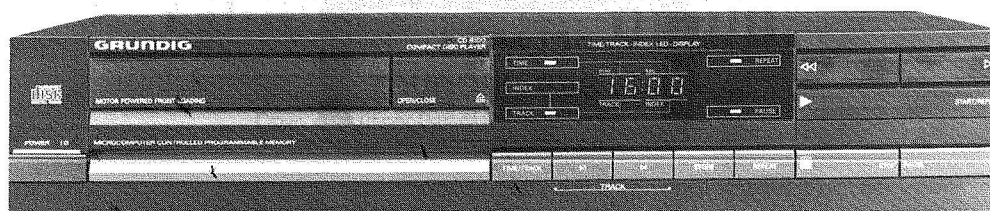
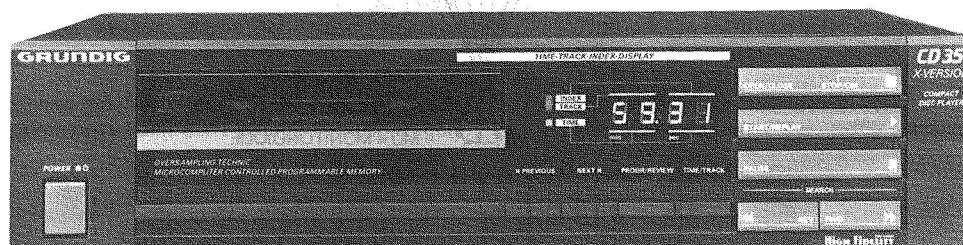


# SERVICE MANUAL

5/88

CD 8100  
CD 35 X

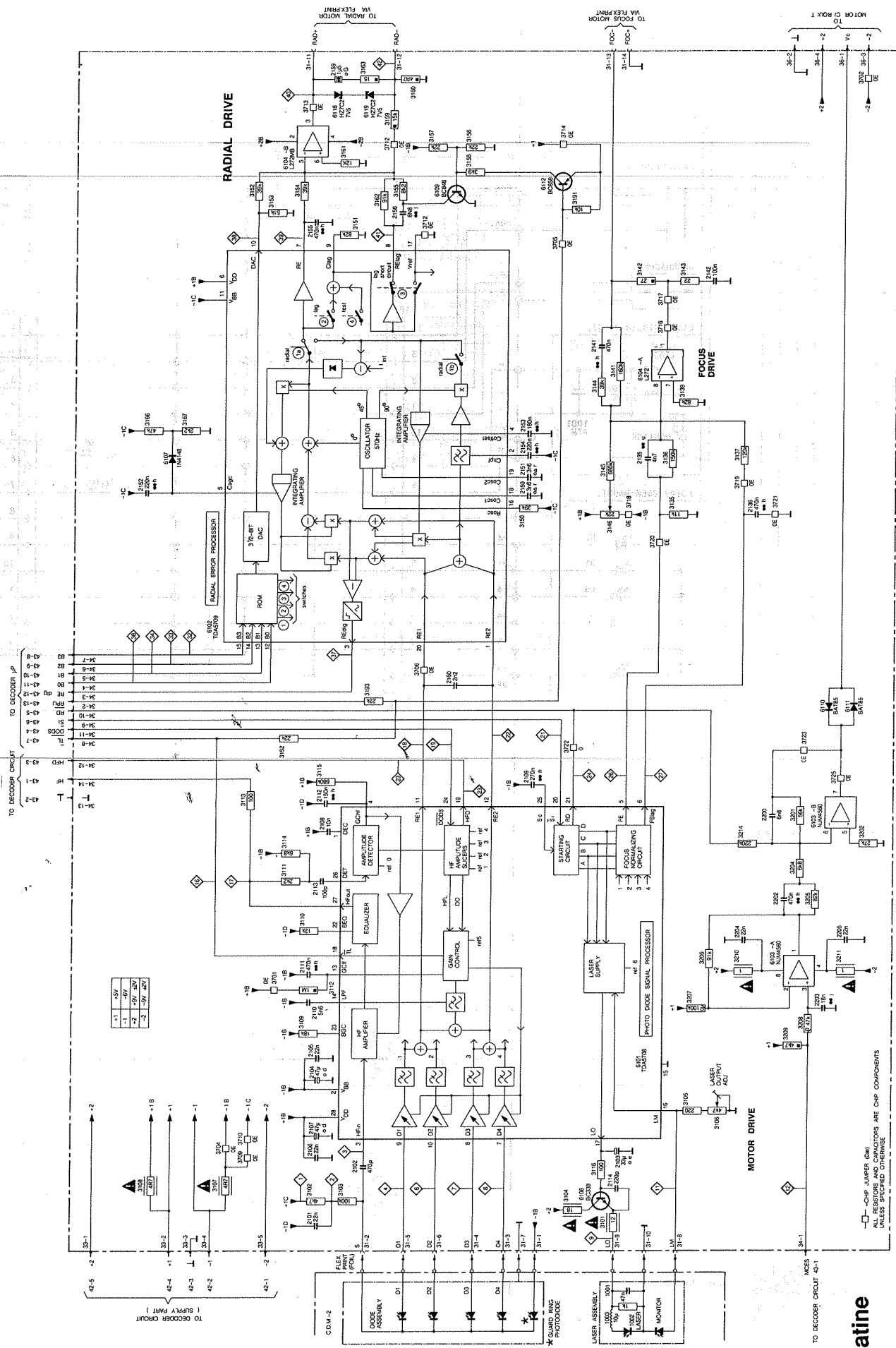


## D Inhaltsverzeichnis

## GB Contents

Sicherheitshinweise Laser	2
Sicherheitshinweise VDE	3
Allgemeine Hinweise	3
MOS-Hinweise	4
Abkürzungen der CD-Technik	4
Beschreibung der Signale	5 - 12
Einstellungen auf der Servo-Platine	13
Technische Daten	14
µP-Serviceprogramm	14
Ausbauhinweise	15
Laufwerksausbau	16
Lademechanismus	17 - 18
Schaltplan	19 - 26
Bedienteil Druckplatte	27
Netzanschlußplatte	29
Decoderplatine	30 - 31
Servoplatine	32 - 34
Explosionsdarstellungen	35 - 37
Ersatzteillisten	38 - 44

Safety instructions Laser	2
Safety instructions VDE	3
General hints	3
MOS-Handling instructions	4
Abbreviations CD-technologie	4
Descriptions of signals	5 - 12
Adjustments on the servo-board	13
Technical data	14
µP-service program	14
Disassembling instructions	15
Disassembly of CD-drive unit	16
Loading	17 - 18
Circuit diagram	19 - 26
Control panel	27
Mains connector	29
Decoder printed circuit board	30 - 31
Servo printed circuit board	32 - 34
Exploded views	35 - 37
Spare parts lists	38 - 44



**Servoplate**  
**Servo-pcb**

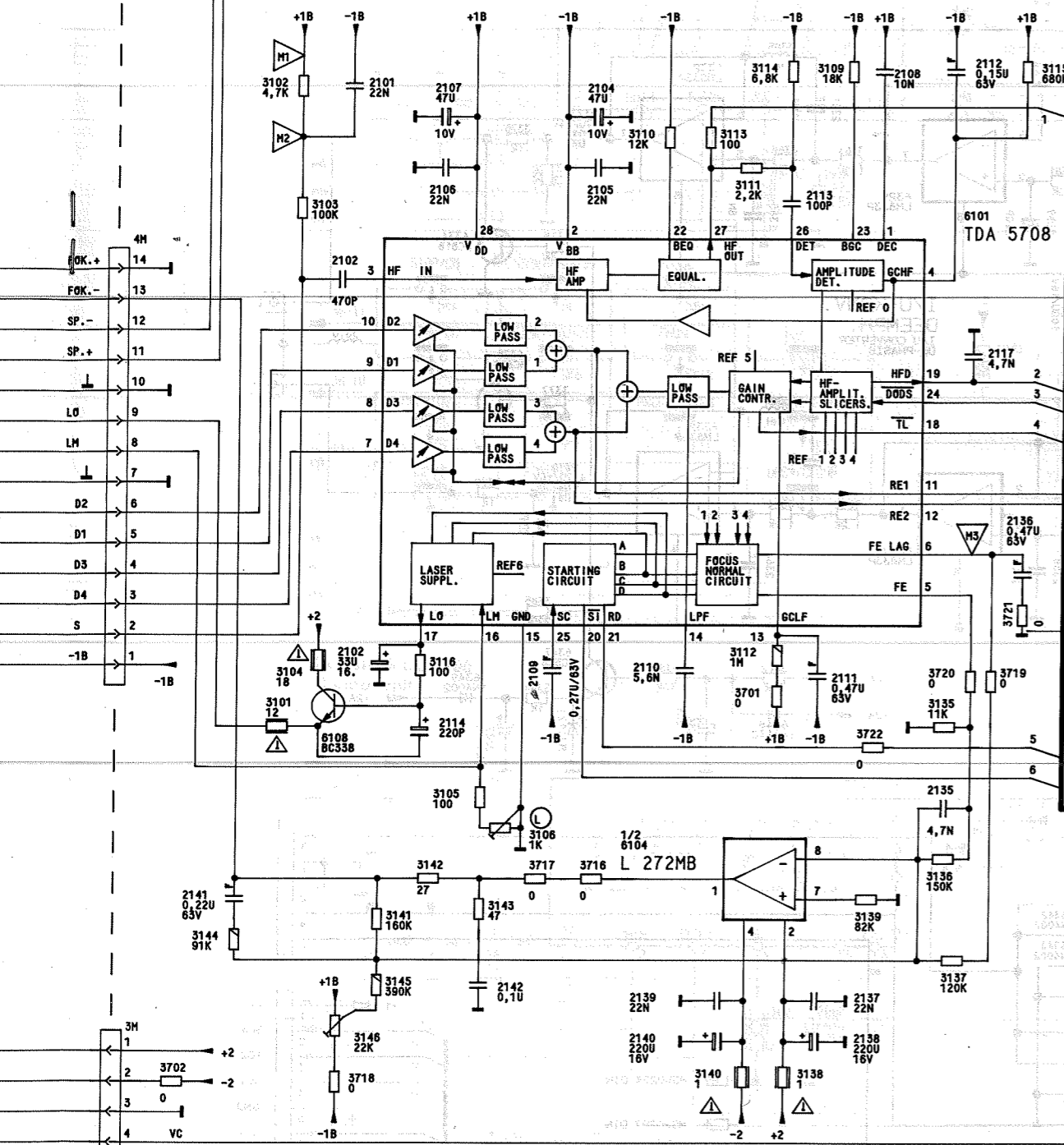


ABTASTSIGNAL-AUFBEREITUNG UND FOKUSREGELUNG

SCANNING SIGNAL PROCESSING AND FOCUS CONTROL

TRAITEMENT DU SIGNAL DE LECTURE ET REGLAGE DU FOCUS

ELABORAZIONE SEGNALE D'ESPLORAZIONE E CONTROLLO DI FOCOLIZZAZIONE

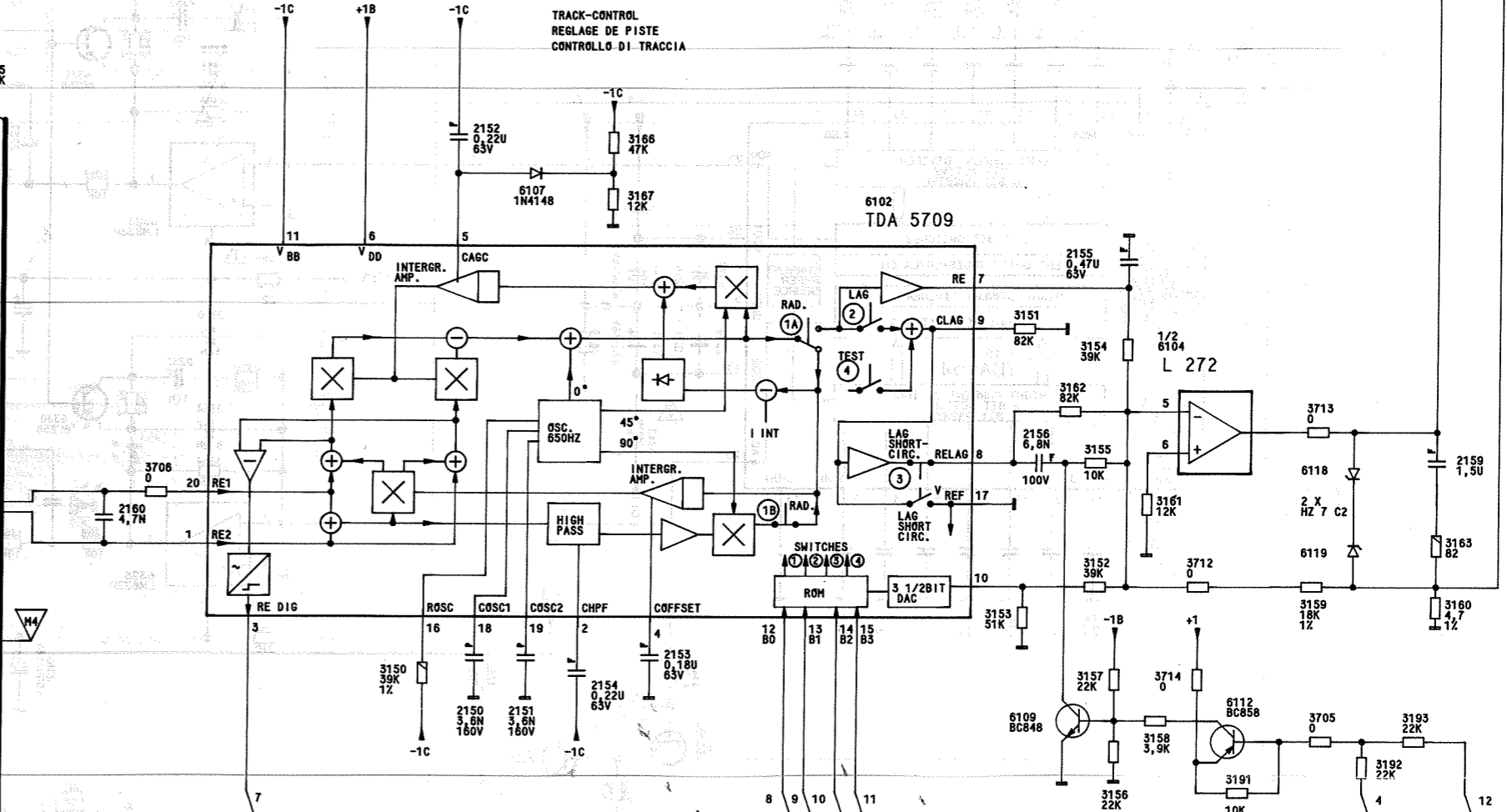


SPURREGELUNG

TRACK-CONTROL

REGLAGE DE PISTE

CONTROLLO DI TRACCIA

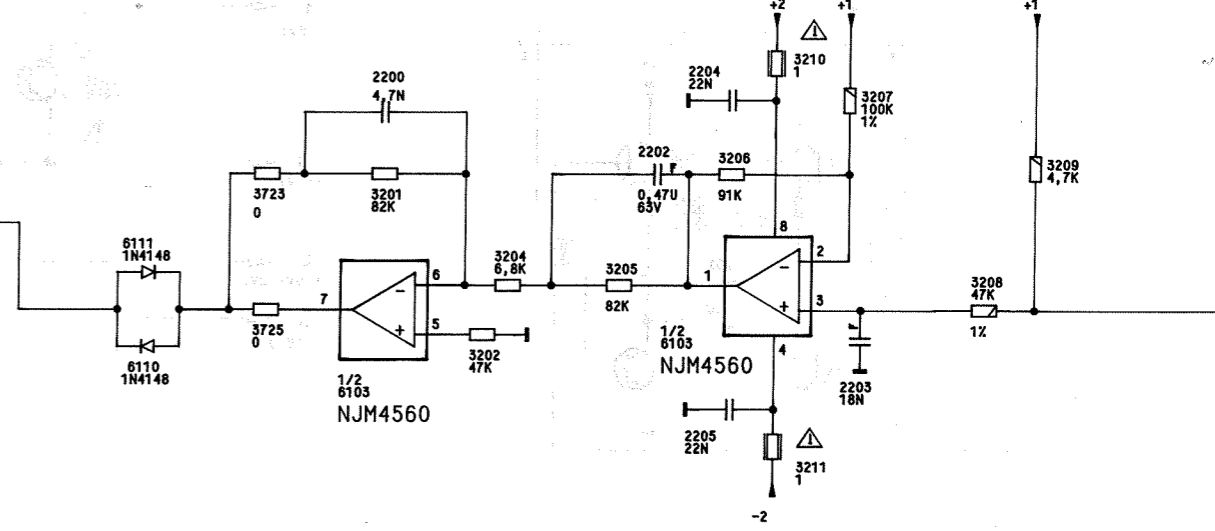


DISC-MOTORSTEUERUNG

DISC-MOTOR-CONTROL

COMM. MOTEUR DISQUE

COMM. MOTORE DEL DISCO



ALLE NICHT GEKENNZEICHNETEN KONDENSATOREN UND WIDERSTÄNDE SIND CHIP-BAUTEILE.  
 ALL CAPACITORS AND RESISTORS ARE CHIP COMPONENTS UNLESS SPECIFIED OTHERWISE.  
 SAUF INDICATION CONTRAIRE, TOUTS LES CONDENSATEURS ET TOUTES LES RESISTANCES SONT DES COMPOSANTS CHIP.  
 TUTTI I CONDENSATORI E LE RESISTENZE SONO COMPONENTI CHIP, SE NON CONTRASSEGNA TI DIVERSAMENTE.

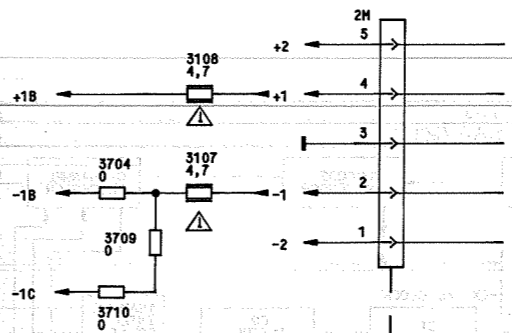
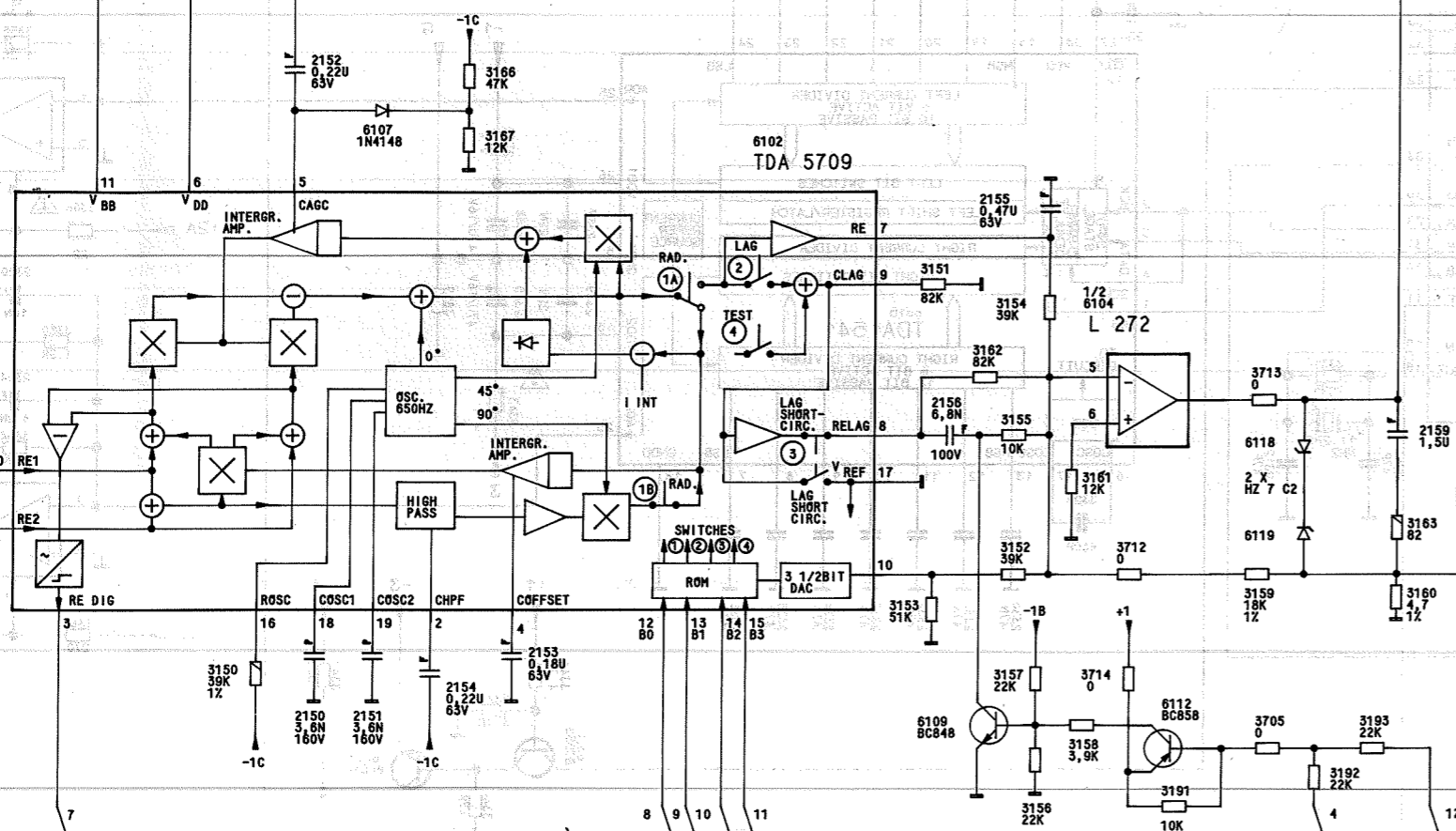
- MSW 0204 DIN
- MSW 0207 DIN
- SCHMER ENTLAMMBAR  
LOW FLAMMABILITY  
PEU INFLAMMABLE  
A BASSA INFLAMMABILITA
- ELKO  
ELECTROLYTIC  
ELECTROLITICO
- POLYPROPYLEN  
(KS-KP)
- FOLIE  
A FEUILLE  
A FOGLIA
- KERAMIK  
CERAMIK  
A CERAMICA

SERVOPLATTE  
SERVO BOARD  
C. SERVO  
PIASTRA SERVO  
59800-704.00

M1 ▽ ▽ M2

M3 ▽ ▽ M4

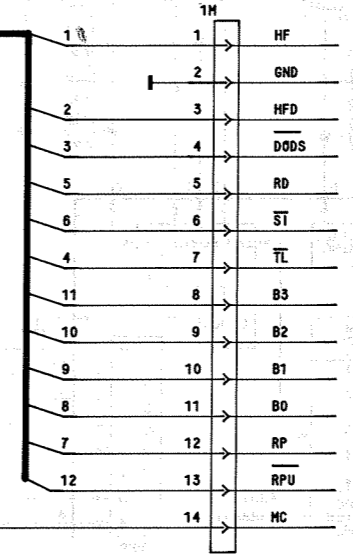
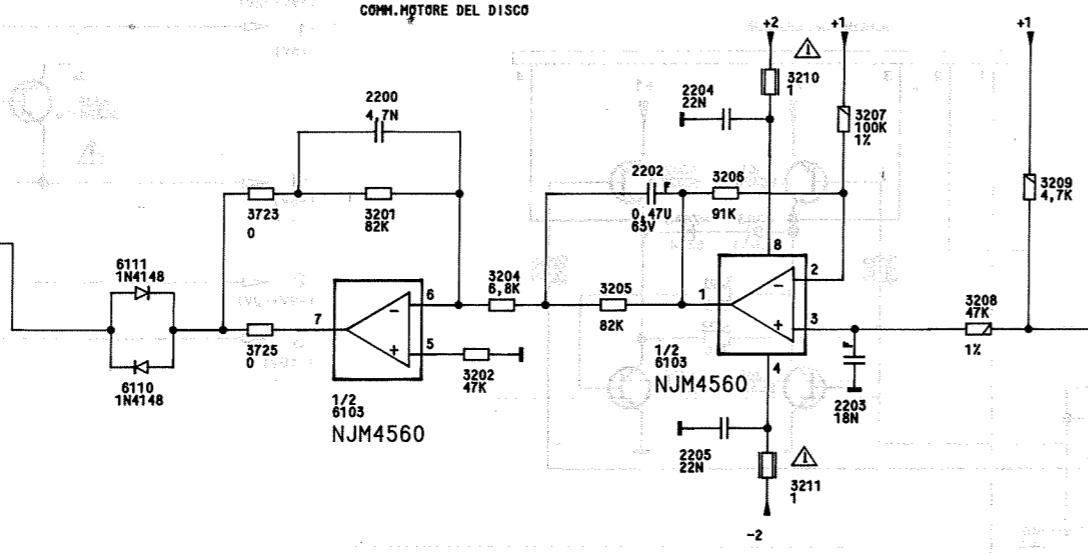
**SPURREGELUNG**  
TRACK-CONTROL  
REGLAGE DE PISTE  
CONTROLO DI TRACCIA



+1	+5V
-1	-6V
+2	+9V+2V
-2	-9V+2V

- VERST. ALLG. AMP. GENERAL AMP. ORD. AMP. COMUNE
- TIEFPASSVERST. LOW-PASS-AMP. AMPLIF. PASSE-BAS AMPLIF. PASSA-BASSO
- HOCHPASSVERST. HIGH-PASS-AMP. AMPLIF. PASSE-HAUT AMP. PASSA-ALTO
- GEREGLETER VERST. CONTR. AMPLIFIER AMP. CONTR. CONTR. AMP.
- DIFFERENZ-VERST. DIFFERENCE AMPLIFIER AMPLIFICATEUR DIFFERENCIALE AMPLIFICATORE DIFFERENZIALE
- STEUERBARER VERST. CONTROLABLE AMPLIFIER AMPLIFICATEUR REGLABLE AMPLIFICATORE PILOTABILE
- SCHMITTRIGGER SCHMITT-TRIGGER TRIGGER DE SCHMITT CIRC. DI SGANCIO DI SCHMITT
- ELECTR. SCHALTER ELECTR. SWITCH COMMUTATEUR ELECTR. COMMUTAZIONE ELETR.
- MISCHER-VERST. MIXER-AMP. MELANGEUR AMP. MISCELATRICE AMP.
- DEMODULATOR DEMODULATOR DEMODULATEUR DEMODULATORE
- TEILER DIVIDER DIVISOR PARTITORE
- MISCHER MIXER MELANGEUR MISCELATRICE

**DISC-MOTORSTEUERUNG**  
DISC-MOTOR-CONTROL  
COMM. MOTEUR DISQUE  
COMM. MOTORE DEL DISCO

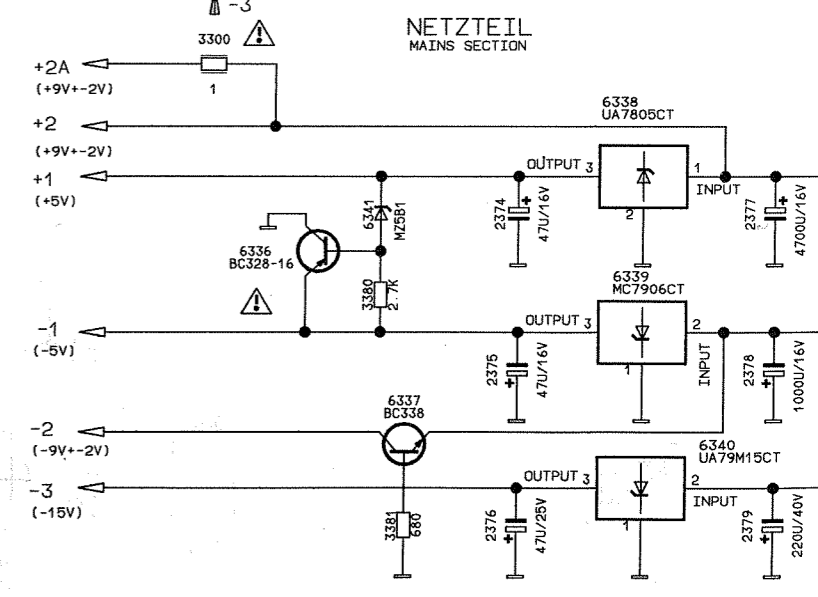
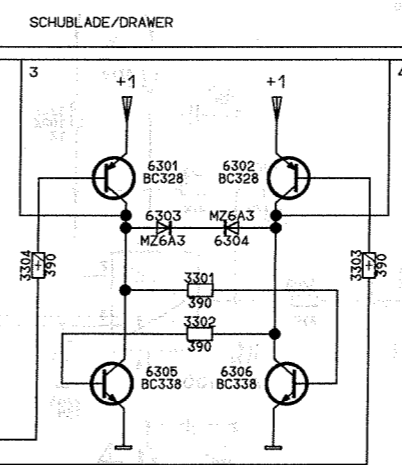
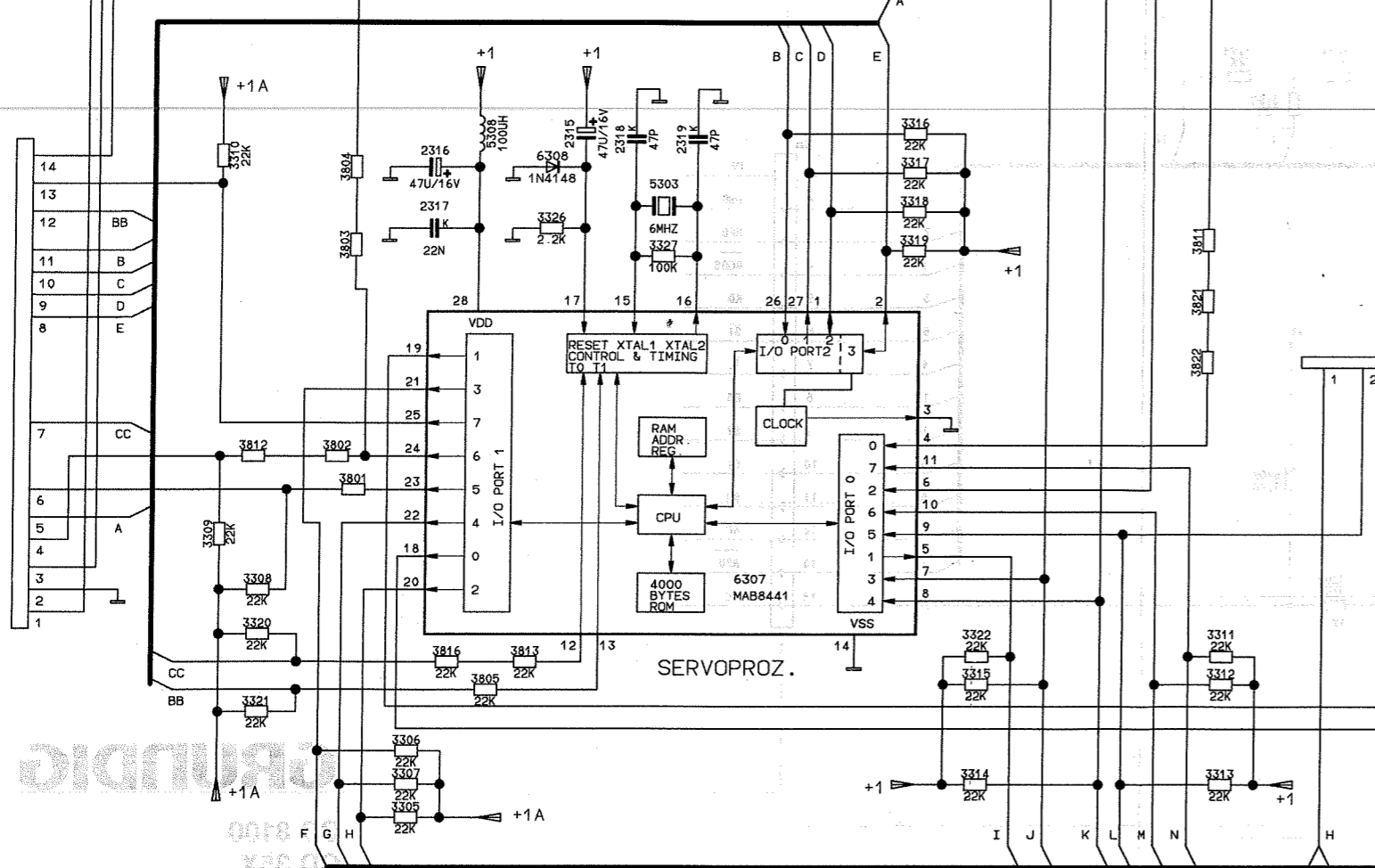
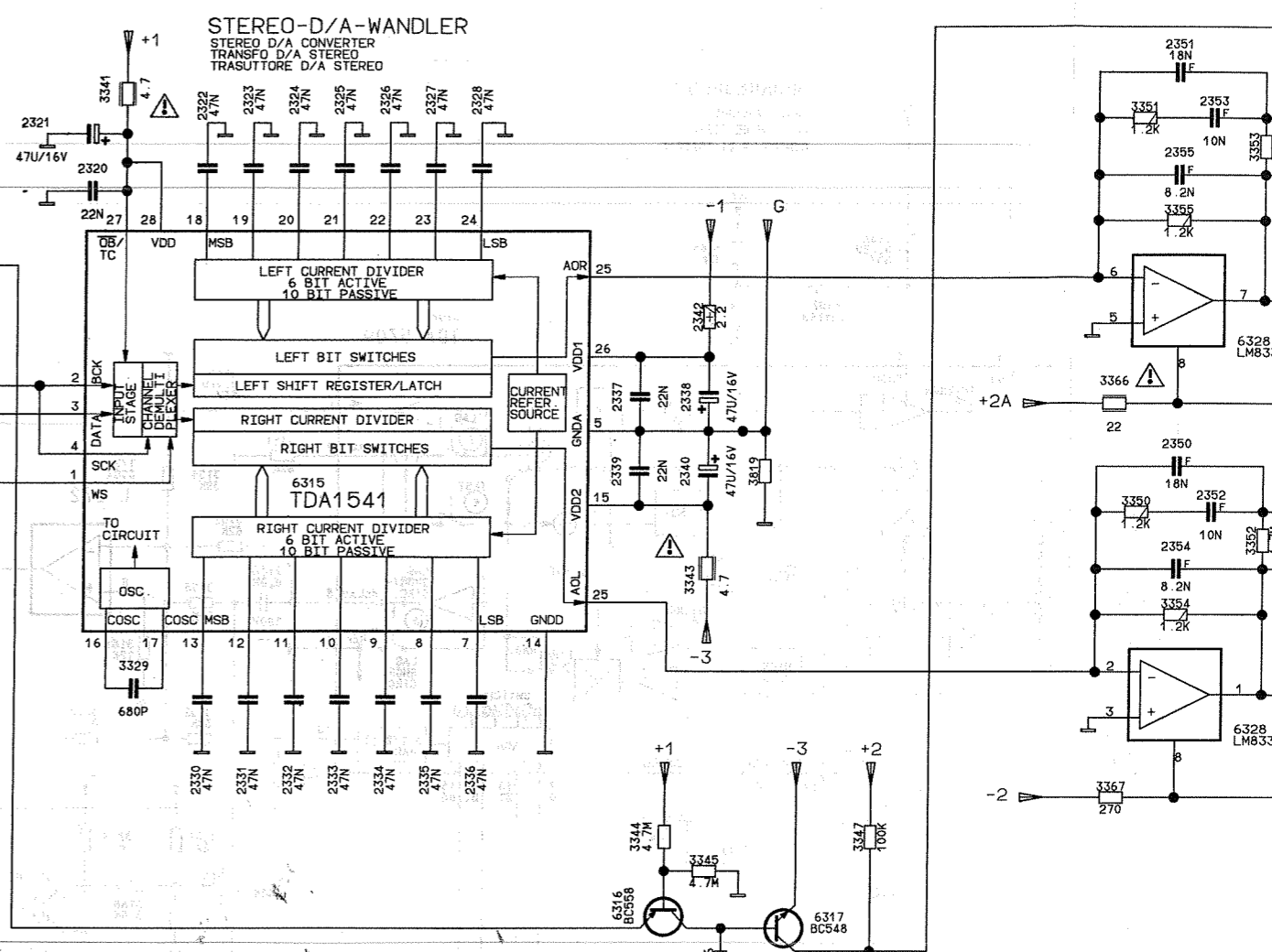
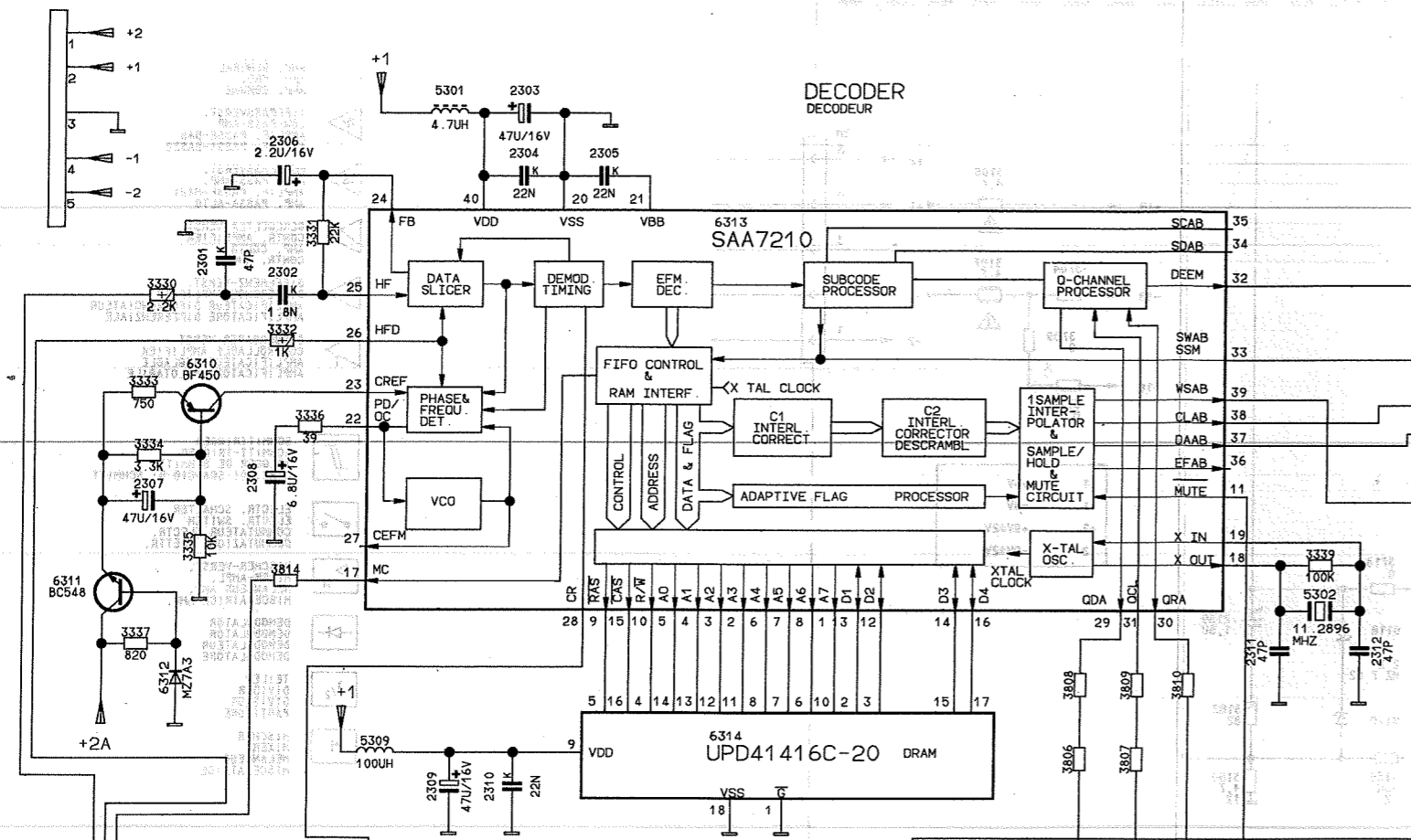


- ELKO ELECTROLYTIC ELECTROLYTIQUE ELETTROLITICO
- POLYPROPYLEN (KS-KP)
- FOLIE FOLI A FEUILLE A FOGLIA
- KERAMIK CERAMIK CERAMIQUE A CERAMICA

**GRUNDIG**

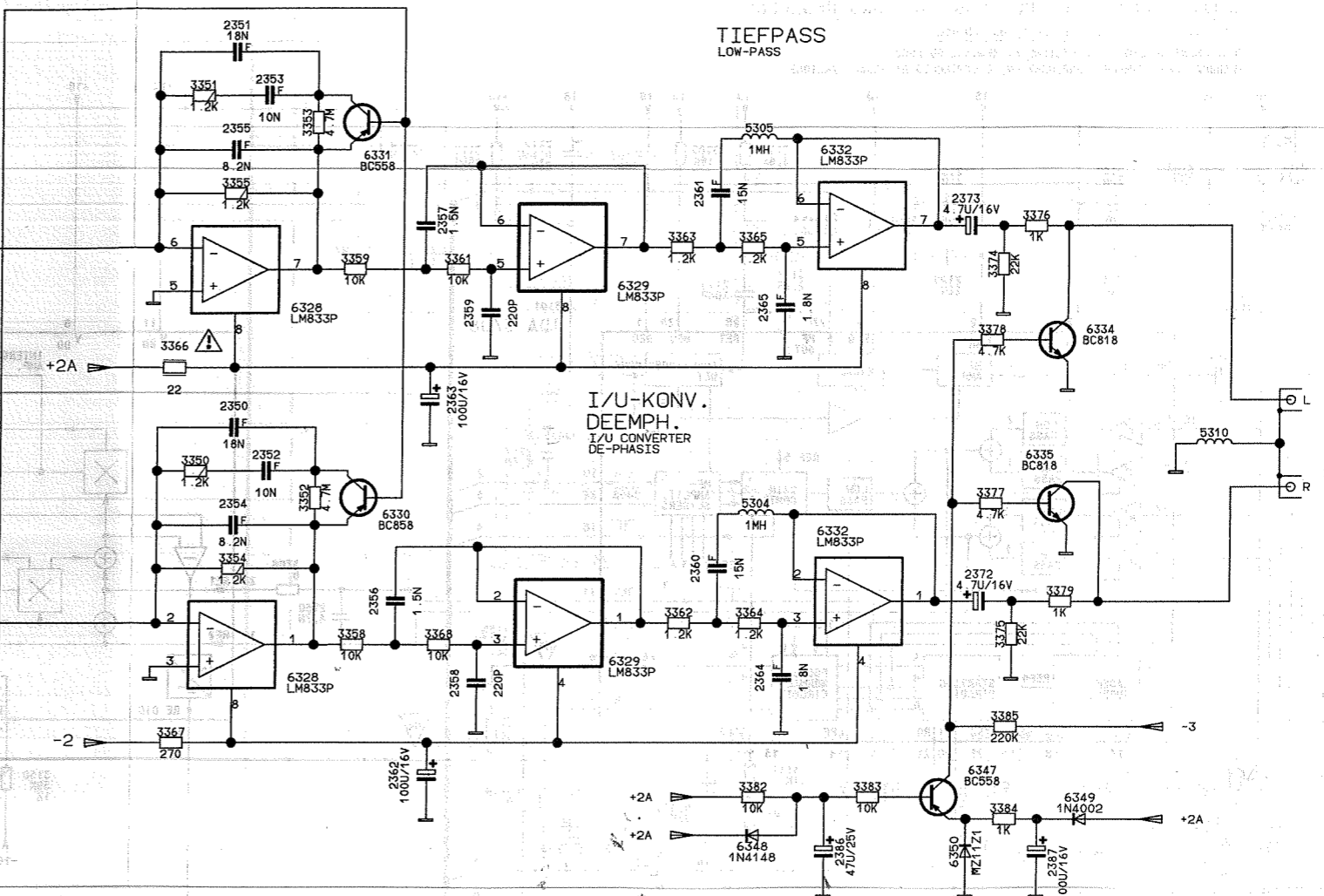
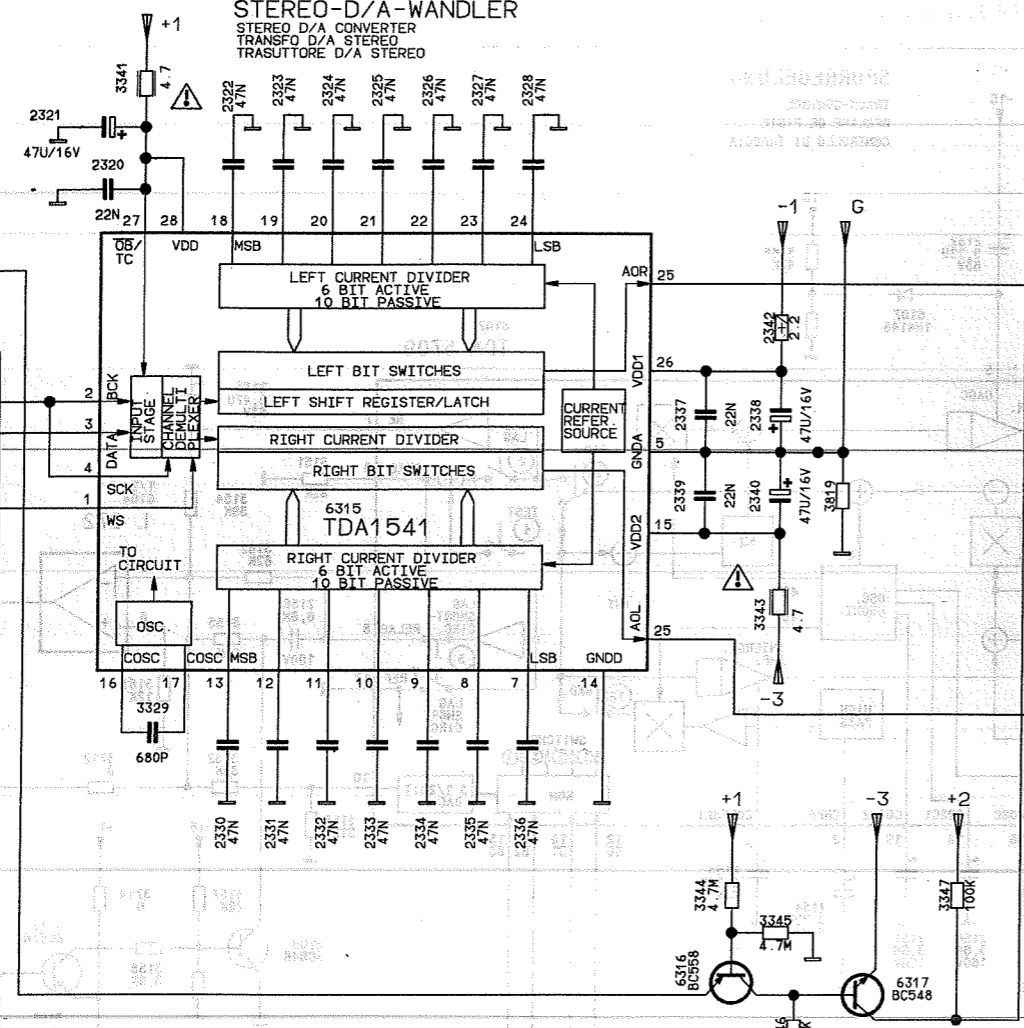
CD 8100  
CD 35X

Blatt 1



**STEREO-D/A-WANDLER**

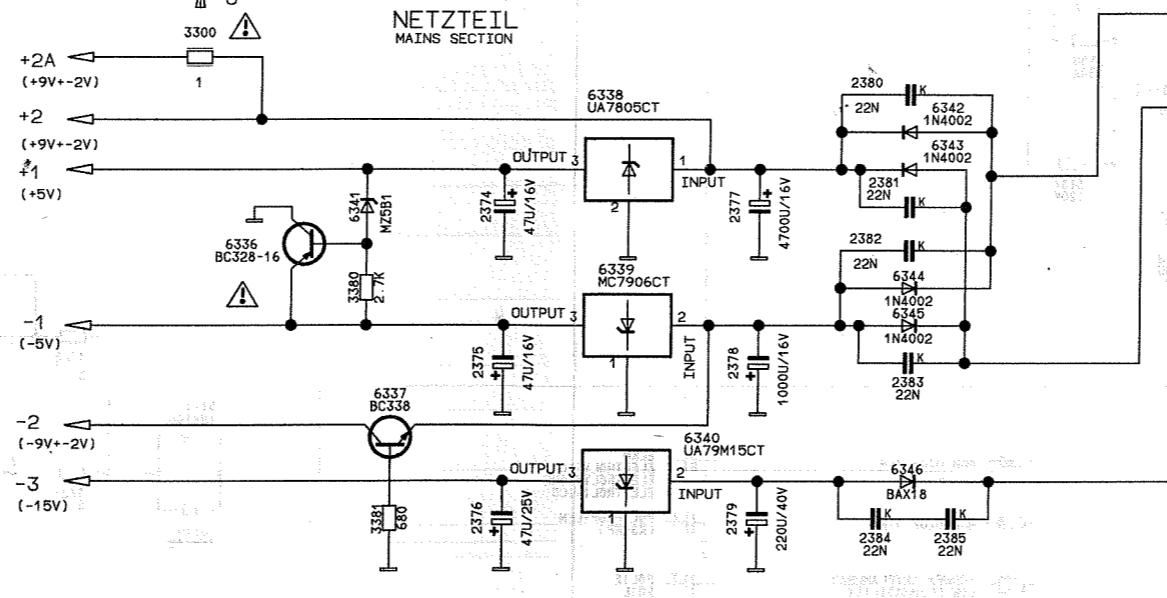
STEREO D/A CONVERTER  
TRANSFO D/A STEREO  
TRANSFORMATEUR D/A STEREO



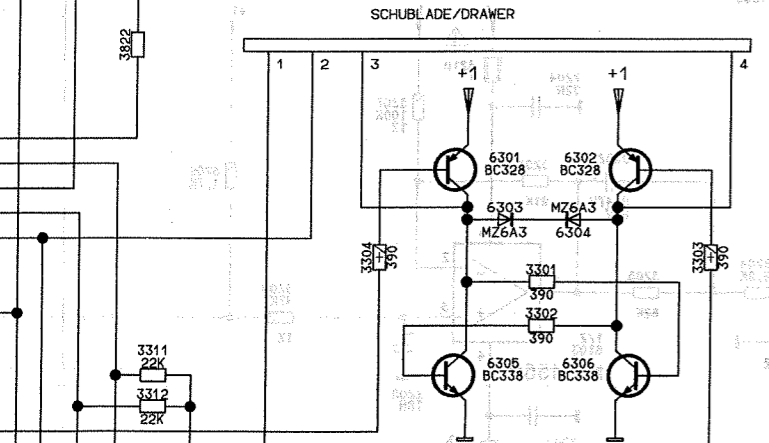
**TIEFPASS**  
LOW-PASS

**I/U-KONV.**  
DEEMPH.  
I/V CONVERTER  
DE-PHASIS

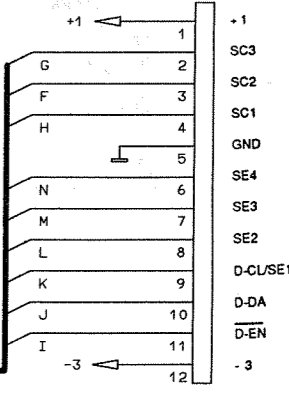
**NETZTEIL**  
MAINS SECTION



**SCHUBLADE/DRAWER**



- MSW0204 DIN
- MSW0207 DIN
- NICHT BRENNBAR  
LOW FLAMMIBILITY
- JUMPER

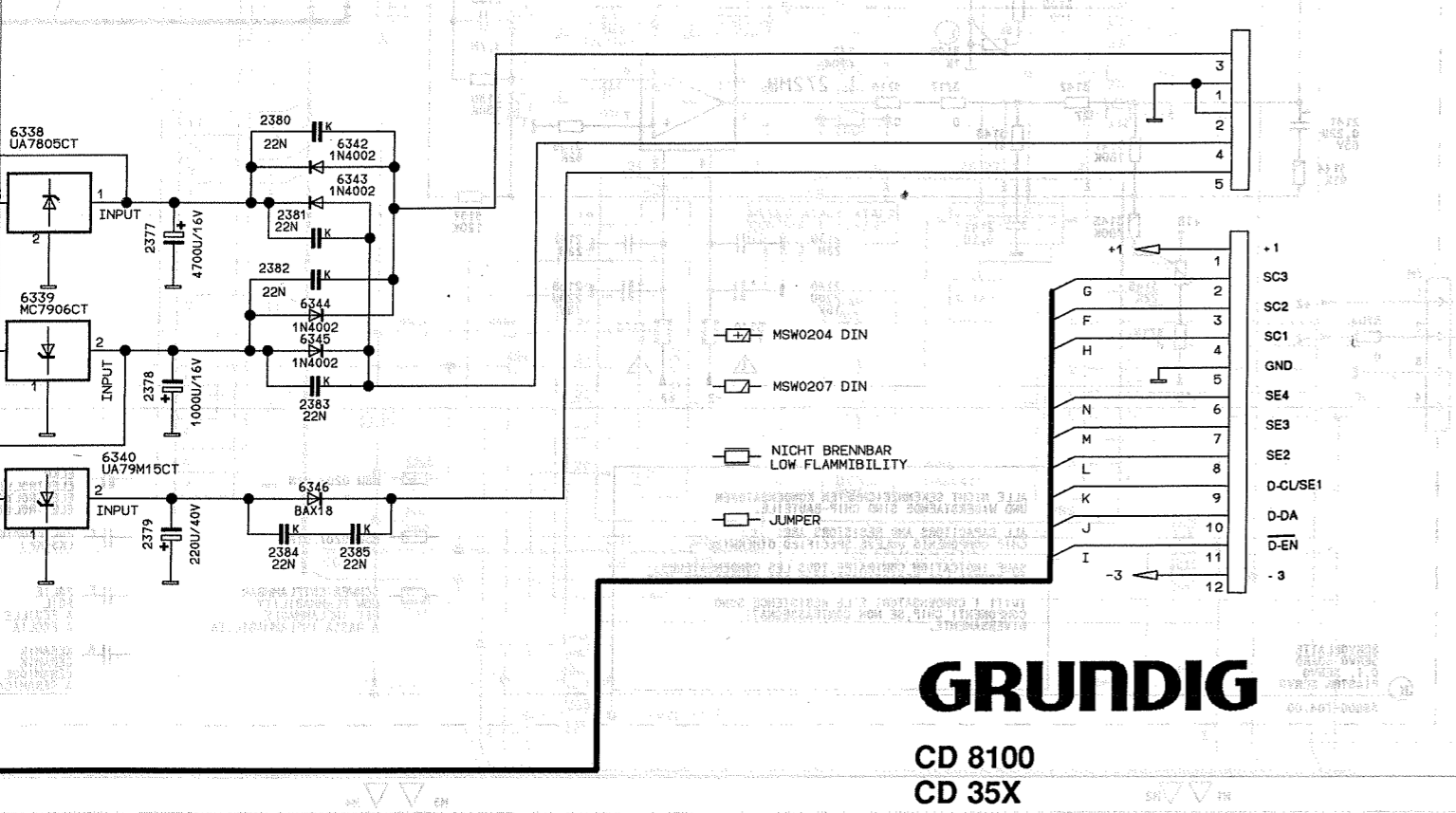
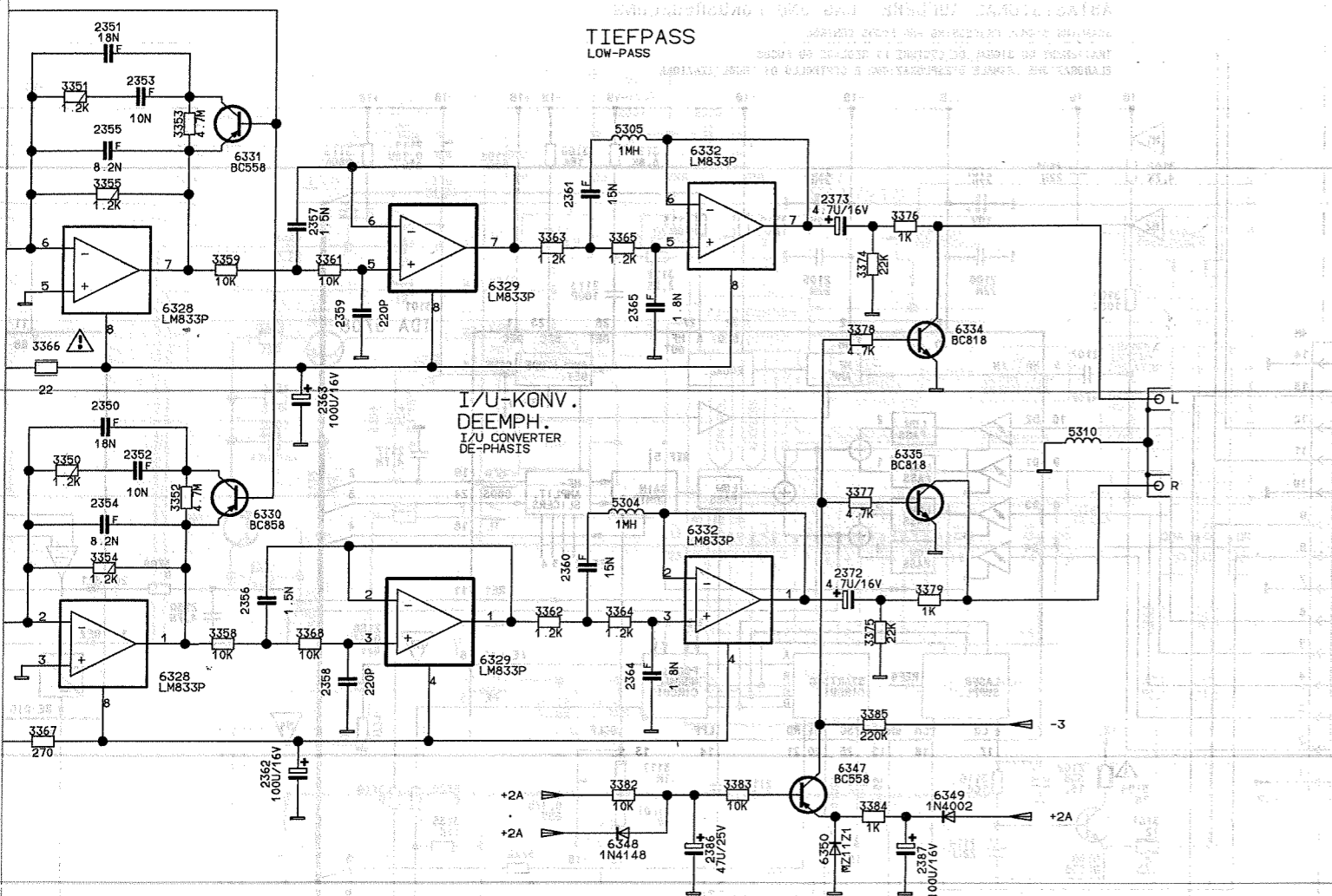


**GRUNDIG**

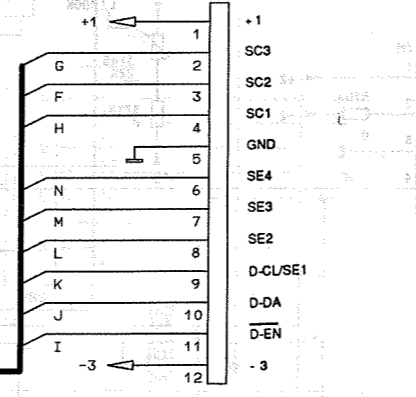
CD 8100  
CD 35X

Blatt 2

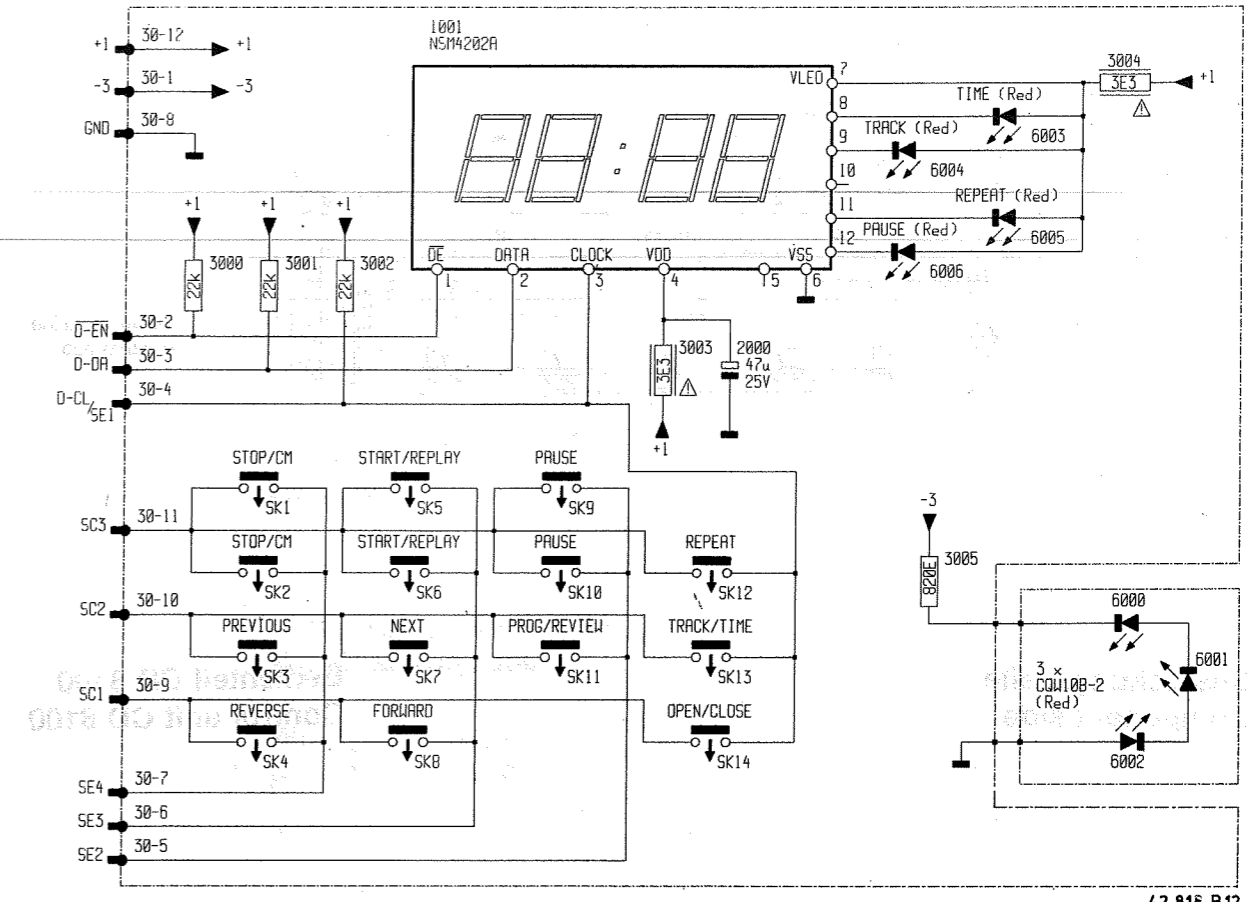
ALLE WIDERSTÄNDE UND KONDENSATOREN SIND CHIP-BAUTEILE.  
WENN NICHT ANDERS ANGEZEIGT  
ALL RESISTORS AND CAPACITORS ARE CHIP COMPONENTS,  
UNLESS SPECIFIED OTHERWISE



- MSW0204 DIN
- MSW0207 DIN
- NICHT BRENNBAR LOW FLAMMIBILITY
- JUMPER

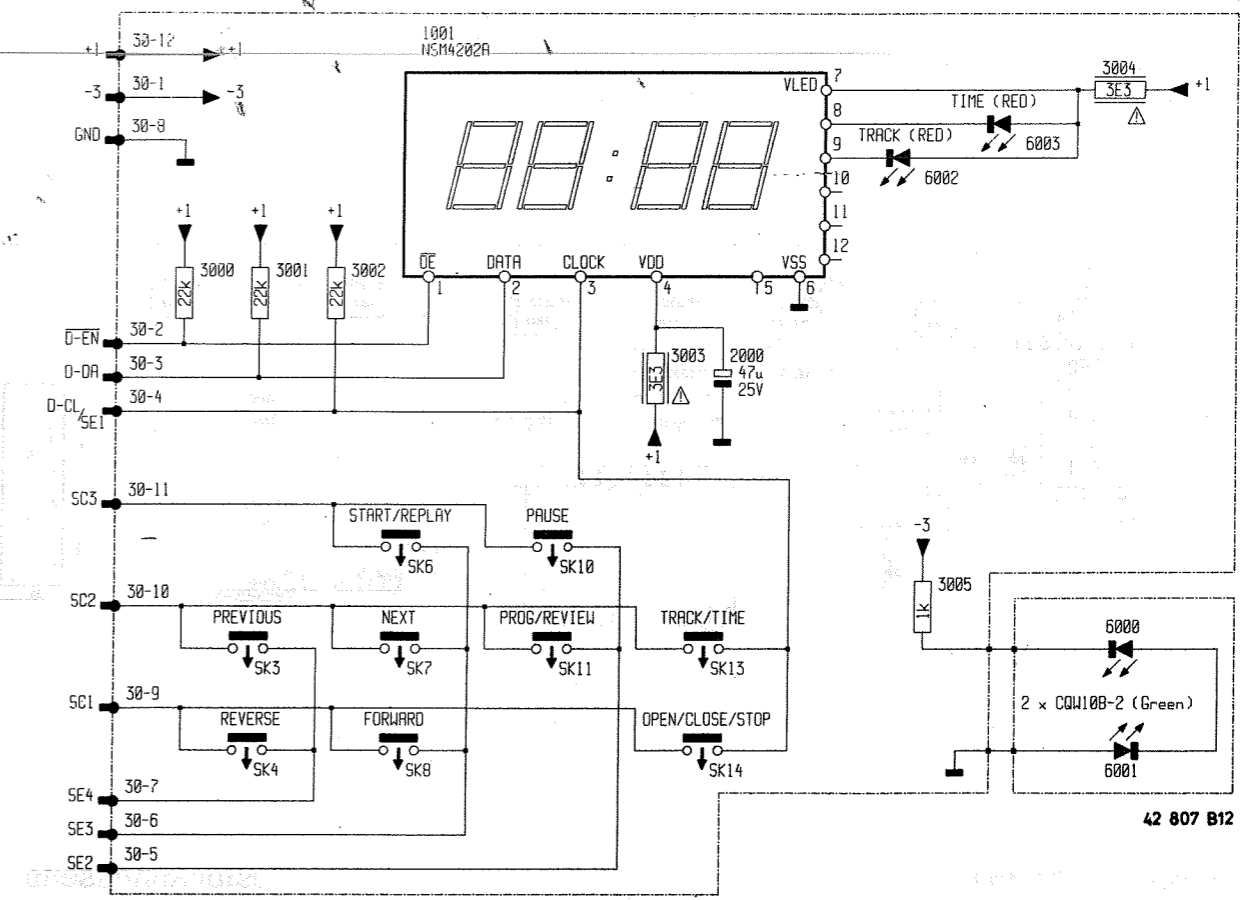


**GRUNDIG**  
 CD 8100  
 CD 35X  
 Blatt 2



**Bedienteil CD 8100**  
 Control unit

42 816 B12

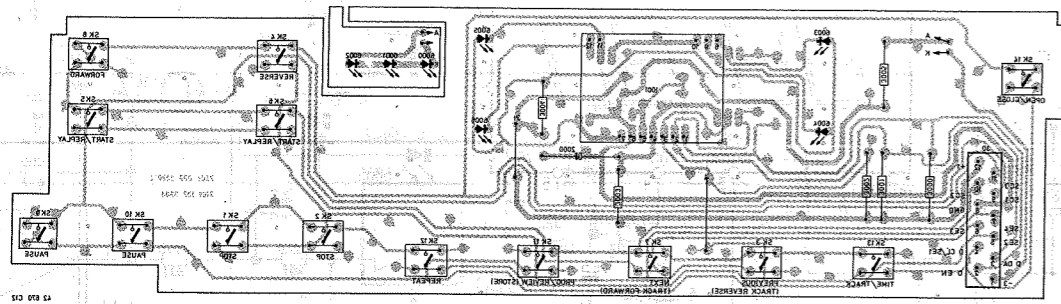


**Bedienteil CD 35X**  
 Control unit

42 807 B12

ALLE WIDERSTÄNDE UND KONDENSATOREN SIND CHIP-BAUTEILE.  
 WENN NICHT ANDERS ANGEGEBEN  
 ALL RESISTORS AND CAPACITORS ARE CHIP COMPONENTS,  
 UNLESS SPECIFIED OTHERWISE



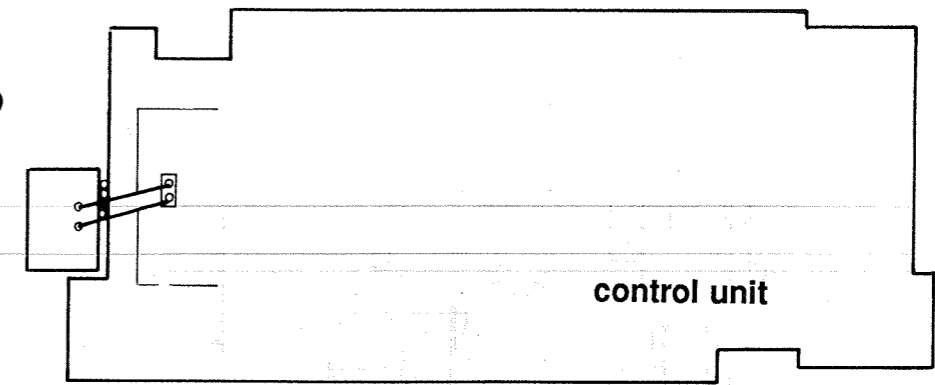


zur Servoplatine  
to servo-pcb

Bestückungsseite  
Component side

Bedienteil CD 8100  
Control unit CD 8100

power-on LED



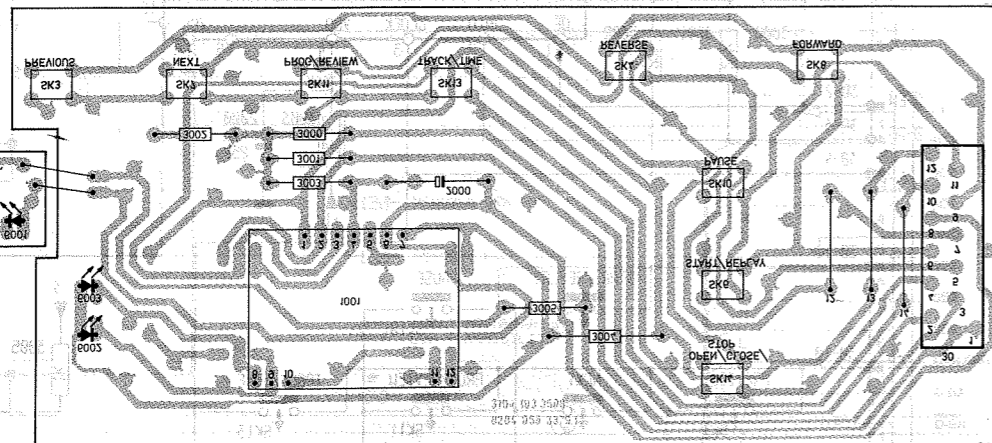
CD 35X

Verbindung Bedienteil -  
Einschaltkontrolle

Wiring control unit -  
power-on control

zur Servoplatte  
to servo pcb

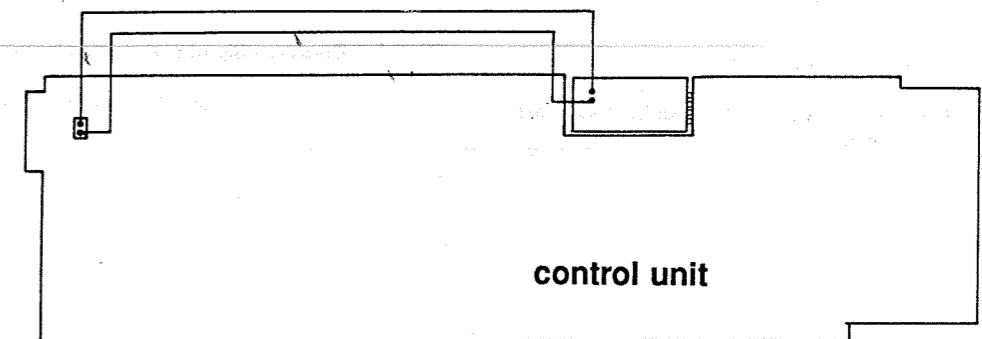
- 1 = -3
- 2 = D-EN
- 3 = D-DA
- 4 = D-CL/SE1
- 5 = SE2
- 6 = SE3
- 7 = SE4
- 8 = GND
- 9 = SC1
- 10 = SC2
- 11 = SC3
- 12 = +1



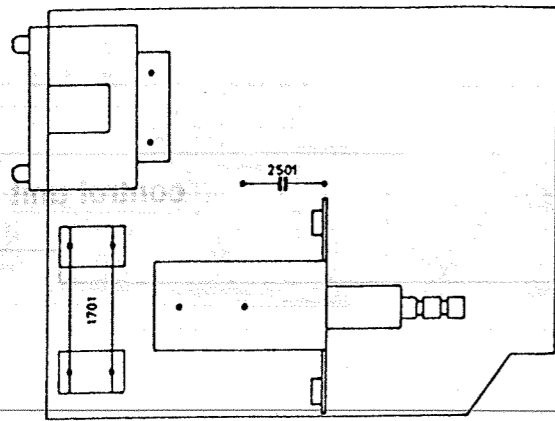
Bedienteil CD 35X  
Control unit CD 35X

Bestückungsseite  
Component-side

power-on LED



CD 8100



**Netzschalterplatte ausbauen**

- Schraube TORX 3Mx10 (k) auf der Rückseite des Gerätes lösen.
- Schieber zwischen Netzschaltertaster und Netzschalter aushängen.

**Netztransformator**

Soll der CD-Spieler an einer anderen als der auf dem Typenschild angegebenen Netzspannung betrieben werden, müssen die Transformatoranschlüsse, wie dargestellt, modifiziert werden.

**Achtung!**

Falls der Transformator zum Anschluß an 110V oder 127V Netzspannung modifiziert werden soll, muß die Glassicherung auf der Netzanschlußplatte von 200mA-T in 400mA-T getauscht werden.

**Netztransformatorplatte ausbauen**

- 4 Schrauben TORX 3Mx20 auf der Unterseite des Gerätes lösen

**Disassembly of mains switch pcb**

- remove 4 screws TORX 3M x10 on the back panel of the set
- disengage pusher between mains switch button and mains switch

**Mains transformer**

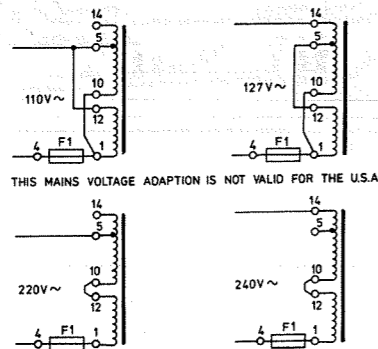
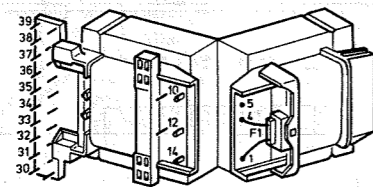
If the set should be connected to a mains voltage that deviates from the voltage mentioned on the type plate, the transformer connections should be changed, as indicated in the drawing.

**Attention!**

If the transformer should be modified for 110V or 127V the glass fuse on the mains switch panel should be changed from 200mA-T to 400mA-T.

**Disassembly of mains transformer pcb**

- remove 4 screws TORX 3Mx20 on the bottom side of cabinet



THIS MAINS VOLTAGE ADAPTION IS NOT VALID FOR THE U.S.A.

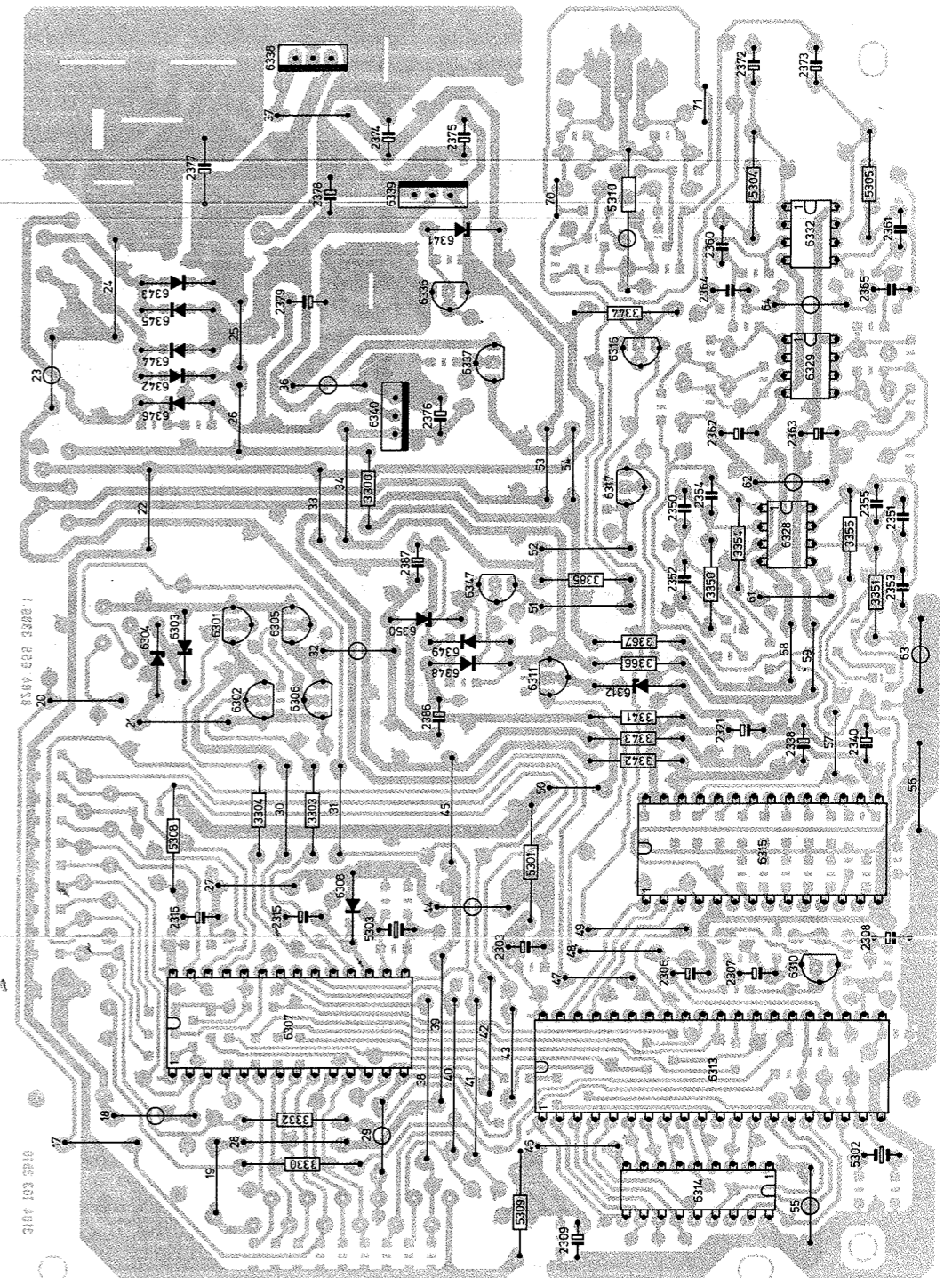
F1 = 0.25A / 125°C

zum Netztransformator  
to mains transformer

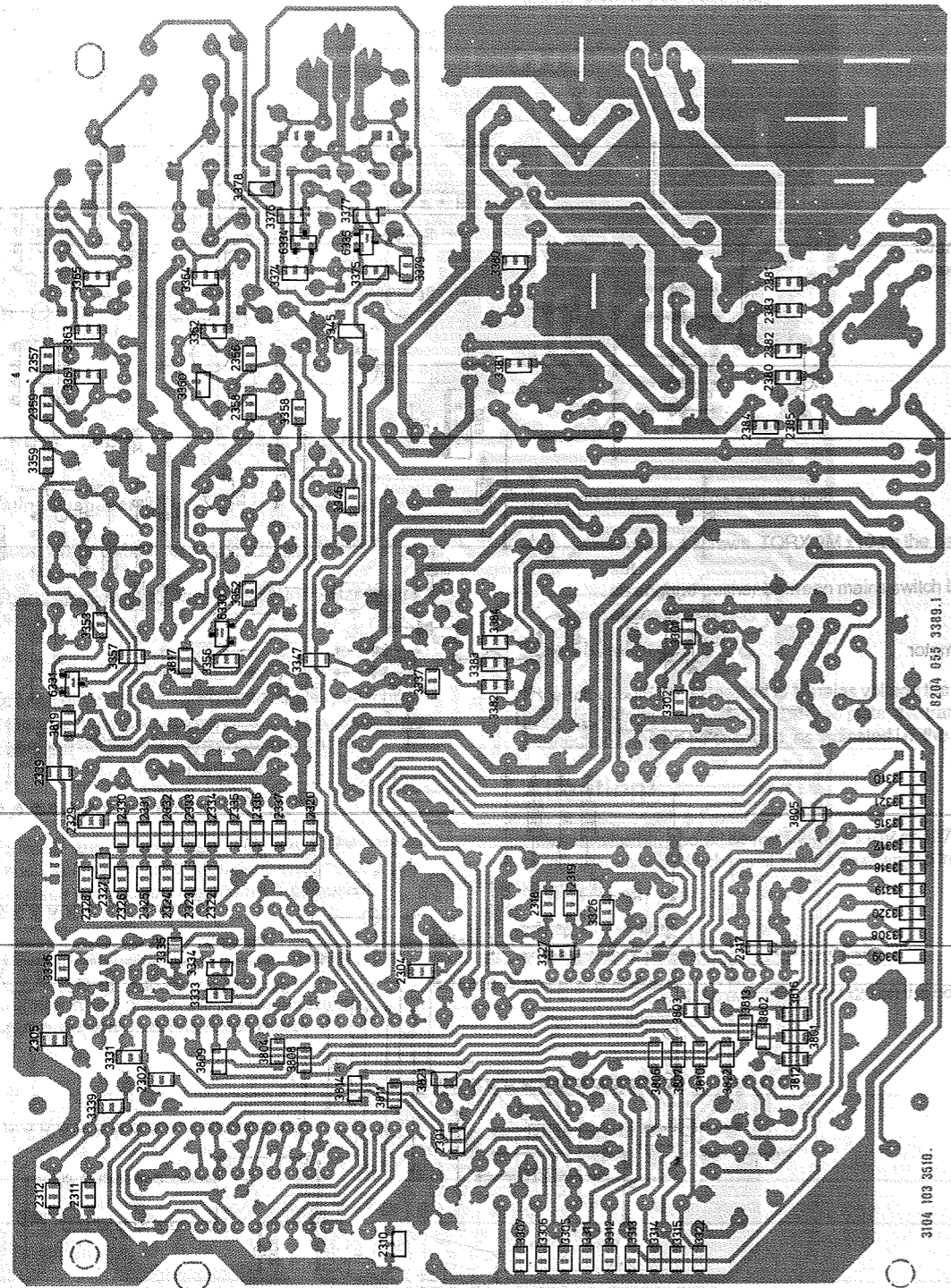
zur Servoplatine  
to servo pcb

zum Schubladenmotor  
to loading motor

zur Servoplatine  
to servo pcb



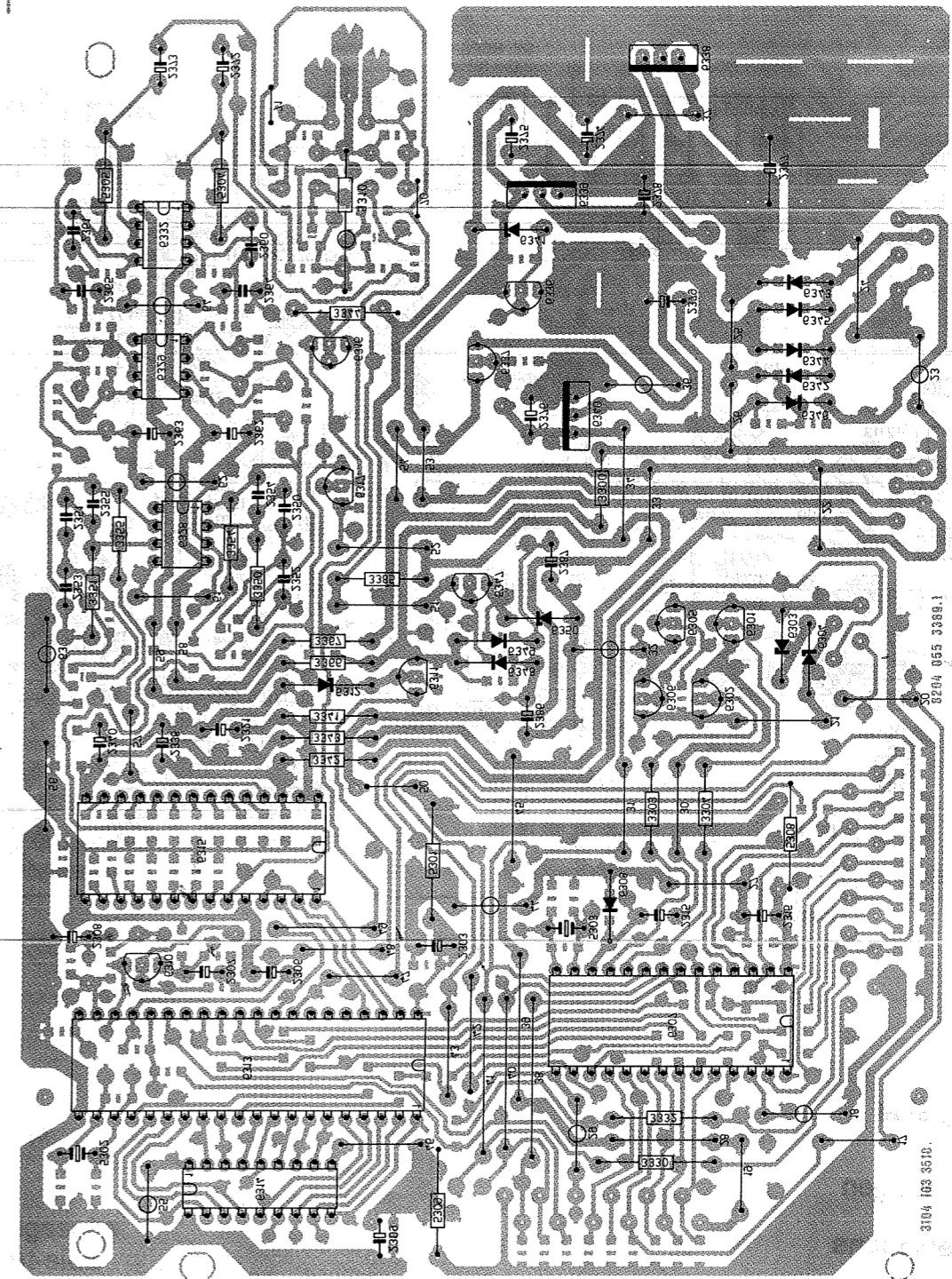
Decoder Platine  
Bestückungsseite  
Decoder pcb  
Component side



3104 103 3510.

8204 055 3383.1

Decoder Platine  
 Bestückungsseite  
 Decoder pcb  
 Component side

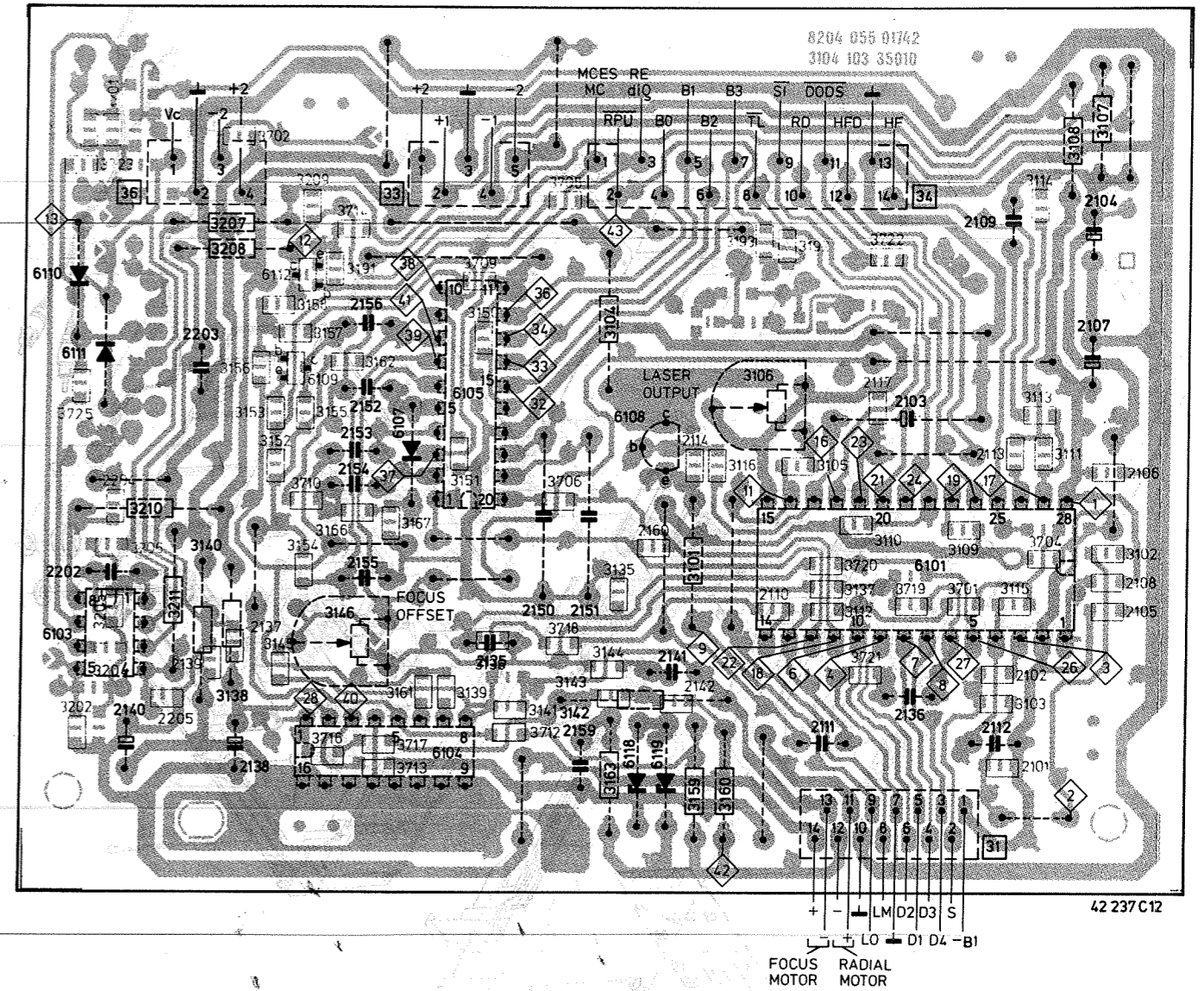
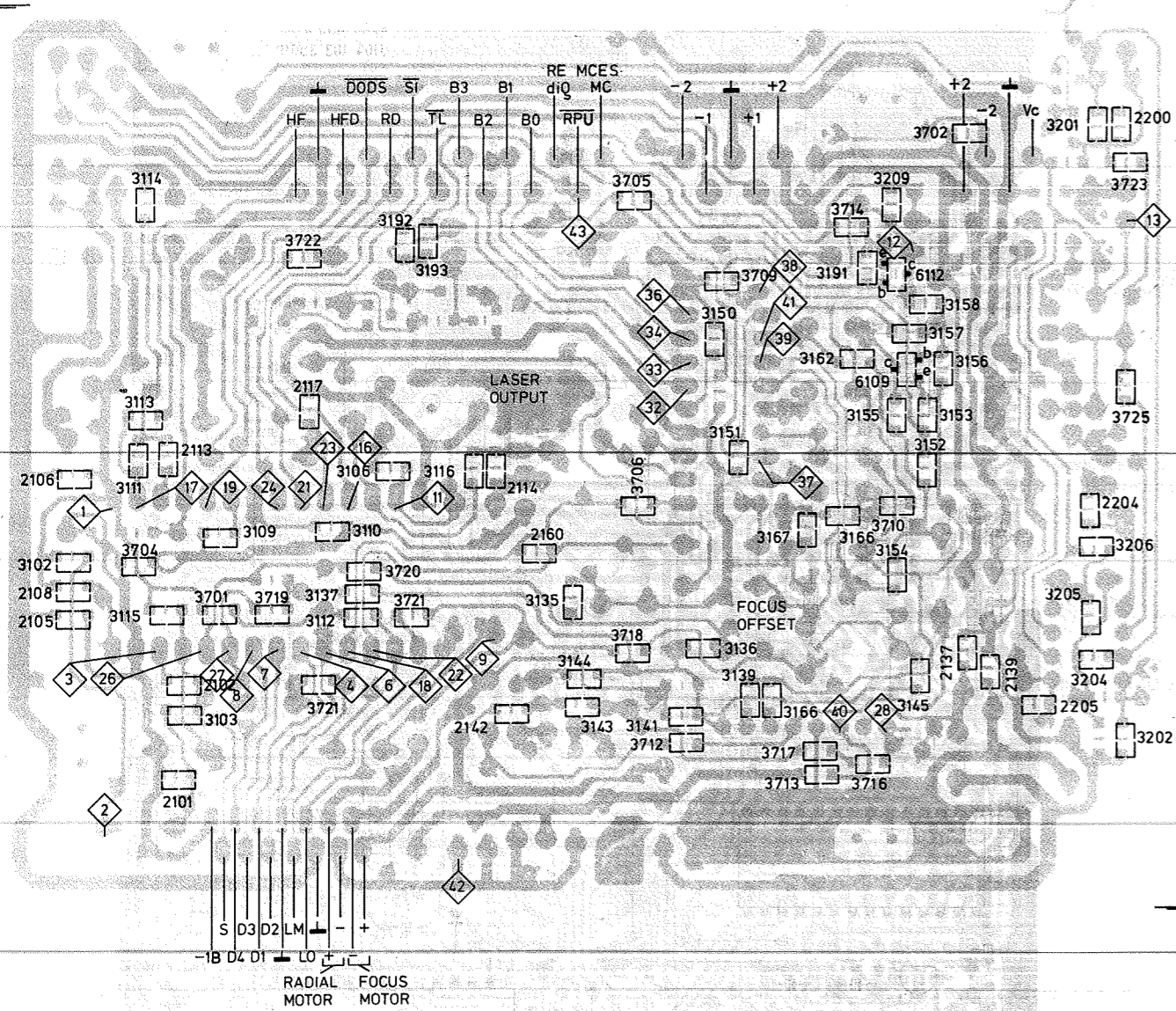


3104 103 3510.

8204 055 3383.1

Decoder Platine  
 Chipbauteile  
 Chip components

Decoder Platine  
 Chipbauteile  
 Chip components



Lötseite  
Soldering side

CD-Abkürzungen

CD-Abbreviations

Servoplatine  
Servo-pcb

Bestückungsseite  
Component-side

- B0-B3 - Control bits for radial circuit
- DAC - Current output for track jumping (Digital to Analogue Converted)
- DEEMPH - Deemphasis
- DODS - Drop out detector supression
- D1+4 - Photodiode currents
- FE - Focus error signal
- FE lag - Focus error signal for LAG network
- HF - HF output for DEMOD
- HFD - HF detector output for DEMOD
- HF-in - HF current input
- I<sup>2</sup>C - Clock signal servo-control μP
- I<sup>2</sup>D - Data signal servo-control μP
- LM - Laser monitor diode input
- LO - Laser amplifier current output
- MCES - Motor control from ERCO to servo circuit
- MUTE - Mute signal

- Q CLOCK - Subcode clock input for servo μP
- Q DATA - Subcode data input for servo μP
- Q SYNC - Subcode synchronization input for servo μP
- RE - Radial error signal (amplified RE1-RE2 currents)
- RE1 - Radial error signal 1 (summation of amplified currents D<sub>3</sub> and D<sub>4</sub>)
- RE2 - Radial error signal 2 (summation of amplified currents D<sub>1</sub> and D<sub>2</sub>)
- RE dig - Radial error digital
- RE lag - Radial error signal for LAG network
- RD - Ready signal, starting up procedure finished
- SI - On/off control for laser supply and focus circuit
- TL - Track lost signal
- Vc - Control voltage for turntable motor