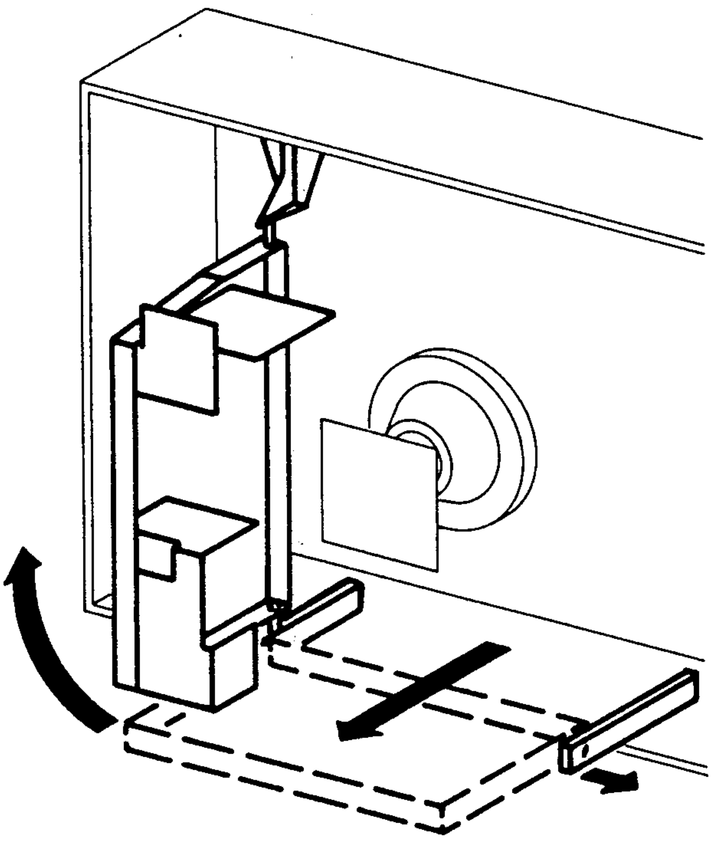
Hinweis für den Fachhandel!
Bei Ausfall von Steckkarten empfehlen wir grundsätzlich unseren Austauschdienst.

Information for dealers!
If a plug-in board becomes defective, we recommend you replace it.

Avvertenza per i rivenditori specializzati!
In caso di schede ad innesto difettose consigliamo in primo luogo di rivolgersi al nostro Servizio permuta.

Servicestellung
Service position
Posizione di servizio



GRUNDIG

Color

SERVICE MANUAL
CUC 2800
CUC 2600

VERS. A
GERAETE MIT SYMM. GEHAEUSE
SETS WITH SYMM. CABINET
APP. CON MOBILE SIMMETRICO

ST 63-250 CTI	(9.25201-01)
ST 70-250 CTI	(9.25196-01)
ST 70-250 CTI	(9.25196-06)
ST 70-250/9	(9.25197-01)

Servicehinweise für Schaltnetzteil: Gerät mit Netztrenntransformator betreiben. Primärseite des Schaltnetzteiles liegt an Netzpotential. Bei fehlender Sekundärspannung oder Takten des Netzteiles Sekundärstromkreise einzeln unterbrechen und Funktion überprüfen.
Suchschema bei Nichtschwingen des Sperrwandlers.

- ⟶ Anlaufspannung (Pin 9/5) < 8 V Anlauf über Di 616 u. R 616.
- ⟶ Referenzspannung (Pin 1) ca. 6 V
- ⟶ Startimpuls (Pin 4) (1)
- ⟶ Basisstromansteuerung (Pin 7) (2)

C 626 muß vor Wechsel des IC 631 entladen sein! Netzteilregelbereich 160 bis 260 V~

Service hints for switch-mode power supply: operate set with mains-isolating transformer (n. b. the primary side of the SM power supply is normally not isolated, if there is no secondary voltage or the power supply pulsates, disconnect the secondary circuits individually and check operation. Fault finding scheme if blocking function prevents oscillation:

- ⟶ Starting voltage (Pin 9/5) < 8 V, starting via Di 616 and R 616
- ⟶ Reference voltage (Pin 1) approx. 6 V
- ⟶ Start pulse (Pin 4) (1)
- ⟶ Base current drive (Pin 7) (2)

Before replacement of IC 631, C 626 must be discharged, Power supply range 160 to 260 V AC.

Avvertenze di Servizio dell'alimentatore: Alimentare l'apparecchio con un trasformatore separatore. Il lato primario dell'alimentatore è a potenziale di rete. Se viene a mancare la tensione del secondario o in caso di intervento ritmico dell'alimentatore, interrompere uno alla volta i circuiti dell secondario e controllarne la funzione. Se il trasduttore di interdizione non viene eccitato, ricercare il guasto secondo lo schema seguente:

- ⟶ Tensione di avviamento (pin 9/5) < 8 V. Avviamento tramite Di 616 e R 616.
- ⟶ Tensione di riferimento (pin 1) ca. 6 V.
- ⟶ Impulso di avviamento (pin 4) (1)
- ⟶ Pilotaggio della corrente di base (pin 7) (2)

Il C 626 deve essere scarico prima di cambiare l'IC 631! Campo di regolazione dell'alimentatore: 160 a 260 V ~.

IR-VORVERST. 29304-015.55
IR PREAMPL.
PREAMPL. IR

LED-PLATTE 29304-013.77/.79
LED-BOARD
PIASTRA LED

SDA 2011 A-003 INL.
SDA 2011 A-007 IT
IC811

KEYBOARD

TDA 4601
IC 631

MOTOROLA-VERS. 4
SIEHE SEITE 37/38
SEE PAGE
VEDI PAGINA

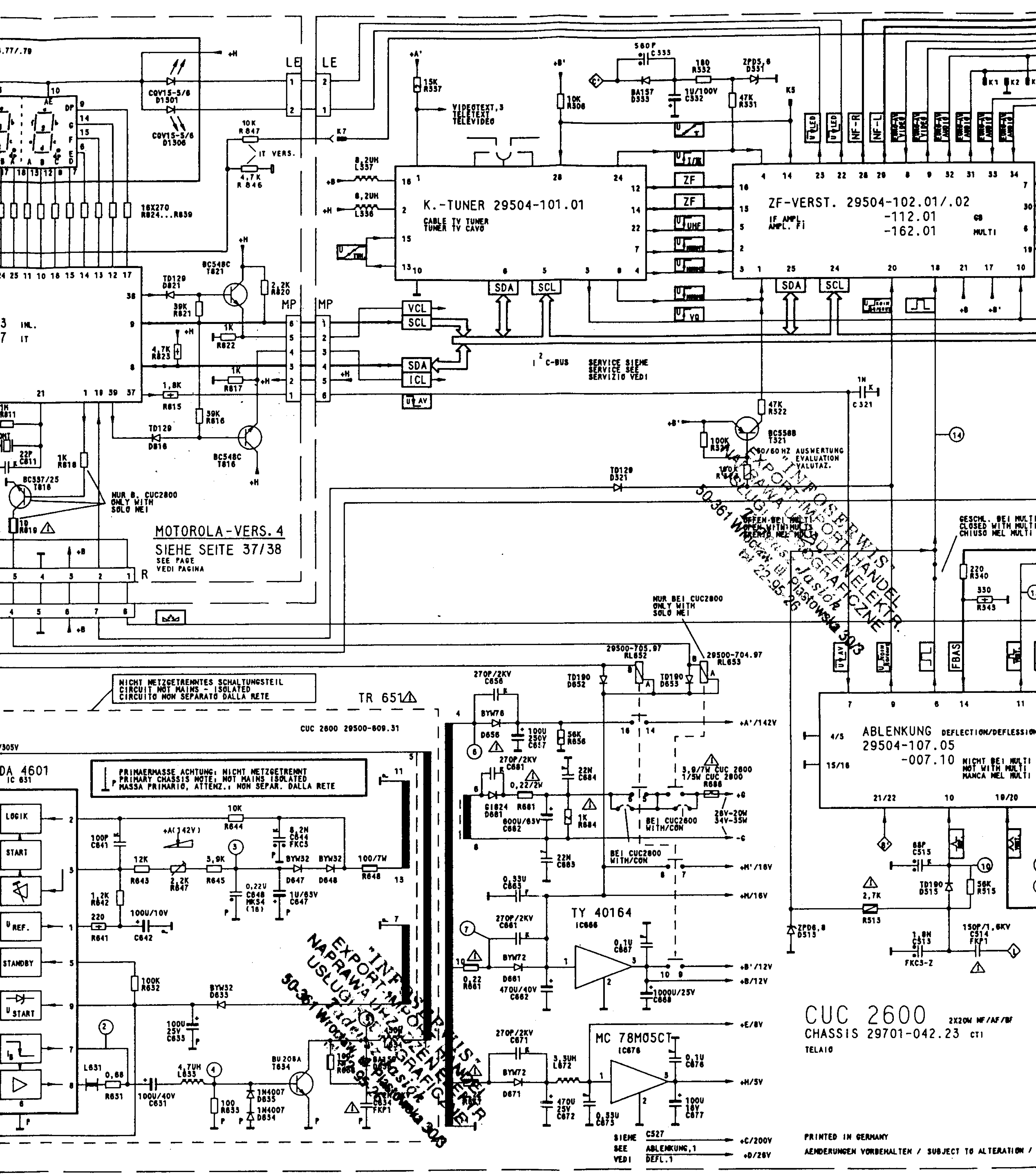
BED.-EINHEIT/CONTROL UNIT/UNITA DI COMANDO

NICHT NETZGETRENNTES SCHALTUNGSTEIL
CIRCUIT NOT MAINS - ISOLATED
CIRCUITO NON SEPARATO DALLA RETE

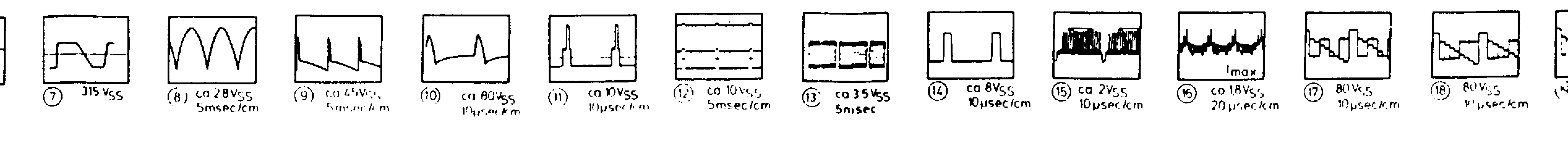
NETZSCHALTERPLATTE
MAINS SWITH BOARD
PIASTRA INTERR. DI RETE
29304-065.23

BEI VERS. B AUF BEDIENEINHEIT
FITTED ON CONTROL UNIT ON B VERS.
NELLA VERS. B SULL'UNITA DI COMANDO

① 1,3 V_{SS} 35 V_S ② 20 V_{SS} 5 V_S ③ 65 V_{SS} ④ 6 V_{SS} ⑤ 700 V_{SS} ⑥ 550 V_{SS} ⑦ 315 V_{SS} ⑧ ca 2,8 V_{SS} 5msec/cm ⑨ ca 45 V_{SS} 5msec/cm



K.-TUNER 29504-101.01
CABLE TV TUNER
TUNER TV CAVO
ZF-VERST. 29504-102.01/.02
IF AMPL.
AMPL. FI
-112.01
-162.01
MULTI
VIDEOTEXT,3
TELETEXT
TELEVIDEO
I²C-BUS
SERVICE SIEHE
SERVICE SEE
SERVIZIO VEDI
50/60 HZ AUSWERTUNG
" EVALUATION
VALUTAZ.
NUR B. CUC2800
ONLY WITH
SOLO NEI
MOTOROLA-VERS. 4
SIEHE SEITE 37/38
SEE PAGE
VEDI PAGINA
GESCHL. BEI MULTI
CLOSED WITH MULTI
CHIUSO NEL MULTI
OFFEN BEI MULTI
OPEN WITH MULTI
APERTO NEL MULTI
NICHT NETZGETRENNTES SCHALTUNGSTEIL
CIRCUIT NOT MAINS - ISOLATED
CIRCUITO NON SEPARATO DALLA RETE
TR 651
CUC 2600 29500-609.31
PRIMAERMASSE ACHTUNG: NICHT NETZGETRENNT
PRIMARY CHASSIS NOTE: NOT MAINS ISOLATED
MASSA PRIMARIO, ATTENZ.: NON SEPAR. DALLA RETE
TDA 4601
IC 631
LOGIK
START
U REF.
STANDBY
U START
ABLENKUNG DEFLECTION/DEFLESSIONE
29504-107.05
-007.10
NICHT BEI MULTI
NOT WITH MULTI
MANCA NEL MULTI
BEI CUC2800
WITH/CON
TY 40164
IC666
MC 78M05CT
IC676
+A'/142V
-G
+H'/16V
+H/16V
+B'/12V
+B/12V
+E/8V
+H/5V
SIEHE C527 +C/200V
SEE ABLENKUNG,1 +D/26V
VEDI DEFL.1
CUC 2600 2X20W NF/AF/BF
CHASSIS 29701-042.23 CTI
TELAIO
PRINTED IN GERMANY
AENDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION /



(7) 315 VSS
(8) ca 2,8VSS 5msec/cm
(9) ca 45VSS 5msec/cm
(10) ca 80VSS 10µsec/cm
(11) ca 10VSS 10µsec/cm
(12) ca 10VSS 5msec/cm
(13) ca 35VSS 5msec
(14) ca 8VSS 10µsec/cm
(15) ca 2VSS 10µsec/cm
(16) ca 18VSS 20µsec/cm
Imax
(17) 80VSS 10µsec/cm
(18) 80VSS 10µsec/cm

BEI VERS. B AUF BED.-EINHEIT
FITTED ON CONTROL UNIT ON B VERS.
NELLA VERS. B SULL'UNITÀ DI COMANDO

KOPFH.-ANSCHL.-PL.29504-054.18
HEADPHONE SOCKET BOARD
PIASTRA PRESA CUFFIA

EURO-AV-BUCHSE
EURO-AV SOCKET
PRESA EURO-AV

VIDEOTEXT 29504-108.01 NORD
.11 SUED
TELETEXT
TELEVIDEO

FARB/RGB 29504-105.01
COLOUR / RGB
COLORE / RVB
-105.21 CTI
-165.01 MULTI

TDA 8442
IC 550

TDA 8145
IC 555

NF 29504-104.01 CUC 2600
AF/BF .02 CUC 2600
.11 CUC 2600

9504-102.01/.02
-112.01 GB
-162.01 MULTI

ABLENKUNG DEFLECTION/DEFLESSIONE
29504-107.05
-007.10 NICHT BEI MULTI
NOT WITH MULTI
MANCA NEL MULTI

ENTF. BEI VIDEOTEXT
DELETED WITH TELETEXT
MANCANO CON TELEVIDEO

GESCHL. BEI MULTI
CLOSED WITH MULTI
CHIUSO NEL MULTI

OFFEN BEI IT.
OPEN IN IT. VERS.
APERTO NELLA VERS. IT.

2600 2X20W NF/AF/BF
29701-042.23 CTI

CUC 2800 2X35W NF/AF/BF
CHASSIS
TELAIO

ERMANY
VORBEHALTEN / SUBJECT TO ALTERATION / CON RISERVA DI MODIFICHE

(17) 80 V_{SS} 10µsec/cm
(18) 80 V_{SS} 10µsec/cm
(19) 80 V_{SS} 30µsec/cm
(20) 15 V_{SS} 20µsec/cm
(21) ca 28 V_{SS} 20µsec/cm
(22) 20 V_{SS} 5msec/cm
(23) 40 V_{SS} 5msec/cm
(25) ca 15 V_{SS} 20µsec/cm
(26) 8 V_{SS} 20µsec/cm
(27) ca 12 V_{SS} 20µsec/cm
(28) 1300 V_{SS} 20µsec/cm
(29) 200 V_{SS} 20µsec/cm
(30)

BEI VERS. B AUF BED.-EINHEIT
FITTED ON CONTROL UNIT ON B VERS.
NELLA VERS. B SULL'UNITA DI COMANDO

KOPFH.-ANSCHL.-PL.29304-054.16
HEADPHONE SOCKET BOARD
PIASTRA PRESA CUFFIA

NF 29504-104.01 CUC 2600
AF/BF .02 CUC 2600
.11 CUC 2600

ENTF. BEI VIDEOTEXT
DELETED WITH TELETEXT
MANCANO CON TELEVIDEO

FARB/RGB 29504-105.01
COLOUR / RGB -105.21 CTI
COLORE / RVB -165.01 MULTI

STECKER BR / PLUG BR / SPINA BR

BILDRÖHRPLATTE 29304-070.46
CRT BASE / PIASTRA CINESC.

LEUCHTPUNKTUNTERDRUECKUNG
BEAM SPOT SUPPRESSION
SOPPRESSIONE SPOT

ABHAENGIG VON BR-TOL.
DEPENDS ON TOL. OF PICTURE TUBE
DIP. DALLA TOLLER. DEL CINESCOPIO

TR 526
29201-019.05


STECKER BR / PLUG BR / SPINA BR
BILDRÖHRPLATTE 29304-070.46
CRT BASE / PIASTRA CINESC.
A 66 EAS 00X 01 (28")
A 59 EAS 00X 01 (25")
CA.25KV
LEUCHTPUNKTUNTERDRUECKUNG
BEAM SPOT SUPPRESSION
SOPPRESSIONE SPOT
BR-PLATTE
CRT BASE
PIASTRA CINESC.
TR 526
29201-019.05
ANSCHL. V. UNTEN GES.
CONN. BOTTOM VIEW
COLLEG. VISTI DI SOTTO
CUC 2600

Service am I²C-Bus

Bei Fehlfunktionen des Gerätes, die nicht auf Netzteil, Hochspannung und Ablenkung zurückzuführen sind, ist der I²C-Bus gemäß Tabelle 1 zu prüfen, bevor weitere Servicearbeiten nach Tabelle 2 durchgeführt werden.

Der µComputer in der Bedieneinheit IC 811 liefert Steuerbefehle für Tuner, ZF, Videotext, Scartbuchse (Euro-AV-Buchse) inklusive VCR-Fernsteuerung und RGB-Analogwerte über den I²C Bus.

Hinweis:

Bei Modulwechsel ist das Gerät generell auszuschalten!

Auch in Stellung »Bereitschaft« darf kein Modul gezogen werden! MOS-handling beachten

Tabelle 1

Messung	Meßwert	Meßpunkt	Mögliche Fehler
+H	5 V	Pin 40, IC 811 (SIE) Pin 4, (MOT)	D 671, IC 676, IC 811
4 MHz Takt Reset	4 MHz, 3 V_{ss} 5 V_{ss} nur im Einschaltmoment	Pin 22, IC 811 (SIE) Pin 5, (MOT) Pin 23, IC 811 (SIE) Pin 2, (MOT)	F 811, IC 811 C 806, IC 811
I²C Bus	5 V_{ss}	Pin 8, 9, IC 811 (SIE) Pin 21, 23, (MOT)	Die I²C-Bus-Daten sind auch ohne TP-Bedienung oder Keyboardeingabe vorhanden. Bei fehlenden Daten: Die Leitungen SDA und SLC (Brücken auf dem Bedienteil) auftrennen. Sind dann die I²C-Bus-Daten vorhanden, liegt eine Überlastung des I²C-Bus vor. **Fehlerursache:** Tuner, ZF, Videotext, IC 350, EURO-AV-Buchse.

Tabelle 2

Mögliche Fehlerarten des Gesamtgerätes in Abhängigkeit der I²C-Bus-Steuerung.

Fehler	Mögliche Ursache	Meßwert	Meßpunkt
Keine Bedienfunktion per Keyboard	+H IC 811	5 V siehe Tabelle 1	IC 811 pin 40 (SIE) Pin 4 (MOT)
Keine Kanal-Programmumschaltung mit TP LED schaltet nicht	IR-Vorverstärker D 1201, T 1204, +B, IC 1211, D 831, +H, IC 811, T 801,	+B = 12 V 5 V_{ss} (IR-Signal) 5 V_{ss} (Einschaltvorgang)	Pin 6 IC 1211 Pin 3 IC 1211 Pin 8, 9 IC 811 (SIE) Pin 21, 23 (MOT)
	Wischerschalter der Netztaste, F 811	Übergangswiderstand 0 Ω 3 V_{ss}	am Schalter Pin 22 IC 811 (SIE) Pin 5 (MOT)
Keine Frequenzabstimmung	+A über R 337 +B, +H Daten (SDA)/Clock (SCL) I²C Bus variable Abstimmspannung in Abhängigkeit der Kanaleingabe	ca. 46 V 12 V, 5 V 5 V_{ss} 0,2 – 30 V	Tuner Stift 1 Tuner Stift 16, 2 Tuner Stift 6, 5 Tuner Stift 13, 15
Kein FBAS-Signal an ZF-Bst. Kont. 7, 9	+B, +B' I²C Bus, SDA, SCL fehlt am Tuner	12 V 5 V_{ss}	ZF 21, 17 Tuner 6, 5
Kein NF-Signal an ZF-Bst. Kont. 28/29	+B, +B' I²C Bus, SDA, SCL keine Koinzidenz	12 V 5 V_{ss} 12 V 5 V	ZF 21, 17 ZF 25, 24 ZF 20 IC 811 Pin 19 (SIE) Pin 35 (MOT)
Keine Analogwerte Keine Helligkeit Kein Kontrast Kein Farbkontrast	I²C Bus, IC 350 D/A-Converter D/A-Converter D/A-Converter	5 V_{ss} 1 – 3 V 2 – 4 V 2 – 4 V	IC 350 Pin 4/5 Farb/RGB-Baustein: Stift 10 (Helligk.) Stift 11 (Kontrast) Stift 12 (Farbkon.)
Nur bei TP-Bedienung Kein Videotext	+B', +E I²C Bus, SDA T 816 ICL	12 V, 8 V 5 V_{ss} 5 V_{ss}	VT 13, 2 VT 9 VT 11
Nur bei TP-Bedienung in Verbindung mit Video 1 Taste			
Keine VCR-Fernsteuerung	T 821, VCL T 816, ICL I²C Bus SDA/T 111	5 V 5 V_{ss} 5 V_{ss}	Euro-AV-Buchse 10 Euro-AV-Buchse 14 Euro-AV-Buchse 12

Service checks on the I²C Bus

If faults occur in the set which cannot be attrib
the I²C bus should be checked using Table

Via the I²C bus the microcomputer in the cont
(Teletext), Scart socket (Euro AV socket) incl

Note:

N.B. when a module is being changed, the se
plugged even in the "standby" mode. Obser

Table 1

Test	Test Figures
+H	5 V
4 MHz clock Reset	4 MHz, 3 V_{pp} 5 V_{pp} only at moment of switch on
I²C Bus	5 V_{pp}

Table 2

Possible faults due to I²C Bus control which c

Fault	Possible Cause
No functions accepted by keyboard	+H IC 811
Channel No. cannot be changed with remote control LED does not switch	IR preamplifier D 1201, T 1204, + IC 1211, D 831, + IC 811, T 801
	Wiper switch of m button F 811
No frequency tuning	+A via R 337 +B, +H Data (SDA)/clock I²C Bus Variation of tuning tage as function o channel selection
No CCVS at IF module contacts 7, 9	+B, +B' I²C Bus, SDA, SCL absent at tuner
No AF signal at IF module contacts 28/29	+B, +B' I²C Bus, SDA, SCL no coincidence
No analog singals Brightness Contrast Colour contrast	I²C Bus, IC 350 D/A convertor D/A convertor D/A convertor
Remote control operation only	
No Videotext (Teletext)	+B', +E I²C bus, SDA T 816 ICL
Remote control operation involving video 1 bu	
No VCR remote control	T 821, VCL T 816, ICL I²C bus SDA/T 111

g und Ablenkung zurückzuführen sind, ist
len nach Tabelle 2 durchgeführt werden.
Tuner, ZF, Videotext, Scartbuchse (Euro-
ber den I²C Bus.

MOS-handling beachten

	Mögliche Fehler
	D 671, IC 676, IC 811
	F 811, IC 811 C 806, IC 811
	Die I²C-Bus-Daten sind auch ohne TP-Bedienung oder Keyboardeingabe vorhanden. Bei fehlenden Daten: Die Leitungen SDA und SLC (Brücken auf dem Bedienteil) auftrennen. Sind dann die I²C-Bus-Daten vorhanden, liegt eine Überlastung des I²C-Bus vor. **Fehlerursache:** Tuner, ZF, Videotext, IC 350, EURO-AV-Buchse.

us-Steuerung.

	Meßpunkt
e 1	IC 811 pin 40 (SIE) Pin 4 (MOT)
nal) altvorgang)	Pin 6 IC 1211 Pin 3 IC 1211 Pin 8, 9 IC 811 (SIE) Pin 21, 23 (MOT)
iderstand	am Schalter Pin 22 IC 811 (SIE) Pin 5 (MOT)
	Tuner Stift 1 Tuner Stift 16, 2 Tuner Stift 6, 5 Tuner Stift 13, 15
	ZF 21, 17 Tuner 6, 5
	ZF 21, 17 ZF 25, 24 ZF 20 IC 811 Pin 19 (SIE) Pin 35 (MOT)
	IC 350 Pin 4/5 Farb/RGB-Baustein: Stift 10 (Helligk.) Stift 11 (Kontrast) Stift 12 (Farbkon.)
	VT 13, 2 VT 9 VT 11
	Euro-AV-Buchse 10 Euro-AV-Buchse 14 Euro-AV-Buchse 12

Service checks on the I²C Bus

If faults occur in the set which cannot be attributed to the power supply unit, the EHT or the deflection system, the I²C bus should be checked using Table 1 before further service work is carried using Table 2.

Via the I²C bus the microcomputer in the control unit IC 811 supplies control signals for the tuner, IF, Videotext (Teletext), Scart socket (Euro AV socket) including the VCR remote control, and the RGB analog signals.

Note:

N.B. when a module is being changed, the set should be switched off completely. Modules must not be unplugged even in the "standby" mode. Observe MOS handling precautions.

Table 1

Test	Test Figures	Test Point	Possible Faults
+H	5 V	Pin 40, IC 811 (SIE) Pin 4, (MOT)	D 671, IC 676, IC 811
4 MHz clock Reset	4 MHz, 3 V_{pp} 5 V_{pp} only at moment of switch on	Pin 22, IC 811 (SIE) Pin 5, (MOT) Pin 23, IC 811 (SIE) Pin 2, (MOT)	F 811, IC 811 C 806, IC 811
I²C Bus	5 V_{pp}	Pin 8, 9, IC 811 (SIE) Pin 21, 23, (MOT)	The I²C Bus data are present even without input from the remote control or keyboard. If data are absent, disconnect the SDA and SLC lines (links on control section). If data are then present on the I²C Bus, the I²C Bus is overloaded. **Possible Faults:** Tuner, IF, Videotext (Teletext), EURO AV socket, IC 350

Table 2

Possible faults due to I²C Bus control which can occur in any part of set.

Fault	Possible Cause	Test Figure	Test Point
No functions accepted by keyboard	+H IC 811	5 V see Table 1	IC 811 pin 40 (SIE) pin 4 (MOT)
Channel No. cannot be changed with remote control LED does not switch	IR preamplifier D 1201, T 1204, +B, IC 1211, D 831, +H IC 811, T 801	+B = 12 V 5 V_{pp} (IR signal) 5 V_{pp} (switch-on cycle)	Pin 6 IC 1211 Pin 3 IC 1211 Pin 8, 9 IC 811 (SIE) Pin 21, 23 (MOT)
	Wiper switch of mains button F 811	Contact resistance 0 ohm 3 V_{pp}	at switch pin 22 IC 811 (SIE) pin 5 (MOT)
No frequency tuning	+A via R 337 +B, +H Data (SDA)/clock (SCL) I²C Bus Variation of tuning voltage as function of channel selection	approx. 46 V 12 V, 5 V 5 V_{pp} 0.2–30 V	Tuner, pin 1 Tuner, pins 16, 2 Tuner, pins 6, 5 Tuner, pins 13, 15
No CCVS at IF module contacts 7, 9	+B, +B' I²C Bus, SDA, SCL absent at tuner	12 V 5 V_{pp}	IF, pins 21, 17 Tuner, pins 6, 5
No AF signal at IF module contacts 28/29	+B, +B' I²C Bus, SDA, SCL no coincidence	12 V 5 V_{pp} 12 V 5 V	IF, pins 21, 17 IF, pins 25, 24 IF, pin 20 IC 811 pin 19 (SIE) pin 35 (MOT)
No analog singals Brightness Contrast Colour contrast	I²C Bus, IC 350 D/A convertor D/A convertor D/A convertor	5 V_{pp} 1–3 V 2–4 V 2–4 V	IC 350, pin 4, 5 Colour/RGB module: pin 10 (brightness) pin 11 (contrast) pin 12 (colour)
Remote control operation only No Videotext (Teletext)	+B', +E I²C bus, SDA T 816 ICL	12 V, 8 V 5 V_{pp} 5 V_{pp}	VT, pin 13, 2 VT, pin 9 VT, pin 11
Remote control operation involving video 1 button only No VCR remote control	T 821, VCL T 816, ICL I²C bus SDA/T 111	5 V_{pp} 5 V_{pp} 5 V_{pp}	Euro AV socket, pin 10 Euro AV socket, pin 14 Euro AV socket, pin 12

Servizio assistenza al bus I²C

Se l'apparecchio svolge erratamente le funzioni, e questo non dipende nè dall'alimentatore, nè dall'alta tensione o dalla deflessione, controllare allora il bus I²C secondo la tabella 1, prima di effettuare gli altri lavori di assistenza indicati in tabella 2.

Il microcomputer nell'unità di comando IC 811 fornisce attraverso il bus I²C, gli ordini di comando per tuner, FI, televideo, presa Euro/Scart, compreso telecomando VCR e valori analogici per RGB.

Nota:

Spegnere l'apparecchio quando un modulo viene sostituito! La sostituzione di un modulo non può avvenire nemmeno in posizione d'attesa (stand-by). Attenzione alle norme MOS!

Tabella 1

Misura	Valore di misura	Punto di misura	Guasto possibile
+H	5 V	Pin 40, IC 811 (SIE) Pin 4, (MOT)	D 671, IC 676, IC 811
Cadenza 4 MHz Reset	4 MHz, 3 V_{pp} 5 V_{pp} solo in accensione	Pin 22, IC 811 (SIE) Pin 5, (MOT) Pin 23, IC 811 (SIE) Pin 2, (MOT)	F 811, IC 811 C 806, IC 811
Bus I²C	5 V_{pp}	Pin 8, 9, IC 811 (SIE) Pin 21, 23, (MOT)	I dati nel bus I²C sono presenti anche senza comando TP o immissione tramite tastiera. Se i dati mancano: Interrompere le linee SDA e SLC (ponticelli sulla sezione di comando). Se i dati nel bus I²C sono poi disponibili, allora è presente un sovraccarico. **Guasto possibile:** tuner, FI, televideo, EURO AV presa IC 350.

Tabella 2

Tipi di guasto possibili nell'apparecchio completo in funzione del comando bus I²C.

Guasto	Causa possibile	Valore di misura	Punto di misura
Nessuna funzione di comando tramite tastiera	+H IC 811	5 V vedi tabella 1	IC 811 Pin 40 (SIE) Pin 4 (MOT)
Nessuna commutazione canale/programma tramite TP Il LED non commuta	Preamplif. ad infrarossi D 1204, +B IC 1211, D 831, +H, IC 811, T 801,	+B = 12 V 5 V_{pp} (segnale all'infrar.) 5 V_{pp} (fase di accensione)	pin 6 IC 1211 pin 3 IC 1211 pin 8, 9 IC 811 (SIE) pin 21, 23 (MOT)
	Contatto temporaneo dell'interruttore di rete F 811	Resistenza di contatto 0 Ohm 3 V_{pp}	sul contatto Pin 22 IC 811 (SIE) Pin 5 (MOT)
Nessuna sintonia della frequenza	+A tramite R 337 +B, +H dati (SDA)/clock (SCL) del bus I²C tensione di sintonia variabile a seconda dell'immissione di canale	ca. 46 V 12 V, 5 V 5 V_{pp} 0,2–30 V	Tuner spinotto Tuner spinotto Tuner spinotto 6, 5 Tuner spinotto 13, 15
Nessun segnale FBAS al modulo FI cont. 7, 9	+B, +B' bus I²C, SDA, SCL manca al tuner	12 V 5 V_{pp}	FI 21, 17 Tuner 6, 5
Nessun segnale BF al modulo FI cont. 28/29	+B, +B' bus I²C, SDA, SCL nessuna coincidenza	12 V 5 V_{pp} 12 V 5 V	FI 21, 17 FI 25, 24 FI 20 IC 811 pin 19 (SIE) Pin 35 (MOT)
Nessun valore analogico luminosità contrasto contrasto colore	bus I²C, IC 350 convertitore D/A convertitore D/A convertitore D/A	5 V_{pp} 1–3 V 2–4 V 2–4 V	IC 350 pin 4/5 modulo colore/RGB: spinotto 10 (luminosità) spinotto 11 (contrasto) spinotto 12 (contr. colore)
Solo con comando TP Manca la funzione Televideo	+B', +E bus I²C, SDA T 816 ICL	12 V, 8 V 5 V_{pp} 5 V_{pp}	VT 13, 2 VT 9 VT 11
Solo con comando TP assieme al tasto video 1 Telecomando VCR non possibile	T 821, VCL T 816, ICL bus I²C SDA/T 111	5 V_{pp} 5 V_{pp} 5 V_{pp}	Presa Euro/Scart 10 Presa Euro/Scart 14 Presa Euro/Scart 12

Symbole und ihre Bedeutung
Symbols and their meaning
Simboli e loro significati

Simbolo	Significato
P	PROGR.
P1	PROGR. TASTE / PROGR. BUTTON / TASTO PROGR. / TOUCHE PROGR.
MEMO	SPEICHERTASTE / MEMORY BUTTON / TASTO DI MEMORIA / TOUCHE MEMOIRE
NORM	NORMTASTE / TV STANDARD SELECT. BUTTON / COMMUT. DI NORMA / TOUCHE DE NORME
▷▷+	FEINABST. + / FINE TUNING + / SINT. FINE + / REGLAGE FIN +
-◁◁	FEINABST. - / FINE TUNING - / SINT. FINE - / REGLAGE FIN -
I	SUCHLAUF BD I / SELF-SEEK BAND I / SINT. AUTOM. BANDA I / RECHERCHE AUTOM. BANDE I
III	SUCHLAUF BANDWAHL III / SELF-SEEK BAND III / SINT. AUTOM. BANDA III / RECHERCHE AUTOM. BANDE III
UHF	SUCHLAUF UHF / SELF-SEEK UHF / SINT. AUTOM. UHF / RECHERCHE AUTOM. UHF
	LAUTSTAERKE / VOLUME / VOLUME SONORE
FT	FEINABST. / FINE TUNING / SINT. FINE / REGLAGE FIN
KA	KANALWAHL / CHANNEL SEL. / SELEZ. CANALE / SELECT. DE CANAUX
	BALANCE / BILANCIAM. / BALANCE
	SUCHLAUF / SELF-SEEK / SINT. AUTOM. / RECHERCHE AUTOM.
U I/III	SCHALTSP. BANDWAHL / BAND SEL. SWITCHING VOLTAGE / TENS. DI COMMUT. SELEZ. BANDA / TENS. DE COMMUT. SELECT. BANDE
U VHF	SCHALTSP. VHF / SWITCHING VOLT. VHF / TENS. DI COMMUT. VHF / TENS. DE COMMUT. VHF
U UHF	SCHALTSP. UHF / SWITCHING VOLT. UHF / TENS. DI COMMUT. UHF / TENS. DE COMMUT. UHF
U AFC	SCHALTSP. AFC / SWITCHING VOLT. AFC / TENS. DI COMMUT. AFC / TENS. DE COMMUT. AFC
U AV	SCHALTSP. AV / AV SWITCHING VOLT. / TENS. DI COMMUT. AV / TENS. DE COMMUT. AV
U NORM	SCHALTSP. NORM / SWITCHING VOLT. STANDARD / TENS. DI COMMUT. NORMA / TENS. DE COMMUT. STANDARD
U KOIN	SCHALTSP. KOINZ. / SWITCHING VOLT. COINC. / TENS. DI COMMUT. COINC. / TENS. DE COMMUT. COINC.
U EURO-AV	SCHALTSP. EURO-AV / SWITCHING VOLT. EURO-AV / TENS. DI COMMUT. EURO-AV / TENS. DE COMMUT.
U VQ	SCHALTSP. VIDEO QUELLE / SWITCHING VOLT. VIDEO SOURCE / TENS. DI COMMUT. SORG. VIDEO / TENS. DE COMMUT. SOURCE VIDEO
U DATA	SCHALTSP. DATENBETR. / SWITCHING VOLT. DATA MODE / TENS. DI COMMUT. DATI / TENS. DE COMMUT. FONCT. DONNEES
U 4,5 MHz	SCHALTSP. 4,5 MHZ / SWITCHING VOLT. 4,5 MHZ / TENS. DI COMMUT. 4,5 MHZ / TENS. DE COMMUT. 4,5 MHZ
	REGELSP. VERZOEGERT / DELAYED CONTR. VOLTAGE / TENS. DI CONTR. RITARD. / TENS. DE REGUL. RETARDEE
	ABSTIMMSP. TUNER / TUNING VOLT. TUNER / TENS. DI SINTONIA TUNER / TENS. D'ACCORD TUNER
	REGELSP. AFC / AFC CONTROL VOLT. / TENS. DI CONTR. AFC / TENS. DE REGUL. AFC
	STUMMSCHALTUNG / MUTING / SILENZIAMENTO / SILENCIEUX
	TASTIMPULS / GATING PULSE / IMPULSO A CADENZA / IMPULS. DE DECLENCHEMENT

Bedeutung
meaning
nificati

CT. BUTTON

DA I
BANDE I

III
II
DA III
BANDE III

UHF

IX

ML
ING VOLTAGE
SELEZ. BANDA
SELECT. BANDE

VHF
VHF
VHF

UHF
UHF
UHF

AFC
AFC
AFC

T.
AV
AV

STANDARD
NORMA
STANDARD

COINC.
COINC.
COINC.

W
EURO-AV
EURO-AV

QUELLE
VIDEO SOURCE
SORG. VIDEO
SOURCE VIDEO

BETR.
DATA MODE
DATI
FONCT. DONNEES

Z
4,5 MHZ
4,5 MHZ
4,5 MHZ

ERT
OLTAGE
RITARD.
RETARDEE

ER
A TUNER
UNER

ÄFC
AFC

A
NCHEMENT

VERT. TASTIMPULS
VERT. GATING PULSE
IMP. A CADENZA VERT.
IMP. TRAME

VERT. PARABEL
VERT. PARABOLA
PARABOLA VERT.
SIGNAL PARABOLIQUE

VERT. SAEGEZAHN
VERT. SAW TOOTH
DENTE DI SEGA VERT.
SIGNAL DENT DE SCIE

HOR. ANSTEUERUNG
HORIZ. DRIVE
PILOTAGGIO ORIZZ.
SYNCHR. LIGNES

REF. IMPULS
REFERENCE PULSE
IMP. DI RIFER.
IMP. DE REFER.

SCHUTZSCHALTUNG
CIRCUIT PROTECTION
CIRCUITO DI PROTEZIONE
CIRCUIT DE SECURITE

FARBTON
TINT
TINTA
TEINTE

REF. LAUTSTAERKE
VOLUME REF. VOLT.
TENS. DI RIF. VOLUME
TENS. DE REF. VOL. SONORE

HELLIGKEIT
BRIGHTNESS
LUMINOSITA'
LUMINOSITE

KONTRAST
CONTRAST
CONTRASTO
CONTRASTE

FARBKONTRAST
CONTRAST COLOUR
CONTRASTO COLORE
CONTRASTE COULEUR

FBAS-SIGNAL
CCVS SIGNAL
SEGNALE SVCC
SIGNAL VIDEO COMPOSITE

SUPERSANDCASTLE

STRAHLSTR. BEGR.
BEAM CURRENT LIM.
CORRENTE CATODICA MEDIA
LIM. COUR. DE FAISCEAU

SPITZ. STRAHLSTR. BEGR.
PEAK BEAM CURRENT LIMITING
CORR. CATODICA DI PICCO
LIM. DE FAISCEAU CRETE

ROT-SIGNAL
RED SIGNAL
SEGNALE ROSSO
SIGNAL ROUGE

GRUEN-SIGNAL
GREEN SIGNAL
SEGNALE VERDE
SIGNAL VERT

BLAU-SIGNAL
BLUE SIGNAL
SEGNALE BLU
SIGNAL BLEU

Y-SIGNAL
SEGNALE Y
SIGNAL Y

F-SIGNAL
CHROMA SIGNAL
SEGNALE F
SIGNAL CHROMA

SCHWARZWERT
BLACK LEVEL
LIVELLO DEL NERO
NIVEAU DU NOIR

NF-SIGNAL
AF SIGNAL
SEGNALE BF
SIGNAL BF

NF-SIGNAL LINKS
AF SIGNAL LEFT
SEGNALE BF SINISTRA
SIGNAL BF GAUCHE

NF-SIGNAL RECHTS
AF SIGNAL RIGHT
SEGNALE BF DESTRA
SIGNAL BF DROIT

VIDEO SIGNAL EURO-AV
SEGNALE VIDEO EURO-AV
SIGNAL VIDEO NORME FR

AUDIO SIGNAL EURO-AV
SEGNALE AUDIO EURO-AV
SIGNAL AUDIO NORME FR

SCHALTSP. LED
LED SWITCHING VOLT.
LED TENS. DI COMMUT.
TENS. DE COMMUT. LED

IR-SIGNAL
SEGNALE IR
SIGNAL IR

SPG. GITTER 1
VOLTAGE GRID 1
TENS. GRIGLIA 1
TENS. GRILLE G1

FOKUSSP.
FOCUSSING VOLTAGE
TENS. DI FOCALIZZ.
TENS. DE FOCALIS.

HOCHSPANNUNG
EHT VOLTAGE
ALTA TENS.
HAUTE TENS.

SCHIRMGITTERSP.
SCREEN-GRID VOLT.
TENS. GRIGLIA SCHERMO
TENS. GRILLE-ECRAN

TEXT ENABLE

I²C-CLOCK

VCR-CLOCK

I-BUS-CLOCK

DATEN
DATA
DATI
DONNEES

ZF-SIGNAL
IF SIGNAL
SEGNALE FI
SIGNAL FI

PAL PRIORITAET
PAL PRIORITY
PRIORITA' PAL
PRIORITE PAL

F-SIGNAL DIREKT
F SIGNAL DIRECT
SEGNALE F DIRETTO
SIGNAL CHROMA DIRECT

FV-SIGNAL
FV SIGNAL
SEGNALE FV
SIGNAL FY

FU-SIGNAL
FU SIGNAL
SEGNALE FU
SIGNAL FX

F-SIGNAL VERZOEGERT
F SIGNAL DELAYED
SEGNALE F RITARD.
SIGNAL CHROMA RETARDE

VERZOEGERUNGSLEITUNG
DELAY LINE
LINEA DI RITARDO
LIGNE A RETERD

SCHALTSP./SCHUTZFUNKTION
SWITCHING VOLT. /PROTECTIVE FUNCTION
TENS. DI COMMUT. /FUNZ.DI PROTEZ.
TENS. DE COMMUT. / SECURITE

ZEILENBREITE
LINE WIDTH
LARGHEZZA DI RIGA
AMPLITUDE HORIZONTALE

OST / WEST AMPLITUDE
EAST / WEST AMPLITUDE
AMPIEZZA EST / OVEST
AMPLITUDE EST / OUEST

HOR. LINEARITAET
HORIZ. LINEARITY
LINEAR. ORIZZ.
LINEAR. HORIZONT.

BILDLAGE HOR.
HORIZ. PICTURE POSITION
POSIZIONE ORIZZ. D'IMMAGINE
CADRAGE HORIZONT.

FOKUSREGLER
FOCUS CONTROL
REGOLAT. DI FOCALIZZ.
REGLAGE DE FOCALISATION

BILDLAGE VERT.
VERT. PICTURE POSITION
POSIZ. VERT. D'IMMAGINE
CADRAGE VERTICAL

BILDAMPLITUDE
FIELD AMPLITUDE
AMPIEZZA D'IMMAGINE
AMPLITUDE VERTICALE

TRAPEZ
TRAPEZIUM
TRAPEZIO
TRAPEZE

HOR. FREQUENZ
HOR. FREQUENCY
FREQ. ORIZZ.
FREQ. HORIZ.

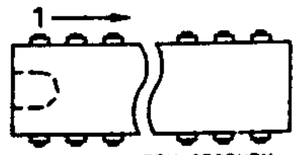
VERT. FREQUENZ
VERT. FREQUENCY
FREQ. VERT.

VERT. LINEARITAET
VERT. LINEARITY
LINEAR. VERT.
LINEAR. VERT.

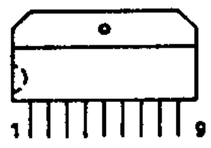
⚠ BEI ERSATZ AUS SICHERHEITSGRUENDEN NUR ORIGINALBAUTEILE VERWENDEN.
FOR REASONS OF SAFETY USE ORIGINAL PARTS ONLY WHEN REPLACING.
IN CASO DI SOSTITUZIONE UTILIZZARE PER RAGIONI DI SICUREZZA SOLAMENTE PEZZI DI RICAMBIO ORIGINALI.
EN CAS DE REMPLACEMENT N'UTILISER, POUR DES RAISONS DE SECURITE, QUE DES PIECES D'ORIGINE.

BEI EINGRIFFEN SCHUTZMASSNAHMEN FUER MOS-BAUTEILE BEACHTEN!
WHEN HANDLING MOS-CIRCUITS, ALWAYS OBSERVE THE MOS PROTECTION MEASURES!
ADOPERANDO COMPONENTI O CIRCUITI MOS OSSERVARNE LE CORRISPONDENTI MISURE DI PROTEZIONE!
LORS DE LA MANIPULATION DES CIRCUITS MOS, RESPECTER LES PRESCRIPTIONS MOS!

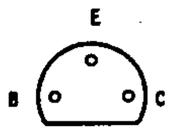
Wichtige Schaltzeichen
Important circuit simbols
Segni circuitali importanti



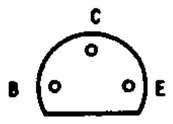
IC'S VON UNTEN GESEHEN
IC'S SEEN FROM BOTTOM
IC'S VISTI DI SOTTO
IC'S VUS DU DESSOUS



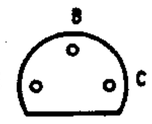
TDA 4601



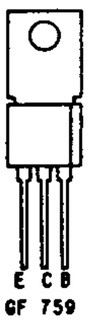
BF 199



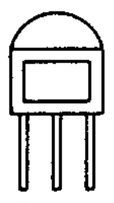
BF 421 / BF 422
BC 637



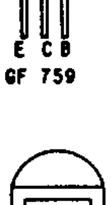
BC 548 / BC 558
BC 337/25
PH 2222
BC 338 / BC 324
BF 414



GF 759



BU 508A
BU 508D



TY 40184 / MC 7505
MC78 MOS CT

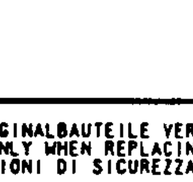
BD 561G
BU 908
BU 903

BD 561 G

BU 208A

TDA 2653A

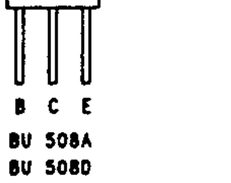
TDA 26558



TDA 4935 *

DL 60292

TDA 2040

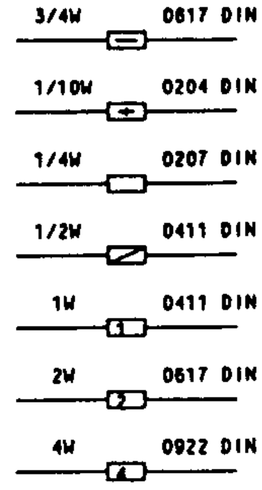


TDA 3654
TDA 3653A

SOT 143
G1 G2
S D
BF 994
BF 996

SOT 23
E B
C
BF 569
BF 579

B E
C
BC 847
BC 858


3/4W 0617 DIN
1/10W 0204 DIN
1/4W 0207 DIN
1/2W 0411 DIN
1W 0411 DIN
2W 0617 DIN
4W 0922 DIN

WIDERSTAND NICHT BRENNBAR
RESISTOR NOT FLAMMABLE
RESISTENZA NON INFIAMMABILE
RESISTANCE ININFLAMMABLE

DRAHTWIDERSTAND
WIRE RESISTOR
RESISTENZA A FILO
RESISTANCE BOBINEE

SICHERUNGSWIDERSTAND
SAFETY RESISTOR
RESISTENZA DI SICUREZZA
RESISTANCE DISJONCTABLE

KONDENSATOR
CAPACITOR
CONDENSATORE
CONDENSATEUR
250V-
400V-
630V-
1000V-

FOLIE
FOIL
A FOGLIA
FOLIO PLASTIQUE

KERAMIK
CERAMIC
CERAMICO
CERAMIQUE

ELKO
ELECTROLYTIC
ELETTROLITICO
ELECTROLYTIQUE

Wichtige Schaltzeichen
Important circuit simbols
Segni circuitali importanti

HOCHSPANNUNG
EHT VOLTAGE
A.TA TENS.
HAUTE TENS.

SCHIRMGITTERSP.
SCREEN-GRID VOLT.
TENS. GRIGLIA SCHERMO
TENS. GRILLE-ECRAN

TEXT ENABLE

I²C-CLOCK

VCR-CLOCK

I-BUS-CLOCK

DATEN
DATA
DATI
DONNEES

ZF-SIGNAL
IF SIGNAL
SEGNALE FI
SIGNAL FI

PAL PRIORITAET
PAL PRIORITY
PRIORITA' PAL
PRIORITE PAL

F-SIGNAL DIREKT
F SIGNAL DIRECT
SEGNALE F DIRETTO
SIGNAL CHROMA DIRECT

FV-SIGNAL
FV SIGNAL
SEGNALE FV
SIGNAL FY

FU-SIGNAL
FU SIGNAL
SEGNALE FU
SIGNAL FX

F-SIGNAL VERZOEGERT
F SIGNAL DELAYED
SEGNALE F RITARD.
SIGNAL CHROMA RETARDE

VERZOEGERUNGSLEITUNG
DELAY LINE
LINEA DI RITARDO
LIGNE A RETERD

SCHALTSP./SCHUTZFUNKTION
SWITCHING VOLT. /PROTECTIVE FUNCTION
TENS. DI COMMUT. /FUNZ.DI PROTEZ.
TENS. DE COMMUT. / SECURITE

ZEILENBREITE
LINE WIDTH
LARGHEZZA DI RIGA
AMPLITUDE HORIZONTALE

OST / WEST AMPLITUDE
EAST / WEST AMPLITUDE
AMPIEZZA EST / OVEST
AMPLITUDE EST / OUEST

HOR. LINEARITAET
HORIZ. LINEARITY
LINEAR. ORIZZ.
LINEAR. HORIZONT.

BILDLAGE HOR.
HORIZ. PICTURE POSITION
POSIZIONE ORIZZ. D'IMMAGINE
CADRAGE HORIZONT.

FOKUSREGLER
FOCUS CONTROL
REGOLAT. DI FOCALIZZ.
REGLAGE DE FOCALISATION

BILDLAGE VERT.
VERT. PICTURE POSITION
POSIZ. VERT. D'IMMAGINE
CADRAGE VERTICAL

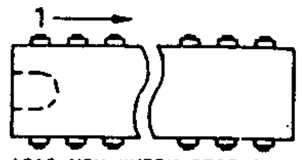
BILDAMPLITUDE
FIELD AMPLITUDE
AMPIEZZA D'IMMAGINE
AMPLITUDE VERTICALE

TRAPEZ
TRAPEZIUM
TRAPEZIO
TRAPEZE

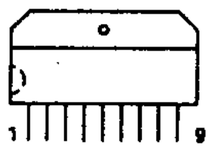
HOR. FREQUENZ
HOR. FREQUENCY
FREQ. ORIZZ.
FREQ. HORIZ.

VERT. FREQUENZ
VERT. FREQUENCY
FREQ. VERT.

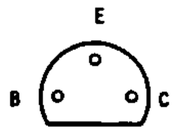
VERT. LINEARITAET
VERT. LINEARITY
LINEAR. VERT.
LINEAR. VERT.



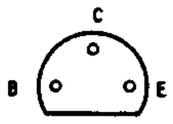
IC'S VON UNTEN GESEHEN
IC'S SEEN FROM BOTTOM
IC'S VISTI DI SOTTO
IC'S VUS DU DESSOUS



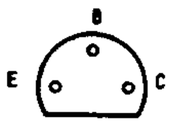
TDA 4601



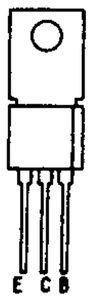
BF 199



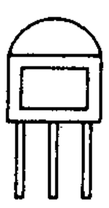
BF 421 / BF 422
BC 637



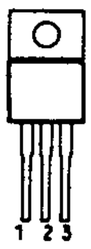
BC 548 / BC 558
BC 557/25
PH 2222
BC 338 / BC 324
BF 414



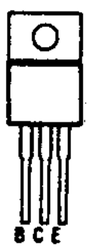
GF 759



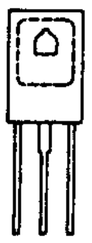
BU 508A
BU 508D



TY 40164 / MC 7505
MC78 MOS CT

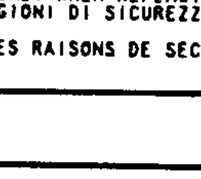


BD 561G
BU 908
BU 903

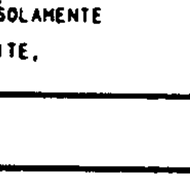


BD 561 G

BU 208A

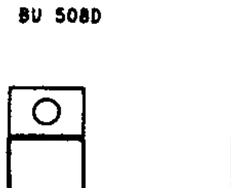


TDA 4935

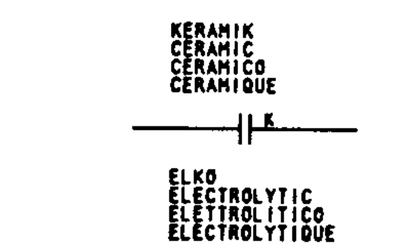


DL 60292

TDA 2040



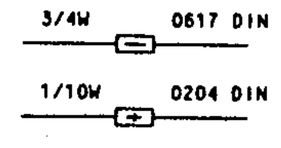
TDA 3654
TDA 3653A



BF 994
BF 996

BF 569
BF 579

BC 847
BC 858

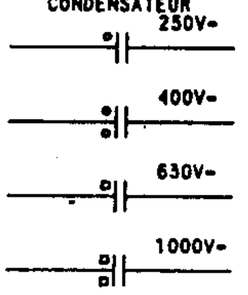


WIDERSTAND NICHT BRENNBAR
RESISTOR NOT FLAMMABLE
RESISTENZA NON INFIAMMABILE
RESISTANCE ININFLAMMABLE

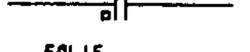
DRAHTWIDERSTAND
WIRE RESISTOR
RESISTENZA A FILO
RESISTANCE BOBINEE

SICHERUNGSWIDERSTAND
SAFETY RESISTOR
RESISTENZA DI SICUREZZA
RESISTANCE DISJONCTABLE

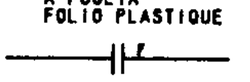
KONDENSATOR
CAPACITOR
CONDENSATORE
CONDENSATEUR



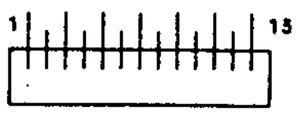
FOLIE
FOIL
A FOGLIA
FOLIO PLASTIQUE



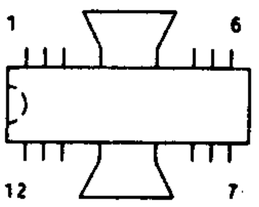
KERAMIK
CERAMIC
CERAMICO
CERAMIQUE



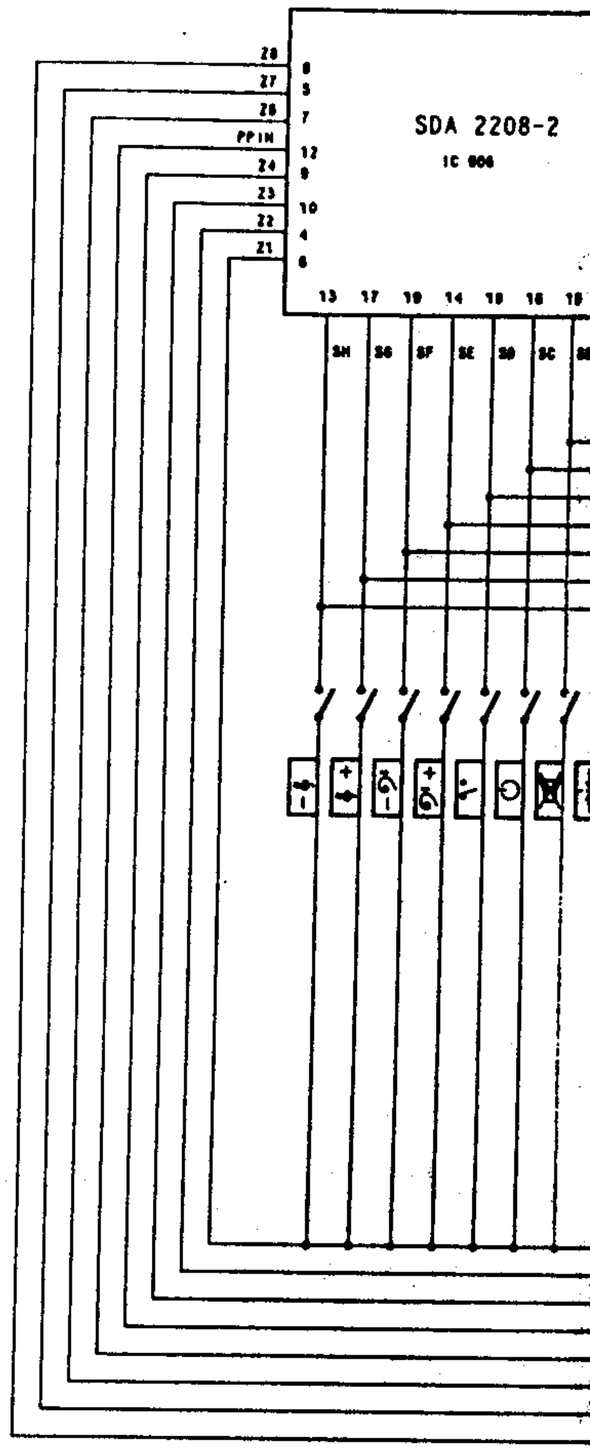
ELKO
ELECTROLYTIC
ELETTROLITICO
ELECTROLYTIQUE

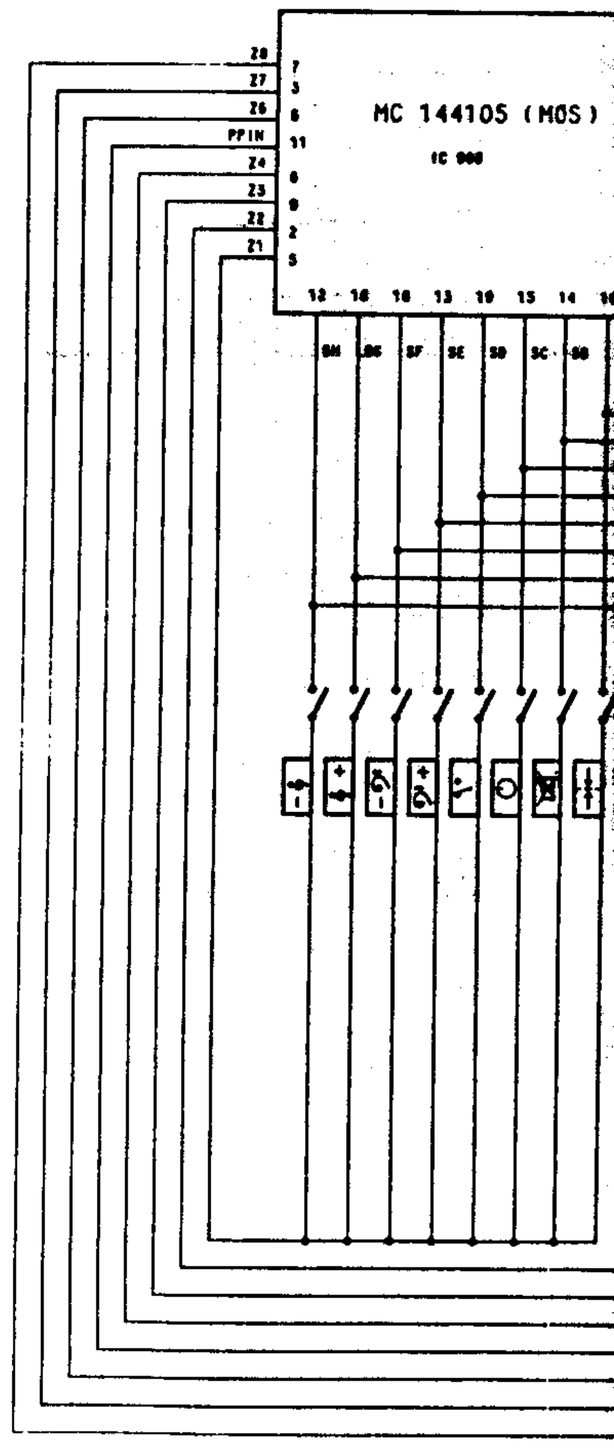


TDA 2653A



TDA 2655B

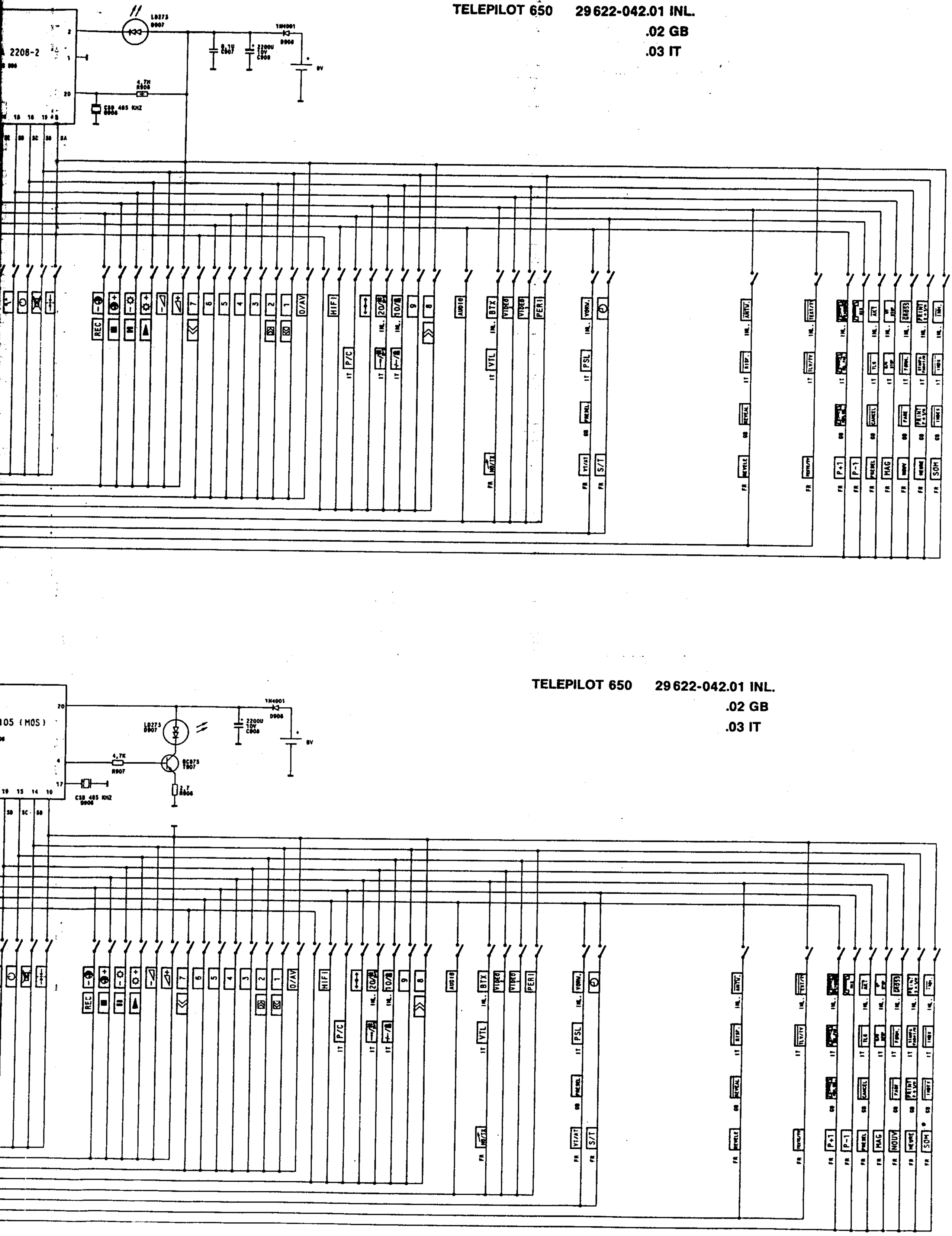


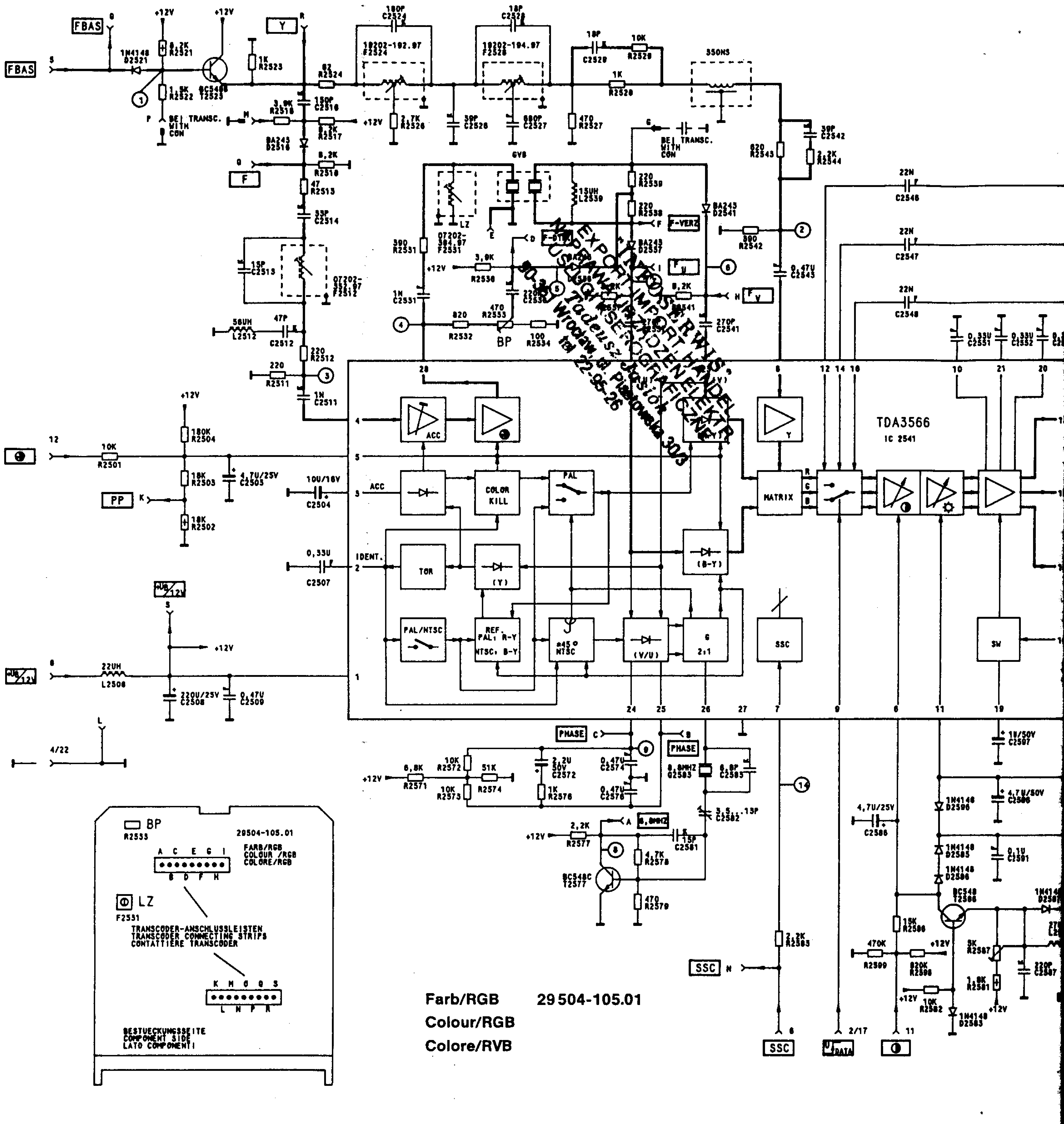


US SICHERHEITSGRUENDEN NUR ORIGINALBAUTEILE VERWENDEN.
OF SAFETY USE ORIGINAL PARTS ONLY WHEN REPLACING.
OSTITUZIONE UTILIZZARE PER RAGIONI DI SICUREZZA SOLAMENTE
AMBI ORIGINALI.
MPLACEMENT N'UTILISER, POUR DES RAISONS DE SECURITE,
ES D'ORIGINE.

CHUTZMASSNAHMEN FUER MOS-BAUTEILE BEACHTEN!
CIRCUITS, ALWAYS OBSERVE THE MOS PROTECTION MEASURES!
EA.. O CIRCUITI MOS OSSERVARNE LE CORRISPONDENTI
ONE!
LATION DES CIRCUITS MOS, RESPECTER LES
!

TELEPILOT 650 29622-042.01 INL.
.02 GB
.03 IT



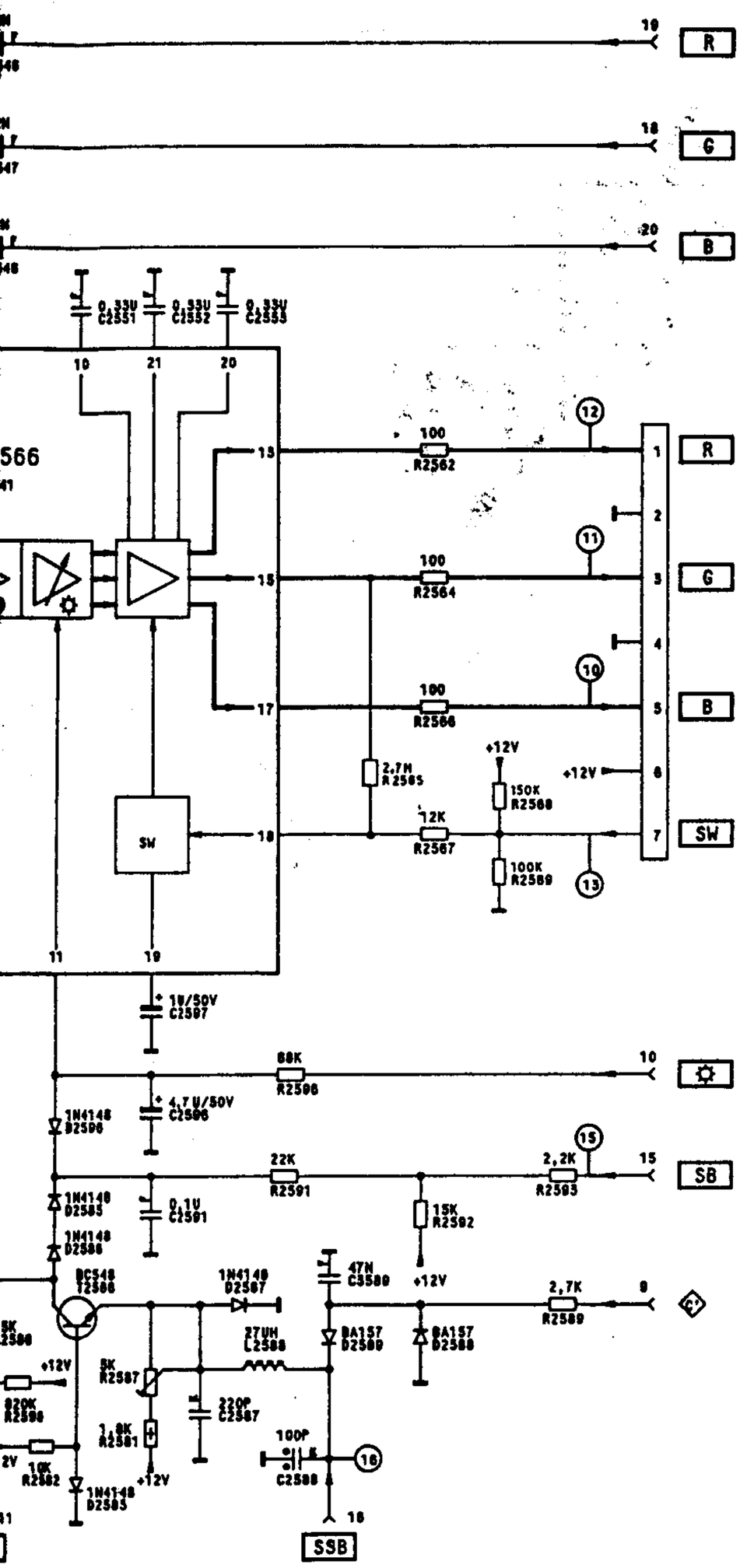


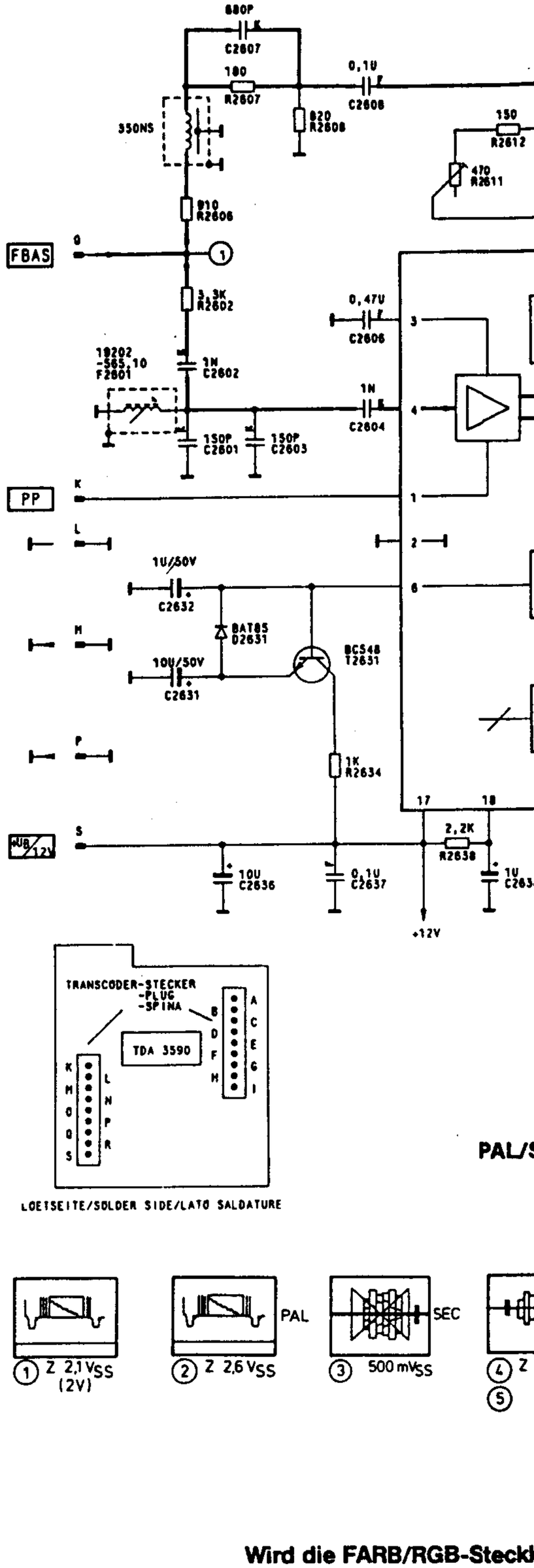
Farb/RGB 29504-105.01
Colour/RGB
Colore/RVB

1. Weißabgleich
   - FuBK-Testbild einspeisen.
   - ◑min., ☼nom., ◐max., einstellen.
   - Regler VG und VB (Bildrohrplatte) so einstellen, daß keine Verfärbungen in den Grauwerten sichtbar sind.
2. Sperrpunktabgleich
   Eine manuelle Einstellung ist nicht möglich, da die Steckkarte eine automatische Dunkelstromregelung besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).
   - FuBK-Testbild einspeisen.
   - ◑min., ☼nom., ◐min., einstellen.
   - Tastkopf an den Kollektoren der Transistoren T736, T756, T776 anhängen (Bildrohrplatte). Die Schwarzwerte der drei Kathodensignale liegen bei ca. 140 … 150 V.
3. Einstellungen im Farbkanal
   - FuBK-Testbild einspeisen.
   - ◑nom., ☼nom., ◐nom. einstellen.
   - Am IC TDA 3566 Pin 1 mit Pin 5 und Pin 24 mit Pin 25 kurzschließen.
   - Mit Trimmer 2582 die durchlaufenden Farbbalken zum Stehen bringen, Kurzschlußbrücken entfernen.
   - Tastkopf am Pin 17 des IC TDA 3566 einhängen.
   Mit Regler BP und Spule LZ die Doppelbilder des B-Signals zur Deckung bringen.

1. White level adjustment.
   - Display colour bar test pattern.
   - Set ◑ to min., ☼ to nom., ◐ to max.
   - Adjust presets VG and VB (CRT socket board) so that the picture does not show any colouration.
2. Adjustment of cut-off point.
   Manual adjustment is not possible, as the circuit board employs an automatic dark current control circuit.
   To check cut-off point (oscilloscope required), proceed as follows:
   - Display colour bar test pattern.
   - Set ◑ to min., ☼ to nom., ◐ to min.
   - Connect test probe to collectors of T736, T756, T776 (CRT socket board). The black levels of the three cathode signals should be 140-150 V.
3. Colour oscillator and PAL adjustments.
   - Inject colour bar test pattern.
   - Adjust to ◑, ☼, ◐ suit view conditions.
   - On the IC TDA 3566, short circuit pin 1 with pin 5 and pin 24 with 25.
   - With trimmer 2582 adjust the until colours are correct. Remove short circuits.
   - Attach probe to pin 17 of the IC TDA 3566.
   - With control BP and coil LZ, adjust the double images of the B signal to coincide.

1. Taratura del bianco
   - Applicare un monoscopio F
   - Regolare ◑ al minimo, ☼ s
   - Con VG e VB (piastra cinesc
2. Taratura del punto di blocco.
   Una regolazione manuale non
   regolazione automatica della c
   Controllo del punto di blocco (
   - Applicare un monoscopio F
   - Regolare ◑ al minimo, ☼ s
   - Collegare la sonda al collett
   Valore nero dei tre segnali
3. Regolazioni dell'oscillatore col
   - Applicare un monoscopio F
   - Regolare ◑, ☼ ed ◐ sul va
   - Cortocircuitare i terminali 1
   - Fermare le barre colorate s
   - Collegare la sonda dell'osci
   Con il regolatore BP e la bob
   gnale B.





Taratura del bianco
- Applicare un monoscopio FuBK
- Regolare ◑ al minimo, ☼ sul valore nominale e ◑ al massimo.
- Con VG e VB (piastra cinescopio) eliminare eventuali macchie di colore.

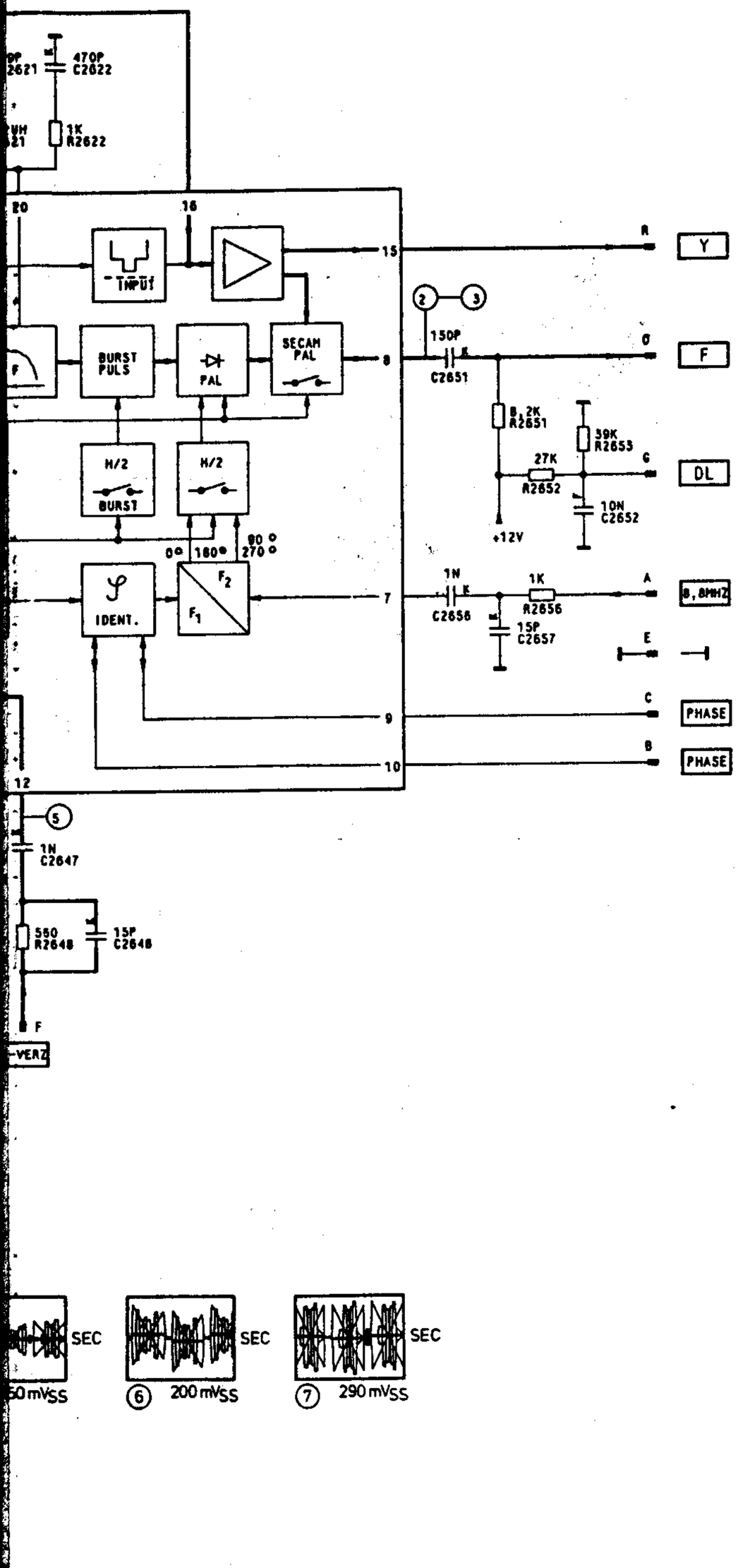
Taratura del punto di blocco.
Una regolazione manuale non è possibile, poichè questa scheda incorpora una regolazione automatica della corrente d'interdizione.
Controllo del punto di blocco (è necessario un oscilloscopio):
- Applicare un monoscopio FuBK.
- Regolare ◑ al minimo, ☼ sul valore nominale e ◑ al minimo.
- Collegare la sonda ai collettori dei transistori T 736, T 756, T 776 (piastra cinescopio). Valore nero dei tre segnali catodici ca. 140...150 V.

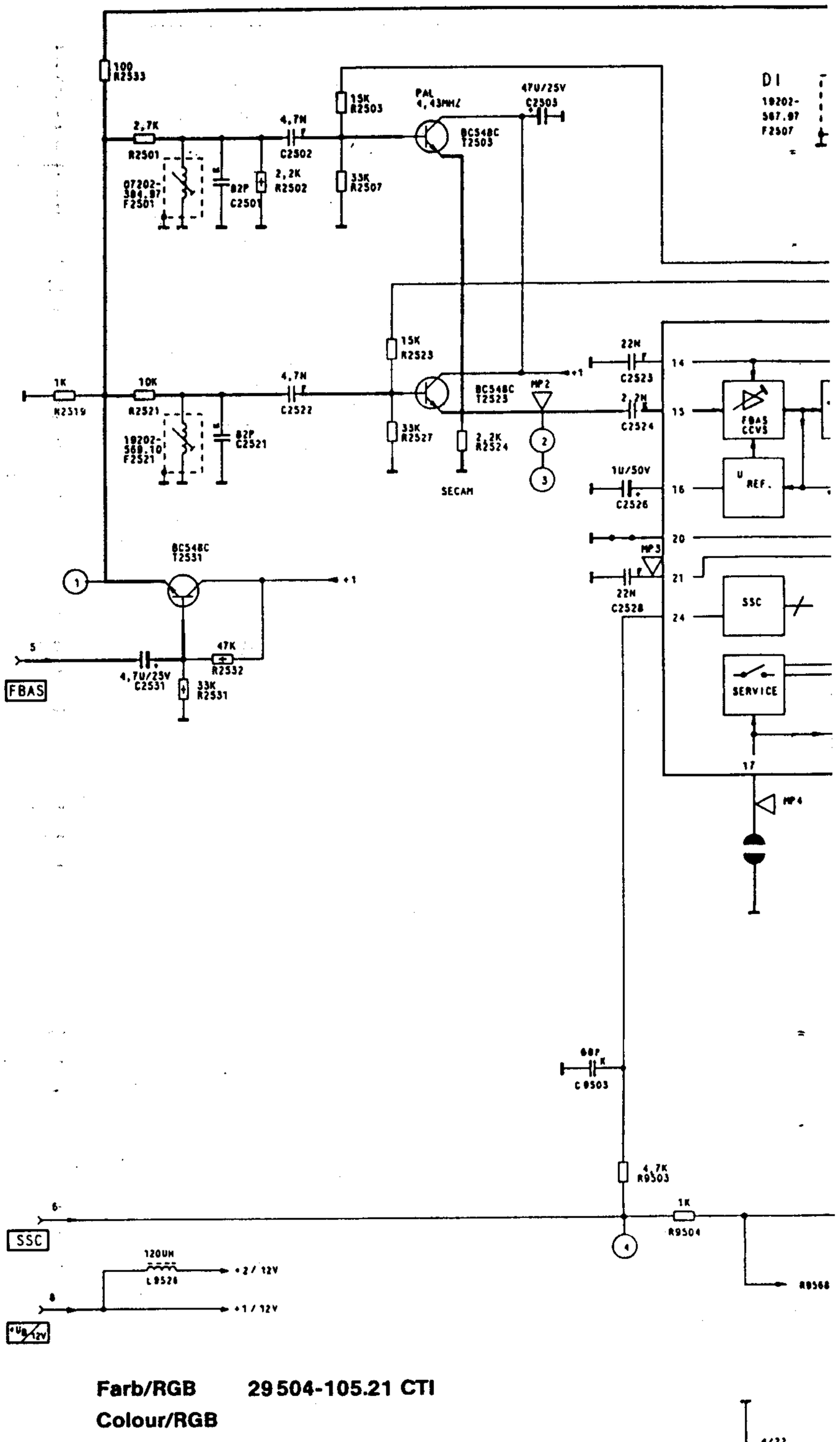
Regolazioni dell'oscillatore colore e PAL
- Applicare un monoscopio FuBK.
- Regolare ◑, ☼ ed ◑ sul valore nominale.
- Cortocircuitare i terminali 1 e 5 ed i terminali 24 e 25 dell'IC TDA 3566.
- Fermare le barre colorate scorrevoli con il trimmer 2582 e togliere i cortocircuiti.
- Collegare la sonda dell'oscilloscopio al terminale 17 dell'IC TDA 3566. Con il regolatore BP e la bobina LZ portare a copertura le immagini doppie del segnale B.

Wird die FARB/RGB-Steckk
SECAM nachgerüstet ist ke

If the colour/RGB board 2
29504-146.01, no additiona

Se la scheda colore/RGB 2
29504-146.01, non occorre





Farb/RGB 29504-105.21 CTI
Colour/RGB
Colore/RVB

4/22

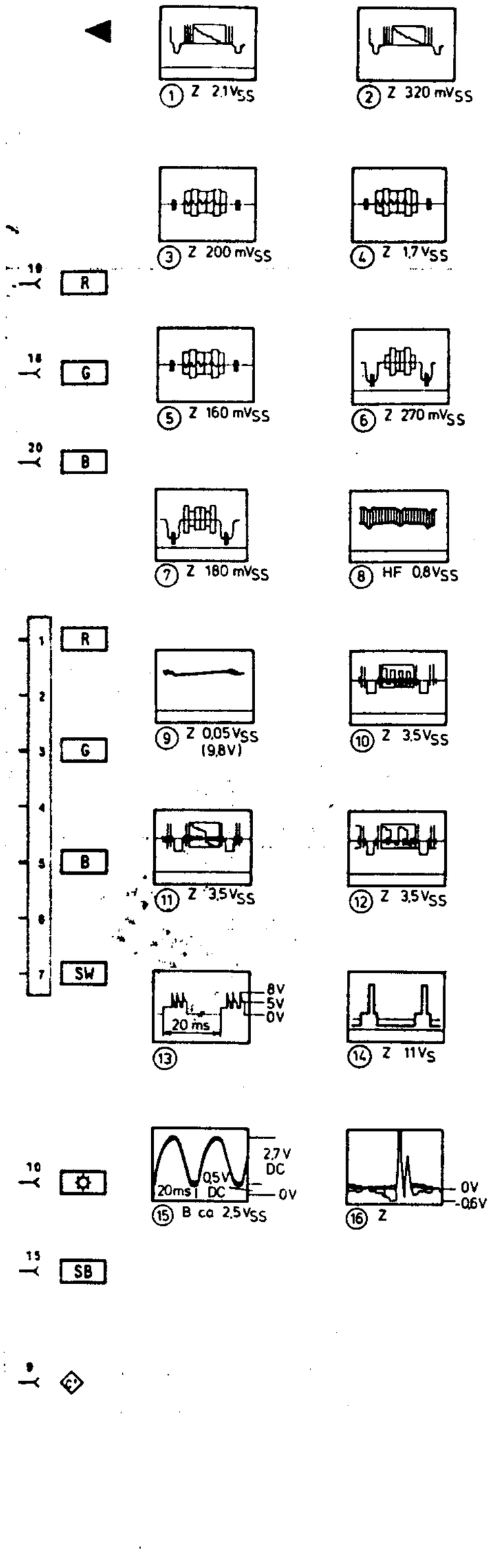
Transcoder 29504-146.01 auf

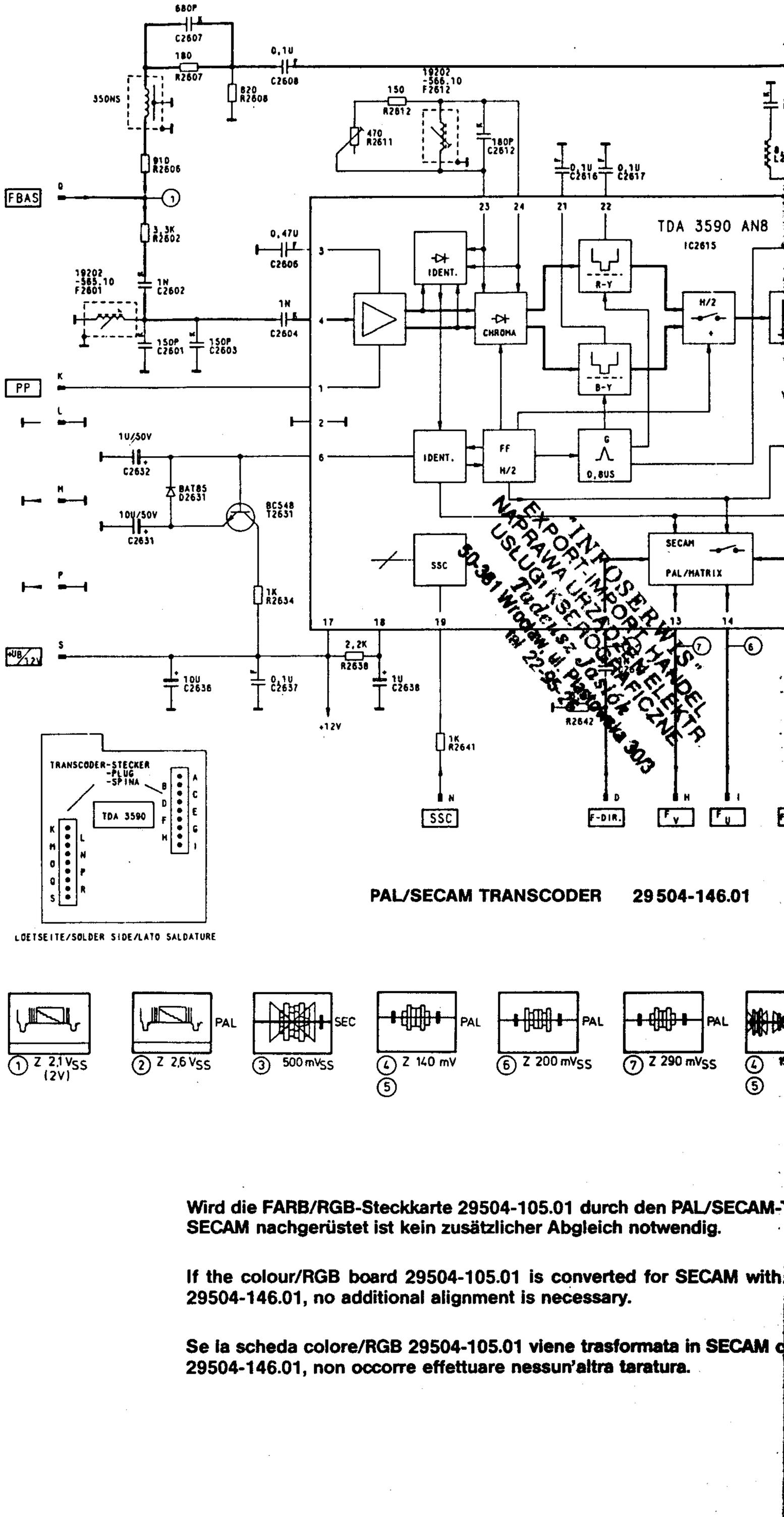
the PAL/SECAM Transcoder

con il transcoder PAL/SECAM

1. Weißabgleich
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑max., einstellen.
   - Regler VR und VB (Bildrohrplatte) so einstellen, daß keine Verfärbungen in den Grauwerten sichtbar sind.
2. Sperrpunktabgleich
   Eine manuelle Einstellung ist nicht möglich, da die Steckkarte eine automatische Dunkelstromregelung besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑min., einstellen.
   - Tastkopf an den Kollektoren der Transistoren T736, T756, T776 anhängen (Bildrohrplatte). Die Schwarzwerte der drei Kathodensignale liegen bei ca. 140 ... 150 V.
3. Einstellungen im Farbkanal
   - PAL-Testbild einspeisen.
   - FK nom., H nom., K max. einstellen.
   - IC-Pin 28 vom TDA 4555 mit + 12 V verbinden.
   - IC-Pin 17 vom TDA 4555 mit Masse verbinden.
   - Mit Trimmer C 9516 die durchlaufenden Farbbalken zum Stehen bringen.
   - Kurzschlußbrücken entfernen.
   - Tastkopf an MP 12, mit Regler BP und Spule LZ die Doppelbilder des B -Signals zur Deckung bringen.
   - SECAM-Testbild einspeisen.
   - Tastkopf an Pin 1 vom TDA 4555 anschließen, mit Spule DR Nullinie des (R-Y)-Signals auf Zeilentastniveau bringen.
   - Tastkopf an Pin 3 vom TDA 4555 anschließen, mit Spule DB Nullinie des (B-Y)-Signals auf Zeilentastniveau bringen.
   - Spule F 2521 so einstellen, daß das (B-Y)-Signal keine Überschwinger hat.

1. White level adjustment
   - Display colour bar test pa
   - Set ◑ to min., ○ to nom.
   - Adjust presets VR and VB (colouration
2. Adjustment of cut-off point
   Manual adjustment is not po current control circuit.
   To check cut-off point (oscill
   - Display colour bar test pa
   - Set ◑ to min., ○ to nom.
   - Connect test probe to col
   The black levels of the th
3. Adjustments in chroma chan
   - Display PAL test pattern.
   - Adjust colour level and br
   - Connect pin 28 of IC TDA
   - Connect pin 17 to IC TDA
   Adjust trimmer C 9516 for
   - Remove wire links.
   - Connect test probe to tes
   B signal to coincidence
   - Display SECAM test patte
   - Connect test probe to pin
   - Use coil DR to align zero
   - Connect test probe to pin
   - With coil DB to align zero
   - Adjust coil F 2521 so that





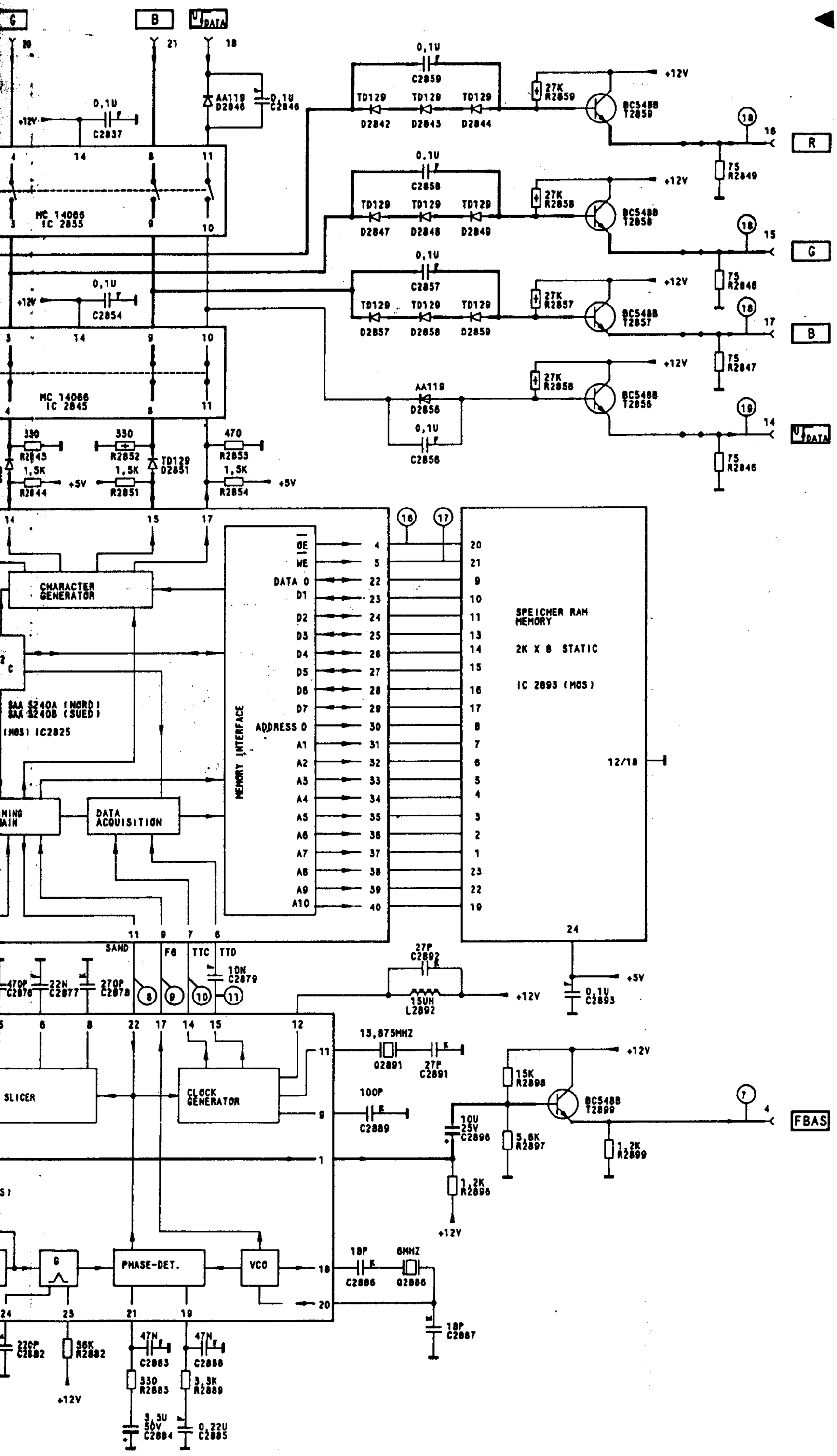
PAL/SECAM TRANSCODER 29504-146.01

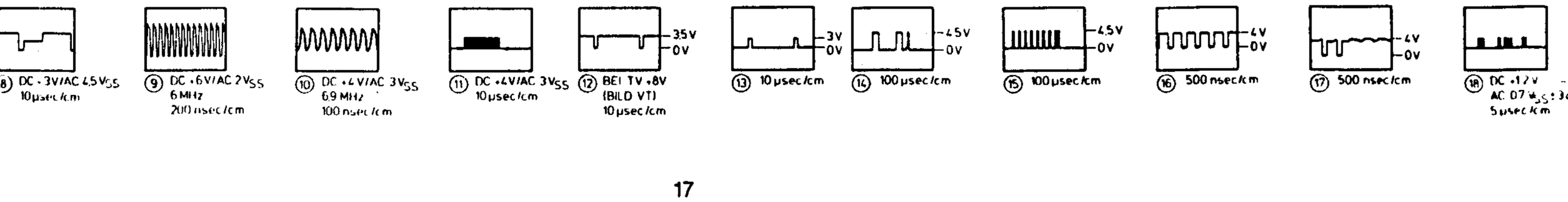
Wird die FARB/RGB-Steckkarte 29504-105.01 durch den PAL/SECAM-T SECAM nachgerüstet ist kein zusätzlicher Abgleich notwendig.

If the colour/RGB board 29504-105.01 is converted for SECAM with 29504-146.01, no additional alignment is necessary.

Se la scheda colore/RGB 29504-105.01 viene trasformata in SECAM c 29504-146.01, non occorre effettuare nessun'altra taratura.

VIDEOTEXT-DECODER 29504-108.01 (NORD)
TELETEXT DECODER -108.11 (SÜD)
DECODER TELEVIDEO





Anpassungsabgleich der Steckkarte

Während des Abgleiches ist es notwendig, die ständig neu anzuwählen, da nur so die Seite neu wird und eine Beurteilung der Fehlerschwelle mö

Der Einsteller R 2867 steht bei Auslieferung auf Link (kleinste Höhenanhebung, ca. 2 dB). Treten trotz freiem Antennensignal Zeichenfehler auf, R 286 nach rechts verstellen, bis Fehler verschwinden. Ni drehen, da Fehlerhäufigkeit wieder zunehmen ka Beim Nachrüsten der Videotext-Steckkarte müsse zeichneten *1Ω-Wiederstände auf der Chassis- werden.

Matching adjustment of the plug-in board

Page 199 must always be selected anew during t ment, as only this effects a new read-in of the page possible to evaluate the error level.

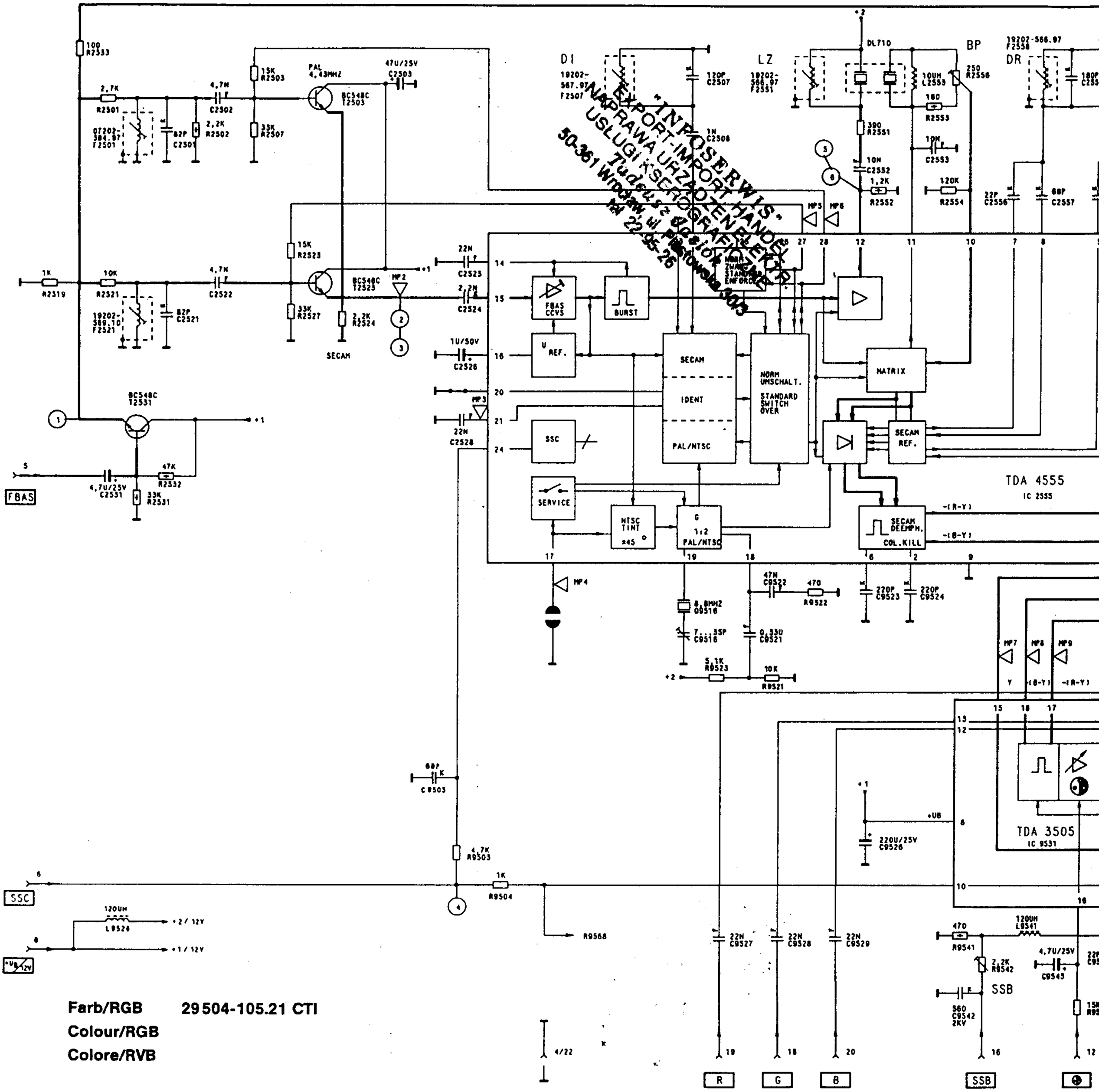
The control R 2867 is set in the fully anticlockwis when the unit is delivered (smallest treble boos 2 dB). If, with a perfect aerial signal character faults R 2867 slowly clockwise until the faults disappear. R 2867 up any further as error rate may increase When fitting the Videotext (GB: Teletext) board, t resistors marked by * on the chassis have to be

Taratura d'adattamento della scheda ad innest

Durante la taratura è necessario selezionare ripetu pagina 199, poiché solo così è possibile una nuova ne della pagina ed una valutazione della soglia d

Il regolatore R 2867 viene fornito col cursore girato mente all'estrema sinistra (minima esaltazione de quenze, ca. 2 dB). Se si manifestano errori di ca nostante un perfetto segnale d'antenna, girare le cursore di R 2867 verso destra fino ad eliminare gli girarlo oltre poiché può riaumentare la presenza

Nel montare la scheda televideo togliere le resiste contrassegnate con * sul telaio.



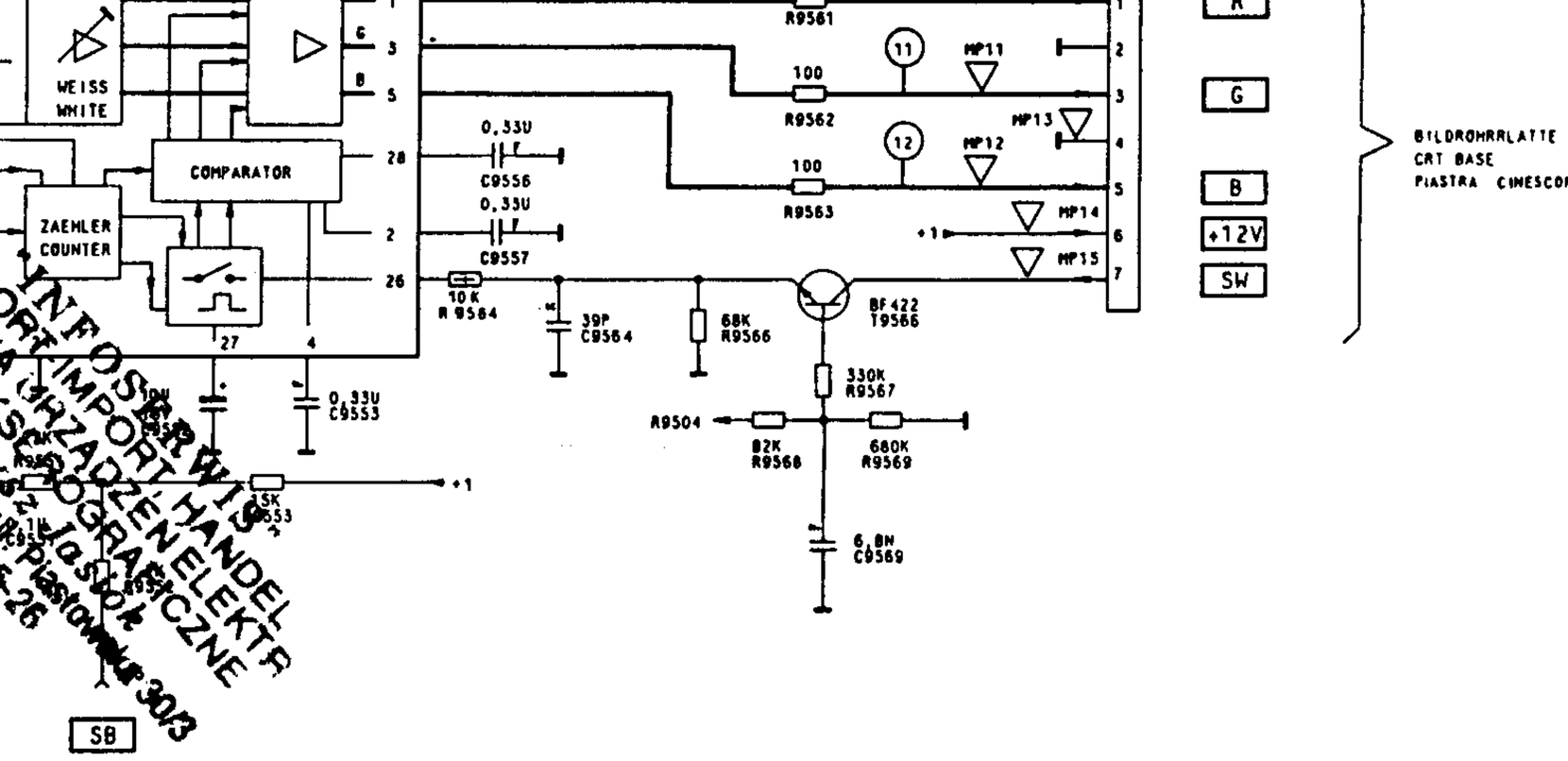
Farb/RGB **29504-105.21 CTI**
Colour/RGB
Colore/RVB

1. Weißabgleich
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑max., einstellen.
   - Regler VR und VB (Bildrohrplatte) so einstellen, daß keine Verfärbungen in den Grauwerten sichtbar sind.
2. Sperrpunktabgleich
   Eine manuelle Einstellung ist nicht möglich, da die Steckkarte eine automatische Dunkelstromregelung besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑min., einstellen.
   - Tastkopf an den Kollektoren der Transistoren T736, T756, T776 anhängen (Bildrohrplatte). Die Schwarzwerte der drei Kathodensignale liegen bei ca. 140 ... 150 V.
3. Einstellungen im Farbkanal
   - PAL-Testbild einspeisen.
   - FK nom., H nom., K max. einstellen.
   - IC-Pin 28 vom TDA 4555 mit + 12 V verbinden.
   - IC-Pin 17 vom TDA 4555 mit Masse verbinden.
   - Mit Trimmer C 9516 die durchlaufenden Farbbalken zum Stehen bringen.
   - Kurzschlußbrücken entfernen.
   - Tastkopf an MP 12, mit Regler BP und Spule LZ die Doppelbilder des B -Signals zur Deckung bringen.
   - SECAM-Testbild einspeisen.
   - Tastkopf an Pin 1 vom TDA 4555 anschließen, mit Spule DR Nullinie des (R-Y)-Signals auf Zeilentastniveau bringen.
   - Tastkopf an Pin 3 vom TDA 4555 anschließen, mit Spule DB Nullinie des (B-Y)-Signals auf Zeilentastniveau bringen.
   - Spule F 2521 so einstellen, daß das (B-Y)-Signal keine Überschwinger hat.

1. White level adjustment.
   - Display colour bar test pattern.
   - Set ◑ to min., ○ to nom., ◑ to max.
   - Adjust presets VR and VB (CRT socket board) so that the picture does not show any colouration.
2. Adjustment of cut-off point.
   Manual adjustment is not possible, as the circuit board employs an automatic dark current control circuit.
   To check cut-off point (oscilloscope required), proceed as follows:
   - Display colour bar test pattern.
   - Set ◑ to min., ○ to nom., ◑ to min.
   - Connect test probe to collectors of T736, T756, T776 (CRT socket board). The black levels of the three cathode signals should be 140-150 V.
3. Adjustments in chroma channel.
   - Display PAL test pattern.
   - Adjust colour level and brightness to nominal value, contrast to maximum.
   - Connect pin 28 of IC TDA 4555 to + 12 V supply.
   - Connect pin 17 to IC TDA 4555 to chassis.
     Adjust trimmer C 9516 for stationary pattern in colour bars.
   - Remove wire links.
   - Connect test probe to test point MP 12. Bring the double image produced by the B signal to coincidence by adjusting the preset BP and the coil LZ.
   - Display SECAM test pattern.
   - Connect test probe to pin 1 of IC TDA 4555.
   - Use coil DR to align zero level of the (R-Y) signal with the line black level.
   - Connect test probe to pin 3 of IC TDA 4555.
   - With coil DB to align zero level of the (B-Y) signal with the line black level.
   - Adjust coil F 2521 so that the (B-Y) signal is free of overshooting.

1. Taratura del bianco
   - Applicare un monoscopio FuBK
   - Regolare ◑ al minimo, ○ sul valo
   - Con VR e VB (piastra cinescopio)
2. Taratura del punto di blocco.
   Una regolazione manuale non è pos
   regolazione automatica della corrent
   Controllo del punto di blocco (è nec
   - Applicare un monoscopio FuBK.
   - Regolare ◑ al minimo, ○ sul valo
   - Collegare la sonda ai collettori dei t
     Valore nero dei tre segnali catodic
3. Regolazione del canale colore.
   - Applicare un monoscopio PAL.
   - Regolare FK e H sul valore nomin
   - Sull'integrato TDA 4555 collegare
   - Sull'integrato TDA 4555 collegare
     Con C 9516 fermare le barre colo
   - Togliere i cortocircuiti.
   - Collegare la sonda a MP 12, con il re
     immagini doppie del segnale B .
   - Applicare un monoscopio SECAM.
   - Collegare la sonda al pin 1 dell'int
     con la bobina DR portare la linea
     livello della frequenza di riga.
   - Collegare la sonda al pin 3 dell'int
     con la bobina DB portare la linea
     livello della frequenza di riga.
   - La bobina F 2521 applicarla così in

del bianco
care un monoscopio FuBK
lare ◑ al minimo, ☼ sul valore nominale e ◑ al massimo.
VR e VB (piastra cinescopio) eliminare eventuali macchie di colore.
del punto di blocco.
olazione manuale non è possibile, poichè questa scheda incorpora una
one automatica della corrente d'interdizione.
o del punto di blocco (è necessario un oscilloscopio):
care un monoscopio FuBK.
lare ◑ al minimo, ☼ sul valore nominale e ◑ al minimo.
gare la sonda ai collettori dei transistori T 736, T 756, T 776 (piastra cinescopio).
nero dei tre segnali catodici ca. 140...150 V.
one del canale colore.
care un monoscopio PAL.
are FK e H sul valore nominale, K al massimo.
tegrato TDA 4555 collegare pin 28 a + 12 V.
tegrato TDA 4555 collegare pin 17 a massa.
C 9516 fermare le barre colorate scorrevoli.
re i cortocircuiti.
gare la sonda a MP 12, con il regolatore BP e la bobina LZ portare a copertura le
gini doppie del segnale B .
care un monoscopio SECAM.
gare la sonda al pin 1 dell'integrato TDA 4555,
bobina DR portare la linea zero del segnale (R-Y) sul
della frequenza di riga.
gare la sonda al pin 3 dell'integrato TDA 4555,
bobina DB portare la linea zero del segnale (B-Y) sul
della frequenza di riga.
bina F 2521 applicarla così in modo che il signale (B-Y) sia chiaro.



peisen.
max., einstellen.
(Bildrohrplatte)-so einstellen, daß keine Verfärbungen in den
ar sind.

ung ist nicht möglich, da die Steckkarte eine automatische
besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).
peisen.
nin., einstellen.
llektoren der Transistoren T736, T756, T776 anhängen
Schwarzwerte der drei Kathodensignale liegen bei ca.
Geräte).
kanal
eisen.
max. einstellen.
4555 mit + 12 V verbinden.
4555 mit Masse verbinden.
die durchlaufenden Farbbalken zum Stehen bringen.
entfernen.
mit Regler BP und Spule LZ die Doppelbilder des B-Signals
n.
4Hz einspeisen.
4555 mit 12 V verbinden.
4555 mit Masse verbinden.
die durchlaufenden Farbbalken zum Stehen bringen.
entfernen.
speisen.
m TDA 4555 anschließen,
e des (R-Y)-Signals auf Zeilenniveau bringen.
m TDA 4555 anschließen,
e des (B-Y)-Signals auf Zeilentastniveau bringen.
stellen, daß das (B-Y)-Signal keine Überschwinger hat.

est pattern.
nom., ◑ to max.
nd VB (CRT socket board) so that the picture does not show any

oint.
not possible, as the circuit board employs an automatic dark

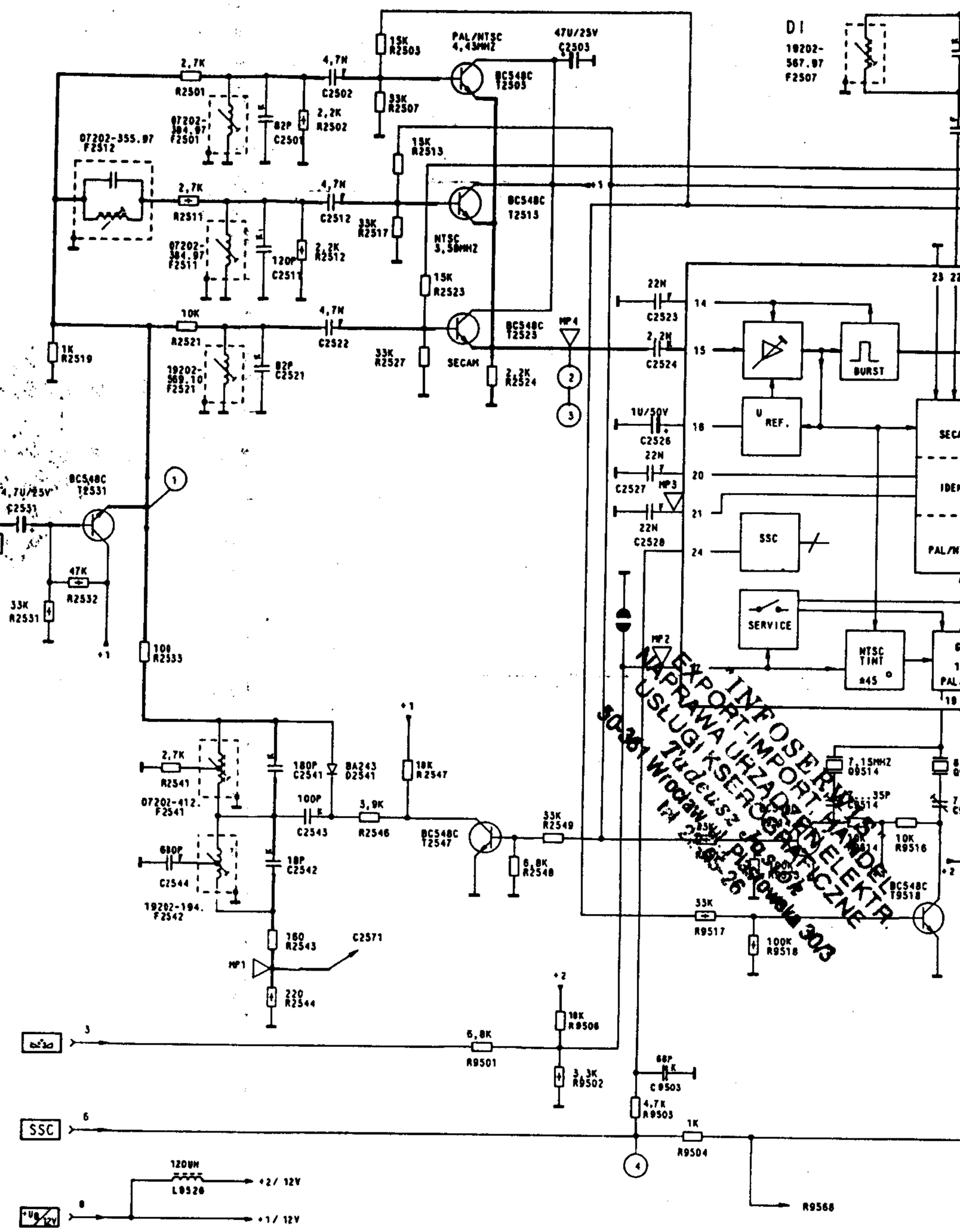
(oscilloscope required), proceed as follows:
est pattern.
nom., ◑ to min.
to collectors of T736, T756, T776 (CRT socket board).
the three cathode signals should be 140-150 V (26" sets).
channel.
ttern.
and brightness to nominal value, contrast to maximum.
C TDA 4555 to + 12 V supply.
C TDA 4555 to chassis.
16 for stationary pattern in colour bars.

to test point MP 12. Bring the double image produced by the
nce by adjusting the preset BP and the coil LZ.
SC test pattern.
C TDA 4555 to 12 V supply.
C TDA 4555 to chassis.
14 for stationary pattern in colour bars.

pattern.
to pin 1 of IC TDA 4555.
zero level of the (R-Y) signal with the line black level.
to pin 3 of IC TDA 4555.
zero level of the (B-Y) signal with the line black level.
that the (B-Y) signal is free of overshooting.

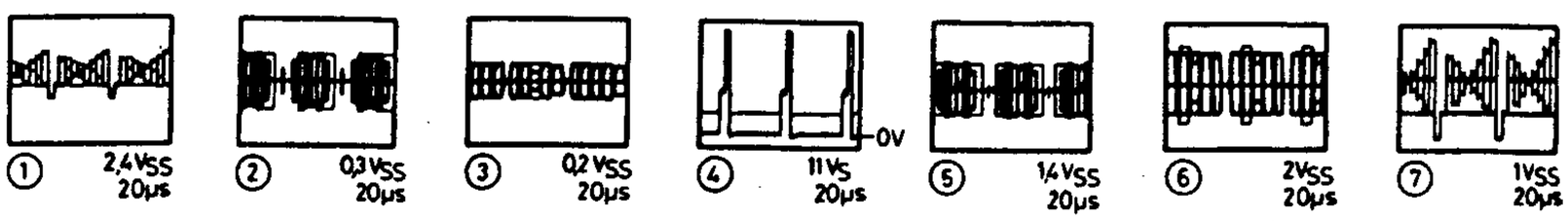
copio FuBK
o, ☼ sul valore nominale e ◑ al massimo.
VB (piastra cinescopio) eliminare eventuali macchie di colore.
occo
le non è possibile, poichè questa scheda incorpora una
della corrente d'interdizione.
blocco (è necessario un oscilloscopio):
copio FuBK.
o, ☼ sul valore nominale e ◑ al minimo.
collettori dei transistori T736, T756, T776 (piastra cinescopio).
egnali catodici ca. 140...150 V (apparecchi da 26").
colore.
copio PAL.
valore nominale, K al massimo.
55 collegare pin 28 a + 12 V.
55 collegare pin 17 a massa.
e barre colorate scorrevoli.
.
IP 12, con il regolatore BP e la bobina LZ portare a copertura le
segnale B.
opio NTSC 3,5 MHz.
55 collegare pin 26 a 12 V.
55 collegare pin 17 a massa.
e barre colorate scorrevoli.

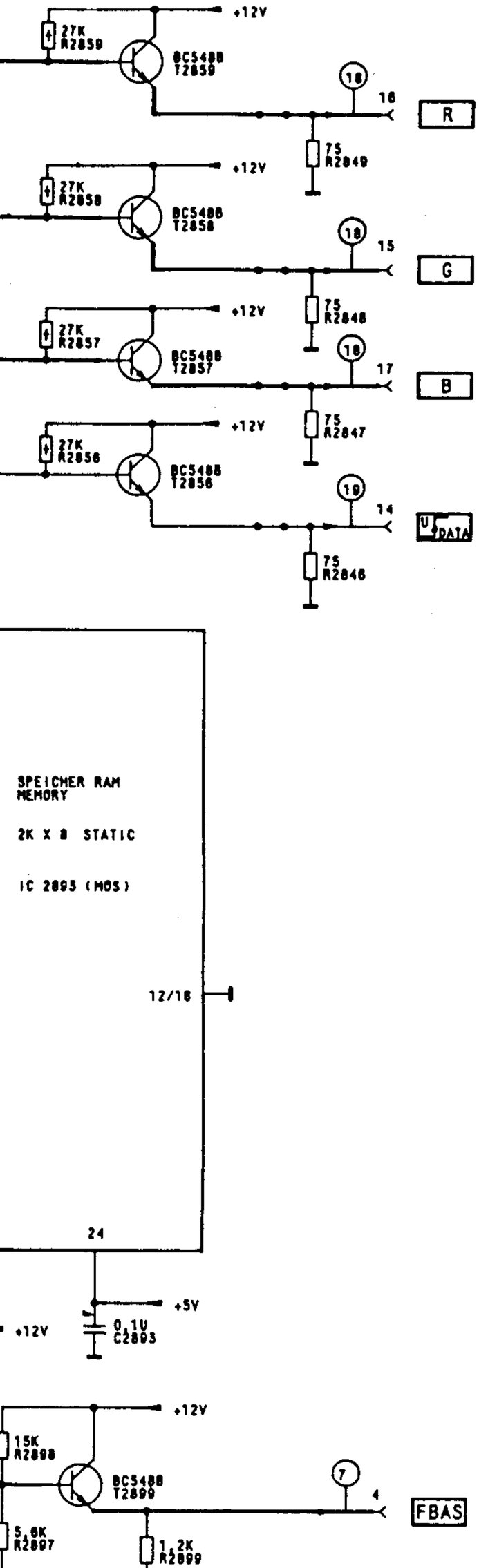
opio SECAM.
pin 1 dell'integrato TDA 4555,
tare la linea zero del segnale (R-Y) sul
di riga.
pin 3 dell'integrato TDA 4555,
tare la linea zero del segnale (B-Y) sul
di riga.
licarla così in modo che il segnale (B-Y) sia chiaro.



Farb/RGB **29504-165.01 MULTI**
Colour/RGB
Colore/RVB

4/22





Anpassungsabgleich der Steckkarte

Während des Abgleiches ist es notwendig, die Seite 199 ständig neu anzuwählen, da nur so die Seite neu eingelesen wird und eine Beurteilung der Fehlerschwelle möglich ist.

Der Einsteller R 2867 steht bei Auslieferung auf Linksanschlag (kleinste Höhenanhebung, ca. 2 dB). Treten trotz einwandfreiem Antennensignal Zeichenfehler auf, R 2867 langsam nach rechts verstellen, bis Fehler verschwinden. Nicht weiterdrehen, da Fehlerhäufigkeit wieder zunehmen kann.

Beim Nachrüsten der Videotext-Steckkarte müssen die gekennzeichneten *1Ω-Wiederstände auf der Chassis-Platte entfernt werden.

Matching adjustment of the plug-in board

Page 199 must always be selected anew during the adjustment, as only this effects a new read-in of the page making it possible to evaluate the error level.

The control R 2867 is set in the fully anticlockwise position when the unit is delivered (smallest cable boost: approx. 2 dB). If, with a perfect aerial signal character faults occur, turn R 2867 slowly clockwise until the faults disappear. Do not turn R 2867 up any further as error rate may increase again.

When fitting the Videotext (GB: Teletext) board, the 1-ohm resistors marked by * on the chassis have to be removed.

Taratura d'adattamento della scheda ad innesto

Durante la taratura è necessario selezionare ripetutamente la pagina 199, poiché solo così è possibile una nuova immissione della pagina ed una valutazione della soglia degli errori.

Il regolatore R 2867 viene fornito col cursore girato completamente all'estrema sinistra (minima esaltazione delle alte frequenze, ca. 2 dB). Se si manifestano errori di carattere, nonostante un perfetto segnale d'antenna, girare lentamente il cursore di R 2867 verso destra fino ad eliminare gli errori. Non girarlo oltre poiché può riaumentare la presenza degli errori.

Nel montare la scheda televideo togliere le resistenze da 1 Ω contrassegnate con * sul telaio.

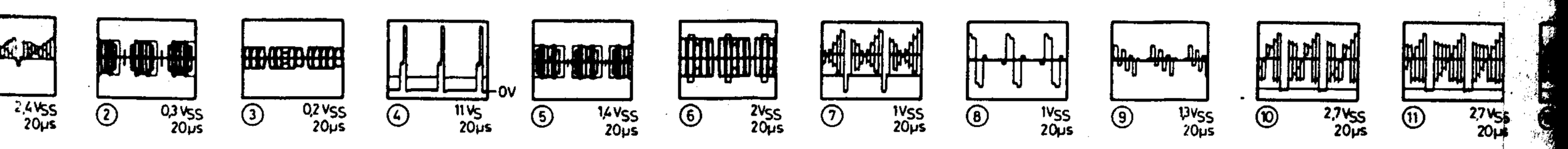
1. Weißabgleich
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑max., einstellen.
   - Regler VR und VB (Bildrohrplatte) so einste Grauwerten sichtbar sind.
2. Sperrpunktabgleich
   Eine manuelle Einstellung ist nicht möglich, d Dunkelstromregelung besitzt. Kontrolle des Sp
   - FuBK-Testbild einspeisen.
   - ◑min., ○nom., ◑min., einstellen.
   - Tastkopf an den Kollektoren der Transistore (Bildrohrplatte). Die Schwarzwerte der drei 140 ... 150 V (26"-Geräte).
3. Einstellungen im Farbkanal
   - PAL-Testbild einspeisen.
   - FK nom., H nom., K max. einstellen.
   - IC-Pin 28 vom TDA 4555 mit + 12 V verbinde
   - IC-Pin 17 vom TDA 4555 mit Masse verbind
   - Mit Trimmer C 9516 die durchlaufenden Far
   - Kurzschlußbrücken entfernen.
   - Tastkopf an MP 12, mit Regler BP und Spul zur Deckung bringen.
   - NTSC-Testbild 3,5 MHz einspeisen.
   - IC-Pin 26 vom TDA 4555 mit 12 V verbinden
   - IC-Pin 17 vom TDA 4555 mit Masse verbind
   - Mit Trimmer C 9514 die durchlaufenden Far
   - Kurzschlußbrücken entfernen.
   - SECAM-Testbild einspeisen.
   - Tastkopf an Pin 1 vom TDA 4555 anschließe mit Spule DR Nullinie des (R-Y)-Signals auf
   - Tastkopf an Pin 3 vom TDA 4555 anschließe mit Spule DB Nullinie des (B-Y)-Signals auf
   - Spule F 2521 so einstellen, daß das (B-Y)-S

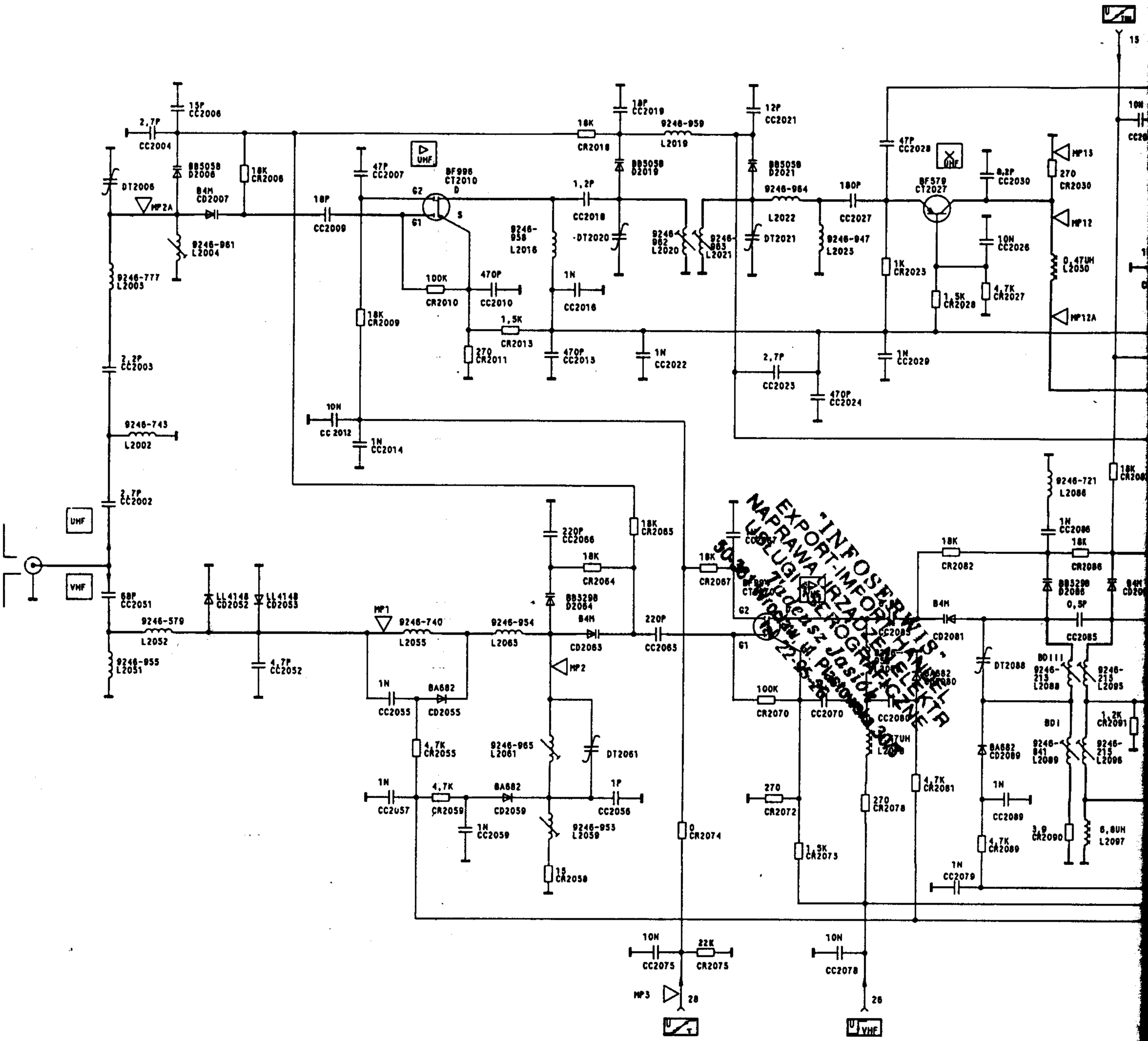
1. White level adjustment.
   - Display colour bar test pattern.
   - Set ◑ to min., ○ to nom., ◑ to max.
   - Adjust presets VR and VB (CRT socket board) colouration.
2. Adjustment of cut-off point.
   Manual adjustment is not possible, as the circu current control circuit.
   To check cut-off point (oscilloscope required),
   - Display colour bar test pattern.
   - Set ◑ to min., ○ to nom., ◑ to min.
   - Connect test probe to collectors of T 736, T The black levels of the three cathode signal
3. Adjustments in chroma channel.
   - Display PAL test pattern.
   - Adjust colour level and brightness to nomin
   - Connect pin 28 of IC TDA 4555 to + 12 V sup
   - Connect pin 17 to IC TDA 4555 to chassis. Adjust trimmer C 9516 for stationary pattern
   - Remove wire links.
   - Connect test probe to test point MP 12. Brin B signal to coincidence by adjusting the pre
   - Display 3.5 MHz NTSC test pattern.
   - Connect pin 26 of IC TDA 4555 to 12 V suppl
   - Connect pin 17 of IC TDA 4555 to chassis.
   - Adjust trimmer C 9514 for stationary pattern
   - Remove wire links.
   - Display SECAM test pattern.
   - Connect test probe to pin 1 of IC TDA 4555.
   - Use coil DR to align zero level of the (R-Y) s
   - Connect test probe to pin 3 of IC TDA 4555.
   - With coil DB to align zero level of the (B-Y) s
   - Adjust coil F 2521 so that the (B-Y) signal is

1. Taratura del bianco
   - Applicare un monoscopio FuBK
   - Regolare ◑ al minimo, ○ sul valore nominal
   - Con i regolatori VR e VB (piastra cinescopio) e
2. Taratura del punto di blocco
   Una regolazione manuale non è possibile, poich regolazione automatica della corrente d'interdizi
   Controllo del punto di blocco (è necessario un
   - Applicare un monoscopio FuBK.
   - Regolare ◑ al minimo, ○ sul valore nominal
   - Collegare la sonda ai collettori dei transistori T Valore nero dei tre segnali catodici ca. 140...
3. Regolazione del canale colore.
   - Applicare un monoscopio PAL.
   - Regolare FK e H sul valore nominale, K al ma
   - Sull'integrato TDA 4555 collegare pin 28 a +
   - Sull'integrato TDA 4555 collegare pin 17 a ma Con C 9516 fermare le barre colorate scorrev
   - Togliere i cortocircuiti.
   - Collegare la sonda a MP 12, con il regolatore BP immagini doppie del segnale B.
   - Applicare un monoscopio NTSC 3,5 MHz.
   - Sull'integrato TDA 4555 collegare pin 26 a 12
   - Sull'integrato TDA 4555 collegare pin 17 a ma
   - Con C 9514 fermare le barre colorate scorrev
   - Togliere i cortocircuiti.
   - Applicare un monoscopio SECAM.
   - Collegare la sonda al pin 1 dell'integrato TDA con la bobina DR portare la linea zero del se livello della frequenza di riga.
   - Collegare la sonda al pin 3 dell'integrato TDA con la bobina DB portare la linea zero del se livello della frequenza di riga.
   - La bobina F 2581 applicarla così in modo che

BP
DR
DB
10202-566.97 F2558
10202-566.97 F2561
180P C2558
470 R2558
180P C2561
820 R2561
22P C2556
68P C2557
22P C2559
68P C2562
47U/25V C2568
4,7 R2566
10K R2568
3,3N C2566
3,3N C2567
8,2K R2567
1,2K R2586
4,7U/25V C2571
R2544
1U/50V C2572
330P C2573
1U/50V C2574
100P C2576
100P C2577
470P C2578
47 R2578
22N C2581
1U/40V C2582
22N C2583
0,1U C9531
100U/25V C9532
22N C9536
22N C9537
22N C9538
100 R9538
0,33U C9556
0,33U C9557
10K R9564
39P C9564
68K R9566
330K R9567
82K R9568
680K R9569
6,8N C9569
100 R9561
100 R9562
100 R9563
470P C2584
47 R2584
120UH L9541
2,2K R9542
4,7U/25V C9543
22P C9544
15K R9543
75 R9544
47N C9546
4,7U/16V C9547
68K R9547
33K R9548
4,7U/16V C9548
100 16V C9552
TD176 D9551
22K R9551
0,1U C9551
2,2K R9552
15K R9553
0,33U C9553
15K R9553
BF422 T9566
R9504
TDA 4555
IC 2555
TDA 4560
IC 2581
TDA 3505
IC 9531
SPEICHER STUFE
MEMORY STAGE
MATRIX
WEISS WHITE
COMPARATOR
S60...840NS
80NS
MP10
MP11
MP12
MP13
MP14
MP15
MP16
MP17
MP18
R
G
B
SW
SSB
SB
BILDROHRLATTE
CRT BASE
2,7Vss 20µs
2,7Vss 20µs
2,7Vss 20µs

Farb/RGB **29504-165.01 MULTI**
Colour/RGB
Colore/RVB





IC'S VON UNTEN GESEHEN
IC'S SEEN FROM BOTTOM
IC'S VISTI DA SOTTO

SOT 143
G1 G2
S D
BF994
BF996

SOT 23
E B
C
BF569
BF579

B E
C
BC847
BC858

Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

Kabeltuner 29504-101.01

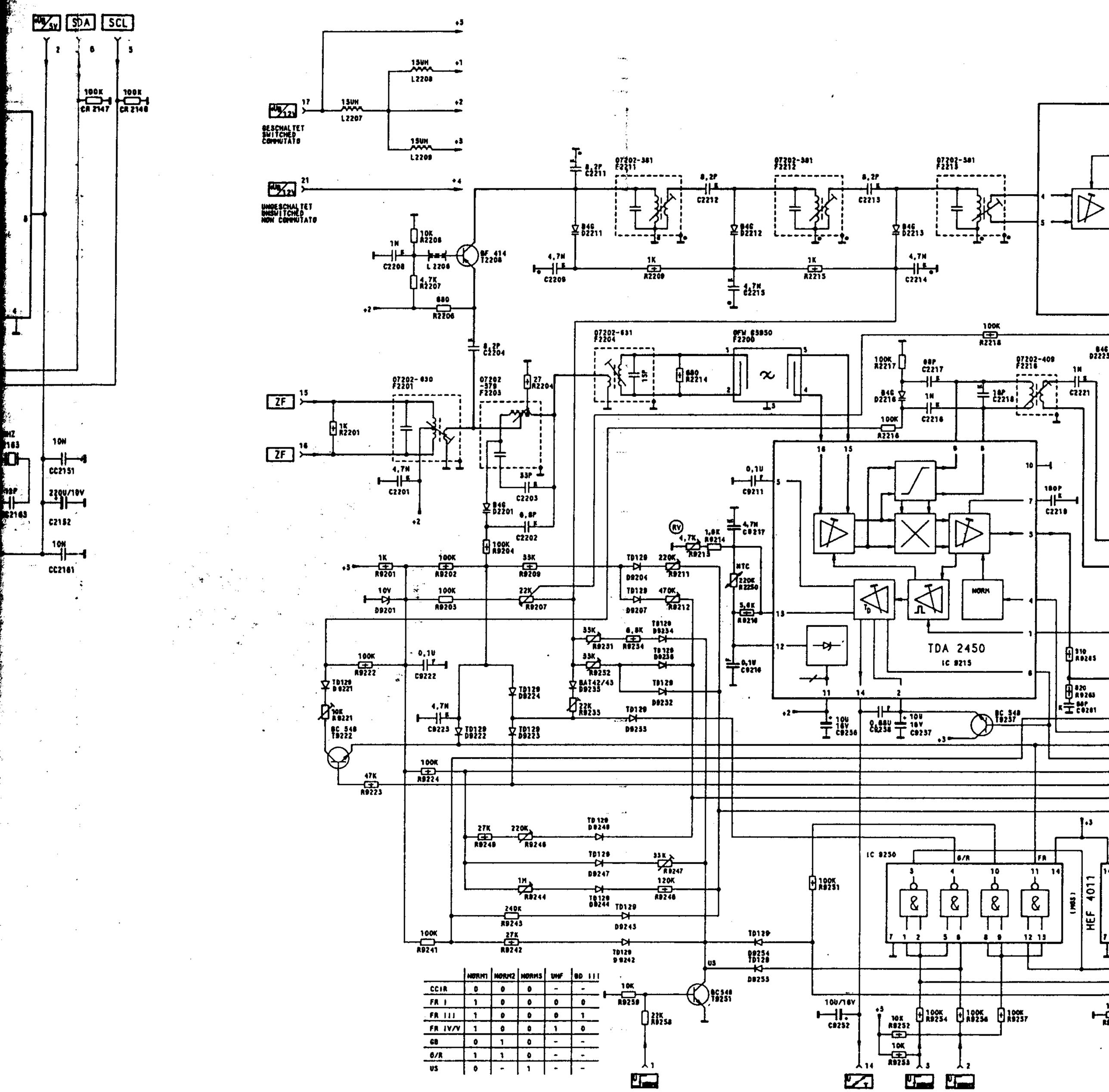
Cable TV Tuner

Tuner TV cavo

SDA 2216
IC2141
MOS
SPEICHER
MEMORY
MEMORIA

SDA3202
IC2161

Kein Anpassungsabgleich bei Austausch
When replacing the plug-in board, no alig
Non è necessaria nessuna taratura di ad
sostituzione di una scheda ad innesto



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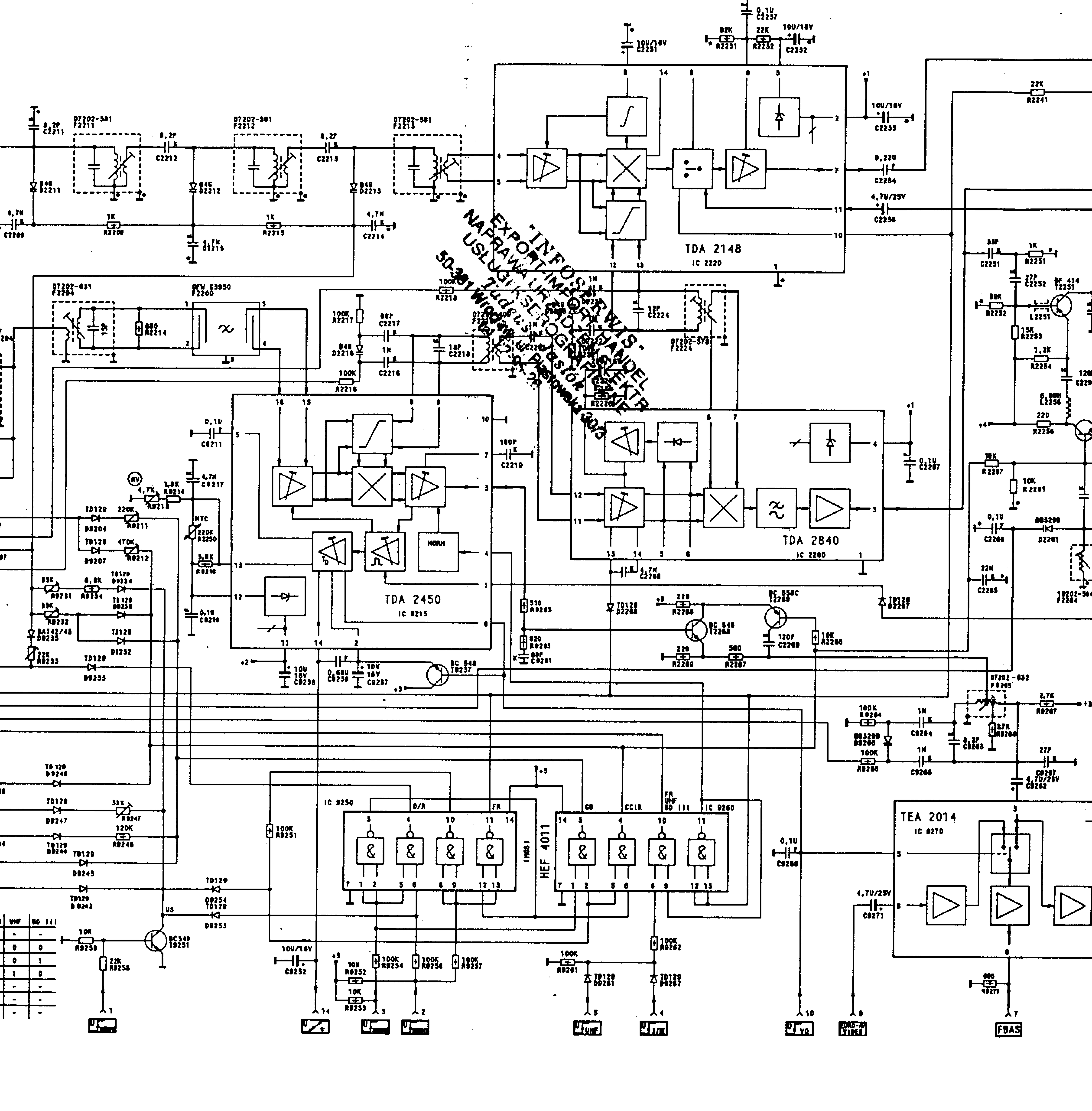


ckkarte notwendig
ls necessary
ito dopo la

U2829B
IC 2240

TDA 6600
IC 2280

MATRIX

DECODER

STEREO-UEBERSPRECHEN
STEREO CROSSTALK
DIAFONIA STEREO

RAUMKLANG
SPATIAL SOUND
AUDIO SPAZIALE

K1/K2

A/D

LOGIK

FBAS

EURO-AV VIDEO

EURO-AV AUDIO L

EURO-AV AUDIO R

NF-R

NF-L

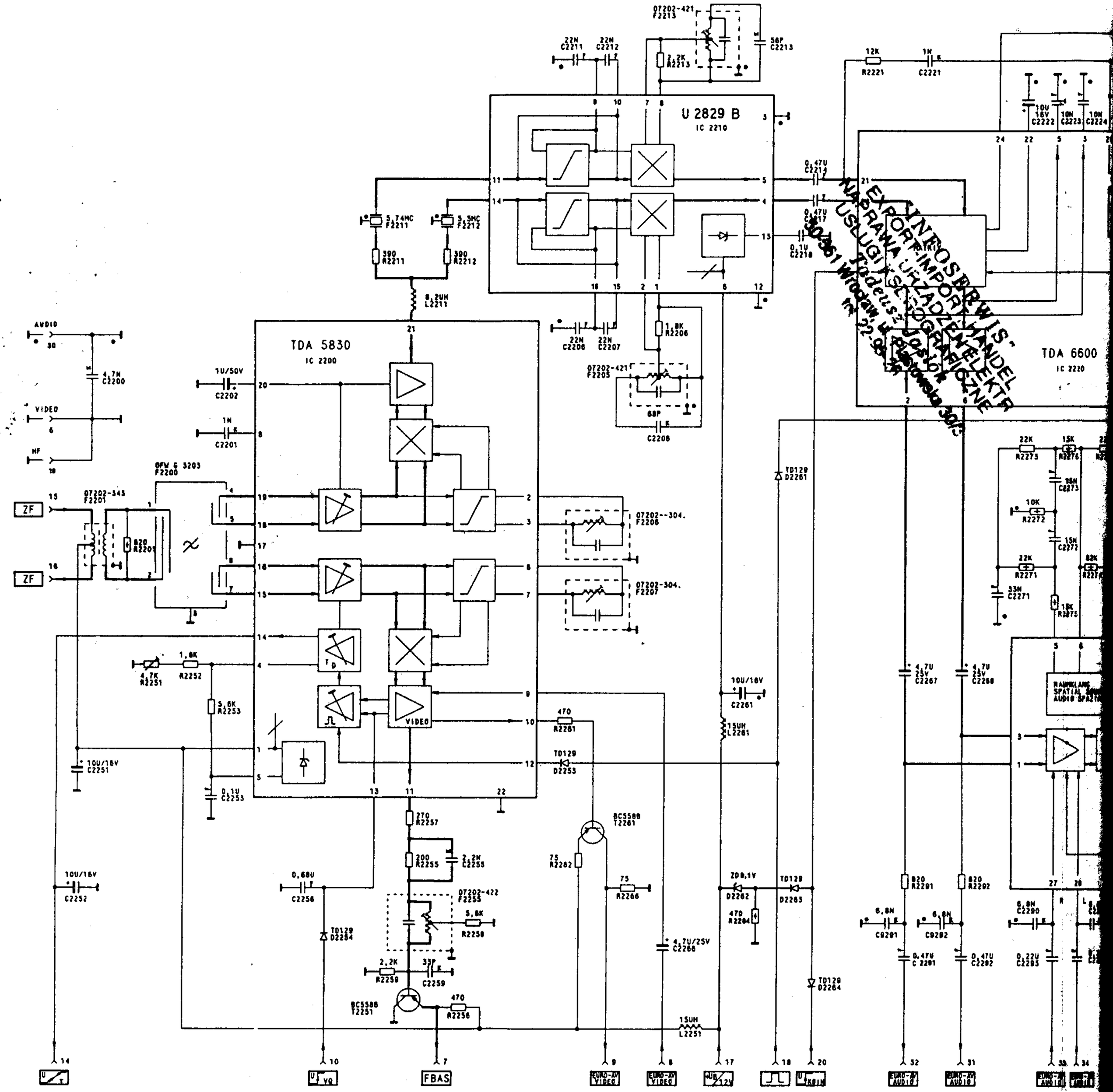
SCL

DATA

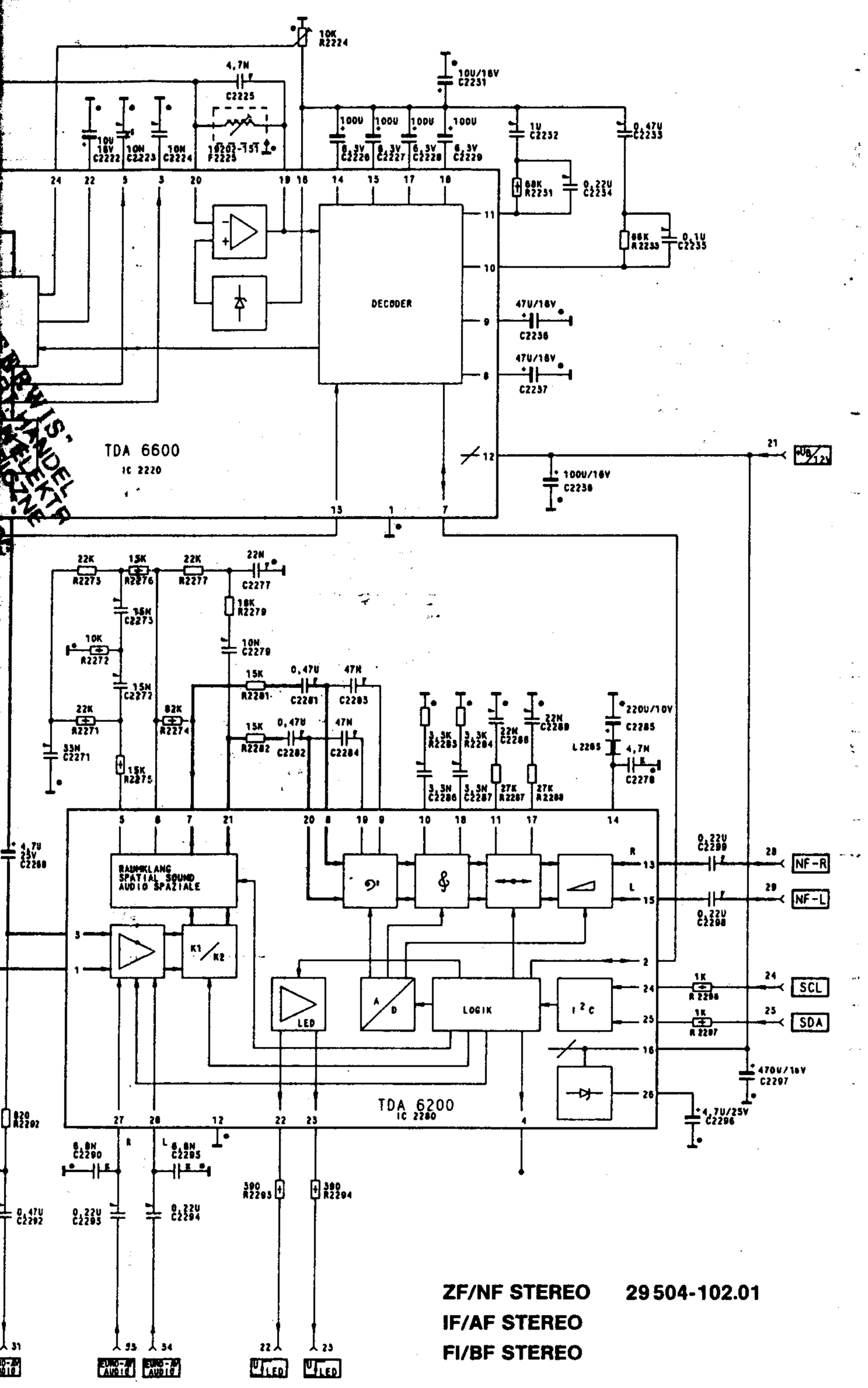
VIDEO

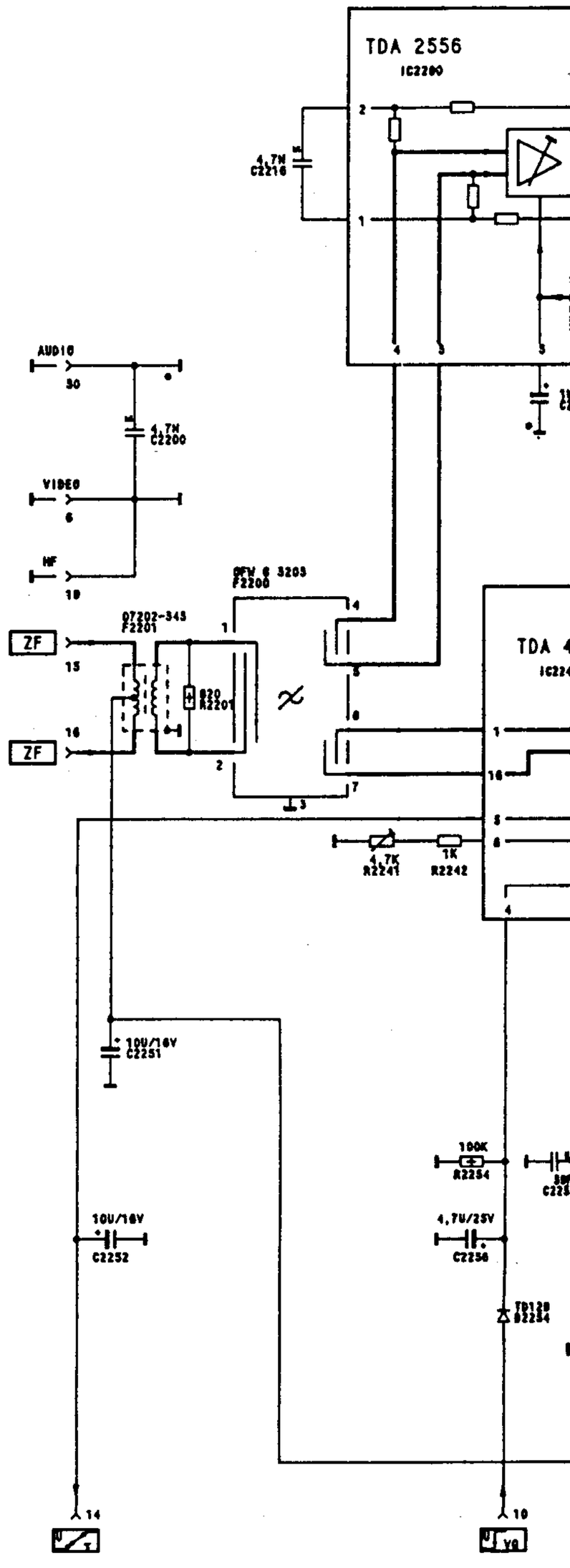
AUDIO

ZF/NF STEREO 29504-162.01 MULTI
IF/AF STEREO
FI/BF STEREO

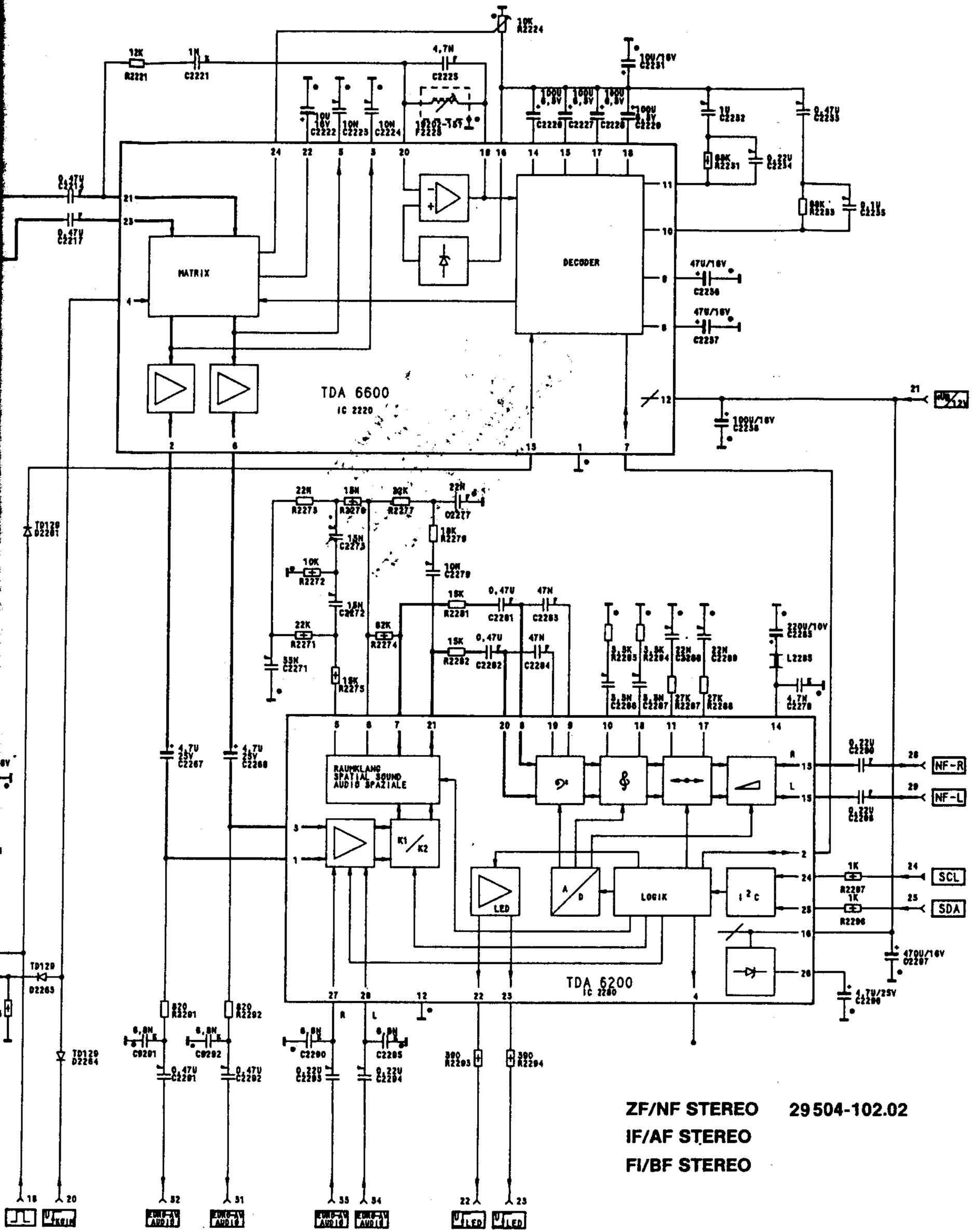


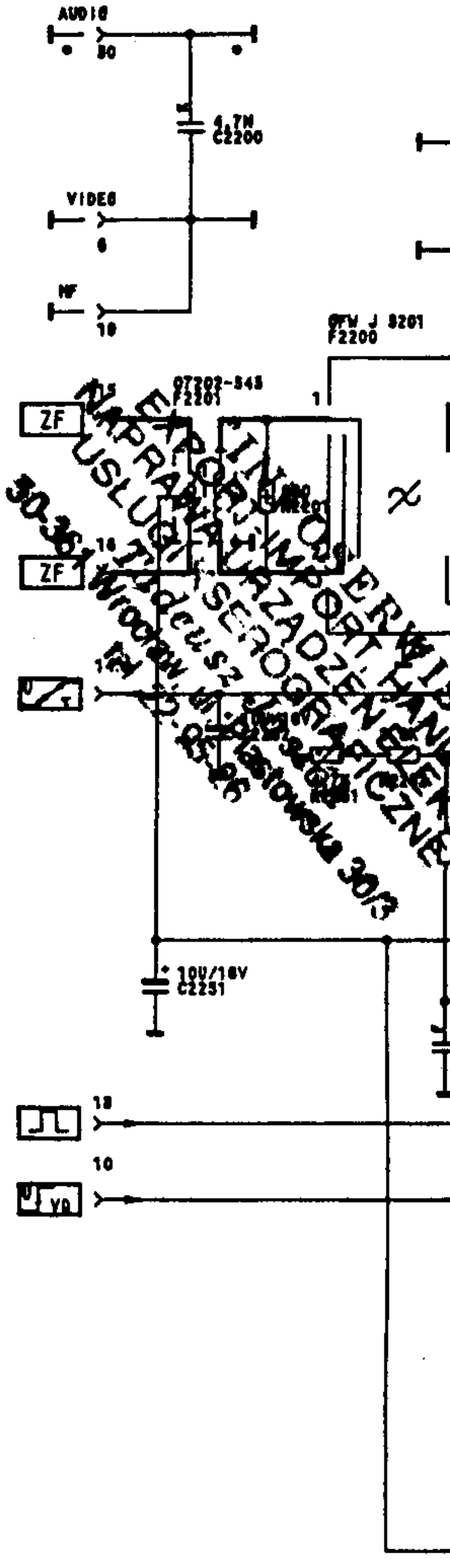
Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto



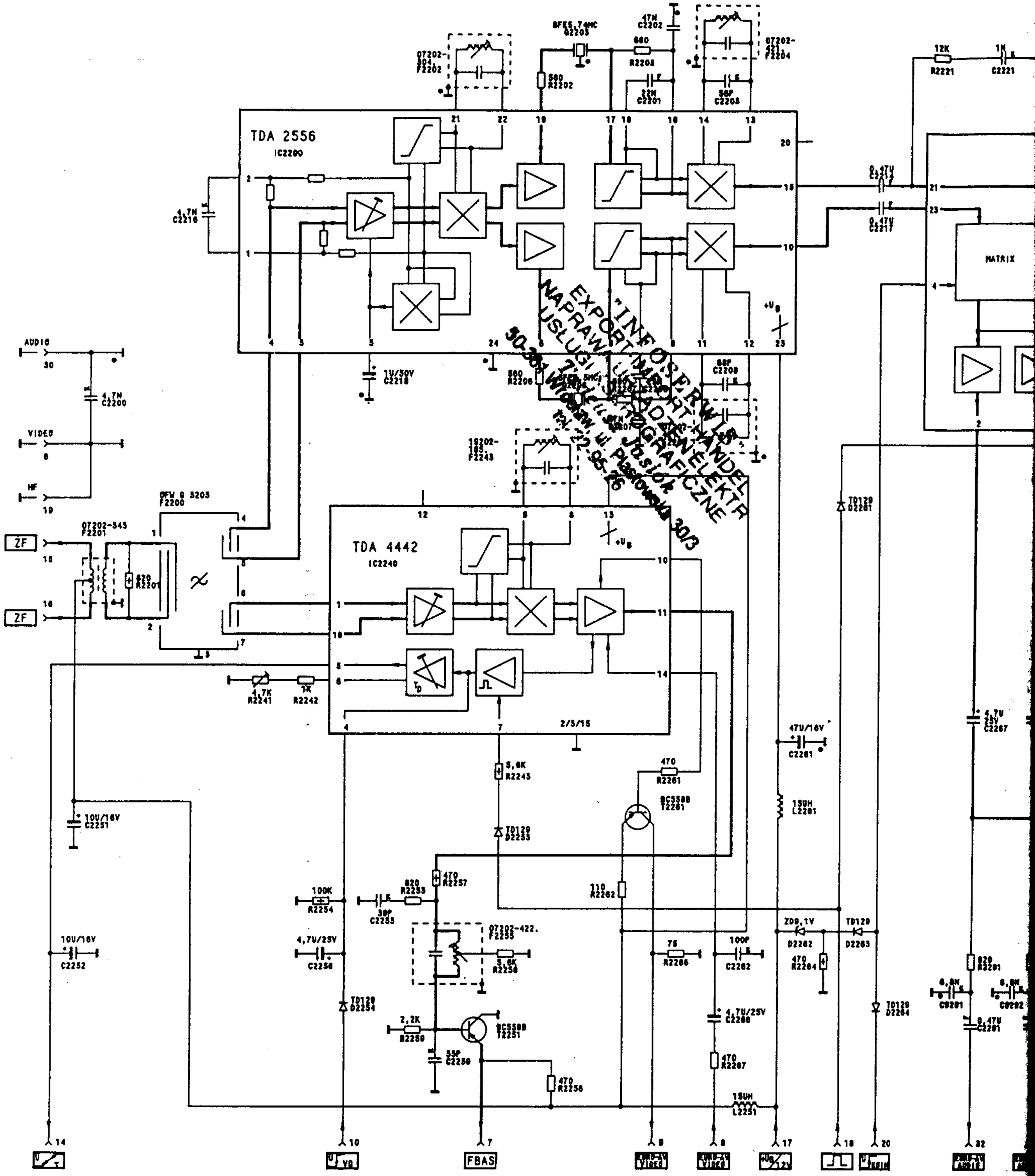


Kein Anpassungsabgleich bei Austausch der Steckkart
When replacing the plug-in board, no alignment is nec
Non è necessaria nessuna taratura di adattamento dop
sostituzione di una scheda ad innesto

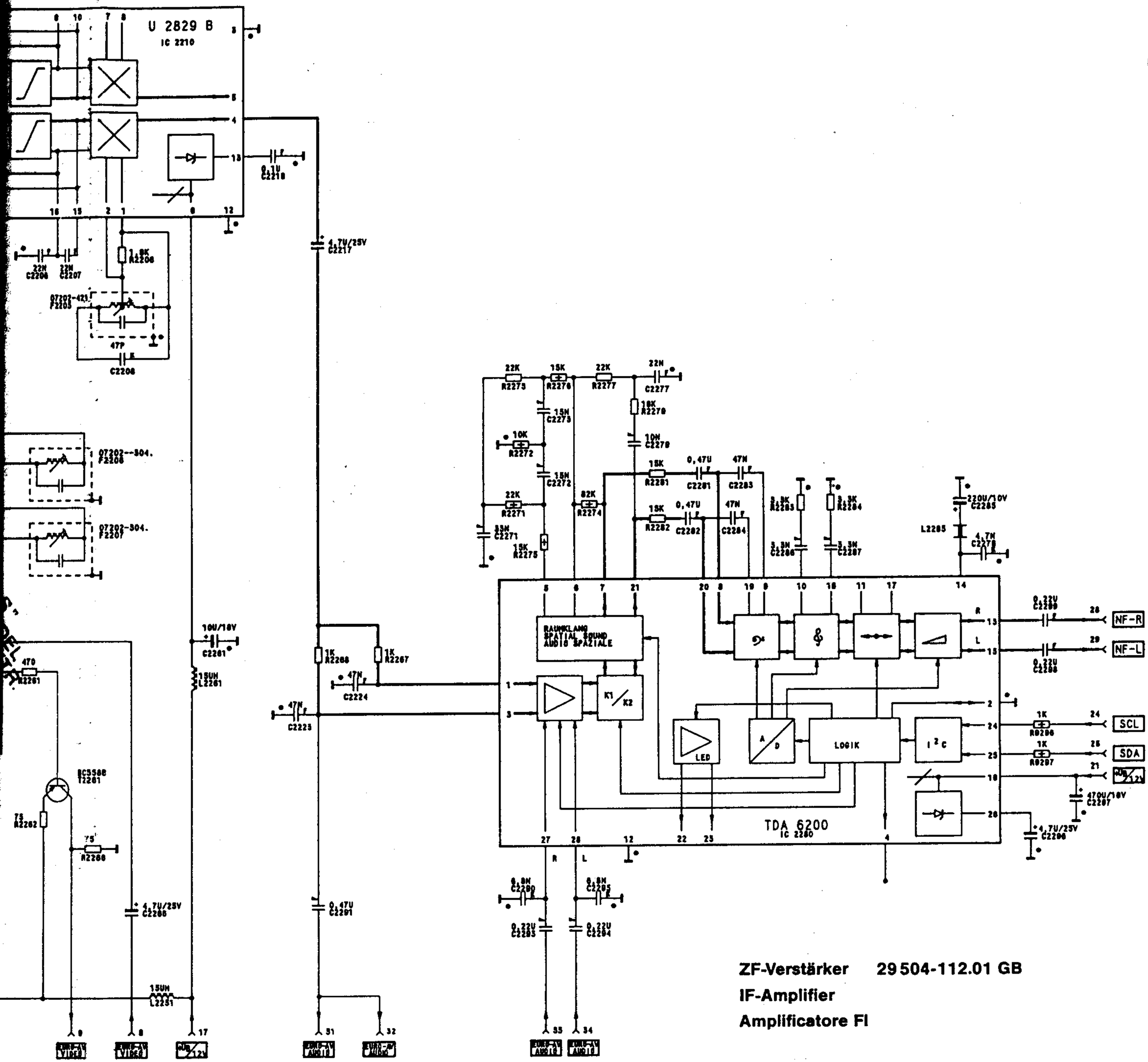




Kein Anpassungsabgleich bei Aust
When replacing the plug-in board,
Non è necessaria nessuna taratura
sostituzione di una scheda ad inne



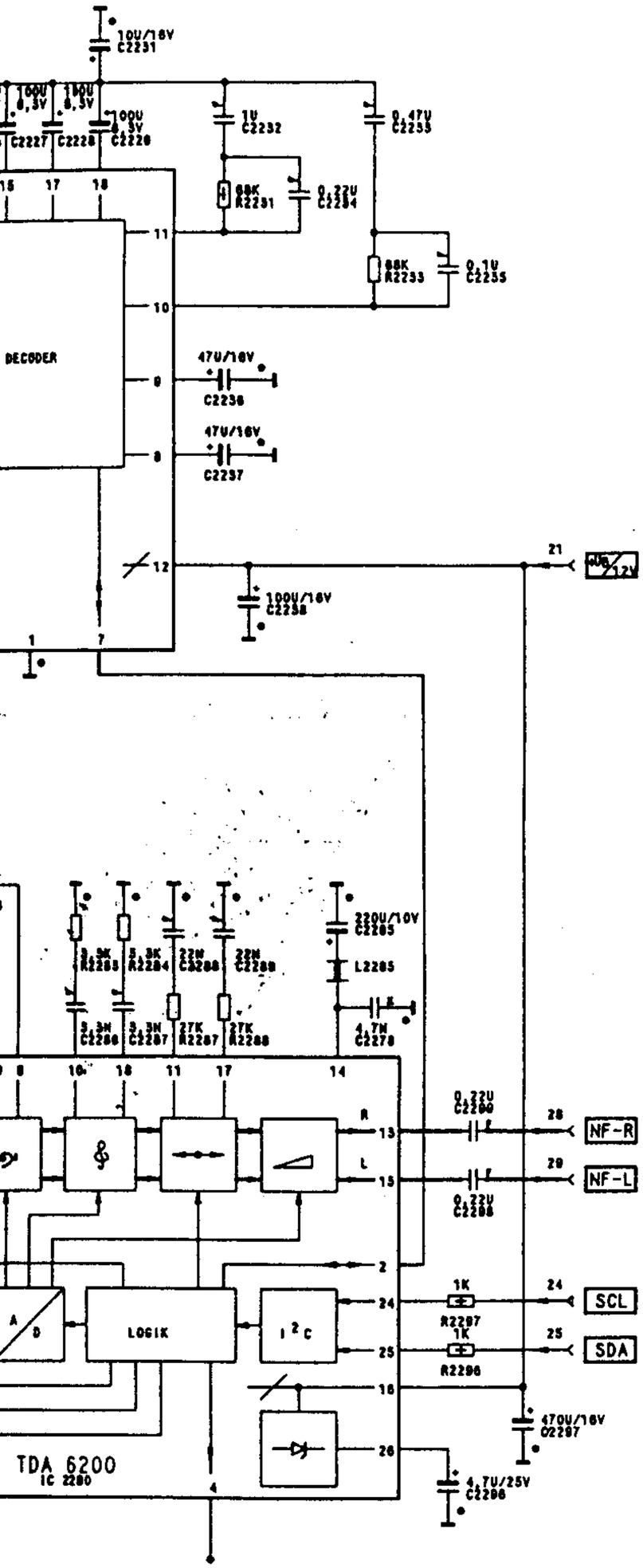
Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

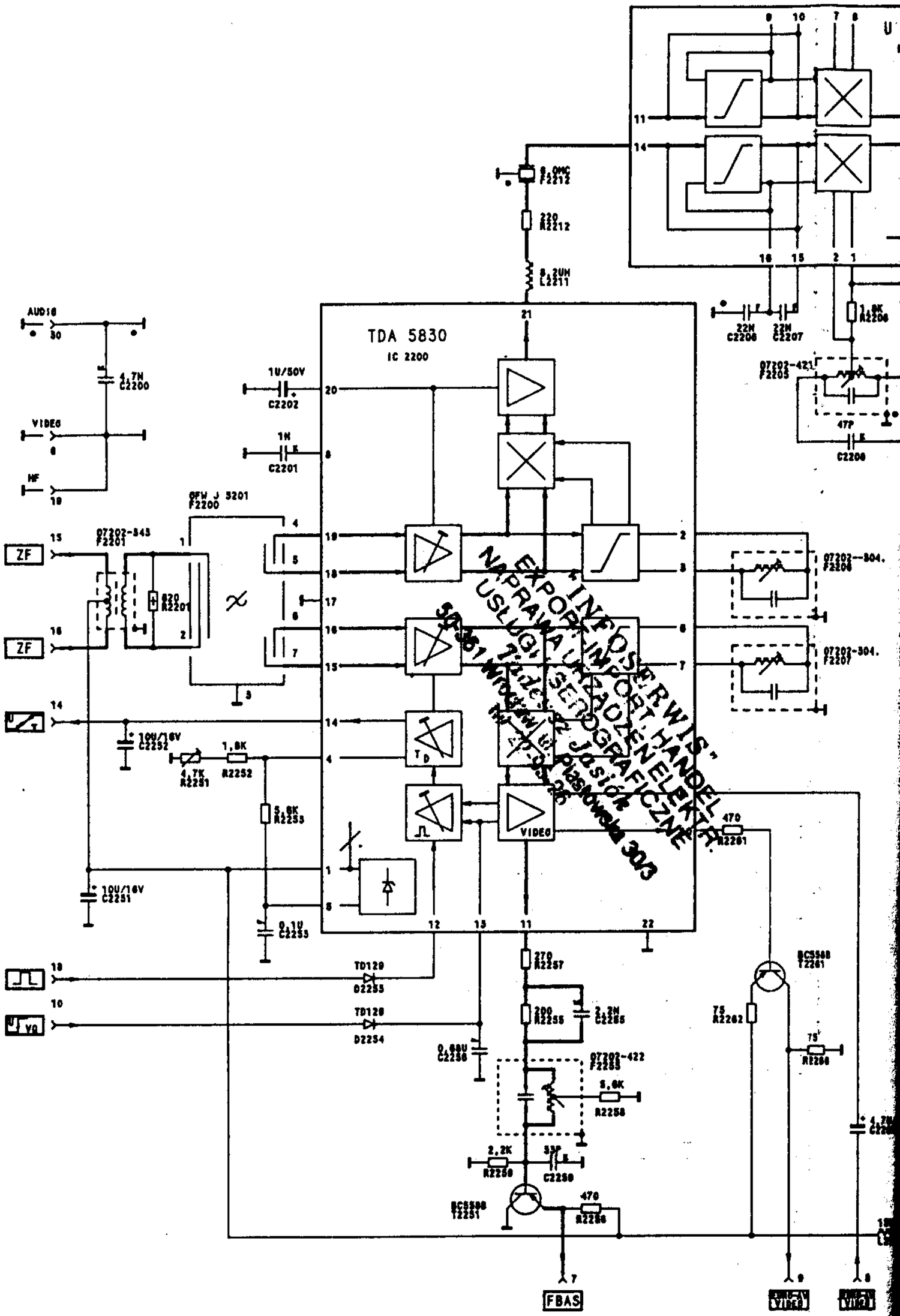


ZF-Verstärker 29 504-112.01 GB

IF-Amplifier

Amplificatore FI





ZF/NF STEREO 29 504-102.02
IF/AF STEREO
FI/BF STEREO

Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

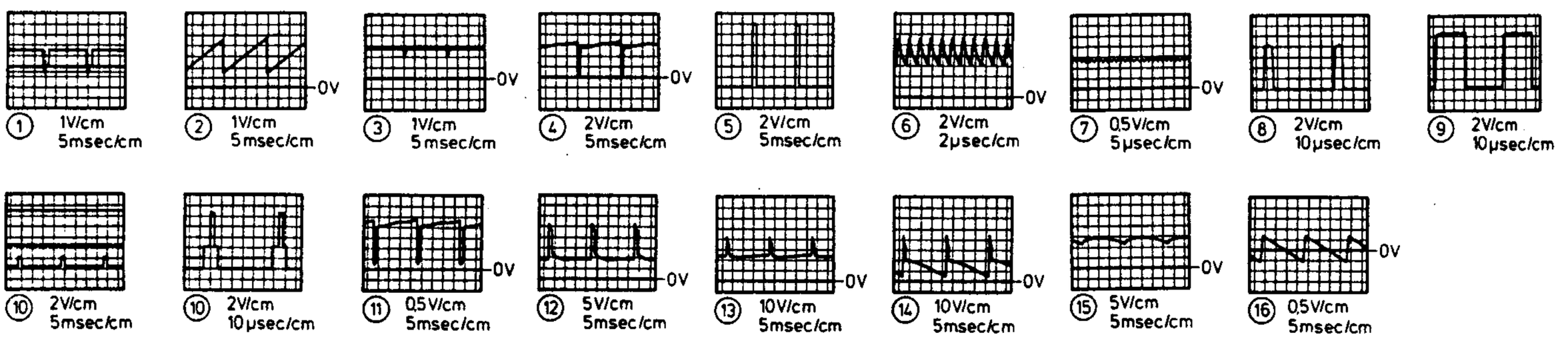
TDA 3586

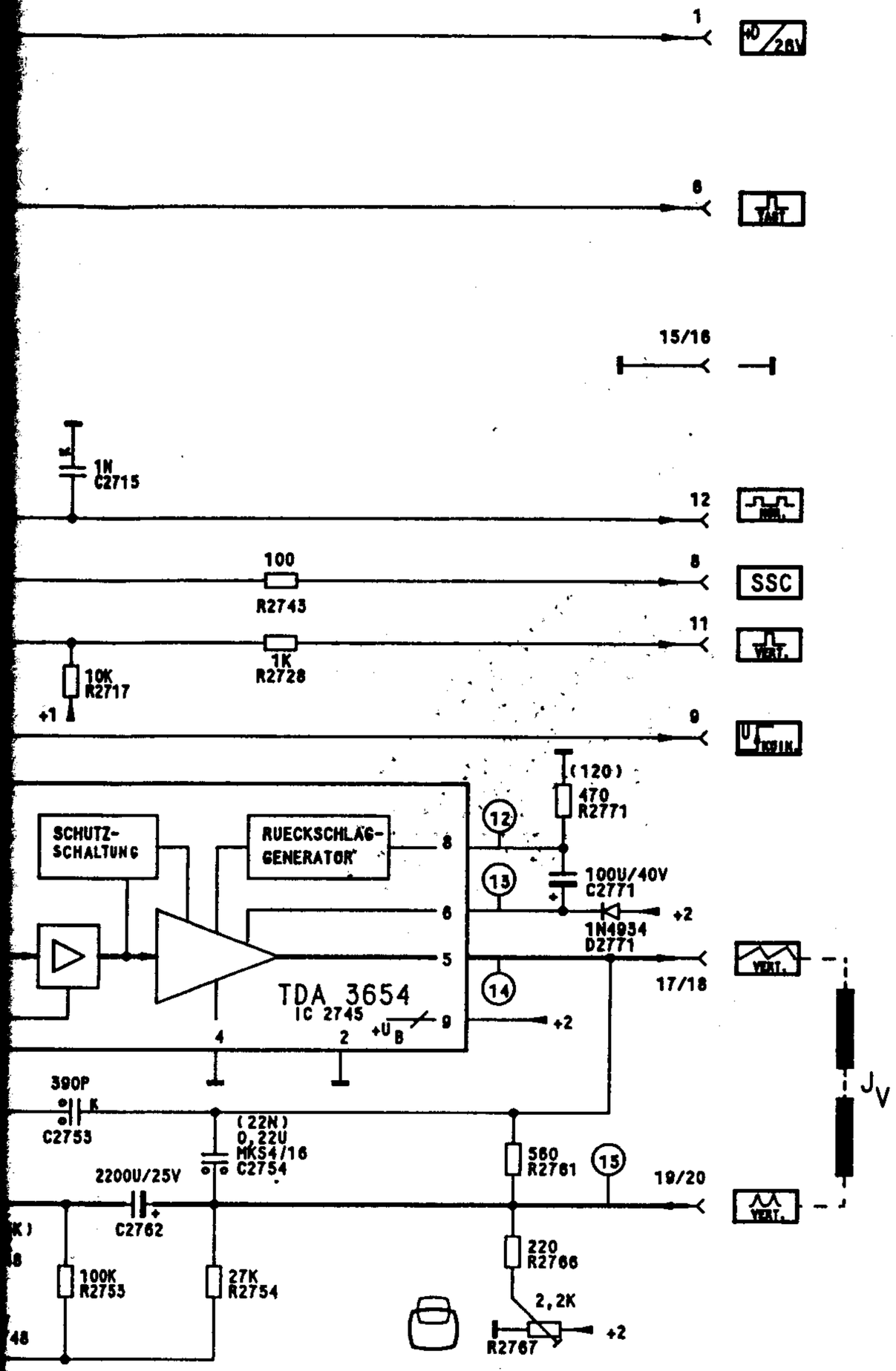
IC 2715

ABLENKUNG
DEFLECTION
DEFLESSIONE

29 504-107.02
29 504-107.05

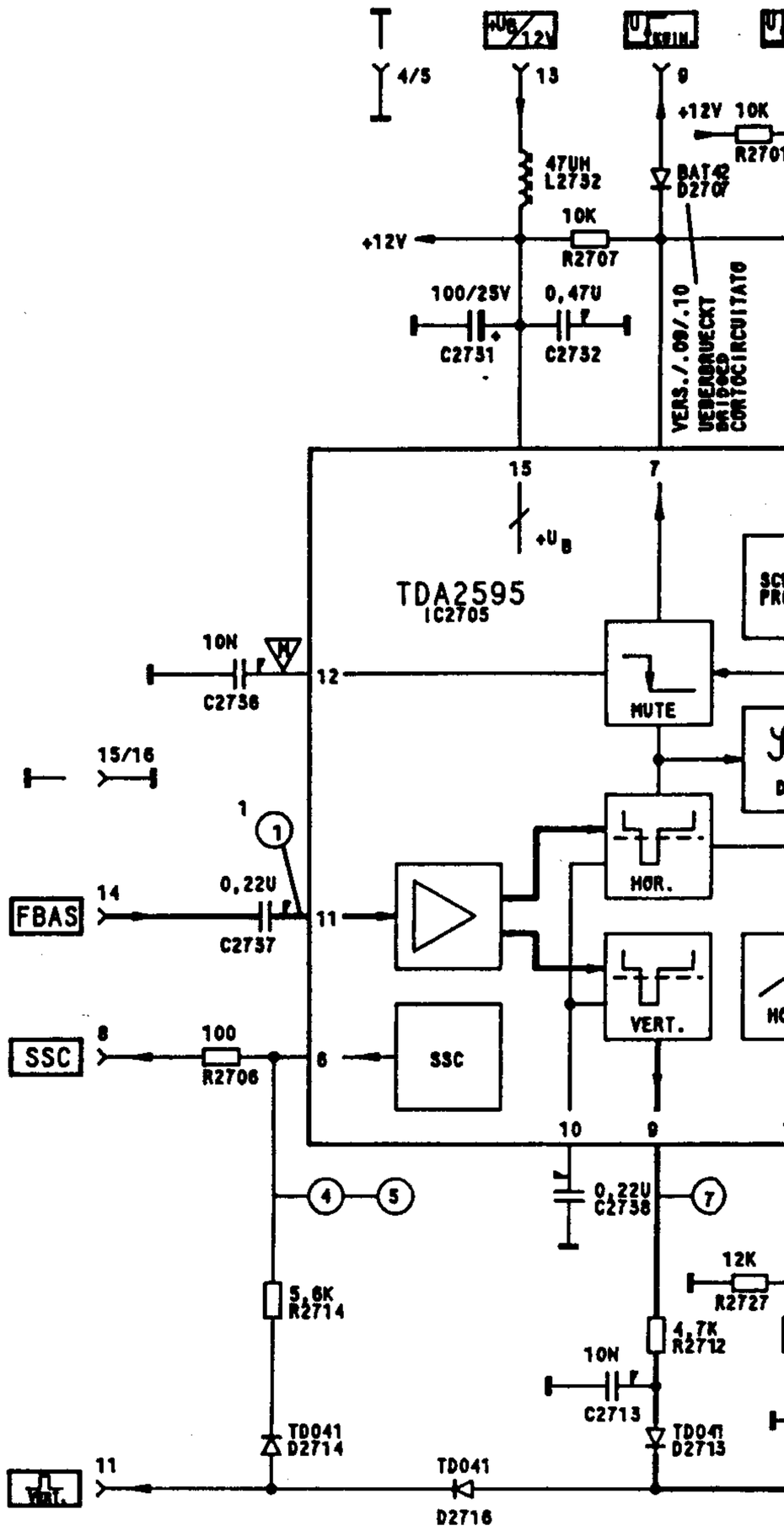
WERTE IN ( )
VALUES IN
VALORI TRA

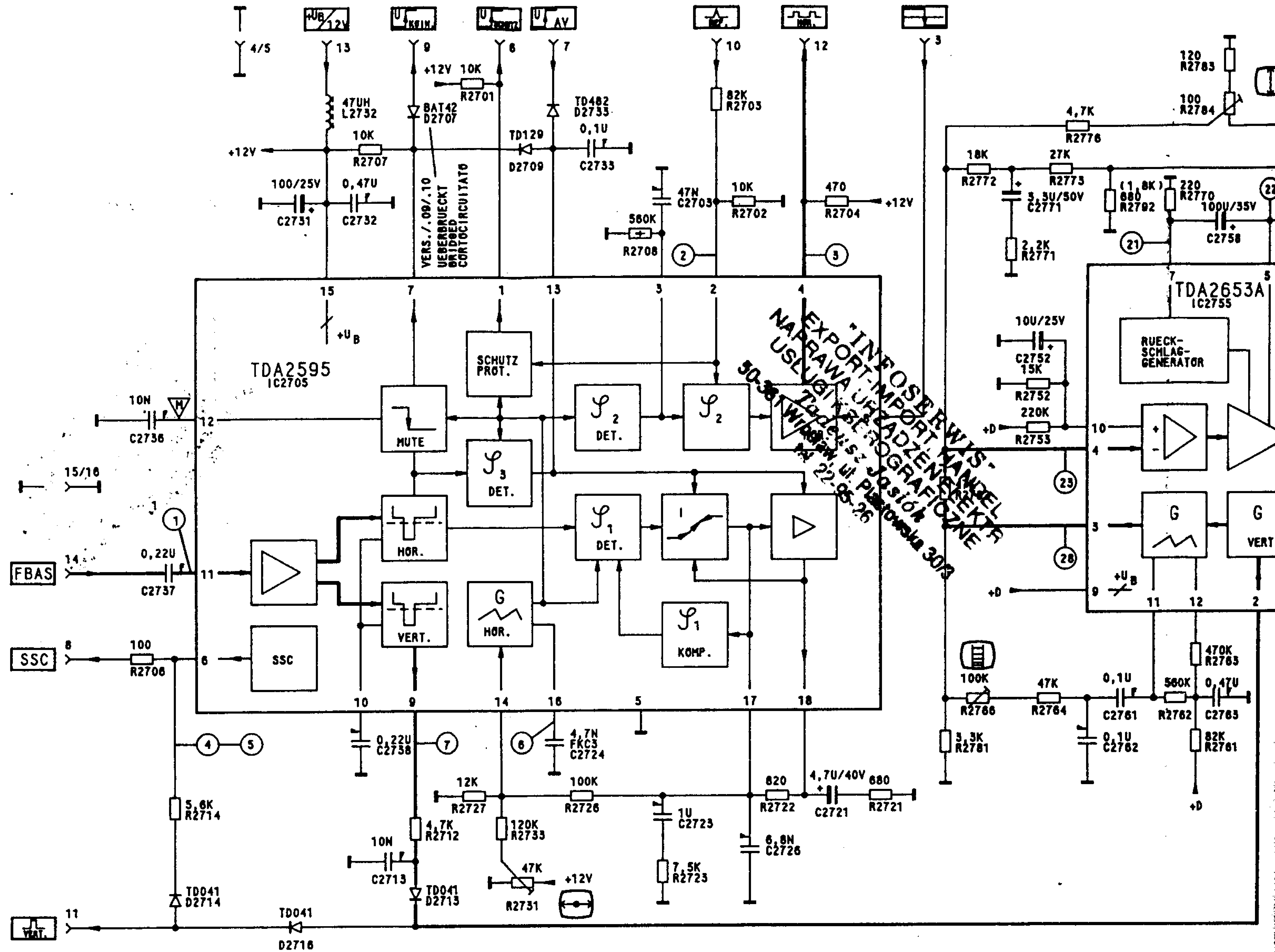




2V/cm
10µsec/cm

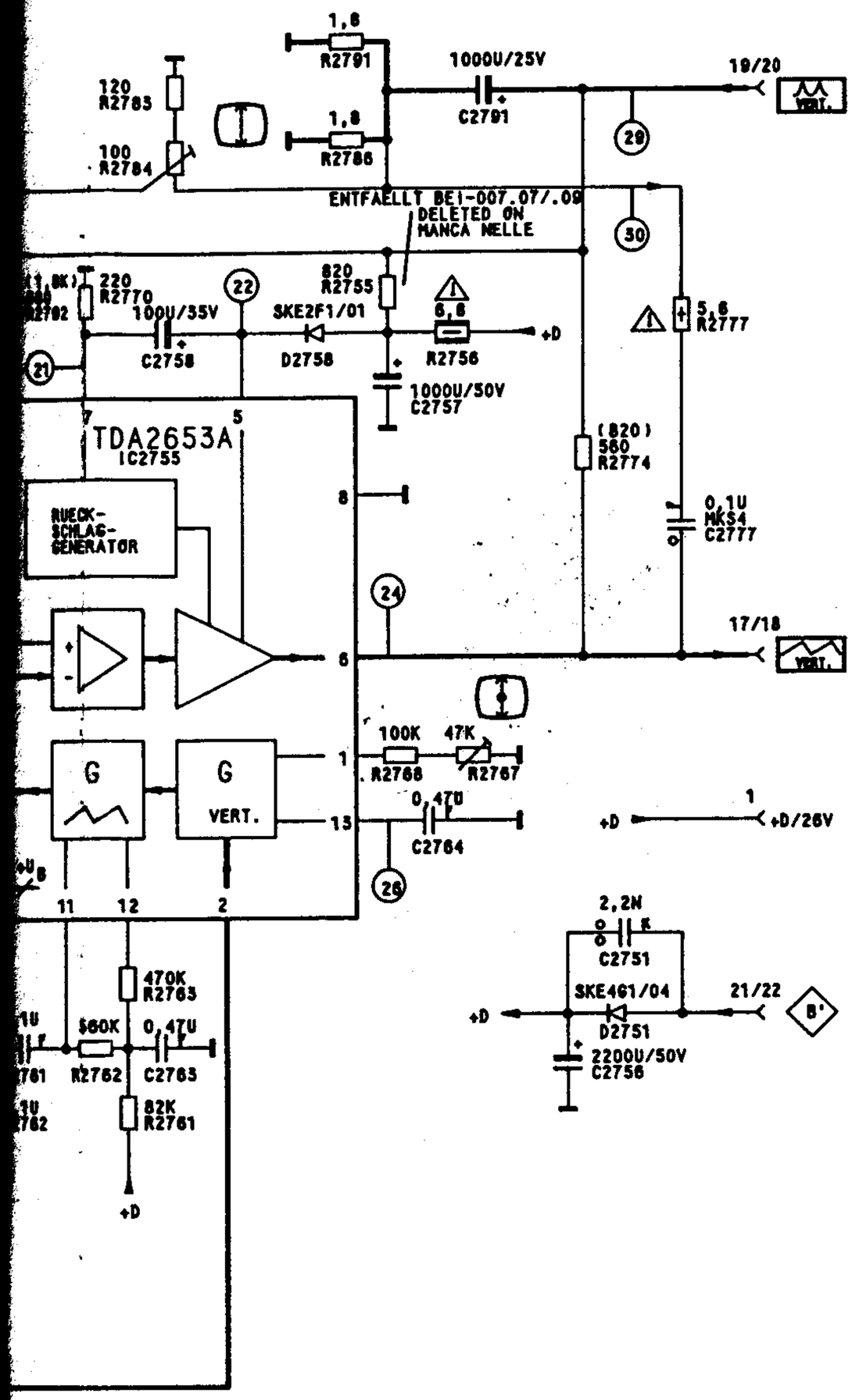
Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

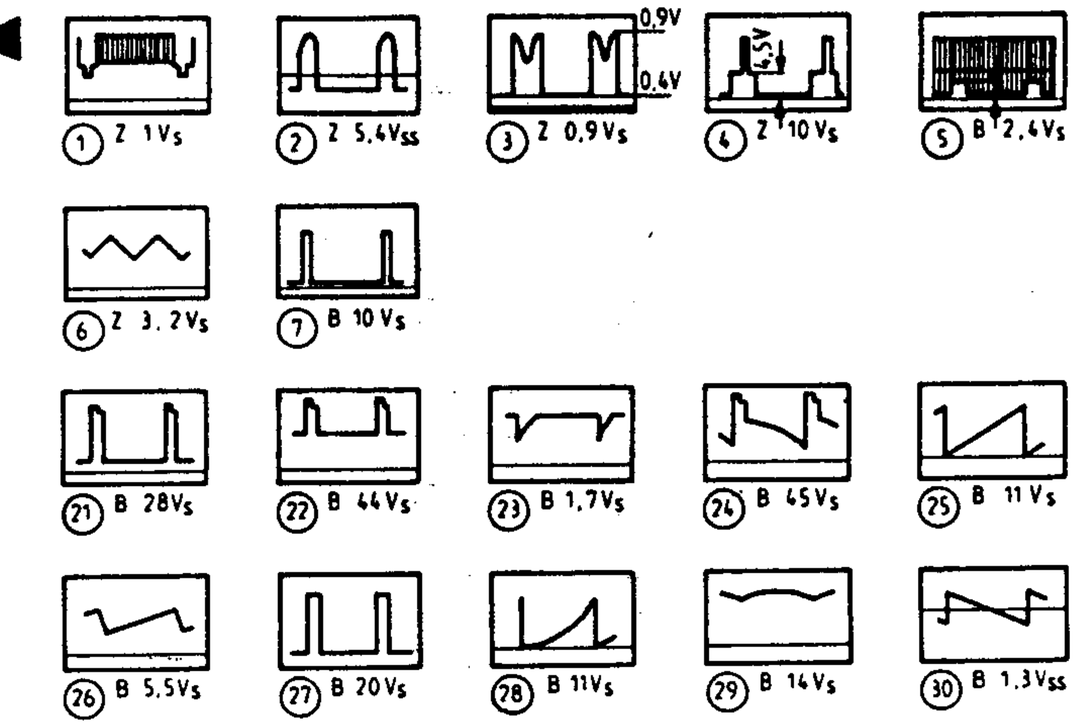


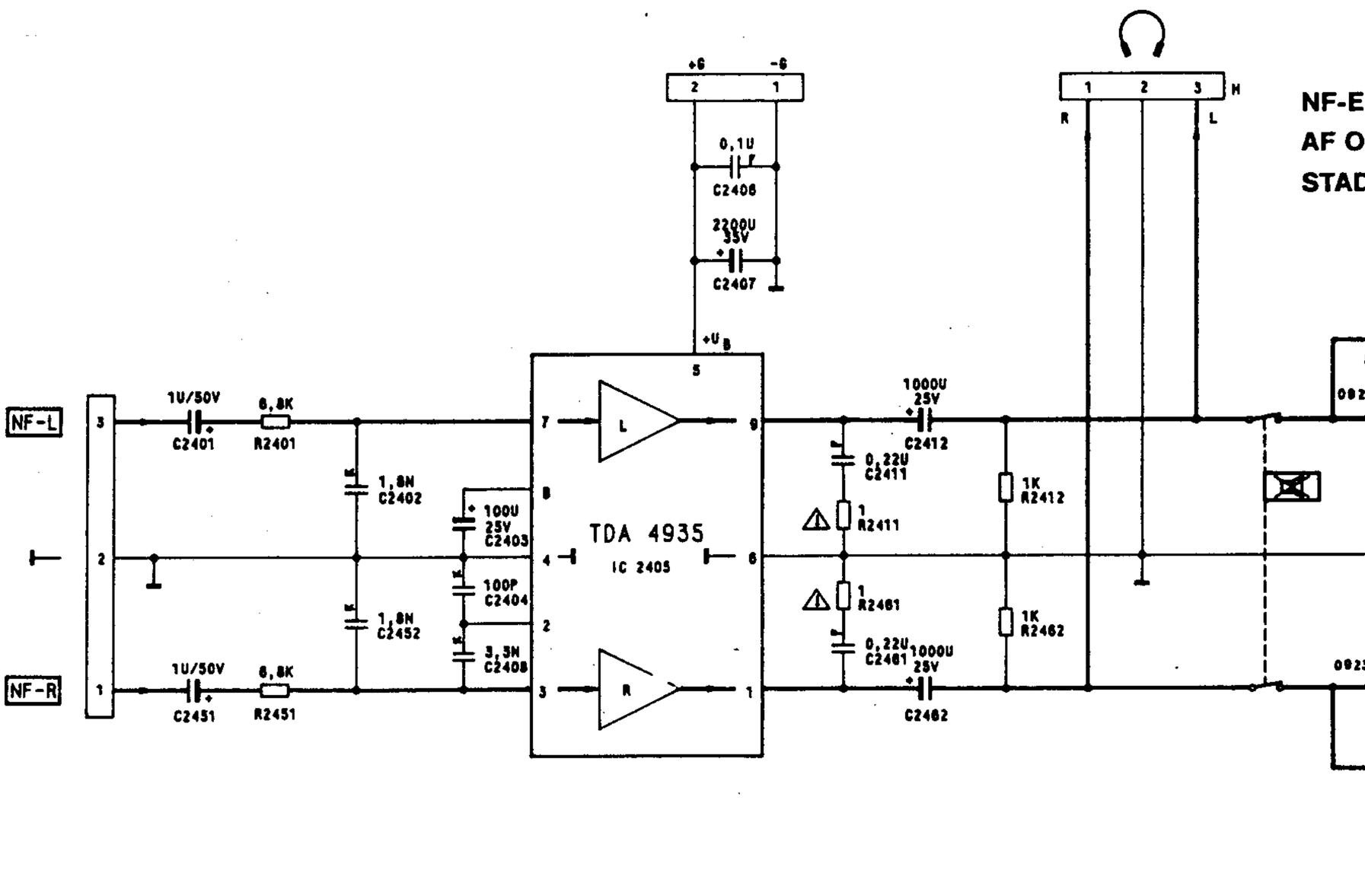


29 504-007.07/09

ABLENKUNG 29 504-007.10 WERTE IN ( )
DEFLECTION VALUES IN
DEFLESSIONE VALORI TRA



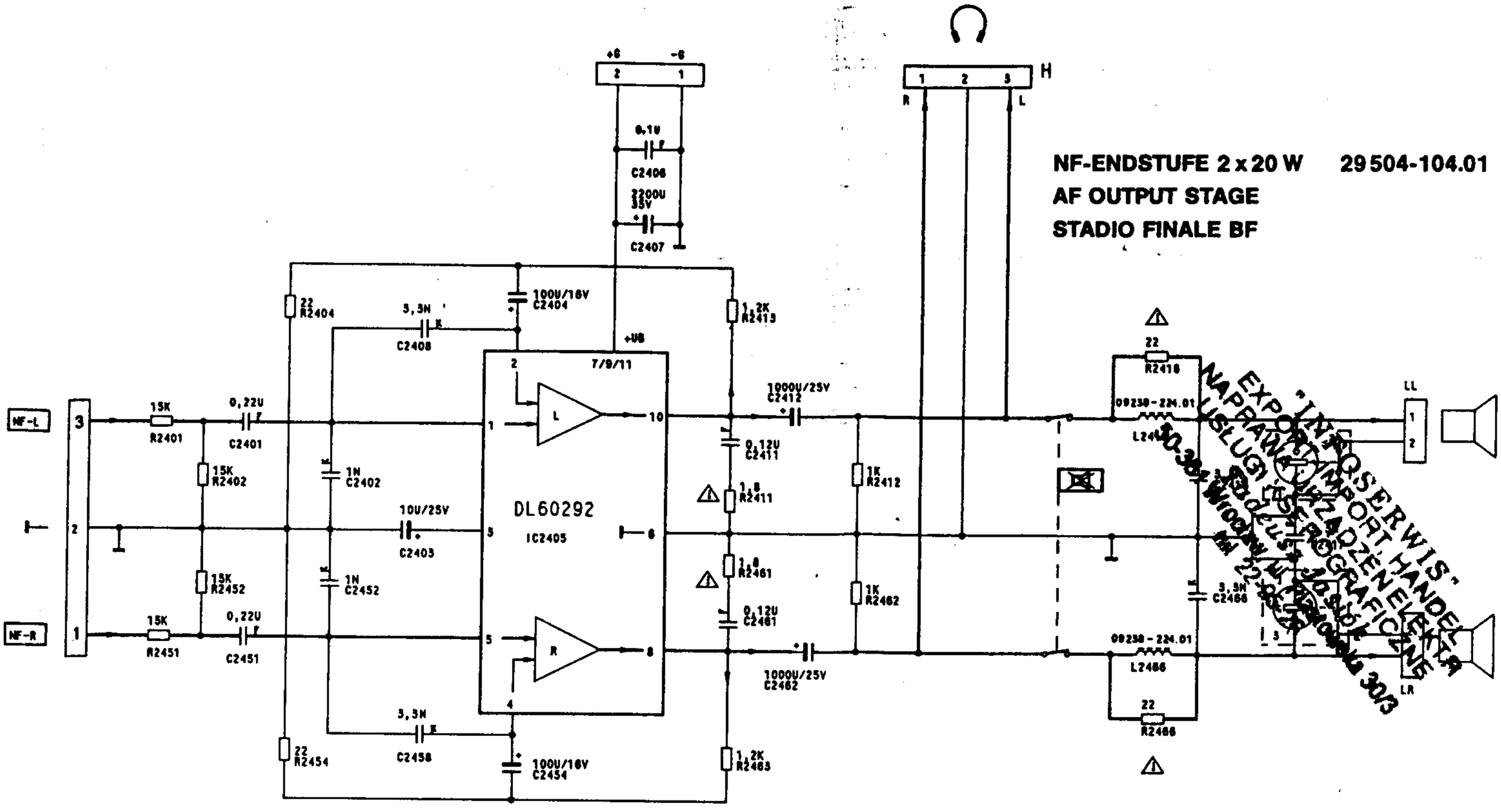




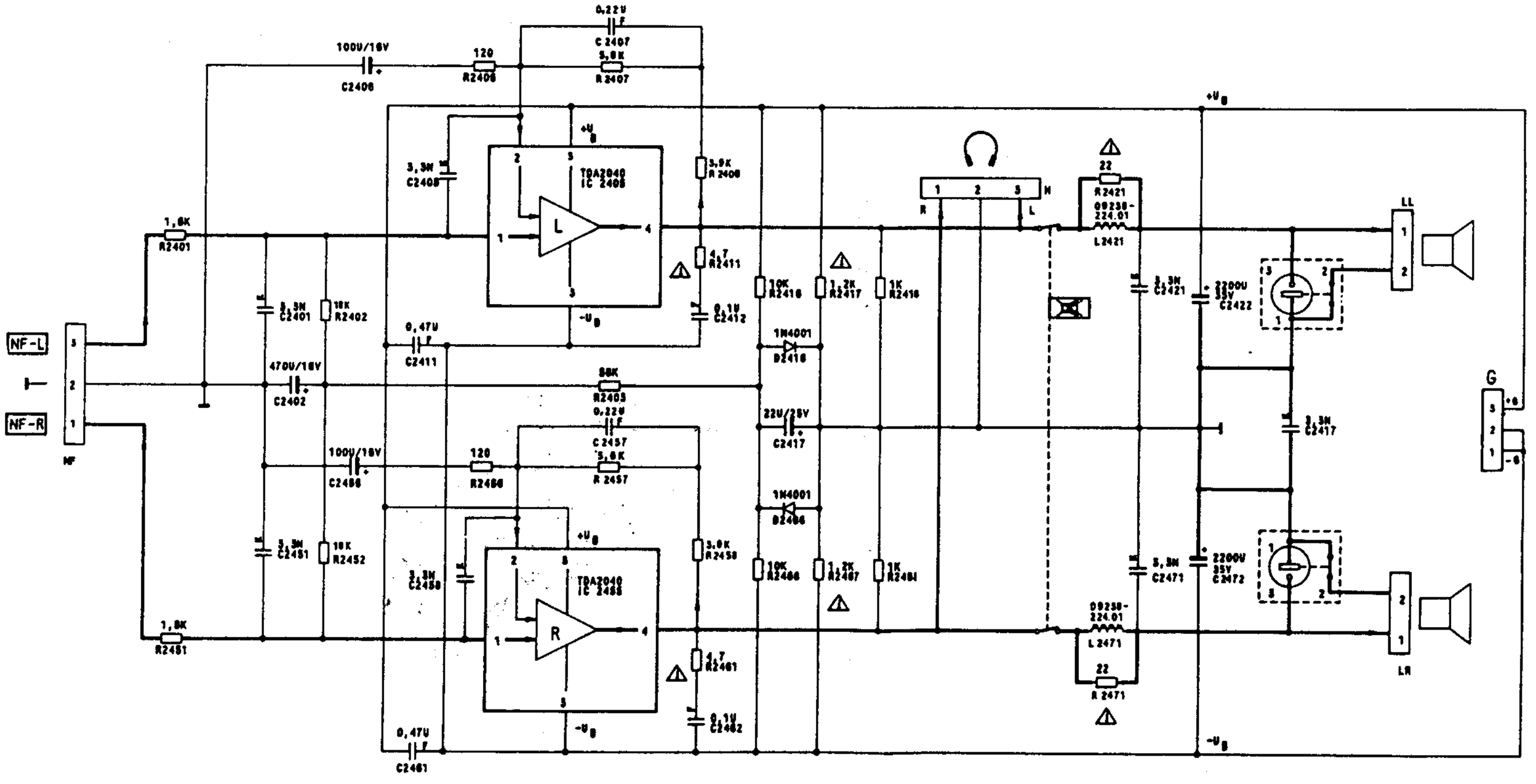
NF-ENDSTUFE 2 x 20 W 2
AF OUTPUT STAGE
STADIO FINALE BF

Kein Anpassungsabgleich bei Austausch der Steck
When replacing the plug-in board, no alignment is
Non è necessaria nessuna taratura di adattamento
sostituzione di una scheda ad innesto

NF-ENDSTUFE 2 x 20 W 29504-104.01
AF OUTPUT STAGE
STADIO FINALE BF

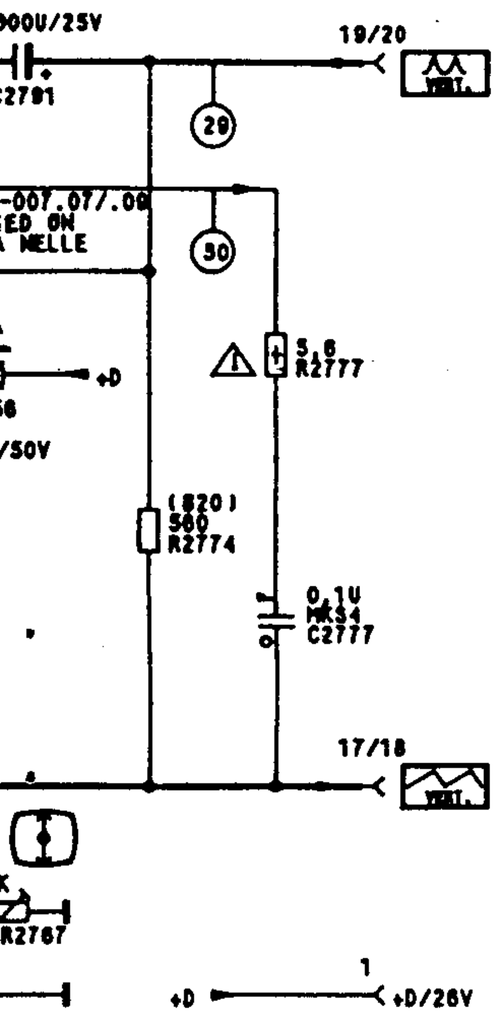


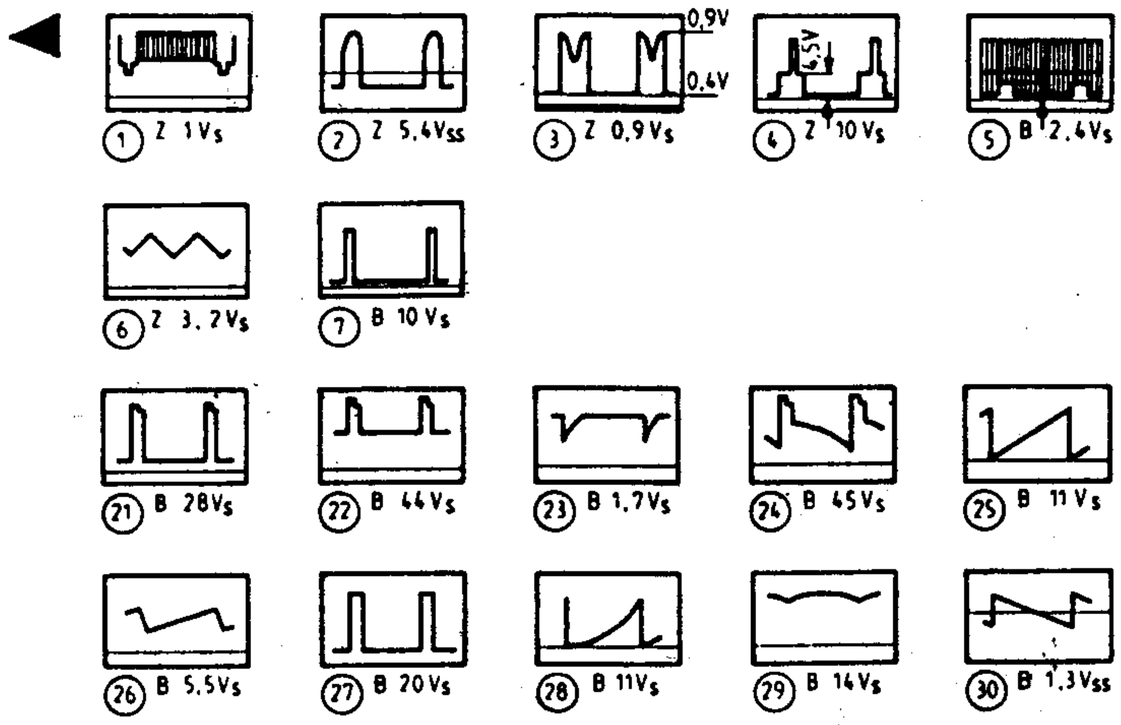
Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

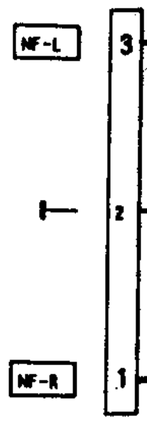


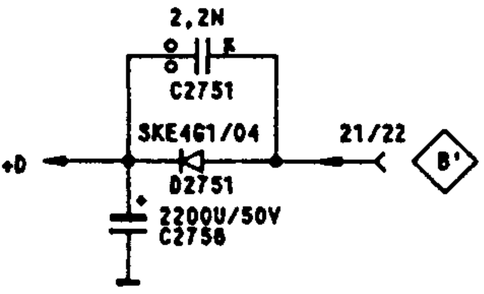
NF-ENDSTUFE 2 x 35 W 29504-104.11
AF OUTPUT STAGE
STADIO FINALE BF

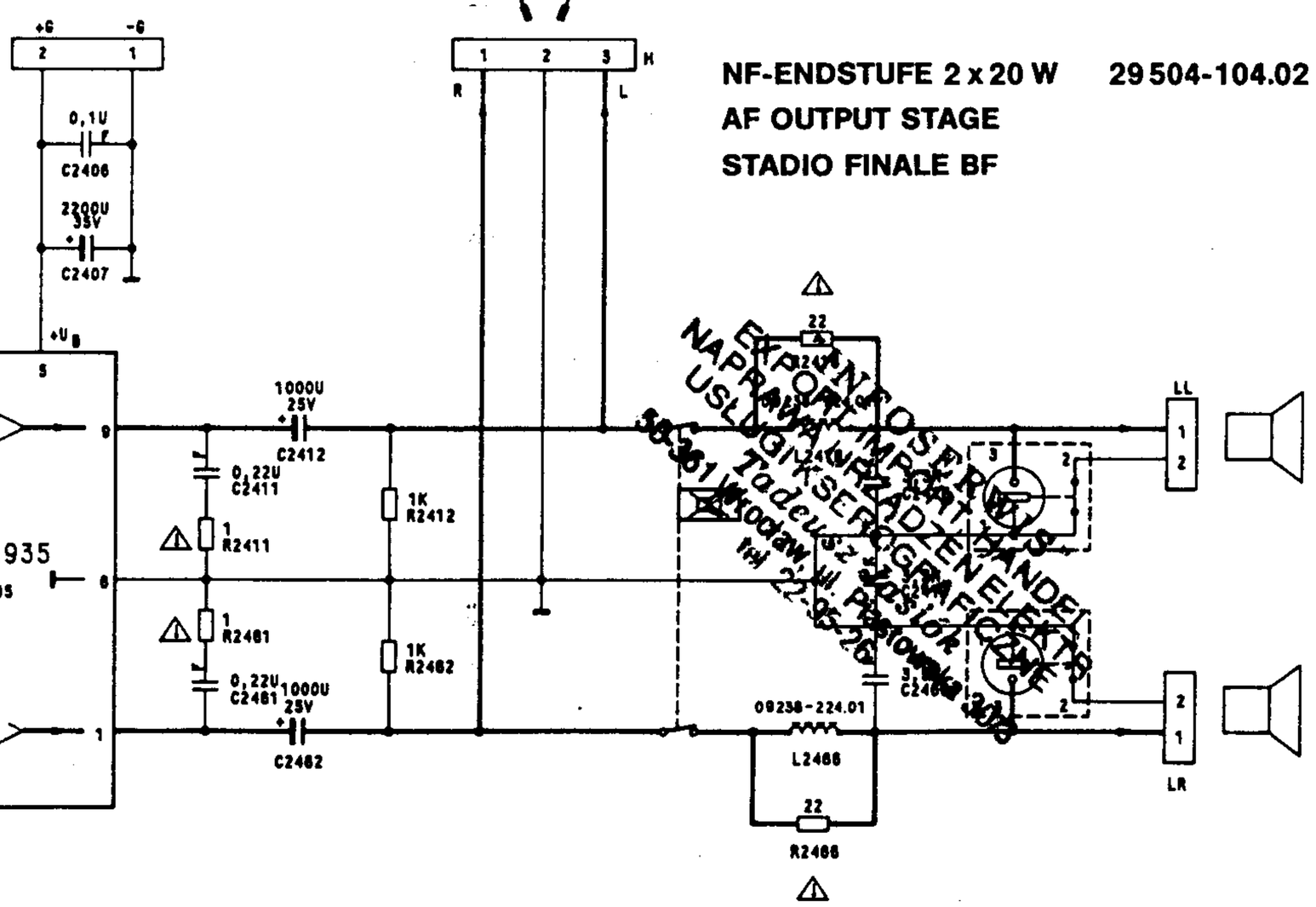
Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto











NF-ENDSTUFE 2 x 20 W **29 504-104.02**
AF OUTPUT STAGE
STADIO FINALE BF

Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto

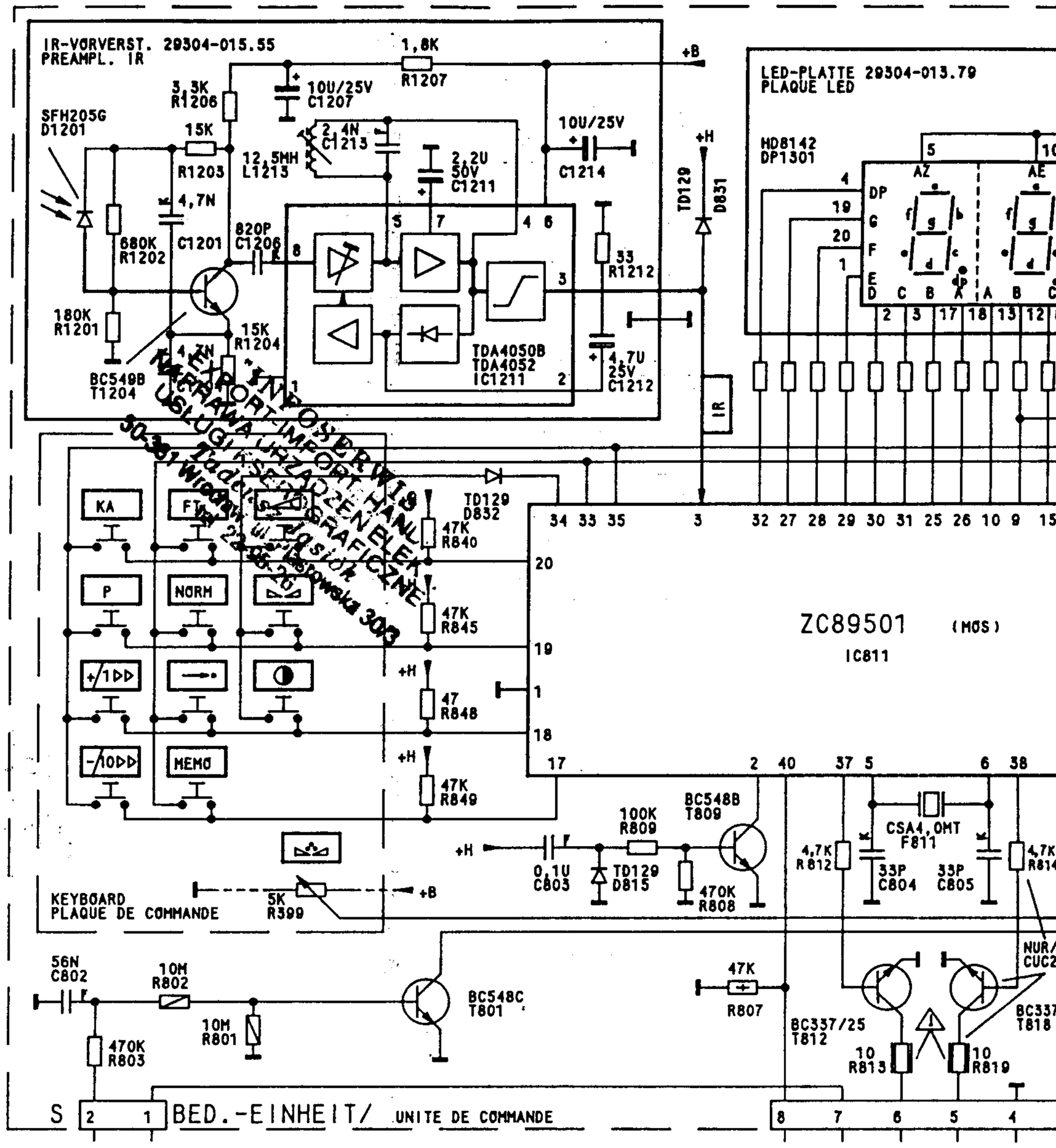
Ersatzteilliste (Auszug) · List of Spare-Parts (extract) · Lista ricambi (estratto)
CUC 2600

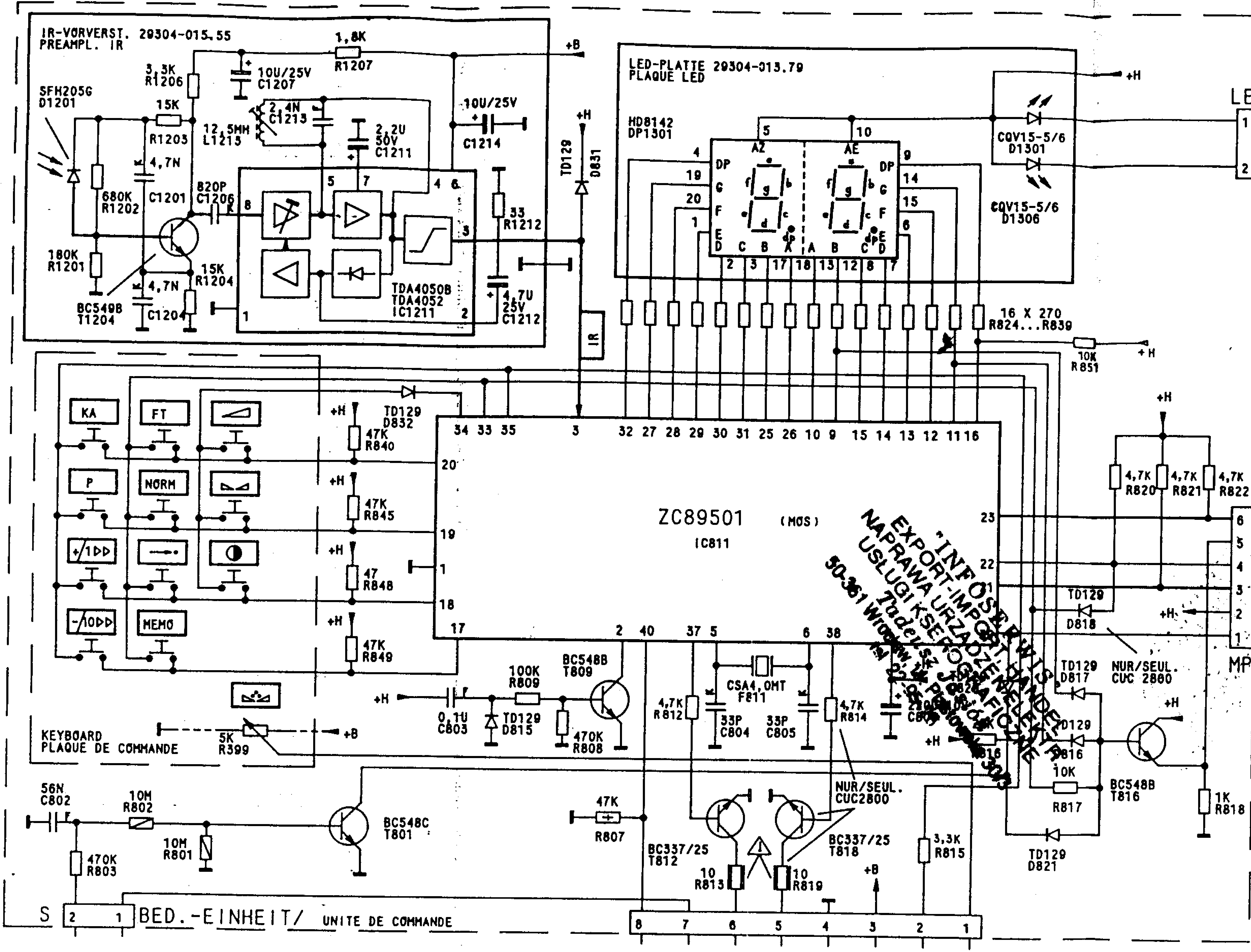
Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni		Benennung	Description
				Steckkarter	Plug-in Circuit Boards
1		29504-101.01		Kabeltuner	Cable tuner
2		29504-102.01		ZF-Verstärker	IF-amplifier
oder					or:
2		29504-102.02		ZF-Verstärker	IF-amplifier
2		29504-102.01		ZF-Verstärker(Multi)	IF-amplifier(Multi)
4		29504-104.01		NF-Stereo	AF-stereo
oder					or:
4		29504-104.02		NF-Stereo	AF-stereo
5		29504-105.21		Farb/RGB	Colour-RGB
5		29504-165.01		Farb/RGB (Multi)	Colour-RGB (Multi)
7		*29504-007.10		Ablenkung	Deflection
7		*29504-107.05		Ablenkung	Deflection
				Mechanische Teile	Mechanical Parts
10		*29304-070.46		Bildrohrplatte kpl.	CRT socket board compl.
10.1		*29303-754.97		Bildrohrfassung	Picture tube socket
12		29700-284.01		Bausteinhalter	Circuit board holder
13		29500-807.01		Koax-Buchsen-Abdeckung	Coaxial-socket cover
14		09621-113.02	2x	Sicherungshalter	Fuse holder
15		29303-153.12	2x	Montageclip für IC	Mounting clip for IC
16		29303-153.02		Montageclip für Trans.	Mounting clip for trans.
18		29303-119.03		Euro-AV-Buchse	Euro-AV-socket
19		29500-503.05		AV-Buchsen-Abdeckung	AV-socket cover
20		29700-280.01		NF-Aufnahme	AF-holder
				Elektrische Teile	Electrical Parts
K 536		8324-800-040		Kaskade BG2087/642-1006	EHT-tripler
		72008-090.02		Fokusregler	Focus control
TR 501		09246-836.21			
TR 526		29201-019.05			
TR 651		29500-609.31			
L 336		8140-526-451			
L 337		8140-526-451			
L 355		8140-526-312			
L 356		09240-113.21			
L 503		29500-806.96			
L 506		8140-525-864			
L 514		8104-982-002			
L 521		29203-110.97			
L 526		09240-110.21			
L 562		09245-804.21			
L 571		29500-806.96			
L 573		09246-846.24			
L 631		29500-806.96			
L 633		8140-525-266			
L 634		09273-309.01			
L 672		8140-526-320			
Rel.652		29500-705.97			
IC 350		8305-338-442		TDA 8442 (MOS)	
IC 555		8305-338-145		TDA 8145	
IC 631		8305-302-459		TDA 4601	
IC 666		8305-205-765		7812/3%	
IC 676		8305-205-701		78 M 05	
T 111		8302-202-543		BC 548 B	
T 321		8302-200-559		BC 558 B	
T 503		8302-260-507		BU 508 A	
T 504		8302-200-637		BC 637	
T 634		8302-260-903		BU 903	
T 736		8302-411-759		GF 759	
T 737		8302-202-560		BC 558 C	
T 742		8302-222-422		BF 422	
T 746		8302-220-421		BF 421	
T 756		8302-411-759		GF 759	
T 762		8302-222-422		BF 422	
T 766		8302-220-421		BF 421	
T 776		8302-411-759		GF 759	
T 782		8302-222-422		BF 422	
T 786		8302-220-421		BF 421	

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
D 321		8309-214-114	TD 129
D 331		8309-715-008	ZPD 5,6
D 333		8309-201-033	BA 157
D 351		8309-214-003	TD 041
D 352		8309-707-107	ZPD 12
D 504		8309-214-114	TD 129
D 513		8309-707-110	ZPD 6,8
D 529		8309-204-268	BY 268
D 531		8309-215-020	1N 4004
D 534		8309-215-020	1N 4004
D 554		8309-215-050	1N 4148
D 571		8309-204-228	BY 228
D 572		8309-210-144	SKE 4 G 2/06
D 616		8309-215-013	1N 4007
D 621		8309-360-384	SKB 380/(1500 L 5 B
D 633		8309-517-033	BYW 32
D 634		8309-215-013	1N 4007
D 635		8309-215-013	1N 4007
D 647		8309-517-033	BYW 32
D 648		8309-517-033	BYW 32
D 652		8309-214-018	TD 190
D 653		8309-214-018	TD 190
D 656		8309-517-076	BYW 76
D 661		8309-517-072	BYW 72
D 671		8309-517-072	BYW 72
D 681		8309-712-822	MR 824-400
D 708		8309-707-109	ZPD 4,7
D 741		8309-215-050	1N 4148
D 743		8309-215-050	1N 4148
D 746		8309-214-018	TD 190
D 761		8309-215-050	1N 4148
D 763		8309-215-050	1N 4148
D 766		8309-214-018	TD 190
D 781		8309-215-050	1N 4148
D 783		8309-215-050	1N 4148
D 786		8309-214-018	TD 190
C 504		8563-720-206	0,068µF/100 V
C 511		8515-911-711	0,0115µF/1600 V
C 512		8515-911-424	0,027µF/400 V
C 513		8523-631-218	1800pF/400 V
C 514		8515-911-001	150pF/1600 V
C 516		8525-040-819	0,33µF/250 V
C 517		8525-040-819	0,33µF/250 V
C 521		8515-722-231	0,26µF/160 V
C 522		8515-722-231	0,26µF/160 V
C 528		8563-731-611	0,01µF/1500 V
C 529		8650-090-477	270pF/2 KV
C 530		8660-097-219	220pF/400 V
C 537		8563-720-206	0,068µF/100 V
C 573		8515-721-253	0,82µF/250 V
C 611		8660-097-241	3300pF/400 V
C 613		8660-097-241	3300pF/400 V
C 621		8650-090-510	1000pF/ 1 KV
C 622		8650-090-510	1000pF/1 KV
C 623		8650-090-510	1000pF/1 KV
C 624		8650-090-510	1000pF/1 KV
C 626		8443-306-055	220µF/385 V
C 634		8515-911-091	2200pF/2000 V
C 644		8525-033-487	8200pF/400 V
C 646		8525-033-487	8200pF/400 V
C 648		8563-731-409	0,047µF/400 V
C 656		8650-090-477	270pF/2 KV
C 657		8451-997-090	100µF/250 V
C 661		8650-090-477	270pF/2 KV
C 668		8415-166-147	1000µF/25 V
C 671		8650-090-477	270pF/2 KV
C 681		8650-090-477	270pF/2 KV
C 703		8515-722-467	0,022µF/400 V
C 722		8563-731-611	0,01µF/1500 V
C 727		8650-131-012	150pF/2 KV
R 337		8705-269-301	15 KΩ
R 501		8700-014-015	3,9 Ω
R 502		8705-328-993	0,51 Ω
R 504		8705-269-033	22 Ω
R 513		8700-249-083	2,7 KΩ NB
R 523		8705-221-271	820 Ω
R 524		8700-119-017	4,7 Ω
R 525		8735-003-033	0,33 Ω
R 526		8311-201-073	PTC 2 G P 2390-J 146

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
R 527		8730-179-221	7W/6,8 Ω
R 528		8705-221-225	10 Ω
R 531		8700-201-081	2,2 KΩ NB
R 533		8700-000-073	1 KΩ
R 550		8765-098-001	1 Ω
R 554		8790-047-135	1 KΩ
R 561		8790-047-164	100 KΩ
R 571		8701-230-817	4,7 Ω
R 616		8705-321-083	2,7 KΩ
R 617		8311-201-462	PTC 1 G D
R 621		8730-199-016	11W/4,3 Ω
R 623		8311-400-125	VDR VZA 27
R 624		8718-250-158	3,6 MΩ VD
R 626		8705-369-325	150 KΩ
R 627		8718-250-014	4,7 MΩ VDE
R 631		8766-326-996	0,68 Ω
R 646		8700-161-131	270 KΩ
R 647		8796-101-142	2,5 KΩ
R 648		8750-210-049	7W/100 Ω
R 656		8705-329-315	56 KΩ
R 661		8735-003-022	0,22 Ω
R 671		8735-003-022	0,22 Ω
R 681		8735-002-022	2W/0,22 Ω
R 684		8705-369-271	820 Ω
R 686		8730-271-215	7W/3,9 Ω
R 704		8705-269-209	2,2 Ω
R 721		8705-226-281	2,2 KΩ
R 724		8797-215-674	470 KΩ
R 731		8790-047-135	1 KΩ
R 734		8705-329-113	47 KΩ
R 741		8705-369-103	18 KΩ
R 742		8700-201-069	680 Ω NB
R 754		8705-329-113	47 KΩ
R 761		8705-369-103	18 KΩ
R 762		8700-201-069	680 Ω NB
R 771		8790-047-135	1 KΩ
R 774		8705-329-113	47 KΩ
R 781		8705-369-103	18 KΩ
R 782		8700-201-069	680 Ω NB
Si 644		8315-618-002	1,25 A

Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
	8730-179-221	7W/6,8 Ω
	8705-221-225	10 Ω
	8700-201-081	2,2 KΩ NB
	8700-000-073	1 KΩ
	8765-098-001	1 Ω
	8790-047-135	1 KΩ
	8790-047-164	100 KΩ
	8701-230-817	4,7 Ω
	8705-321-083	2,7 KΩ
	8311-201-462	PTC 1 G Q 63100-P 2462-J 29
	8730-199-016	11W/4,3 Ω
	8311-400-125	VDR VZA 275
	8716-250-158	3,6 MΩ VDE
	8705-369-325	150 KΩ
	8718-250-014	4,7 MΩ VDE
	8766-326-996	0,68 Ω
	8700-161-131	270 KΩ
	8796-101-142	2,5 KΩ
	8750-210-049	7W/100 Ω
	8705-329-315	56 KΩ
	8735-003-022	0,22 Ω
	8735-003-022	0,22 Ω
	8735-002-022	2W/0,22 Ω
	8705-369-271	820 Ω
	8730-271-215	7W/3,9 Ω
	8705-269-209	2,2 Ω
	8705-226-281	2,2 KΩ
	8797-215-674	470 KΩ
	8790-047-135	1 KΩ
	8705-329-113	47 KΩ
	8705-369-103	18 KΩ
	8700-201-069	680 Ω NB
	8705-329-113	47 KΩ
	8705-369-103	18 KΩ
	8700-201-069	680 Ω NB
	8790-047-135	1 KΩ
	8705-329-113	47 KΩ
	8705-369-103	18 KΩ
	8700-201-069	680 Ω NB
	8315-618-002	1,25 A




IR-VORVERST. 29304-015.55
PREAMPL. IR
SFH205G D1201
680K R1202
180K R1201
BC549B T1204
3,3K R1206
15K R1203
4,7N C1201
4,7N C1204
15K R1204
820P C1206
10U/25V C1207
1,8K R1207
2,4N C1213
12,5MH L1215
2,2U 50V C1211
10U/25V C1214
33 R1212
4,7U 25V C1212
TDA4050B
TDA4052
IC1211
+B
+H
TD129 D831
IR
LED-PLATTE 29304-013.79
PLAQUE LED
HD8142 DP1301
CQV15-5/6 D1301
CQV15-5/6 D1306
LE
16 X 270 R824...R839
10K R851
KA
FT
P
NORM
MEMO
47K R840
47K R845
47 R848
47K R849
TD129 D832
ZC89501 (MOS)
IC811
KEYBOARD
PLAQUE DE COMMANDE
5K R399
0,1U C803
TD129 D815
100K R809
470K R808
BC548B T809
4,7K R812
33P C804
CSA4,0MT F811
33P C805
4,7K R814
NUR/SEUL. CUC2800
NUR/SEUL. CUC 2800
4,7K R820
4,7K R821
4,7K R822
TD129 D818
TD129 D817
TD129 D816
10K R817
BC548B T816
1K R818
TD129 D821
MP
56N C802
10M R802
10M R801
470K R803
BC548C T801
47K R807
BC337/25 T812
BC337/25 T818
10 R813
10 R819
3,3K R815
S
BED.-EINHEIT/ UNITE DE COMMANDE