

# G0426

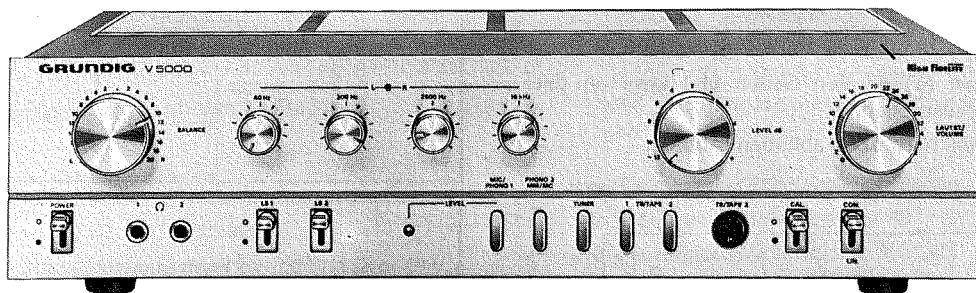
**GRUNDIG**

# Service Anleitung



2/80

Verstärker  
V 5000  
V 5000 GB  
V 5000 U

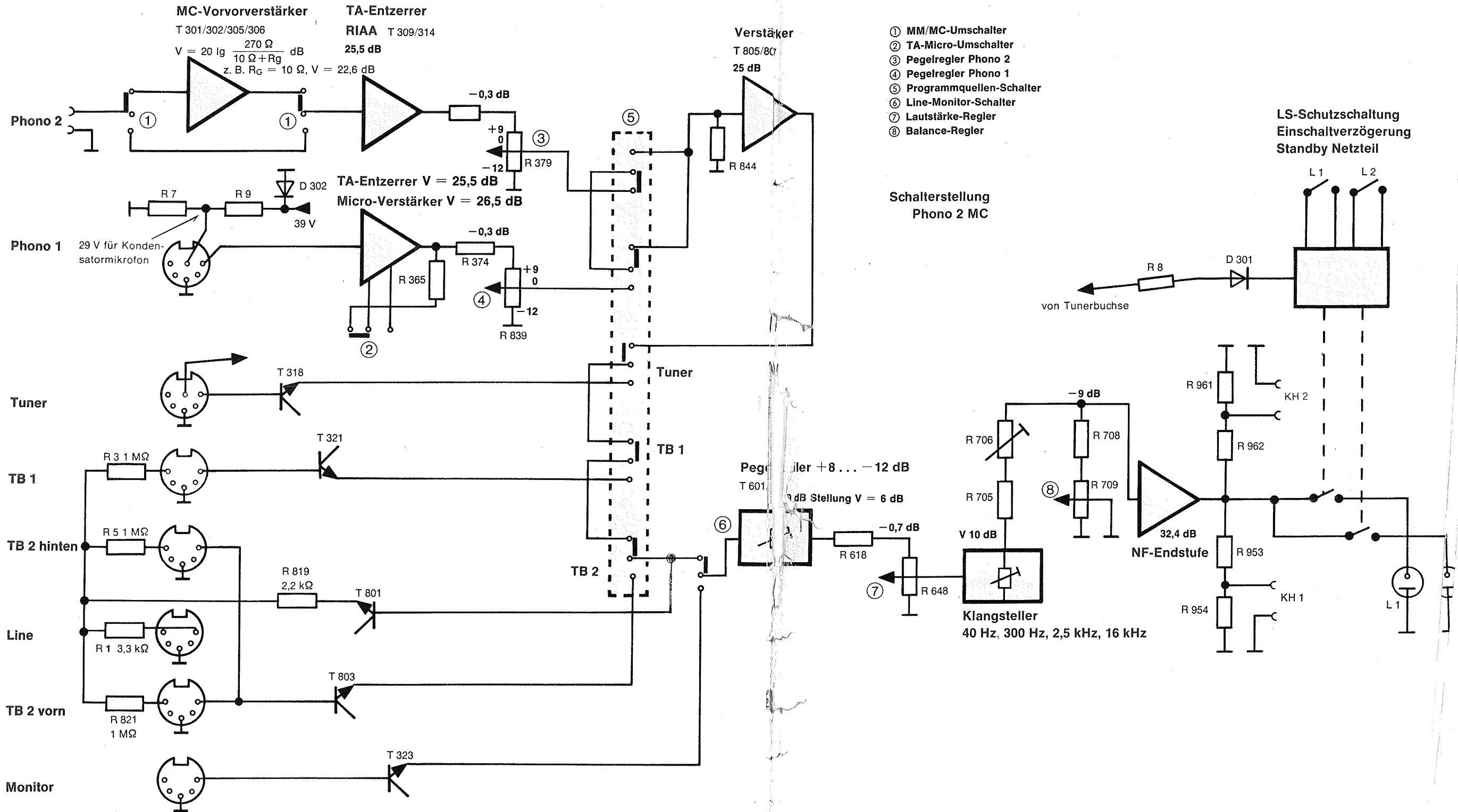


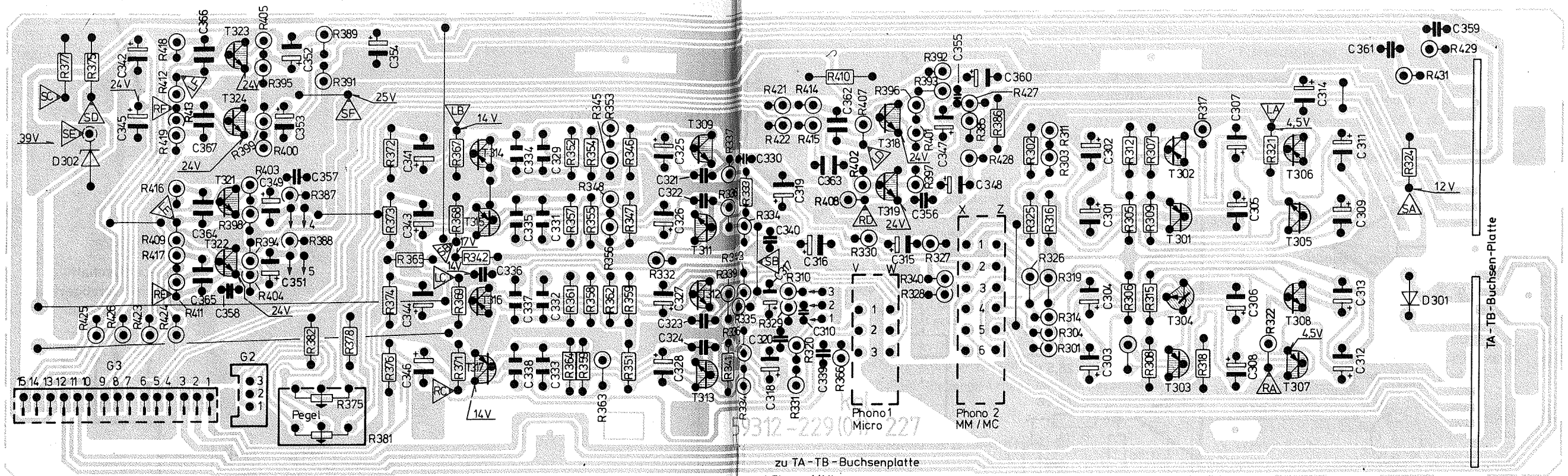
## Abgleich- und Prüfvorschrift

- |   |   |
|---|---|
| I. Allgemeine Hinweise  | f) Eingangswiderstand                     |
| II. Ausbauhinweise  | g) Entzerrung TA                          |
| III. Arbeitspunkteinstellung des NF-Verstärkers                 | h) Regelbereich der Friktions-Klangregler |
| IV. Prüfung des NF-Verstärkers                                  | i) Regelbereich des Balance-Reglers       |
| a) Eingangsempfindlichkeit für 2 x 100 W ( $\cong 20 V_{eff}$ ) | k) Physiologie (Contour)                  |
| b) Frequenzgang linear  | l) Pegelschalter                          |
| c) Klirrfaktor  | m) Fremdspannungsabstand                  |
| d) Leistungsbandbreite  | n) Übersprechen                           |
| e) Maximale Eingangsspannung                                    | o) Kurzschlußautomatik                    |

72008-255.41

# Signallauf-Schaltbild für linken Kanal





**NF-Eingangsplatte, Lötseite 59312-006.00**

**AF INPUT BOARD, SOLDER SIDE**

**C. I. ENTREE BF, COTE SOUDURES**

**PIASTRA INGRESSO BF, LATO SALDATURE**

**Lötseite**  
**SOLDER SIDE**  
**COTE DES SOUDURES**  
**LATO SALDATURE**

**Bestückungsseite**  
**COMPONENT SIDE**  
**VUE DU COTE DES COMPOSANTS**  
**LATO COMPONENTI**

zu TA-TB-Buchsenplatte

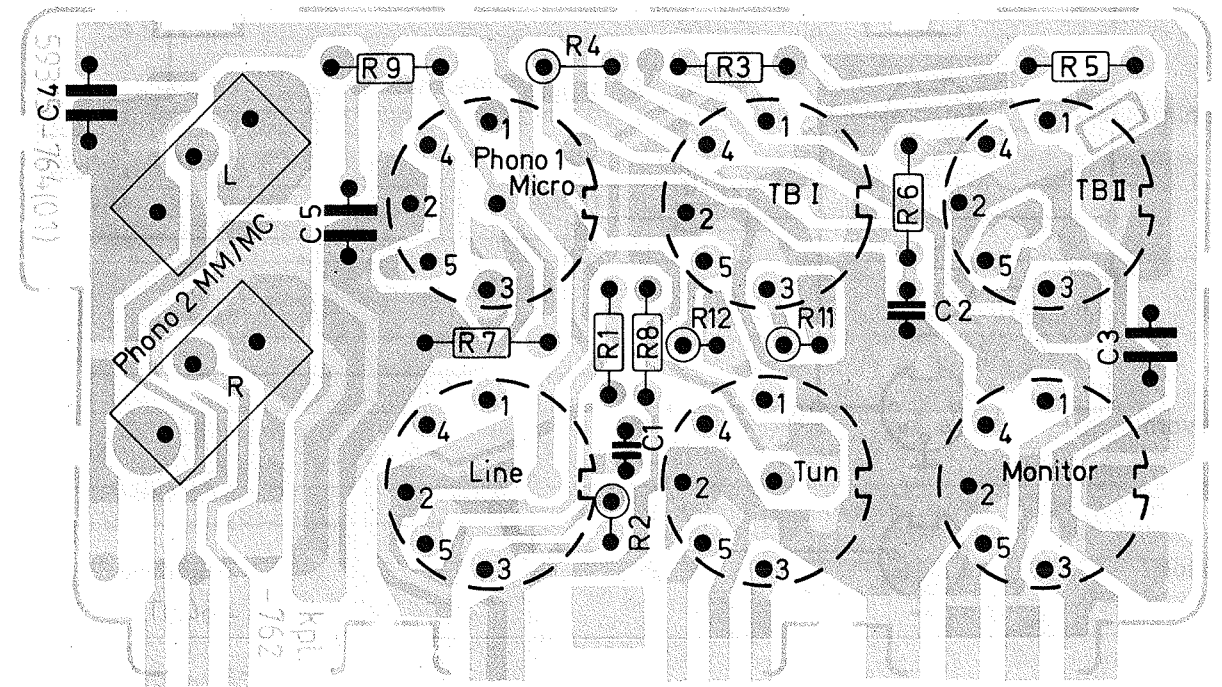
- 1 Phono 1/Micro
- 2 Phono 1/Micro
- 3 Phono 1/Micro
- 4 TB 1 / Absch.
- 5 TB 1 / Absch.

**TA-TB Buchsenplatte, Lötseite 59315-120.00**

**PU-TR SOCKETS BOARD, SOLDER SIDE**

**C. I. PRISES PU-MAGNETO, COTE SOUDURES**

**PIASTRA PRESE REGISTRATORE/GIRADISCHI, LATO SALDATURE**



**TBI, TBII FRONT, TBII**

- 1 = Aufnahme Mono, Aufnahme Stereo links
- 2 = Masse
- 3 = Wiedergabe Mono, Wiedergabe Stereo links
- 4 = Aufnahme Stereo rechts
- 5 = Wiedergabe Stereo rechts

**TRI, TRII FRONT, TRII**

- 1 = RECORDING MONO, RECORDING LH STEREO
- 2 = CHASSIS
- 3 = PLAYBACK MONO, PLAYBACK LH STEREO
- 4 = RECORDING RH STEREO
- 5 = PLAYBACK RH STEREO

**MAG I, MAG II AVANT, MAG II**

- 1 = ENR MONO, ENR STEREO CANAL GAUCHE
- 2 = MASSE
- 3 = LECTURE MONO, LECTURE STEREO CANAL GAUCHE
- 4 = ENREGISTREMENT STEREO CANAL DROIT
- 5 = LECTURE STEREO CANAL DROIT

**TBI, TBII ANTERIORE, TBII**

- 1 = PRESA MONO, PRESA STEREO SINISTRO
- 2 = MASSA
- 3 = RIP MONO, RIP STEREO SINISTRO
- 4 = PRESA STEREO DESTRO
- 5 = RIPRODUZIONE STEREO DESTRO

**LINE-UNIVERSAL Ausgang**

- 2 = Masse / CHASSIS / MASSE / MASSA
- 3 = TB - Aufnahme Stereo links
- TR - RECORDING LH STEREO
- MAG - ENR STEREO CANAL GAUCHE
- TB - PRESA STEREO SINISTRO
- 5 = TB - Aufnahme Stereo rechts
- TR - RECORDING RH STEREO
- MAG - ENR STEREO CANAL DROIT
- TB - PRESA STEREO DESTRO

**MONITOR, TUNING, Phono 1 Micro**

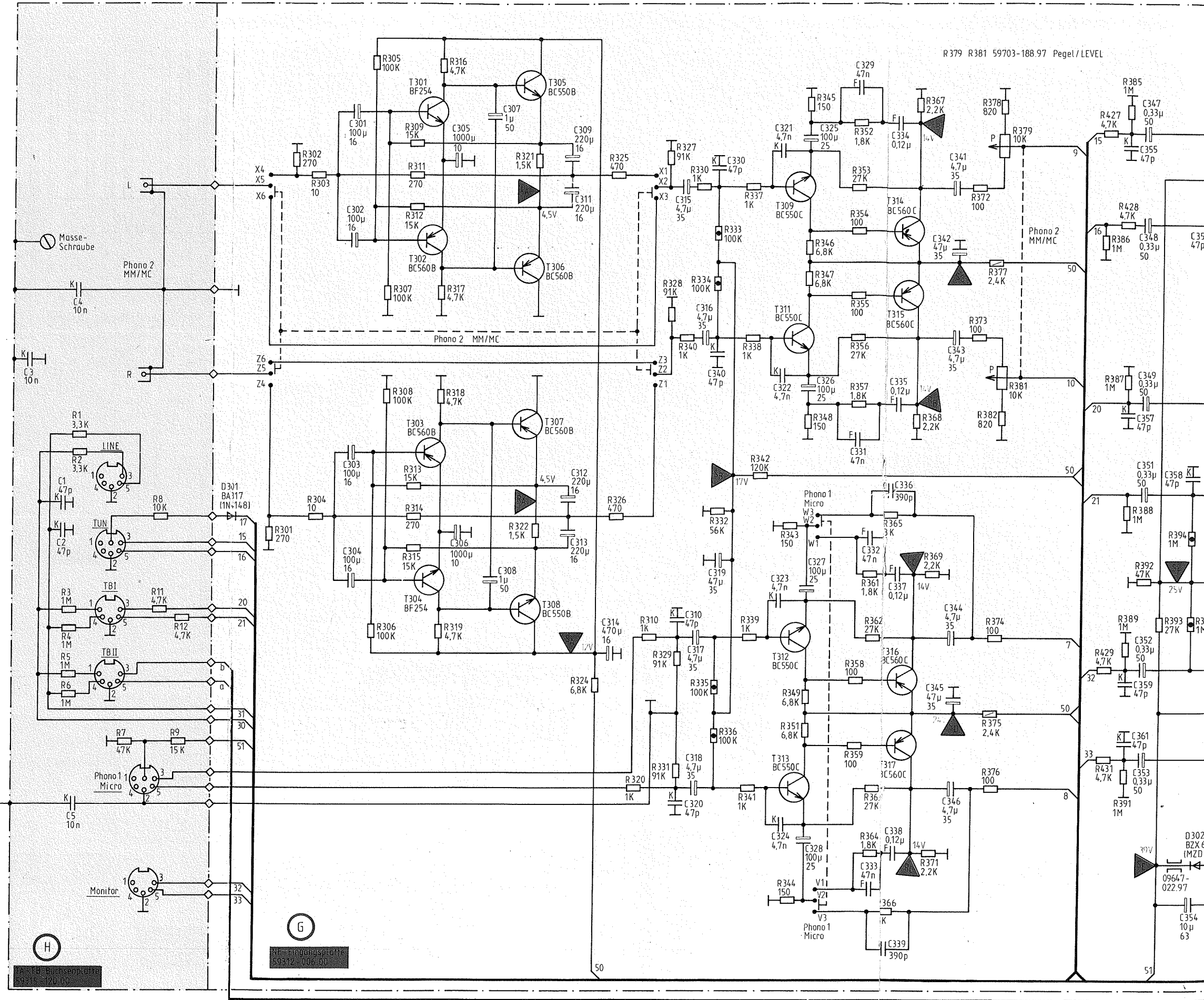
- 2 = Masse / CHASSIS / MASSE / MASSA
- 3 = Stereo links / STEREO LH CHANNEL
- STEREO CANAL GAUCHE / STEREO SINISTRO
- 5 = Stereo rechts / STEREO RH CHANNEL
- STEREO CANAL DROIT / STEREO DESTRO

Spannungen mit Grundig-Voltmeter (Ri=10MΩ) falls nicht anders angegeben, gegen Masse gemessen. Messwerte gelten bei Nennspannung und im nicht erwärmten Zustand, ohne Signal bei 20°C Raumtemperatur und zuge-drehtem Lautstärkereglern. Sämtliche Spannungen über Trennwiderstand messen.

IF NOT OTHERWISE INDICATED ALL VOLTAGES ARE MEASURED AGAINST CHASSIS WITH A GRUNDIG VOLTMETER (RI=10MΩ) THE VALUES ARE VALID FOR NOMINAL VOLTAGE. INSTRUMENT NOT WARMED UP ON WAVEBANDS. NO SIGNAL APPLIED 20°C AMBIENT TEMPERATURE, AND CLOSED VOLUME CONTROL ALL VOLTAGES MUST BE MEASURED VIA SEPARATING RESISTOR.

SAUF INDICÉ LES TENSIONS SONT MESUREES PAR RAPPORT AU CHASSIS AVEC UN VOLTMETRE GRUNDIG (RI=10MΩ) LES VALEURS SONT VALABLES POUR UNE TENSION NOMINALE CA. L'APPAREIL EN ETAT NON-ECHAUFFE. DANS LES GAMMAS D'ONDES SANS SIGNAL, TEMPERATURE AMBIANTE DE 20°C ET REGLAGE DE PUISSANCE FERME LES TENSIONS SONT A MESURER A TRAVERS UNE RESISTANCE DE SEPARATION.

TENSIONI MISURATE CON VOLTMETRO GRUNDIG (RI=10MΩ) SALVE ALTRE INDICAZIONI, RIFERITE A MASSA I VALORI DI MISURA VALGONO CON TENSIONE NOMINALE E RILEVATI A FREDDO SU SENZA SEGNALE, CON TEMPERATURA AMBIENTALE DI 20°C E COL REGOLATORE DI VOLUME A ZERO TUTTE LE TENSIONI SONO MISURATE MEDIANTE UNA RESISTENZA DI SEPARAZIONE.



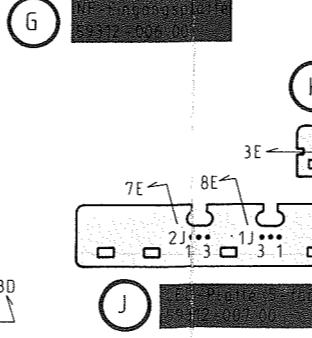
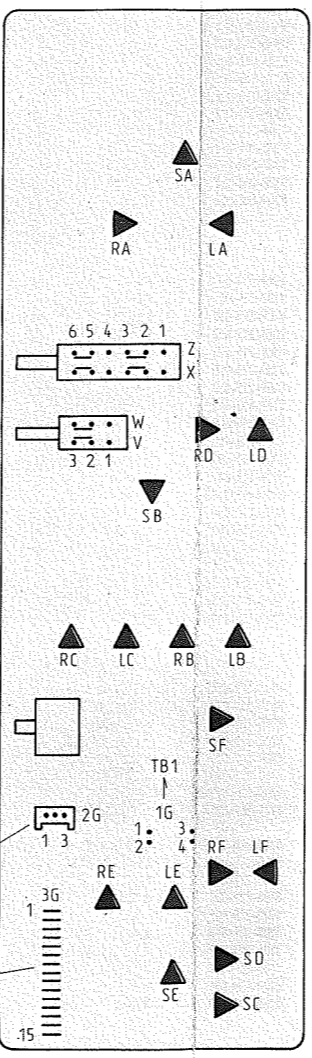
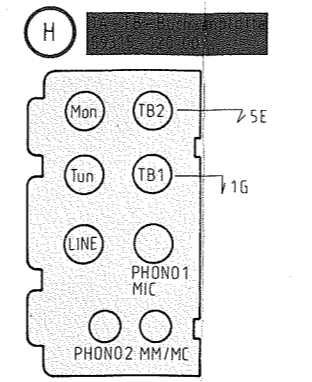
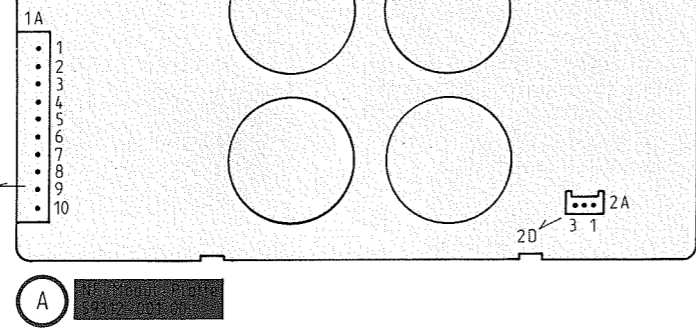
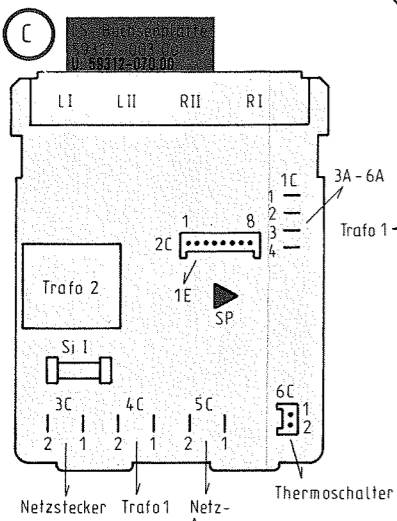
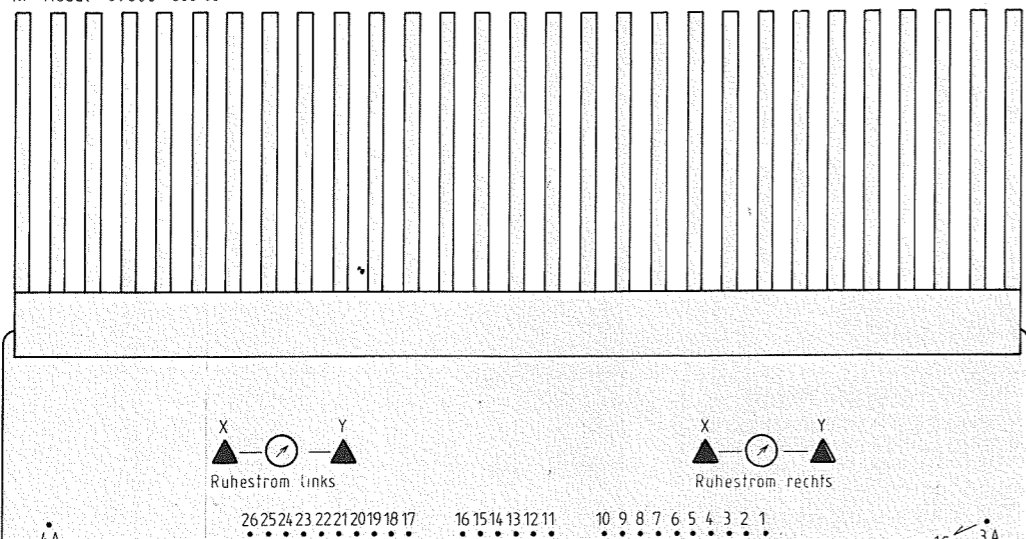
R379 R381 59703-188.97 Pegel / LEVEL

C	3.	1, 4, 2, 5,			301, 304, 302, 303,	305, 307, 306, 308,	309, 313, 311, 312,	314,	315, 316, 330, 310, 317, 340, 320, 318, 319,	321, 324, 327, 322, 325, 328, 323, 326,	329, 332, 335, 338, 331, 333, 336, 339, 334, 337,	341, 344, 342, 345, 343, 346,	355, 361, 349, 353, 357, 347, 351, 359, 348, 352,	358, 354, 3
R		1, 4, 2, 5, 3, 6,	7, 11, 9,	12, 9,	301, 302, 303, 304,	305, 307, 309, 313, 316, 319, 306, 308, 311, 314, 317, 312, 315, 318,	321, 322,	324, 325, 326,	310, 327, 331, 330, 333, 335, 337, 341, 328, 340, 329,	343, 345, 348, 344, 346, 349, 332, 339,	352, 355, 358, 362, 365, 367, 369, 353, 356, 359, 363, 366, 368, 371, 354, 357, 363, 364,	372, 374, 377, 381, 373, 375, 378, 382, 376, 379,	427, 431, 387, 391, 393, 386, 385, 388, 392, 429, 428, 389,	394, 3 395, 3 3





NF-Modul 59800-655 00



- Elko
- Folie
- KS, KP
- Keramik
- 0207 DIN
- 0207 DIN Rauscharm
- 0411 DIN
- schwer entflammbar
- Draht
- Metalloxydschicht

Gleichrichter  
 B 20 C 140  
 B 80 C 900/600 B 2 812

Z-Dioden  
 5,6V 19799-109 97  
 6,8V 19799-107 01  
 7,5V 09654-124 01  
 ( 02 / 03 / 04 / 31 )  
 39V 19799-139 91  
 47V 19799-126 91  
 56V 19799-128 91

Transistoren

- BC 546
- BC 547
- BC 548
- BC 550
- BC 557
- BC 560
- BF 254
- BC 651

Ersatztypen in Klammer ( )  
 INTERCH. TYPES IN BRACKETS ( )  
 TYPES DE RECHANGE EN PARENTH ( )  
 TIPI DI RICAMBI IN ( )

Vornummer für Dioden und Transistoren  
 INDES NUMBER FOR DIODES AND TRANSISTORS  
 CHIFFRES REPERES POUR DIODES ET TRANSISTORS  
 SIGLA PER DIODI E TRANSISTORS

09654-

NF-Spannungen mit Grundig-Millivoltmeter (Ri=1MΩ//50pF) gegen Masse gemessen, Meßwerte gelten für Eingangsspannungen von 500mV an TBI und 5mV an Phono1 Micro mit jeweils 1000 Hz. Das Gerät befindet sich in folgendem Betriebszustand: TBI „Ein“, Lautstärkeregler auf je 2x100W, Klang- und Balanceregler in mechanischer Mittelstellung, Monitorschalter „Aus“.

AF VOLTAGES ARE MEASURED AGAINST CHASSIS WITH A GRUNDIG MILLIVOLTMETER (RI=1MΩ//50PF) MEASURING VALUES ARE VALID FOR INPUT VOLTAGES OF 500mV ON TBI AND 5mV ON PHONO1 MICRO, EACH WITH 1000Hz. THE SET IS IN THE FOLLOWING OPERATING MODE: TBI "ON" VOLUME CONTROL OPEN, 2x100W, TONE CONTROLS AND BALANCE CONTROL IN MECHANICAL CENTRE POSITION, MONITOR SWITCH "OFF".

TENSIONS BF MESUREES PAR RAPPORT A CHASSIS AVEC UN MILLIVOLTMETRE GRUNDIG (RI=1MΩ//50PF). LES VALEURS MESUREES SONT VALABLES POUR DES TENSIONS D'ENTREE DE 500mV SUR TBI (MAGNETOPHONE) ET DE 5mV SUR PHONO 1 MICRO A 1000Hz. L'APPAREIL SE TROUVE DANS LE MODE DE FONCTIONNEMENT SUIVANT: (MAGNETOPHONE) TBI MARCHE, REGLAGE DE VOLUME OUVERT, 2x100W, REGLAGES DE TONALITE ET DE BALANCE EN POSITION MEDIANE MECANIQUE, COMMANDE MONITOR HORS SERVICE.

TENSIONI BF MISURATE CON IL MILLIVOLTMETRO GRUNDIG (RI=1MΩ//50PF) VERSO MASSA I VALORI MISURATI VALGONO PER TENSIONI D'INGRESSO DI 500mV SU TBI E DI 5mV SU PHONO1 MICRO CON RISPETTIVAMENTE 1000Hz. L'APPARECCHIO E REGOLATO COME SEGUE: TBI INSERITO, REGOLAZIONE VOLUME PER RISP. TE 2 PER 100W, REGOLATORI DI TONO E DI BILANCIAMENTO IN POSIZIONE MECCANICA CENTRALE, INTERRUOTORE MONITOR DISINSERITO.

G0 679 -480 97  
 (G0 681)  
 BD 135  
 BD 136

G 745 C -485 25  
 G 746 C -486 25

G 179 -437 25  
 (G 237 -442 02)  
 G 180 -438 25  
 (G 238 -443 02)  
 GD 139 -436 01  
 (BD 791)

BD 829-10 -435 01

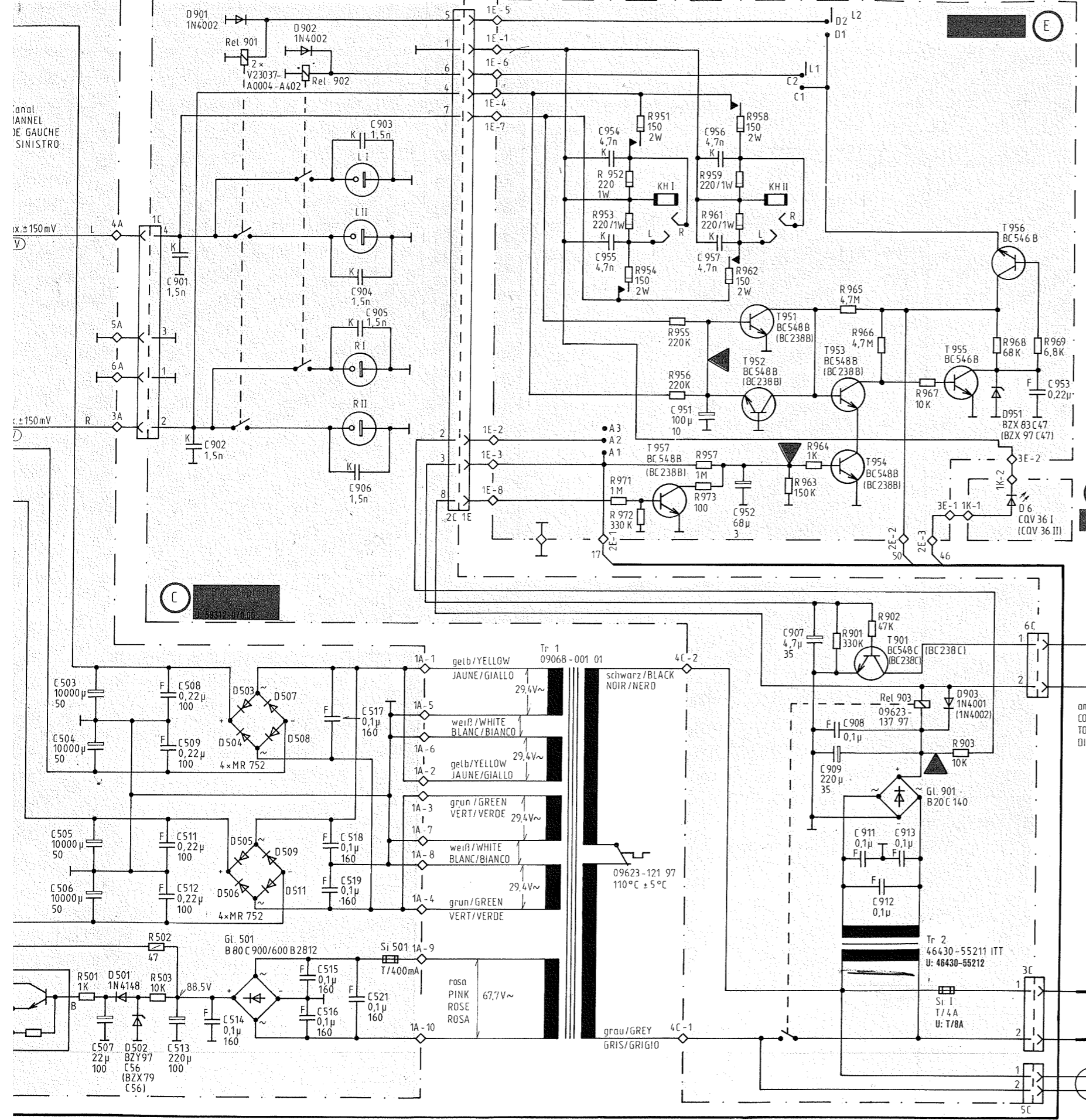


**V 5000**  
**V 5000 GB**  
**V 5000 U**  
 (55032-906.01)

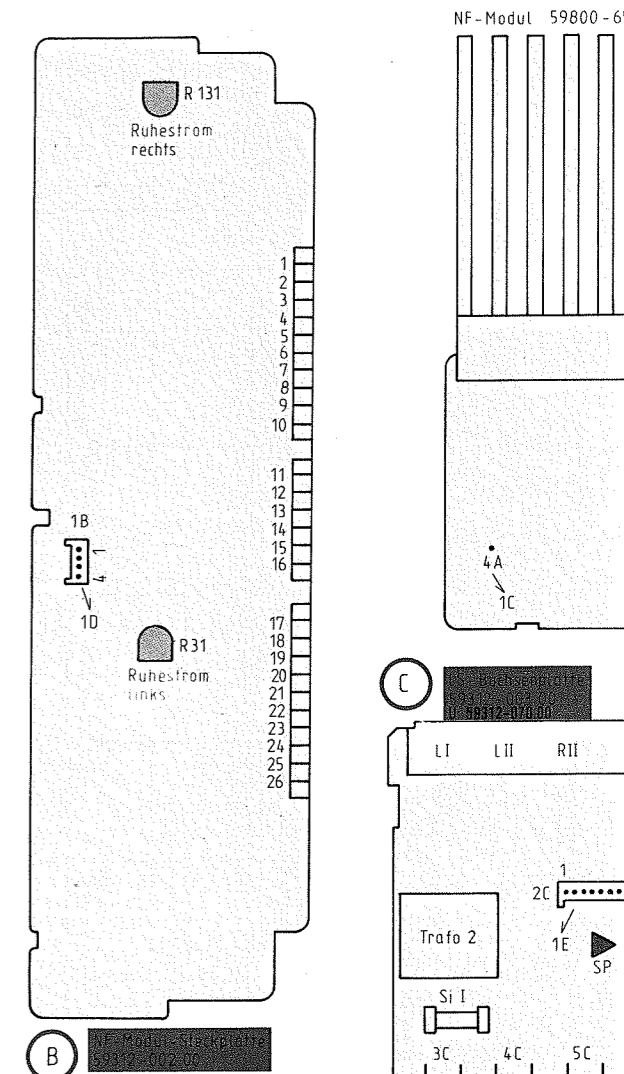
anal  
KANAL  
DE GAUCHE  
SINISTRO

ix ±150mV

ix ±150mV



- I = Gruppe I  
GROUP I  
GROUPE I  
GRUPPO I
- II = Gruppe II  
GROUP II  
GROUPE II  
GRUPPO II
- L = linker Kanal  
LEFT CHANNEL  
CANAL DE GAUCHE  
CANALE SINISTRO
- R = rechter Kanal  
RIGHT CHANNEL  
CANAL DE DROITE  
CANALE DESTRO

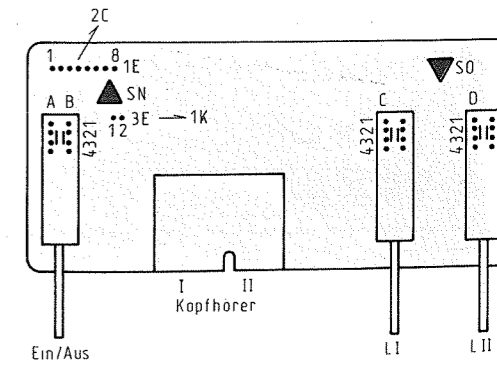
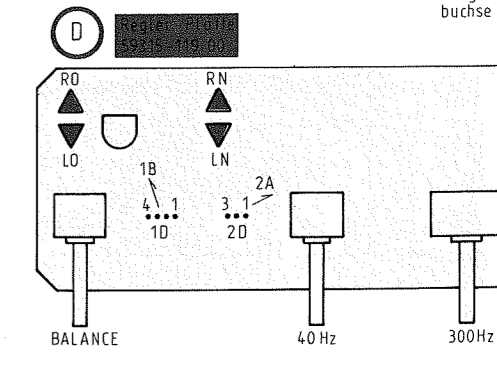
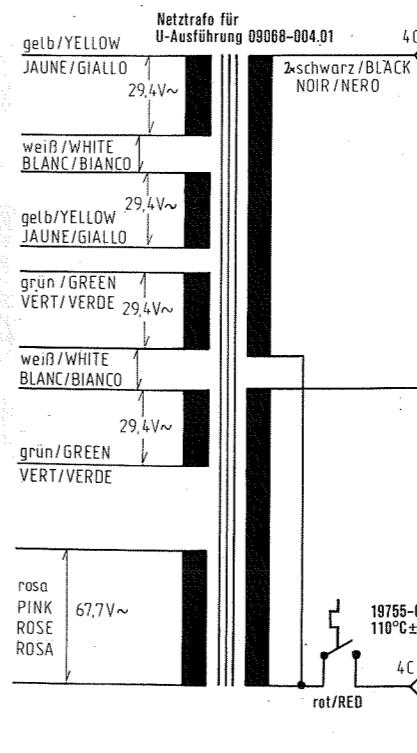


NF-Modul 59800-65

LI LII RII R

Trafo 2

Netzstecker Trafo1 Netz-Ausgang buchse



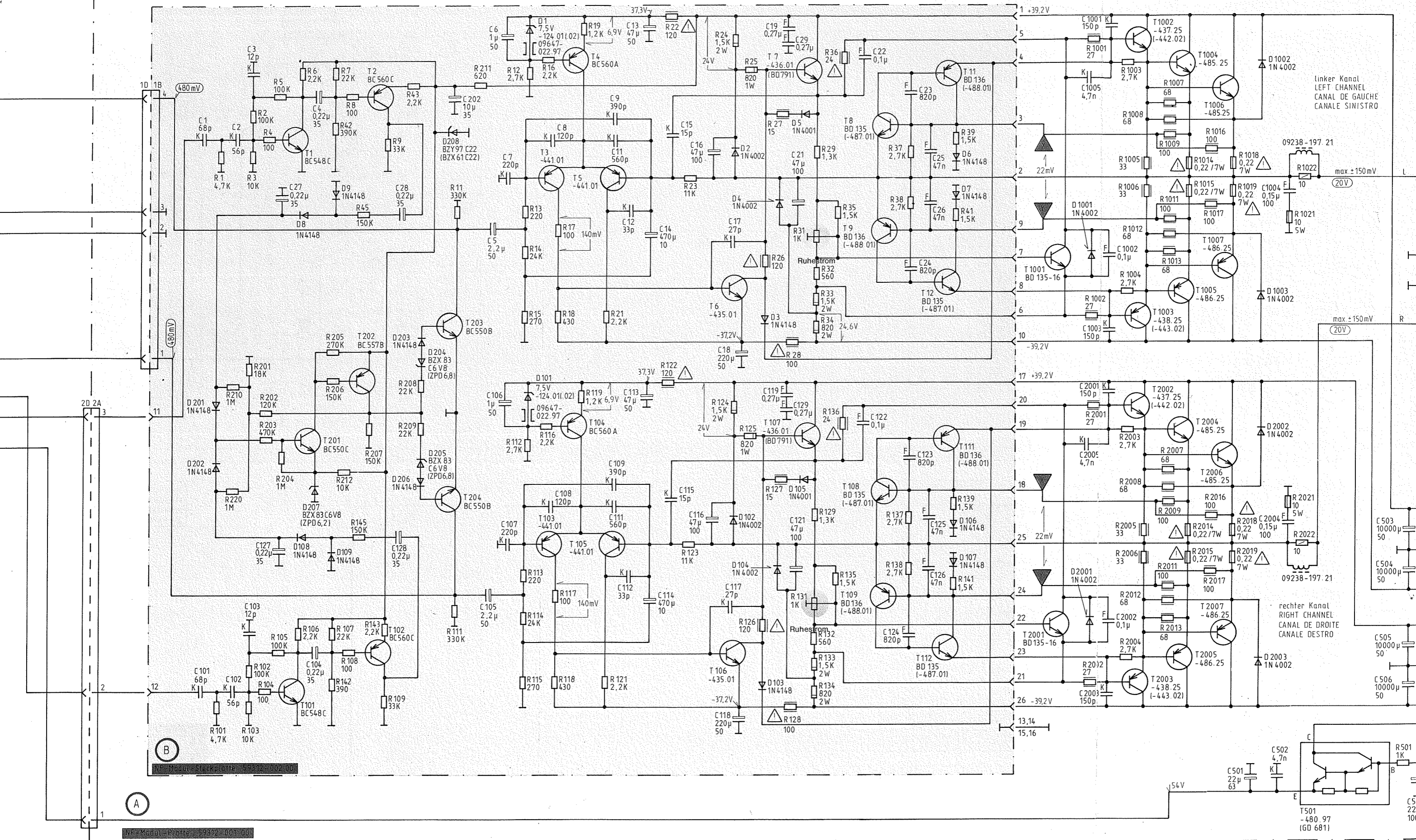
am Kühlkörper  
COOLING PLATE  
TOLE DE REFROIDISSEMENT  
DISSIPATORE TERMICO

Netz-Eingang  
MAINS ENTRÉE  
TENSIONE D'INGRESSO  
U: 120V AC 60 Hz

Netz-Ausgang  
MAINS SORTIE  
TENSIONE USCITA  
U: 120V AC 60 Hz

max 200W  
Netz-Ausgang entfällt bei GB- und U-Ausführung.

503, 506, 504, 507, 505,	508, 512, 902, 514, 509, 901, 511, 513,	515, 517, 903, 906, 516, 518, 904, 521, 519, 905,	954, 955,	951, 956, 952, 957,	907, 908, 909,	911, 912, 913, 914,	953,
501,	502, 503,		971, 952, 951, 953, 972, 956, 973, 954,	955, 957, 962, 958, 959, 961,	963, 964, 901, 965, 902, 966, 967, 903, 968,	969,	



linker Kanal  
LEFT CHANNEL  
CANAL DE GAUCHE  
CANALE SINISTRO

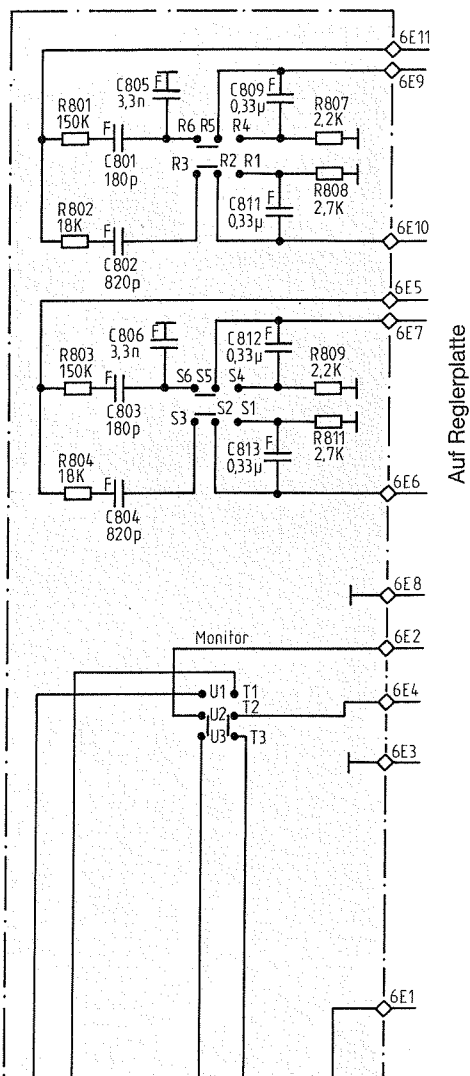
rechter Kanal  
RIGHT CHANNEL  
CANAL DE DROITE  
CANALE DESTRO

(A)

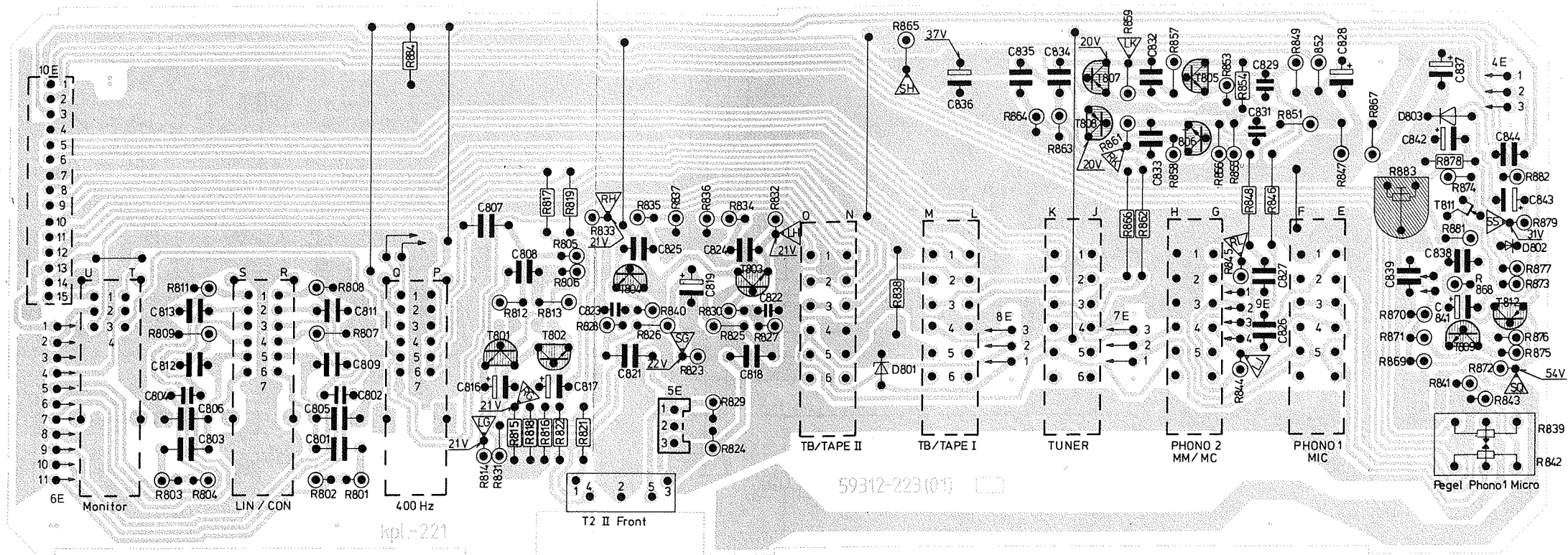
(B)

NF-Modul-Platte 59812-001-00

1, 101,	2, 102,	3, 103,	27, 127,	4, 104,	28, 128,	202,	5, 105,	6, 106,	7, 107,	8, 108,	9, 109,	11, 110,	12, 111,	13, 112,	14, 113,	15, 114,	16, 115,	17, 116,	18, 117,	19, 118,	20, 119,	21, 120,	22, 121,	23, 122,	24, 123,	25, 124,	26, 125,	27, 126,	28, 127,	29, 128,	30, 129,	31, 130,	32, 131,	33, 132,	34, 133,	35, 134,	36, 135,	37, 136,	38, 137,	39, 138,	40, 139,	41, 140,	42, 141,	43, 142,	44, 143,	45, 144,	46, 145,	47, 146,	48, 147,	49, 148,	50, 149,	51, 150,	52, 151,	53, 152,	54, 153,	55, 154,	56, 155,	57, 156,	58, 157,	59, 158,	60, 159,	61, 160,	62, 161,	63, 162,	64, 163,	65, 164,	66, 165,	67, 166,	68, 167,	69, 168,	70, 169,	71, 170,	72, 171,	73, 172,	74, 173,	75, 174,	76, 175,	77, 176,	78, 177,	79, 178,	80, 179,	81, 180,	82, 181,	83, 182,	84, 183,	85, 184,	86, 185,	87, 186,	88, 187,	89, 188,	90, 189,	91, 190,	92, 191,	93, 192,	94, 193,	95, 194,	96, 195,	97, 196,	98, 197,	99, 198,	100, 199,	101, 200,	102, 201,	103, 202,	104, 203,	105, 204,	106, 205,	107, 206,	108, 207,	109, 208,	110, 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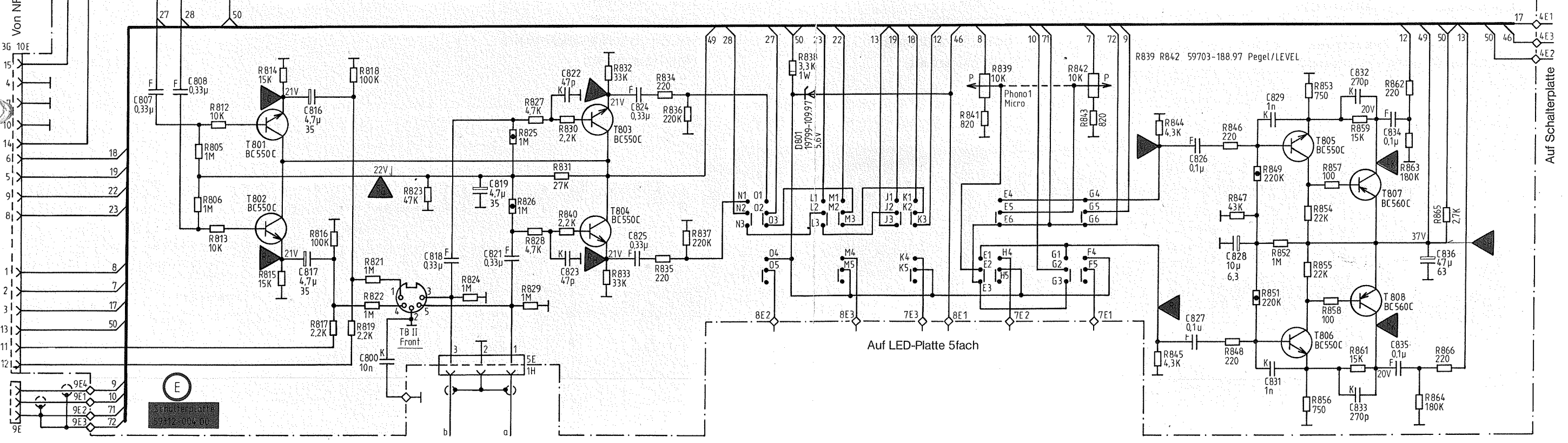
Auf Reglerplatte



59312-223(01)

**Schalter-Platte, Lötseite 59312-004.00**  
**SWITCH BOARD, SOLDER SIDE**  
**C. I. COMMUTATEURS, COTE SOUDURES**  
**PIASTRA COMMUTATORI, LATO SALDATURE**

Von NF-Eingangplatte

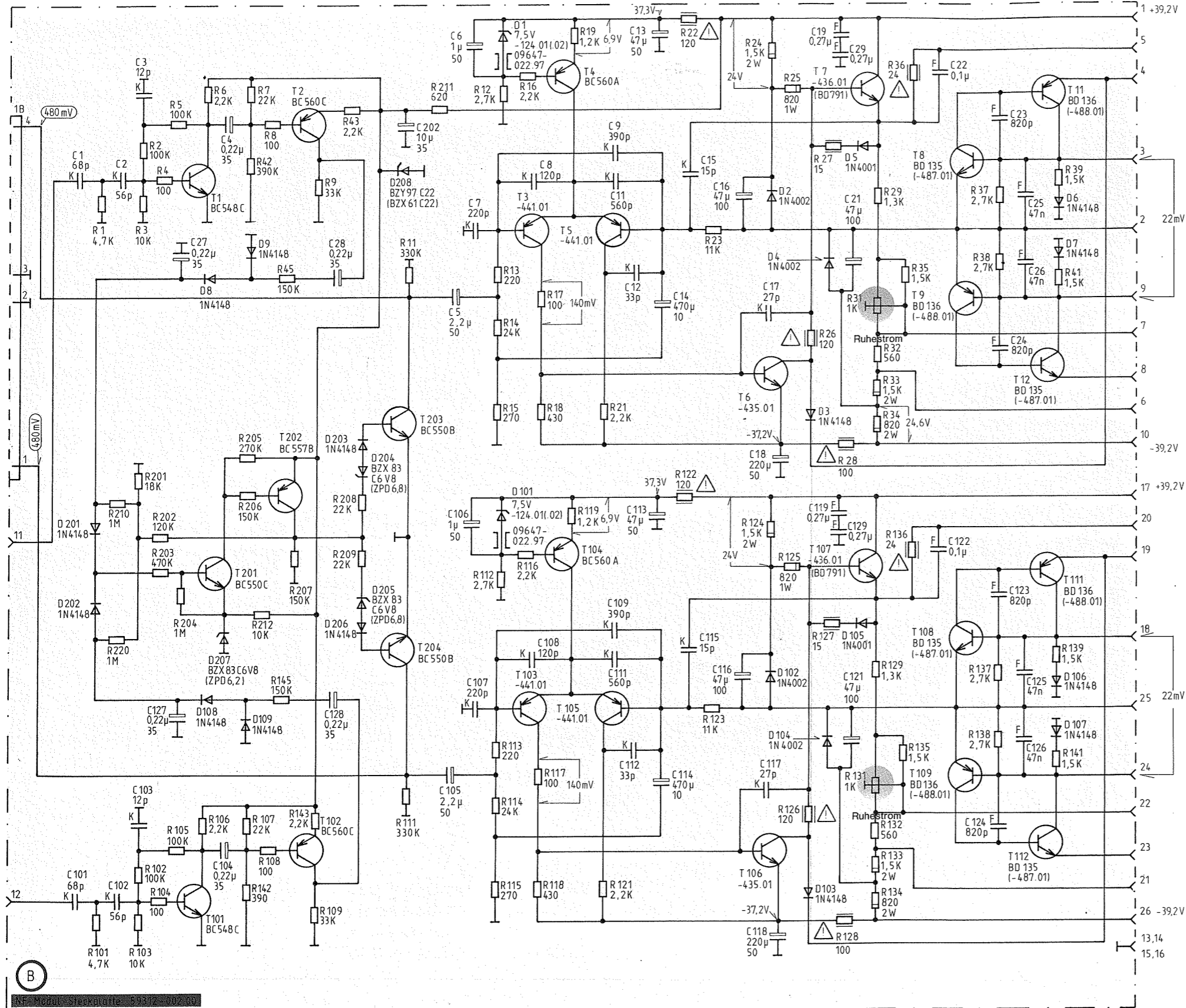


Auf LED-Platte 5fach

Auf Schalterplatte

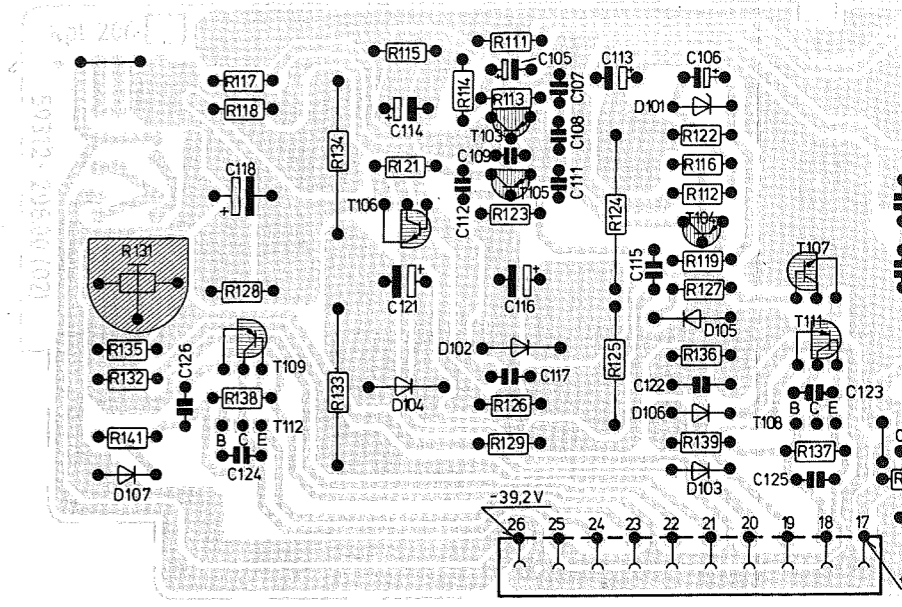


Von Reglerplatte

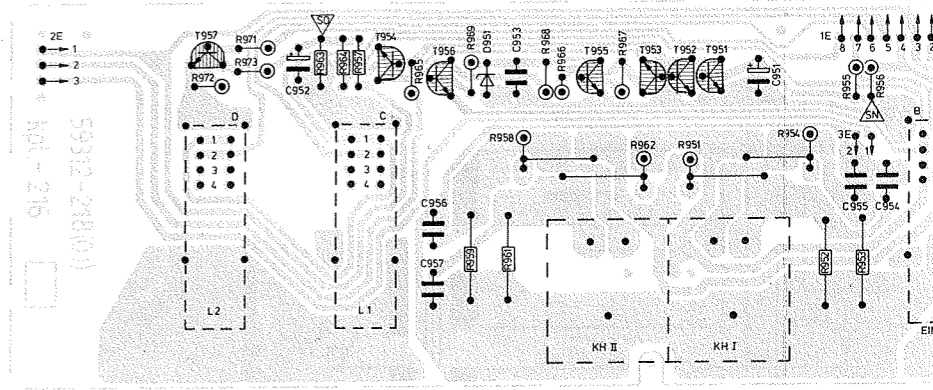


NF-Modul-Steckplatte 59312-002.00

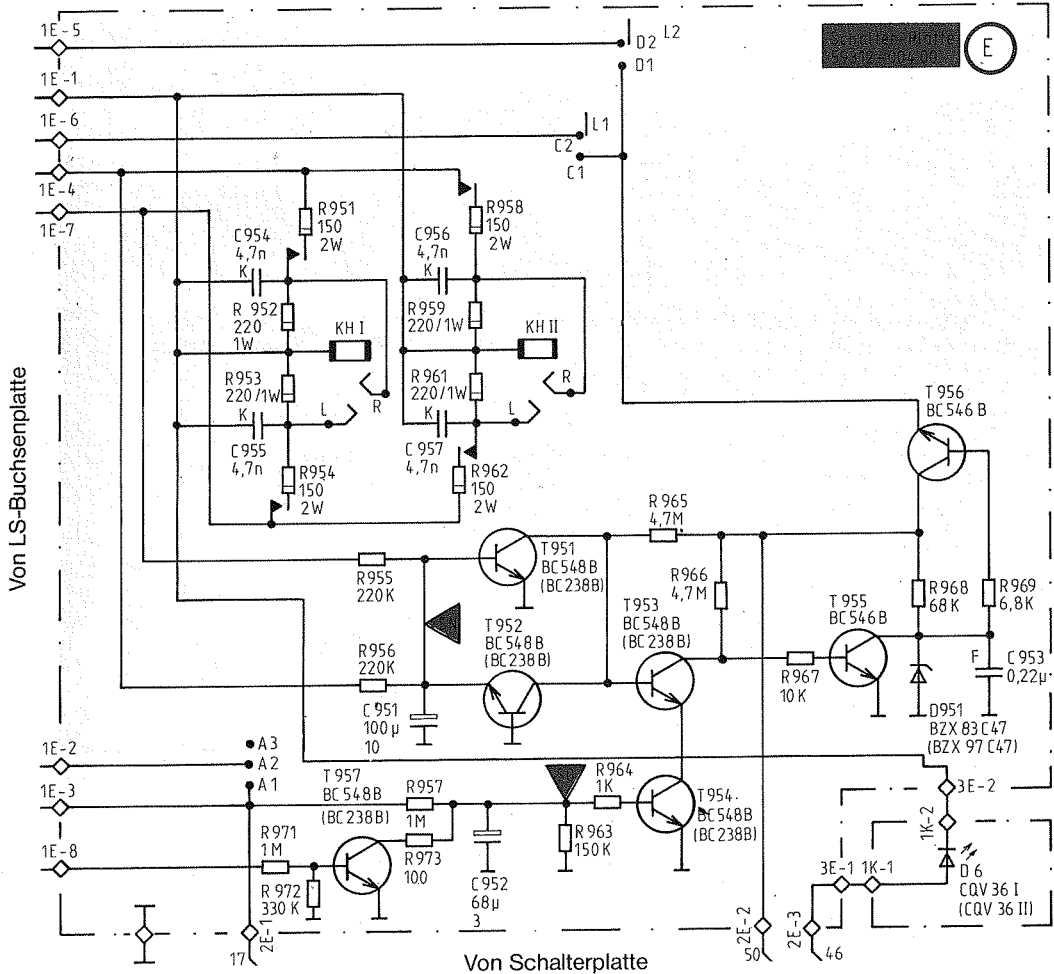
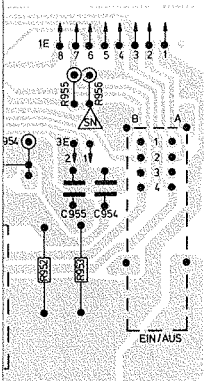
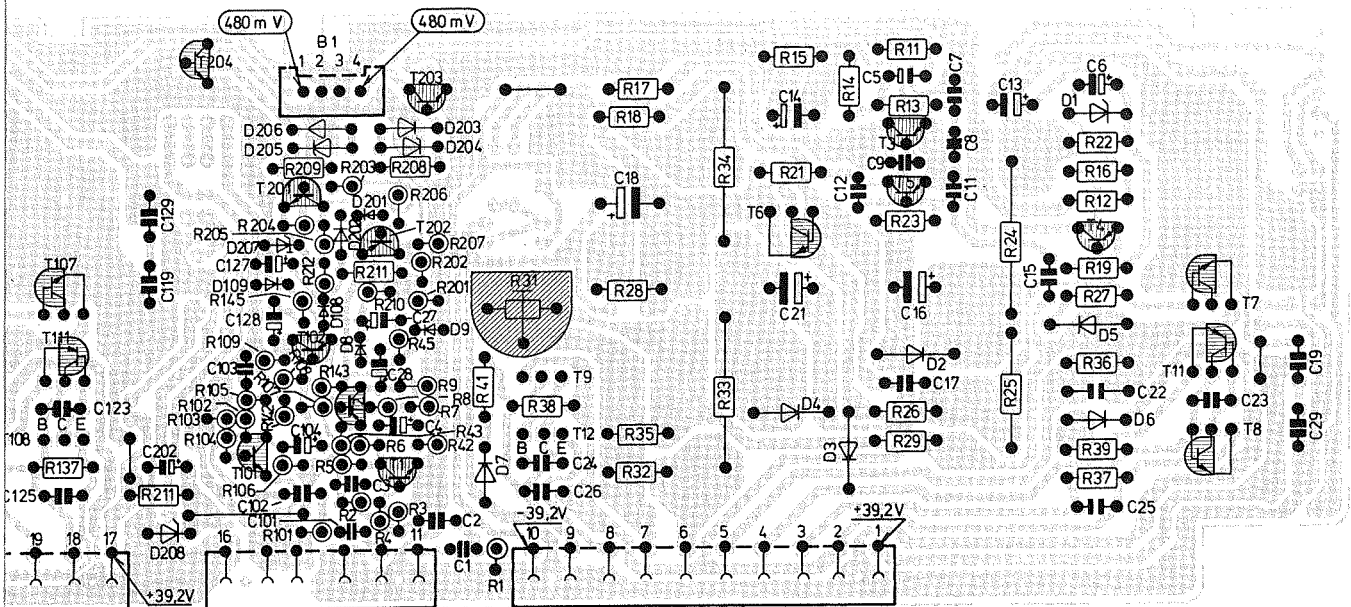
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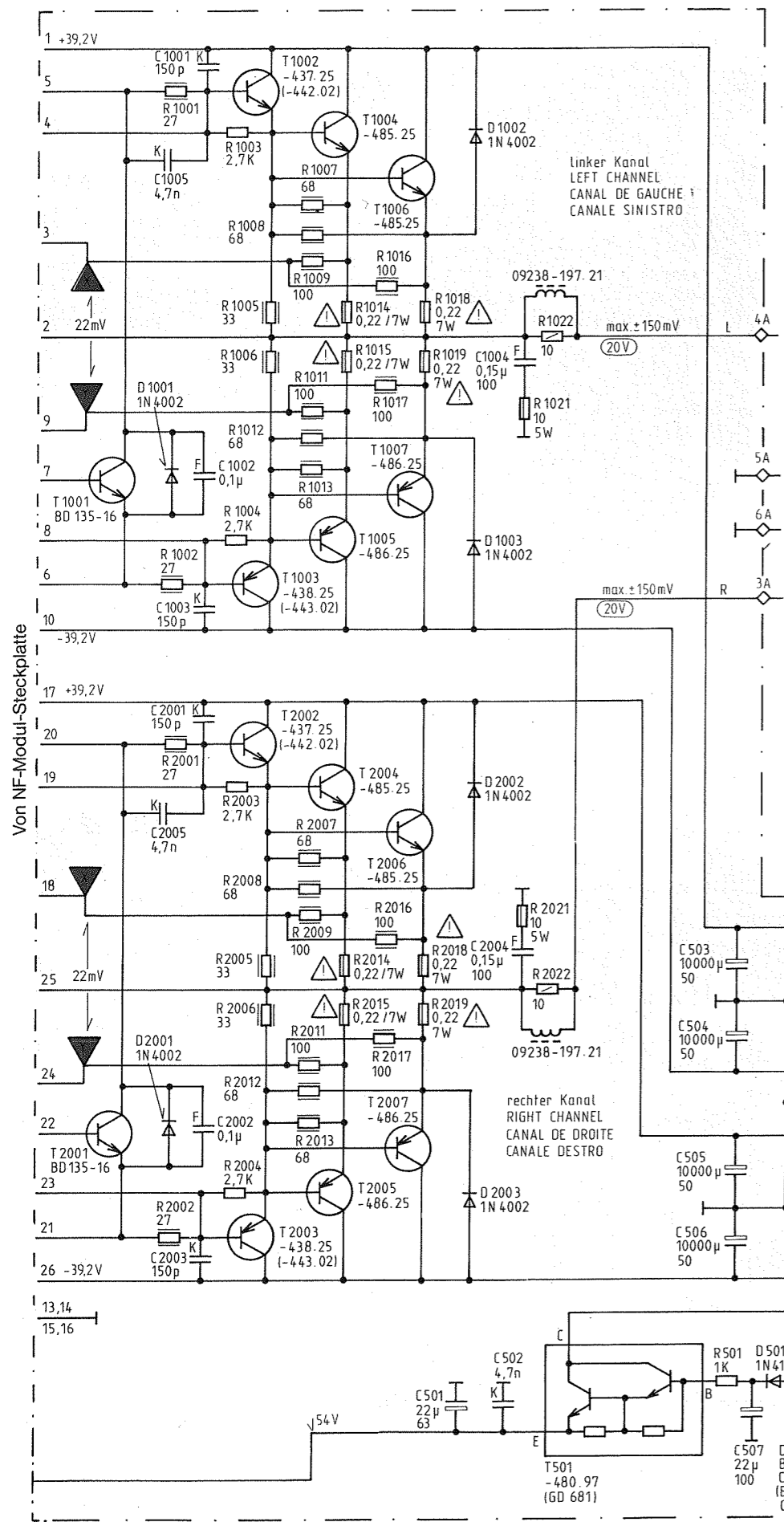
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**AF MODULE PLUG BOARD, SOLDER SIDE**  
**C. I. ENFICHABLE MODULE BF, COTE SOUDURES**  
**PIASTRA MODULO BF AD INNESTO, LATO SALDATURE**



**Schalterplatte, Lötseite 59312-00**  
**SWITCH BOARD, SOLDER SIDE**  
**C. I. COMMUTATEURS, COTE SOUDURES**  
**PIASTRA COMMUTATORI, LATO SALDATO**

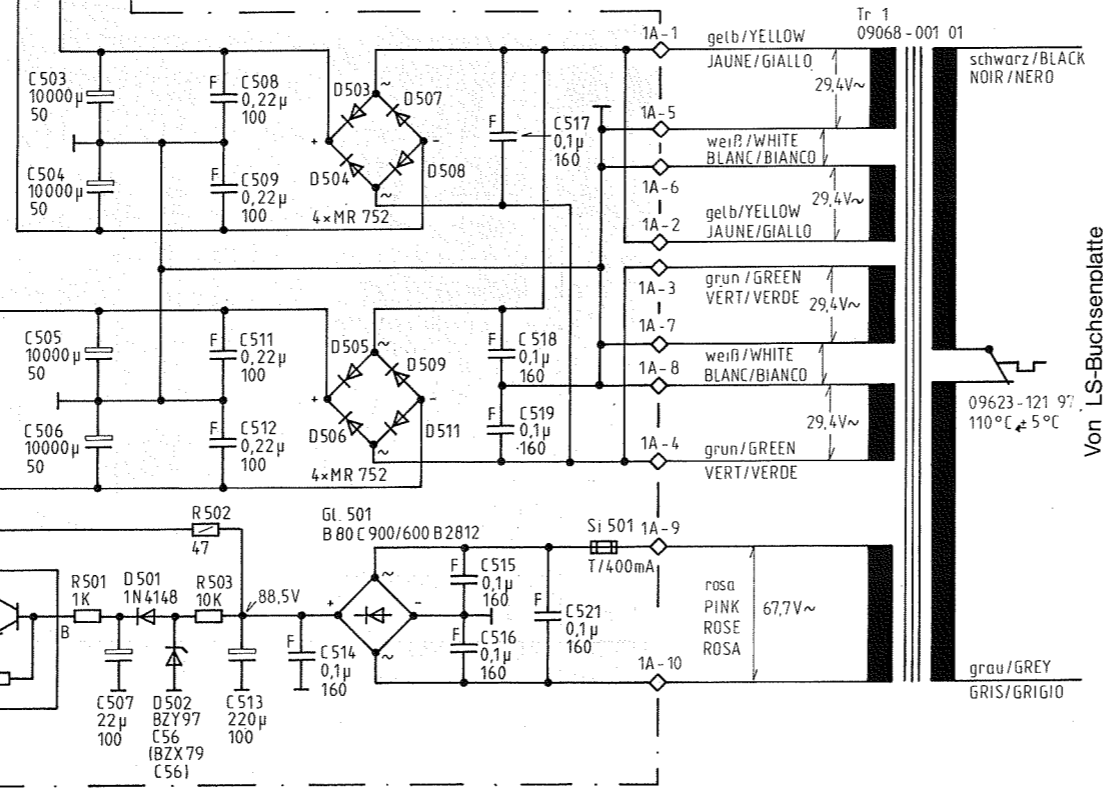


Site 59312-004.00  
 R SIDE  
 COTE SOUDURES  
 RI, LATO SALDATURE

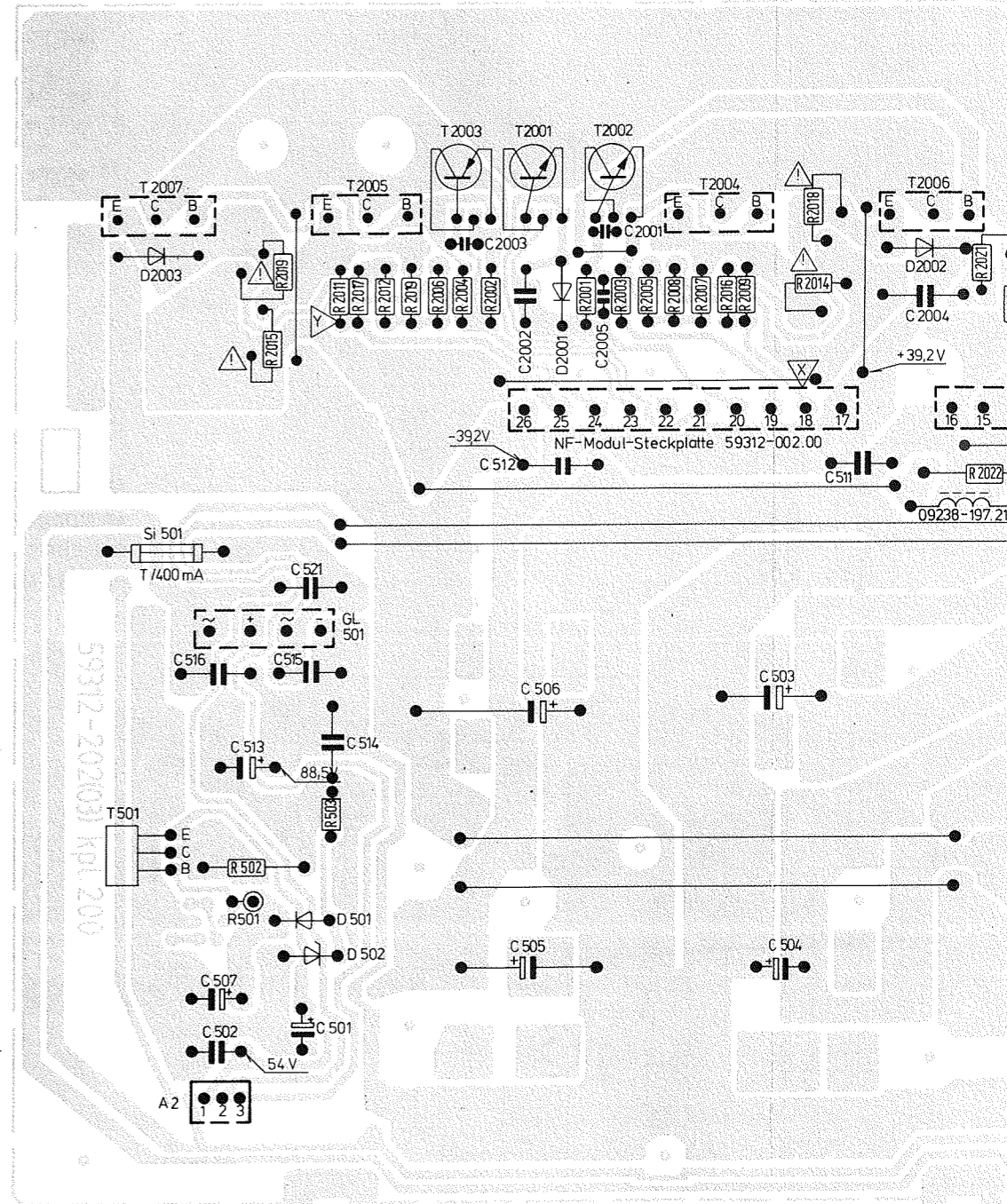


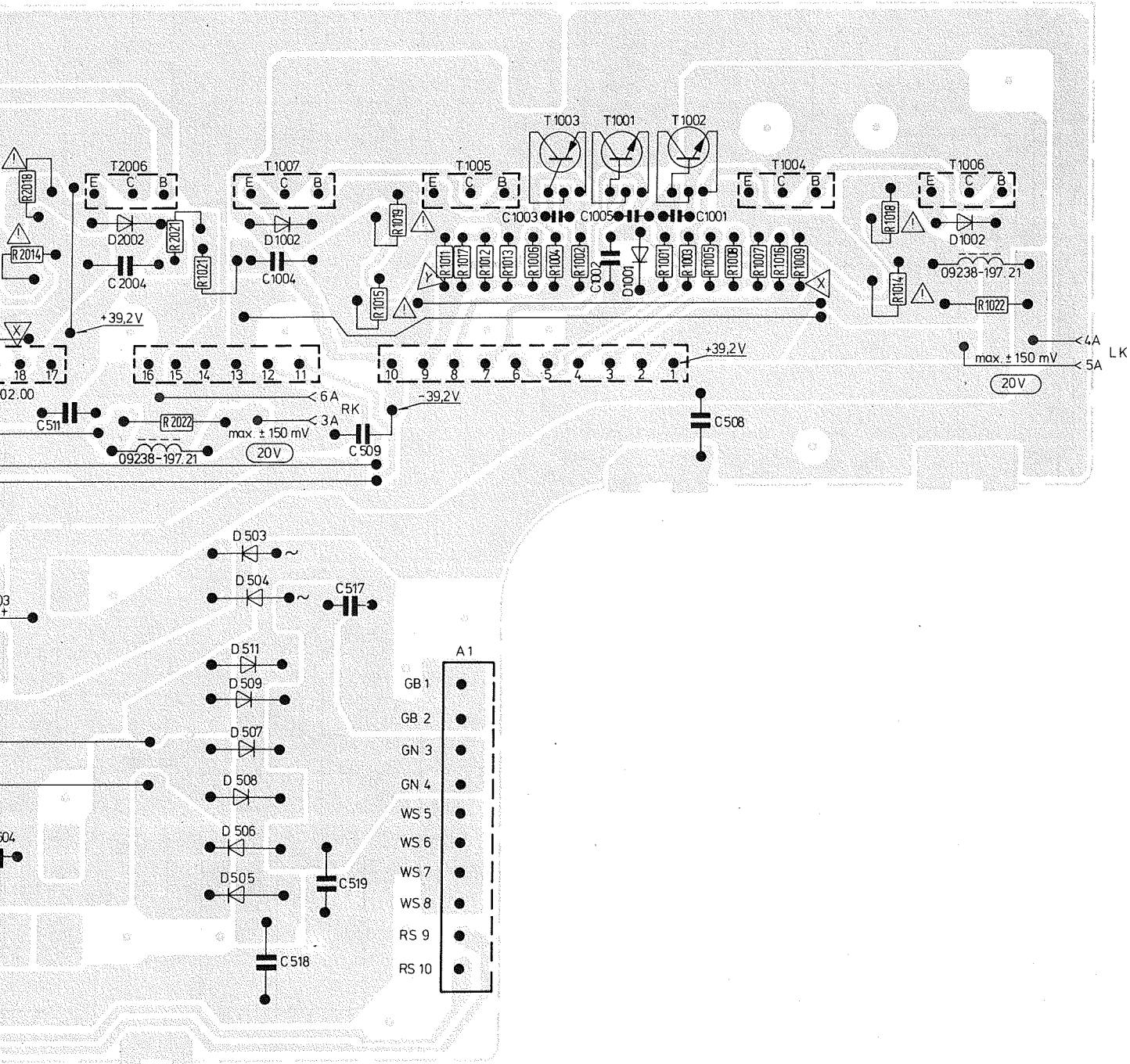
Auf LS-Buchsenplatte

**NF-Modul-Platte, Lötseite 59312-001.00**  
**AF MODULE BOARD, SOLDER SIDE**  
**C. I. MODULE BF, COTE SOUDURES**  
**PIASTRA MODULO BF, LATO SALDATURE**



Von LS-Buchsenplatte



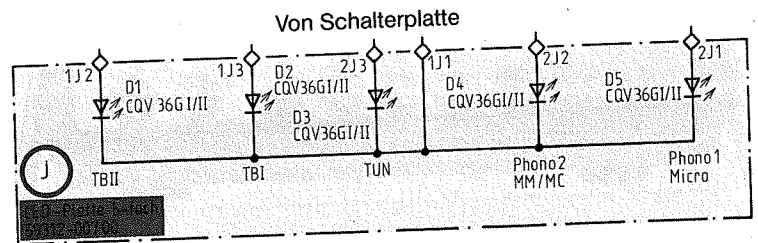
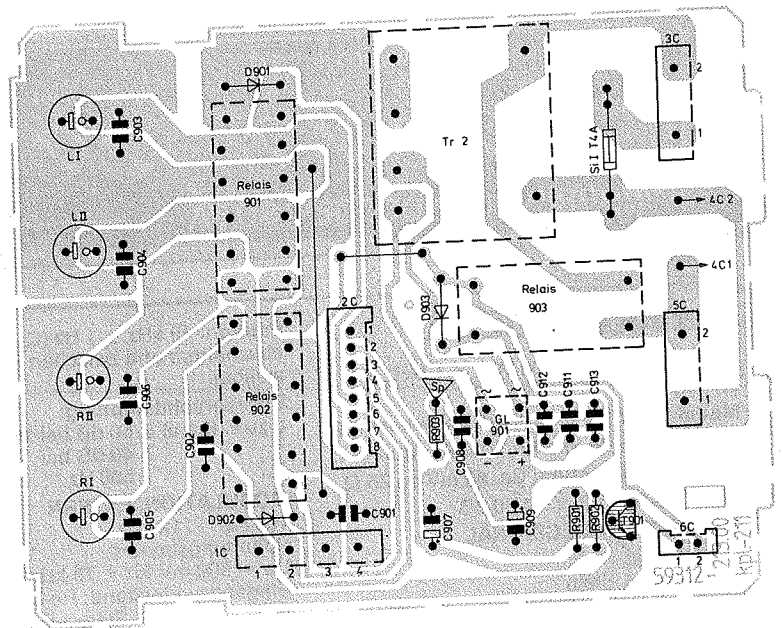
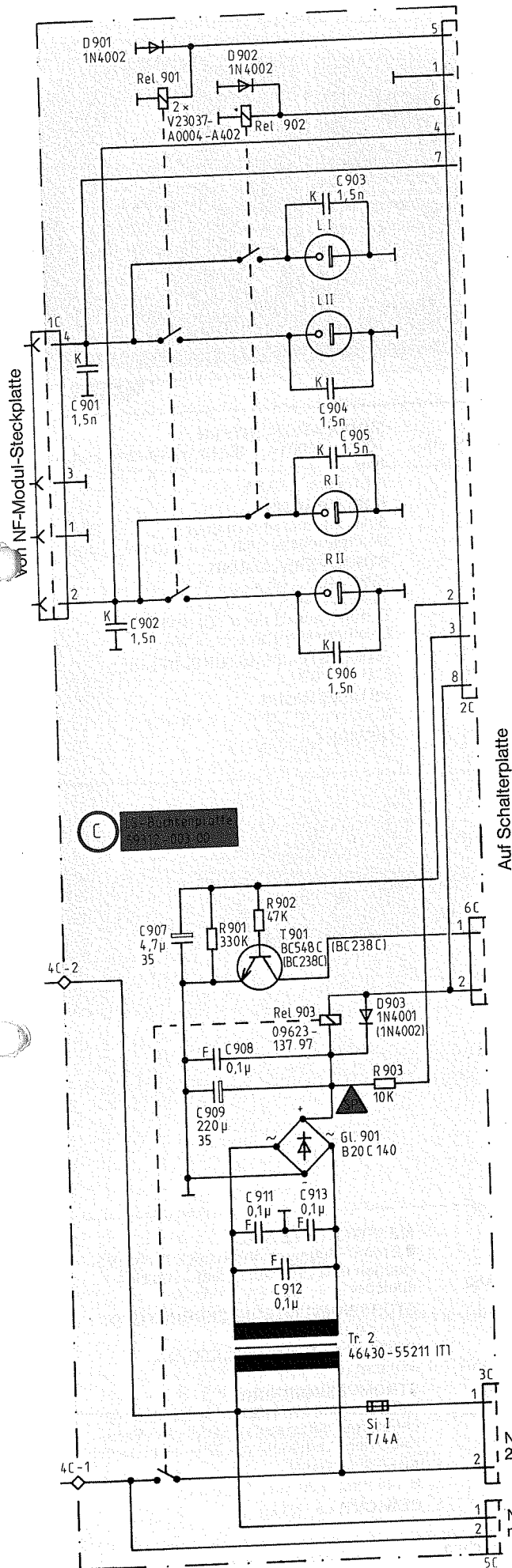


**LS-Buchsenplatte, Lötseite 59312-003.00**

**LS SOCKETS BOARD, SOLDER SIDE**

**C. I. PRISES HP, COTE SOUDURES**

**PIASTRA PRESE ALTOPARLANTI, LATO SALDATURE**



**LED-Platte 5-fach, Lötseite 59312-007.00**

**LED BOARD (5 LED'S), SOLDER SIDE**

**C. I. A 5 LED'S, COTE SOUDURES**

**PIASTRA A 5 LED, LATO SALDATURE**

