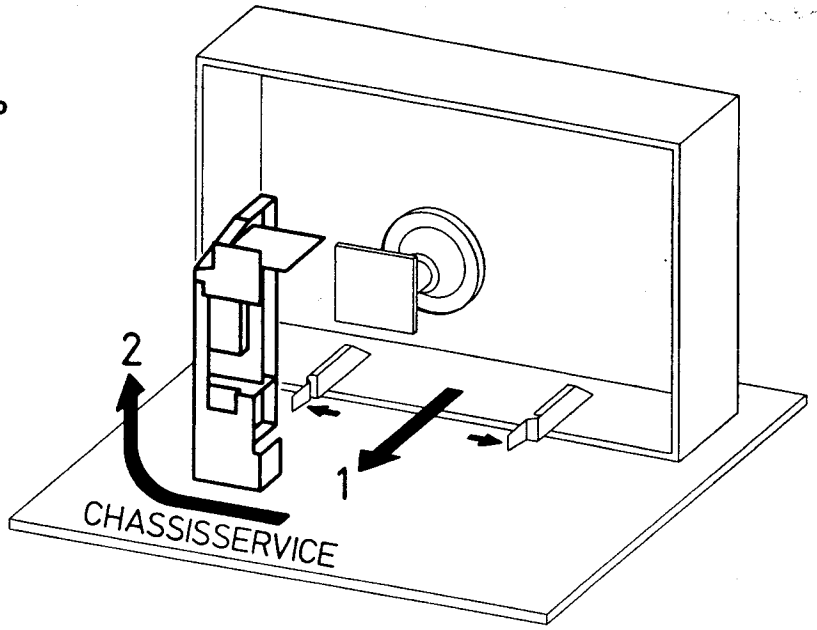
Servicestellung
Service position
Posizione di servizio



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Tel:- 01844-351694 Fax:- 01844-352554
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GRUNDIG Color

Ⓓ 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	**(9.25284-01)**
M 63-370 CTI/text	**(9.25284-02)**
M 70-390/9	**(9.25280-01)**
M 63-370 CTI/GB	**(9.25284-63)**
M 70-390 CTI/GB	**(9.25409-63)**
M 70-390/9 text	**(9.25280-02)**
M 70-396 CTI-PC	**(9.25408-01)**
M 70-390/9 text	**(9.25280-06)**
M 63-370 CTI/text	**(9.25284-06)**

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

M 70-395 CTI	**(9.25289-01)**
M 63-375/9	**(9.25440-01)**
M 63-375 CTI/GB	**(9.25264-63)**
M 70-395 CTI/GB	**(9.25289-63)**
M 70-395 CTI/text	**(9.25289-02)**
M 63-375/9 text	**(9.25440-02)**
M 70-395 CTI/text	**(9.25289-06)**
M 63-375 CTI/text	**(9.25264-06)**

Ⓓ SERVICEHINWEISE

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Service am I²C-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
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Ⓘ AVVERTENZA DI SERVIZIO

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Service Manual CUC 3600/3800 — Sach-Nr. 72010-000.70
Service manual CUC 3600/3800 — Order-No. 72010-000.70

mpc

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

P	PROGR.
P1	PROGR. TASTE PROGR. BUTTON TASTO PROGR. TOUCHE PROGR.
M	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 -
	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
C	KANALWAHL CHANNEL SEL. SELEZ. CANALE SELECT. DE CANAUX
	BALANCE BILANCIAM. BALANCE
	SUCHLAUF SELF-SEEK SINT. AUTOM. RECHERCHE AUTOM.
U T/M	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 COINC.	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. NORME FR
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
U T	REGELSP. VERZOEGERT DELAYED CONTR. VOLTAGE TENS. DI CONTR. RITARD. TENS. DE REGUL. RETARDEE
U TUN	ABSTIMMSP. TUNER TUNING VOLT. TUNER TENS. DI SINTONIA TUNER TENS. D'ACCORD TUNER
U AFC	REGELSP. AFC AFC CONTROL VOLT. TENS. DI CONTR. AFC TENS. DE REGUL. AFC
U MUTE	STUMMSCHALTUNG MUTING SILENZIAMENTO SILENCIEUX
	TASTIMPULS GATING PULSE IMPULSO A CADENZA IMPULS. DE DECLENCHEMENT
VERT.	VERT. TASTIMPULS VERT. GATING PULSE IMP. A CADENZA VERT. IMP. TRAME
VERT.	VERT. PARABEL VERT. PARABOLA PARABOLA VERT. SIGNAL PARABOLIQUE
VERT.	VERT. SAEGEZAHN VERT. SAW TOOTH DENTE DI SEGA VERT. SIGNAL DENT DE SCIE
HOR.	HOR. ANSTEUERUNG HORIZ. DRIVE PILOTAGGIO ORIZZ. SYNCHR. LIGNES
REF.	REF. IMPULS REFERENCE PULSE IMP. DI RIFER. IMP. DE REFER.
	SCHUTZSCHALTUNG CIRCUIT PROTECTION CIRCUITO DI PROTEZIONE CIRCUIT DE SECURITE
	FARBTON TINT TINTA TEINTE
REF.	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	FBAS-SIGNAL CCVS SIGNAL SEGNALE SVCC SIGNAL VIDEO COMPOSITE
SSC	SUPERSANDCASTLE
SB	STRAHLSTR. BEGR. BEAM CURRENT LIM. CORRENTE CATODICA MEDIA LIM. COUR. DE FAISCEAU
SSB	SPITZ. STRAHLSTR. BEGR. PEAK BEAM CURRENT LIMITING CORR. CATODICA DI PICCO LIM. DE FAISCEAU CRETE
R	ROT-SIGNAL RED SIGNAL SEGNALE ROSSO SIGNAL ROUGE
G	GRUEN-SIGNAL GREEN SIGNAL SEGNALE VERDE SIGNAL VERT
B	BLAU-SIGNAL BLUE SIGNAL SEGNALE BLU SIGNAL BLEU
Y	Y-SIGNAL SEGNALE Y SIGNAL Y
F	F-SIGNAL CHROMA SIGNAL SEGNALE F SIGNAL CHROMA
SW	SCHWARZWERT BLACK LEVEL LIVELLO DEL NERO NIVEAU DU NOIR
AUDIO	AUDIO-SIGNAL SEGNALE AUDIO SIGNAL AUDIO
AUDIO-L	AUDIO SIGNAL LINKS AUDIO SIGNAL LEFT SEGNALE AUDIO SINISTRA SIGNAL AUDIO GAUCHE
AUDIO-R	AUDIO SIGNAL RECHTS AUDIO SIGNAL RIGHT SEGNALE AUDIO DESTRA SIGNAL AUDIO DROIT
EURO-AV VIDEO	VIDEO SIGNAL EURO-AV SEGNALE VIDEO EURO-AV SIGNAL VIDEO NORME FR
EURO-AV AUDIO-R	AUDIO SIGNAL EURO-AV RECHTS AUDIO SIGNAL EURO-AV RIGHT SEGNALE AUDIO EURO-AV DESTRA SIGNAL AUDIO NORME FR DROIT
EURO-AV AUDIO-L	AUDIO SIGNAL EURO-AV LINKS AUDIO SIGNAL EURO-AV LEFT SEGNALE VIDEO EURO-AV SINISTRA SIGNAL AUDIO NORME FR GAUCHE
IR	IR-SIGNAL SEGNALE IR SIGNAL IR
U G1	SPG. GITTER 1 VOLTAGE GRID 1 TENS. GRIGLIA 1 TENS. GRILLE G1
U FOC.	FOKUSSP. FOCUSSING VOLTAGE TENS. DI FOCALIZZ. TENS. DE FOCALIS.
U H	HOCHSPANNUNG EHT VOLTAGE ALTA TENS. HAUTE TENS.
U SG	SCHIRMGITTERSP. SCREEN-GRID VOLT. TENS. GRIGLIA SCHERMO TENS. GRILLE-ECRAN
TE	TEXT ENABLE
SCL	I²C-CLOCK
VCL	VCR-CLOCK
ICL	I-BUS-CLOCK
SDA	DATEN DATA DATI DONNEES
ZF	ZF-SIGNAL IF SIGNAL SEGNALE FI SIGNAL FI
PP	PAL PRIORITAET PAL PRIORITY PRIORITA' PAL PRIORITE PAL
F-DIR.	F-SIGNAL DIREKT F SIGNAL DIRECT SEGNALE F DIRETTO SIGNAL CHROMA DIRECT
F V	FV-SIGNAL FV SIGNAL SEGNALE FV SIGNAL FY
F U	FU-SIGNAL FU SIGNAL SEGNALE FU SIGNAL FX
F-VERZ	F-SIGNAL VERZOEGERT F SIGNAL DELAYED SEGNALE F RITARD. SIGNAL CHROMA RETARDE
DL	VERZOEGERUNGSLEITUNG DELAY LINE LINEA DI RITARDO LIGNE A RETERD
U PROTECT.	SCHALTSP./SCHUTZFUNKTION SWITCHING VOLT. /PROTECTIVE FUNCTION TENS. DI COMMUT. /FUNZ.DI PROTEZ. TENS. DE COMMUT. / SECURITE
FBAS SYNC.	FBAS/SYNC.-SIGNAL CCVS/SYNC. SIGNAL SEGNALE SINCR. /VIDEO COL. COMPOSITO SIGNAL SYNC./VIDEO COMPOSITE
SYNC.	SYNC.-SIGNAL SYNC. SIGNAL SEGNALE SINCR. SIGNAL SYNC.
U 50/60 HZ	SCHALTSP. 50/60HZ SWITCHING VOLT.50/60HZ TENS. DI COMMUT. 50/60HZ TENS. DE COMMUT. 50/60HZ
U BTX	SCHALTSP. BTX SWITCHING VOLT. BTX (VIEWDATA) TENS. COMMUT. VIDEOTEL TENS. COMMUT. VIDEOTEXTE
SYNC. VT	SYNC. VT SYNC. VT (TELETEXT) SINCR. TELEVIDEO SYNC. TELETEXTE
SYNC. BTX	SYNC. BTX SYNC. BTX (VIEWDATA) SINCR. VIDEOTEL SYNC. VIDEOTEXTE
U RESET	SCHALTSP. RESET SWITCHING VOLT. RESET TENS. COMMUT. RESET
U STAND BY	SCHALTSP. STAND BY SWITCHING VOLT. STAND BY TENS. COMMUT. STAND BY TENS. COMMUT. VEILLE
U HUB	SCHALTSP. HUB SWITCHING VOLT. DEVIATION TENS. COMMUT. DEVIAZIONE TENS. COMMUT. DEVIATION
U DEEM	SCHALTSP. DEEM SWITCHING VOLT. DEEMPHASIS TENS. COMMUT. DEEMFASI TENS. COMMUT. DESACCENT.
U CAM AV	SCHALTSP. KAMERA WIEDERG. SWITCHING VOLT. CAMERA PLAYBACK TENS. COMMUT. RIPRODUZ. TELECAMERA TENS. COMMUT. REPROD. CAMERA
U LED	SCHALTSP. LED LED SWITCHING VOLT. LED TENS. DI COMMUT. TENS. DE COMMUT. LED
	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.
	OST/WEST SYMMETRIE EAST/WEST SYMMETRY SIMMETRIA EST/OVEST SYMMETRIE EST/OUEST

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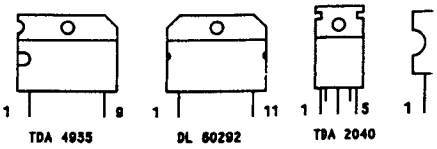
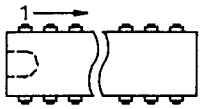
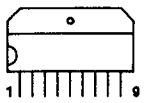


Wichtige Schaltzeichen
Important circuit simbols
Segni circuitali importanti



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



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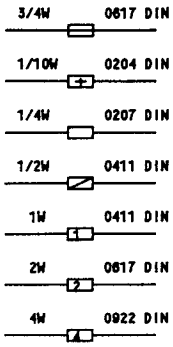
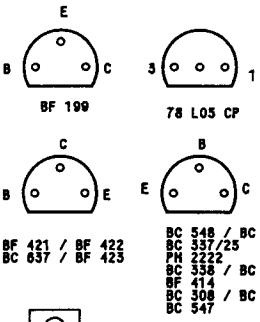
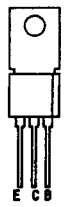


WIDERSTAND NICHT BRENNBAR
RESISTOR NOT FLAMMABLE
RESISTENZA NON INFIAMMABILE
RESISTANCE ININFLAMMABLE

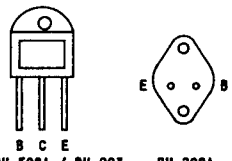
DRAHTWIDERSTAND
WIRE RESISTOR
RESISTENZA A FILO
RESISTANCE BOBINEE

SICHERUNGSWIDERSTAND
SAFETY RESISTOR
RESISTENZA DI SICUREZZA
RESISTANCE DISJONCTABLE



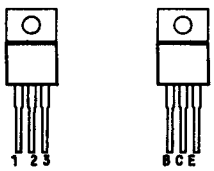


GF 759



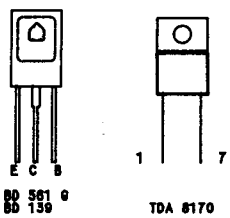
BU 508A / BU 903
BU 508D / BU 908

BU 208A
BU 546



TY 40184 / MC 7505
MC78 M05 CT
7812

BD 561G
BU 908
BU 903
S 668T
BUT 11A
BUT 56A



BD 561 G
BD 139

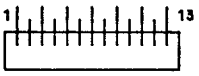
TDA 8170

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

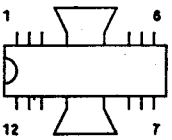
FOLIE
FOIL
A FOGLIA
FOLIO PLASTIQUE
F

KERAMIK
CERAMIC
CERAMICO
CERAMIQUE
K

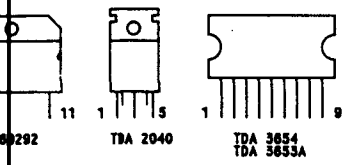
ELKO
ELECTROLYTIC
ELETTROLITICO
ELECTROLYTIQUE
+



TDA 2653A

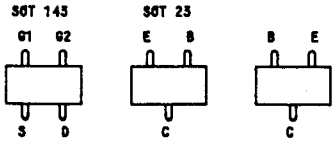


TDA 26558



TDA 2040

TDA 3654
TDA 3653A



BF 994
BF 996

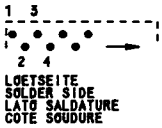
BF 569
BF 579

BC 847
BC 858

⚠ 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!

STECKERUNTERTEIL ZAEHLRICHTUNG
PLUG BOTTOM PART COUNTING DIRECTION
PARTE INFER. SPINA DIREZ. CONTEGGIO
SENS COMPTAGE PARTIE INFER. CONNECTEUR



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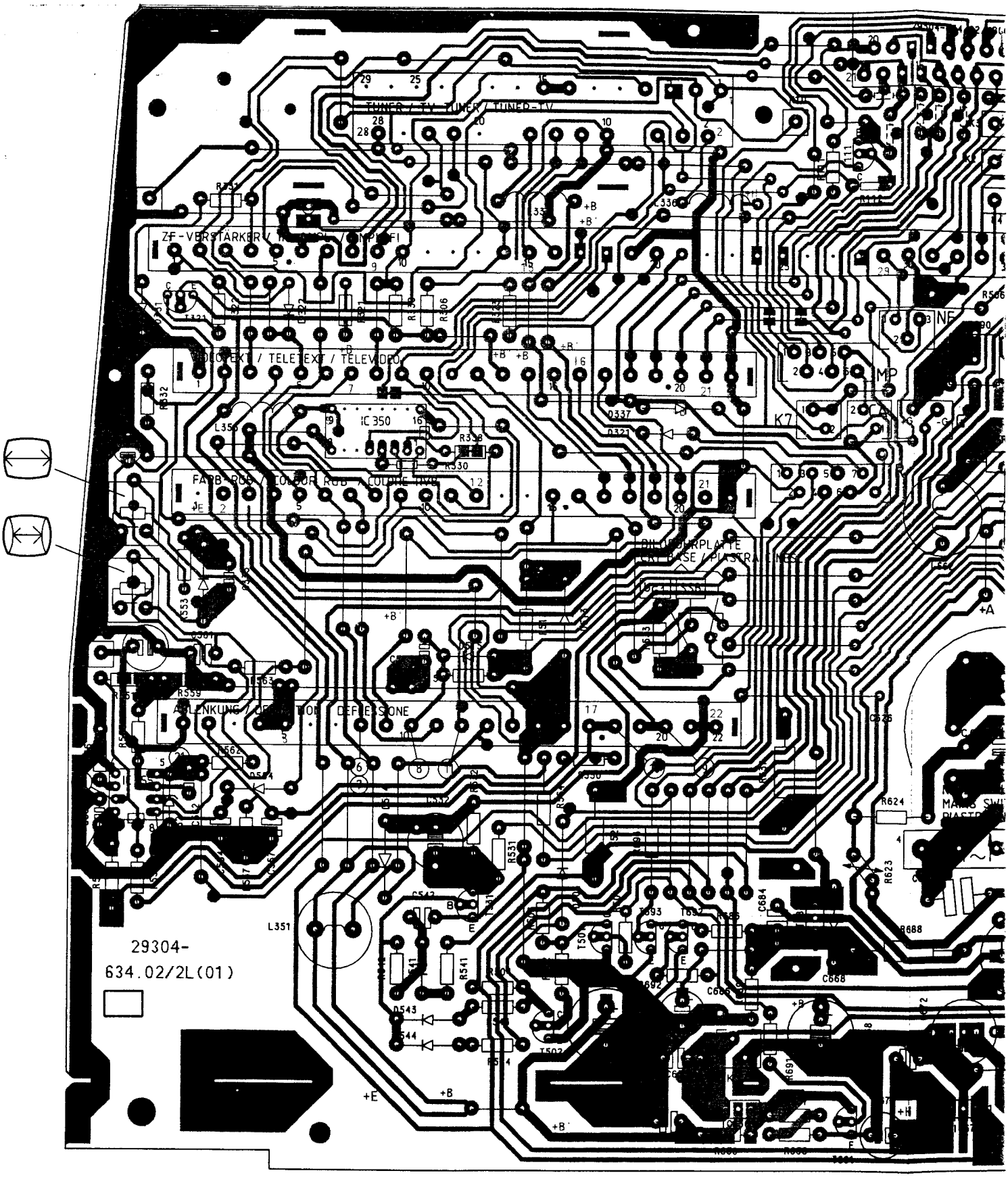
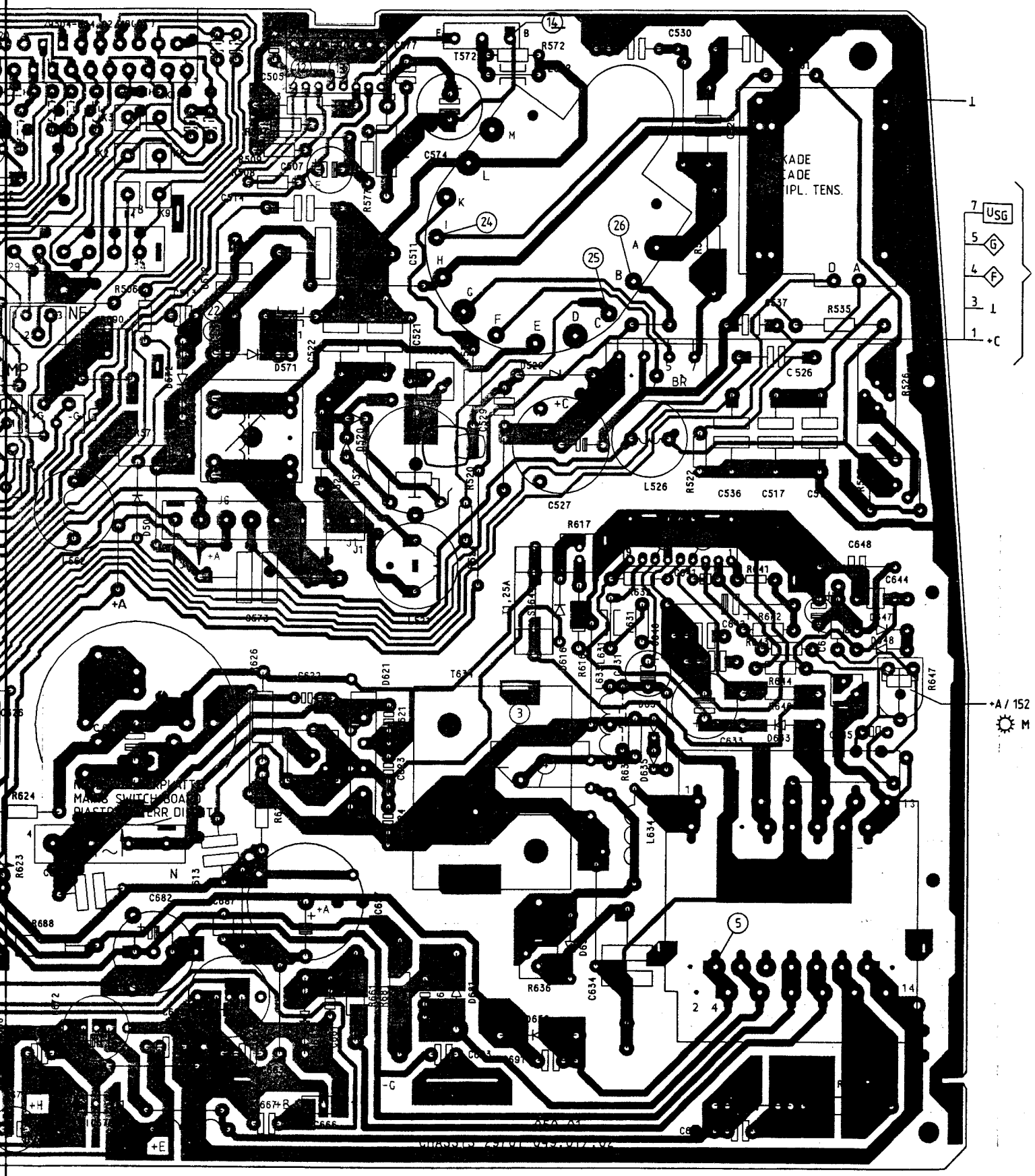
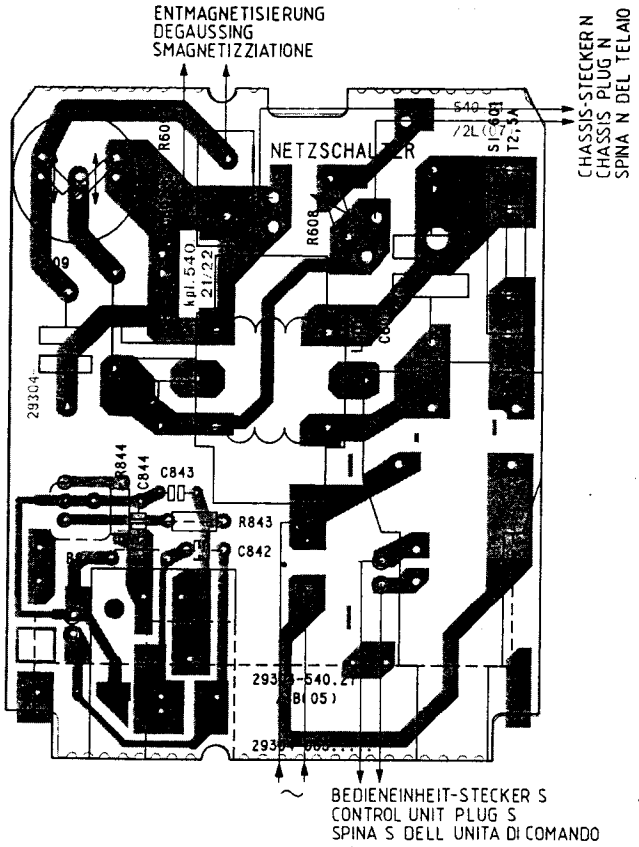

TUNER / TV TUNER / TUNER-TV
ZF-VERSTÄRKER
TELETEXT / TELETEXT / TELEVIDEO
FARB-RGB / COLOUR RGB / COULEUR RGB
BILDFÜHRPLATTE
ABLENKUNG / DEFLECTION / DEFLEXIONE
IC 350
K7
MP
NE
+A
+B
+E
+H
29304-
634.02/2L(01)


C530
R572
T572
C574
C511
C521
R535
C526
R526
L526
R522
C536
C517
C527
R617
C648
C644
R647
+A / 152
M
USG
+C
+A
R624
R623
C682
R688
R636
C634
L634
D621
T631
D571
D520
R506
C507
R577
C505
+H
+E
-C

NETZSCHALTERPLATTE
MAINS SWITCH BOARD
PIASTRA INTERR. DI RETE



BILDROHRPLATTE - STECKER BR
CRT BASE-PLUG BR
SPINA BR PIASTRA CINESC.

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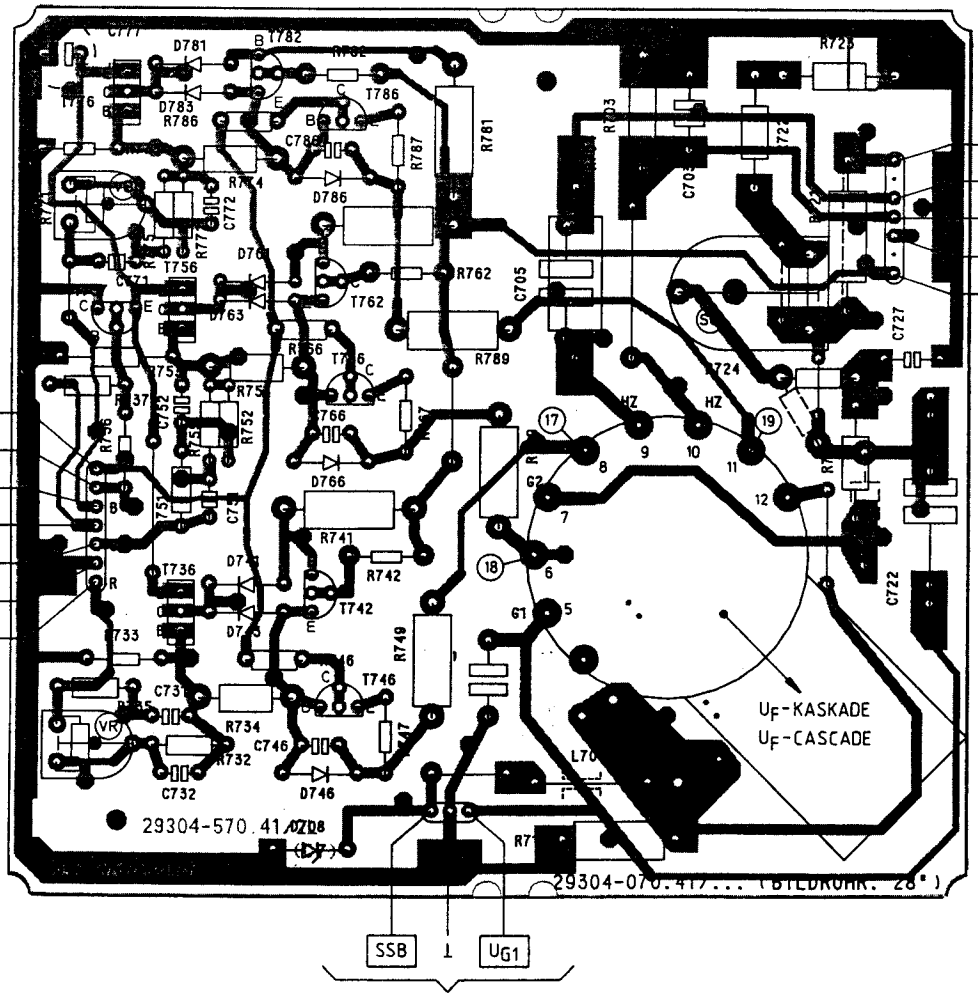
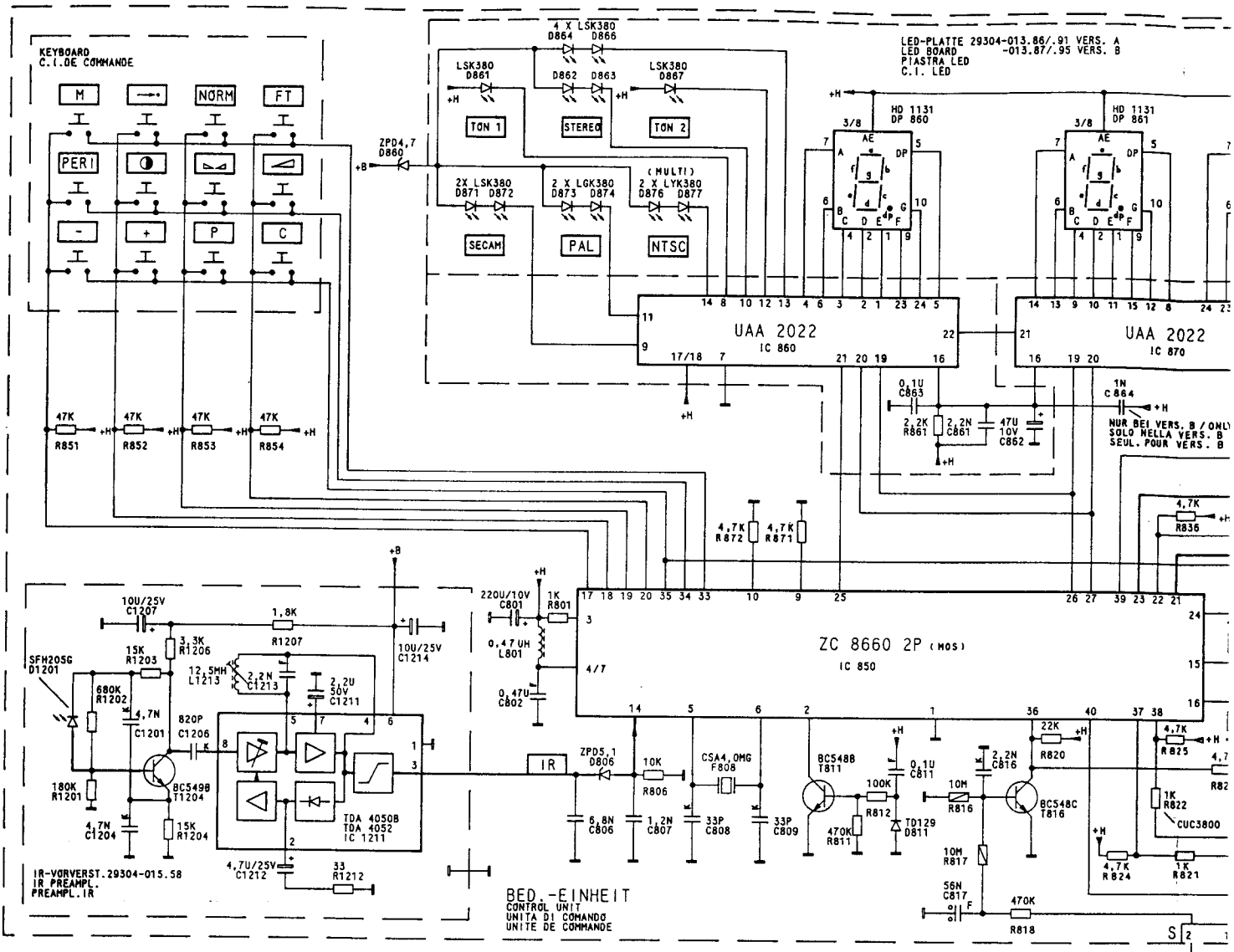
BILDROHRPLATTE
CRT BASE
PIASTRA CINESC.





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:

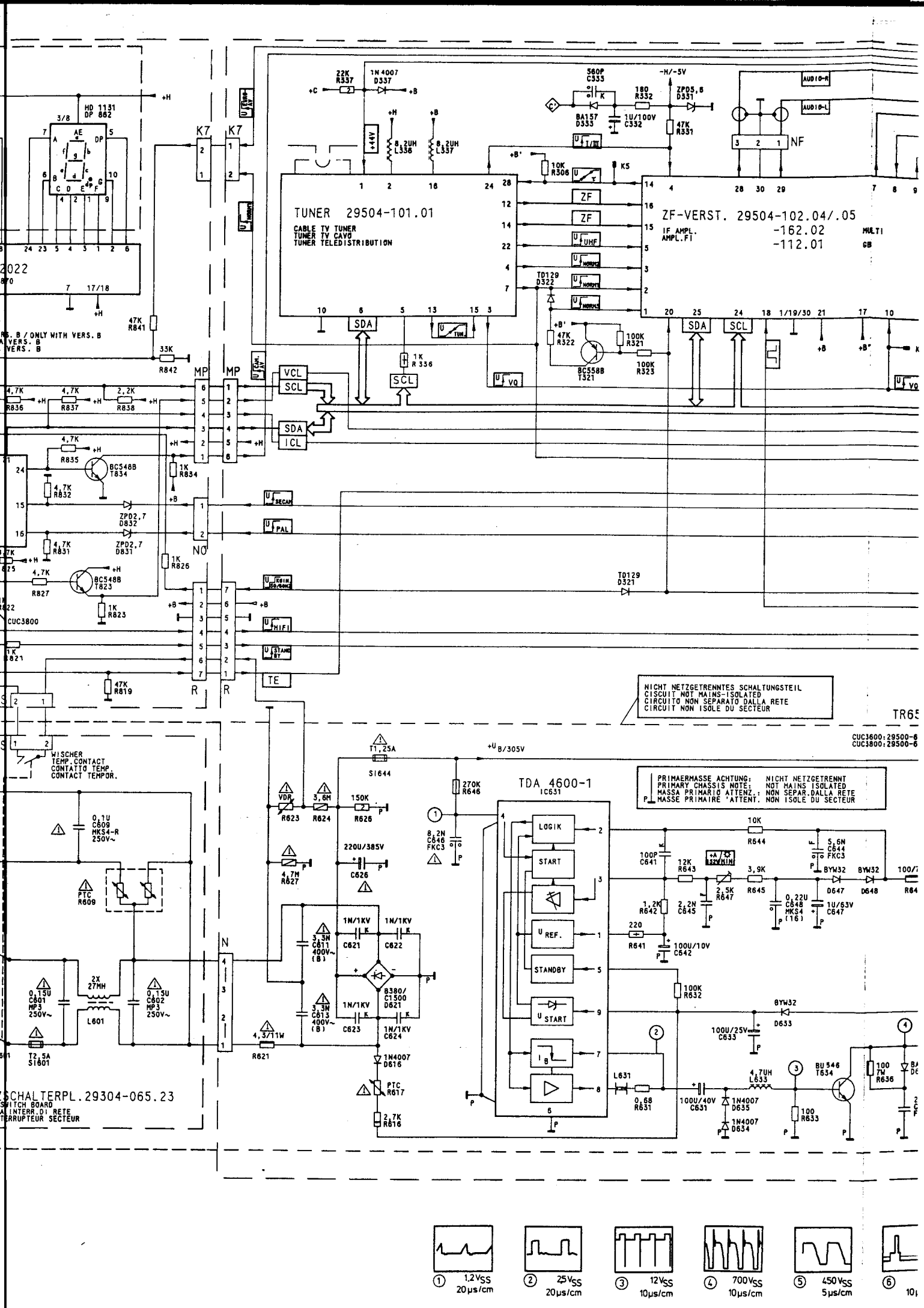
- → Starting voltage (Pin 9/5) < 8 V, starting via Di 616 and R 616
- → Reference voltage (Pin 1) approx. 6 V
- → Start pulse (Pin 4) (1)
- → Base current drive (Pin 7) (2)

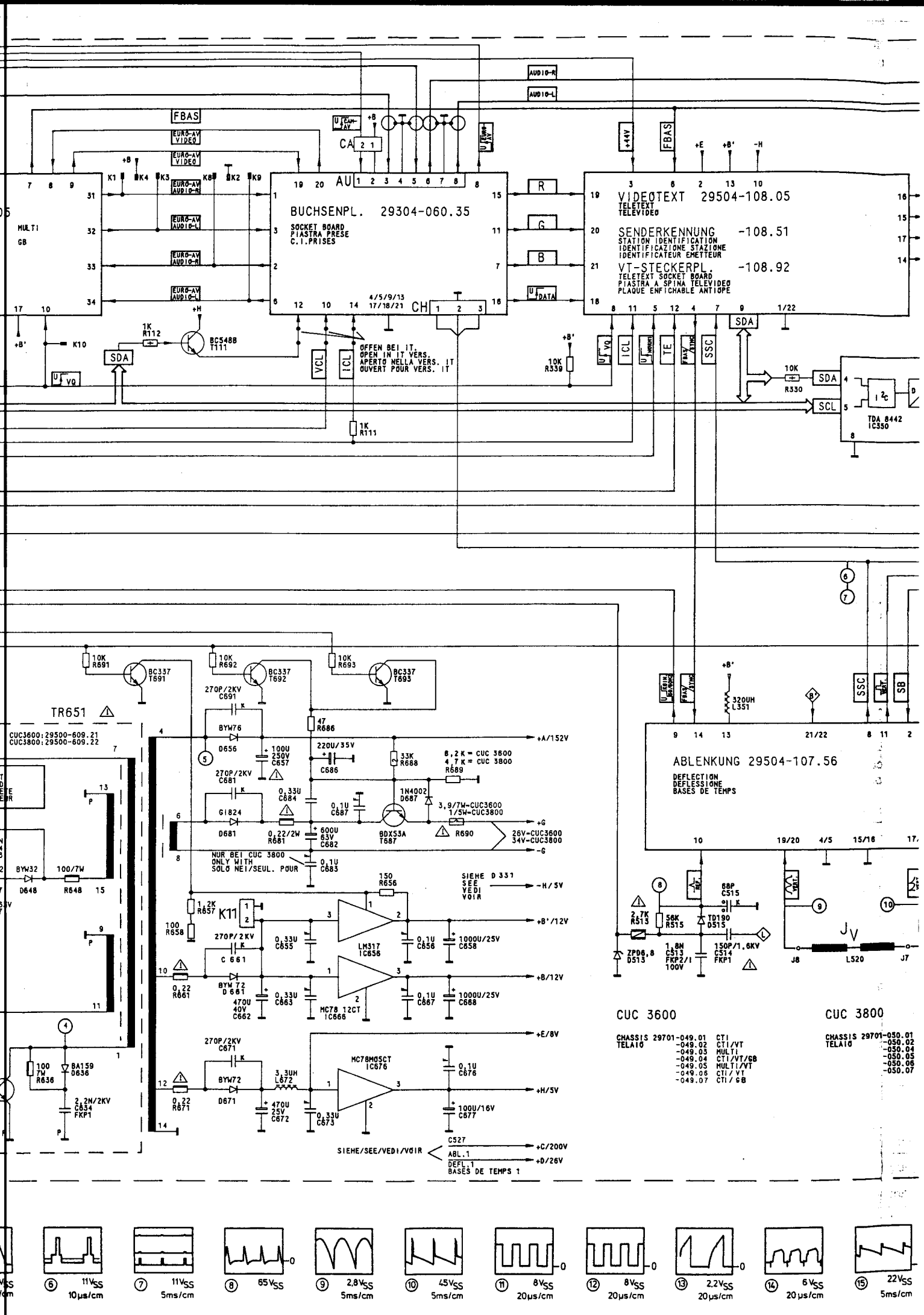
Before replacement of IC 631, C 626 must be discharged. Power supply range 160 to 260 V AC.

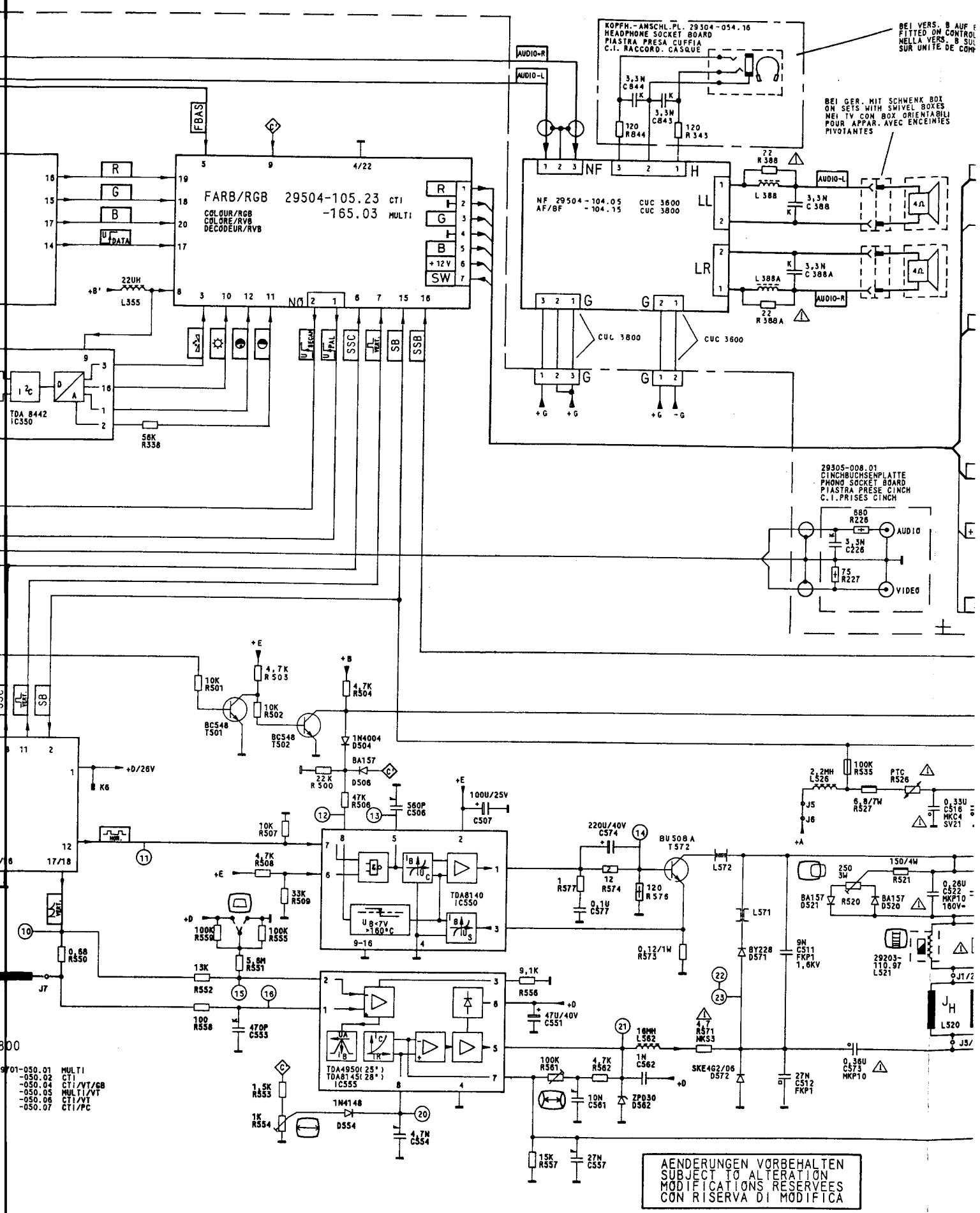
Avvertenze di Servizio dell'alimentatore: Alimentare l'apparecchio con un trasformatore separatore. Il lato primario dell'alimentatore è a potenziale di rete. Se viene a mancare la tensione del secondario o in caso di intervento ritmico dell'alimentatore, interrompere uno alla volta i circuiti dell secondario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

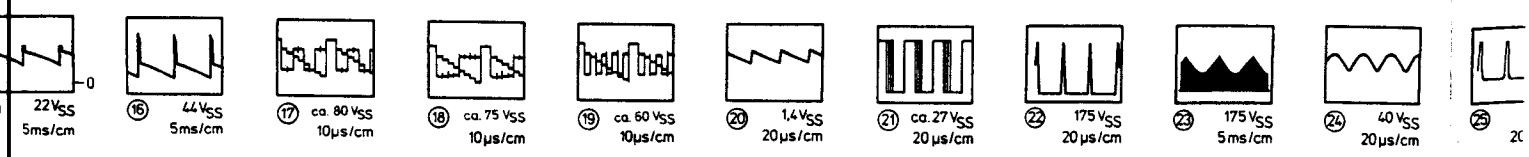
- → Tensione di avviamento (pin 9/5) < 8 V. Avviamento tramite Di 616 e R 616.
- → Tensione di riferimento (pin 1) ca. 6 V.
- → Impulso di avviamento (pin 4) (1)
- → Pilotaggio della corrente di base (pin 7) (2)

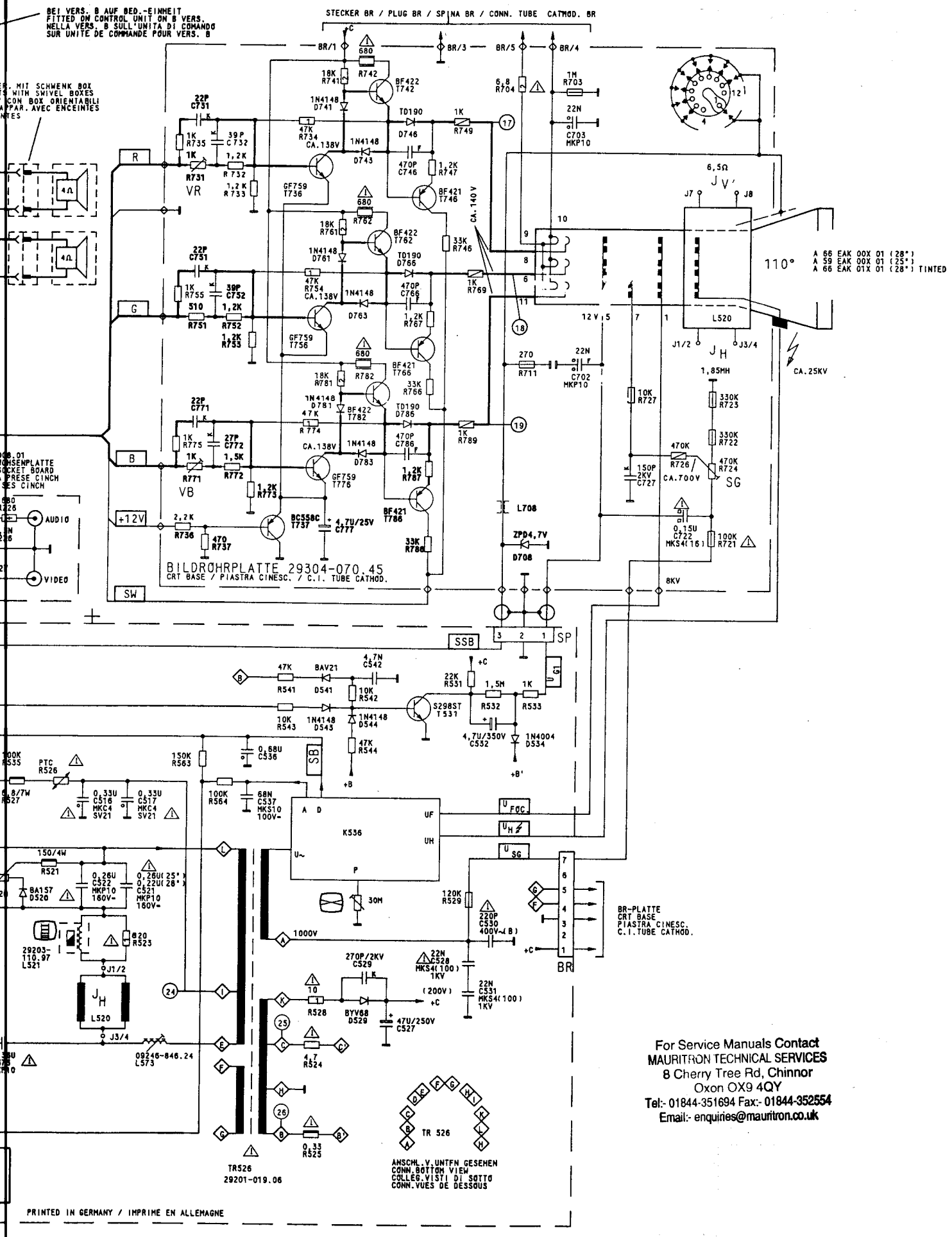
Il C 626 deve essere scarico prima di cambiare l'IC 631! Campo di regolazione dell'alimentatore: 160 a 260 V ~.


TUNER 29504-101.01
CABLE TV TUNER
TUNER TV CAVO
TUNER TELEDISTRIBUTION
ZF-VERST. 29504-102.04/.05
IF AMPL.
AMPL.FI
-162.02
-112.01
MULTI
GB
HD 1131
DP 862
NICHT NETZGETRENNTES SCHALTUNGSTEIL
CISCUIT NOT MAINS-ISOLATED
CIRCUITO NON SEPARATO DALLA RETE
CIRCUIT NON ISOLE DU SECTEUR
WISCHER
TEMP.CONTACT
CONTATTO TEMP.
CONTACT TEMPOR.
TDA 4600-1
IC631
PRIMAERMASSE ACHTUNG:
PRIMARY CHASSIS NOTE:
MASSA PRIMARIO ATTENZ.:
MASSE PRIMAIRE 'ATTENT.
NICHT NETZGETRENNT
NOT MAINS ISOLATED
NON SEPAR.DALLA RETE
NON ISOLE DU SECTEUR
SCHALTERPL.29304-065.23
SWITCH BOARD
INTERR.DI RETE
TERRUPTEUR SECTEUR
CUC3600:29500-6
CUC3800:29500-6
1,2VSS 20µs/cm
25VSS 20µs/cm
12VSS 10µs/cm
700VSS 10µs/cm
450VSS 5µs/cm


MULTI GB
BUCHSENPL. 29304-060.35
SOCKET BOARD
PIASTRA PRESE
C.I.PRISES
VIDEOTEXT 29504-108.05
TELETEXT
TELEVIDEO
SENDERKENNUNG -108.51
STATION IDENTIFICATION
IDENTIFICAZIONE STAZIONE
IDENTIFICATEUR EMETTEUR
VT-STECKERPL. -108.92
TELETEXT SOCKET BOARD
PIASTRA A SPINA TELEVIDEO
PLAQUE ENFICHABLE ANTIOPE
OFFEN BEI IT.
OPEN IN IT VERS.
APERTO NELLA VERS. IT
OUVERT POUR VERS. IT
TDA 8442
IC350
TR651
CUC3600:29500-609.21
CUC3800:29500-609.22
ABLENKUNG 29504-107.56
DEFLECTION
DEFLESSIONE
BASES DE TEMPS
NUR BEI CUC 3800
ONLY WITH
SOLO NEI/SEUL. POUR
SIEHE D 331
SEE
VEDI
VOIR
CUC 3600
CHASSIS 29701-049.01 CTI
TELAIO -049.02 CTI/VT
-049.03 MULTI
-049.04 CTI/VT/GB
-049.05 MULTI/VT
-049.06 CTI/VT
-049.07 CTI/GB
CUC 3800
CHASSIS 29701-050.01
TELAIO -050.02
-050.04
-050.05
-050.06
-050.07
SIEHE/SEE/VEDI/VOIR
DEFL.1
BASES DE TEMPS 1


FARB/RGB 29504-105.23 CTI
-165.03 MULTI
COLOUR/RGB
COLORE/RVB
DECODEUR/RVB
TDA 8442
IC350
KOPFH.-ANSCHL.PL. 29304-054.16
HEADPHONE SOCKET BOARD
PIASTRA PRESA CUFFIA
C.I. RACCORD. CASQUE
BEI VERS. B AUF
FITTED ON CONTROL
NELLA VERS. B SU
SUR UNITE DE COM
BEI GER. MIT SCHWENK BOX
ON SETS WITH SWIVEL BOXES
NEI TV CON BOX ORIENTABILI
POUR APPAR. AVEC ENCEINTES
PIVOTANTES
NF 29504-104.05 CUC 3600
AF/BF -104.15 CUC 3800
29305-008.01
CINCHBUCHSENPLATTE
PHONO SOCKET BOARD
PIASTRA PRESE CINCH
C.I.PRISES CINCH
AUDIO
VIDEO
TDA8140
IC550
TDA4950(25°)
TDA8145(28°)
IC555
BU508A
T572
SKE4G2/06
D572
29203-
110.97
L521
L520
9701-050.01 MULTI
-050.02 CTI
-050.04 CTI/VT/GB
-050.05 MULTI/VT
-050.06 CTI/VT
-050.07 CTI/PC
AENDERUNGEN VORBEHALTEN
SUBJECT TO ALTERATION
MODIFICATIONS RESERVEES
CON RISERVA DI MODIFICA
PRINTED IN GERMANY


22VSS 5ms/cm
16 44VSS 5ms/cm
17 ca. 80VSS 10µs/cm
18 ca. 75VSS 10µs/cm
19 ca. 60VSS 10µs/cm
20 1,4VSS 20µs/cm
21 ca. 27VSS 20µs/cm
22 175VSS 20µs/cm
23 175VSS 5ms/cm
24 40VSS 20µs/cm
25



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 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
I²C Bus	5 V_{ss}	Pin 21, 23, IC 850	Die I²C-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-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	Ausgangsignale 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) I²C 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' I²C 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' I²C 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	I² (IC D/ D/ D/
Nur bei TP-Bedienung Kein Videotext	+ E I²C
Nur bei TP-Bedienung in Verb Keine VCR-Fernsteuerung	T 8 I²C

Nur bei Multi-Geräten

Fehler	Mögliche Ursache	Me
Keine Normumschaltung	Bedienungseinheit Tuner, ZF-Verstärker	Di (Ta dr ZF ZF ZF

werte kontrast eit t rast	I²C 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.) Sift 11 (Kontrast) Stift 12 (Farbkon.)
edienung t	+ B', + E I²C Bus, SDA	12 V, 8 V 5 V_{ss}	VT Pin 13, 2 VT Pin 9
edienung in Verbindung mit Video 1 Taste			
rn-	T 823, VCL I²C Bus SDA/T 111	4 V 4 V_{ss}	Buchsenplatte Euro-AV-Buchse 10 Euro-AV-Buchse 12

Geräten

liche Ursache	Meßpunkt	Meßwert			
enungseinheit r, 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				

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Service checks on the I²C Bus (with MOTOF

If faults occur in the set which cannot be attrib
the I²C bus should be checked using Table 1
Via the I²C bus the microcomputer in the contr
(teletext), socket board (Euro AV socket) inclu

Note:

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

Table 1

Test	Measured Value
+H	5 V
Reset	LOW only at moment of switch on
4 MHz clock	4 MHz, 3 V_{pp}
I²C 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 an release lines
No frequency tuning	+ C via R 337
	+ B, + H
	Data (SDA)/clock I²C bus
Noise-infested picture	Variable tuning voltage as functio channel selection
Dark screen – no noise	Tuner, Pin 3 HIGH
No CCVS at IF module, contacts 7, 9	+ B, + B' I²C 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' I²C bus, SDA, SCI no coincidence

h MOTOROLA processor)

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

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

, the set should always be switched off. Modules must not be unplugged e MOS handling precautions.

alue	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 I²C 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.

e Cause	Measured Value	Test Point
	5 V see Table 1	IC 850, Pin 4
plifier T 1204, + B	+ B = 12 V	Pin 6, IC 1211
	5 V	Pins 17, 18 ICs 860, 870
863, R 861	5 V	Pin 16, ICs 860, 870
870	LOW output signals, approx. 3 V	on the cathodes of the LEDs
cuit or on in DATA and nes	approx. 5 V_{pp}	ICs 860, 870 Pins 19, 21, 20
337	approx. 44 V	Tuner, Pin 1
	12 V, 5 V	Tuner, Pins 16, 2
A)/clock (SCL)	5 V_{pp}	Tuner, Pins 6, 5
tuning s function of selection	0.2-30 V	Tuner, Pins 13, 15
n 3	HF 0 V AV > 8 V	Tuner, Pin 3
SDA, SCL t 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
oard	"	AU plug, Pins 6, 8
n board	"	AF, plug, Pins 1, 3
G	26 V, 34 V	Plug G
SDA, SCL dence	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	I²C 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 I²C 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 I²C bus SDA/T 111	4 V 4 V_{pp}

For multi-standard TV sets only

Fault	Possible Cause	Test Piont	Measured Valu	
No stand-ards conver-sion	Control unit tuner, IF AMP	Indication (press „standard")	„0" CCIR (st. B/G)	„1" FR (st.
		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

sured 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 nè all'alimentatore, nè all'alta tensione o alla c trollare 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
I²C Bus	5 V_{pp}	Pin 21, 23, IC 811	I dati nel sistema I²C-B presenti anche senza i mediante TP o tastiera. mancano: staccare un le schede tuner, FI e T risp.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) I²C-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' I²C-Bus, SDA, SCL manca nel tuner, FI pin 10 HIGH	12 V 5 V_{pp}	FI 21, 17 Tuner 6, 5 FI pin 10

p alla deflessione, con-
are i lavori riportati in ta-

astra prese (Euro-Scart)
logici RGB.

Prestare attenzione alle

ti
C 850
a I²C-Bus sono senza immissione tastiera. Se i dati care una dopo l'altra , FI e Televideo e i pin 4 e 5 di i dati non sono ire l'unità

a
,870
D

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' I²C 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	I²C Bus, IC 350 IC 350 Convertitore D/A Convertitore D/A Convertitore D/A	5 V_{pp} valori analogici 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 l'uso del TP Le funzioni Televideo non vengono accettate	+ B', + E I²C 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 I²C 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" CCIR Norma B/G	„1" FR Norma L	„2" GB Norma I	„3" 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				

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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
I²C Bus	5 V_{ss}	Pin 21,22, IC 850	Die I²C-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	Ausgangsignale 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) I²C 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' I²C 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' I²C 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, Farbkontras 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	Bedienungsei Tuner, ZF-Verstärker

e rast	I²C 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.) Sift 11 (Kontrast) Stift 12 (Farbkon.)
ung	+ B', + E I²C Bus, SDA	12 V, 8 V 5 V_{ss}	VT Pin 13, 2 VT Pin 9
ung in Verbindung mit Video 1 Taste			Buchsenplatte
	T 823, VCL I²C Bus SDA/T 111	4 V 4 V_{ss}	Euro-AV-Buchse 10 Euro-AV-Buchse 12

en

Ursache	Meßpunkt	Meßwert			
geinheit rker	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				

Service checks on the I²C Bus (with SIEMENS proce

If faults occur in the set which cannot be attributed to t 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 Pc
+ 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,
I²C bus	5 V_{pp}	Pin 21,

Table 2

Possible faults due to I²C Bus control which can occu

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) I²C 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' I²C 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' I²C bus, SDA, SCL no coincidence

ENS processor)

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

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

et should always be switched off. Modules must not be unplugged handling precautions.

	Test Point	Possible Faults
	Pin 40, IC 850	D 671, IC 676, IC 850
t	Pin 9	C 811, D 811
	Pin 19, IC 850	F 808, IC 850
	Pin 21, 22, IC 850	The I²C 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.

can occur in any part of set.

se	Measured Value	Test Point
	5 V see Table 1	IC 850, Pin 40
4, + 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
r and	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
ck (SCL)	5 V_{pp}	Tuner, Pins 6, 5
ction of ion	0.2-30 V	Tuner, Pins 13, 15
	HF 0 V AV > 8 V	Tuner, Pin 3
SCL er,	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
nd	"	AF, plug, Pins 1, 3
	26 V, 34 V	Plug G
SCL e	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	I²C 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 I²C 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 I²C bus SDA/T 111	4 V 4 V_{pp}

For multi-standard TV sets only

Fault	Possible Cause	Test Piont	Measured Value	
No standards conversion	Control unit tuner, IF AMP	Indication (press „standard")	„0" CCIR (st. B/G)	„1" 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

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

ed 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 nè all'alimentatore, nè all'alta tensione o alla defle trollare prima di tutto il sistema I²C-Bus secondo la tabella 1 e successivamente effettuare i lavori r bella 2.

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 att 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
I²C Bus	5 V_{pp}	Pin 21, 22, IC 811	I dati nel sistema I²C-Bus presenti anche senza imm mediante TP o tastiera. Se mancano: staccare una dc le schede tuner, FI e Telev risp.te dissaldare i pin 4 e IC 350. Se malgrado ciò i dati non presenti: sostituire l'unità comandi.

Tabella 2

Poasibili 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) I²C-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' I²C-Bus, SDA, SCL manca nel tuner, FI pin 10 HIGH	12 V 5 V_{pp}	FI 21, 17 Tuner 6, 5 FI pin 10