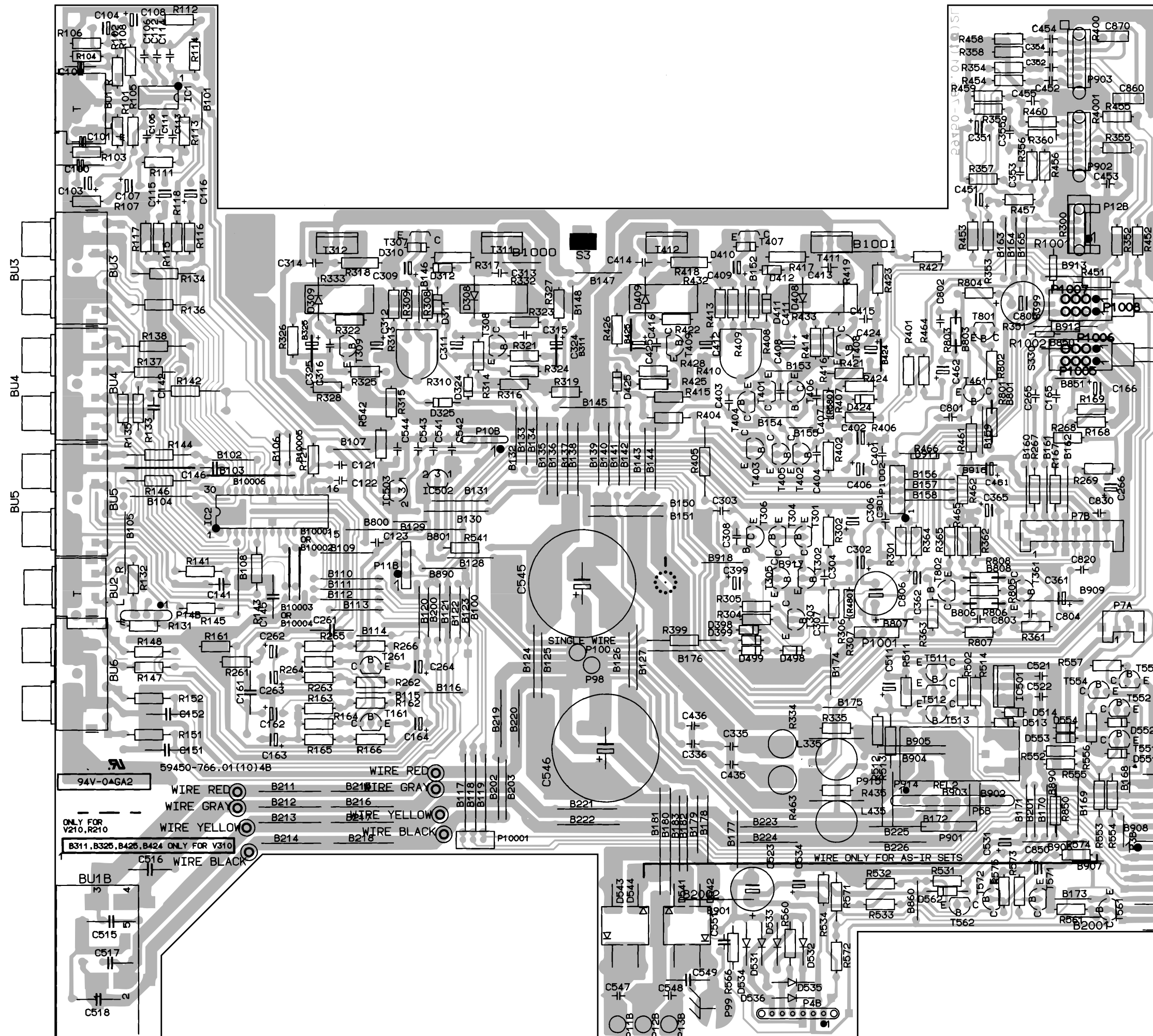


Kopfhörer-Platte / Headphone Board



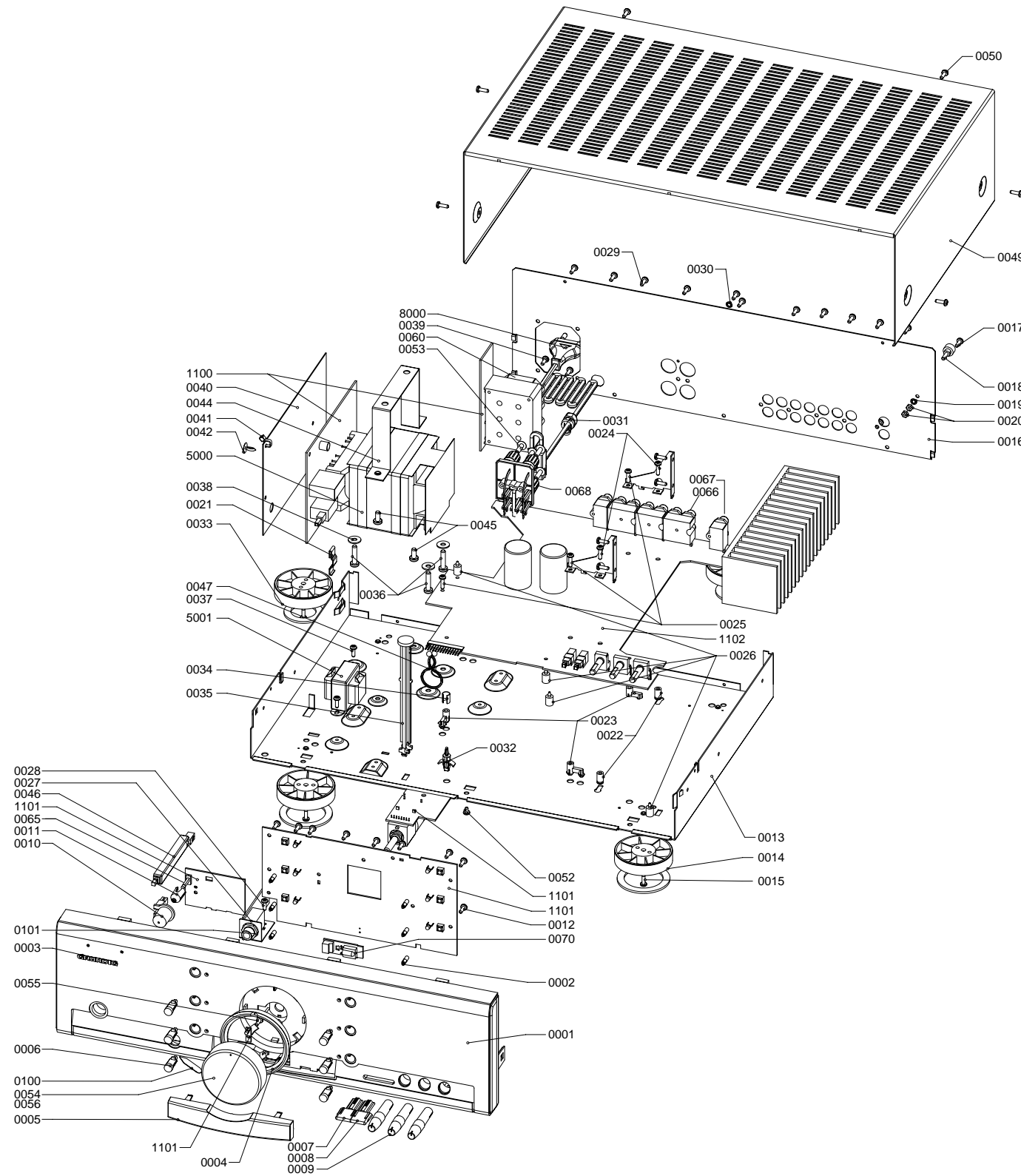


Hauptplatte / Main Board





Ersatzteilliste und Explosionszeichnung / Spare Parts List and Exploded View



GRUNDIG AUDIO/HIFI V 21

Ersatzteilliste Spare Parts List

09 / 97

Table with columns: POS. NR., SACHNUMMER, ANZ., BEZEICHNUNG, DESCRIPTION, and POS. NR., SACHNUMMER, BEZEICHNUNG, DESCRIPTION. Lists various electronic components and their part numbers.

Table with columns: POS. NR., SACHNUMMER, BEZEICHNUNG, DESCRIPTION. Lists various electronic components like diodes, capacitors, and resistors.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Bk *32700#