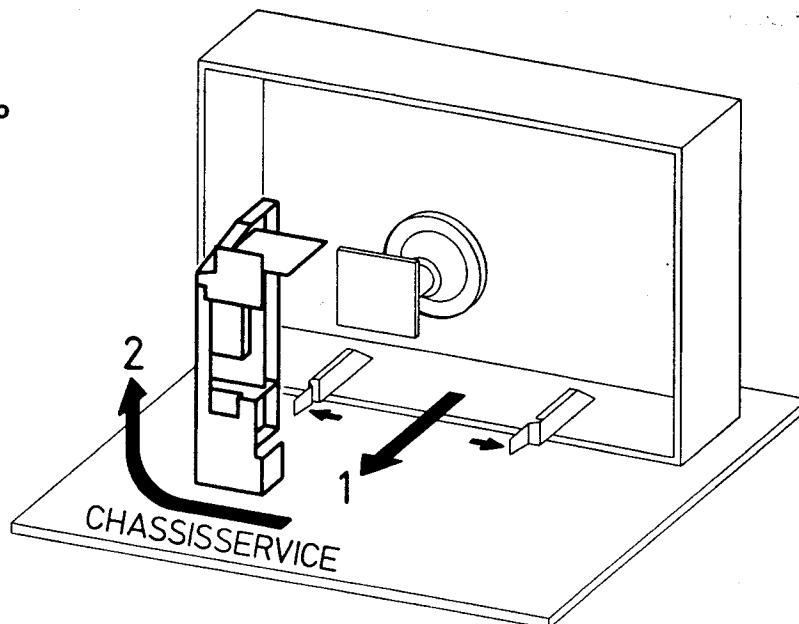


Servicestellung
Service position
Posizione di servizio



For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk

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GRUNDIG



Ⓛ Btx * 32700 #

SERVICE MANUAL

CUC 3600/3800

m70-490/9.

VERS. A:
 GER. MIT SYMM. GEHÄUSE
 SETS WITH SYMM. CABINET
 APP. CON MOBILE SIMMETRICO

M 63-370 CTI
 M 63-370 CTI/text
 M 70-390/9
 M 63-370 CTI/GB
 M 70-390 CTI/GB
 M 70-390/9 text
 M 70-396 CTI-PC
 M 70-390/9 text
 M 63-370 CTI/text

(9.25284-01)
 (9.25284-02)
 (9.25280-01)
 (9.25284-63)
 (9.25409-63)
 (9.25280-02)
 (9.25408-01)
 (9.25280-06)
 (9.25284-06)

VERS. B:
 GER. MIT WÜRFELGEHÄUSE
 SETS WITH CUBE CABINET
 APP. CON MOBILE A CUBO

M 70-395 CTI
 M 63-375/9
 M 63-375 CTI/GB
 M 70-395 CTI/GB
 M 70-395 CTI/text
 M 63-375/9 text
 M 70-395 CTI/text
 M 63-375 CTI/text

(9.25289-01)
 (9.25440-01)
 (9.25264-63)
 (9.25289-63)
 (9.25289-02)
 (9.25440-02)
 (9.25289-06)
 (9.25264-06)

Ⓛ SERVICEHINWEISE

Seite

Servicehinweise für Schaltnetzteil	7
Service am I ² C-Bus und Fehlerarten des Gesamtgerätes:	
Bedieneinheit mit MOTOROLA Prozessor	12-16
Bedieneinheit mit SIEMENS Prozessor	17-21
Schaltbild der Bed.-Einheit mit SIEMENS Prozessor	22-23
Abnehmen und Aufsetzen der Geräte rückwand	23-24
Abgleichhinweise der Steckkartenarten	

Ⓛ SERVICE NOTES

Page

Service hints for switch-mode power supply	7
Service checks on the I ² C Bus and faults in the complete sets:	
Control unit with MOTOROLA processor	12-16
Control unit with SIEMENS processor	17-21
Circuit diagram of the control unit with SIEMENS processor	22-23
Disassembly and assembly of the cabinet rear panel	23-24
Alignment notes of the plug-in board types.	

Ⓛ AVVERTENZA DI SERVIZIO

Pagina

Avvertenze di Servizio dell'alimentatore	7
Servizio assistenza al bus I ² C e tipi di errori dell'intero apparecchio:	
Unità di comando con processore MOTOROLA	12-16
Unità di comando con processore SIEMENS	17-21
Schema dell'unità di comando con processore SIEMENS	22-23
Smontaggio e montaggio dello schienale	23-24
Avvertenze di taratura dei tipi di scheda.	

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

Wi
Im
Se

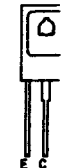
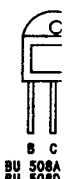
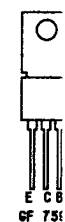
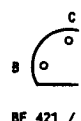
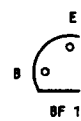
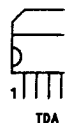
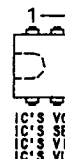
	PROGR.
	PROGR. TASTE PROGR. BUTTON TASTO PROGR. TOUCHE PROGR.
	SPEICHERTASTE MEMORY BUTTON TASTO DI MEMORIA TOUCHE MEMOIRE
	NORMTASTE TV STANDARD SELECT. BUTTON COMMUT. DI NORMA TOUCHE DE NORME
	FEINABST. + FINE TUNING + SINT. FINE + REGLAGE FIN +
	FEINABST. - FINE TUNING - SINT. FINE - REGLAGE FIN -
	SUCHLAUF BD I SELF-SEEK BAND I SINT. AUTOM. BANDE I RECHERCHE AUTOM. BANDE I
	SUCHLAUF BANDWAHL III SELF-SEEK BAND III SINT. AUTOM. BANDE III RECHERCHE AUTOM. BANDE III
	SUCHLAUF UHF SELF-SEEK UHF SINT. AUTOM. UHF RECHERCHE AUTOM. UHF
	LAUTSTÄRKE VOLUME VOLUME SONORE
	FEINABST. FINE TUNING SINT. FINE REGLAGE FIN
	KANALWAHL CHANNEL SEL. SELEZ. CANALE SELECT. DE CANAUX
	BALANCE BILANCIAM. BALANCE
	SUCHLAUF SELF-SEEK SINT. AUTOM. RECHERCHE AUTOM.
	SCHALTSP. BANDWAHL BAND SEL. SWITCHING VOLTAGE TENS. DI COMMUT. SELEZ. BANDE TENS. DE COMMUT. SELECT. BANDE
	SCHALTSP. VHF SWITCHING VOLT. VHF TENS. DI COMMUT. VHF TENS. DE COMMUT. VHF
	SCHALTSP. UHF SWITCHING VOLT. UHF TENS. DI COMMUT. UHF TENS. DE COMMUT. UHF
	SCHALTSP. AFC SWITCHING VOLT. AFC TENS. DI COMMUT. AFC TENS. DE COMMUT. AFC
	SCHALTSP. AV AV SWITCHING VOLT. TENS. DI COMMUT. AV TENS. DE COMMUT. AV
	SCHALTSP. NORM SWITCHING VOLT. STANDARD TENS. DI COMMUT. NORMA TENS. DE COMMUT. STANDARD
	SCHALTSP. KOINC. SWITCHING VOLT. COINC. TENS. DI COMMUT. COINC. TENS. DE COMMUT. COINC.
	SCHALTSP. EURO-AY SWITCHING VOLT. EURO-AY TENS. DI COMMUT. EURO-AY TENS. DE COMMUT. NORME FR
	SCHALTSP. VIDEO QUELLE SWITCHING VOLT. VIDEO SOURCE TENS. DI COMMUT. SORG. VIDEO TENS. DE COMMUT. SOURCE VIDEO
	SCHALTSP. DATENBETR. SWITCHING VOLT. DATA MODE TENS. DI COMMUT. DATI TENS. DE COMMUT. FONCT. DONNEES
	SCHALTSP. 4,5 MHz SWITCHING VOLT. 4,5 MHz TENS. DI COMMUT. 4,5 MHz TENS. DE COMMUT. 4,5 MHz
	REGELSP. VERZÖGERST DELAYED CONTR. VOLTAGE TENS. DI CONTR. RITARDO TENS. DE REGUL. RETARDEE
	ABSTIMMS. 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
	STÜRMISCHALTUNG MUTING SILENZIAMENTO SILENCIEUX
	TASTIMPULS GATING PULSE IMPULSO A CADENZA IMPULS. DE DECLENCHEMENT

	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. LAUTSTÄRKE 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 CORR. CATODICA MEDIA LIM. COUR. DE FAISCEAU
	SPITZ. STRAHLSTR. BEGR. PEAK BEAM CURRENT CORR. CATODICA DI PICCO LIM. DE FAISCEAU CRETE
	ROT-SIGNAL RED SIGNAL SEGNALE ROSSO SIGNAL ROUGE
	GRÜN-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
	AUDIO-SIGNAL SEGNALE AUDIO SIGNAL AUDIO
	AUDIO SIGNAL LINKS AUDIO SIGNAL LEFT SEGNALE AUDIO SINISTRA SIGNAL AUDIO GAUCHE
	AUDIO SIGNAL RECHTS AUDIO SIGNAL RIGHT SEGNALE AUDIO DESTRA SIGNAL AUDIO DROIT
	VIDEO SIGNAL EURO-AY SEGNALE VIDEO EURO-AY SIGNAL VIDEO NORME FR
	AUDIO SIGNAL EURO-AY RECHTS AUDIO SIGNAL EURO-AY RIGHT SEGNALE AUDIO EURO-AY DESTRA SIGNAL AUDIO NORME FR DROIT
	AUDIO SIGNAL EURO-AY LINKS AUDIO SIGNAL EURO-AY LEFT SEGNALE VIDEO EURO-AY SINISTRA SIGNAL AUDIO NORME FR GAUCHE
	IR-SIGNAL SEGNALE IR SIGNAL IR
	SPG. GITTER 1 VOLTAGE GRID 1 TENS. GRIGLIA 1 TENS. GRILLE 1
	FOKUSSP. FOCUSING VOLTAGE TENS. DI FOCALIZZ. TENS. DE FOCALIS.

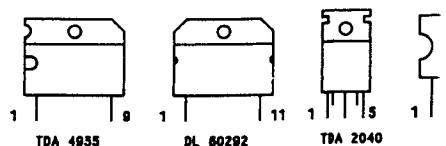
	HOCHSPANNUNG H.T. VOLTAGE ALTA TENS. HAUTE TENS.
	SCHIRMGITTERSP. SCREEN-GRID VOLT. TENS. GRIGLIA SCHERMO TENS. GRILLE-ECRAN
	TEXT ENABLE
	1 ² C-CLOCK
	VCR-CLOCK
	I-BUS-CLOCK
	DATEN DATA DONNEES
	ZF-SIGNAL IF SIGNAL SEGNALE FI SIGNAL FI
	PAL PRIORITAET PAL PRIORITY PRIORITA' PAL PRIORITE PAL
	F-SIGNAL DIREKT F SIGNAL DIRECT SEGNALE F DIRETTO SIGNAL CHROMA DIRECT
	FV-SIGNAL FV SIGNAL SEGNALE FV SIGNAL FV
	FU-SIGNAL FU SIGNAL SEGNALE FU SIGNAL FX
	F-SIGNAL VERZÖGERT F SIGNAL DELAYED SEGNALE F RITARDO SIGNAL CHROMA RETARDE
	VERZÖGERUNGSLEITUNG DELAY LINE LINEA DI RITARDO LIGNE A RETERD
	SCHALTSP. /SCHUTZFUNKTION SWITCHING VOLT. /PROTECTIVE FUNCTION TENS. DI COMMUT. /FUNZ. DI PROTEZ. TENS. DE COMMUT. /SECURITE
	FBAS-SIGNAL CCVS/SYNC. SIGNAL SEGNALE SINCR. /VIDEO COL. COMPOSITO SIGNAL SYNC./VIDEO COMPOSITE
	SYNC.-SIGNAL SYNC. SIGNAL SEGNALE SINCR. SIGNAL SYNC.
	SCHALTSP. 50/60HZ SWITCHING VOLT. 50/60HZ TENS. DI COMMUT. 50/60HZ TENS. DE COMMUT. 50/60HZ
	SCHALTSP. BTX SWITCHING VOLT. BTX (VIEREDATA) TENS. COMMUT. VIDEOTEL TENS. COMMUT. VIDEOTEXTE
	SYNC. VT SYNC. VT (TELETEXT) SINCR. TELEVIDEO SYNC. TELETEXTE
	SYNC. BTX SYNC. BTX (VIEREDATA) SINCR. VIDEOTEL SYNC. VIDEOTEXTE
	SCHALTSP. RESET SWITCHING VOLT. RESET TENS. COMMUT. RESET
	SCHALTSP. STAND BY SWITCHING VOLT. STAND BY TENS. COMMUT. STAND BY TENS. COMMUT. VEILLE
	SCHALTSP. HUB SWITCHING VOLT. DEVIATION TENS. COMMUT. DEVIATION TENS. COMMUT. DEVIATION
	SCHALTSP. DEEM SWITCHING VOLT. DEEMPHASIS TENS. COMMUT. DEEMPHASIS TENS. COMMUT. DESACCENT.
	SCHALTSP. KAMERA WIEDERG. SWITCHING VOLT. CAMERA PLAYBACK TENS. COMMUT. RIPRODUZ. TELECAMERA TENS. COMMUT. REPROD. CAMERA
	SCHALTSP. LED LED SWITCHING VOLT. LED TENS. DI COMMUT. TENS. DE COMMUT. LED

	ZEILENBREITE LINE WIDTH LARGHEZZA DI RIGA AMPLITUDE HORIZONTALE
	EST / WEST AMPLITUDE EAST / WEST AMPLITUDE AMPIEZZA EST / OVEST AMPLITUDE EST / OUEST
	HOR. LINEARITAET HORIZ. LINEARITY LINEAR. ORIZZ. LINEAR. HORIZONT.
	BILDAGE HOR. HORIZ. PICTURE POSITION POSIZIONE ORIZZ. D'IMMAGINE CADRAGE HORIZONT.
	FOKUSREGLER FOCUS CONTROL REGOLAT. DI FOCALIZZ. REGLAGE DE FOCALISATION
	BILDAGE 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.
	EST/WEST SYMMETRIE EAST/WEST SYMMETRY SIMMETRIA EST/OVEST SYMMETRIE EST/OUEST

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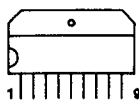
BD 561
BD 136



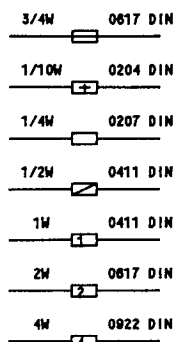
Wichtige Schaltzeichen
Important circuit symbols
Segni circuitali importanti



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



TDA 4601



WIDERSTAND NICHT BRENNBAR
 RESISTOR NOT FLAMMABLE
 RESISTENZA NON INFIAMMABILE
 RESISTANCE ININFLAMMABLE

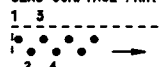


SICHERUNGSWIDERSTAND
 SAFETY RESISTOR
 RESISTENZA DI SICUREZZA
 RESISTANCE DISJONCTABLE

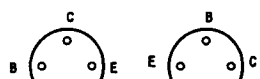
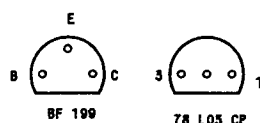
BEI ERSATZ AUS SICHERHEITSGRÜNDEN NUR ORIGINALBAUTEILE VERWENDEN.
 FOR REASONS OF SAFETY USE ORIGINAL PARTS ONLY WHEN REPLACING.
 IN CASO DI SOSTITUZIONE UTILIZZARE PER RAGIONI DI SICUREZZA SOLAMENTE
 PEZZI DI RICAMBIO ORIGINALI.
 EN CAS DE REMPLACEMENT N'UTILISER, POUR DES RAISONS DE SECURITE,
 QUE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

BEI EINGRIFFE SCHUTZMASSNAHMEN FÜR MOS-BAUTEILE BEACHTEN!
 WHEN HANDLING MOS-CIRCUITS, ALWAYS OBSERVE THE MOS PROTECTION MEASURES!
 ADOPERANDO COMPONENTI A CIRCUITI MOS OSSERVARE LE CORISPONDENTI
 MISURE DI PROTEZIONE!
 LORS DE LA MANIPULATION DES CIRCUITS MOS, RESPECTER LES
 PRESCRIPTIONS MOS!

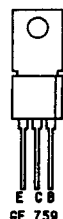
STECKERUNTERTEIL ZÄHRLICHTUNG
 PLUG BOTTOM PART COUNTING DIRECTION
 PARTE INFER. SPINA DIREZ. CONTEGGIO
 SENS. COTIAGE PARTIE INFER. CONNECTEUR



LOETSEITE
 SOLDER SIDE
 LATO SALDATURA
 COTE SOUDURE



BF 199 78 L05 CP
 BF 421 / BF 422 BC 548 / BC 558
 BC 637 / BF 423 BC 557 / 25
 PM 2222 BC 338 / BC 324
 BF 414 BC 308 / BC 248
 BC 547



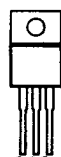
GF 759



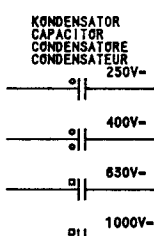
BU 508A / BU 903 BU 208A
 BU 508D / BU 906 BU 546



TY 40184 / MC 7505
 MC78 MOS CT 7812



BD 561G
 BU 908
 BU 903
 S 6687
 BUT 11A
 BUT 56A



KONDENSATOR
 CAPACITOR
 CONDENSATORE
 CONDENSATEUR



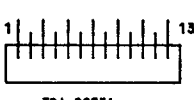
FOLIE
 FOIL
 A FOGLIA
 FOLIO PLASTIQUE



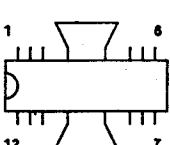
KERAMIK
 CERAMIC
 CERAMICO
 CERAMIQUE



ELKO
 ELECTROLYTIC
 ELETTROLITICO
 ELECTROLYTIQUE



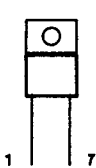
TDA 2653A



TDA 2655B



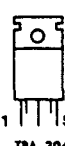
BD 561 G
 BD 159



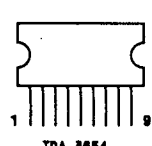
TDA 8170



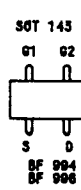
9292



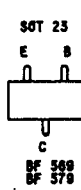
TDA 2040



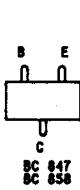
TDA 3854
 TDA 3853A



SOT 143
 G1 G2
 S D
 BF 994
 BF 996



SOT 23
 E B
 C
 BF 589
 BF 579

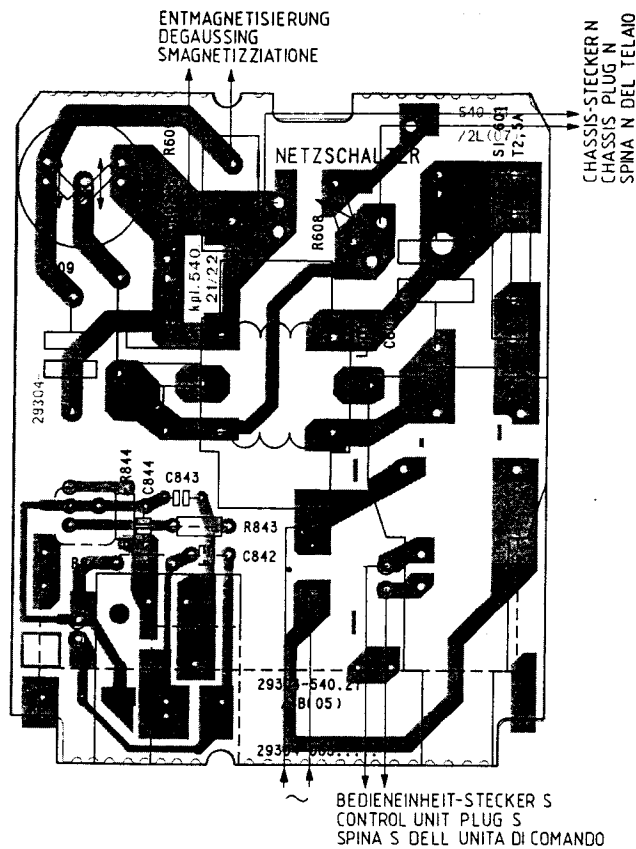


B E
 C
 BC 847
 BC 858

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 MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd. Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
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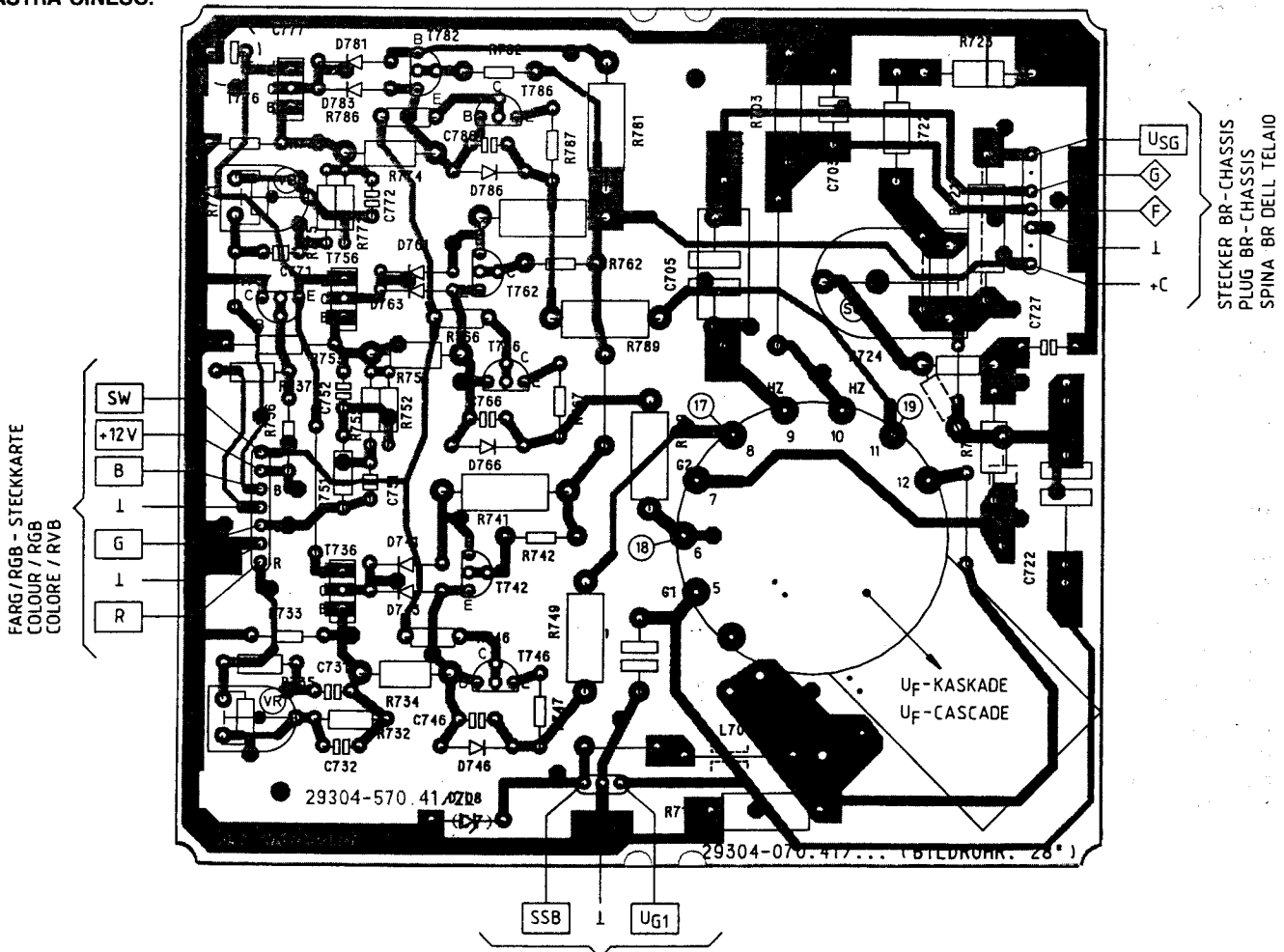


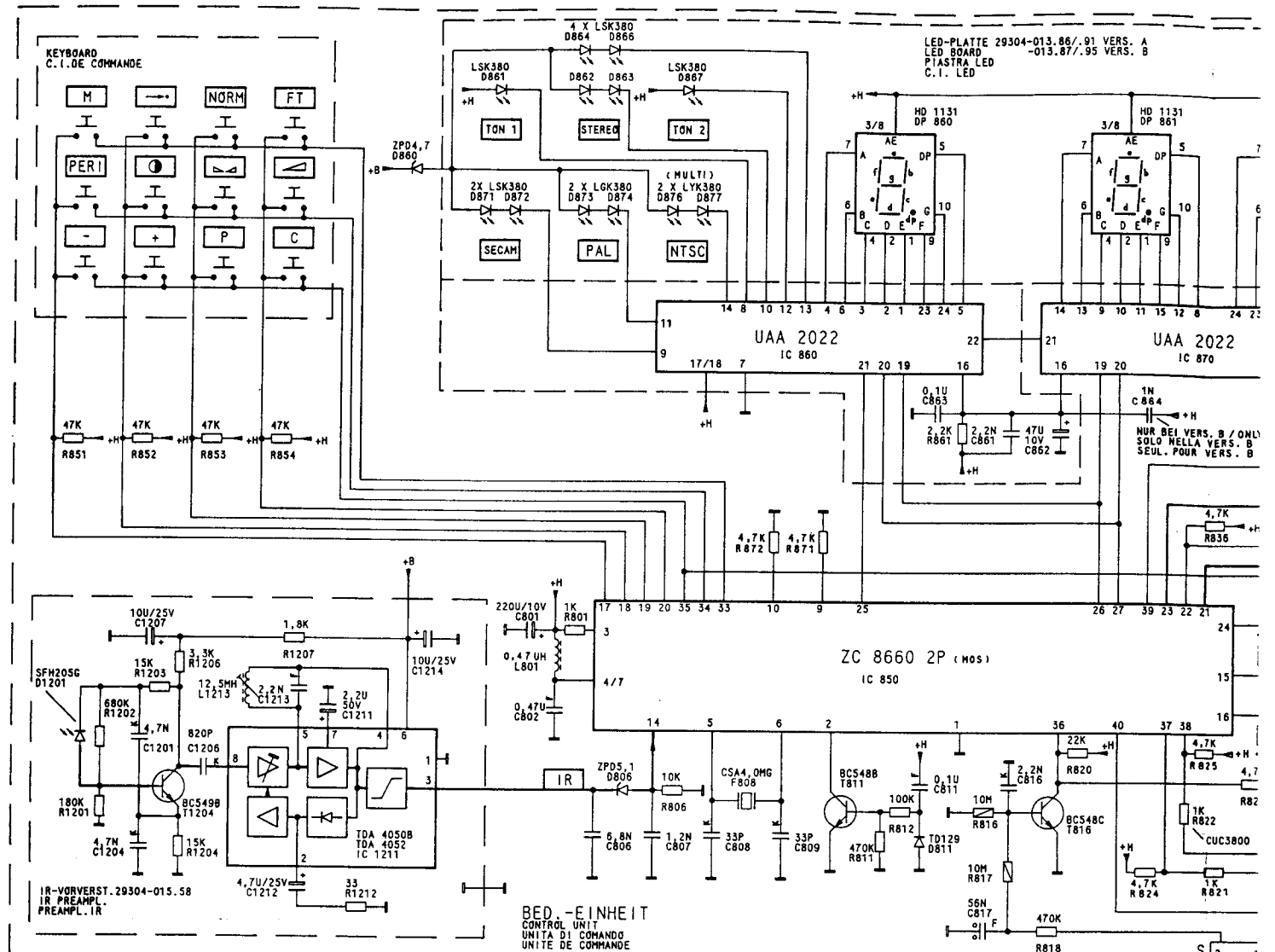
NETZSCHALTERPLATTE
MAINS SWITCH BOARD
PIASTRA INTERR. DI RETE



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BILDROHRPLATTE
CRT BASE
PIASTRA CINESC.





Servicehinweise für Schaltnetzteil: Gerät mit Netztrenntransformator betreiben. Primärseite des Schaltnetztes liegt an Netzpotential. Bei fehlender Sekundärspannung oder Takten des Netztesles 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
- Basisstromsteuerung (Pin 7) ②

C 626 muß vor Wechsel des IC 631 entladen sein! Netzteilbereich 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:

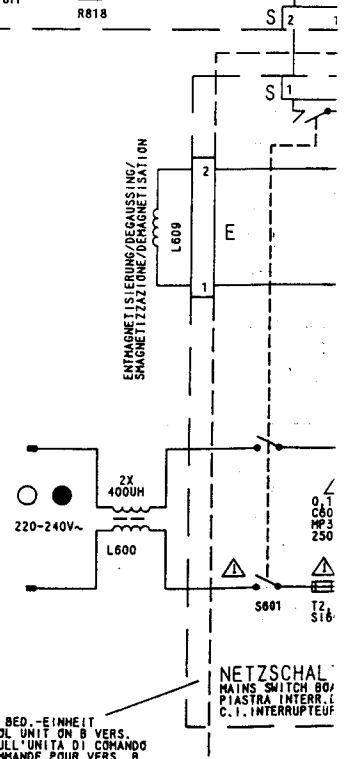
- Starting voltage (Pin 9/5) < 8 V, starting via Di 616 and R 616
- Reference voltage (Pin 1) approx. 6 V
- Start pulse (Pin 4) ①
- Base current drive (Pin 7) ②

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

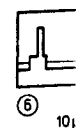
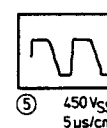
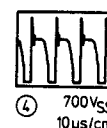
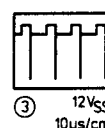
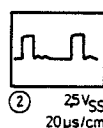
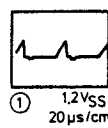
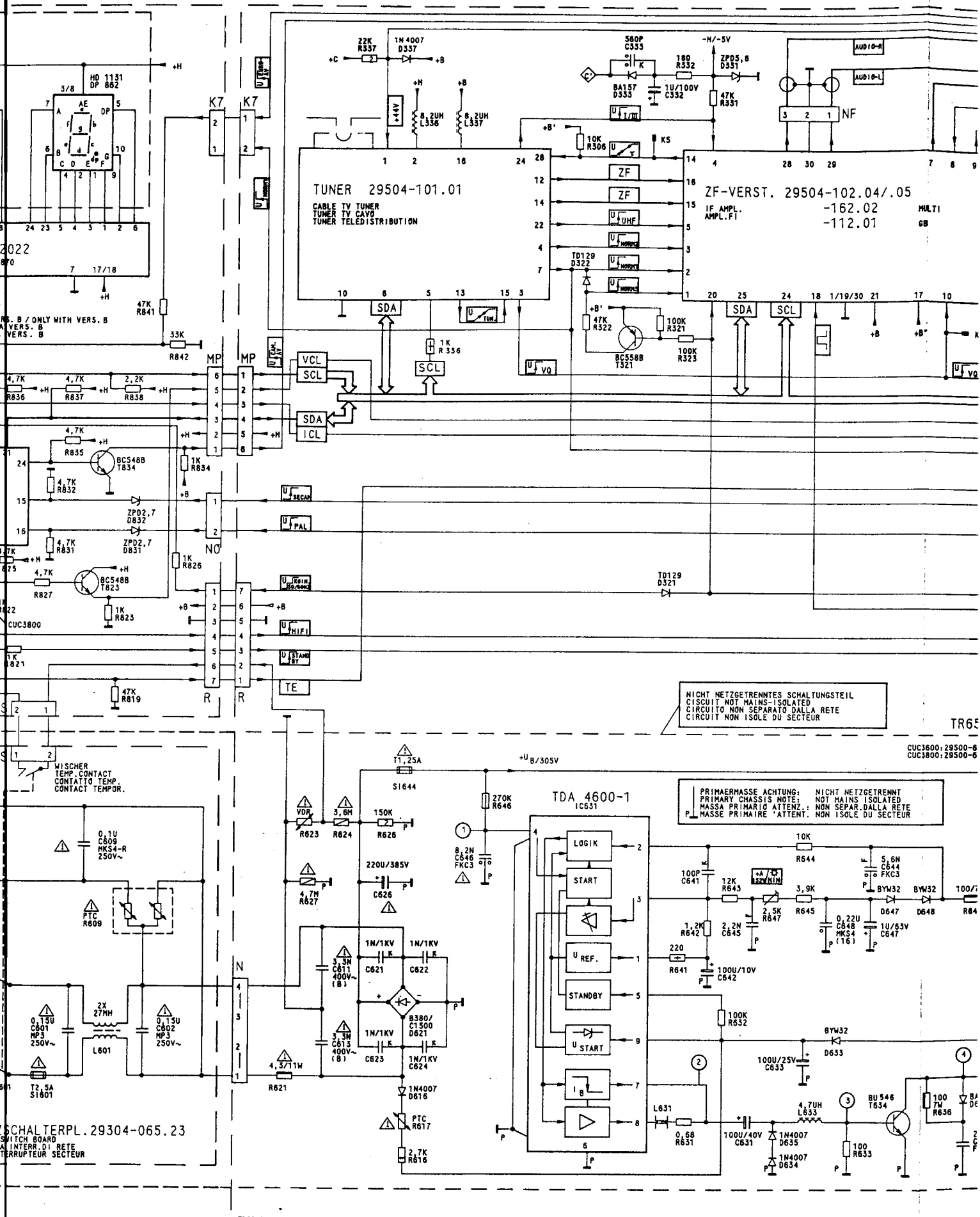
Avvertenze di Servizio dell'alimentatore: Alimentare l'apparecchio con un trasformatore separatore. Il lato primario dell'alimentatore è a potenziale di rete. Se viene a mancare la tensione del secondario o in caso di intervento ritmico dell'alimentatore, interrompere uno alla volta i circuiti del secondario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

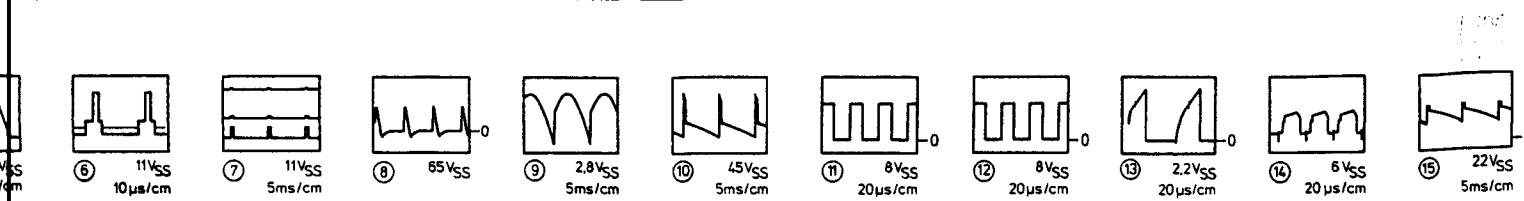
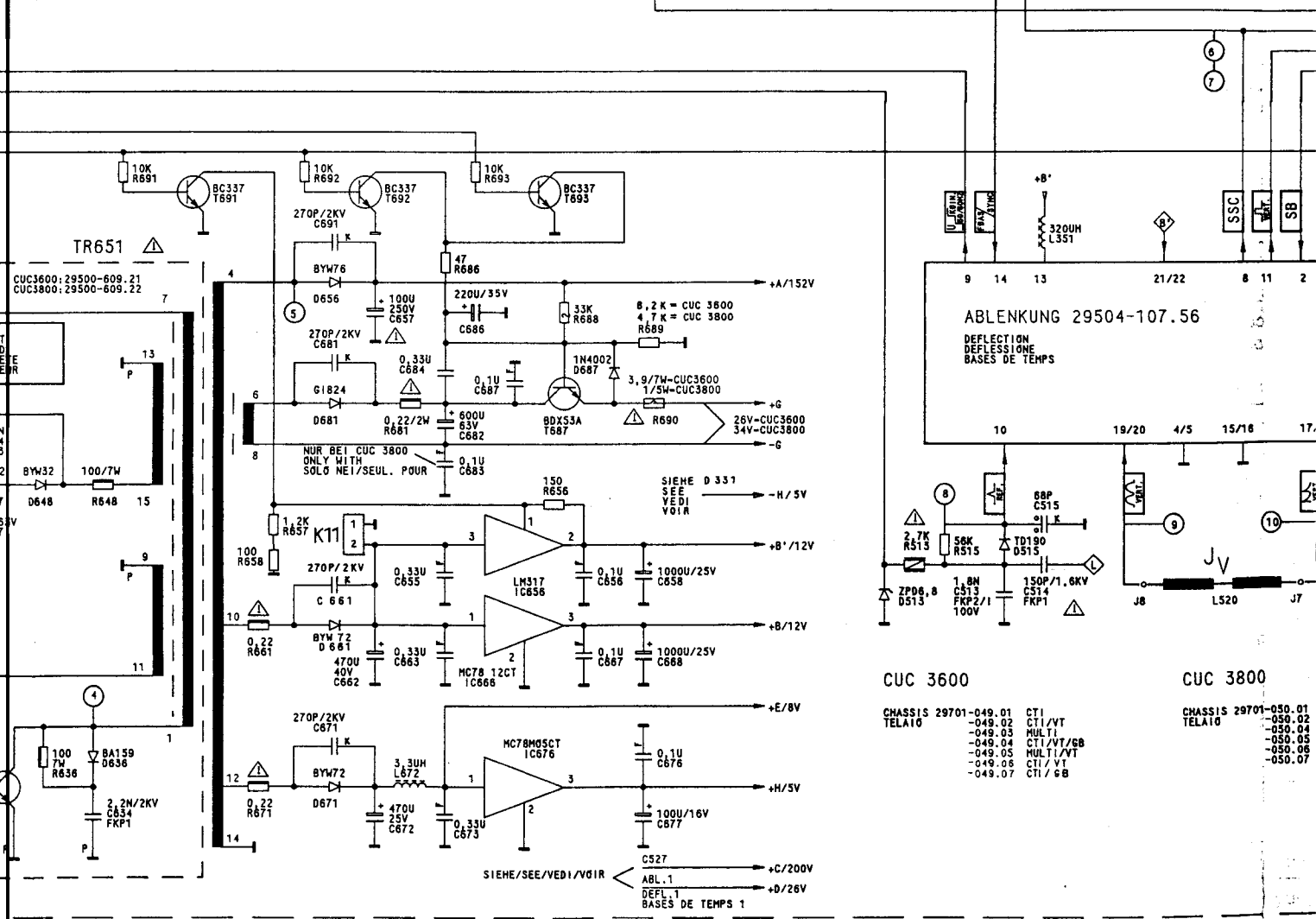
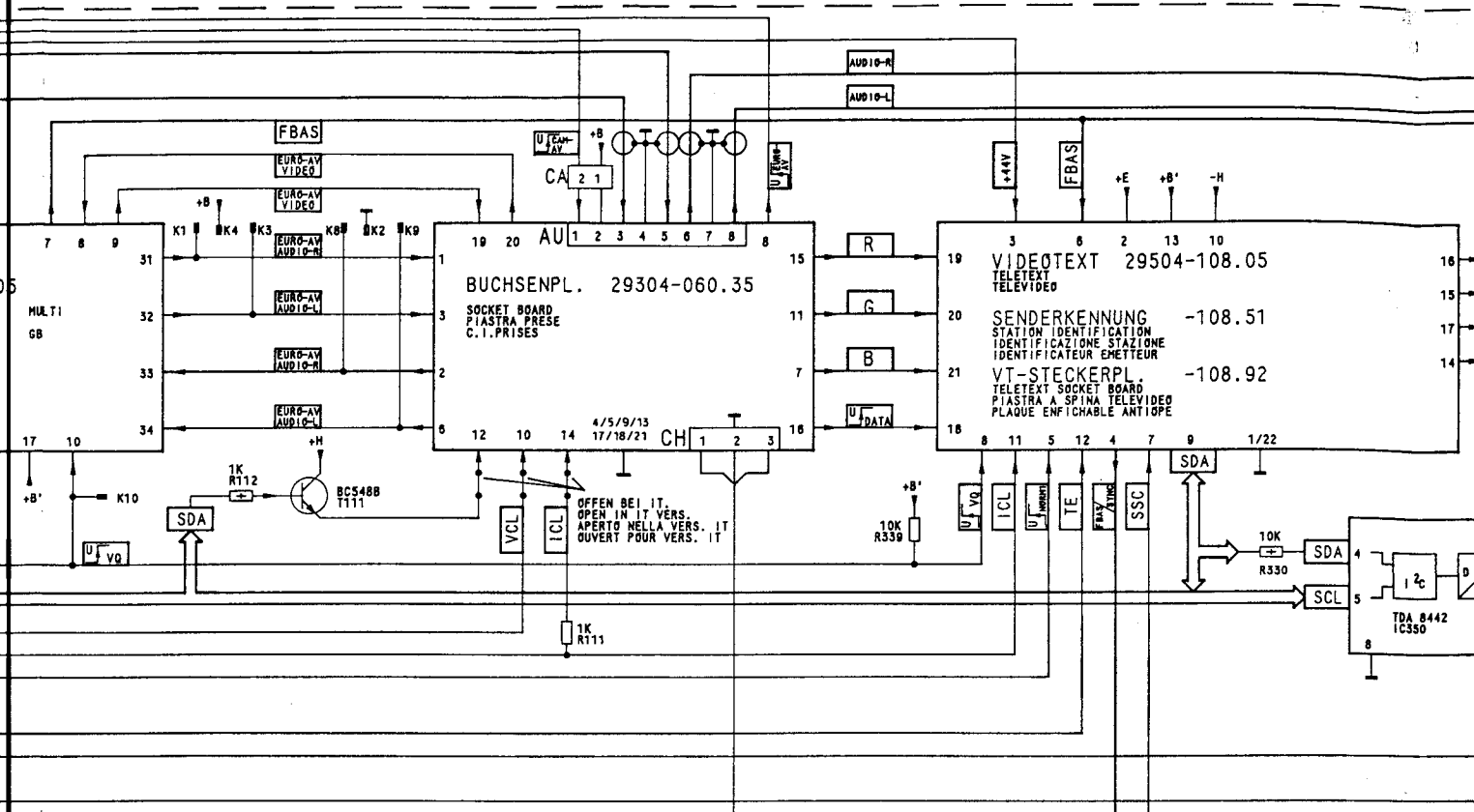
- Tensione di avviamento (pin 9/5) < 8 V. Avviamento tramite Di 616 e R 616.
- Tensione di riferimento (pin 1) ca. 6 V.
- Impulso di avviamento (pin 4) ①
- Pilotaggio della corrente di base (pin 7) ②

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



BEI VERS. B AUF BED-EINHEIT
 FITTED ON CONTROL UNIT ON B VERS.
 NELLA VERS. B SULL'UNITA DI COMANDO
 SUR UNITE DE COMMANDE POUR VERS. B





STECKER BR / PLUG BR / SPINA BR / CONN. TUBE CATHOD. BR



Service am I²C-Bus (mit MOTOROLA-Prozessor)

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 850 liefert Steuerbefehle für Tuner, ZF, Videotext, Buchsenplatte (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 4, IC 850	D 671, IC 676, IC 850
Reset	LOW nur im Einschaltmoment	Pin 2	T 811, D 811
4 MHz Takt	4 MHz, 3 V _{ss}	Pin 6, IC 850	F 808, IC 850
I ² C Bus	5 V _{ss}	Pin 21, 23, IC 850	Die I ² C-Bus-Daten sind auch ohne TP-Bedienung oder Keyboardeingabe vorhanden. Bei fehlenden Daten: Tuner-, ZF-, Videotext-Steckkarte nacheinander ziehen bzw. IC 350 Pin 4,5 ablöten. Stellen sich trotz dieser Maßnahmen keine Daten ein ist die Bedieneinheit zu wechseln.

Tabelle 2

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

Fehler	Mögliche Ursache	Meßwert	Meßpunkt
Keine Bedienfunktion per Keyboard	+H IC 850	5 V siehe Tabelle 1	IC 850 Pin 4
Keine Kanal-Programmschaltung mit TP	IR-Vorverstärker D 1201, T 1204, +B,	+B = 12 V	Pin 6 IC 1211
Display dunkel keine Anzeige	+H	5 V	Pin 17, 18 IC 860, 870
	C 862, C 863, R 861	5 V	Pin 16 IC 860, 870
	IC 860, 870	Ausgangssignale LOW ca. 3 V	an den Katoden der LED's.
Display dunkel oder fehlerhafte Anzeige	Schluß oder Unterbrechung der CLOCK-, DATEN- und Freigabeleitung	ca. 5 V _{ss}	IC 860, 870 Pin 19, 21, 20
Keine Frequenzabstimmung	+C über R 337	ca. 44 V	Tuner Pin 1
	+B, +H	12 V, 5 V	Tuner Pin 16, 2
	Daten (SDA)/Clock (SCL) I ² C Bus	5 V _{ss}	Tuner Pin 6, 5
Rauschen am Bildschirm	variable Abstimmspannung in Abhängigkeit der Kanaleingabe	0,2-30 V	Tuner Pin 13, 15
Bildschirm dunkel-kein Rauschen	Tuner Pin 3 HIGH	HF 0 V AV > 8 V	Tuner Pin 3
Kein FBAS-Signal an ZF-Bst. Kont. 7, 9	+B, +B' I ² C Bus, SDA, SCL fehlt am Tuner ZF Pin 10 HIGH	12 V 5 V _{ss}	ZF 21, 17 Tuner 6, 5 ZF Pin 10
Kein Ton	ZF-Verstärker	bei voller Lautstärke ca. 1,5 V _{ss}	ZF Pin 28, 29
	Buchsenplatte	"	Stecker AU Pin 6, 8
	NF-Steckkarte	"	Stecker NF Pin 1, 3
	+G und -G	26 V, 34 V	Stecker G
	+B, +B' I ² C Bus, SDA, SCL keine Koinzidenz	12 V 5 V _{ss} 12 V 5 V	ZF 21, 17 ZF 25, 24 ZF 20 IC 850 Pin 35

Keine Analogwerte Kontrast, Farbkontrast Keine Helligkeit Kein Kontrast Kein Farbkontrast	I ² C IC D/ D/ D/
Nur bei TP-Bedienung Kein Videotext	+E I ² C
Nur bei TP-Bedienung in Verb Keine VCR-Fernsteuerung	T 8 I ² C

Nur bei Multi-Geräten

Fehler	Mögliche Ursache	M
Keine Normumschaltung	Bedieneinheit Tuner, ZF-Verstärker	Dis (Te dr ZF ZF ZF

werte kontrast keit trast	I ² C Bus, IC 350 IC 350 D/A-Converter D/A-Converter D/A-Converter	5 V _{ss} Analogwerte 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.)
edienung t	+ B', + E I ² C Bus, SDA	12 V, 8 V 5 V _{ss}	VT Pin 13, 2 VT Pin 9
edienung in m-	Verbindung mit Video 1 Taste T 823, VCL I ² C Bus SDA/T 111	4 V 4 V _{ss}	Buchsenplatte Euro-AV-Buchse 10 Euro-AV-Buchse 12

Geräten

Ursache	Meßpunkt	Meßwert			
ienungseinheit er, erstärker	Displayanzeige (Taste „Norm“ drücken)	„0“ CCIR (Norm B/G)	„1“ FR (Norm L)	„2“ GB (Norm I)	„3“ OIRT (Norm D)
	ZF-Pin 2 (Norm 1)	0	1	0	1
	ZF-Pin 3 (Norm 2)	0	0	1	1
	ZF-Pin 1 (Norm 3)	0	0	0	0
	1 = ca. 12 V				

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

Service checks on the I²C Bus (with MOTOF)
If faults occur in the set which cannot be attributed to the I²C bus should be checked using Table 1
Via the I²C bus the microcomputer in the control (teletext), socket board (Euro AV socket) include
Note:

N.B. when a module is being changed, the set is even in the "standby" mode. Observe MOS

Table 1

Test	Measured Value
+ H	5 V
Reset	LOW only at moment of switch on
4 MHz clock	4 MHz, 3 V _{pp}
I ² C bus	5 V _{pp}

Table 2

Possible faults due to I²C Bus control which

Fault	Possible Cause
No functions accepted by keyboard	+ H IC 850
Channel No. cannot be changed with remote control	IR preamplifier D 1201, T 1204,
Dark display, no indication	+ H C 862, C 863, R ICs 860, 870
Dark display or defective display segments	Short circuit or interruption in CLOCK, DATA and release lines
No frequency tuning	+ C via R 337 + B, + H Data (SDA)/clock I ² C bus
Noise-infested picture	Variable tuning voltage as function channel selection
Dark screen — no noise	Tuner, Pin 3 HIGH
No CCVS at IF module, contacts 7, 9	+ B, + B' I ² C bus, SDA, SCI missing at tuner, IF Pin 10: HIGH
No sound	IF amplifier Socket board AF plug-in board + G and -G + B, + B' I ² C bus, SDA, SCI no coincidence

MOTOROLA processor)

be attributed to the power supply unit, the EHT or the deflection system, see Table 1 before further service work is carried using Table 2.

The control unit IC 850 supplies control signals for the tuner, IF, Videotext (teletext) including the VCR remote control, and the RGB analog signals.

the set should always be switched off. Modules must not be unplugged without the MOS handling precautions.

Value	Test Point	Possible Faults
	Pin 4, IC 850	D 671, IC 676, IC 850
moment	Pin 2	T 811, D 811
	Pin 6, IC 850	F 808, IC 850
	Pin 21, 23, IC 850	The I ² C bus data are present even without input from the remote control or keyboard. If there are no data: Take out the tuner, IF, Videotext plug-in boards successively or unsolder Pins 4,5 of IC 350. If there are still no data replace the control unit.

which can occur in any part of set.

Cause	Measured Value	Test Point
	5 V see Table 1	IC 850, Pin 4
amplifier T 1204, + B	+ B = 12 V	Pin 6, IC 1211
	5 V	Pins 17, 18 ICs 860, 870
D 863, R 861	5 V	Pin 16, ICs 860, 870
870	LOW output signals, approx. 3 V	on the cathodes of the LEDs
circuit or connection in DATA and lines	approx. 5 V _{pp}	ICs 860, 870 Pins 19, 21, 20
R 337	approx. 44 V	Tuner, Pin 1
	12 V, 5 V	Tuner, Pins 16, 2
DATA/clock (SCL)	5 V _{pp}	Tuner, Pins 6, 5
tuning as function of selection	0.2-30 V	Tuner, Pins 13, 15
Pin 3	HF 0 V AV > 8 V	Tuner, Pin 3
SDA, SCL at tuner, HIGH	12 V 5 V _{pp}	IF, Pins 21, 17 Tuner, Pins 6, 5 IF, Pin 10
er	approx. 1.5 V _{pp} at max. volume	IF, Pins 28, 29
board	"	AU plug, Pins 6, 8
in board	"	AF, plug, Pins 1, 3
-G	26 V, 34 V	Plug G
SDA, SCL ence	12 V 5 V _{pp} 12 V 5 V	IF, Pins 21, 17 IF, Pins 25, 24 IF, Pin 20 IC 850, Pin 35

No analog signals, contrast, colour contrast Brightness Contrast Colour contrast	I ² C bus, IC 350 IC 350 D/A converter D/A converter D/A converter	5 V _{pp} Analog signals 1-3 V 2-4 V 2-4 V
Only in case of remote control No Videotext (teletext)	+ B', + E I ² C bus, SDA	12 V, 8 V 5 V _{pp}
Only in case of remote control with Video 1 button No VCR remote control	T 823, VCL I ² C bus SDA/T 111	4 V 4 V _{pp}

For multi-standard TV sets only

Fault	Possible Cause	Test Point	Measured Value	
No stand- ards conver- sion	Control unit tuner, IF AMP	Indication (press „standard“)	„0“ CCIR (st. B/G)	„1“ FR (st. I)
		IF Pin 2 (st. 1)	0	1
		IF Pin 3 (st. 2)	0	0
		IF Pin 1 (st. 3)	0	0
		1 =		

g signals	IC 350, Pins 4/5 Colour/RGB module: Pin 10 (brightness) Pin 11 (contrast) Pin 12 (col. contrast)
8 V	VT, Pins 13, 2 VT, Pin 9
	Socket board Euro-AV socket 10 Euro-AV socket 12

asured Value		
"1" FR (st. L)	"2" GB (st. I)	"3" OIRT (st. D)
1	0	1
0	1	1
0	0	0
1 = 12 V approx.		

Servizio per I²C-Bus (con processore MOTOROLA)

Se si riscontrano anomalie che non sono dovute né all'alimentatore, né all'alta tensione o alla crollare prima di tutto il sistema I²C-Bus secondo la tabella 1 e successivamente effettuare i lav bella 2.

Il microcomputer dell'unità comandi IC 850 fornisce istruzioni o tuner, FI, Televideo e piastra pr per mezzo del sistema I²C-Bus; inoltre provvede al telecomando VCT e ai valori analogici F

Avviso:

Mentre si sostituisce un modulo, l'apparecchio va spento!

Non estrarre il modulo nemmeno quando l'apparecchio si trova in posizione d'attesa! Prestar norme MOS.

Tabella 1

Misura	Valore di misura	Punto di misura	Possibili guasti
+ H	5 V	Pin 4, IC 850	D 671, IC 676, IC 850
Reset	LOW solo all'atto dell'accensione	Pin 2	T 811, D 811
Cadenza 4 MHz	4 MHz, 3 V _{pp}	Pin 6, IC 850	F 808, IC 850
I ² C Bus	5 V _{pp}	Pin 21, 23, IC 811	I dati nel sistema I ² C-B presenti anche senza i mediante TP o tastiera. mancano: staccare un le schede tuner, FI e T resp.te dissaldare i pin IC 350. Se malgrado ciò i dati presenti: sostituire l'un comandi.

Tabella 2

Possibili guasti dell'apparecchio dipendenti dal sistema I²C-Bus.

Guasto	Possibile causa	Valore di misura	Punto di misura
Le funzioni immesse con tastiera non vengono accettate	+ H IC 850	5 V vedi tabella 1	IC 850, pin 4
Non viene commutato da canale a programma mediante TP	Preamplif. ad infrarossi D 1201, T 1204, + B	+ B = 12 V	IC 1211, pin 6
Display oscuro Non appaiono indicazioni	+ H	5 V	Pin 17, 18 IC 860, 870
	C 862, C 863, R 861	5 V	Pin 16 — IC 860, 870
	IC 860, 870	Segnali d'uscita LOW ca. 9 V	Ai catodi dei LED
Display oscuro oppure errori d'indicazione	CLOCK interrotto o in corto; linea dati e di consenso	ca. 5 V _{pp}	IC 860, 870 pin 19, 21, 20
La frequenza non viene sintonizzata	+ C mediante R 337	ca. 44 V	Tuner pin 1
	+ B, + H	12 V, 5 V	Tuner pin 16, 2
	Dati (SDA)/Clock (SCL) I ² C-Bus	5 V _{pp}	Tuner pin 6, 5
Rumore sullo schermo	Tensione di sintonia variabile in funzione dell'immissione di canale	0,2-30 V	Tuner pin 13, 15
Schermo oscuro Il rumore non è presente	Tuner pin 3 HIGH	HF 0 V AV > 8 V	Tuner pin 3
Manca il segnale FBAS sul mod. FI cont. 7, 9	+ B', + B' I ² C-Bus, SDA, SCL manca nel tuner, FI pin 10 HIGH	12 V 5 V _{pp}	FI 21, 17 Tuner 6, 5 FI pin 10

o alla deflessione, con-
ere i lavori riportati in ta-

stra prese (Euro-Scart)
logici RGB.

Prestare attenzione alle

C 850
la I ² C-Bus sono senza immissione tastiera. Se i dati care una dopo l'altra ; FI e Televideo e i pin 4 e 5 di
di dati non sono ure l'unità

Manca l'audio	Amplificatore FI	a massimo volume ca. 1,5 V _{pp}	FI pin 28, 29
	Piastra prese	"	Spina AV pin 6, 8
	Modulo BF	"	Spina BF pin 1, 3
	+ G e -G	26 V, 34 V	Spina G
	+ B, + B' I ² C Bus, SDA, SCL Manca la coincidenza	12 V 5 V _{pp} 12 V 5 V	FI 21, 17 FI 25, 24 FI 20 IC 850 pin 35
Mancano i valori analogici Contrasto, contro. colore Manca la luminosità Manca il contrasto Manca il contr. colore	I ² C Bus, IC 350	5 V _{pp}	IC 350 pin 4/5
	IC 350	valori analogici	Modulo colore/RGB:
	Convertitore D/A	1-3 V	spinotto 10 (luminosità)
	Convertitore D/A	2-4 V	spinotto 11 (contrasto)
Solo con l'uso del TP Le funzioni Televideo non vengono accettate	+ B', + E I ² C Bus, SDA	12 V, 8 V 5 V _{pp}	VT pin 13, 2 VT pin 9
	Solo col tasto Video 1 del TP Il videoregistratore non viene telecomandato.	T 823, VCL I ² C Bus SDA/T 111	4 V 4 V _{pp}
			Piastra prese Presa Euro-Scart 10 Presa Euro-Scart 12

Solo per apparecchi Multi-System

Guasto	Possibile cause	Punto di misura	Valore di misura			
Non avviene la commutazione di norma sion	Unità comandi Tuner, amplificatore FI	Indicazione sul display (premere tasto "Norm")	„0"	„1"	„2"	„3"
			CCIR Norma B/G	FR Norma L	GB Norma I	OIRT Norma D
		FI pin 2 (norma 1)	0	1	0	1
		FI pin 3 (norma 2)	0	0	1	1
		FI pin 1 (norma 3)	0	0	0	0
		1 = ca. 12 V				

870

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MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351894 Fax: 01844-352554
Email: enquires@mauritron.co.uk

Service am I²C-Bus (mit SIEMENS-Prozessor).

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 850 liefert Steuerbefehle für Tuner, ZF, Videotext, Buchsenplatte (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 850	D 671, IC 676, IC 850
Reset	LOW nur im Einschaltmoment	Pin 9	C 811, D 811
4 MHz Takt	4 MHz, 3 V _{ss}	Pin 19, IC 850	F 808, IC 850
I ² C Bus	5 V _{ss}	Pin 21, 22, IC 850	Die I ² C-Bus-Daten sind auch ohne TP-Bedienung oder Keyboardeingabe vorhanden. Bei fehlenden Daten: Tuner-, ZF-, Videotext-Steckkarte nacheinander ziehen bzw. IC 350 Pin 4, 5 ablöten. Stellen sich trotz dieser Maßnahmen keine Daten ein ist die Bedieneinheit zu wechseln.

Tabelle 2

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

Fehler	Mögliche Ursache	Meßwert	Meßpunkt
Keine Bedienfunktion per Keyboard	+ H IC 850	5 V siehe Tabelle 1	IC 850 Pin 40
Keine Kanal-Programmumschaltung mit TP	IR-Vorverstärker D 1201, T 1204, + B,	+ B = 12 V	Pin 6 IC 1211
Display dunkel keine Anzeige	+ H	5 V	Pin 17, 18 IC 860, 870
	C 862, C 863, R 861	5 V	Pin 16 IC 860, 870
	IC 860, 870	Ausgangssignale LOW ca. 3 V	an den Katoden der LED's.
Display dunkel oder fehlerhafte Anzeige	Schluß oder Unterbrechung der CLOCK-, DATEN- und Freigabeleitung	ca. 5 V _{ss}	IC 860, 870 Pin 19, 21, 20
Keine Frequenzabstimmung	+ C über R 337	ca. 44 V	Tuner Pin 1
	+ B, + H	12 V, 5 V	Tuner Pin 16, 2
	Daten (SDA)/Clock (SCL) I ² C Bus	5 V _{ss}	Tuner Pin 6, 5
Rauschen am Bildschirm	variable Abstimmspannung in Abhängigkeit der Kanaleingabe	0,2-30 V	Tuner Pin 13, 15
Bildschirm dunkel-kein Rauschen	Tuner Pin 3 HIGH	HF 0 V AV > 8 V	Tuner Pin 3
Kein FBAS-Signal an ZF-Bst. Kont. 7, 9	+ B, + B' I ² C Bus, SDA, SCL fehlt am Tuner ZF Pin 10 HIGH	12 V 5 V _{ss}	ZF 21, 17 Tuner 6, 5 ZF Pin 10
Kein Ton	ZF-Verstärker	bei voller Lautstärke ca. 1,5 V _{ss}	ZF Pin 28, 29
	Buchsenplatte	"	Stecker AU Pin 6, 8
	NF-Steckkarte	"	Stecker NF Pin 1, 3
	+ G und - G	26 V, 34 V	Stecker G
	+ B, + B' I ² C Bus, SDA, SCL keine Koinzidenz	12 V 5 V _{ss} 12 V 5 V	ZF 21, 17 ZF 25, 24 ZF 20 IC 850 Pin 5

Keine Analogwerte
Kontrast, Farbkontrast
Keine Helligkeit
Kein Kontrast
Kein Farbkontrast

Nur bei TP-Bedienung
Kein Videotext

Nur bei TP-Bedienung
Keine VCR-Fernsteuerung

Nur bei Multi-Geräten

Fehler	Mögliche Urs
Keine Normumschaltung	Bedienungse Tuner, ZF-Verstärker

Test	I ² C Bus, IC 350 IC 350 D/A-Converter D/A-Converter D/A-Converter	5 V _{ss} Analogwerte 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.)
ung	+ B', + E I ² C Bus, SDA	12 V, 8 V 5 V _{ss}	VT Pin 13, 2 VT Pin 9
ung in Verbindung mit Video 1 Taste	T 823, VCL I ² C Bus SDA/T 111	4 V 4 V _{ss}	Buchsenplatte Euro-AV-Buchse 10 Euro-AV-Buchse 12

Ursache	Meßpunkt	Meßwert			
seinheit	Displayanzeige (Taste „Norm“ drücken)	„0“ CCIR (Norm B/G)	„1“ .FR (Norm L)	„2“ GB (Norm I)	„3“ OIRT (Norm D)
erker	ZF-Pin 2 (Norm 1)	0	1	0	1
	ZF-Pin 3 (Norm 2)	0	0	1	1
	ZF-Pin 1 (Norm 3)	0	0	0	0
1 = ca. 12 V					

Service checks on the I²C Bus (with SIEMENS proce

If faults occur in the set which cannot be attributed to the I²C bus should be checked using Table 1 before f
Via the I²C bus the microcomputer in the control unit IC (teletext), socket board (Euro AV socket) including the
Note:

N.B. when a module is being changed, the set should a
even in the "standby" mode. Observe MOS handling

Table 1

Test	Measured Value	Test Po
+ H	5 V	Pin 40,
Reset	LOW only at moment of switch on	Pin 9
4 MHz clock	4 MHz, 3 V _{pp}	Pin 19,
I ² C bus	5 V _{pp}	Pin 21,

Table 2

Possible faults due to I²C Bus control which can occur

Fault	Possible Cause
No functions accepted by keyboard	+ H IC 850
Channel No. cannot be changed with remote control	IR preamplifier D 1201, T 1204, + B
Dark display, no indication	+ H C 862, C 863, R 861 ICs 860, 870
Dark display or defective display segments	Short circuit or interruption in CLOCK, DATA and release lines
No frequency tuning	+ C via R 337 + B, + H Data (SDA)/clock (SCL) I ² C bus
Noise-infested picture	Variable tuning voltage as function of channel selection
Dark screen — no noise	Tuner, Pin 3 HIGH
No CCVS at IF module, contacts 7, 9	+ B, + B' I ² C bus, SDA, SCL missing at tuner, IF Pin 10 HIGH
No sound	IF amplifier Socket board AF plug-in board + G and -G + B, + B' I ² C bus, SDA, SCL no coincidence

VIDEO processor)

connected to the power supply unit, the EHT or the deflection system, before further service work is carried using Table 2.

The control unit IC 850 supplies control signals for the tuner, IF, Videotext including the VCR remote control, and the RGB analog signals.

The set should always be switched off. Modules must not be unplugged without taking handling precautions.

Test Point	Possible Faults
Pin 40, IC 850	D 671, IC 676, IC 850
Pin 9	C 811, D 811
Pin 19, IC 850	F 808, IC 850
Pin 21, 22, IC 850	The I ² C bus data are present even without input from the remote control or keyboard. If there are no data: Take out the tuner, IF, Videotext plug-in boards successively or unsolder Pins 4, 5 of IC 350. If there are still no data replace the control unit.

faults can occur in any part of set.

	Measured Value	Test Point
	5 V see Table 1	IC 850, Pin 40
+ B	+ B = 12 V	Pin 6, IC 1211
	5 V	Pins 17, 18 ICs 860, 870
R 861	5 V	Pin 16, ICs 860, 870
	LOW output signals, approx. 3 V	on the cathodes of the LEDs
	approx. 5 V _{pp}	ICs 860, 870 Pins 19, 21, 20
	approx. 44 V	Tuner, Pin 1
	12 V, 5 V	Tuner, Pins 16, 2
lock (SCL)	5 V _{pp}	Tuner, Pins 6, 5
tion of ion	0.2-30 V	Tuner, Pins 13, 15
	HF 0 V AV > 8 V	Tuner, Pin 3
SCL	12 V 5 V _{pp}	IF, Pins 21, 17 Tuner, Pins 6, 5 IF, Pin 10
	approx. 1.5 V _{pp} at max. volume	IF, Pins 28, 29
	"	AU plug, Pins 6, 8
rd	"	AF, plug, Pins 1, 3
	26 V, 34 V	Plug G
SCL	12 V 5 V _{pp} 12 V 5 V	IF, Pins 21, 17 IF, Pins 25, 24 IF, Pin 20 IC 850, Pin 5

No analog signals, contrast, colour contrast Brightness Contrast Colour contrast	I ² C bus, IC 350 IC 350 D/A converter D/A converter D/A converter	5 V _{pp} Analog signals 1-3 V 2-4 V 2-4 V
Only in case of remote control No Videotext (teletext)	+ B', + E I ² C bus, SDA	12 V, 8 V 5 V _{pp}
Only in case of remote control with Video 1 button No VCR remote control	T 823, VCL I ² C bus SDA/T 111	4 V 4 V _{pp}

For multi-standard TV sets only

Fault	Possible Cause	Test Point	Measured Value	
			"0"	"1"
No stand- ards conver- sion	Control unit tuner, IF AMP	Indication (press „standard“)	CCIR (st.B/G)	FR (st.L)
		IF Pin 2 (st.1)	0	1
		IF Pin 3 (st.2)	0	0
		IF Pin 1 (st.3)	0	0

1 = 12 V a

signals	IC 350, Pins 4/5 Colour/RGB module: Pin 10 (brightness) Pin 11 (contrast) Pin 12 (col. contrast)
	VT, Pins 13, 2 VT, Pin 9
	Socket board Euro-AV socket 10 Euro-AV socket 12

Test Value		
"1" FR (st.L)	"2" GB (st.I)	"3" OIRT (st.D)
1	0	1
0	1	1
0	0	0
1 = 12 V approx.		

Servizio per I²C-Bus (con processore SIEMENS)

Se si riscontrano anomalie che non sono dovute né all'alimentatore, né all'alta tensione o alla deflettore prima di tutto il sistema I²C-Bus secondo la tabella 1 e successivamente effettuare i lavori richiesti.

Il microcomputer dell'unità comandi IC 850 fornisce istruzioni o tuner, FI, Televideo e piastra prese per mezzo del sistema I²C-Bus; inoltre provvede al telecomando VCT e ai valori analogici RGB.

Avviso:

Mentre si sostituisce un modulo, l'apparecchio va spento!

Non estrarre il modulo nemmeno quando l'apparecchio si trova in posizione d'attesa! Prestare attenzione norme MOS.

Tabella 1

Misura	Valore di misura	Punto di misura	Possibili guasti
+ H	5 V	Pin 40, IC 850	D 671, IC 676, IC 850
Reset	LOW solo all'atto dell'accensione	Pin 9	T 811, D 811
Cadenza 4 MHz	4 MHz, 3 V _{pp}	Pin 19, IC 850	F 808, IC 850
I ² C Bus	5 V _{pp}	Pin 21, 22, IC 811	I dati nel sistema I ² C-Bus presenti anche senza immagine mediante TP o tastiera. Se mancano: staccare una delle schede tuner, FI e Televideo e dissaldare i pin 4 e IC 350. Se malgrado ciò i dati non sono presenti: sostituire l'unità comandi.

Tabella 2

Possibili guasti dell'apparecchio dipendenti dal sistema I²C-Bus.

Guasto	Possibile causa	Valore di misura	Punto di misura
Le funzioni immesse con tastiera non vengono accettate	+ H IC 850	5 V vedi tabella 1	IC 850, pin 40
Non viene commutato da canale a programma mediante TP	Preamplif. ad infrarossi D 1201, T 1204, + B	+ B = 12 V	IC 1211, pin 6
Display oscuro Non appaiono indicazioni	+ H	5 V	Pin 17, 18 IC 860, 870
	C 862, C 863, R 861	5 V	Pin 16 — IC 860, 870
	IC 860, 870	Segnali d'uscita LOW ca. 9 V	Ai catodi dei LED
Display oscuro oppure errori d'indicazione	CLOCK interrotto o in corto; linea dati e di consenso	ca. 5 V _{pp}	IC 860, 870 pin 19, 21, 20
La frequenza non viene sintonizzata	+ C mediante R 337	ca. 44 V	Tuner pin 1
	+ B, + H	12 V, 5 V	Tuner pin 16, 2
	Dati (SDA)/Clock (SCL) I ² C-Bus	5 V _{pp}	Tuner pin 6, 5
Rumore sullo schermo	Tensione di sintonia variabile in funzione dell'immissione di canale	0,2-30 V	Tuner pin 13, 15
Schermo oscuro Il rumore non è presente	Tuner pin 3 HIGH	HF 0 V AV > 8 V	Tuner pin 3
Manca il segnale FBAS sul mod. FI cont. 7, 9	+ B', + B' I ² C-Bus, SDA, SCL manca nel tuner, FI pin 10 HIGH	12 V 5 V _{pp}	FI 21, 17 Tuner 6, 5 FI pin 10

ensione o alla deflessione, con-
effettuare i lavori riportati in ta-

eo e piastra prese (Euro-Scart)
lori analogici RGB.

attesa! Prestare attenzione alle

i guasti

676, IC 850

811

850

sistema I²C-Bus sono
anche senza immissione
TP o tastiera. Se i dati
staccare una dopo l'altra
tuner, FI e Televideo
saldare i pin 4 e 5 di

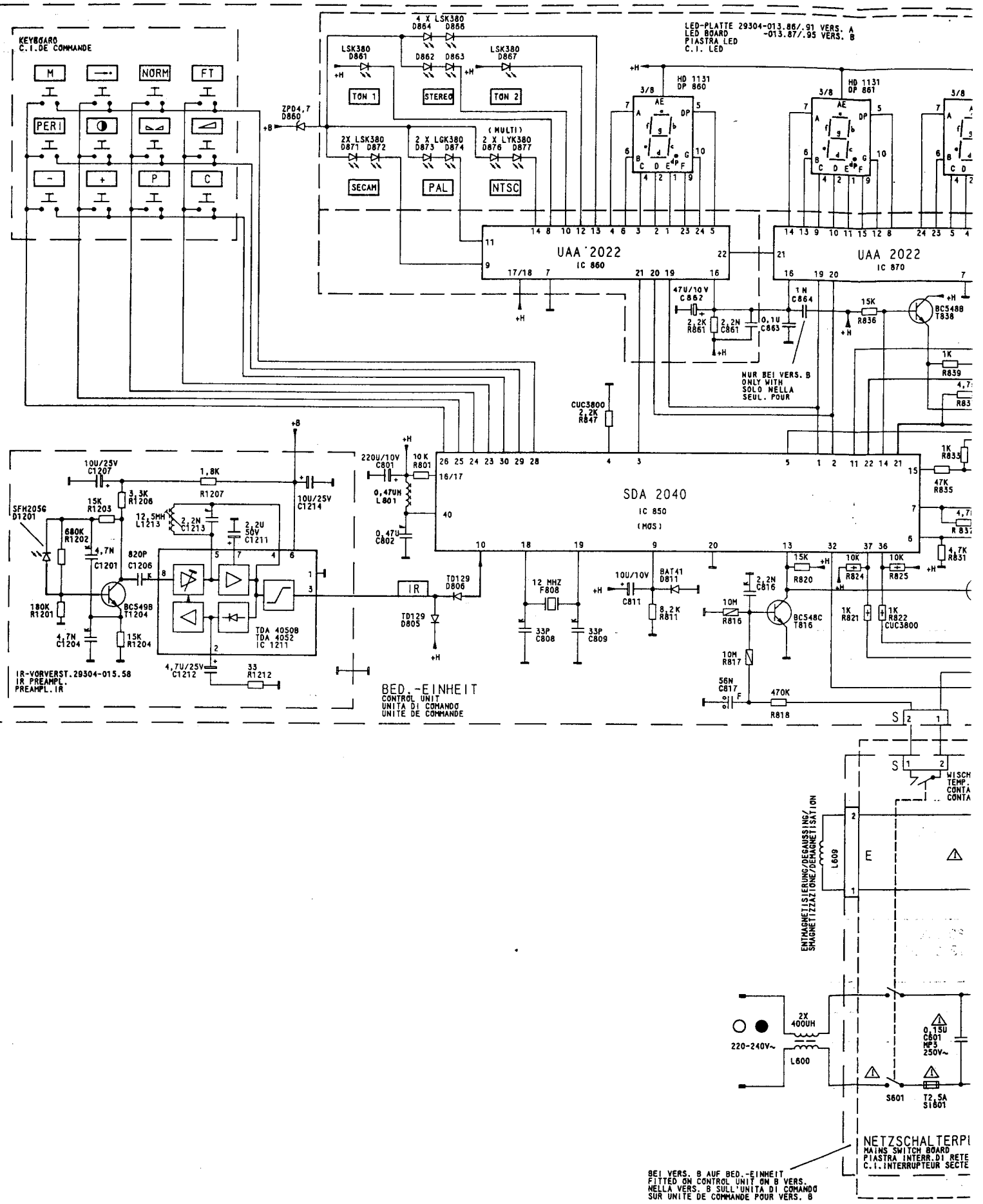
ado ciò i dati non sono
sostituire l'unità

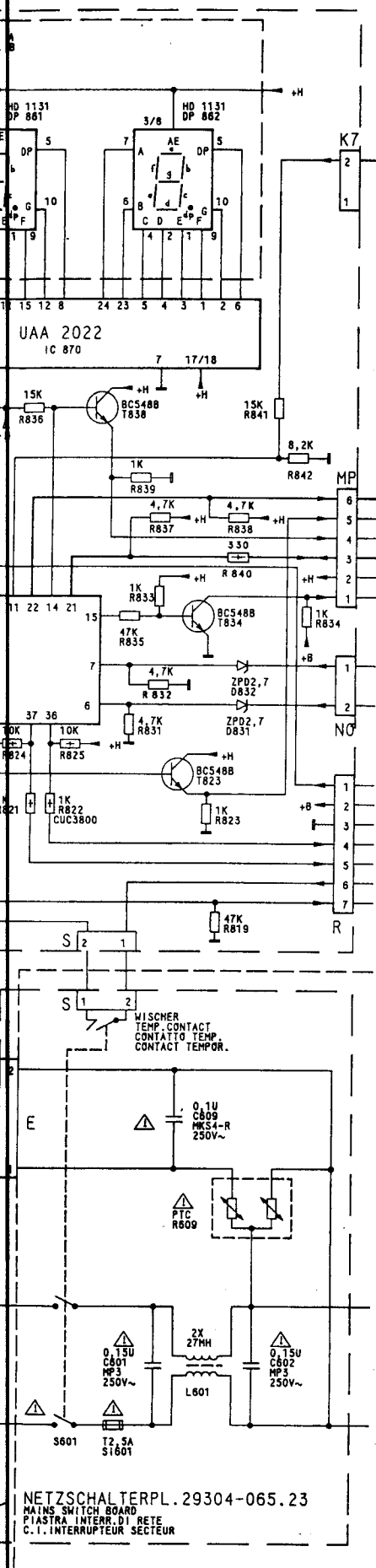
Manca l'audio	Amplificatore FI	a massimo volume ca. 1,5 V _{pp}	FI pin 28, 29
	Piastra prese	"	Spina AV pin 6, 8
	Modulo BF	"	Spina BF pin 1, 3
	+ G e - G	26 V, 34 V	Spina G
	+ B, + B' I ² C Bus, SDA, SCL Manca la coincidenza	12 V 5 V _{pp} 12 V 5 V	FI 21, 17 FI 25, 24 FI 20 IC 850 pin 5
Mancano i valori analogici Contrasto, contro. colore Manca la luminosità Manca il contrasto Manca il contr. colore	I ² C Bus, IC 350	5 V _{pp}	IC 350 pin 4/5
	IC 350	valori analogici	Modulo colore/RGB:
	Convertitore D/A Convertitore D/A Convertitore D/A	1-3 V 2-4 V 2-4 V	spinotto 10 (luminosità) spinotto 11 (contrasto) spinotto 12 (contr. colore)
	Solo con l'uso del TP Le funzioni Televideo non vengono accettate	+ B', + E I ² C Bus, SDA	12 V, 8 V 5 V _{pp}
Solo col tasto Video 1 del TP Il videoregistratore non viene telecomandato.	T 823, VCL I ² C Bus SDA/T 111	4 V 4 V _{pp}	Piastra prese Presa Euro-Scart 10 Presa Euro-Scart 12

Solo per apparecchi Multi-System

Guasto	Possibile cause	Punto di misura	Valore di misura			
Non avviene la commutazione di normasion	Unità comandi Tuner, amplificatore FI	Indicazione sul display (premere tasto "Norm")	„0"	„1"	„2"	„3"
			CCIR Norma B/G	FR Norma L	GB Norma I	OIRT Norma D
		FI pin2 (norma 1)	0	1	0	1
		FI pin3 (norma 2)	0	0	1	1
		FI pin1 (norma 3)	0	0	0	0
		1 = ca. 12 V				

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk





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- ① Abnehmen und Aufsetzen der Geräte
- ② Disassembly and assembly of the ca
- ③ Smontaggio e montaggio dello schi

Symbol auf der Geräterückwand beachten!

Please note the symbol at the rear of the cabinet!

Osservare il simbolo sullo schienale

Hinweis

Note

Nota

Sc
Dri

Ins
Pre

Ins
Pre
sga

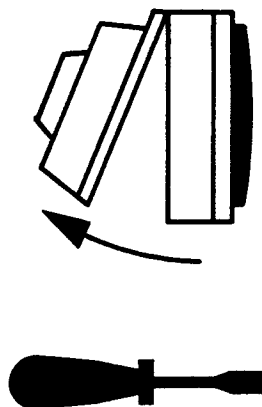
Abnehmen und Aufsetzen der Geräterückwand

Disassembly and assembly of the cabinet rear panel

Smontaggio e montaggio dello schienale



Geräterückwand
 of the cabinet rear panel
 lo schienale dell'apparecchio



Schraubendreher (Größe 4) in die markierten Aussparungen stecken.
 Drücken oder drehen bis der Schnapphaken ausrastet.

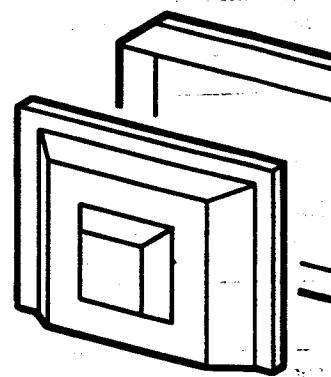
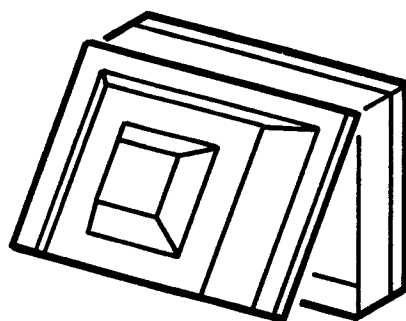
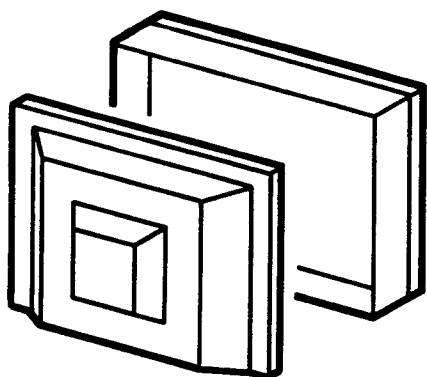
Insert the screwdriver (size 4) into the marked holes.
 Press or turn it until the catch disengages.

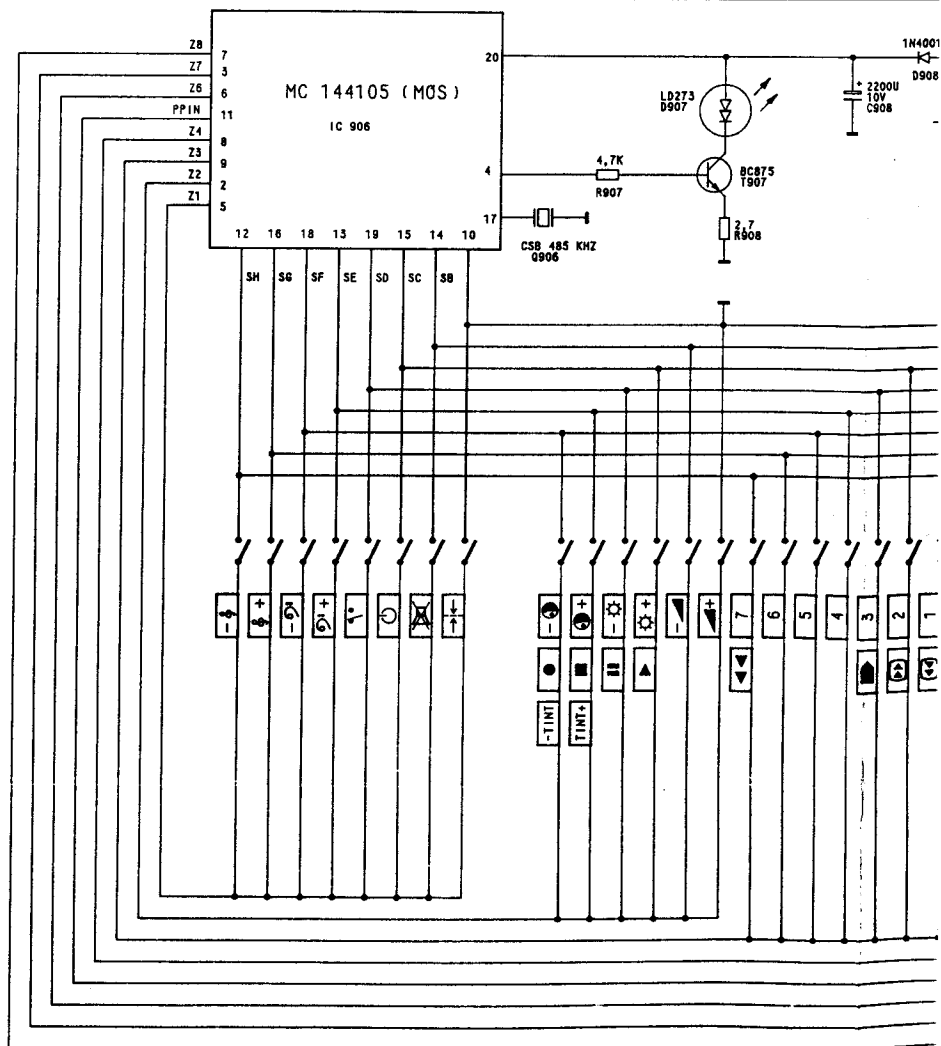
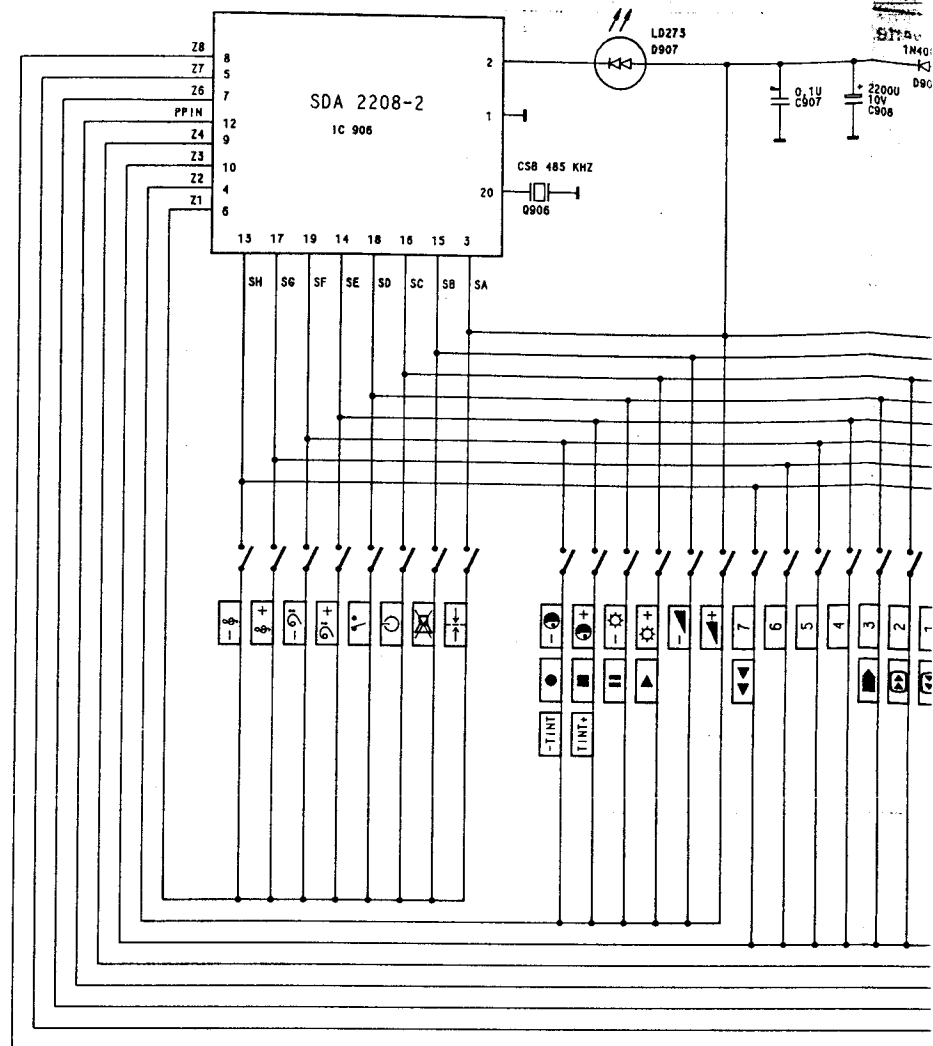
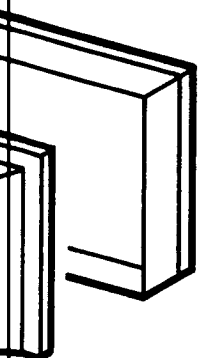
Inserire un giravite (di misura 4) nelle rientranze contrassegnate.
 Premere o ruotare poi fino a che il gancio a scatto viene a sganciarsi.

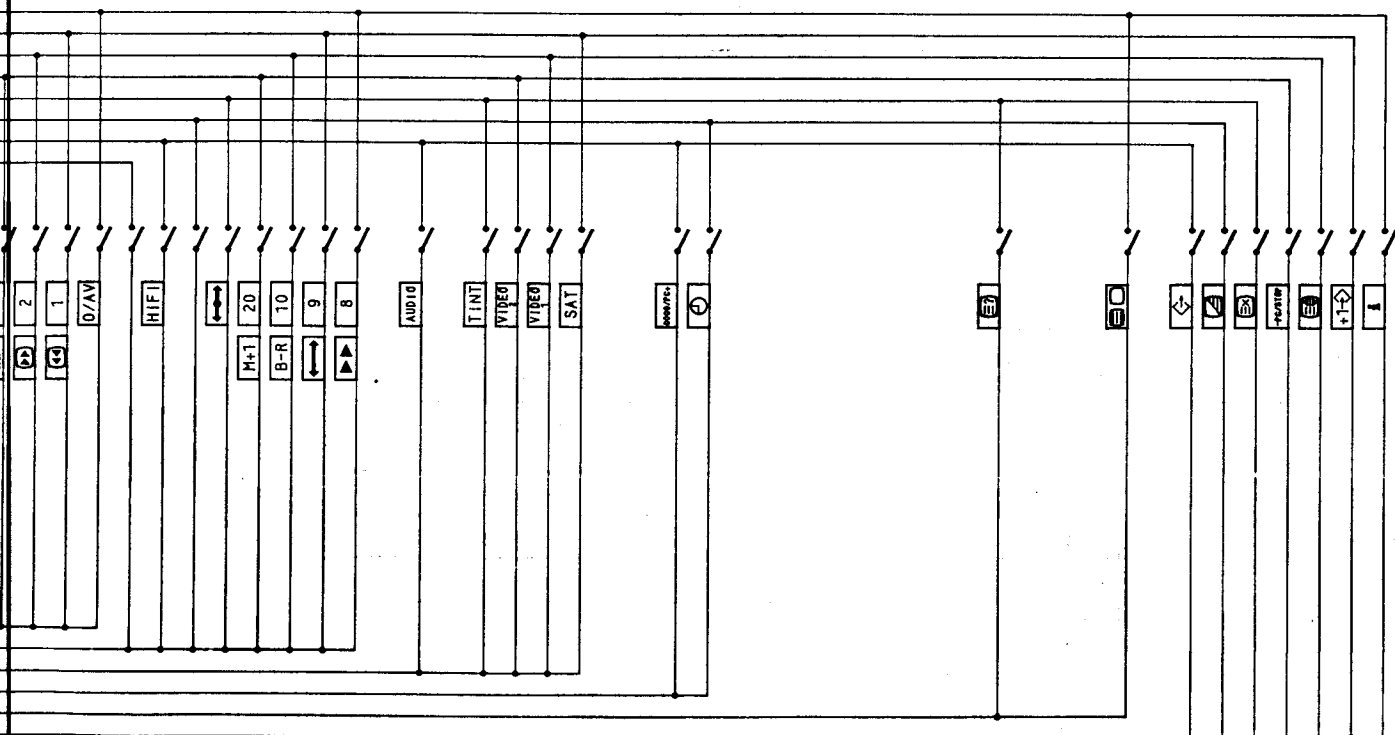
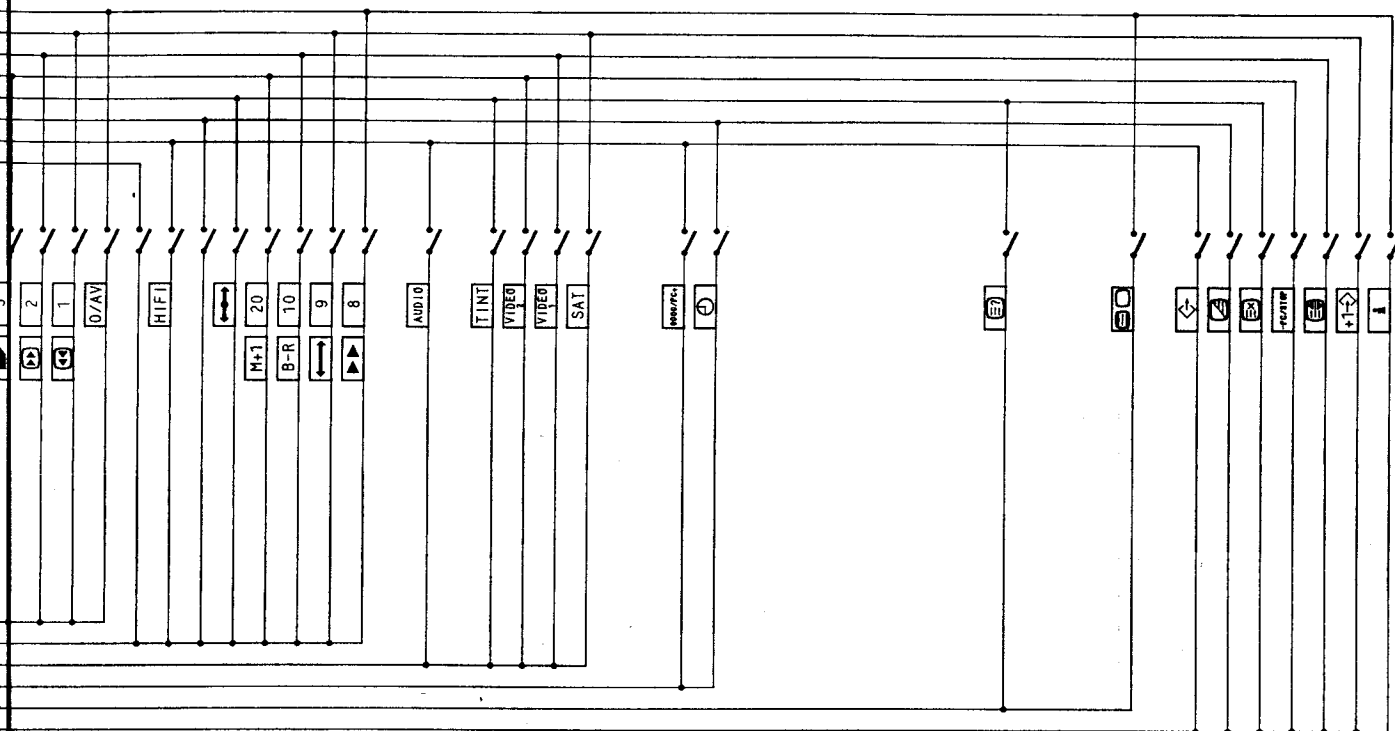
Drehen um 90°

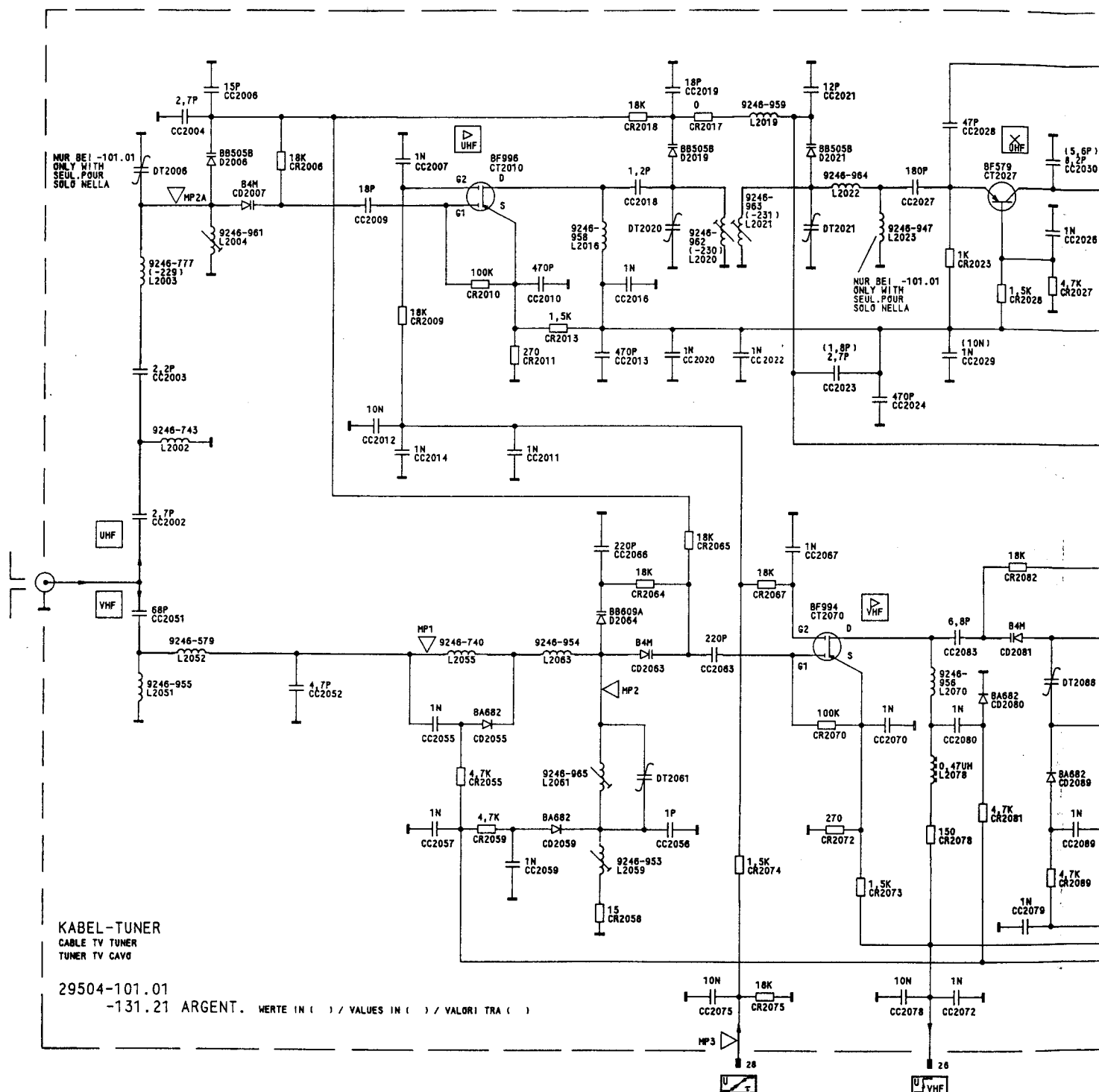
Turn by 90°

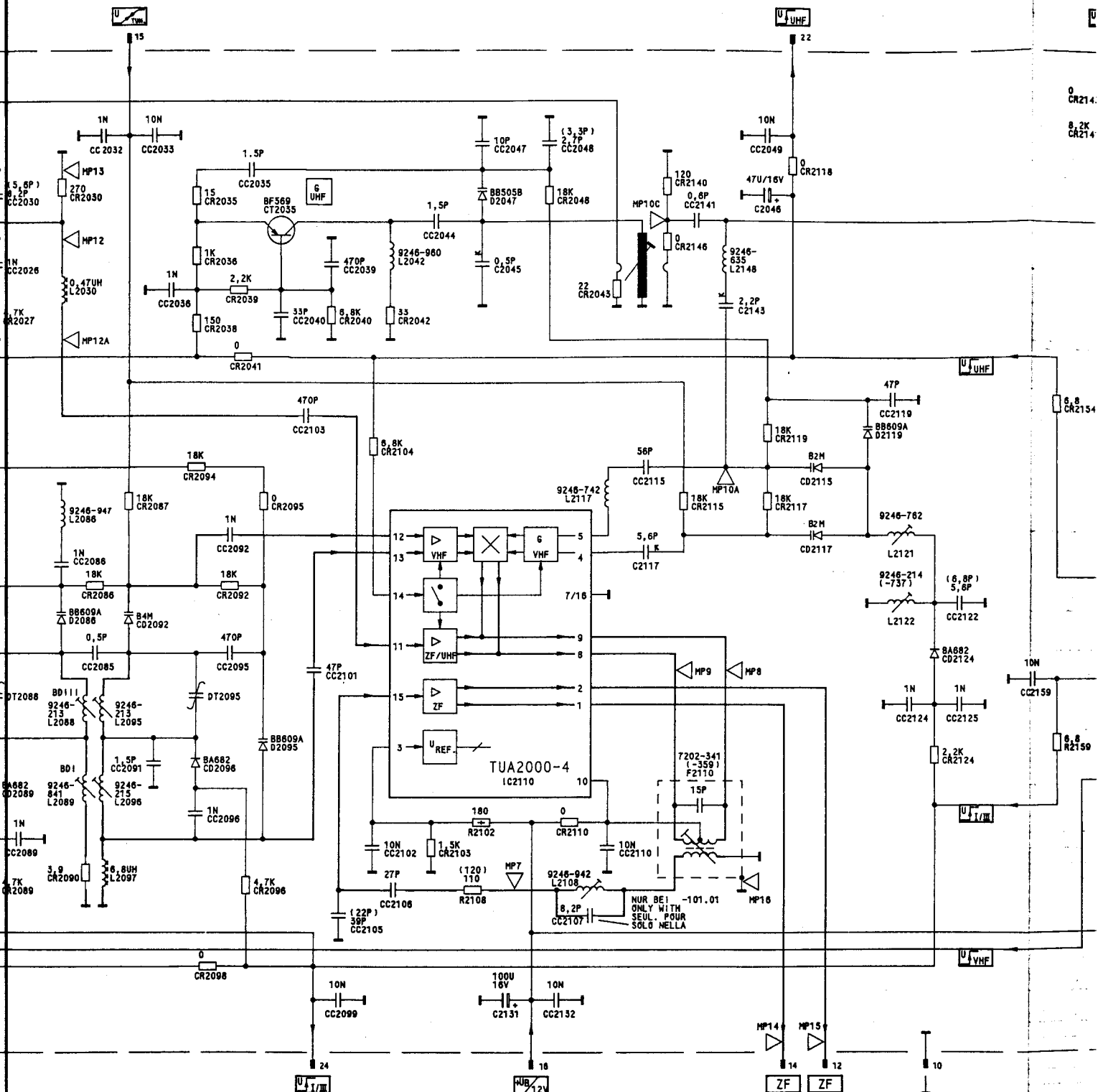
Ruotare di 90°







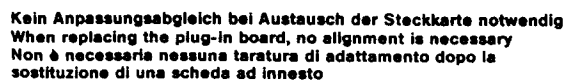




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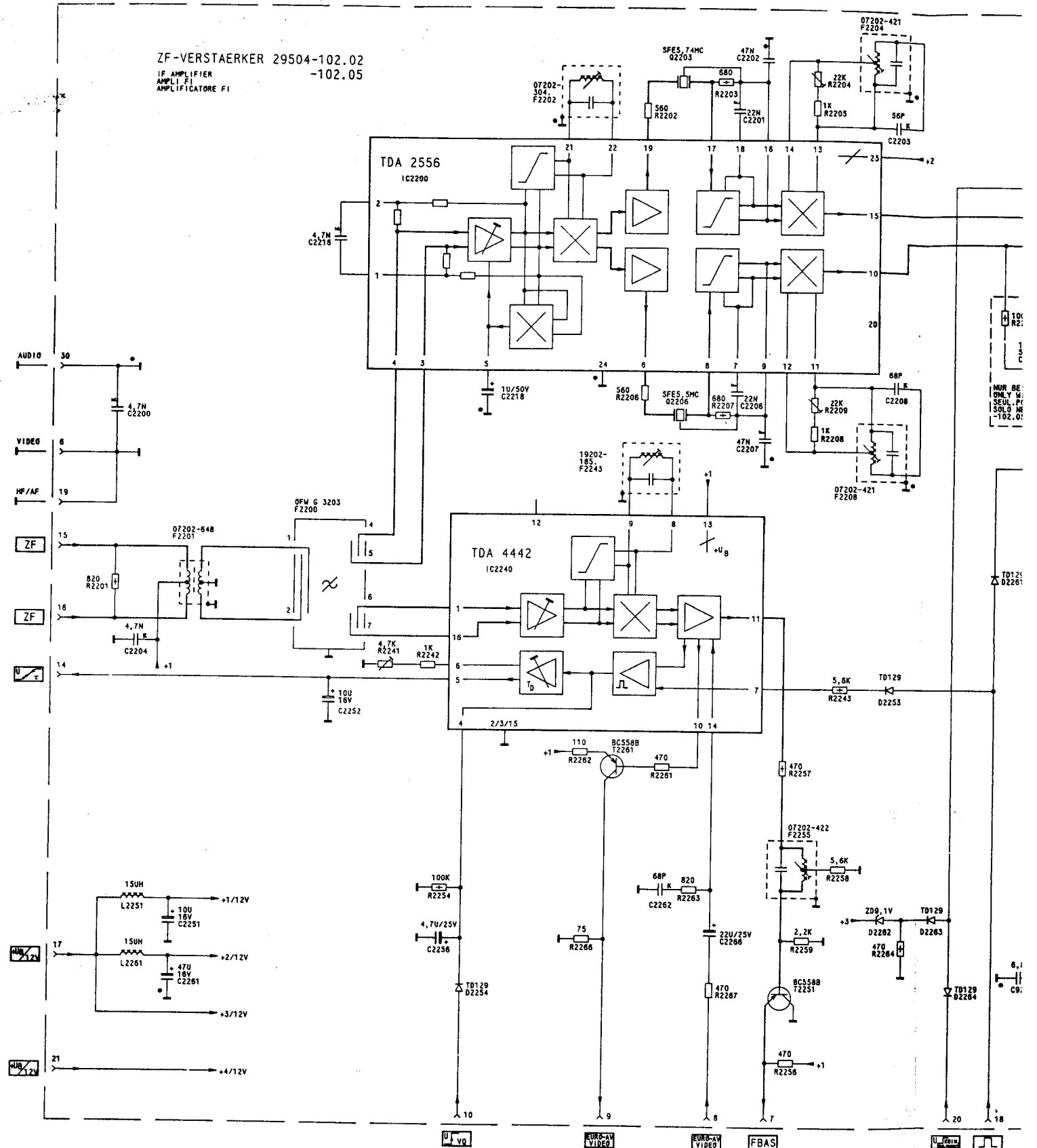


AMPLIFIER
FI
IFICATORE FI

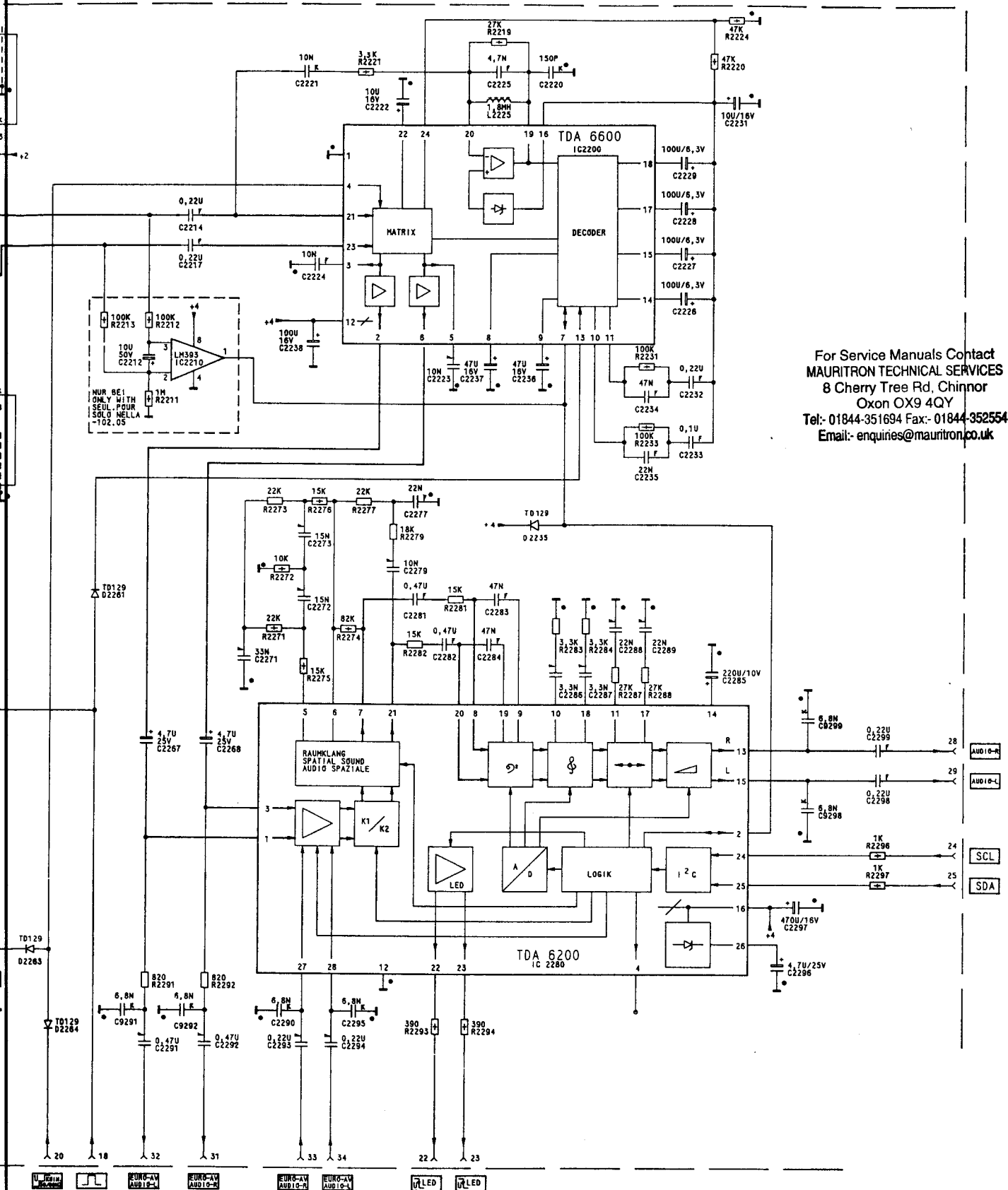


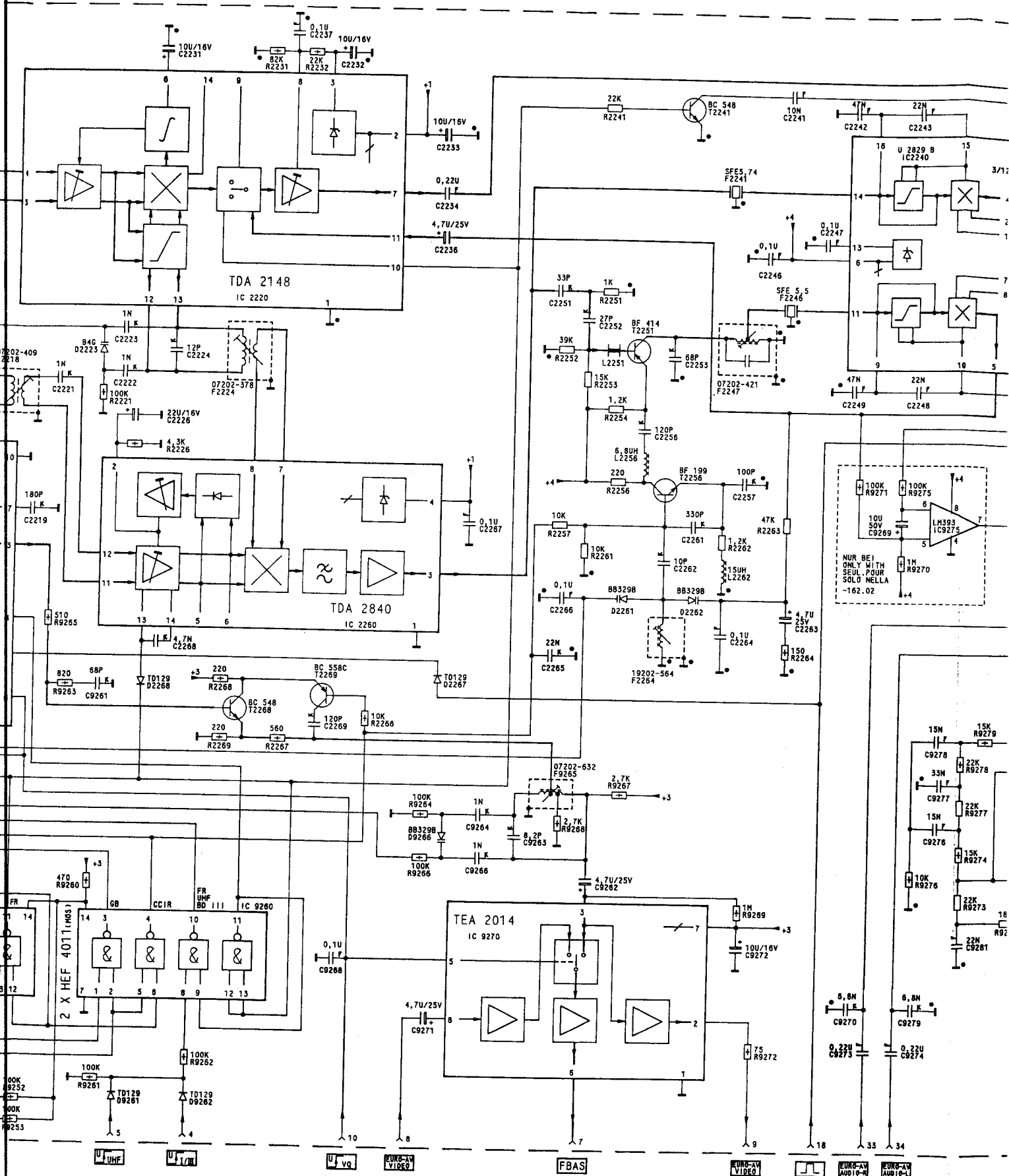
ZF-VERSTÄRKER 29504-102.02
IF AMPLIFIER
AMPLIFICATORE FI

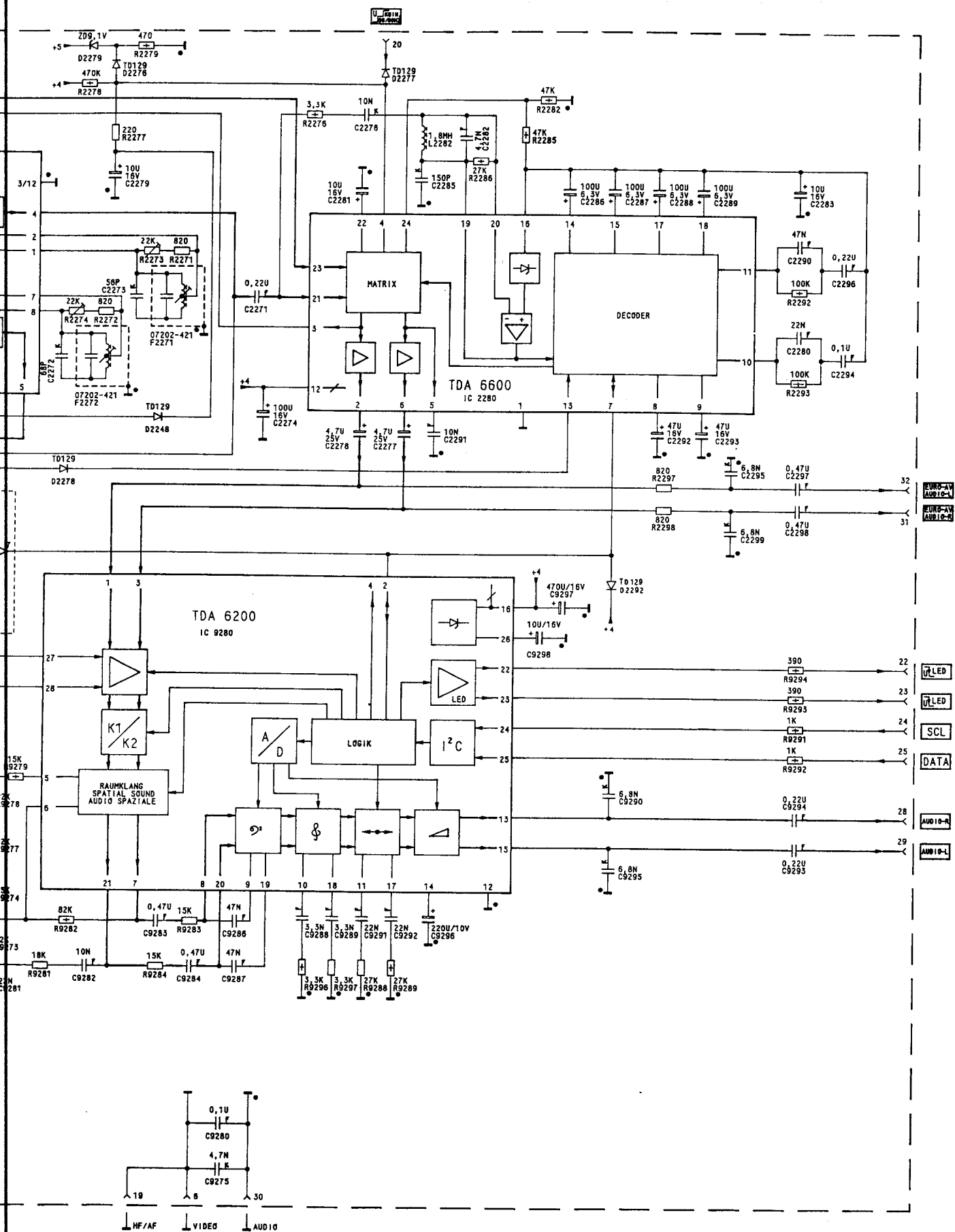
-102.05



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







IF AMPLIFIER
AMPLIFICATEORE FI



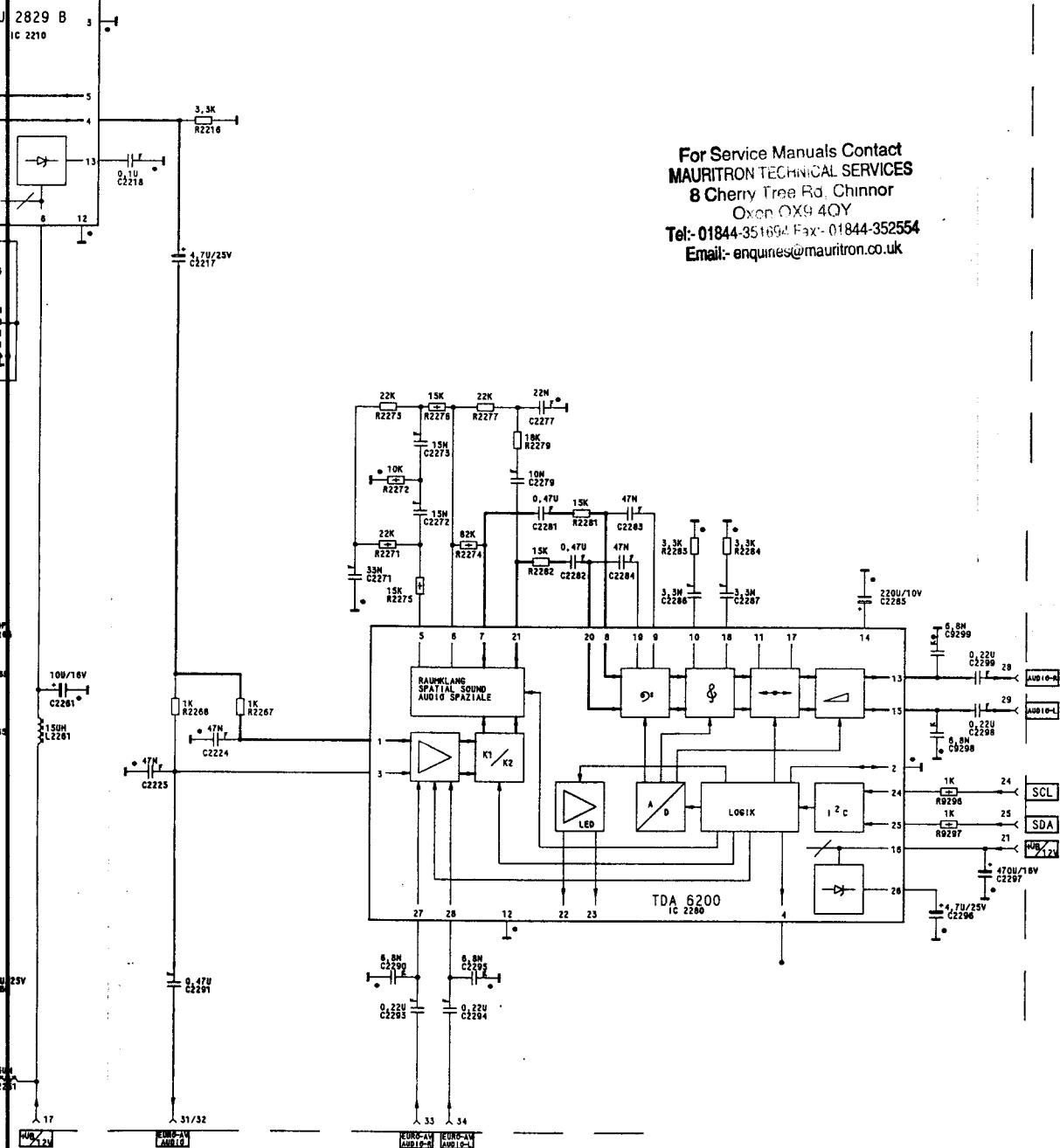
**EURO-AM
VIDEO**

**EURO-AY
VIDEO**

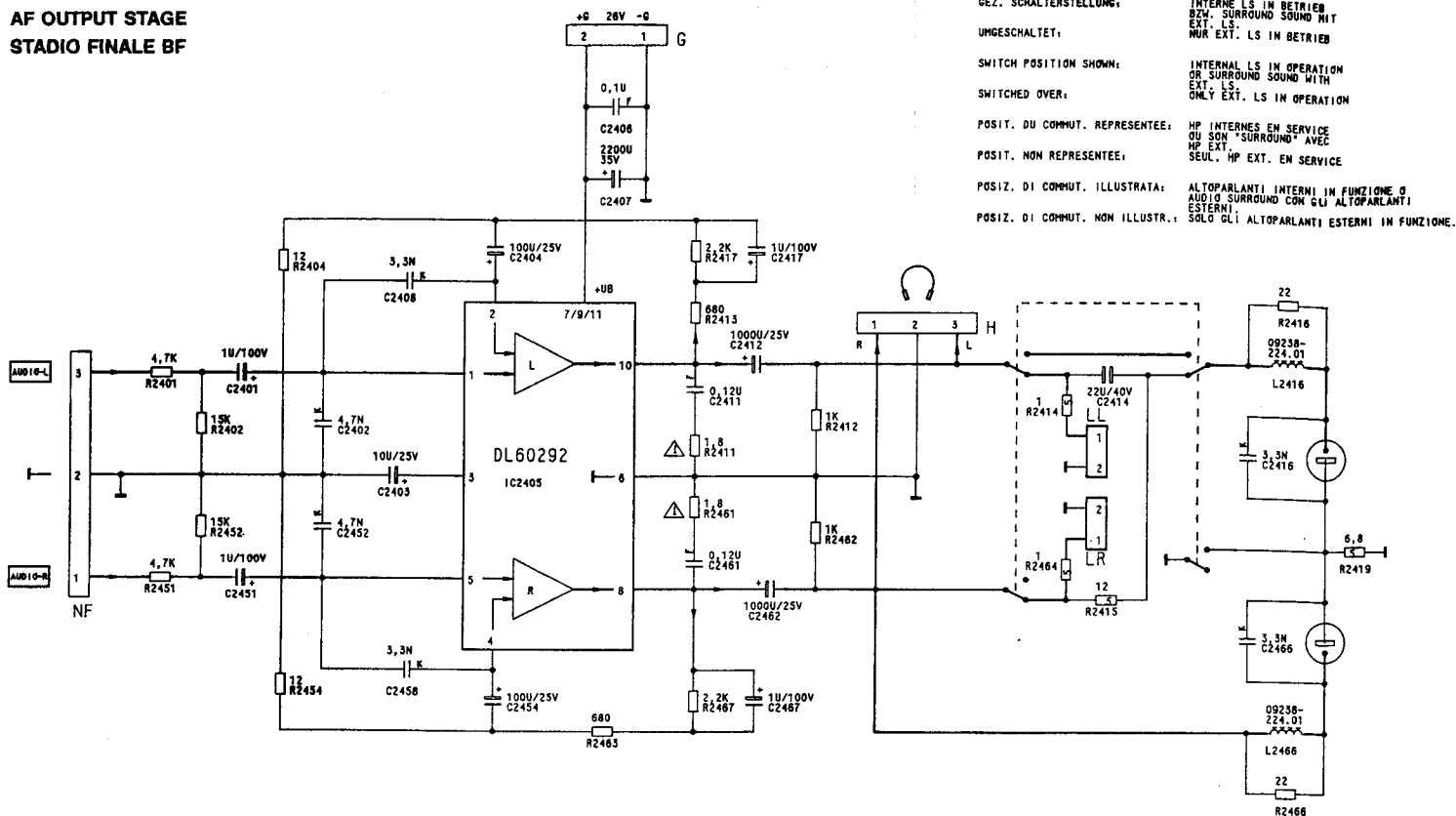
408	3.23
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2829 B
IC 2210

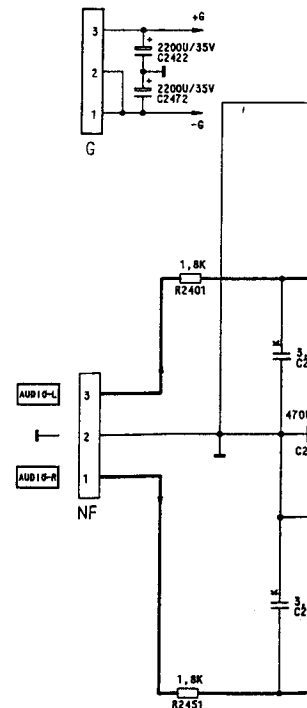
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NF-ENDSTUFE 2x20 W 29504-104.05
AF OUTPUT STAGE
STADIO FINALE BF



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 2x35 W 29504-104.15
AF OUTPUT STAGE
STADIO FINALE BF

IN FUNZIONE O
L'ALTOPARLANTI
ESTERNI IN FUNZIONE.

6,8
R2419

6,8
R2419

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R2419

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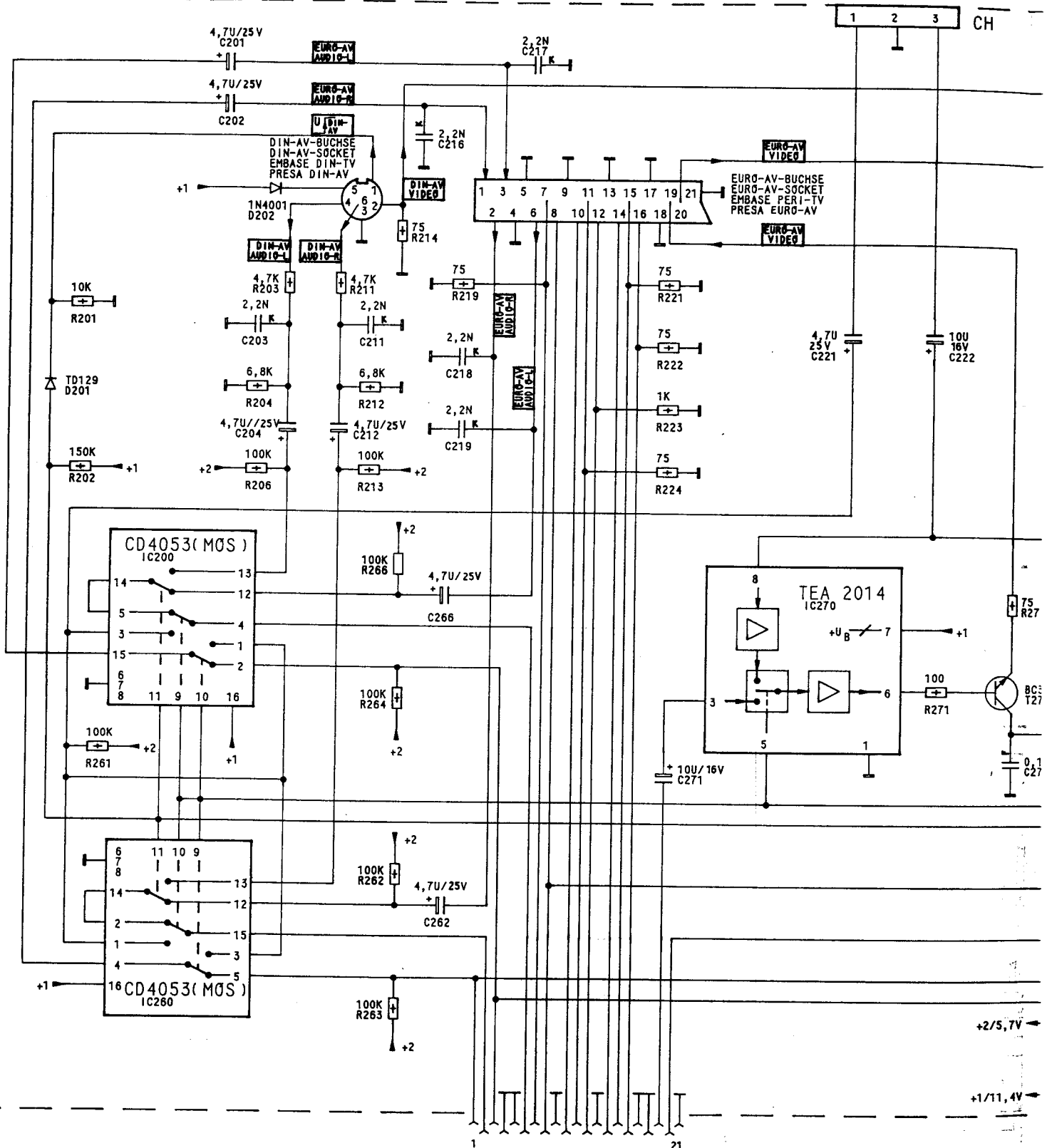
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R2419

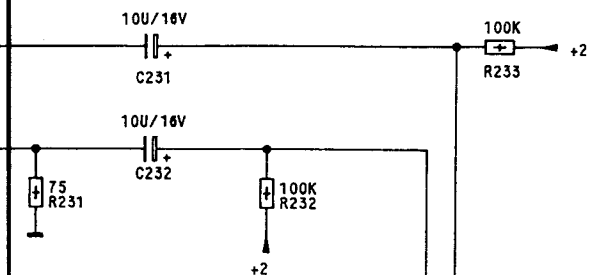
GEZ. SCHALTERSTELLUNG: INTERNE LS IN BETRIEB
BZW. SURROUND SOUND MIT
EXT. LS.
UMGESCHALTET: NUR EXT. LS IN BETRIEB

SWITCH POSITION SHOWN: INTERNAL LS IN OPERATION
OR SURROUND SOUND WITH
EXT. LS.
SWITCHED OVER: ONLY EXT. LS IN OPERATION

POSIT. DU COMMUT. REPRESENTEE: HP INTERNES EN SERVICE
OU SON "SURROUND" AVEC
HP EXT.
POSIT. NON REPRESENTEE: SEUL HP EXT. EN SERVICE

POSIT. DI COMMUT. ILLUSTRATA: ALTOPARLANTI INTERNI IN FUNZIONE O
AUDIO SURROUND CON GLI ALTOPARLANTI
ESTERNI.
POSIT. DI COMMUT. NON ILLUSTR.: SOLO GLI ALTOPARLANTI ESTERNI IN FUNZIONE.





EURO-AV-BUCHSENPLATTE 29304-060.35

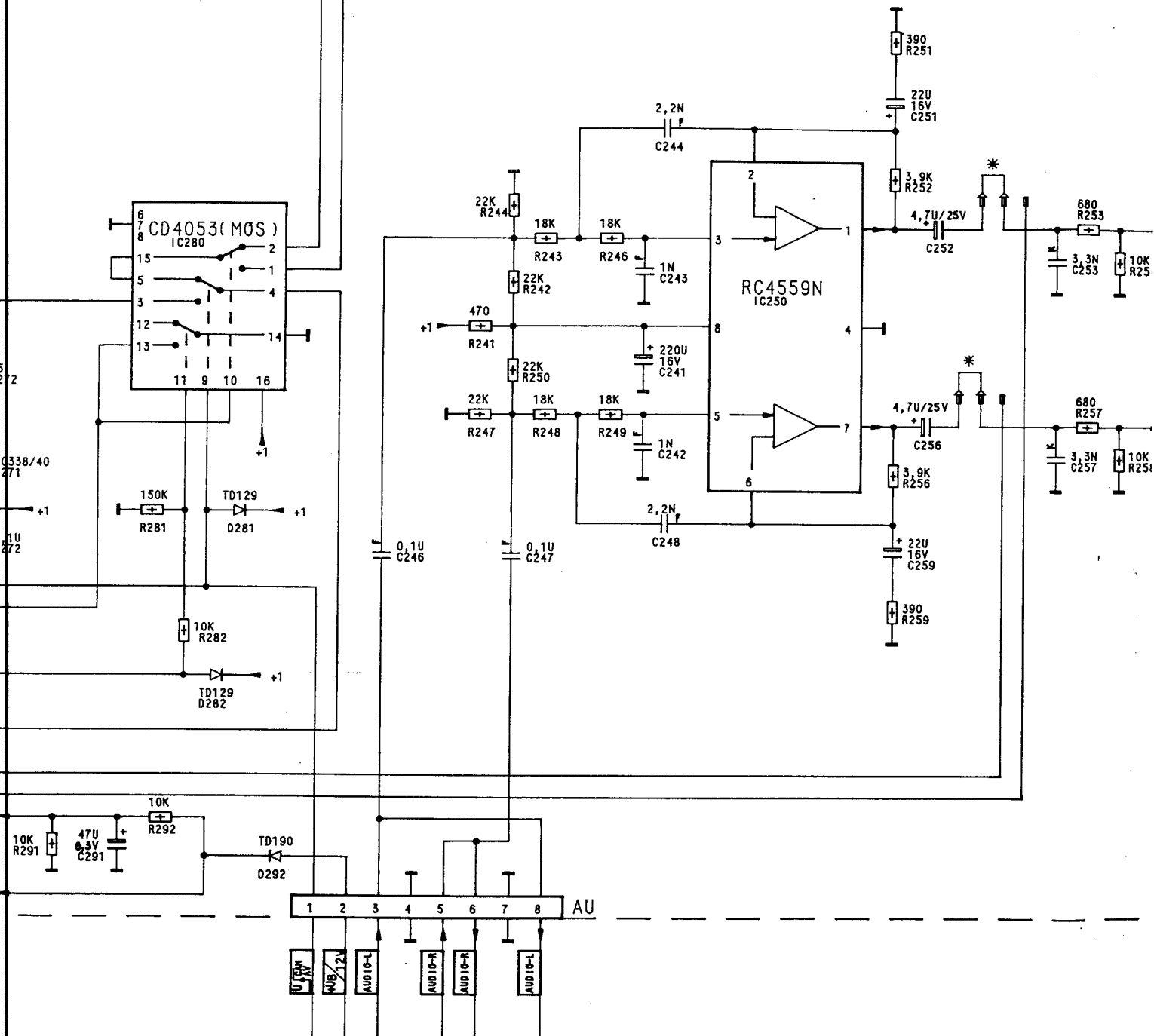
EURO-AV SOCKET BOARD
C.1. PRISES PERI-TV
PIASTRA PRESE EURO-AV

* GEZ. BRUECKENBESTUECKUNG:
GEREGELTER AUDIO AUSGANG
BRUECKEN UNBESTUECKT:
AUDIO AUSGANG UNGEREGELT

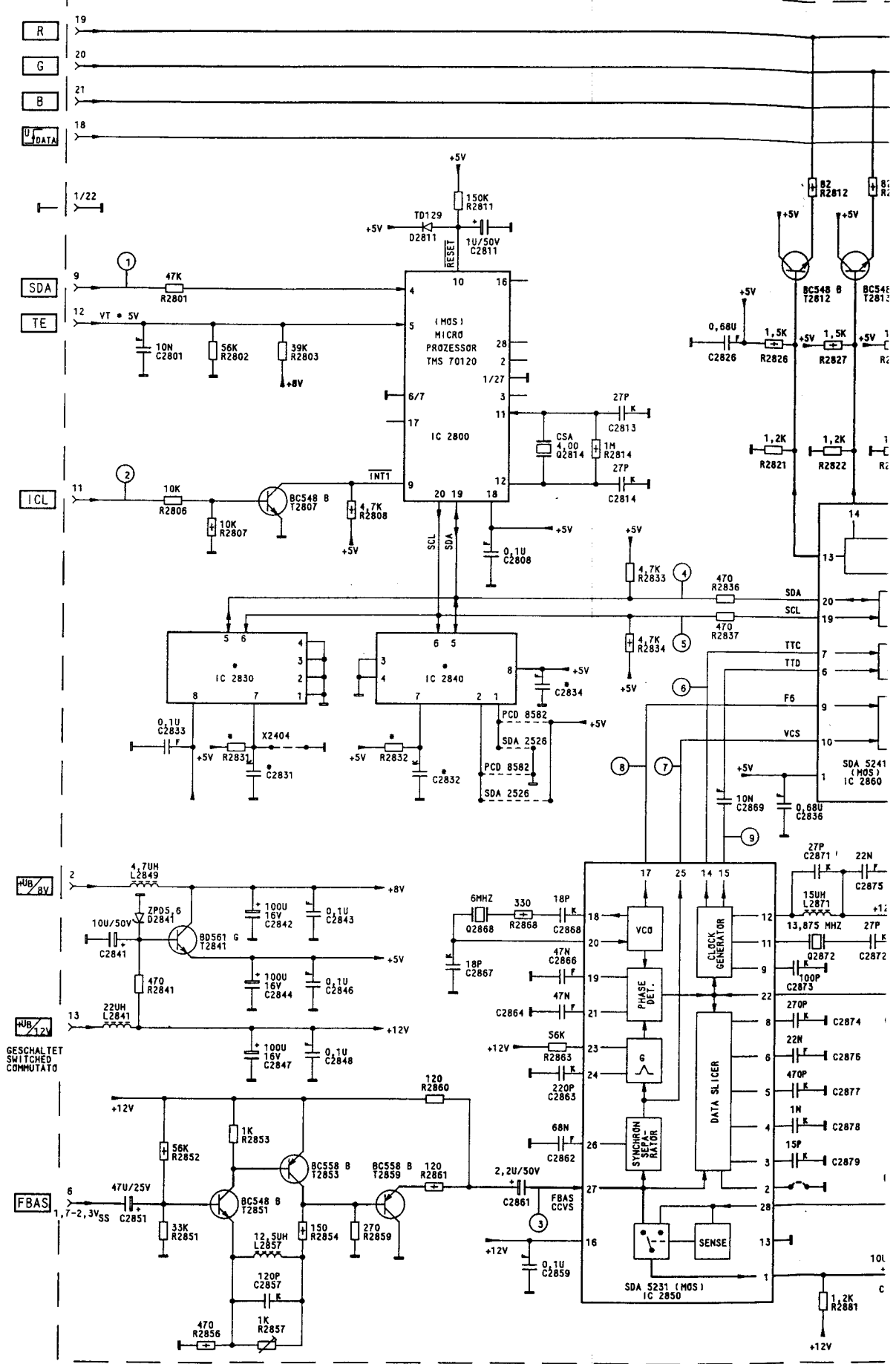
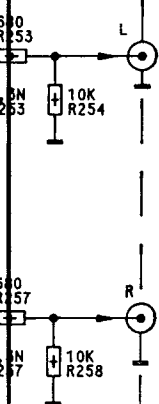
BRIDGING POSITION SHOWN:
CONTROLLED AUDIO OUTPUT
BRIDGING POSITION NOT SHOWN:
AUDIO OUTPUT UNCONTROLLED

SHUNTS DANS LA POS. ILLUSTRÉE
SORTIE AUDIO REGLABLE
SHUNTS DANS LA POS. NON ILLUSTRÉE
SORTIE AUDIO NON REGLABLE

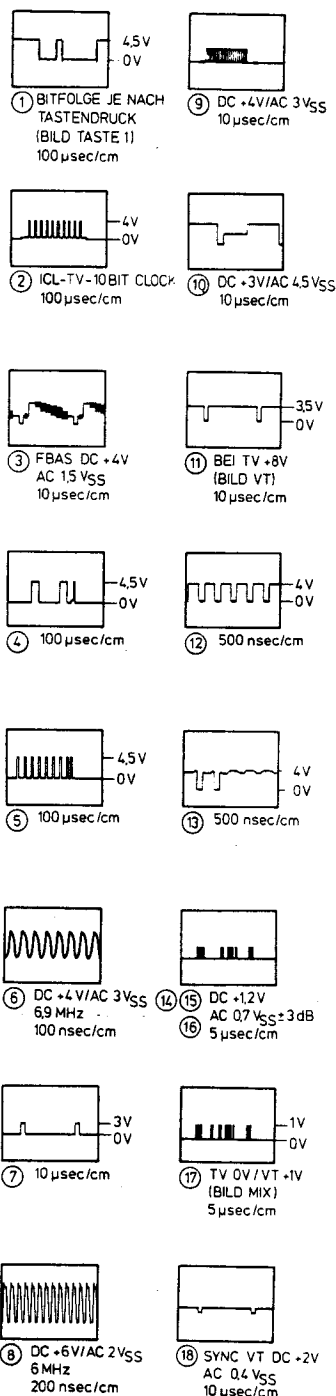
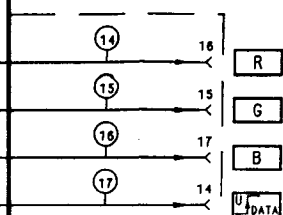
PONTICELLI NELLA POSIZ. ILLUSTRATA:
USCITA AUDIO REGOLABILE
PONTICELLI NELLA POSIZ. ILLUSTRATA:
USCITA AUDIO NON REGOLABILE



KING :
 LANG
 EGELT
 OWN :
 SHOWN :
 COLLED
 ILLUSTRREE :
 NOM ILLUSTRREE :
 ABLE
 ILLUSTRATA :
 ILLUSTRATA :
 ABILE.







VT-Nachrüstung und Anpassungsabgleich

Beim Nachrüsten der Videotext-Steckkarte muß die Videotext-Steckerplatte entfernt werden (* siehe Geräteschaltbild im Service Manual).

Der Einsteller R 2857 steht bei Auslieferung auf Linksanschlag (kleinste Höhenanhebung, ca. 2 dB). Treten trotz einwandfreiem Antennensignal Zeichenfehler auf, R2857 langsam nach links verstellen, bis Fehler verschwinden. Nicht weiterdrehen, da Fehlerhäufigkeit wieder zunehmen kann.

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.

VT (GB: Teletext) instalation and matching adjustment

When fitting the Videotext (GB: Teletext) plug-in board, the Videotext plug plate has to be removed (* see circuit diagram in the Service Manual).

The control R2857 is set in the fully anti clockwise position when the unit is delivered (smallest treble boost: approx. 2 dB). If, with a perfect aerial signal character faults occur, turn R2857 slowly anticlockwise until the faults disappear. Do not turn R2857 up any further as error rate may increase again.

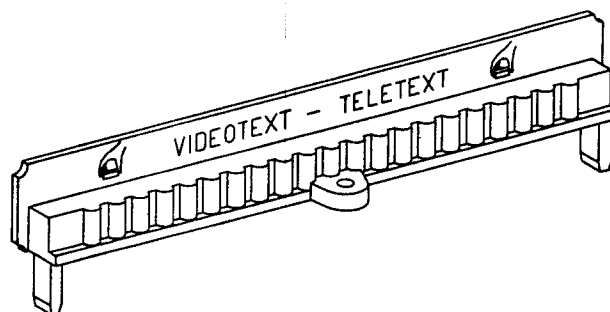
Page 199 must always be selected anew during the adjustment, as only this effects a new read-in of the page making it possible to evaluate the error level.

Montaggio e taratura d'addattamento della scheda ad innesto

Nel montare la scheda televideo togliere la piastrina televideo (* vedere lo schema del televisore nel manuale di servizio).

Il regolatore R2857 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 R2857 verso sinistra fino ad eliminare gli errori. Non girarlo oltre può riaumentare la presenza degli errori.

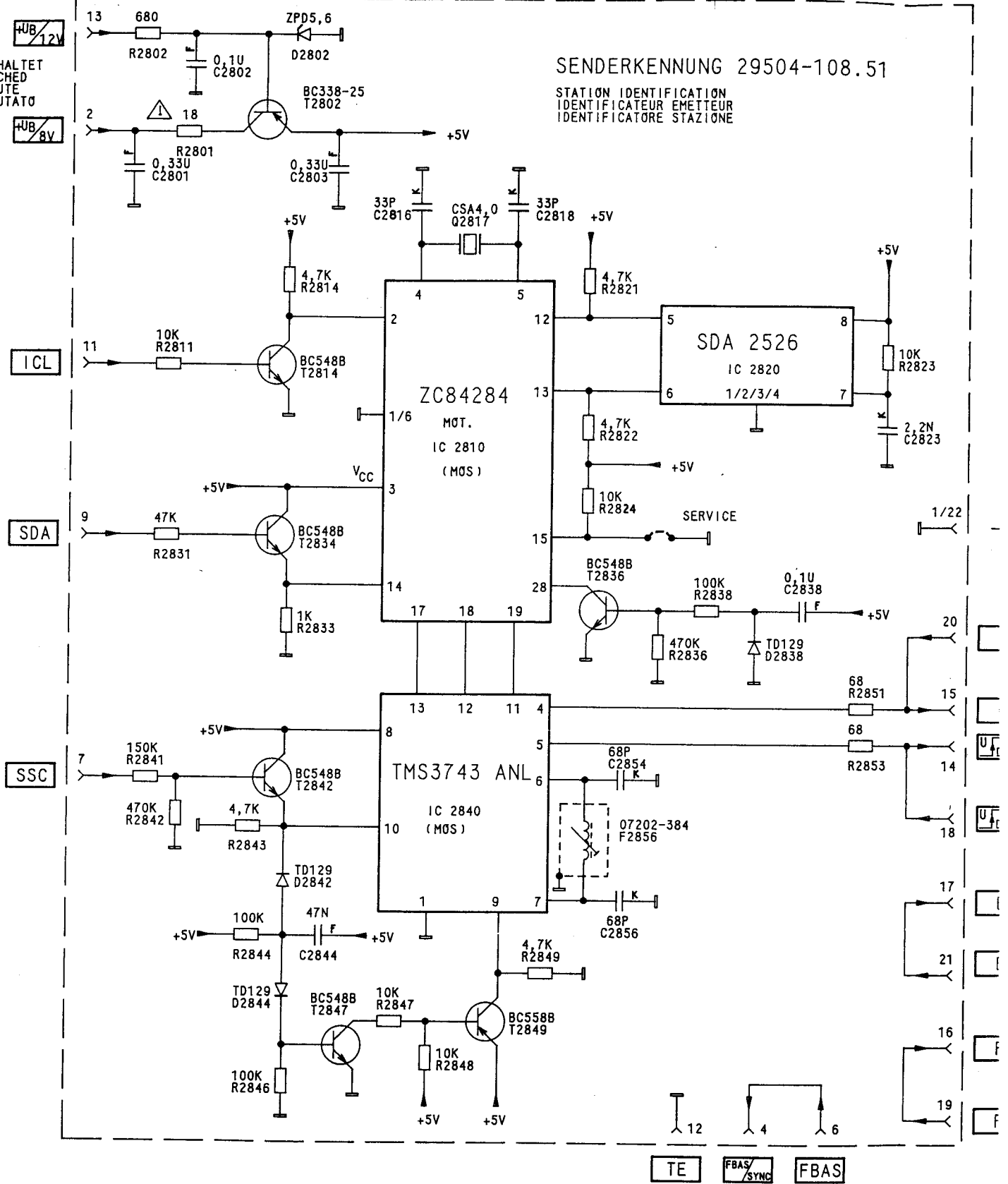
Durante la taratura è necessario selezionare ripetutamente la pagina 199, poiché solo così è possibile una nuova immissione della pagina ed una valutazione della soglia degli errori.



GESCHALTET
SWITCHED
COMMUTE
COMMUTATO

SENDERKENNUNG 29504-108.51

STATION IDENTIFICATION
IDENTIFICATEUR EMETTEUR
IDENTIFICATORE STAZIONE



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

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. Sperrpunktgleich

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 C9516 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 Nulllinie des (R-Y)-Signals auf Zeilenniveau bringen.
- Tastkopf an Pin 3 vom TDA 4555 anschließen, mit Spule DB Nulllinie des (B-Y)-Signals auf Zeilenniveau bringen.
- Spule F2521 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 C9516 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 F2521 so that the (B-Y) signal is free of overshooting.

1. Taratura del bianco

- Applicare un monoscopio FuBK.
- Regolare Ⓐ al minimo, Ⓑ sul valore nominale e Ⓒ al massimo.
- Con i regolatori VR e VB (piastra cinescopio) eliminare le macchie di colore.

2. Taratura del punto di blocco

Una regolazione manuale non è possibile, poichè questa scheda possiede 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 T736, T756 (piastra cinescopio).

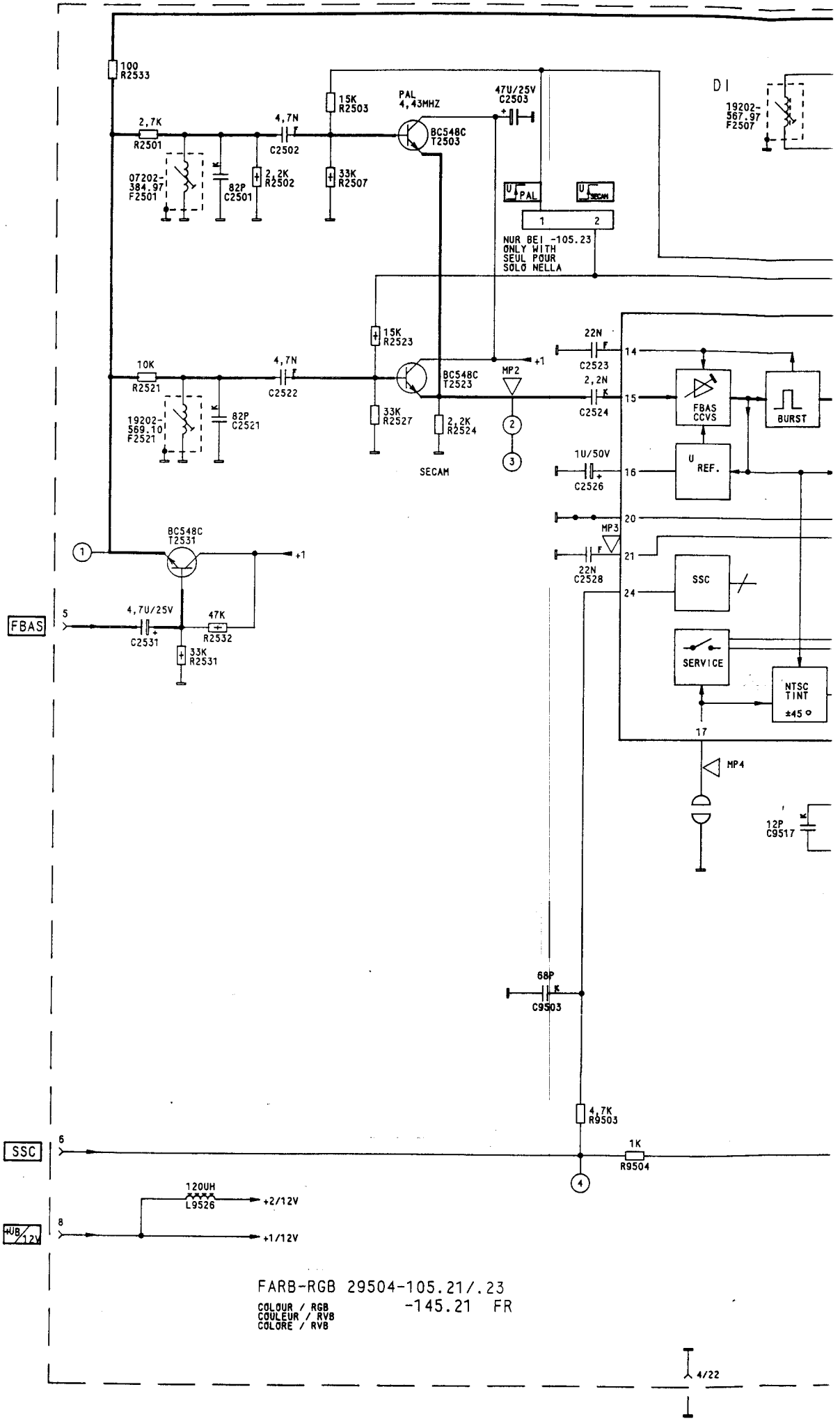
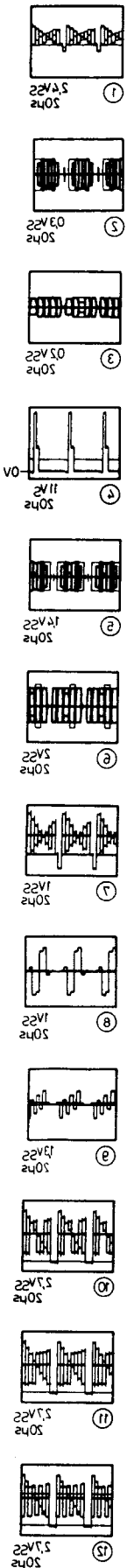
Valore nero dei tre segnali catodici ca. 140...150 V.

3. Regolazione del canale colore.

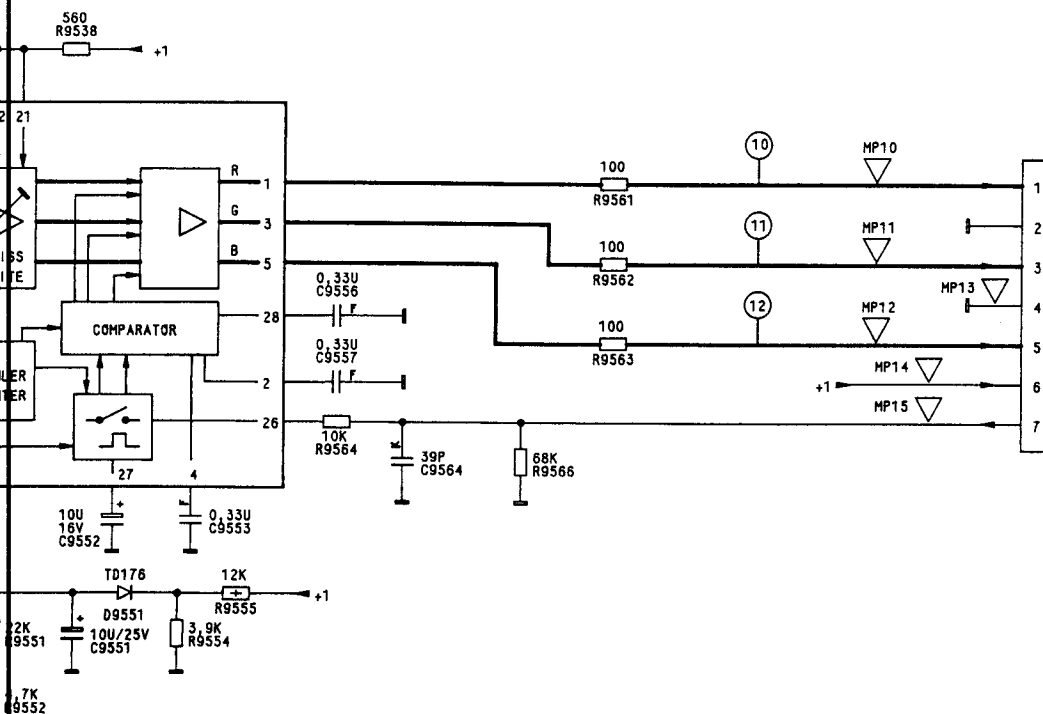
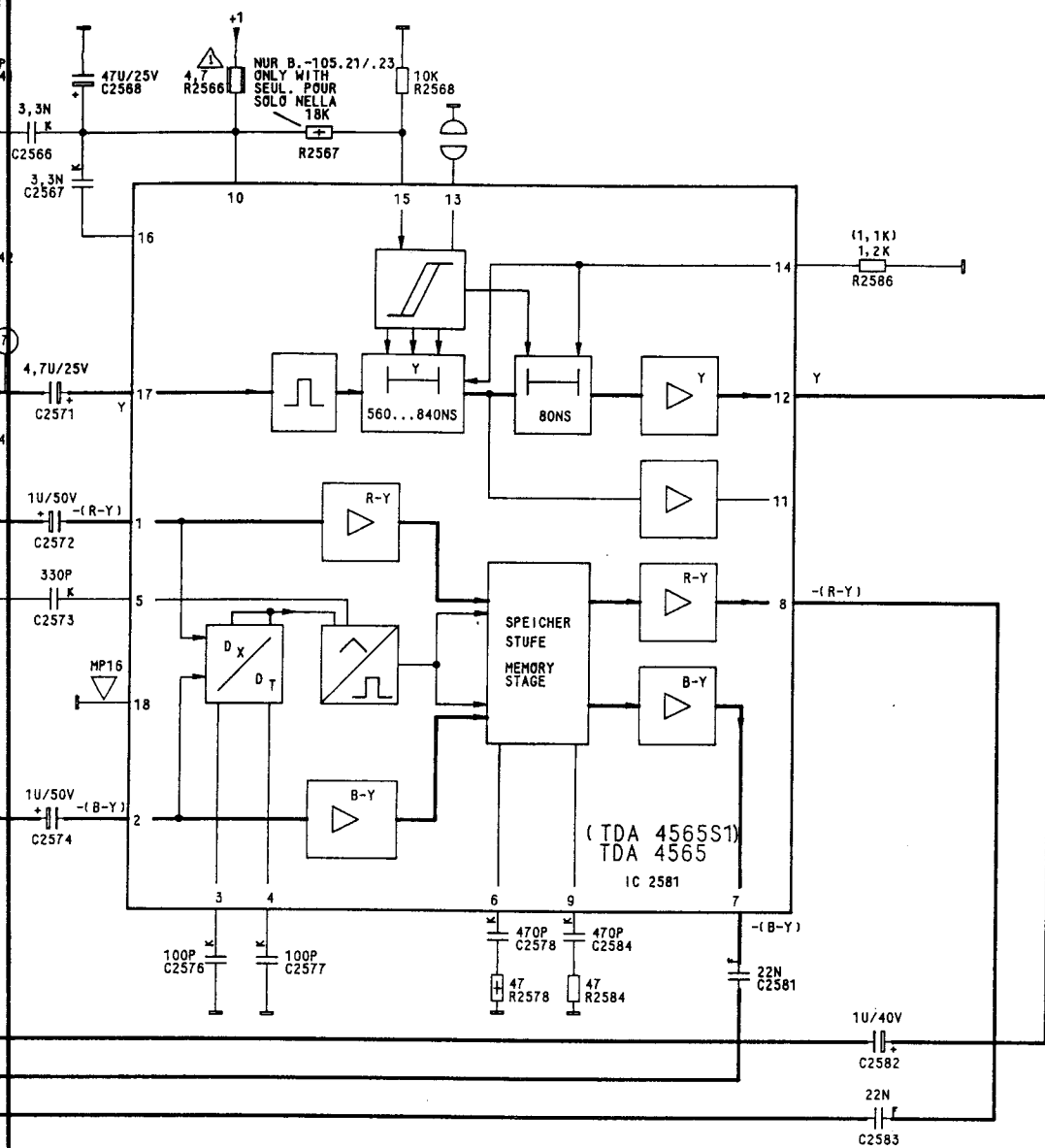
- Applicare un monoscopio PAL.
- Regolare FK e H sul valore nominale, K al massimo.
- Sull'integrato TDA 4555 collegare pin 28 a +12 V.
- Sull'integrato TDA 4555 collegare pin 17 a massa.
- Con C9516 fermare le barre colorate scorrevoli.
- Togliere i cortocircuiti.
- Collegare la sonda a MP 12, con il regolatore BP e la bobina LZ a copertura le immagini doppie del segnale B.
- Applicare un monoscopio SECAM.
- Collegare la sonda al pin 1 dell'integrato TDA 4555, con la bobina DR portare la linea zero del segnale (R-Y) sulla frequenza di riga.
- Collegare la sonda al pin 3 dell'integrato TDA 4555, con la bobina DB portare la linea zero del segnale (B-Y) sulla frequenza di riga.
- La bobina F2581 applicarla così in modo che il segnale è chiaro.

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauratron.co.uk

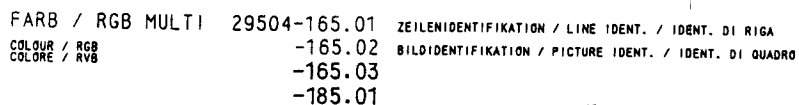
① al massimo.
 iminare eventuali
 sta scheda incor-
 terdizione.
 illoscopio):
 ⑤ al minimo.
 736, T756, T776
 0 V.
 mo.
 /.
 a.
 la bobina LZ por-
 B.
 55,
 le (R-Y) sul livello
 55,
 le (B-Y) sul livello
 segnale (B-Y) sia

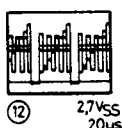
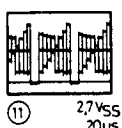
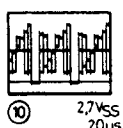
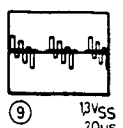
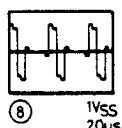
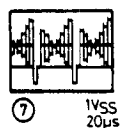
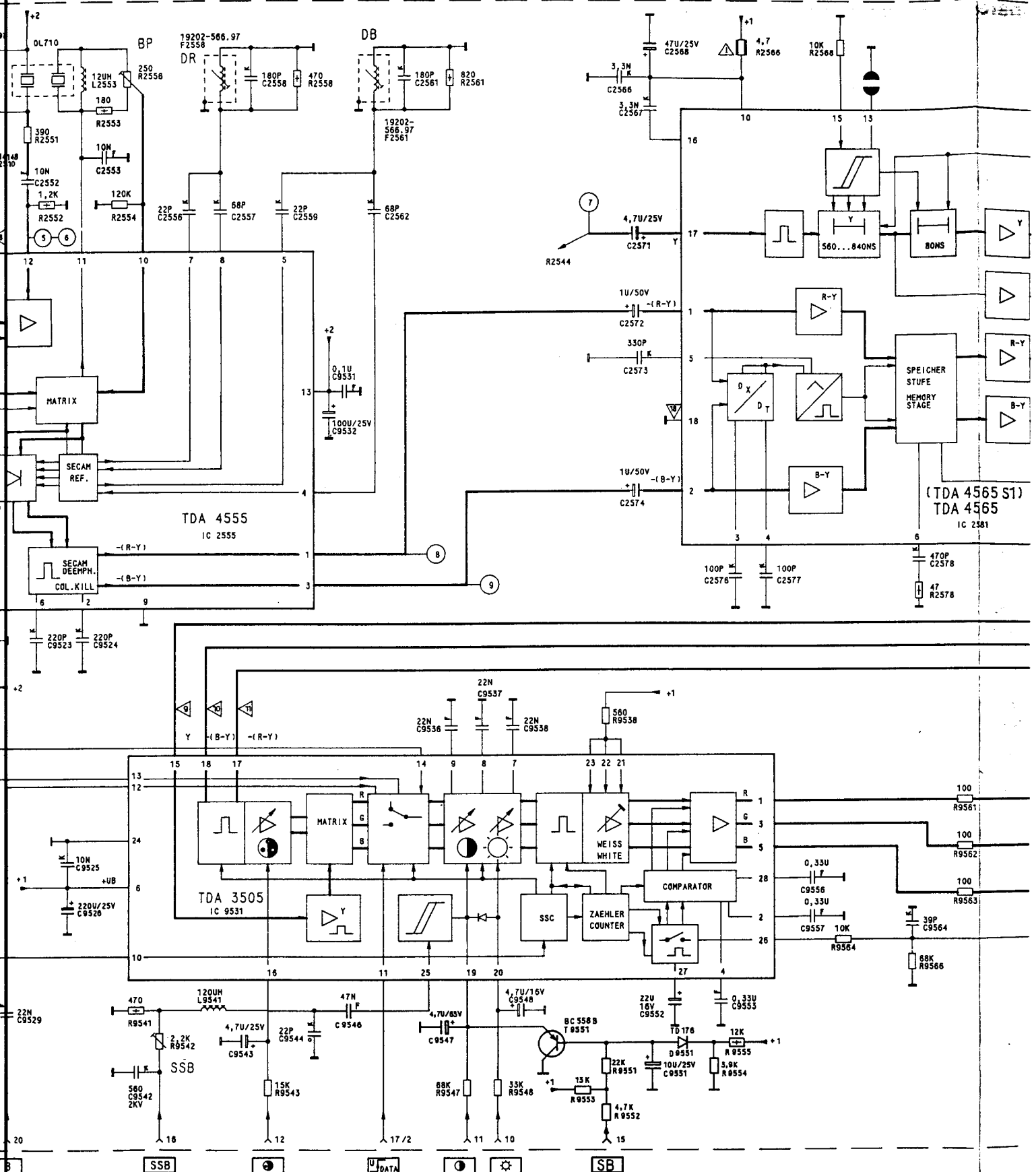


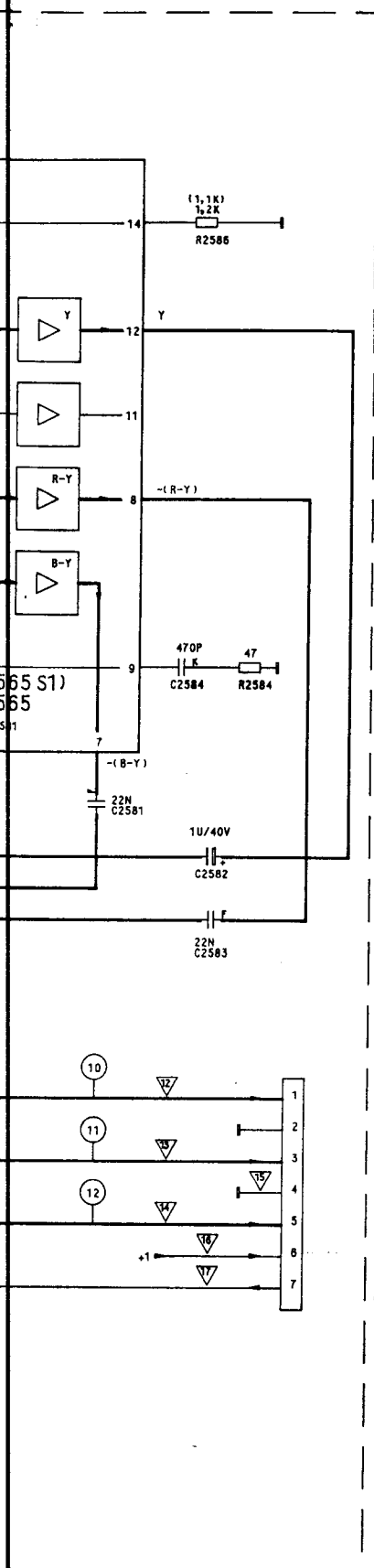
FARB-RGB 29504-105.21/.23
 COLOUR / RGB
 COULEUR / RVB
 COLORE / RVB



BILDROHRLATTE
CRT BASE
PIASTRA CINESCOPIO
C.I. TUBE CATHOD.







1. Weißabgleich

- FuBK-Testbild einspeisen.
- $\odot$ min., $\odot$ nom., $\odot$ max., einstellen.
- Regler VR und VB (Bildrohrplatte) so einstellen, daß keine Verfärbungen in den Grauwerten sichtbar sind.

2. Sperrpunktgleich

Eine manuelle Einstellung ist nicht möglich, da die Steckkarte eine automatische Dunkelstromregelung besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).

- FuBK-Testbild einspeisen.
- $\odot$ min., $\odot$ nom., $\odot$ min., einstellen.
- Tastkopf an den Kollektoren der Transistoren T736, T756, T776 anhängen (Bildrohrplatte). Die Schwarzwerte der drei Kathodensignale liegen bei ca. 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 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.
- NTSC-Testbild 3,5 MHz einspeisen.
- IC-Pin 26 vom TDA 4555 mit +12 V verbinden.
- IC-Pin 17 vom TDA 4555 mit Masse verbinden.
- Mit Trimmer C 9514 die durchlaufenden Farbbalken zum Stehen bringen.
- Kurzschlußbrücken entfernen.
- SECAM-Testbild einspeisen.
- Tastkopf an Pin 1 vom TDA 4555 anschließen, mit Spule DR Nulllinie des (R-Y)-Signals auf Zeilenniveau bringen.
- Tastkopf an Pin 3 vom TDA 4555 anschließen, mit Spule DB Nulllinie 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 $\odot$ to min., $\odot$ to nom., $\odot$ 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 $\odot$ to min., $\odot$ to nom., $\odot$ 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 (26" sets).

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 3.5 MHz NTSC test pattern.
- Connect pin 26 of IC TDA 4555 to +12 V supply.
- Connect pin 17 of IC TDA 4555 to chassis.
- Adjust trimmer C 9514 for stationary pattern in colour bars.
- 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) 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 b

- Applicare u
- Regolare $\odot$
- Con i regol
- macchie di

2. Taratura del p

- Una regolazione
- pora una regol
- Controllo del p
- Applicare u
- Regolare $\odot$
- Collegare la
- (piastra cin
- Valore nero
- da 26").

3. Regolazione d

- Applicare u
- Regolare FK
- Sull'integrat
- Sull'integrat
- Con C 9516
- Togliere i co
- Collegare la
- tare a cope
- Applicare u
- Sull'integrat
- Sull'integrat
- Con C 9514
- Togliere i co
- Applicare u
- Collegare la
- con la bobin
- della freque
- Collegare la
- con la bobin
- della freque
- La bobina F
- chiaro.

Taratura del bianco

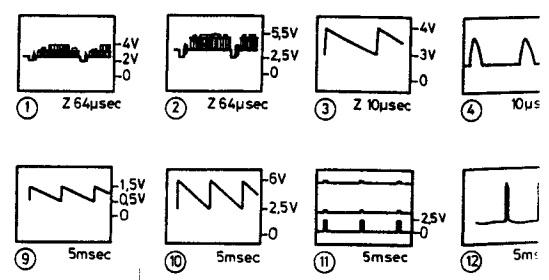
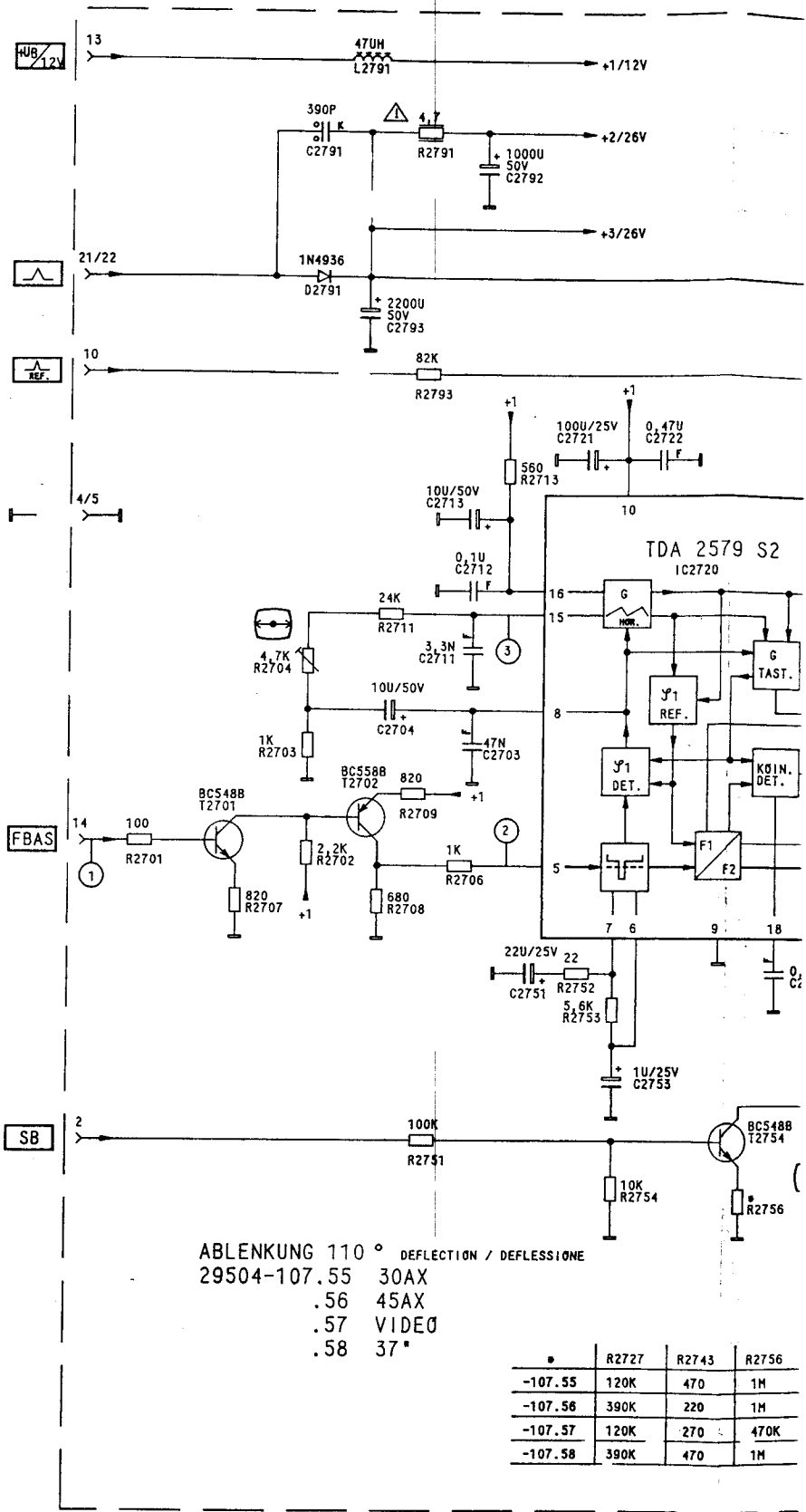
- Applicare un monoscopio FuBK
- Regolare al minimo, sul valore nominale e al massimo.
- Con i regolatori VR e VB (piastra cinescopio) eliminare eventuali macchie di colore.

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 T736, T756, T776 (piastra cinescopio).
- Valore nero dei tre segnali catodici ca. 140...150 V (apparecchi da 26").

Regolazione del canale colore.

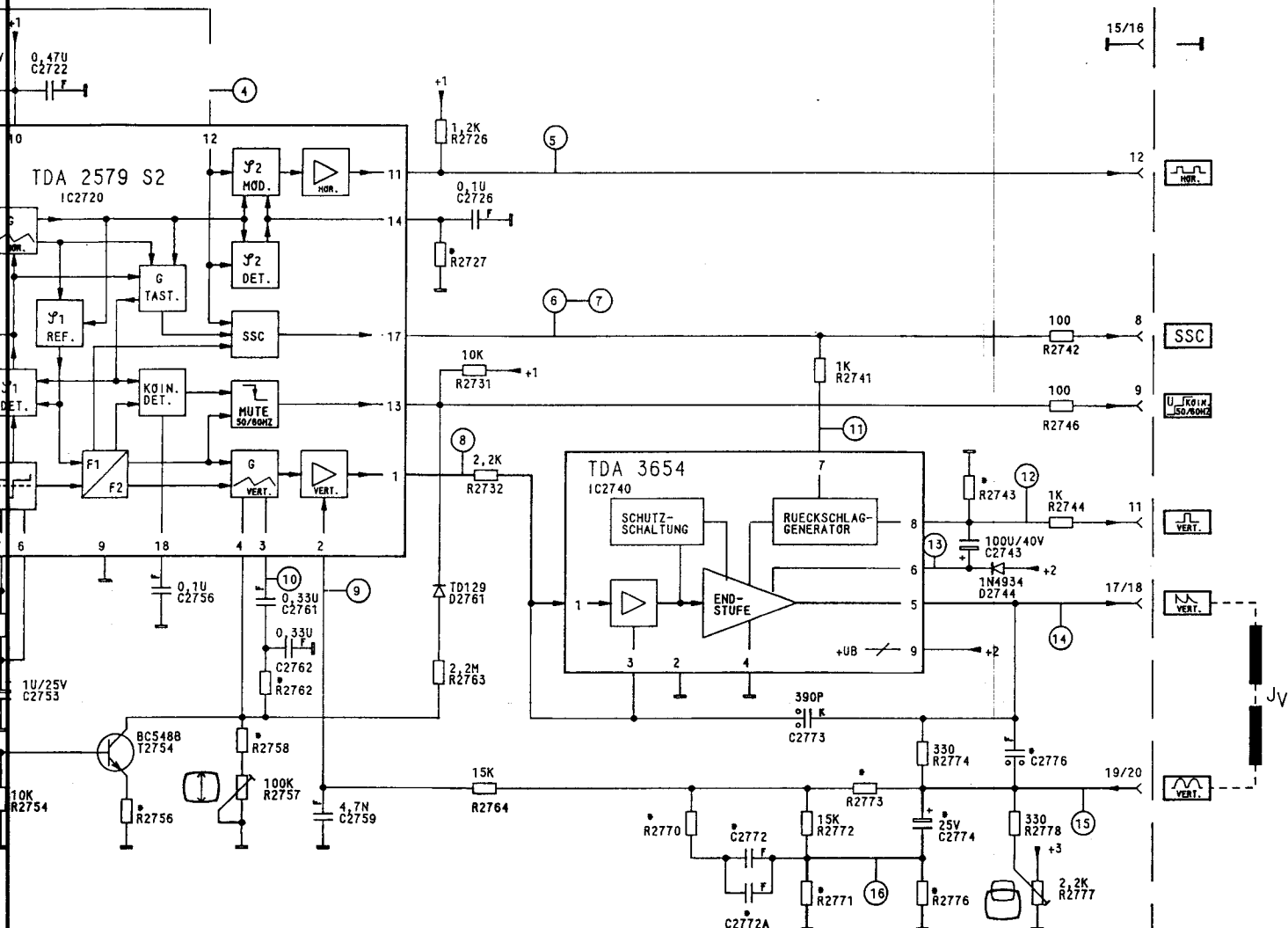
- Applicare un monoscopio PAL.
- Regolare FK e H sul valore nominale, K al massimo.
- Sull'integrato TDA 4555 collegare pin 28 a +12 V.
- Sull'integrato TDA 4555 collegare pin 17 a massa.
- Con C 9516 fermare le barre colorate scorrevoli.
- Togliere i cortocircuiti.
- Collegare la sonda a MP 12, con il regolatore BP e la bobina LZ portare a copertura le immagini doppie del-segnale B.
- Applicare un monoscopio NTSC 3,5 MHz.
- Sull'integrato TDA 4555 collegare pin 26 a +12 V.
- Sull'integrato TDA 4555 collegare pin 17 a massa.
- Con C 9514 fermare le barre colorate scorrevoli.
- Togliere i cortocircuiti.
- Applicare un monoscopio SECAM.
- Collegare la sonda al pin 1 dell'integrato TDA 4555, con la bobina DR portare la linea zero del segnale (R-Y) sul livello della frequenza di riga.
- Collegare la sonda al pin 3 dell'integrato TDA 4555, con la bobina DB portare la linea zero del segnale (B-Y) sul livello della frequenza di riga.
- La bobina F 2581 applicarla così in modo che il segnale (B-Y) sia chiaro.



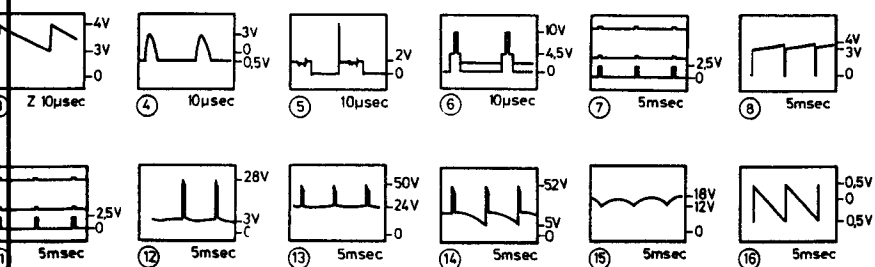
12V

26V

26V



R2727	R2743	R2756	R2758	R2762	R2770	R2771	C2772A	R2773	C2774	R2776	C2776	C2772
20K	470	1M	200K	330K	—	1	—	200K	2200U	1	0,22U/MKS4	1U
300K	220	1M	220K	150K	—	1	—	200K	1000U	1	0,22U/MKS4	1U
20K	270	470K	180K	200K	470	1,5	—	180K	2200U	1,5	0,1U/MKS100	1U
300K	470	1M	300K	150K	470	0,68	0,47U	180K	2200U	0,68	68N/FKS3	0,82U



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

CUC 3600

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung	Description	Denominazione	Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni
Stackkarten Plug-in circuit boards Schede								
1		29504-101.01	Kabeltuner	Cable tuner	Tuner per TV cavo	TR 526		29201-019.06
2		29504-102.04	ZF-Verstärker	IF-amplifier	Amplificatore FI	TR 651		29500-609.21
oder				or:	oppure:			
2		29504-102.05	ZF-Verstärker	IF-amplifier	Amplificatore FI	L 336		8140-526-451
2		29504-112.01	ZF-Verstärker (GB)	IF-amplifier (GB)	Amplificatore FI (GB)	L 337		8140-526-451
5		29504-105.23	Farb/RGB	RGB colour	Colore /RGB	L 351		09240-113.21
7		29504-107.56	Ablenkung	Deflection	Deflessione	L 355		8140-525-969
8		29504-108.05	Videotext VT 3805	Videotext VT 3805	Televideo VT 3805	L 503		29500-804.07
Mechanische Teile Mechanical parts Parti meccaniche						L 514		29500-804.08
15		29304-070.45	Bildrohrplatte kpl.	Picture tube plate	Piastra cinescopio	L 521		29203-110.97
15.1		29303-752.95	Bildrohrfassung	Picture tube socket	Zoccolo cinescopio	L 526		09240-110.21
15.2		8104-982-014	Dämpfungssperle	Anti-vibration	Perlina ammortizzatore	L 562		09245-405.08
16		29700-284.01	Bausteinhalter	Module holder	Supporto modulare	L 571		29500-804.07
16		29700-332.01	Bausteinhalter (VT)	Module holder (VT)	Supporto modulare (VT)	L 573		09246-846.24
17		29700-317.01	Bausteinhalter	Module holder	Supporto modulare	L 631		29500-804.06
18		29500-807.01	Abdeckung (Ant.-Buchse)	Cover (ant. plug)	Copertura (ant. spina)	L 633		8140-525-266
19		09621-113.02	2x Sicherungshalter	Fuse holder	Portafusibile	L 634		09278-309.01
20		29303-153.12	3x Montageclip f. IC	Mounting f. IC	Archetto di montaggio p. IC	L 672		8140-526-320
21		29303-153.02	Montageclip f. Trans.	Mounting f. trans.	Archetto di montaggio p. tras.			
22		29303-156.03	Isolierscheibe f. BU 508	Insulating washer f. BU 508	Rondella isolante p. BU 508	IC 200		8305-201-953
25		29304-060.35	Euro-AV-Buchsenplatte kpl.	Euro-AV-socket	Euro-AV-embase cpl.	IC 250		8305-293-559
25.1		29303-119.05	Pari-Buchse	Pari socket	Presa pari	IC 260		8305-201-953
25.2		27511-403.00	Mehrfachbuchse (Video)	Multiple socket	Presa multipla	IC 270		8305-362-014
25.3		29303-168.01	2x Cinch-Buchse	Cinch socket	Presa cinch	IC 280		8305-201-953
30		29303-364.01	Tuneraufnahme	Tuner holder	Supporto tuner	IC 350		8305-338-442
31		29700-282.01	Kabelhalter	Cable clamp	Supporto cavo	IC 550		8305-338-140
32		29700-283.01	Kabelhalter	Cable clamp	Supporto cavo	IC 555		8305-302-497
oder/or		29700-324.01	(f. Röder Kaskade)	(EHT-triplier -Roeder)	(per Molt. EAT Roeder)	IC 631		8305-302-461
			Kabelhalter	Cable clamp	Supporto cavo	IC 656		8305-204-317
			(f. Siemens Kaskade)	(EHT-triplier Siemens)	(per Molt. EAT Siemens)	IC 666		8305-205-765
						IC 676		8305-205-701
Elektrische Teile Electrical parts Parti elettriche								
K 536		8324-800-040	Kaskade	Kascade	Moltiplicatore in cascade	T 111		8302-202-543
oder/or/oppure:			BG 2087/642-1006(Röderst.)	BG 2087/642-1006(Röderstein)	BG 2087/642-1006 (Röderstein)	T 271		8302-200-171
		72008-090.02	B 9245-S 8154-M473(Siemens)	B 9245-S 8154-M 473(Siemens)	B 9245-S 8154- M 473 (Siemens)	T 321		8302-200-559
			Fokusregler	Focusing control	Regolatore del fuoco	T 501		8302-202-538
FFS-Einbauchassis CUC 3600 29701-049.01/02/04						T 502		8302-202-538
						T 531		8302-220-299
						T 572		8302-260-507
						T 634		8302-260-903
						T 687		8302-218-053
						T 691		8302-200-348
						T 692		8302-200-348
						T 693		8302-200-348
						T 736		8302-411-759
						T 737		8302-202-560
						T 742		8302-222-422
						T 746		8302-220-421
						T 756		8302-411-759

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauratron.co.uk

Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
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001-019.06
000-609.21

0-526-451
0-526-451
0-113.21
0-525-969
0-804.07
0-804.08
0-110.97
0-110.21
0-405.08
0-804.07
0-846.24
0-804.06
0-525-266
0-309.01
0-526-320

0-201-953 CD 4053 BE (MOS)
0-293-559 RC 4559 NB
0-201-953 CD 4053 BE (MOS)
0-362-014 TEA 2014
0-201-953 CD 4053 BE (MOS)
0-338-442 TDA 8442 (MOS)
0-338-140 TDA 8140
0-302-497 TDA 4950
0-302-461 TDA 4600-2
0-204-317 LM 317 T
0-205-765 7812/3%
0-205-701 78 N 05

0-202-543 BC 548 B
0-200-171 BC 338-40
0-200-559 BC 558 B
0-202-538 BC 548
0-202-538 BC 548
0-220-299 BF 299
0-260-507 BU 508 A
0-260-903 BU 903
0-218-053 BDX 53 A
0-200-348 BC 337-16
0-200-348 BC 337-16
0-200-348 BC 337-16
0-411-759 GF 759
0-202-560 BC 558 C
0-222-422 BF 422
0-220-421 BF 421
0-411-759 GF 759

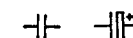
Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
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T 762 8302-222-422 BF 422
T 766 8302-220-421 BF 421
T 776 8302-411-759 GF 759
T 782 8302-222-422 BF 422
T 786 8302-220-421 BF 421

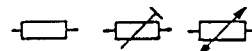


D 201 8309-214-114 TD 129
D 202 8309-215-021 1 N 4001
D 281 8309-214-114 TD 129
D 282 8309-214-114 TD 129
D 292 8309-214-018 TD 190
D 322 8309-214-114 TD 129
D 331 8309-715-008 ZPD 5,6
D 333 8309-201-033 BA 157
D 504 8309-215-020 1 N 4004
D 506 8309-201-033 BA 157
D 513 8309-707-110 ZPD 6,8
D 515 8309-214-018 TD 190
D 529 8309-516-016 BYV 16
D 534 8309-215-020 1 N 4004
D 541 8309-200-021 BAV 21
D 543 8309-215-050 1 N 4148
D 544 8309-215-050 1 N 4148
D 554 8309-215-050 1 N 4148
D 562 8309-707-035 ZPD 30
D 571 8309-204-228 BY 228
D 572 8309-210-144 SKE 4 G 2/06
D 616 8309-215-013 1 N 4007
D 621 8308-560-384 SKB 380/C1500/ LB 5
D 633 8309-517-033 BYW 32
D 634 8309-215-013 1 N 4007
D 635 8309-215-013 1 N 4007
D 636 8309-201-101 BA 159
D 647 8309-517-033 BYW 32
D 648 8309-517-033 BYW 32
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 687 8309-215-009 1 N 4002
D 708 8309-707-109 ZPD 4,7
D 741 8309-215-050 1 N 4148
D 743 8309-215-050 1 N 4148
D 746 8309-214-018 TD 190
D 761 8309-215-050 1 N 4148
D 763 8309-215-050 1 N 4148
D 766 8309-214-018 TD 190
D 781 8309-215-050 1 N 4148
D 783 8309-215-050 1 N 4148
D 786 8309-214-018 TD 190

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
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C 511 8515-911-114 9000pF/1600 V
C 512 8515-911-424 0,027µF/400 V
C 513 8515-942-131 1800pF/100 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 8563-731-622 0,022µF/1000 V
C 529 8650-090-477 270pF/2 KV
C 530 8660-097-219 220 pF
C 531 8563-731-622 0,022µF/1000 V
C 537 8563-720-206 0,06µF/100 V
C 573 8515-721-240 0,36µF/250 V
C 611 8660-097-241 3300pF
C 613 8660-097-241 3300pF
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 634 8515-911-091 2200pF/2000 V
C 644 8520-601-563 5600pF/400 V
C 646 8525-033-487 8200pF/400 V
C 648 8563-731-418 0,22µF/250 V
C 658 8415-166-147 1000µF/25 V
C 661 8650-090-477 270pF/2 KV
C 668 8415-166-147 1000µF/25 V
C 671 8650-090-477 270 pF/2 KV
C 681 8650-090-477 270 pF/2 KV
C 691 8650-090-477 270 pF/2 KV
C 722 8563-731-655 0,15µF/1000 V
C 727 8650-131-012 150pF/2 KV



R 337 8705-269-301 15 KΩ
R 513 8700-249-083 2,7 KΩ NB
R 522 8700-329-025 10 Ω NB
R 523 8705-221-271 820 Ω
R 524 8700-121-217 4,7 Ω
R 525 8735-003-033 0,33 Ω
R 526 8311-201-073 PTC 2 G P 2390- J 146

Ersatzteilliste (Auszug) · List of Spare Parts CUC 3800

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 533		8700-007-473	1 KΩ
R 550		8765-097-997	0,68 Ω
R 554		8790-047-135	1 KΩ
R 558		8700-007-449	100 Ω
R 561		8790-047-164	100 KΩ
R 571		8701-230-817	4,7 Ω
R 573		8730-018-979	0,12 Ω
R 574		8705-369-229	15 Ω
R 616		8705-321-083	2,7 KΩ
R 617		8311-201-462	PTC 1 G Q 63100-P 2462-J29
R 621		8730-199-016	11 W/4,3 Ω
R 623		8311-400-125	VZA 275
R 624		8718-250-158	3,6 MΩ VDE
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 636		8750-210-049	7W/100 Ω
R 647		8796-101-142	2,2 KΩ
R 648		8750-210-049	7W/100 Ω
R 661		8735-003-022	0,22 Ω
R 671		8735-003-022	0,22 Ω
R 681		8735-002-022	0,22 Ω
R 688		8705-269-109	33 KΩ
R 690		8730-271-215	7 W /3,9 Ω
R 704		8705-269-021	6,8 Ω
R 721		8700-051-073	100 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/T

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung	Description
			<u>Steckkarten</u>	<u>Plug-in circuit boards</u>
1		29504-101.01	Kabeltuner	Cable tuner
2		29504-102.04	ZF-Verstärker	IF-amplifier
oder				or:
2		29504-102.05	ZF-Verstärker	IF-amplifier
2		29504-162.02	ZF-Verstärker(Multi)	IF-amplifier (multi)
2		29504-112.01	ZF-Verstärker (GB)	IF-amplifier (GB)
5		29504-105.23	Farb/RGB	RGB colour
5		29504-165.03	Farb/RGB (Multi)	RGB colour (multi)
7		29504-107.56	Ablenkung	Deflection
8		29504-108.05	Videotext VT 3805	Videotext VT 3805
			<u>Mechanische Teile</u>	<u>Mechanical parts</u>
15		29304-070.45	Bildrohrplatte kpl.	Picture tube plate
15.1		29303-752.95	Bildrohrfassung	Picture tube socket
15.2		8104-982-014	Dämpfungssperle	Anti-vibration
16		29700-284.01	Bausteinhalter	Module holder
16		29700-332.01	Bausteinhalter (VT)	Module holder (VT)
16		29700-277.01	Bausteinhalter (Multi)	Module holder (multi)
17		29700-317.01	Bausteinhalter	Module holder
18		29500-807.01	Abdeckung(Ant.-Buchse)	Cover (ant. plug)
19		09621-113.02	Sicherungshalter	Fuse holder
20		29303-153.12	Montageclip f. IC	Mounting f. IC
21		29303-153.02	Montageclip f. Trans.	Mounting f. trans.
22		29303-156.03	Isolierscheibe f. BU 508	Insulating washer f. t
25		29304-060.35	Euro-AV-Buchsenplatte kpl.	Euro-AV-socket
25.1		29303-119.05	Peri-Buchse	Peri socket
25.2		27511-403.00	Mehrfachbuchse(Video)	Multiple socket
25.3		29303-168.01	Cinch-Buchse	Cinch socket
30		29303-364.01	Tuneraufnahme	Tuner holder
31		29700-282.01	Kabelhalter	Cable clamp
32		29700-283.01	Kabelhalter	Cable clamp
oder/or		29700-324.01	(f. Röder Kaskade)	(EHT-tripler Röder)
			Kabelhalter	Cable clamp
			(f. Siemens Kaskade)	(EHT-tripler Siemens)
			<u>Elektrische Teile</u>	<u>Electrical parts</u>
K 536		8324-800-040	Kaskade	Kaskade
oder/or/oppure:			B62087/642-1006(Röderst.)	B62087/642-1006(Röder
			B9245-S 8154-M473(Siemens)	B9245-S 8154-M473(Sie
		72008-090.02	Fokusregler	Focusing control
FFS-Einbauchassis CUC 3800		29701-050.01/02/04		

are-Parts (extract) · Lista ricambi (estratto)

Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione	Pos. No.	Fig. No.	Bestell-Nr./Part No. Réf./Nr. d'ordinazioni	Benennung Description Désignation Denominazione
Electronic circuit boards				Electronic circuit boards			
<u>Schede</u>				<u>Schede</u>			
							
Tuner	TR 526	29201-019.06		T 762		8302-222-422	BF 422
Amplifier	TR 651	29500-609.22		T 766		8302-220-421	BF 421
oppure:				T 776		8302-411-759	GF 759
Amplifier				T 782		8302-222-422	BF 422
Amplifier				T 786		8302-220-421	BF 421
Amplifier (multi)	L 336	8140-526-451					
Amplifier (GB)	L 337	8140-526-451		D 201		8309-214-114	TD 129
Color /RGB	L 351	09240-113.21		D 202		8309-215-021	1 N 4001
Color (multi)	L 355	8140-525-969		D 281		8309-214-114	TD 129
Deflection	L 503	29500-804.07		D 282		8309-214-114	TD 129
Teletext VT 3805	L 514	29500-804.08		D 292		8309-214-018	TD 190
	L 521	29203-110.97		D 322		8309-214-114	TD 129
Mechanical parts				D 331		8309-715-008	ZPD 5,6
<u>Parti meccaniche</u>				D 333		8309-201-033	BA 157
Cathode plate	L 526	09240-110.21		D 504		8309-215-020	1 N 4004
Cathode socket	L 562	09245-405.08		D 506		8309-201-033	BA 157
Coil	L 571	29500-804.07		D 513		8309-707-110	ZPD 6,8
Coil (VT)	L 573	09246-846.24		D 515		8309-214-018	TD 190
Coil (multi)	L 631	29500-804.06		D 529		8309-516-016	BYV 16
Coil	L 633	8140-525-266		D 534		8309-215-020	1 N 4004
Coil	L 634	09278-309.01		D 541		8309-200-021	BAV 21
Coil	L 672	8140-526-320		D 543		8309-215-050	1 N 4148
Coil (ant. plug)				D 544		8309-215-050	1 N 4148
Coil				D 554		8309-215-050	1 N 4148
Coil f. IC	IC 200	8305-201-953	CD 4053 BE (MOS)	D 562		8309-707-035	ZPD 30
Coil f. trans.	IC 250	8305-293-559	RC 4559 NB	D 571		8309-204-228	BY 228
Coil washer f. BU 508	IC 260	8305-201-953	CD 4053 BE (MOS)	D 572		8309-210-144	SKE 4 G
Coil socket	IC 270	8305-362-014	TEA 2014	D 616		8309-215-013	1 N 4007
Coil socket	IC 280	8305-201-953	CD 4053 BE (MOS)	D 621		8308-560-384	SKB 380/
Coil socket	IC 350	8305-338-442	TDA 8442 (MOS)	D 633		8309-517-033	BYW 32
Coil socket	IC 550	8305-338-145	TDA 8145	D 634		8309-215-013	1 N 4007
Coil	IC 555	8305-302-497	TDA 4950	D 635		8309-215-013	1 N 4007
Coil	IC 631	8305-302-461	TDA 4600-2	D 636		8309-201-101	BA 159
Coil	IC 656	8305-204-317	LM 317 T	D 647		8309-517-033	BYW 32
Coil (Röder)	IC 666	8305-205-765	7812/3%	D 648		8309-517-033	BYW 32
Coil	IC 676	8305-205-701	78 M 05	D 656		8309-517-076	BYW 76
Coil (Siemens)				D 661		8309-517-072	BYW 72
Electronic parts				D 671		8309-517-072	BYW 72
<u>Parti elettriche</u>				D 681		8309-712-822	MR 824-4C
Multiplier in cascade	T 111	8302-202-543	BC 548 B	D 687		8309-215-009	1 N 4002
642-1006(Röderstein)	T 271	8302-200-171	BC 338-40	D 708		8309-707-109	ZPD 4,7
8154-4473(Siemens)	T 321	8302-200-559	BC 558 B	D 741		8309-215-050	1 N 4148
	T 501	8302-202-538	BC 548	D 743		8309-215-050	1 N 4148
Regulator	T 502	8302-202-538	BC 548	D 746		8309-214-018	TD 190
	T 531	8302-220-299	BF 299	D 761		8309-215-050	1 N 4148
	T 572	8302-260-507	BU 508 A	D 763		8309-215-050	1 N 4148
	T 634	8302-260-903	BU 903	D 766		8309-214-018	TD 190
	T 687	8302-218-053	BDX 53 A	D 781		8309-215-050	1 N 4148
	T 691	8302-200-348	BC 337-16	D 783		8309-215-050	1 N 4148
	T 692	8302-200-348	BC 337-16	D 786		8309-214-018	TD 190
	T 693	8302-200-348	BC 337-16				
	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				

Benennung
Description
Designation
Denominazione

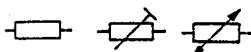
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759
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421

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190
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D 5,6
157
N 4004
157
D 6,8
190
V 16
N 4004
V 21
N 4148
N 4148
N 4148
30
228
E 4 G 2/06
N 4007
B 380/C1500/ LB 5
32
N 4007
N 4007
A 159
32
32
76
72
72
R 824-400
N 4002
D 4,7
4148
4148
D 190
4148
4148
D 190
4148
4148
D 190

Pos. Fig. Bestell-Nr./Part No. Benennung
No. No. Ref./Nr. d'ordinazioni Description
Designation
Denominazione



C 511	8515-911-114	9000pF/1600 V
C 512	8515-911-424	0,027µF/400 V
C 513	8515-942-131	1800pF/100 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	8515-722-222	0,22µF/160 V
C 522	8515-722-231	0,26µF/160 V
C 528	8563-731-622	0,022µF/1000 V
C 529	8650-090-477	270pF/2 KV
C 530	8660-097-219	220 pF
C 531	8563-731-622	0,022µF/1000 V
C 537	8563-720-206	0,068µF/100 V
C 573	8515-721-240	0,36µF/250 V
C 611	8660-097-241	3300pF
C 613	8660-097-241	3300pF
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 634	8515-911-091	2200pF/2000 V
C 644	8520-601-563	5600pF/400 V
C 646	8525-033-487	8200pF/400 V
C 648	8563-731-418	0,22µF/250 V
C 658	8415-166-147	1000µF/25 V
C 661	8650-090-477	270pF/2 KV
C 668	8415-166-147	1000µF/25 V
C 671	8650-090-477	270 pF/2 KV
C 681	8650-090-477	270 pF/2 KV
C 691	8650-090-477	270 pF/2 KV
C 722	8563-731-655	0,15µF/1000 V
C 727	8650-131-012	150pF/2 KV



R 337	8705-269-301	15 KΩ
R 513	8700-249-083	2,7 KΩ NB
R 522	8700-329-025	10 Ω NB
R 523	8705-221-271	820 Ω
R 524	8700-121-217	4,7 Ω
R 525	8735-003-033	0,33 Ω
R 526	8311-201-073	PTC 2 G P 2390- J 146

Pos. Fig. Bestell-Nr./Part No. Benennung
No. No. Ref./Nr. d'ordinazioni Description
Designation
Denominazione

R 527	8730-179-221	7W/6,8 Ω
R 528	8705-221-225	10 Ω
R 533	8700-007-473	1 KΩ
R 550	8765-097-997	0,68 Ω
R 554	8790-047-135	1 KΩ
R 558	8700-007-449	100 Ω
R 561	8790-047-164	100 KΩ
R 571	8701-230-817	4,7 Ω
R 573	8730-018-979	0,12 Ω
R 574	8705-369-229	15 Ω
R 616	8705-321-083	2,7 KΩ
R 617	8311-201-462	PTC 1 G Q 63100-P 2462-J29
R 621	8730-199-016	11 W/4,3 Ω
R 623	8311-400-125	VZA 275
R 624	8718-250-158	3,6 MΩ VDE
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 636	8750-210-049	7W/100 Ω
R 647	8796-101-142	2,2 KΩ
R 648	8750-210-049	7W/100 Ω
R 661	8735-003-022	0,22 Ω
R 671	8735-003-022	0,22 Ω
R 681	8735-002-022	0,22 Ω
R 688	8705-269-109	33 KΩ
R 690	8730-252-001	5,5 W/1 Ω
R 704	8705-269-021	6,8 Ω
R 721	8700-051-073	100 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/T
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