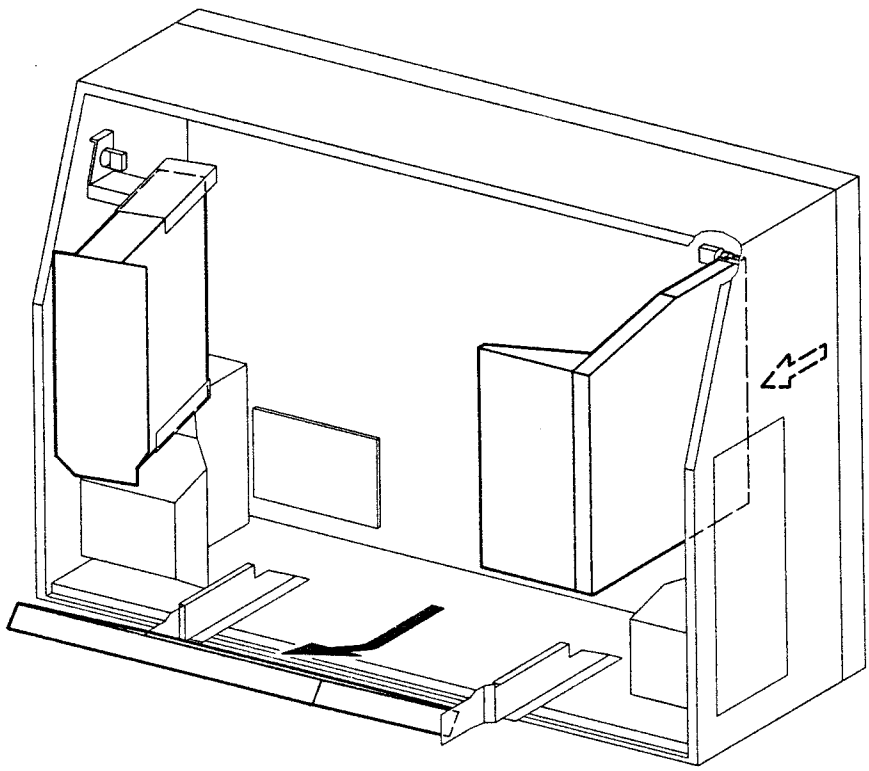
Servicestellung
Service position
Posizione di servizio



GRUNDIG

Ⓓ Btx ★ 32700 #

SERVICE MANUAL
CUC 3870

M 70 - 390/7 text (9.25435-01)
M 70 - 390/7 text (9.25435-05)

Service Manual CUC 3870 Sach-Nr. 72010-001.60
Service manual CUC 3870 Order-No. 72010-001.60

(D)

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(GB)

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Symbols and their meaning
Simboli e loro significati

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PROGR. TASTE
PROGR. BUTTON
TASTO PROGR.
TOUCHE PROGR.
PULS. PROGR.

SPEICHERTASTE
MEMORY BUTTON
TASTO DI MEMORIA
TOUCHE MEMOIRE
PULS. MEMORIA

NORMTASTE
TV STANDARD SELECT. BUTTON
COMMUT. DI NORMA
TOUCHE DE NORME
PULS. DE NORMA

FEINABST. +
FINE TUNING +
SINT. FINE +
REGLAGE FIN +
SINT. FINA +

FEINABST.-
FINE TUNING -
SINT. FINE -
REGLAGE FIN -
SINT. FINA -

SUCHLAUF BD I
SELF-SEEK BAND I
SINT. AUTOM. BANDA I
RECHERCHE AUTOM. BANDE I
SINT. AUTOM. BANDA-I

SUCHLAUF BANDWAHL III
SELF-SEEK BAND III
SINT. AUTOM. BANDA III
RECHERCHE AUTOM. BANDE III
SINT. AUTOM. BANDA-III

SUCHLAUF UHF
SELF-SEEK UHF
SINT. AUTOM. UHF
RECHERCHE AUTOM. UHF
SINT. AUTOM. UHF

LAUTSTAERKE
VOLUME
VOLUME SONORE
VOLUMEN

FEINABST.
FINE TUNING
SINT. FINE
REGLAGE FIN
SINT. FINA

KANALWAHL
CHANNEL SEL.
SELEZ. CANALE
SELECT. DE CANAUX
SELECCION CANAL

BALANCE
BILANCIAM.
BALANCE
BALANCE

SUCHLAUF
SELF-SEEK
SINT. AUTOM.
RECHERCHE AUTOM.
SINTONIA AUTOMATICA

SCHALTSP. BANDWAHL
BAND SEL. SWITCHING VOLTAGE
TENS. DI COMMUT. SELEZ. BANDA
TENS. DE COMMUT. SELECT. BANDE
TENS. CONMUT. SELEC. BANDA

SCHALTSP. VHF
SWITCHING VOLT. VHF
TENS. DI COMMUT. VHF
TENS. DE COMMUT. VHF
TENS. CONMUT. VHF

SCHALTSP. UHF
SWITCHING VOLT. UHF
TENS. DI COMMUT. UHF
TENS. DE COMMUT. UHF
TENS. CONMUT. UHF

SCHALTSP. AFC
SWITCHING VOLT. AFC
TENS. DI COMMUT. AFC
TENS. DE COMMUT. AFC
TENS. CONMUT. CAF

SCHALTSP. AV
AV SWITCHING VOLT.
TENS. DI COMMUT. AV
TENS. DE COMMUT. AV
TENS. CONMUT. AV

SCHALTSP. NORM
SWITCHING VOLT. STANDARD
TENS. DI COMMUT. NORMA
TENS. DE COMMUT. STANDARD
TENS. CONMUT. NORMA

SCHALTSP. KOINZ.
SWITCHING VOLT. COINC.
TENS. DI COMMUT. COINC.
TENS. DE COMMUT. COINC.
TENS. CONMUT. COINCIDENCIA

SCHALTSP. EURO-AV
SWITCHING VOLT. EURO-AV
TENS. DI COMMUT. EURO-AV
TENS. DE COMMUT. NORME FR
TENS. CONMUT. EURO-AV

SCHALTSP. VIDEO QUELLE
SWITCHING VOLT. VIDEO SOURCE
TENS. DI COMMUT. SORG. VIDEO
TENS. DE COMMUT. SOURCE VIDEO
TENS. CONMUT. VIDEO

SCHALTSP. DATENBETR.
SWITCHING VOLT. DATA MODE
TENS. DI COMMUT. DATI
TENS. DE COMMUT. FONCT. DONNEES
TENS. CONMUT. DATOS

SCHALTSP. 4,5 MHZ
SWITCHING VOLT. 4,5 MHZ
TENS. DI COMMUT. 4,5 MHZ
TENS. DE COMMUT. 4,5 MHZ
TENS. CONMUT. 4,5MHZ

REGELSP. VERZOEGERT
DELAYED CONTR. VOLTAGE
TENS. DI CONTR. RITARD.
TENS. DE REGUL. RETARDEE
TENS. REGUL. RETARDADA

ABSTIMMSP. TUNER
TUNING VOLT. TUNER
TENS. DI SINTONIA TUNER
TENS. D'ACCORD TUNER
TENS. SINTONIA AL TUNER

REGELSP. AFC
AFC CONTROL VOLT.
TENS. DI CONTR. AFC
TENS. DE REGUL. AFC
TENS. REGUL. CAF

STUMMSCHALTUNG
MUTING
SILENZIAMENTO
SILENCIEUX
MUTING

TASTIMPULS
GATING PULSE
IMPULSO A CADENZA
IMPULS. DE DECLENCHEMENT
IMP. PUERTA

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

VERT. PARABEL
VERT. PARABOLA
PARABOLA VERT.
SIGNAL PARABOLIQUE
SENAL PARABOL. VERT.

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

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

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

SCHUTZSCHALTUNG
CIRCUIT PROTECTION
CIRCUITO DI PROTEZIONE
CIRCUIT DE SECURITE
CIRCUITO DE PROTECCION

FARBTON
TINT
TINTA
TEINTE
TINTE

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

HELLIGKEIT
BRIGHTNESS
LUMINOSITA'
LUMINOSITE
BRILLO

KONTRAST
CONTRAST
CONTRASTO
CONTRASTE
CONTRASTE

FARBKONTRAST
CONTRAST COLOUR
CONTRASTO COLORE
CONTRASTE COULEUR
SATUR. COLOR

FBAS-SIGNAL
CCVS SIGNAL
SEGNALE SVCC
SIGNAL VIDEO COMPOSITE
SENAL VIDEO COMPUESTA

SUPERSANDCASTLE

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

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

ROT-SIGNAL
RED SIGNAL
SEGNALE ROSSO
SIGNAL ROUGE
SENAL ROJA

GRUEN-SIGNAL
GREEN SIGNAL
SEGNALE VERDE
SIGNAL VERT
SENAL VERDE

BLAU-SIGNAL
BLUE SIGNAL
SEGNALE BLU
SIGNAL BLEU
SENAL AZUL

Y-SIGNAL
SEGNALE Y
SIGNAL Y
SENAL Y

F-SIGNAL
CHROMA SIGNAL
SEGNALE F
SIGNAL CHROMA
SENAL CROMA

SCHWARZWERT
BLACK LEVEL
LIVELLO DEL NERO
NIVEAU DU NOIR
NIVEL DE NEGRO

AUDIO-SIGNAL
SEGNALE AUDIO
SIGNAL AUDIO
SENAL AUDIO

AUDIO SIGNAL LINKS
AUDIO SIGNAL LEFT
SEGNALE AUDIO SINISTRA
SIGNAL AUDIO GAUCHE
SENAL AUDIO IZQUIERDA

AUDIO SIGNAL RECHTS
AUDIO SIGNAL RIGHT
SEGNALE AUDIO DESTRA
SIGNAL AUDIO DROIT
SENAL AUDIO DERECHA

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

AUDIO SIGNAL EURO-AV RECHTS
AUDIO SIGNAL EURO-AV RIGHT
SEGNALE AUDIO EURO-AV DESTRA
SIGNAL AUDIO NORME FR DROIT
SENAL AUDIO DERECHA EURO-AV

AUDIO SIGNAL EURO-AV LINKS
AUDIO SIGNAL EURO-AV LEFT
SEGNALE VIDEO EURO-AV SINISTRA
SIGNAL AUDIO NORME FR GAUCHE
SENAL AUDIO IZQUIERDA EURO-AV

IR-SIGNAL
SEGNALE IR
SIGNAL IR
SENAL IR

SPG. GITTER 1
VOLTAGE GRID 1
TENS. GRIGLIA 1
TENS. GRILLE G1
TENS. REJILLAS G-1

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

HOCHS
EHT V
ALTA
HAUTE
MAT

SCHIR
SCREE
TENS.
TENS.
TENS.

TEXT

I²C-C
I²C-E

VCR-C

I-BUS

DATEN
DATA
DATI
DONNE
DATA

ZF-SI
IF SI
SEGNA
SIGNA
SENAL

PAL P
PAL P
PRIOR
PRIOR
PRIOR

F-SIG
F SIG
SEGNA
SIGNA
SENAL

FV-SI
FV SI
SEGNA
SIGNA
SENAL

FU-SI
FU SI
SEGNA
SIGNA
SENAL

F-SIG
F SIG
SEGNA
SIGNA
SENAL

VERZÖ
DELAY
LINEA
LIGNE
LINEA

HOCHSPANNUNG
EHT VOLTAGE
ALTA TENS.
HAUTE TENS.
MAT

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

TEXT ENABLE

I²C-CLOCK
I²C-BUS

VCR-CLOCK

I-BUS-CLOCK

DATEN
DATA
DATI
DONNEES
DATA

ZF-SIGNAL
IF SIGNAL
SEGNALE FI
SIGNAL FI
SENAL DE FI

PAL PRIORITAET
PAL PRIORITY
PRIORITA' PAL
PRIORITE PAL
PRIORIDAD PAL

F-SIGNAL DIREKT
F SIGNAL DIRECT
SEGNALE F DIRETTO
SIGNAL CHROMA DIRECT
SENAL CROMA DIRECTA

FV-SIGNAL
FV SIGNAL
SEGNALE FV
SIGNAL FY
SENAL FV

FU-SIGNAL
FU SIGNAL
SEGNALE FU
SIGNAL FX
SENAL FU

F-SIGNAL VERZOEGERT
F SIGNAL DELAYED
SEGNALE F RITARD.
SIGNAL CHROMA RETARDE
SENAL CROMA RETARDADA

VERZOEGERUNGSLEITUNG
DELAY LINE
LINEA DI RITARDO
LIGNE A RETARD
LINEA DE RETARDO

SCHALTSP./SCHUTZFUNKTION
SWITCHING VOLT. /PROTECTIVE FUNC.
TENS. DI COMMUT. /FUNZ.DI PROTEZ.
TENS. DE COMMUT. / SECURITE
TENS. CONMUT./PROTECCION

FBAS/SYNC.-SIGNAL
CCVS/SYNC. SIGNAL
SEGNALE SINCR. /VIDEO COL. COMP.
SIGNAL SYNC./VIDEO COMPOSITE
SENAL SINCR./VIDEO COMPUESTA

SYNC.-SIGNAL
SYNC. SIGNAL
SEGNALE SINCR.
SIGNAL SYNC.
SENAL DE SINCRONISMOS

SCHALTSP. 50/60HZ
SWITCHING VOLT.50/60HZ
TENS. DI COMMUT. 50/60HZ
TENS. DE COMMUT. 50/60HZ
TENS. CONMUT. 50/60HZ

SCHALTSP. BTX
SWITCHING VOLT. BTX (VIEWDATA)
TENS. COMMUT. VIDEOTEL
TENS. COMMUT. VIDEOTEXTE
TENS. CONMUT. VIDEOTEXTO

SYNC. VT
SYNC. VT (TELETEXT)
SINCR. TELEVIDEO
SYNC. TELETEXTE
SINCR. TELETEXTO

SYNC. BTX
SYNC. BTX (VIEWDATA)
SINCR. VIDEOTEL
SYNC. VIDEOTEXTE
SINCR. VIDEOTEXTO

SCHALTSP. RESET
SWITCHING VOLT. RESET
TENS. COMMUT.'RESET
TENS. CONMUT.'RESET

SCHALTSP. STAND BY
SWITCHING VOLT. STAND BY
TENS. COMMUT. STAND BY
TENS. COMMUT.'VEILLE
TENS. CONMUT.'STAND BY

SCHALTSP. HUB
SWITCHING VOLT. DEVIATION
TENS. COMMUT. DEVIAZIONE
TENS. COMMUT.'DEVIATION
TENS. CONMUT.'DESVIACION

SCHALTSP. DEEM
SWITCHING VOLT. DEEMPHASIS
TENS. COMMUT. DEENFASI
TENS. COMMUT.'DESACCENT.
TENS. CONMUT.'DEENFASIS

SCHALTSP. KAMERA WIEDERG.
SWITCHING VOLT. CAMERA PLAYBACK
TENS. COMMUT. RIPRODUZ. TELECAM.
TENS. COMMUT. REPROD. CAMERA
TENS. CONMUT. REPROD. CAMARA

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

ZEILENBREITE
LINE WIDTH
LARGHEZZA DI RIGA
AMPLITUDE HORIZONTALE
AMPLITUD HORIZONTAL

OST / WEST AMPLITUDE
EAST / WEST AMPLITUDE
AMPIEZZA EST / OVEST
AMPLITUDE EST / OUEST
AMPLITUD E/O

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

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

FOKUSREGLER
FOCUS CONTROL
REGOLAT. DI FOCALIZZ.
REGLAGE DE FOCALISATION
CONTROL DE FOCO

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

BILDAMPLITUDE
FIELD AMPLITUDE
AMPIEZZA D'IMMAGINE
AMPLITUDE VERTICALE
AMPLITUD VERTICAL

TRAPEZ
TRAPEZIUM
TRAPEZIO
TRAPEZE
TRAPECIO

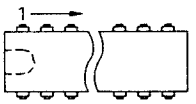
HOR. FREQUENZ
HOR. FREQUENCY
FREQ. ORIZZ.
FREQ. HORIZ.
FRECUENCIA HORIZONTAL

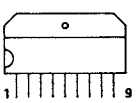
VERT. FREQUENZ
VERT. FREQUENCY
FREQ. VERT.
FRECUENCIA VERTICAL

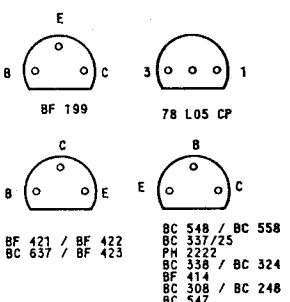
VERT. LINEARITAET
VERT. LINEARITY
LINEAR. VERT.
LINEAR. VERT.
LINEALIDAD VERTICAL

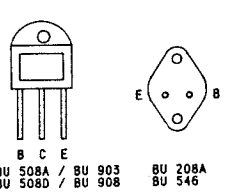
OST/WEST SYMMETRIE
EAST/WEST SYMMETRY
SIMMETRIA EST/OVEST
SYMMETRIE EST/OUEST
SIMETRIA E/O

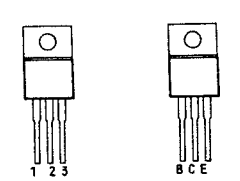
Wichtige Schaltzeichen
Important circuit simbols
Segni circuitali importanti

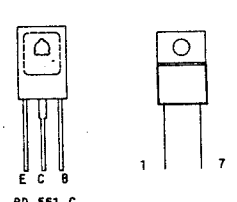


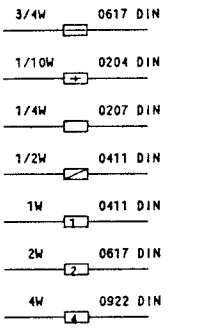








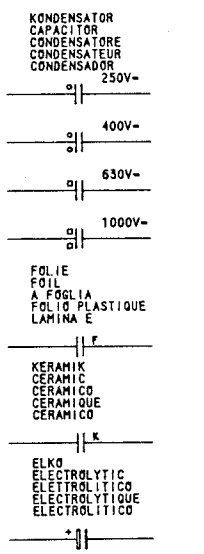


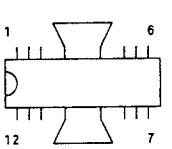


WIDERSTAND NICHT BRENNBAR
RESISTOR NOT FLAMMABLE
RESISTENZA NON INFIAMMABILE
RESISTANCE ININFLAMMABLE
RESISTENCIA ININFLAMABLE

DRAHTWIDERSTAND
WIRE RESISTOR
RESISTENZA A FILO
RESISTANCE BOBINEE
RESISTENCIA BOBINADA

SICHERUNGSWIDERSTAND
SAFETY RESISTOR
RESISTENZA DI SICUREZZA
RESISTANCE DISJONCTABLE
RESISTENCIA FUSIBLE





ACHTUNG: (D) **BEI EINGRIFFEN INS GERÄT SIND DIE SICHERHEITSVORSCHRIFTEN NACH VDE701(REPARATURBEZOGEN) BZW.VDE0860/IEC65 (GERÄTEBEZOGEN) ZU BEACHTEN.**

⚠ IM REPARATURFALL DÜRFEN NUR ORIGINALBAUTEILE VERWENDET WERDEN !

ATTENTION: (GB) **PLEASE OBSERVE THE APPLICABLE SAFETY REQUIREMENTS ACCORDING TO VDE 701 (CONCERNING REPAIRS) AND VDE 0860/IEC 65 (CONCERNING TYPE OF PRODUCT).**

⚠ ONLY USE COMPONENTS WITH THE SAME SPECIFICATION FOR REPLACEMENT !

ATTENTION: (F) **PRIERE D'OBSERVER LES PRESCRIPTIONS DE SECURITE VDE 701 (CONCERNANT LES REPARATIONS) ET VDE 0860/IEC 65 (CONCERNANT LE TYPE DE PRODUIT).**

⚠ EN CAS DE REMPLACEMENT N'UTILISER QUE DES COMPOSANTS DES MEMES SPECIFICATIONS !

ATTENZIONE: (I) **OSSERVARNE LE CORRISPONDENTI PRESCRIZIONI DI SICUREZZA VDE 701 (CONCERNENTE SERVIZIO) E VDE 0860/IEC 65 (CONCERNENTE IL TIPO DI PRODOTTO).**

⚠ IN CASO DI SOSTITUZIONE IMPIEGARE SOLO COMPONENTI CON LE STESSE CARATTERISTICHE !

ATENCION: (E) **RECOMENDAMOS LAS NORMAS DE SEGURIDAD VDE U OTRAS NORMAS EQUIVALENTES. POR EJEMPLO : VDE 701 PARA REPARACIONES, VDE 0860/IEC 65 PARA APARATOS.**

⚠ EN CASO DE REPARACION UTILIZAR UNICAMENTE REPUESTOS ORIGINALES.

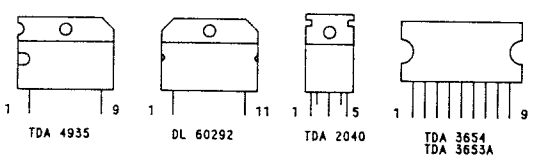
ACHTUNG! (D) VORSCHRIFTEN BEIM UMGANG MIT MOS - BAUTEILEN BEACHTEN !

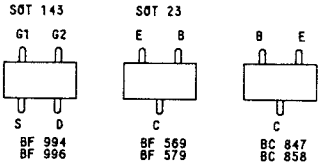
ATTENTION! (GB) OBSERVE MOS COMPONENTS HANDLING INSTRUCTIONS WHEN SERVICING !

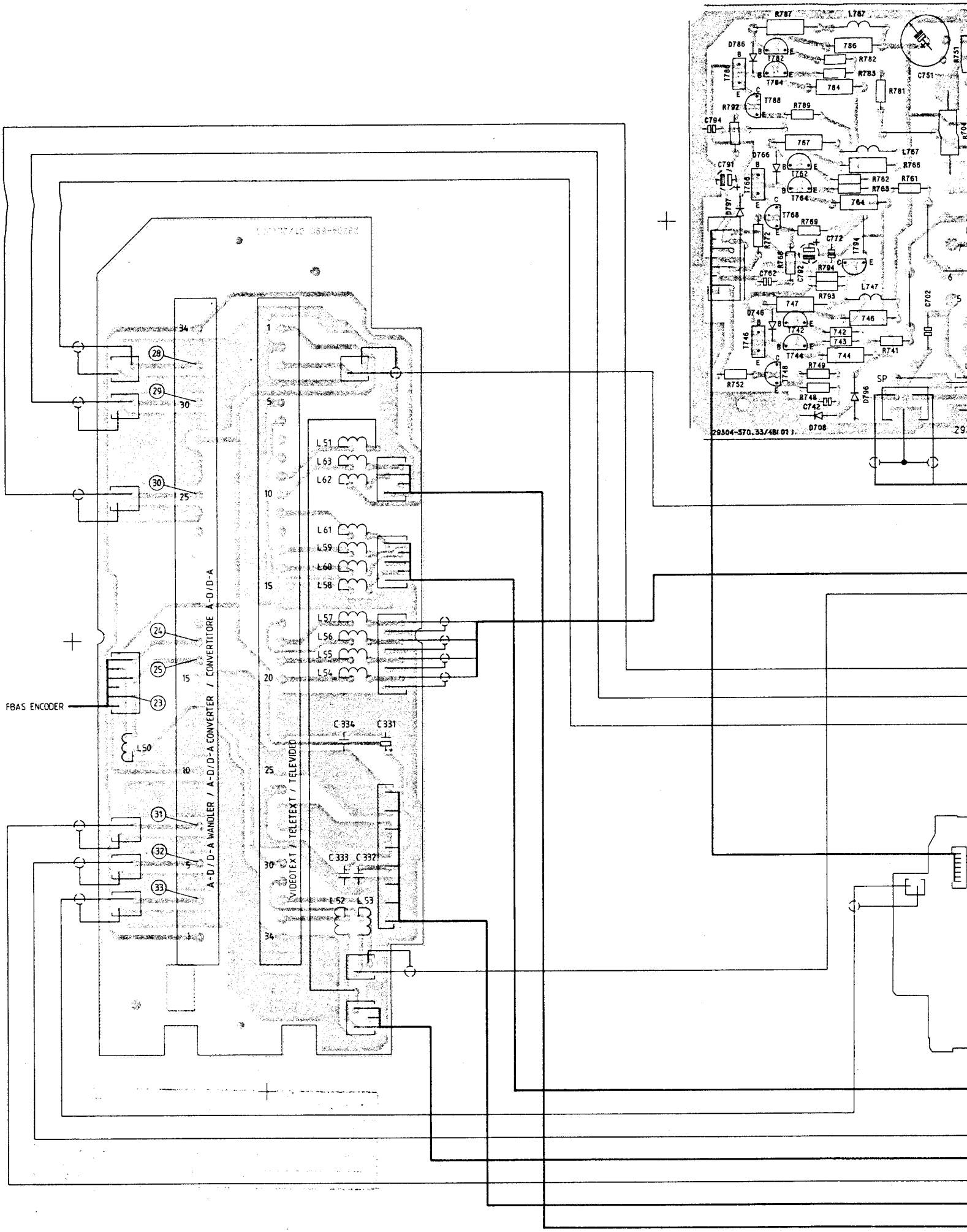
ATTENTION! (F) LORS DE LA MANIPULATION DES CIRCUITS MOS , RESPECTER LES PESCRIPTIONS MOS !

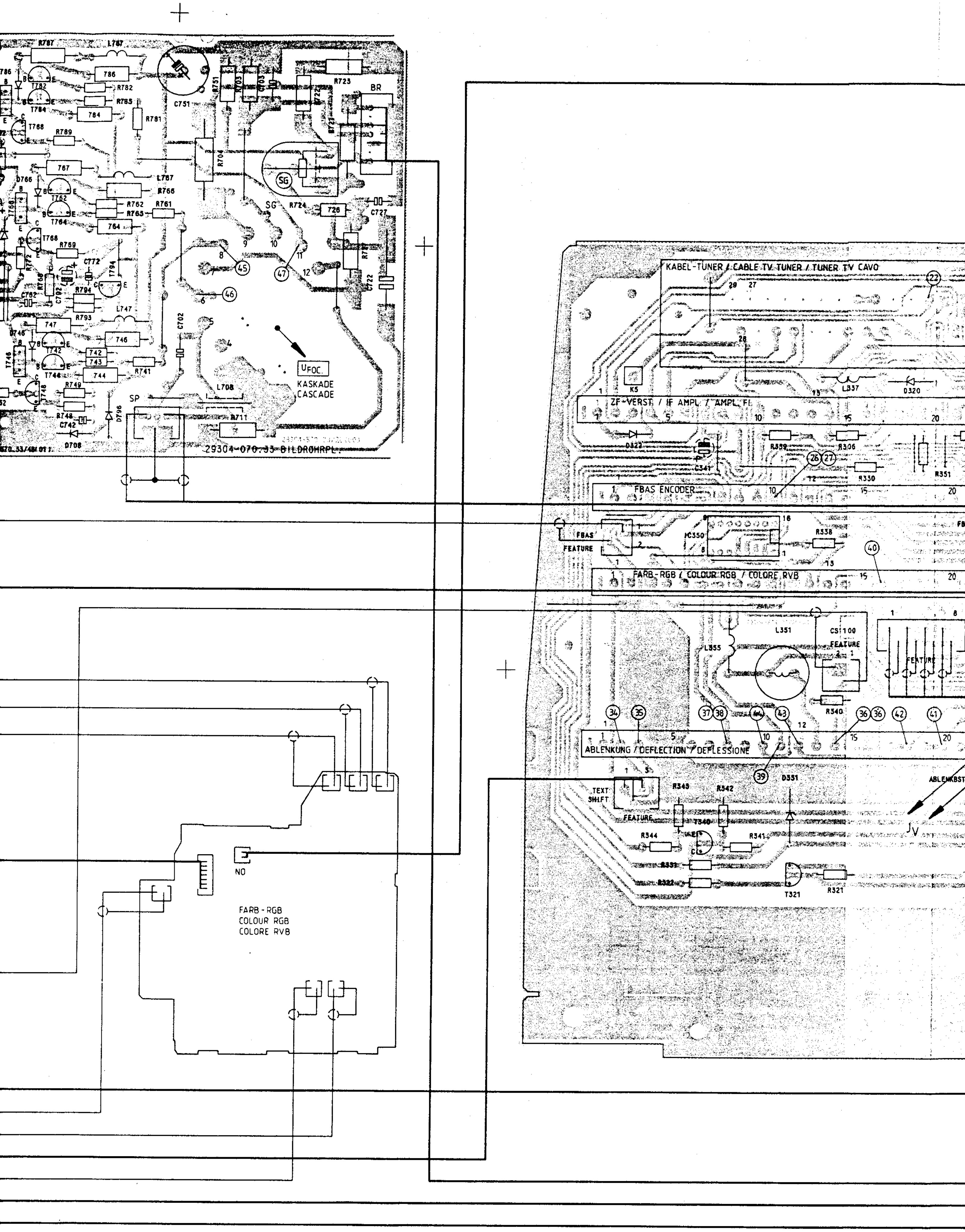
ATTENZIONE! (I) OSSERVARE LE RELATIVE PRESCRIZIONI DURANTE, LAVORI CON COMPONENTI MOS !

ATENCION! (E) DURANTE LA REPARACION OBSERVAR LAS NORMAS SOBRE COMPONENTES MOS !

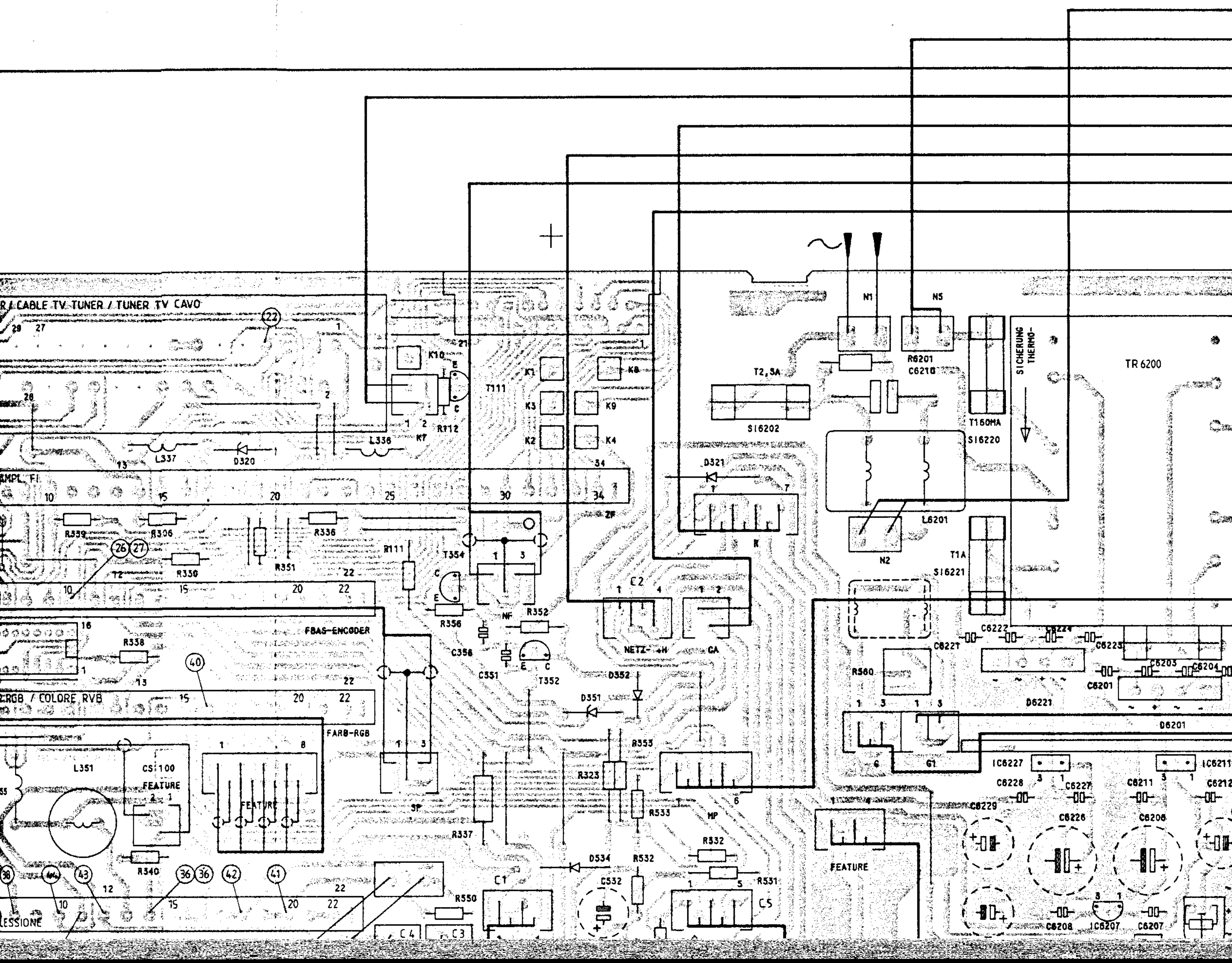





A-D/D-A WANDLER / A-D/D-A CONVERTER / CONVERTITORE A-D/D-A
VIDEOTEXT / TELETEXT / TELEVIDEO
FBAS ENCODER
SP
29504-570.33/48.01



29304-070.33 BILDROHRPL.
KASKADE
CASCADE
UFOC.
SG
BR
SP
KABEL-TUNER / CABLE TV TUNER / TUNER TV CAVO
ZF-VERST. / IF AMPL. / AMPL. FI
FBAS ENCODER
FBAS
FEATURE
FARB-RGB / COLOUR RGB / COLORE RVB
ABLENKUNG / DEFLECTION / DEFLESSIONE
TEXT SHIFT
FEATURE
NO
FARB - RGB
COLOUR RGB
COLORE RVB


CABLE TV TUNER / TUNER TV CAVO
AMPL. FI
RGB / COLORE RVB
FBAS-ENCODER
FARB-RGB
FEATURE
NETZ
SICHERUNG THERMO-
TR 6200
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T160MA
T1A
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L6201
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R111
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R356
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T352
R352
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R532
R531
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C532
R337
R550
R340
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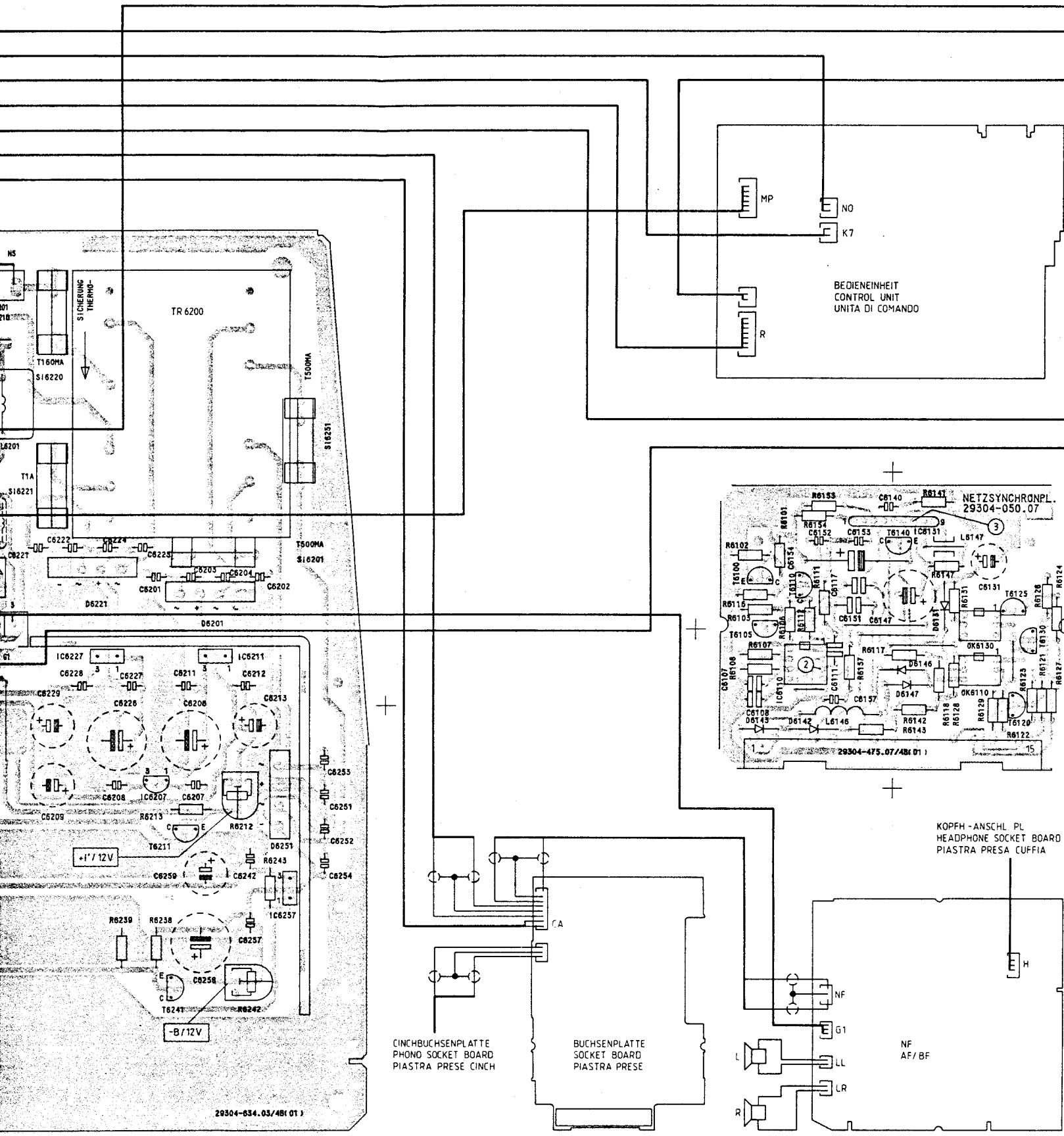
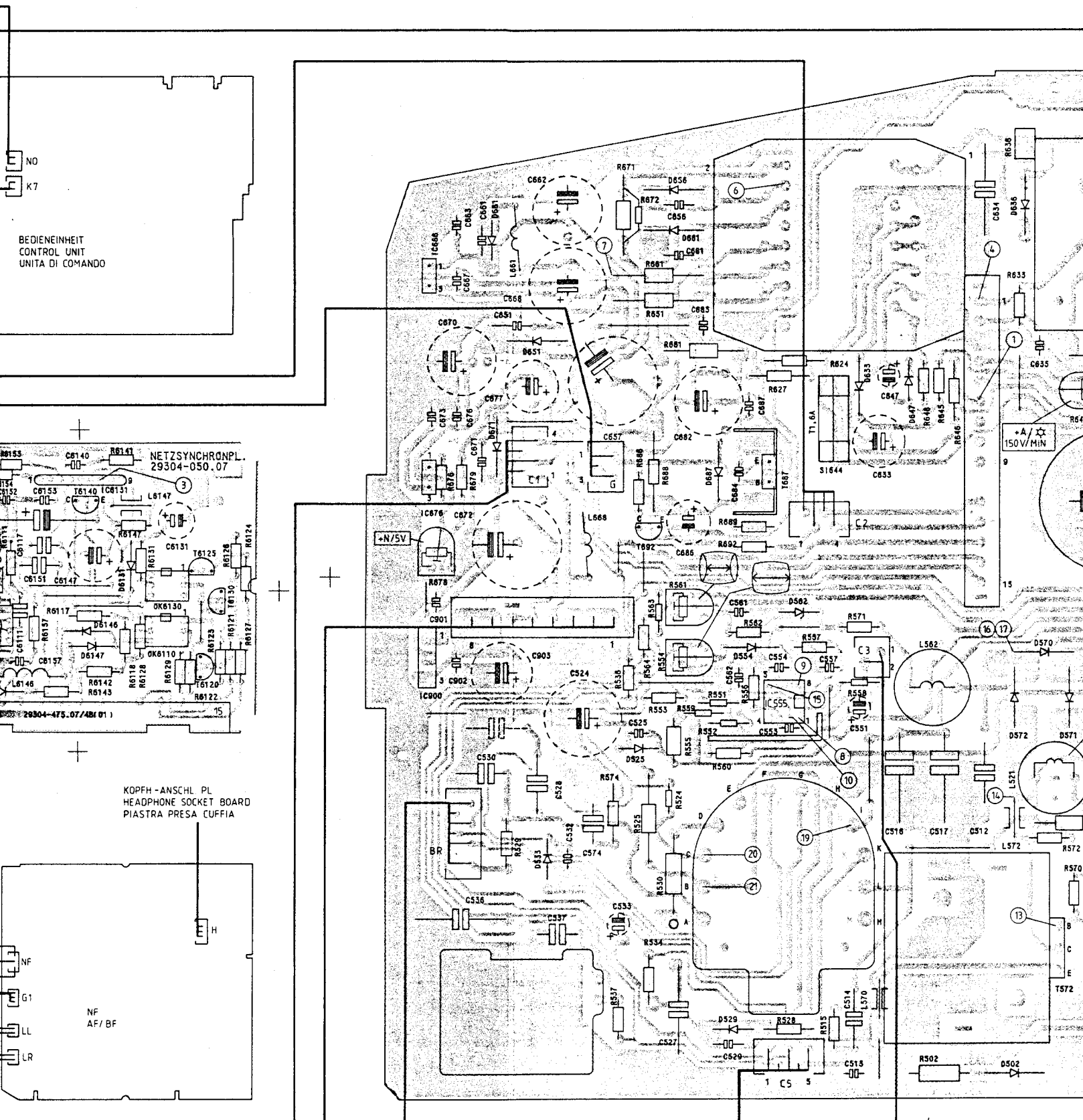
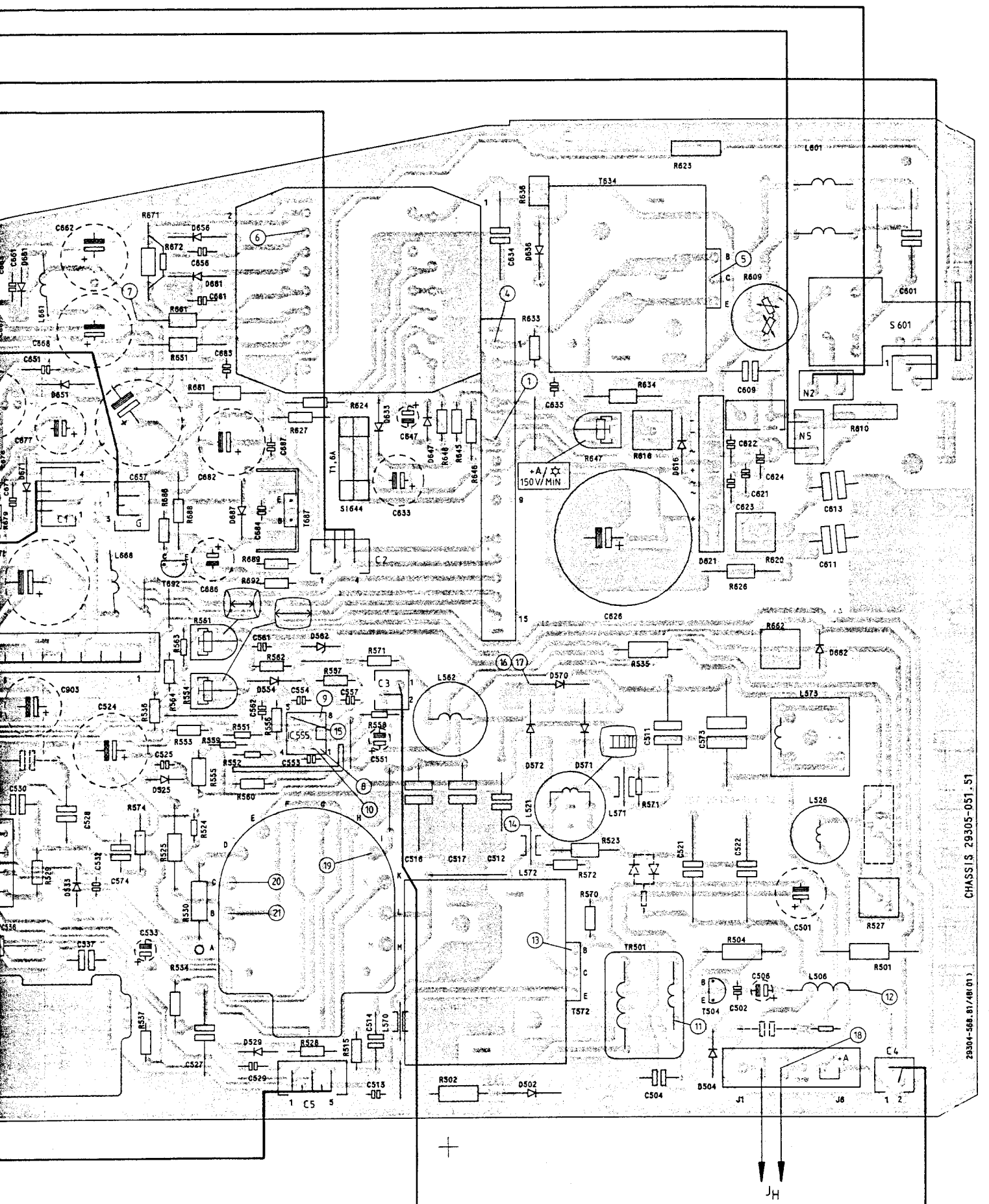
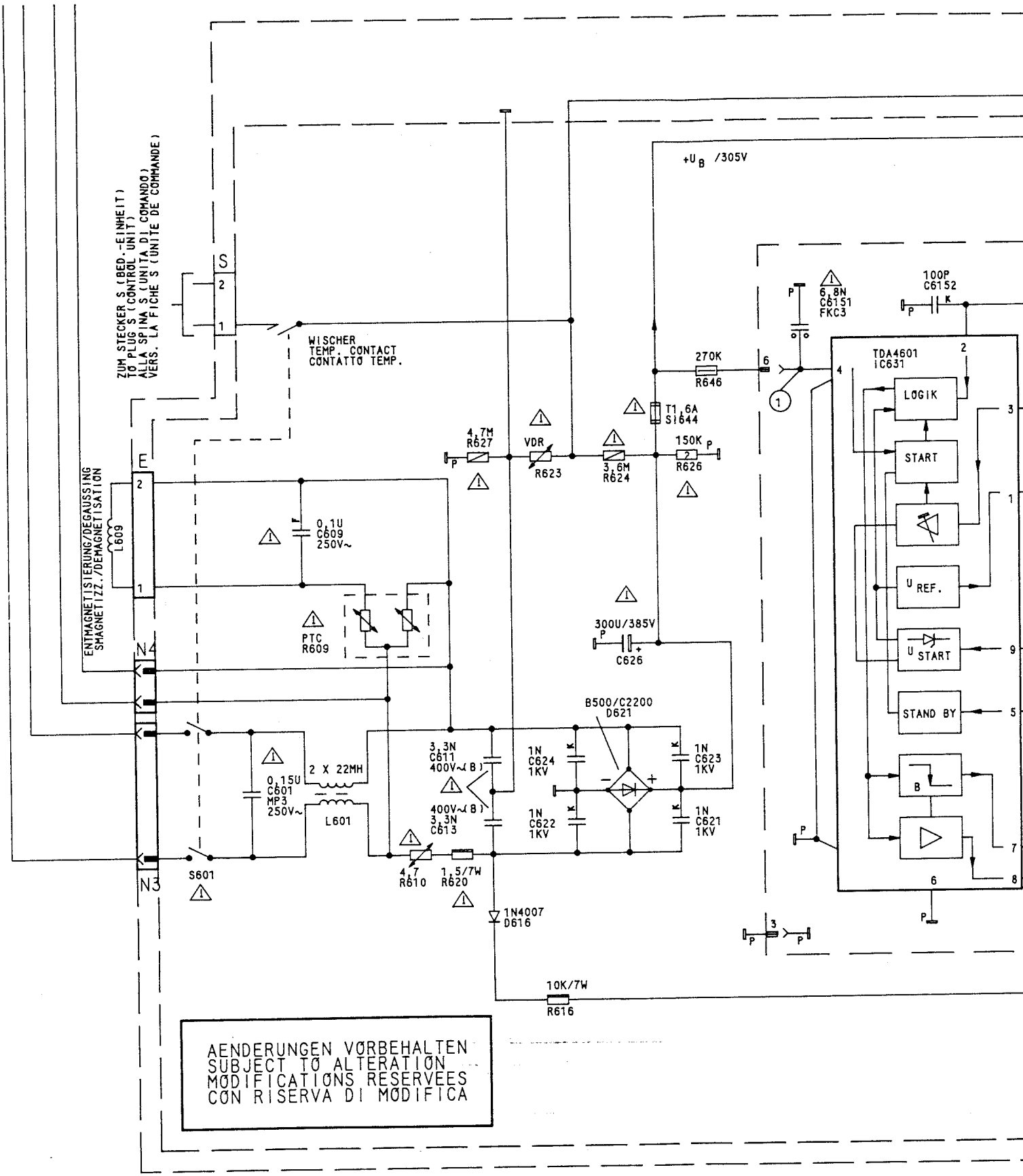
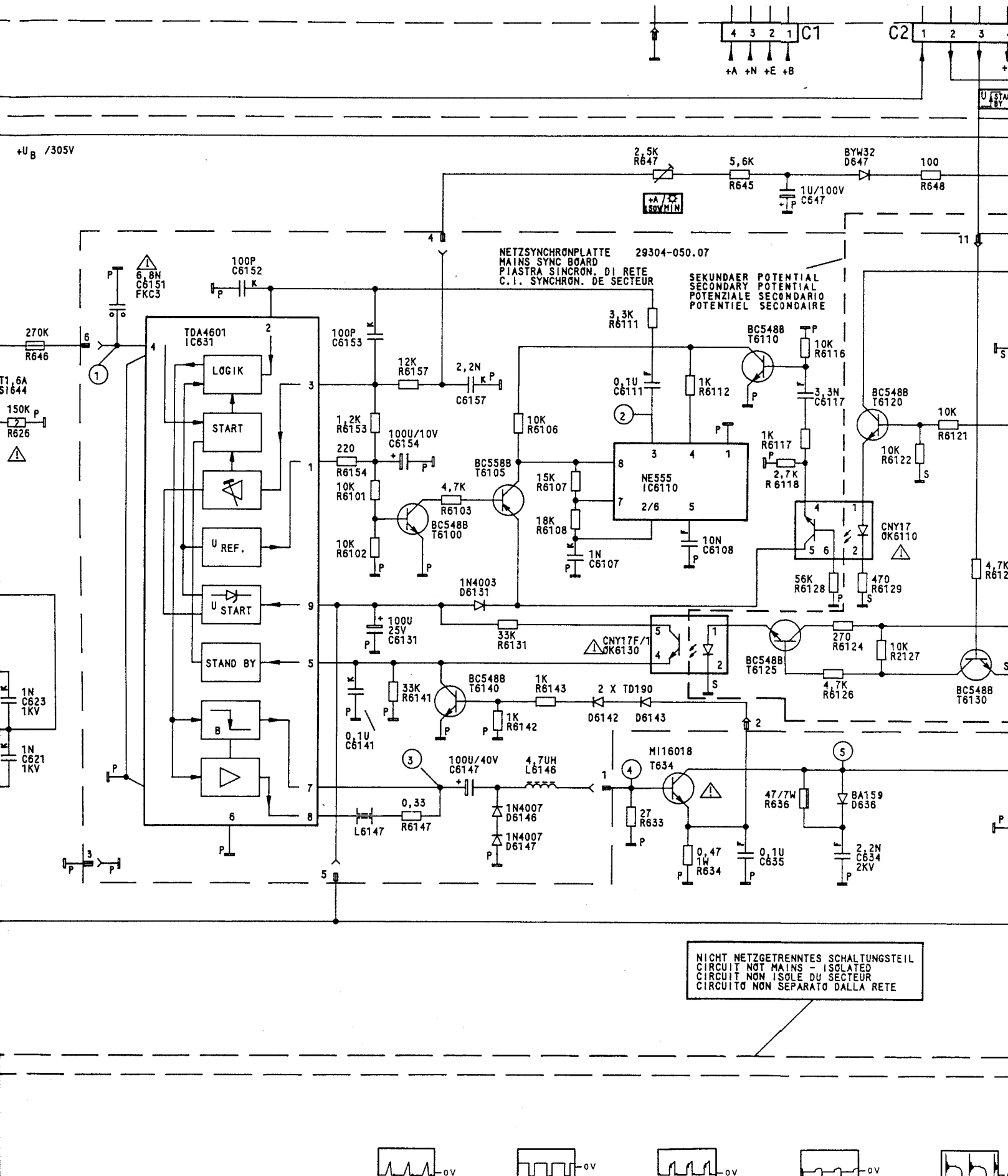
IC6207
C6207

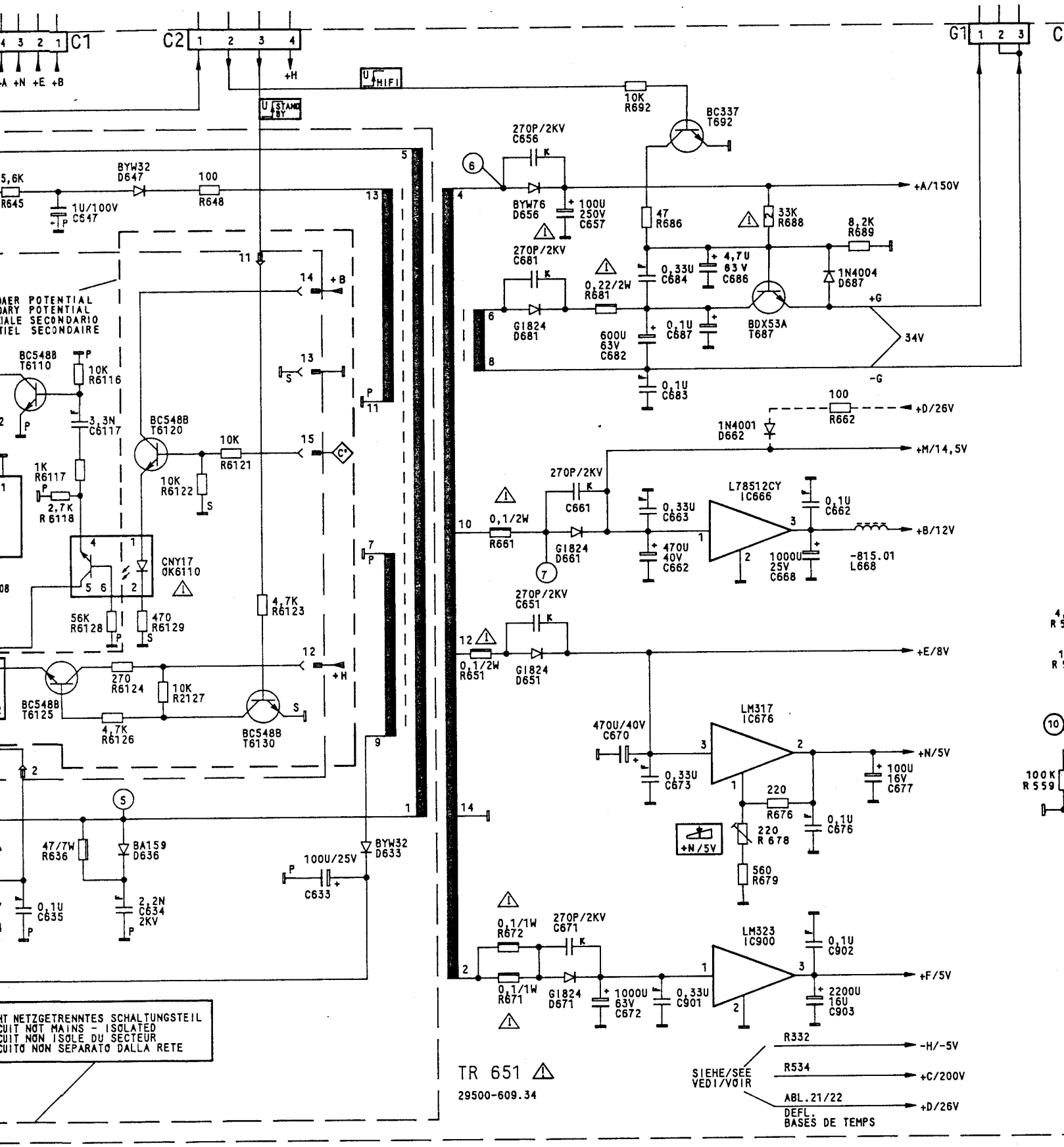

MP
NO
K7
R
BEDIENEINHEIT
CONTROL UNIT
UNITA DI COMANDO
TR 6200
SICHERUNG THERMO-
T160MA
S16220
T500MA
S16231
T1A
S16221
T500MA
S16201
D6221
D6201
NETZSYNCHRONPL.
29304-050.07
29304-475.07/4B(01)
+I' / 12V
-B / 12V
29304-634.03/4B(01)
CA
CINCHBUCHSENPLATTE
PHONO SOCKET BOARD
PIASTRA PRESE CINCH
BUCHSENPLATTE
SOCKET BOARD
PIASTRA PRESE
KOPFH.-ANSCHL PL
HEADPHONE SOCKET BOARD
PIASTRA PRESA CUFFIA
NF
G1
L
LL
LR
R
H
NF
AF/BF


NO
K7
BEDIENEINHEIT
CONTROL UNIT
UNITA DI COMANDO
NETZSYNCHRONPL.
29304-050.07
KOPFH-ANSCHL PL
HEADPHONE SOCKET BOARD
PIASTRA PRESA CUFFIA
H
NF
G1
LL
LR
NF
AF/BF
+N/5V
+A/150V/MIN
BR


CHASSIS 29305-051.51
29304-568.81/48(01)
+A/ 150V/MIN
S1644
T1,6A
IC555
C1
C2
C3
C4
C5
J1
J6
JH


ZUM STECKER S (BED.-EINHEIT)
TO PLUG S (CONTROL UNIT)
ALLA SPINA S (UNITA DI COMANDO)
VERS. LA FICHE S (UNITE DE COMMANDE)
S
2
1
WISCHER
TEMP. CONTACT
CONTATTO TEMP.
+U B /305V
E
2
1
ENTMAGNETISIERUNG/DEGAUSSING
SMAGNETIZZ./DEMAGNETISATION
L609
0,1U
C609
250V~
4,7M
R627
VDR
R623
3,6M
R624
150K P
R626
270K
R646
T1,6A
SI644
6,8N
C6151
FKC3
100P
C6152
TDA4601
IC631
LOGIK
START
U REF.
U START
STAND BY
B
PTC
R609
300U/385V
C626
N4
N3
S601
0,15U
C601
MP3
250V~
2 X 22MH
L601
3,3N
C611
400V~(B)
400V~(B)
3,3N
C613
1N
C624
1KV
1N
C622
1KV
B500/C2200
D621
1N
C623
1KV
1N
C621
1KV
4,7
R610
1,5/7W
R620
1N4007
D616
10K/7W
R616
AENDERUNGEN VORBEHALTEN
SUBJECT TO ALTERATION
MODIFICATIONS RESERVEES
CON RISERVA DI MODIFICA


C1
4 3 2 1
+A +N +E +B
C2
1 2 3
+U B /305V
2,5K R647
5,6K R645
BYW32 D647
100 R648
1U/100V C647
NETZSYNCHRONPLATTE 29304-050.07
MAINS SYNC BOARD
PIASTRA SINCRON. DI RETE
C.I. SYNCHRON. DE SECTEUR
SEKUNDAER POTENTIAL
SECONDARY POTENTIAL
POTENZIALE SECONDARIO
POTENTIEL SECONDAIRE
6,8N C6151 FKC3
100P C6152
TDA4601 IC631
LOGIK
START
U REF.
U START
STAND BY
B
270K R646
T1,6A SI644
150K R626
100P C6153
12K R6157
2,2N C6157
1,2K R6153
220 R6154
100U/10V C6154
10K R6101
10K R6102
4,7K R6103
BC548B T6100
BC558B T6105
10K R6106
15K R6107
18K R6108
1N C6107
NE555 IC6110
10N C6108
3,3K R6111
0,1U C6111
1K R6112
BC548B T6110
10K R6116
3,3N C6117
1K R6117
2,7K R6118
BC548B T6120
10K R6121
10K R6122
CNY17 0K6110
56K R6128
470 R6129
4,7K R612
1N4003 D6131
100U 25V C6131
33K R6131
CNY17F/1 0K6130
BC548B T6125
270 R6124
10K R2127
4,7K R6126
BC548B T6130
1N C623 1KV
1N C621 1KV
0,1U C6141
33K R6141
BC548B T6140
1K R6142
1K R6143
2 X TD190
D6142 D6143
100U/40V C6147
4,7UH L6146
0,33 R6147
L6147
1N4007 D6146
1N4007 D6147
MI16018 T634
27 R633
0,47 1W R634
0,1U C635
47/7W R636
BA159 D636
2,2N C634 2KV
NICHT NETZGETRENNTES SCHALTUNGSTEIL
CIRCUIT NOT MAINS - ISOLATED
CIRCUIT NON ISOLE DU SECTEUR
CIRCUITO NON SEPARATO DALLA RETE
0V
① ca. 1,5 VSS 10 µs/cm
② ca. 12,5 VSS 5 µs/cm
③ ca. 4 VSS 5 µs/cm
④ ca. 18 VSS 5 µs/cm
⑤ ca. 720 VSS 5 µs/cm



0V

④ ca. 18 V_{SS} 5 µs/cm

⑤ ca. 720 V_{SS} 5 µs/cm

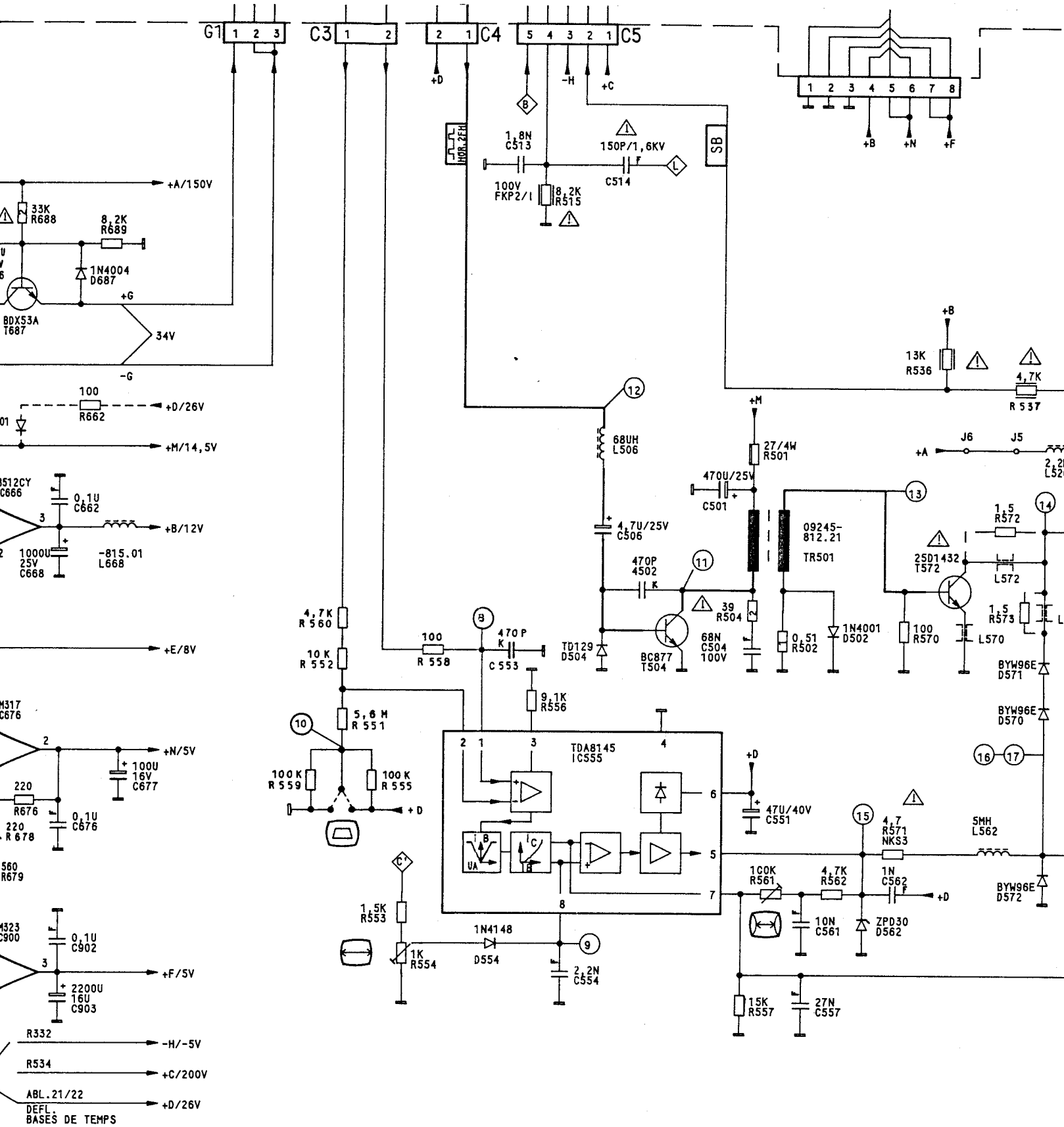
⑥ ca. 450 V_{SS} 5 µs/cm

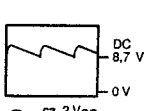
⑦ ca. 55 V_{SS} 5 µs/cm

⑧ ca. 50 V_{SS} 2 ms/cm

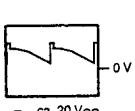
⑨ DC 8,7 V, ca. 2 V_{SS} 5 µs/cm

⑩ ca. 20 V_{SS} 2 ms/cm

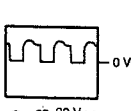




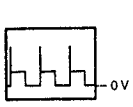
⑨ ca. 2 V_{SS} 5 µs/cm



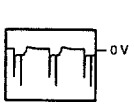
⑩ ca. 20 V_{SS} 2 ms/cm



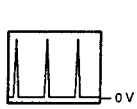
⑪ ca. 20 V_{SS} 5 µs/cm



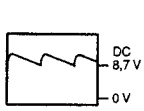
⑫ ca. 8 V_{SS} 5 µs/cm



⑬ ca. 22 V_{SS} 5 µs/cm



⑭ ca. 1300 V_{SS} 5 µs/cm

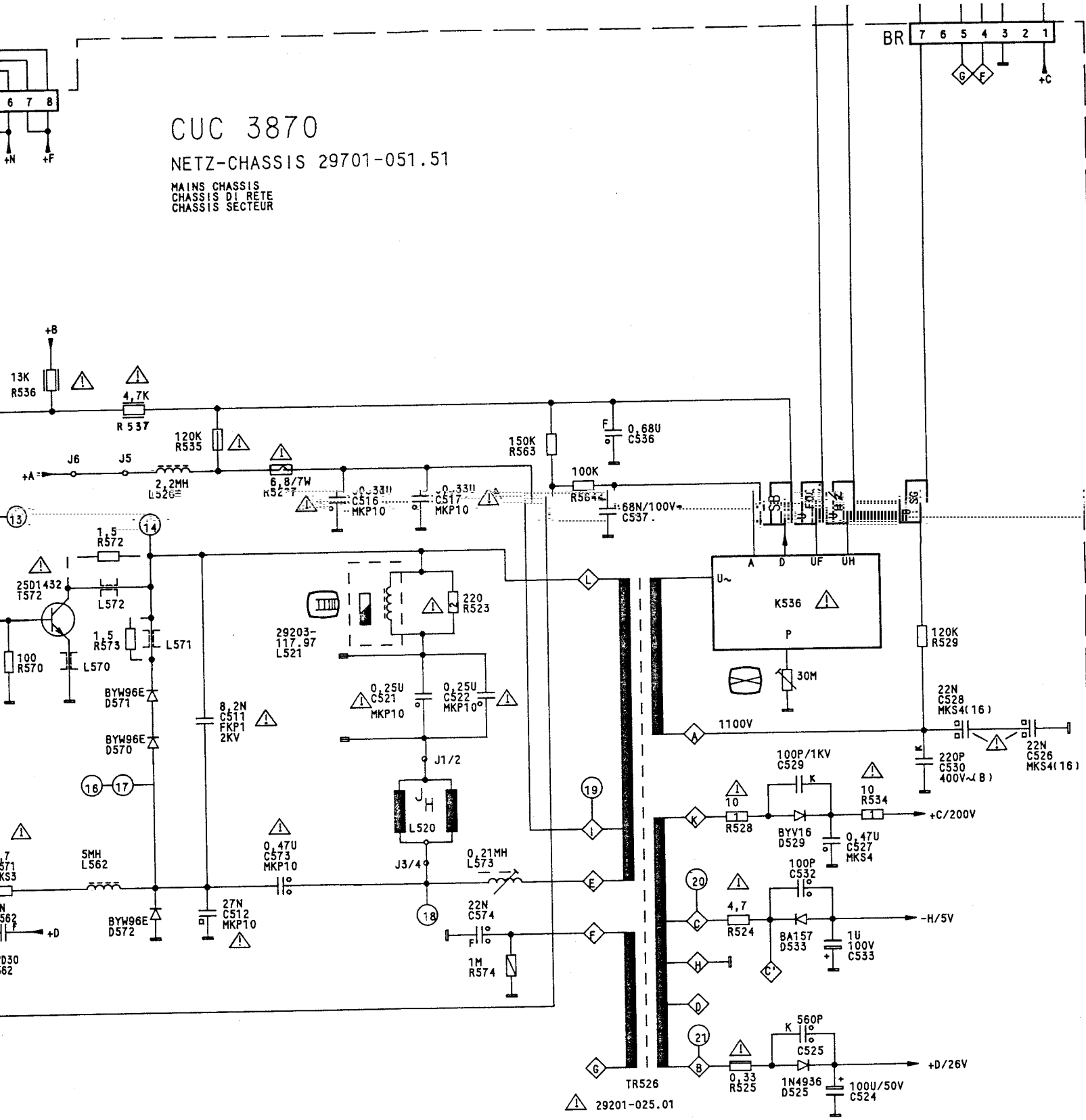


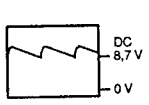
⑮ ca. 1,5 V_{SS} 5 µs/cm

CUC 3870

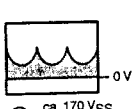
NETZ-CHASSIS 29701-051.51

MAINS CHASSIS
CHASSIS DI RETE
CHASSIS SECTEUR

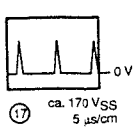




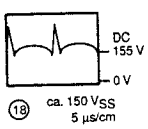
15 ca. 1,5 V_{SS} 5 µs/cm



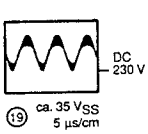
16 ca. 170 V_{SS} 2 ms/cm



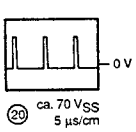
17 ca. 170 V_{SS} 5 µs/cm



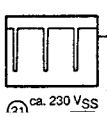
18 ca. 150 V_{SS} 5 µs/cm



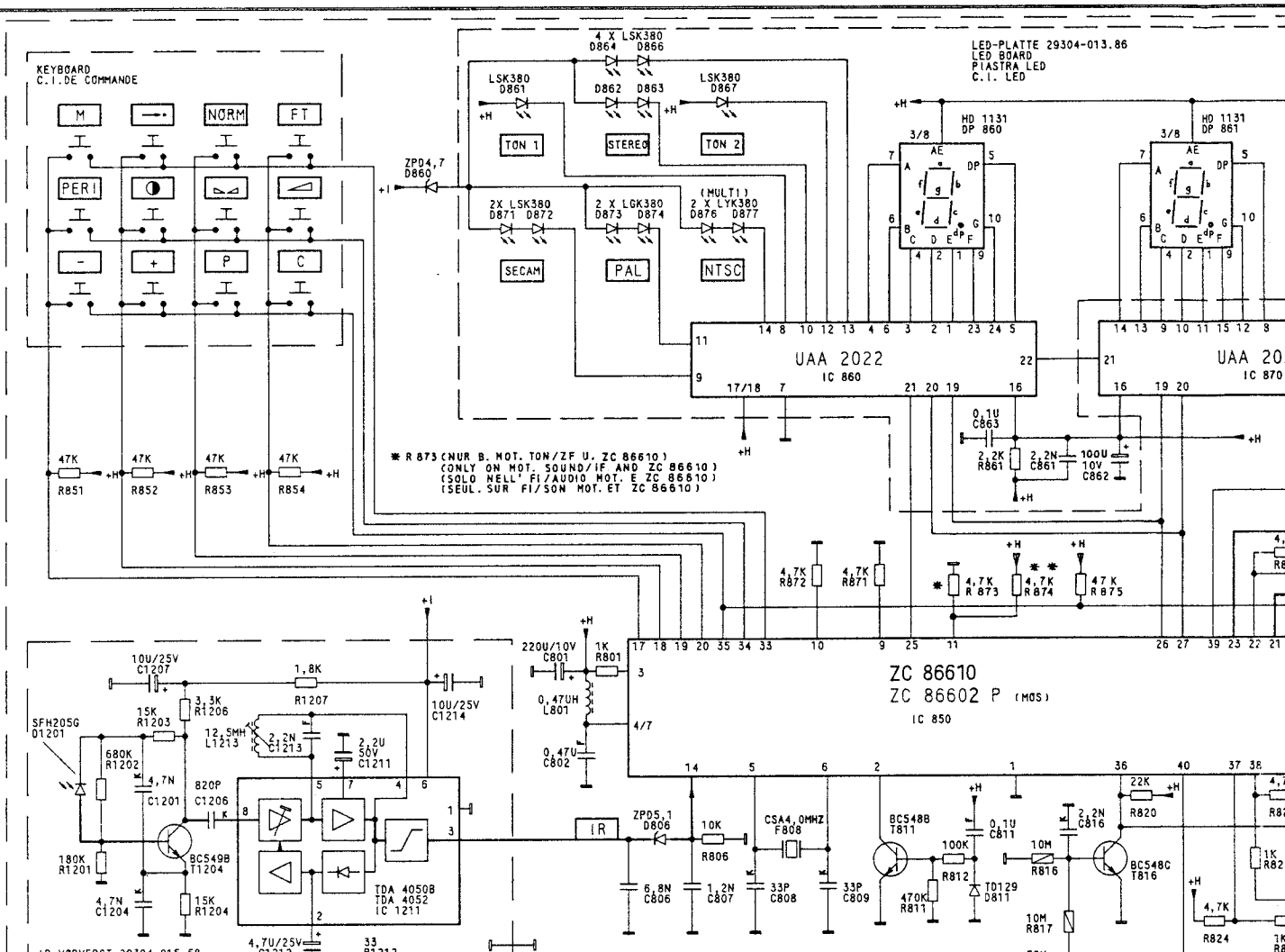
19 ca. 35 V_{SS} 5 µs/cm

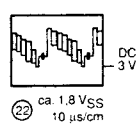


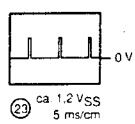
20 ca. 70 V_{SS} 5 µs/cm

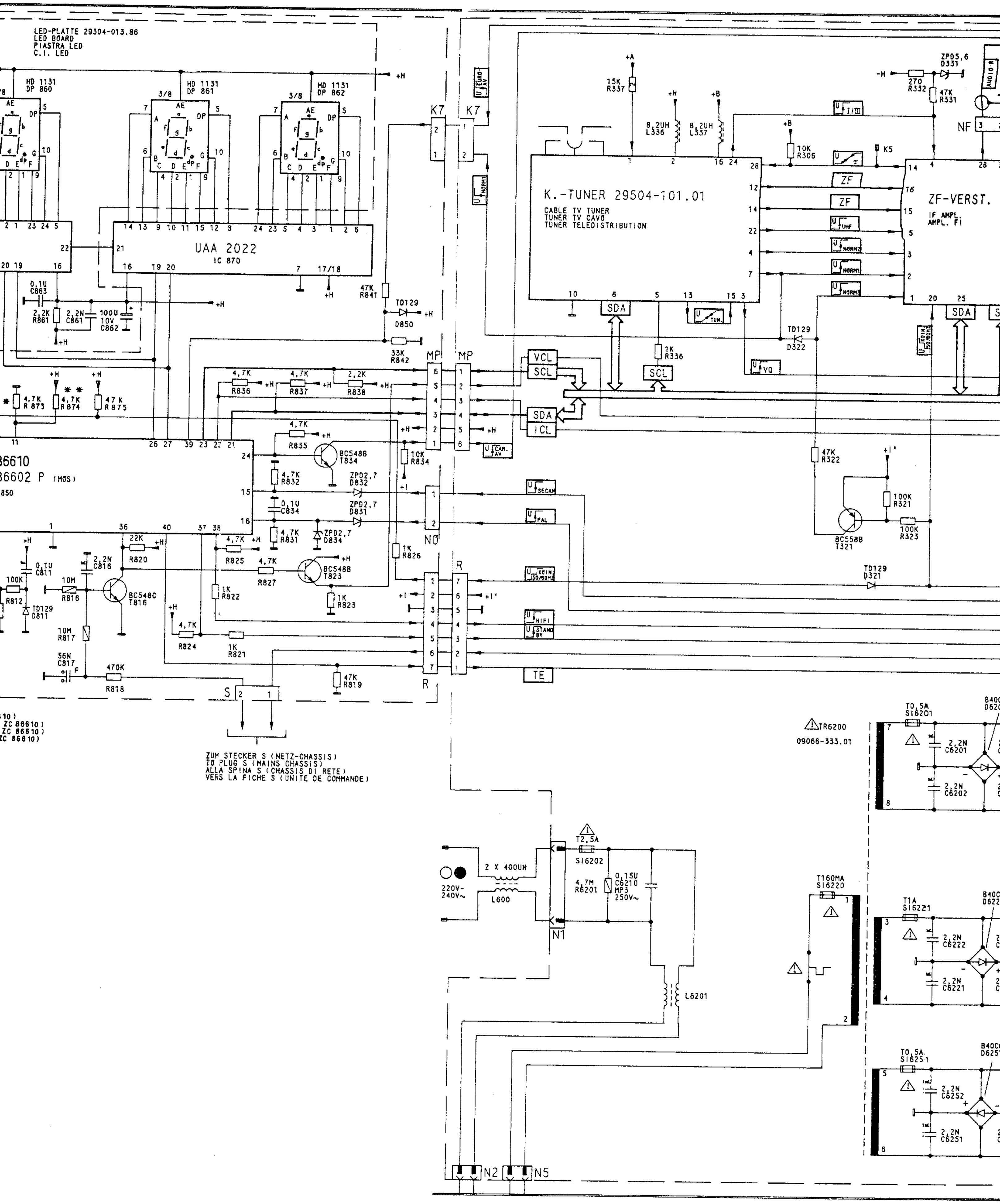
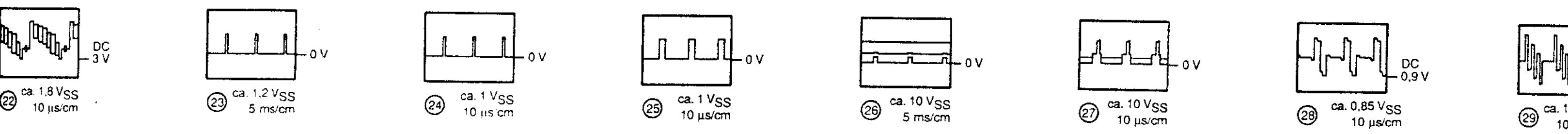


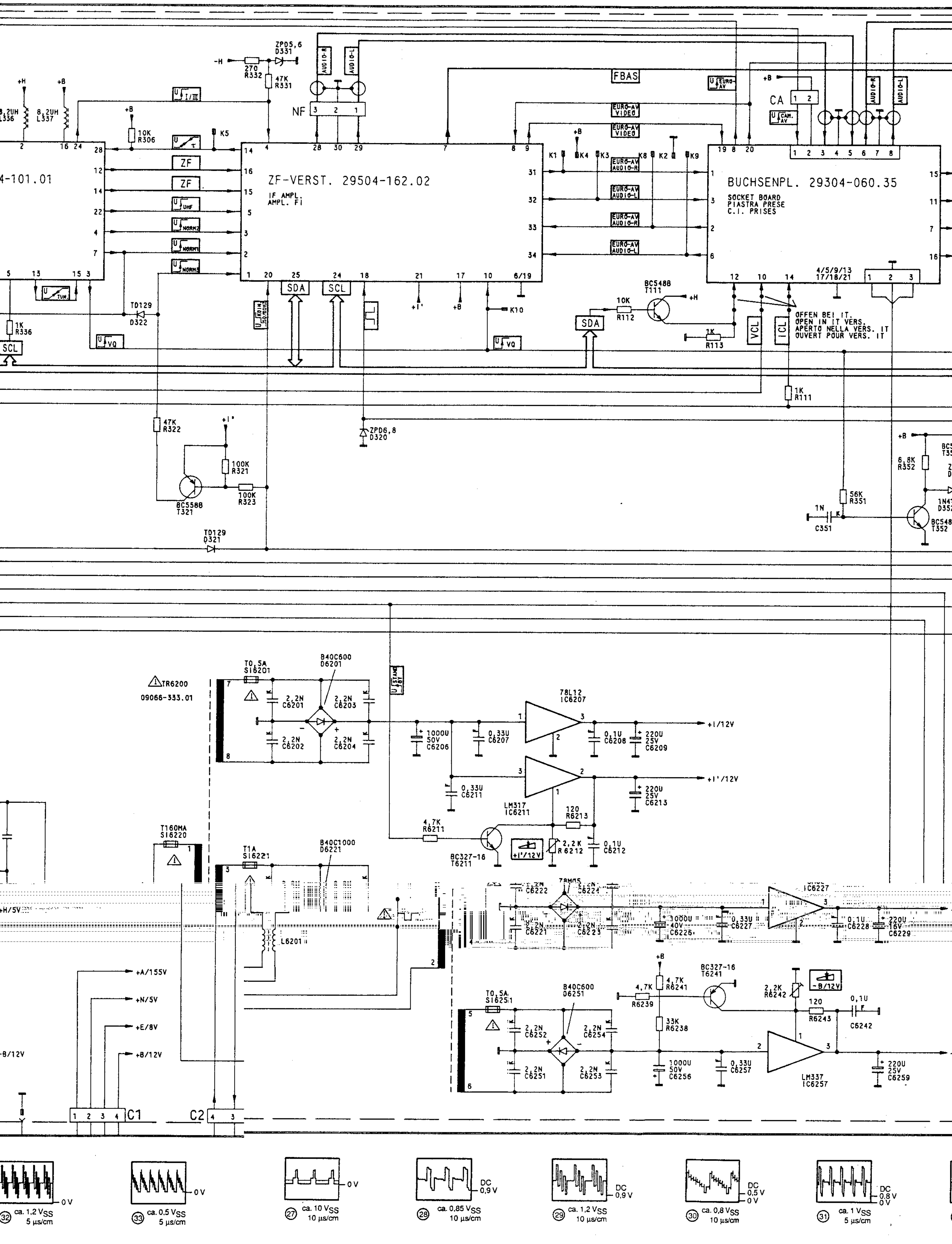
21 ca. 230 V_{SS}

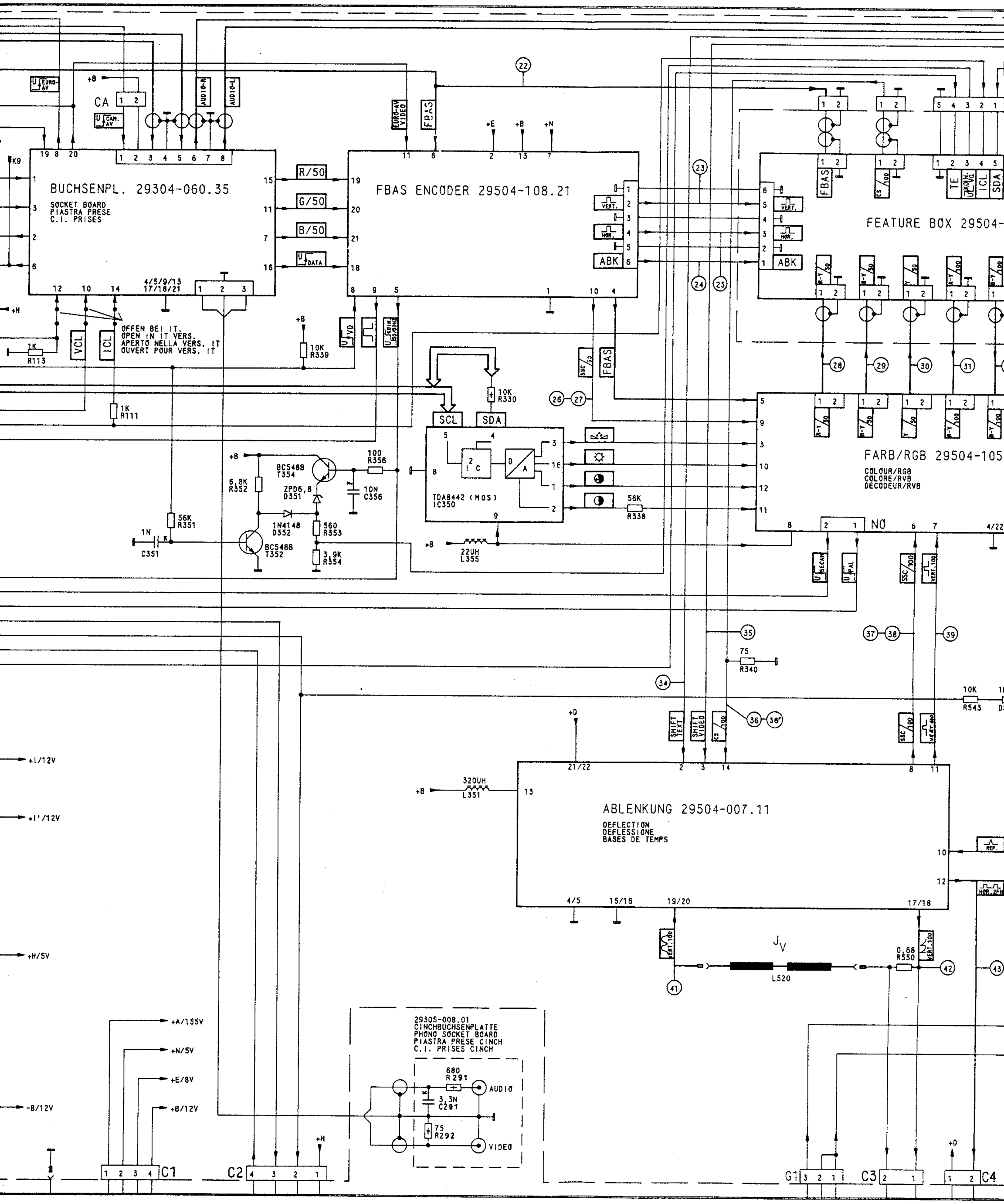

KEYBOARD
C.I.DE COMMANDE
M
NORM
FT
PERI
P
C
4 X LSK380
D864 D866
LSK380
D861
D862 D863
LSK380
D867
TON 1
STEREO
TON 2
ZPD4,7
D860
2X LSK380
D871 D872
2 X LGK380
D873 D874
(MULTI)
2 X LYK380
D876 D877
SECAM
PAL
NTSC
LED-PLATTE 29304-013.86
LED BOARD
PIASTRA LED
C.I. LED
HD 1131
DP 860
HD 1131
DP 861
UAA 2022
IC 860
UAA 20
IC 870
47K
R851
47K
R852
47K
R853
47K
R854
* R 873 (NUR B. MOT. TON/ZF U. ZC 86610)
(ONLY ON MOT. SOUND/IF AND ZC 86610)
(SOLO NELL' FI/AUDIO MOT. E ZC 86610)
(SEUL. SUR FI/SON MOT. ET ZC 86610)
0,1U
C863
2,2K
R861
2,2N
C861
100U
10V
C862
4,7K
R872
4,7K
R871
4,7K
R 873
4,7K
R874
47K
R875
ZC 86610
ZC 86602 P (MOS)
IC 850
10U/25V
C1207
1,8K
R1207
10U/25V
C1214
3,3K
R1206
15K
R1203
SFH205G
D1201
12,5MH
L1213
2,2N
C1213
2,2U
50V
C1211
680K
R1202
4,7N
C1201
820P
C1206
180K
R1201
BC549B
T1204
4,7N
C1204
15K
R1204
TDA 4050B
TDA 4052
IC 1211
4,7U/25V
C1212
33
R1212
IR-VORVERST.29304-015.58
IR PREAMPL.
PREAMPL.IR
220U/10V
C801
1K
R801
0,47UH
L801
0,47U
C802
IR
ZPD5,1
D806
10K
R806
CSA4,0MHZ
F808
6,8N
C806
1,2N
C807
33P
C808
33P
C809
BC548B
T811
100K
R812
470K
R811
TD129
D811
0,1U
C811
22K
R820
2,2N
C816
10M
R816
BC548C
T816
10M
R817
4,7K
R824
56N
C817
470K
R818
BED.-EINHEIT 29501-066.21
CONTROL UNIT
UNITA DI COMANDO
UNITE DE COMMANDE
** R 874 (NUR B. SIE. TON/ZF U. ZC 86610)
(ONLY ON SIE. SOUND/IF AND ZC 86610)
(SOLO NELL' FI/AUDIO SIE. E ZC 86610)
(SEUL. SUR FI/SON SIE. ET ZC 86610)

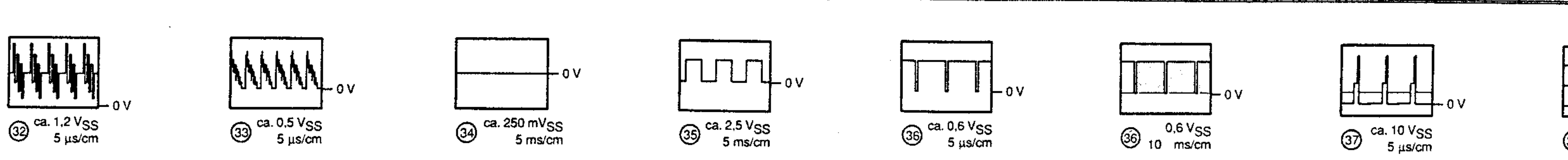

DC
3 V
22
ca. 1,8 Vss
10 µs/cm

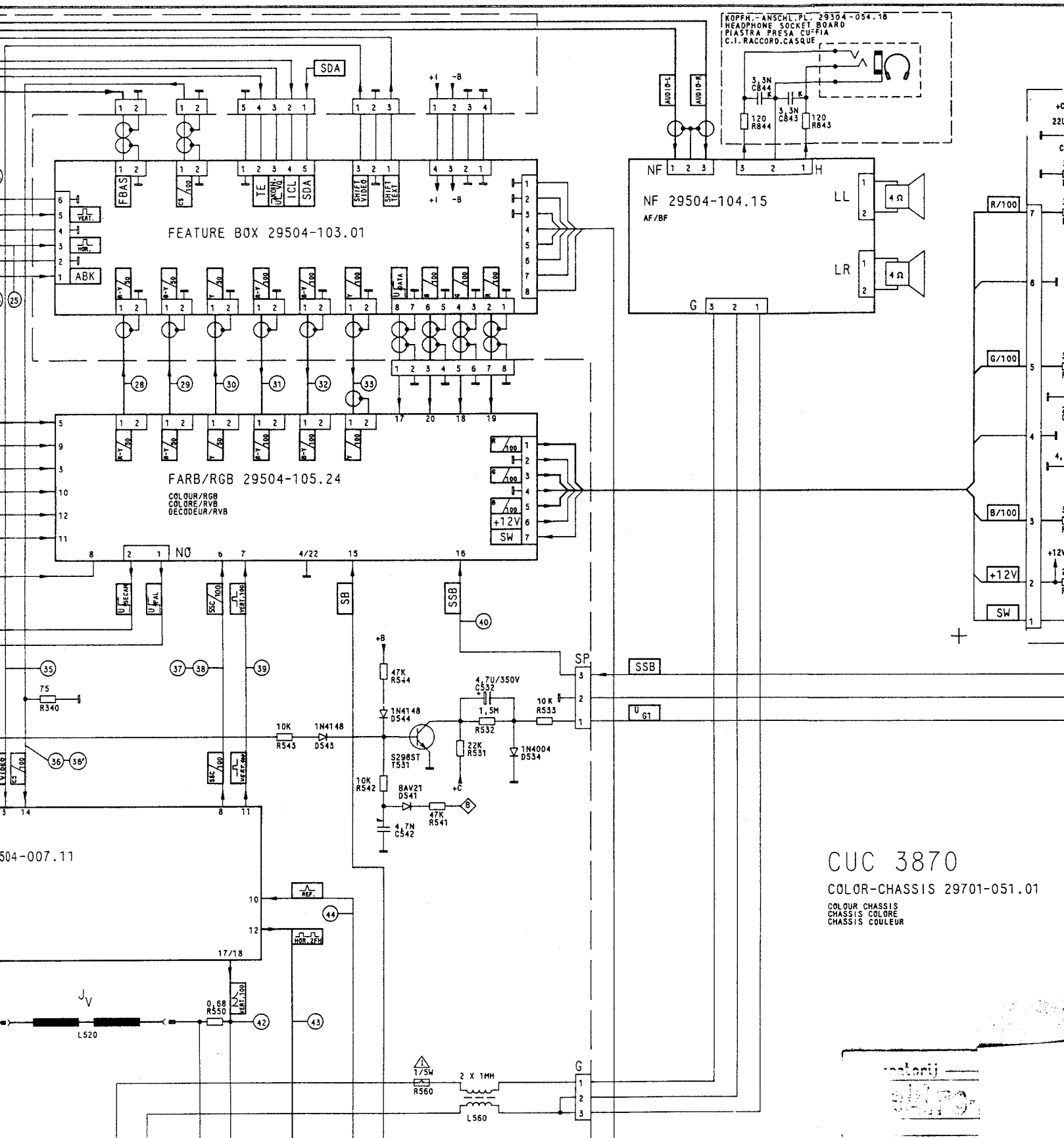

0 V
23
ca. 1,2 Vss
5 ms/cm

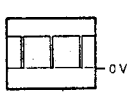

LED-PLATTE 29304-013.86
LED BOARD
PIASTRA LED
C.I. LED
HD 1131 DP 860
HD 1131 DP 861
HD 1131 DP 862
UAA 2022
IC 870
K.-TUNER 29504-101.01
CABLE TV TUNER
TUNER TV CAVO
TUNER TELEDISTRIBUTION
ZF-VERST.
IF AMPL.
AMPL. FI
SDA
SCL
VCL
ICL
TE
ZUM STECKER S (NETZ-CHASSIS)
TO PLUG S (MAINS CHASSIS)
ALLA SPINA S (CHASSIS DI RETE)
VERS LA FICHE S (UNITE DE COMMANDE)
TR6200
09066-333.01
220V-240V~
2 X 400UH
L600
L6201
N1
N2
N5

22 ca. 1,8 VSS 10 µs/cm DC 3 V
23 ca. 1,2 VSS 5 ms/cm 0 V
24 ca. 1 VSS 10 µs/cm 0 V
25 ca. 1 VSS 10 µs/cm 0 V
26 ca. 10 VSS 5 ms/cm 0 V
27 ca. 10 VSS 10 µs/cm 0 V
28 ca. 0,85 VSS 10 µs/cm DC 0,9 V


ZF-VERST. 29504-162.02
IF AMPL.
AMPL. Fi
BUCHSENPL. 29304-060.35
SOCKET BOARD
PIASTRA PRESE
C.I. PRISES
4-101.01
FBAS
NF
CA
SDA
SCL
ZF
VCL
ICL
EURO-AV VIDEO
EURO-AV AUDIO-R
EURO-AV AUDIO-L
AUDIO-R
AUDIO-L
OFFEN BEI IT.
OPEN IN IT VERS.
APERTO NELLA VERS. IT
OUVERT POUR VERS. IT
TR6200
09066-333.01
B40C600
D6201
78L12
IC6207
LM317
IC6211
BC327-16
T6211
B40C1000
D6221
L6201
IC6227
B40C600
D6251
LM337
IC6257
BC327-16
T6241
+I/12V
+I'/12V
+A/155V
+N/5V
+E/8V
+B/12V
+H/5V
-B/12V
C1
C2
ca. 1,2 VSS 5 µs/cm
ca. 0,5 VSS 5 µs/cm
ca. 10 VSS 10 µs/cm
ca. 0,85 VSS 10 µs/cm
ca. 1,2 VSS 10 µs/cm
ca. 0,8 VSS 10 µs/cm
ca. 1 VSS 5 µs/cm

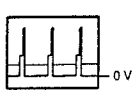

BUCHSENPL. 29304-060.35
SOCKET BOARD
PIASTRA PRESE
C.I. PRISES
CA
AUDIO-R
AUDIO-L
EURO-AV VIDEO
FBAS
R/50
G/50
B/50
FBAS ENCODER 29504-108.21
VERT.
HOR.
ABK
FEATURE BOX 29504-
FBAS
TE
ICL
SDA
OFFEN BEI IT.
OPEN IN IT VERS.
APERTO NELLA VERS. IT
OUVERT POUR VERS. IT
VCL
ICL
1K
R113
1K
R111
10K
R339
10K
R330
SCL
SDA
FBAS
BC548B
T354
6,8K
R352
ZPD6,8
D351
100
R356
10N
C356
TDA8442 (MOS)
IC350
1N4148
D352
560
R353
3,9K
R354
BC548B
T352
56K
R351
1N
C351
56K
R338
22UH
L355
FARB/RGB 29504-105
COLOUR/RGB
COLORE/RVB
DECODEUR/RVB
NO
75
R340
10K
R543
SHIFT TEXT
SHIFT VIDEO
ABLENKUNG 29504-007.11
DEFLECTION
DEFLESSIONE
BASES DE TEMPS
320UH
L351
0,68
R550
L520
+I/12V
+I'/12V
+H/5V
+A/155V
+N/5V
+E/8V
+B/12V
-B/12V
29305-008.01
CINCHBUCHSENPLATTE
PHONO SOCKET BOARD
PIASTRA PRESE CINCH
C.I. PRISES CINCH
680
R291
AUDIO
3,3N
C291
75
R292
VIDEO
C1
C2
G1
C3
C4


0 V
32 ca. 1,2 VSS 5 µs/cm
33 ca. 0,5 VSS 5 µs/cm
34 ca. 250 mVSS 5 ms/cm
35 ca. 2,5 VSS 5 ms/cm
36 ca. 0,6 VSS 5 µs/cm
36 0,6 VSS 10 ms/cm
37 ca. 10 VSS 5 µs/cm

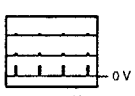




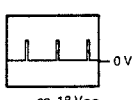
36 0,6 V_{SS} 10 ms/cm



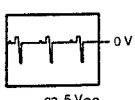
37 ca. 10 V_{SS} 5 µs/cm



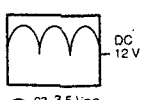
38 ca. 10 V_{SS} 2 ms/cm



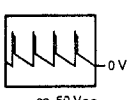
39 ca. 18 V_{SS} 2 ms/cm



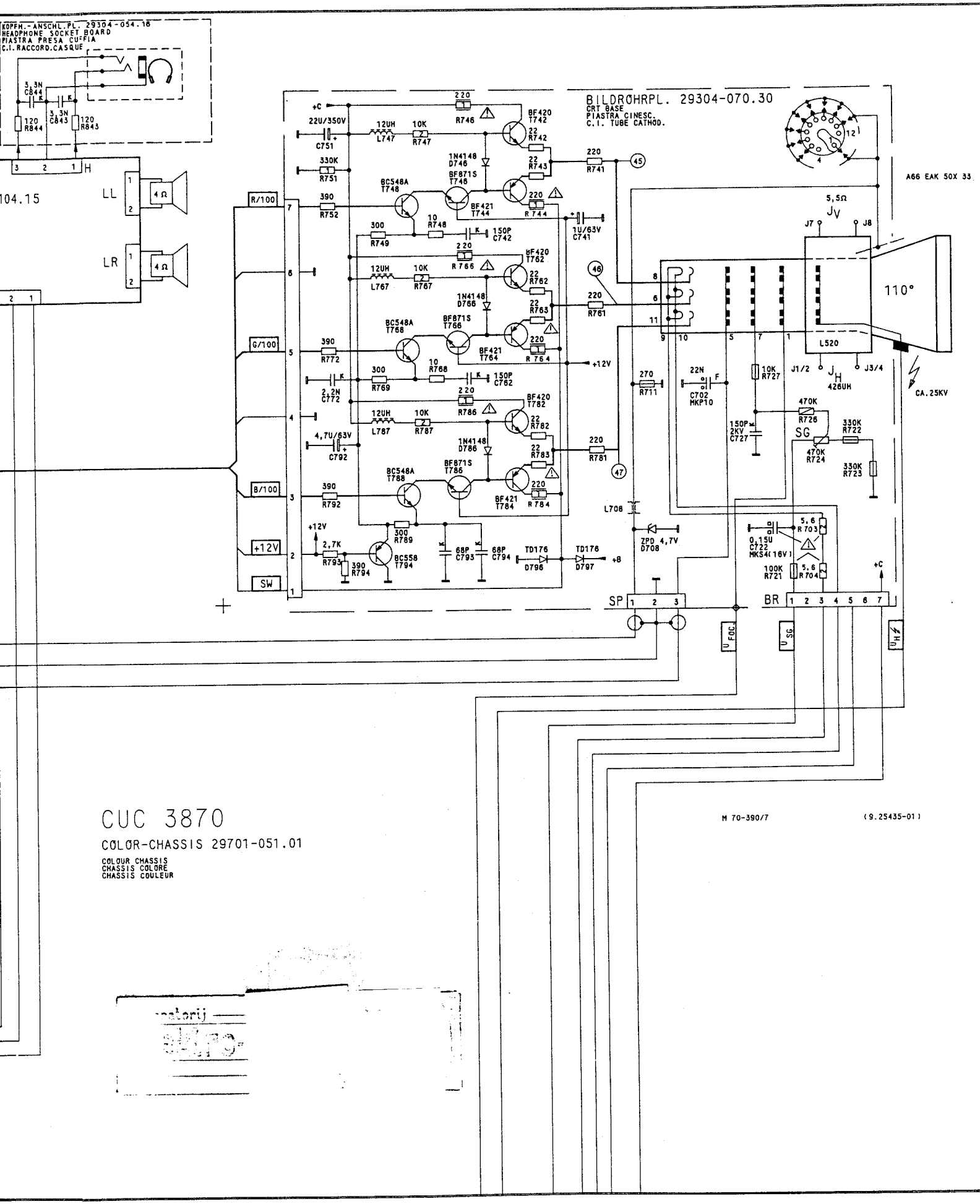
40 ca. 5 V_{SS} 5 µs/cm



41 ca. 3,5 V_{SS} 2 ms/cm



42 ca. 50 V_{SS} 2 ms/cm



CUC 3870

COLOR-CHASSIS 29701-051.01

COLOUR CHASSIS
CHASSIS COLORE
CHASSIS COULEUR

(41) DC 12 V — ca. 3,5 V_{SS} 2 ms/cm

(42) 0 V — ca. 50 V_{SS} 2 ms/cm

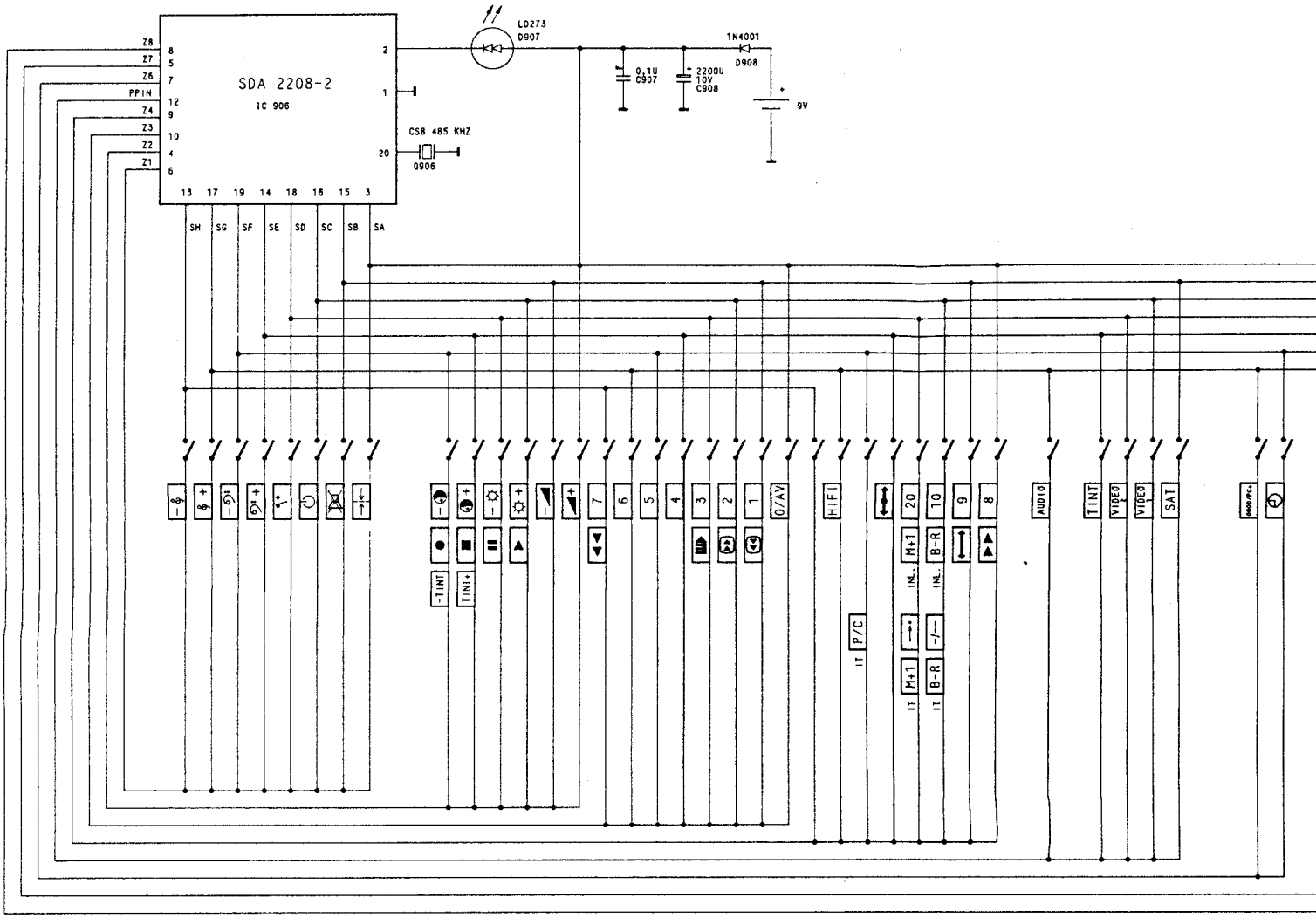
(43) 0 V — ca. 8 V 5 µs

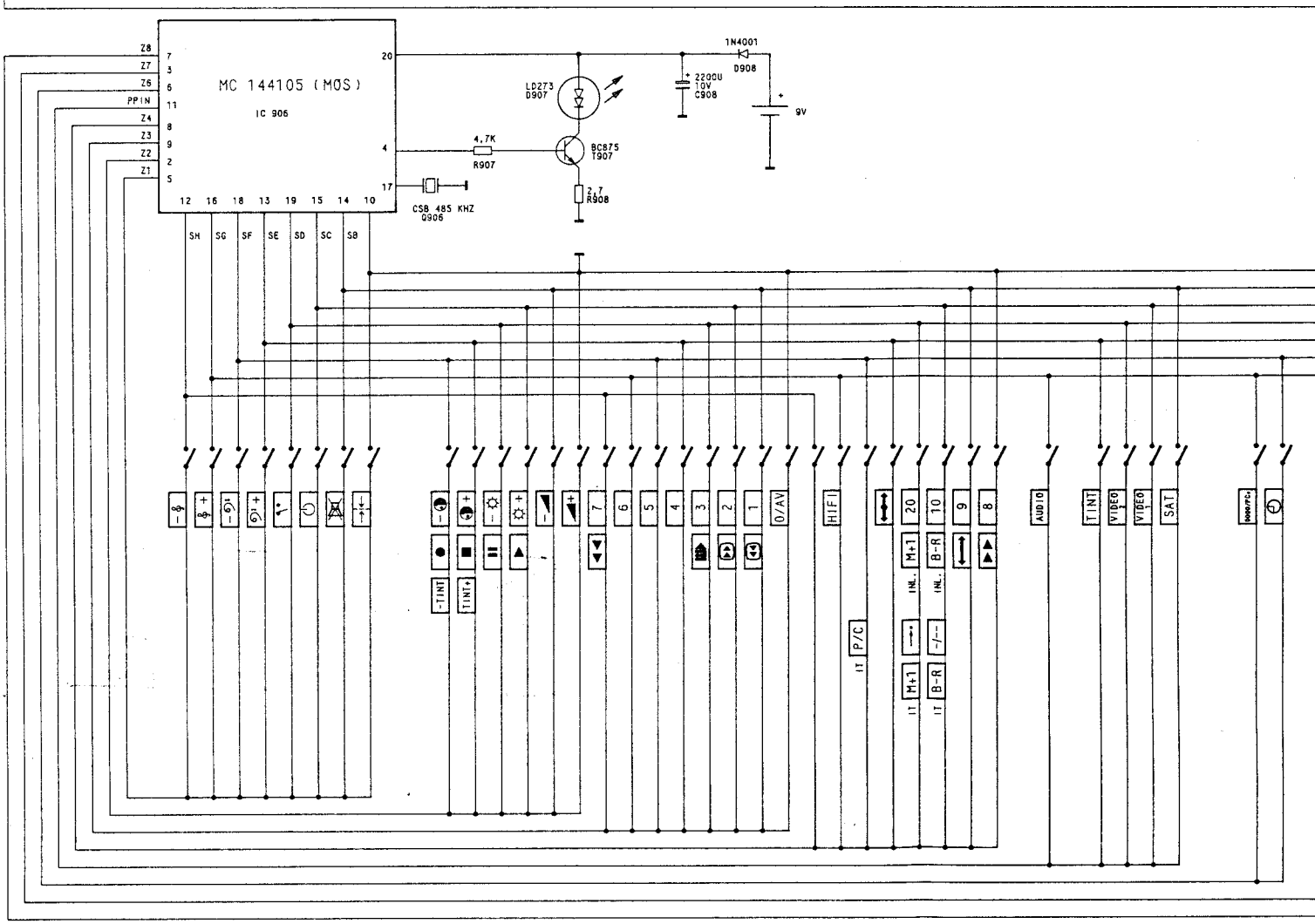
(44) 0 V — ca. 90 V_{SS} 5 µs/cm

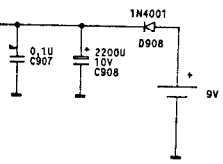
(45) DC 180 V — ca. 80 V_{SS} 5 µs/cm

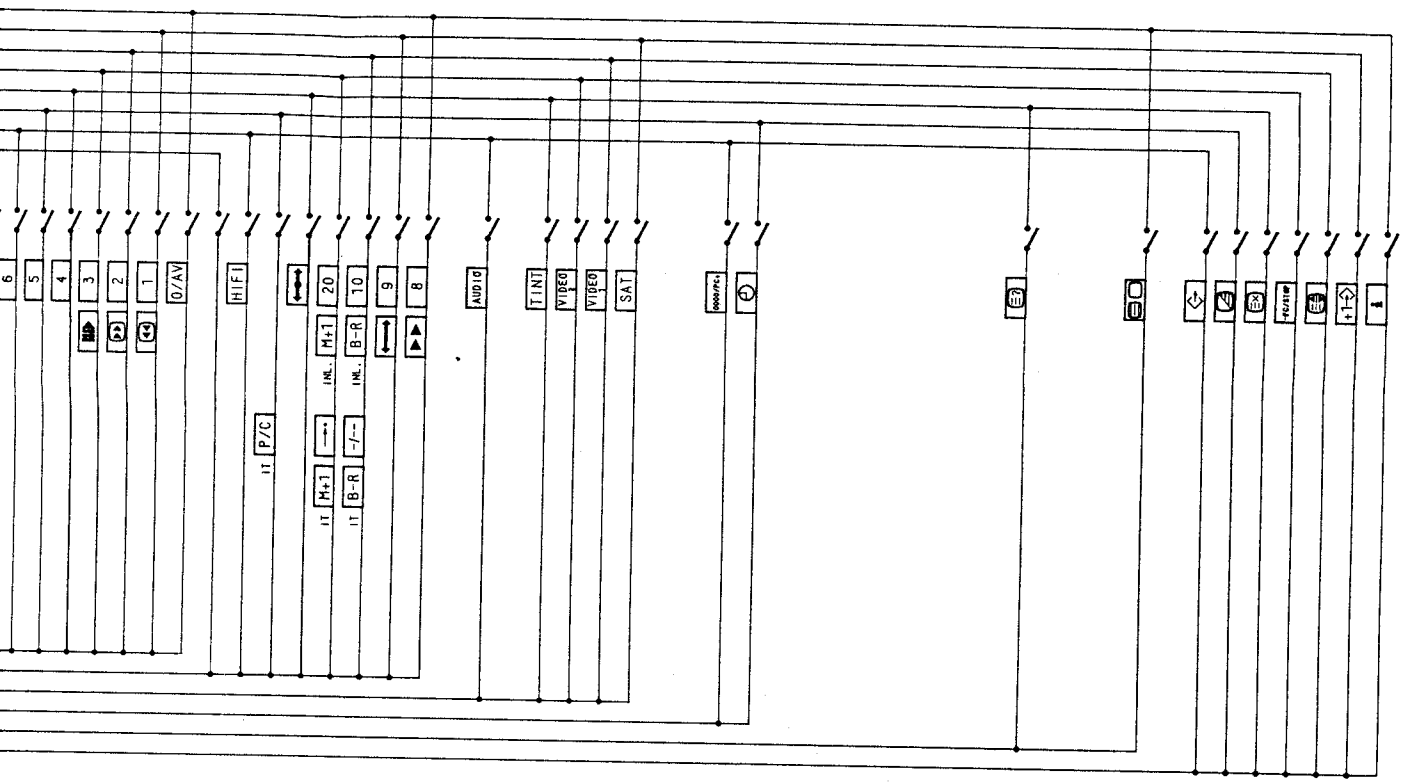
(46) DC 170 V — ca. 80 V_{SS} 5 µs/cm

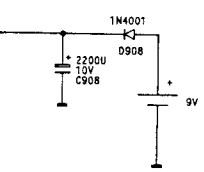
(47) DC 135 V — ca. 60 V_{SS} 5 µs/cm


SDA 2208-2
IC 906
LD273
D907
1N4001
D908
0,1U
C907
2200U
10V
C908
9V
CSB 485 KHZ
Q906
Z8
Z7
Z6
PPIN
Z4
Z3
Z2
Z1
SH
SG
SF
SE
SD
SC
SB
SA
-TINT
TINT+
0/AV
HIFI
P/C
AUDIO
TINT
VIDEO
VIDEO
SAT

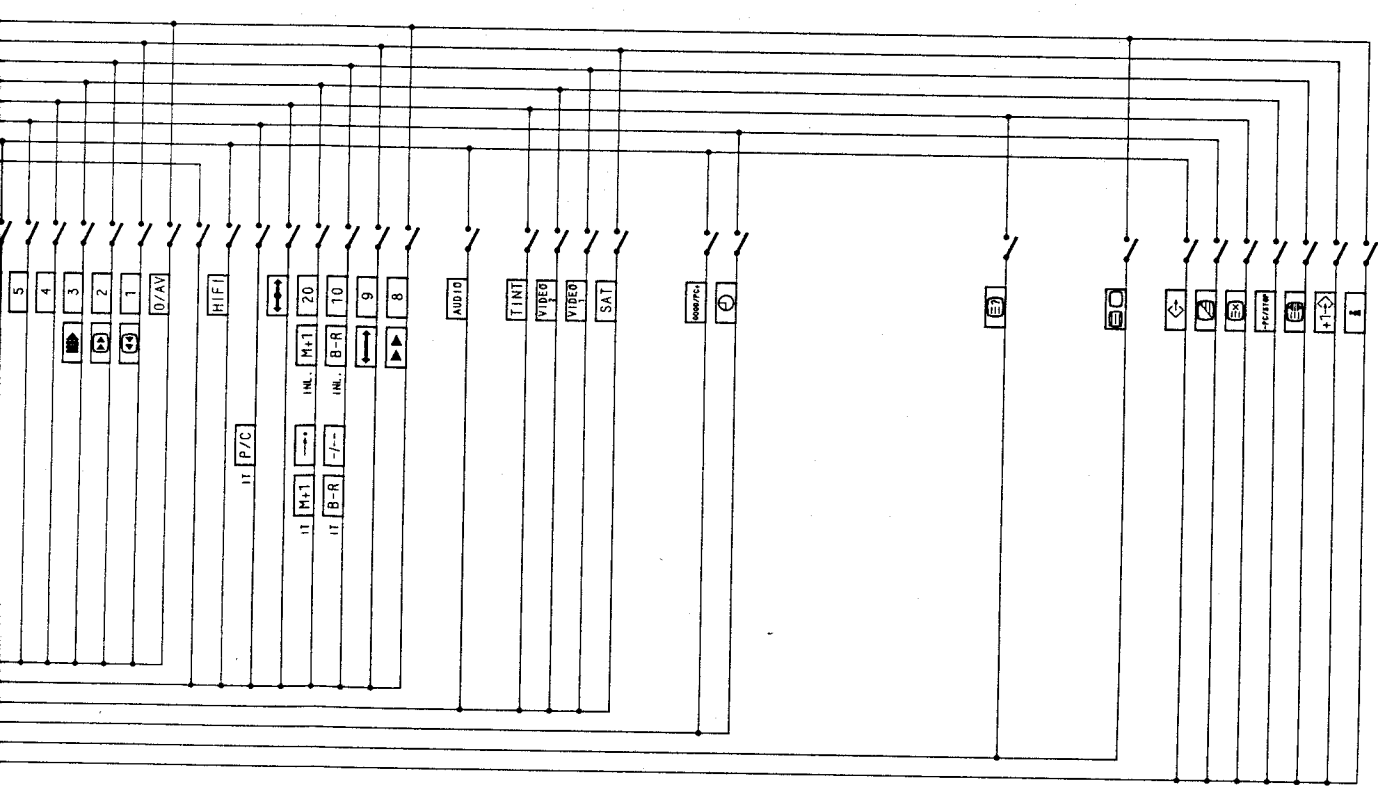

MC 144105 (MOS)
IC 906
LD273
D907
1N4001
D908
2200U
10V
C908
9V
4,7K
R907
BC875
T907
2,7
R908
CSB 485 KHZ
Q906
Z8
Z7
Z6
PPIN
Z4
Z3
Z2
Z1
SH
SG
SF
SE
SD
SC
SB
-TINT
TINT+
0/AV
HIFI
P/C
AUDIO
TINT
VIDEO
VIDEO
SAT

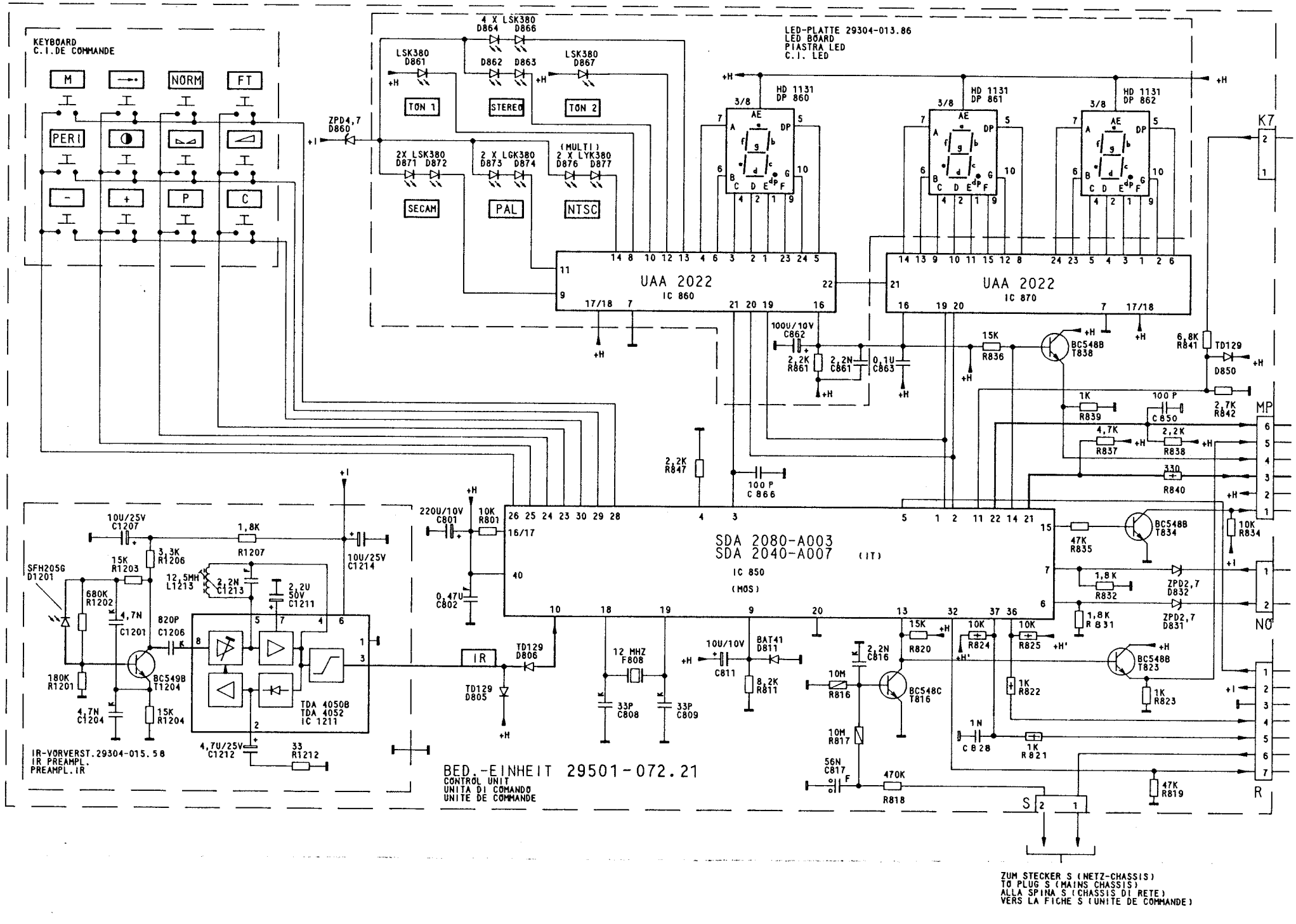


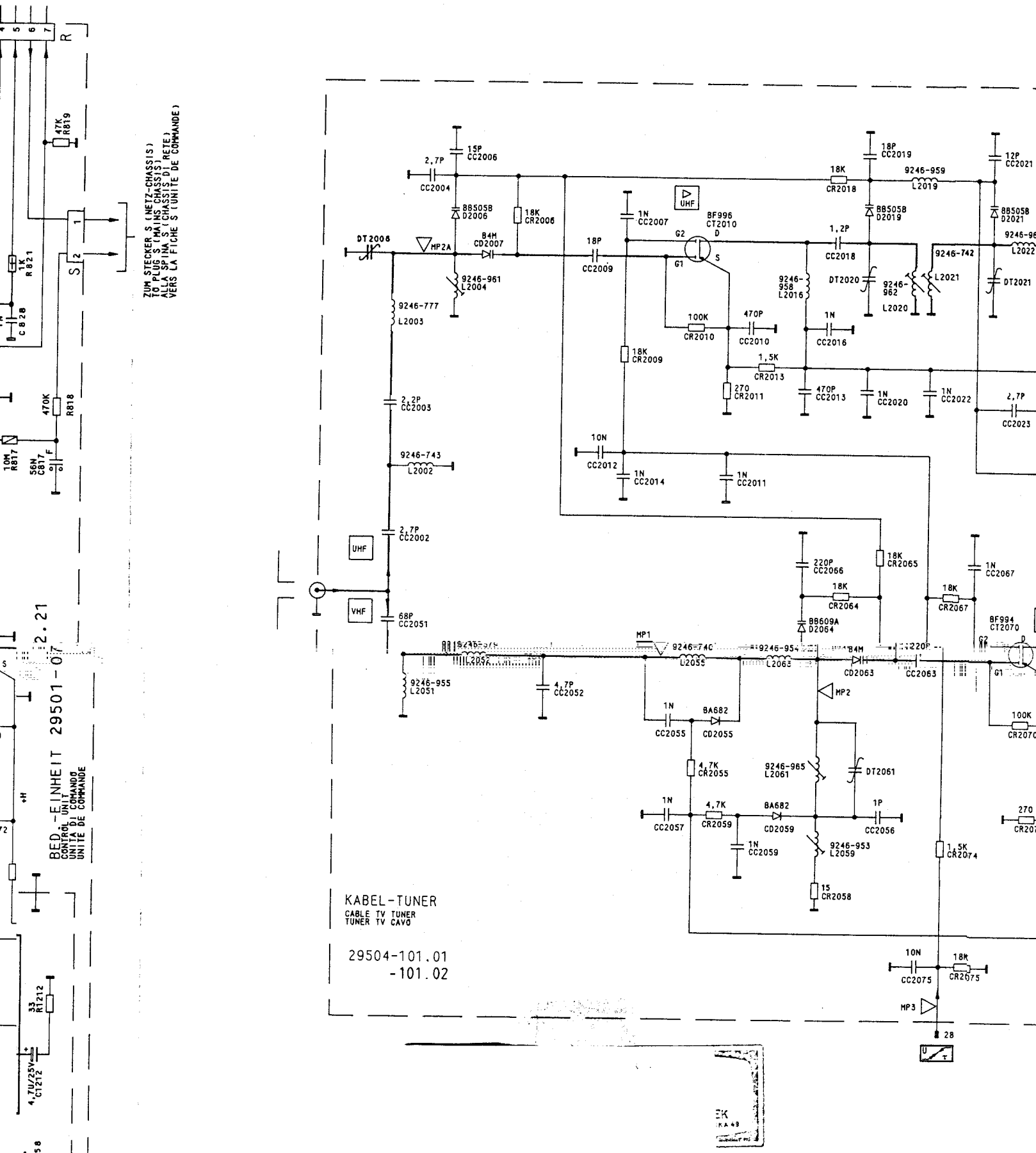




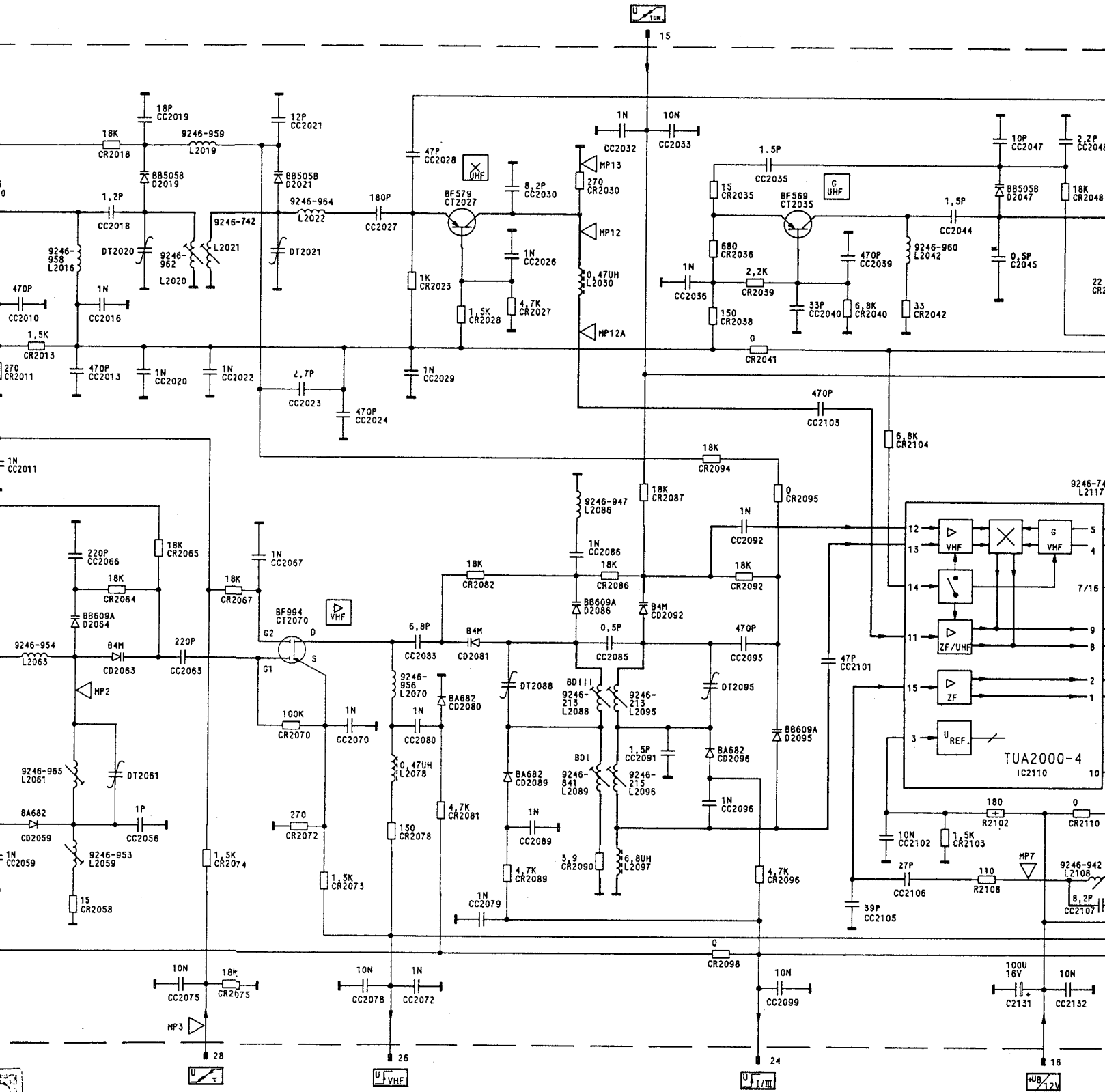
TP 650 DATA 29622-048.01
TC 650 DATA -048.03 IT

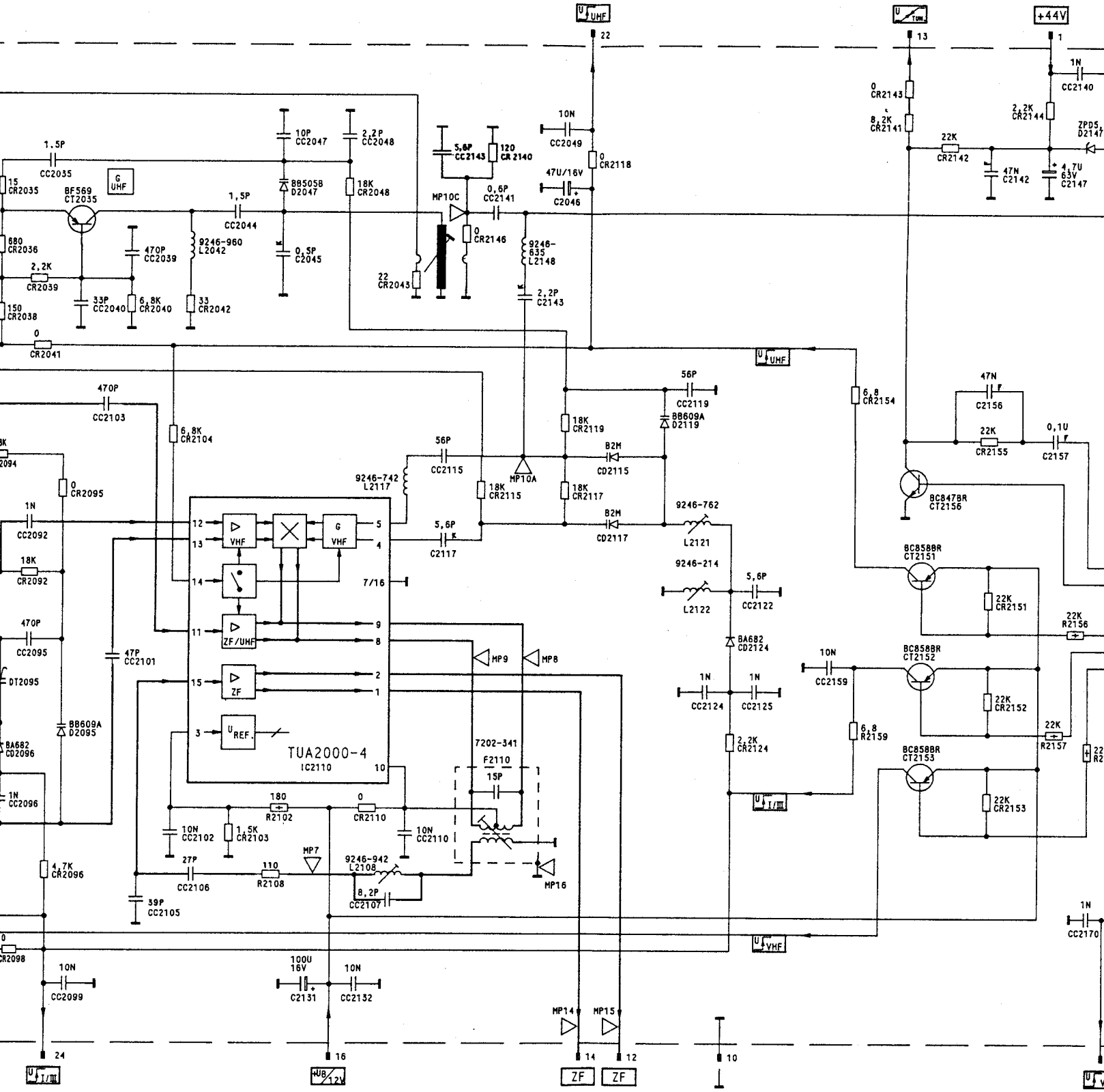


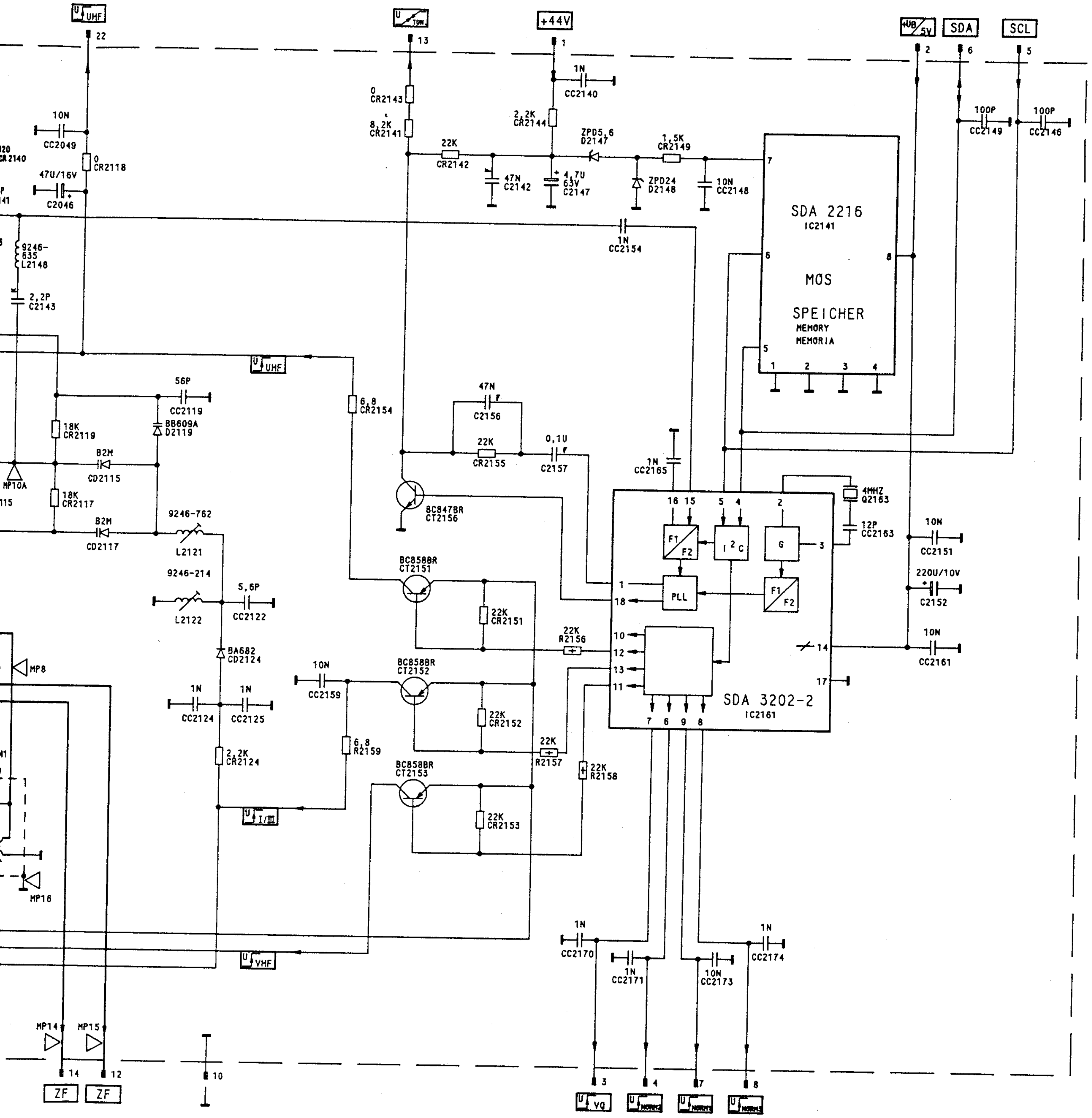

KEYBOARD
C.I.DE COMMANDE
M
NORM
FT
PERI
P
C
LED-PLATTE 29304-013.86
LED BOARD
PIASTRA LED
C.I. LED
4 X LSK380
D864 D866
LSK380
D861
D862 D863
LSK380
D867
TON 1
STEREO
TON 2
2X LSK380
D871 D872
2 X LGK380
D873 D874
(MULTI)
2 X LYK380
D876 D877
SECAM
PAL
NTSC
ZPD4,7
D860
HD 1131
DP 860
HD 1131
DP 861
HD 1131
DP 862
UAA 2022
IC 860
UAA 2022
IC 870
K7
100U/10V
C862
2,2K
R861
2,2N
C861
0,1U
C863
15K
R836
BC548B
T838
6,8K
R841
TD129
D850
2,7K
R842
MP
1K
R839
100 P
C 850
4,7K
R837
2,2K
R838
330
R840
2,2K
R847
100 P
C 866
SDA 2080-A003
SDA 2040-A007 (IT)
IC 850
(MOS)
BC548B
T834
47K
R835
10K
R834
NO
ZPD2,7
D832
ZPD2,7
D831
1,8K
R832
1,8K
R831
BC548B
T823
1K
R822
1K
R823
10U/25V
C1207
1,8K
10U/25V
C1214
SFH205G
D1201
15K
R1203
3,3K
R1206
R1207
12,5MH
L1213
2,2N
C1213
2,2U
50V
C1211
680K
R1202
4,7N
C1201
820P
C1206
180K
R1201
BC549B
T1204
4,7N
C1204
15K
R1204
TDA 4050B
TDA 4052
IC 1211
4,7U/25V
C1212
33
R1212
IR-VORVERST.29304-015.58
IR PREAMPL.
PREAMPL.IR
220U/10V
C801
10K
R801
0,47U
C802
IR
TD129
D806
TD129
D805
12 MHZ
F808
33P
C808
33P
C809
10U/10V
C811
BAT41
D811
8,2K
R811
2,2N
C816
15K
R820
10K
R824
10K
R825
10M
R816
BC548C
T816
10M
R817
1N
C828
1K
R821
56N
C817
470K
R818
47K
R819
S
R
BED.-EINHEIT 29501-072.21
CONTROL UNIT
UNITA DI COMANDO
UNITE DE COMMANDE
ZUM STECKER S (NETZ-CHASSIS)
TO PLUG S (MAINS CHASSIS)
ALLA SPINA S (CHASSIS DI RETE)
VERS LA FICHE S (UNITE DE COMMANDE)

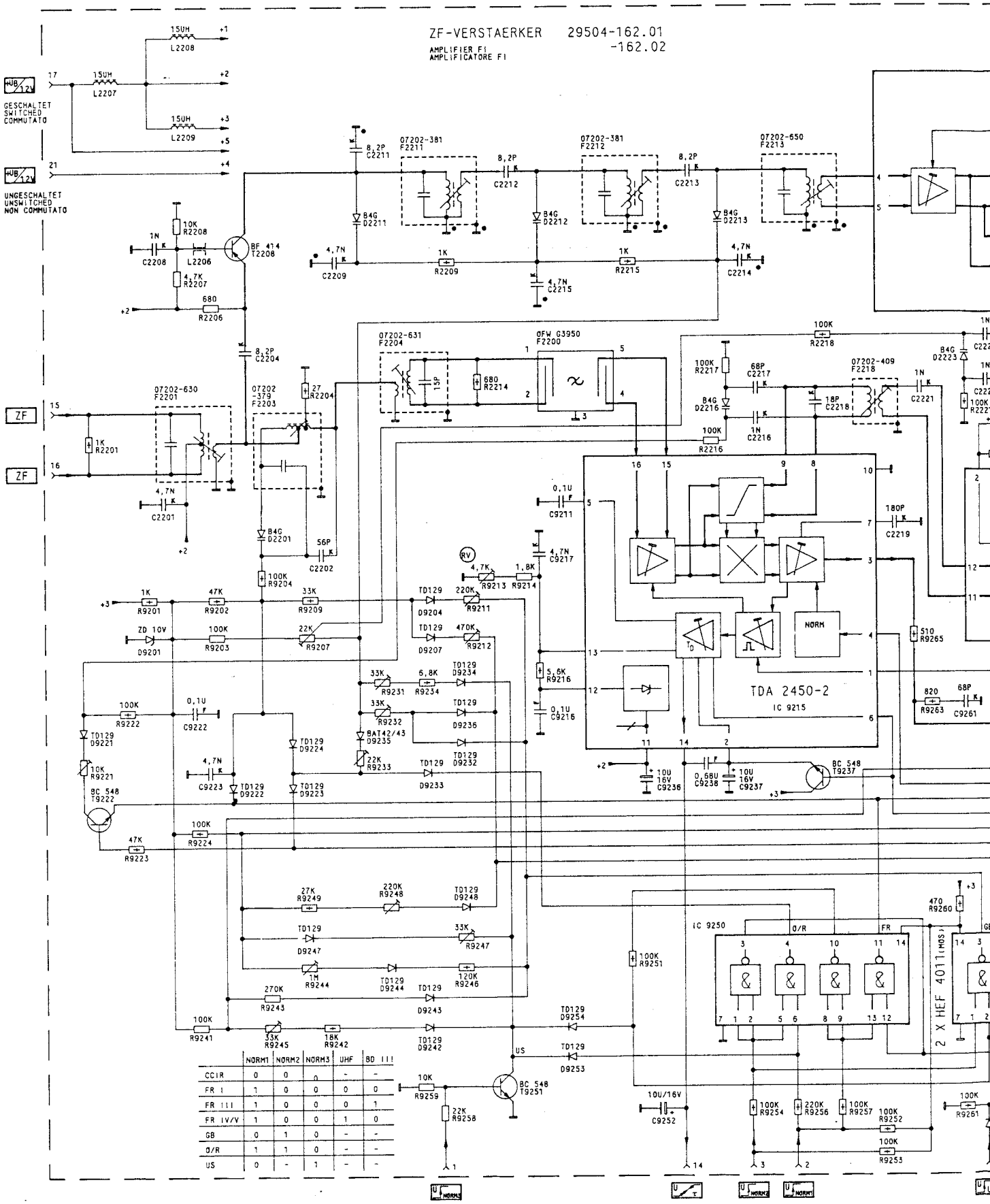


Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto


U TUN
15
18P CC2019
18K CR2018
9246-959 L2019
BB505B D2019
1,2P CC2018
9246-958 L2016
DT2020
9246-962 L2020
9246-742 L2021
12P CC2021
BB505B D2021
9246-964 L2022
DT2021
180P CC2027
47P CC2028
UHF
BF579 CT2027
8,2P CC2030
1K CR2023
1,5K CR2028
4,7K CR2027
1N CC2026
1N CC2032
10N CC2033
MP13
270 CR2030
MP12
0,47UH L2030
MP12A
1,5P CC2035
15 CR2035
BF569 CT2035
G UHF
680 CR2036
2,2K CR2039
150 CR2038
0 CR2041
470P CC2039
33P CC2040
6,8K CR2040
9246-960 L2042
33 CR2042
1,5P CC2044
10P CC2047
BB505B D2047
0,5P C2045
18K CR2048
1N CC2036
470P CC2010
1N CC2016
1,5K CR2013
270 CR2011
470P CC2013
1N CC2020
1N CC2022
2,7P CC2023
470P CC2024
1N CC2029
470P CC2103
6,8K CR2104
18K CR2094
1N CC2011
9246-947 L2086
18K CR2087
0 CR2095
1N CC2092
1N CC2086
18K CR2082
18K CR2086
18K CR2092
BB609A D2086
B4M CD2092
0,5P CC2085
470P CC2095
220P CC2066
18K CR2065
18K CR2064
BB609A D2064
9246-954 L2063
B4M CD2063
220P CC2063
MP2
1N CC2067
18K CR2067
BF994 CT2070
G2
D
S
G1
VHF
6,8P CC2083
B4M CD2081
100K CR2070
1N CC2070
9246-956 L2070
BA682 CD2080
1N CC2080
0,47UH L2078
4,7K CR2081
270 CR2072
150 CR2078
1,5K CR2073
1,5K CR2074
DT2088
BD III
9246-213 L2088
9246-213 L2095
DT2095
47P CC2101
BB609A D2095
1,5P CC2091
BA682 CD2096
BA682 CD2089
BD I
9246-841 L2089
9246-215 L2096
1N CC2096
1N CC2089
4,7K CR2089
3,9 CR2090
6,8UH L2097
4,7K CR2096
1N CC2079
9246-965 L2061
DT2061
8A682 CD2059
1P CC2056
1N CC2059
9246-953 L2059
15 CR2058
9246-74 L2117
12
13
14
11
15
3
VHF
G VHF
ZF/UHF
ZF
U REF.
TUA2000-4
IC2110
5
4
7/16
9
8
2
1
10
180 R2102
0 CR2110
10N CC2102
1,5K CR2103
MP7
27P CC2106
110 R2108
9246-942 L2108
8,2P CC2107
39P CC2105
0 CR2098
10N CC2075
18K CR2075
MP3
10N CC2078
1N CC2072
10N CC2099
100U 16V C2131
10N CC2132
28
26
24
16
U T
U VHF
U I/III
+UB 12V


U UHF
U TUN
+44V
22
13
1
1N CC2140
0 CR2143
8,2K CR2141
2,2K CR2144
22K CR2142
47N C2142
4,7U 63V C2147
ZPD5,1 D2147
10N CC2049
0 CR2118
47U/16V C2046
5,6P CC2143
120 CR 2140
MP10C
0,6P CC2141
0 CR2146
9246-635 L2148
2,2P C2143
22 CR2043
10P CC2047
2,2P CC2048
18K CR2048
BB505B D2047
0,5P C2045
1,5P CC2044
9246-960 L2042
33 CR2042
1,5P CC2035
15 CR2035
BF569 CT2035
G UHF
680 CR2036
2,2K CR2039
150 CR2038
470P CC2039
33P CC2040
6,8K CR2040
0 CR2041
470P CC2103
6,8K CR2104
56P CC2119
BB609A D2119
18K CR2119
6,8 CR2154
47N C2156
22K CR2155
0,1U C2157
BC847BR CT2156
56P CC2115
9246-742 L2117
MP10A
18K CR2115
18K CR2117
B2M CD2115
B2M CD2117
5,6P C2117
9246-762 L2121
9246-214 L2122
5,6P CC2122
BA682 CD2124
1N CC2124
1N CC2125
2,2K CR2124
BC858BR CT2151
22K CR2151
22K R2156
BC858BR CT2152
10N CC2159
22K CR2152
6,8 R2159
22K R2157
BC858BR CT2153
22K CR2153
0 CR2095
1N CC2092
18K CR2092
470P CC2095
DT2095
BB609A D2095
BA682 CD2096
1N CC2096
47P CC2101
12
13
14
11
15
3
5
4
7/16
9
8
2
1
10
VHF
G VHF
ZF/UHF
ZF
U REF.
TUA2000-4
IC2110
MP9
MP8
7202-341
F2110
15P
180 R2102
0 CR2110
10N CC2102
1,5K CR2103
10N CC2110
MP7
9246-942 L2108
27P CC2106
110 R2108
8,2P CC2107
MP16
39P CC2105
4,7K CR2096
0 CR2098
10N CC2099
100U 16V C2131
10N CC2132
1N CC2170
U I/III
U VHF
MP14
MP15
24
16
14
12
10
+UB 12V
ZF
ZF


+44V
SDA
SCL
UHF
10N
CC2049
0
CR2118
47U/16V
C2046
9246-
635
L2148
2,2P
C2143
0
CR2143
8,2K
CR2141
22K
CR2142
47N
C2142
2,2K
CR2144
1N
CC2140
4,7U
63V
C2147
ZPD5,6
D2147
ZPD24
D2148
1,5K
CR2149
10N
CC2148
1N
CC2154
100P
CC2149
100P
CC2146
SDA 2216
IC2141
MØS
SPEICHER
MEMORY
MEMORIA
56P
CC2119
BB609A
D2119
18K
CR2119
B2M
CD2115
MP10A
18K
CR2117
B2M
CD2117
9246-762
L2121
9246-214
L2122
5,6P
CC2122
6,8
CR2154
47N
C2156
22K
CR2155
0,1U
C2157
BC847BR
CT2156
1N
CC2165
4MHZ
Q2163
12P
CC2163
BC858BR
CT2151
22K
CR2151
22K
R2156
BA682
CD2124
MP8
10N
CC2159
BC858BR
CT2152
22K
CR2152
22K
R2157
1N
CC2124
1N
CC2125
6,8
R2159
2,2K
CR2124
BC858BR
CT2153
22K
CR2153
22K
R2158
I/III
MP16
VHF
F1/F2
I²C
G
PLL
SDA 3202-2
IC2161
10N
CC2151
220U/10V
C2152
10N
CC2161
1N
CC2170
1N
CC2171
10N
CC2173
1N
CC2174
MP14
MP15
ZF
ZF
VQ



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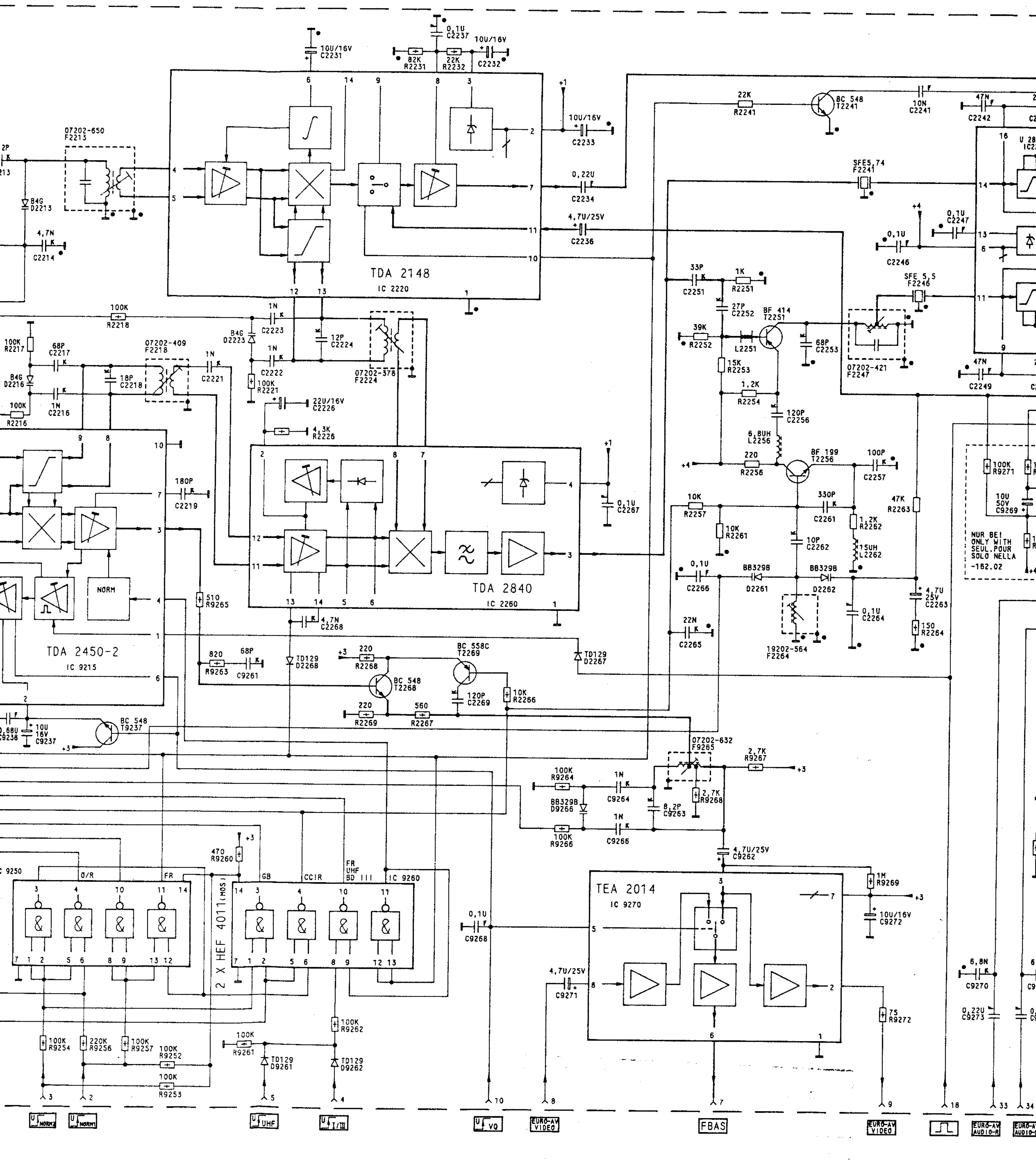
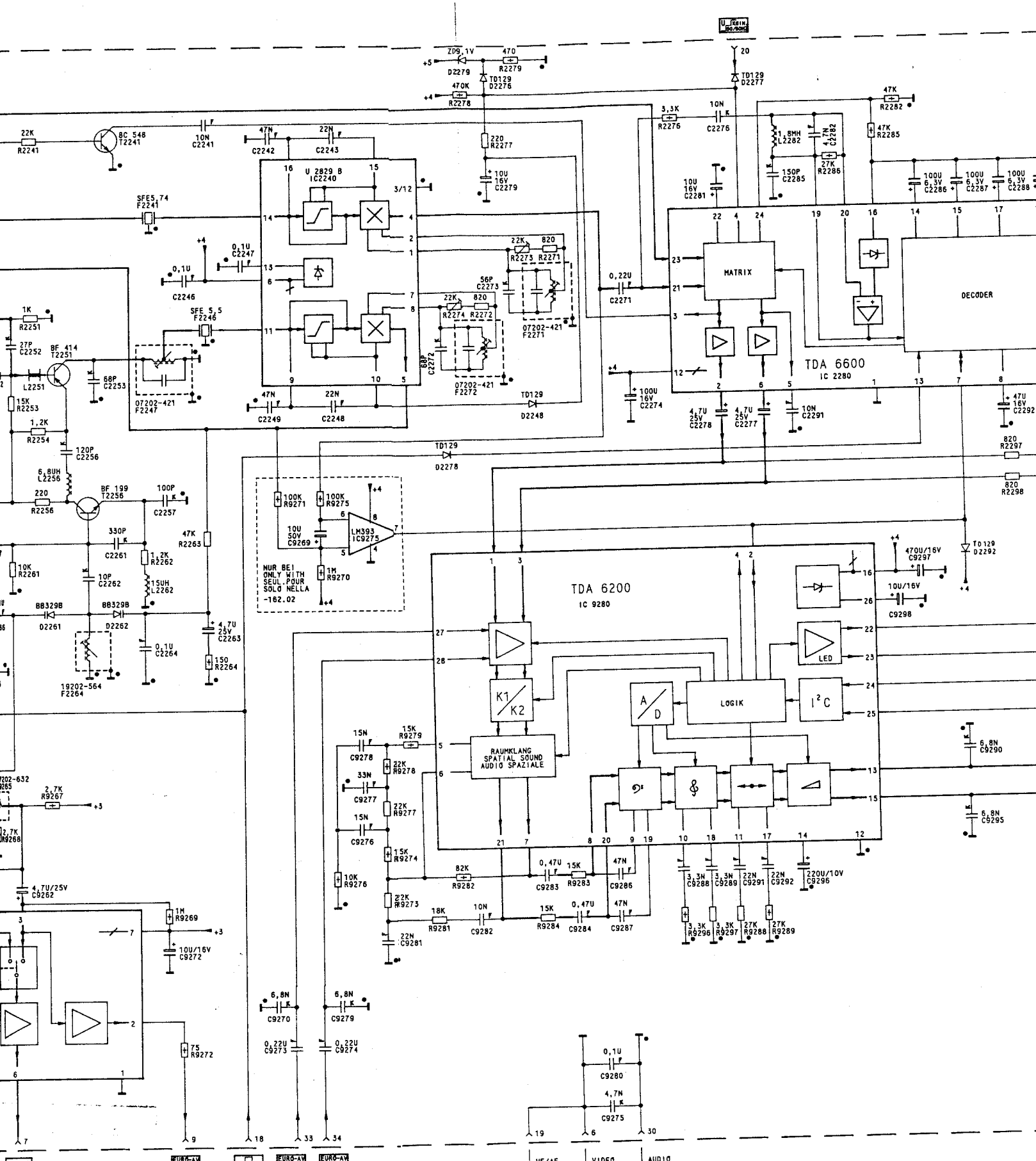
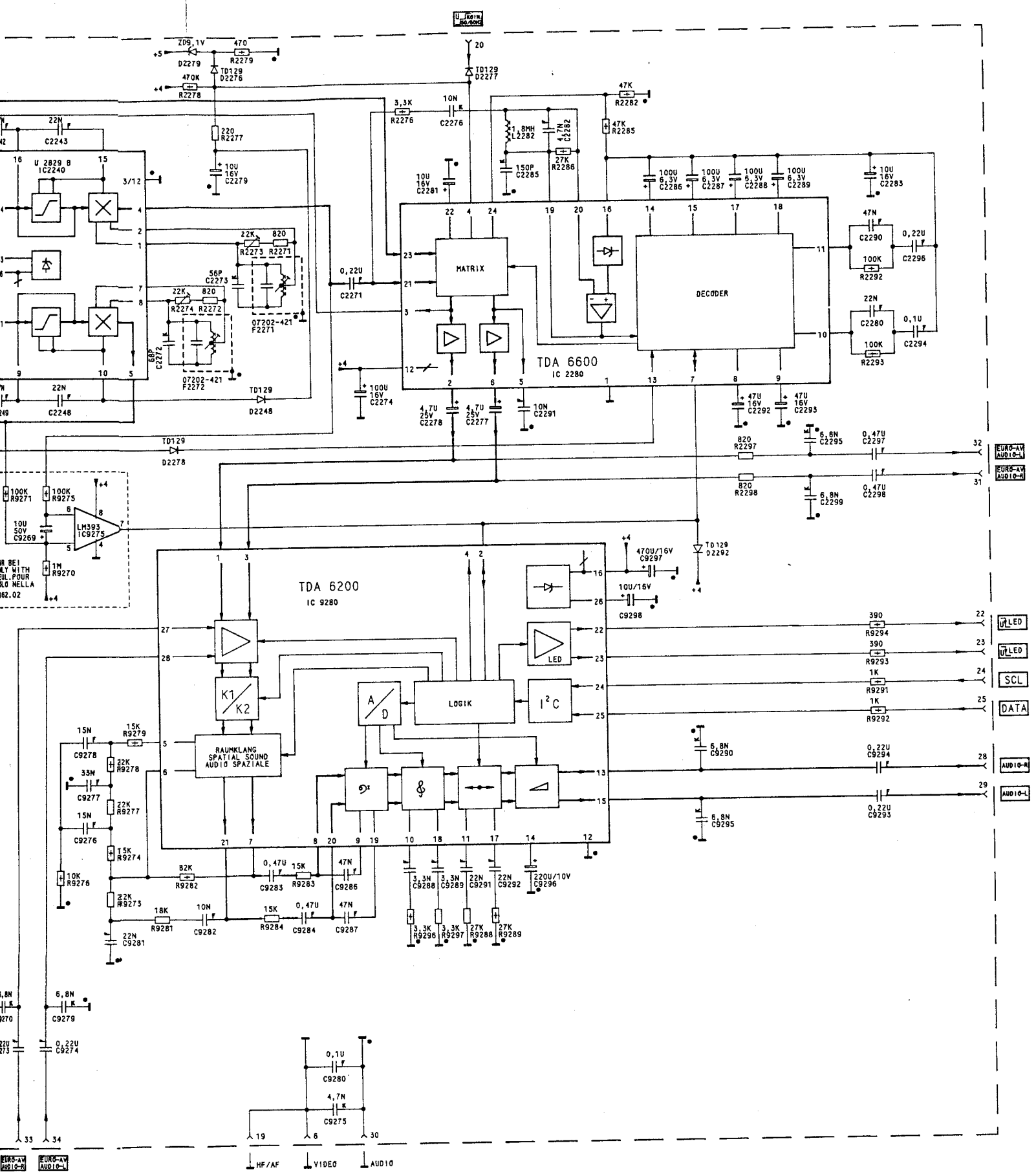
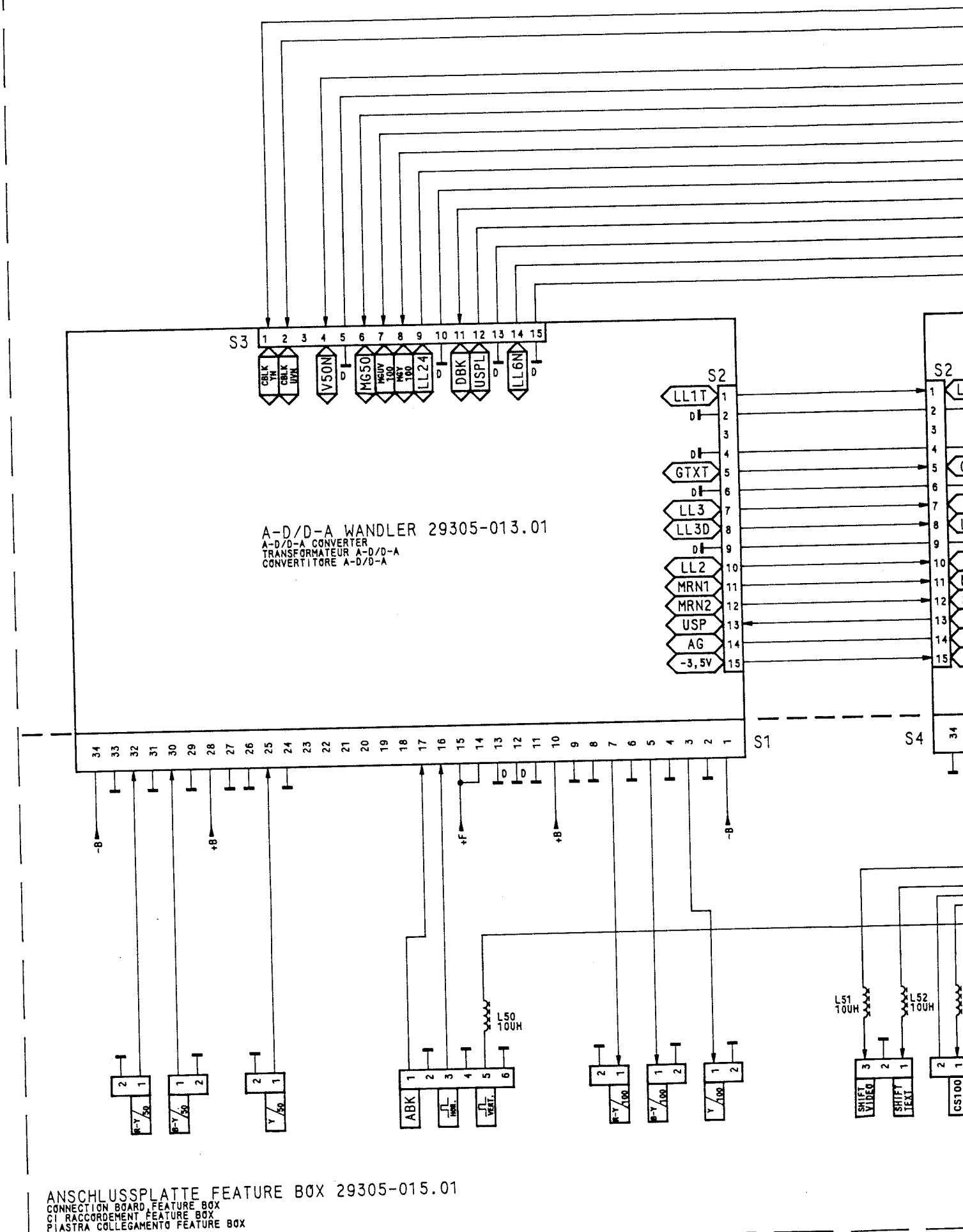


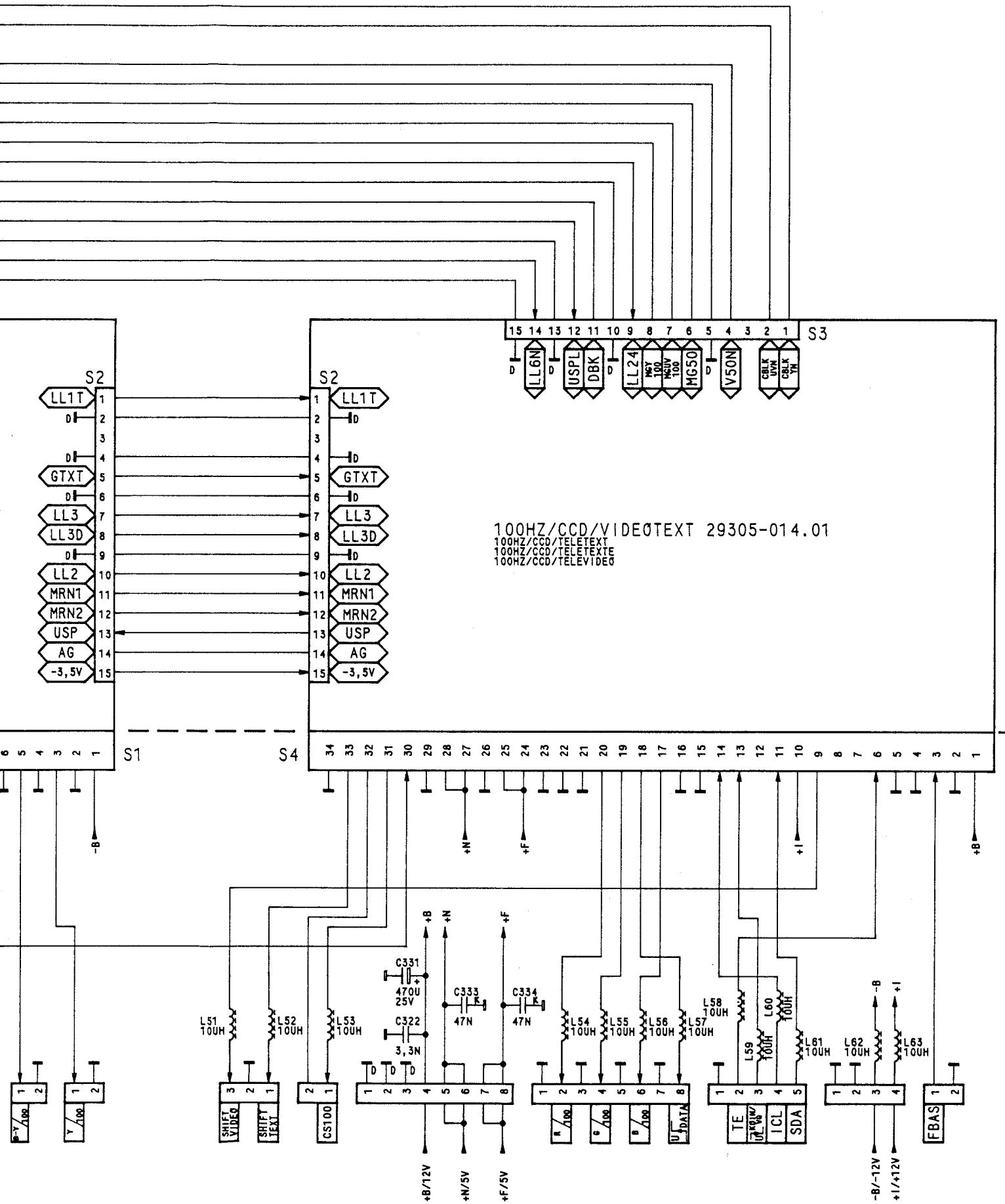
TDA 2148
IC 2220
TDA 2840
IC 2260
TDA 2450-2
IC 9215
TEA 2014
IC 9270
2 X HEF 4011 (MOS)
IC 9250
IC 9260
BC 548
T2241
BF 414
T2251
BF 199
T2256
BC 558C
T2269
BC 548
T2268
BC 548
T9237
SFE5,74
F2241
SFE 5,5
F2246
NORM
NUR BEI
ONLY WITH
SEUL. POUR
SOLO NELLA
-162.02
GB
CCIR
FR
UHF
BD III
FBAS
EURO-AV VIDEO
EURO-AV AUDIO-R

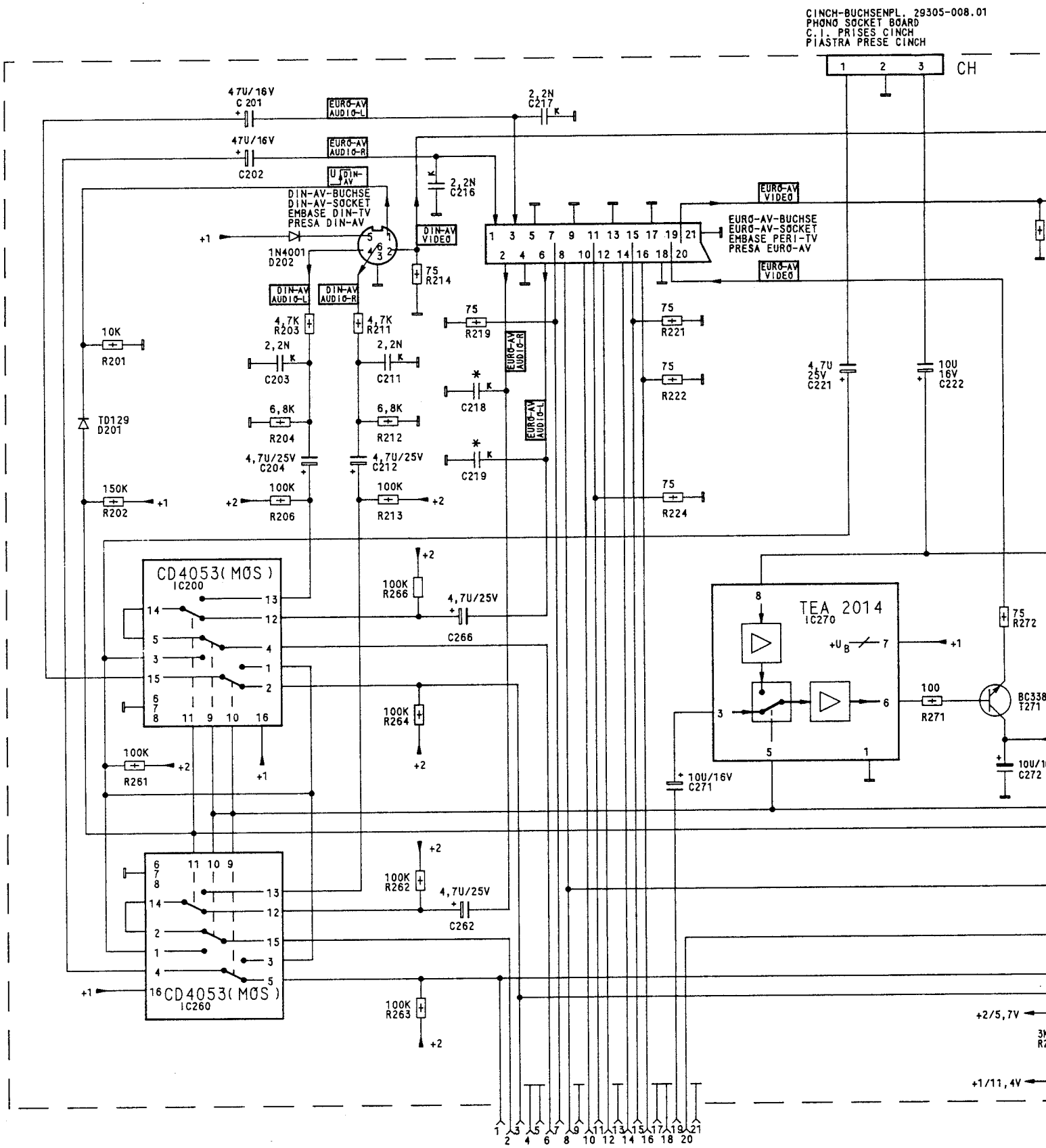

TDA 6600
IC 2280
MATRIX
DECODER
TDA 6200
IC 9280
LOGIK
LED
RAUMKLANG
SPATIAL SOUND
AUDIO SPAZIALE
LM393
IC9275
NUR BEI
ONLY WITH
SEUL.POUR
SOLO NELLA
-162.02
FBAS
EURO-AV VIDEO
EURO-AV AUDIO-R
EURO-AV AUDIO-L
HF/AF
VIDEO
AUDIO


TDA 6600
IC 2280
MATRIX
DECODER
TDA 6200
IC 9280
LOGIK
RAUMKLANG
SPATIAL SOUND
AUDIO SPAZIALE
LED
SCL
DATA
AUDIO-R
AUDIO-L
HF/AF
VIDEO
AUDIO

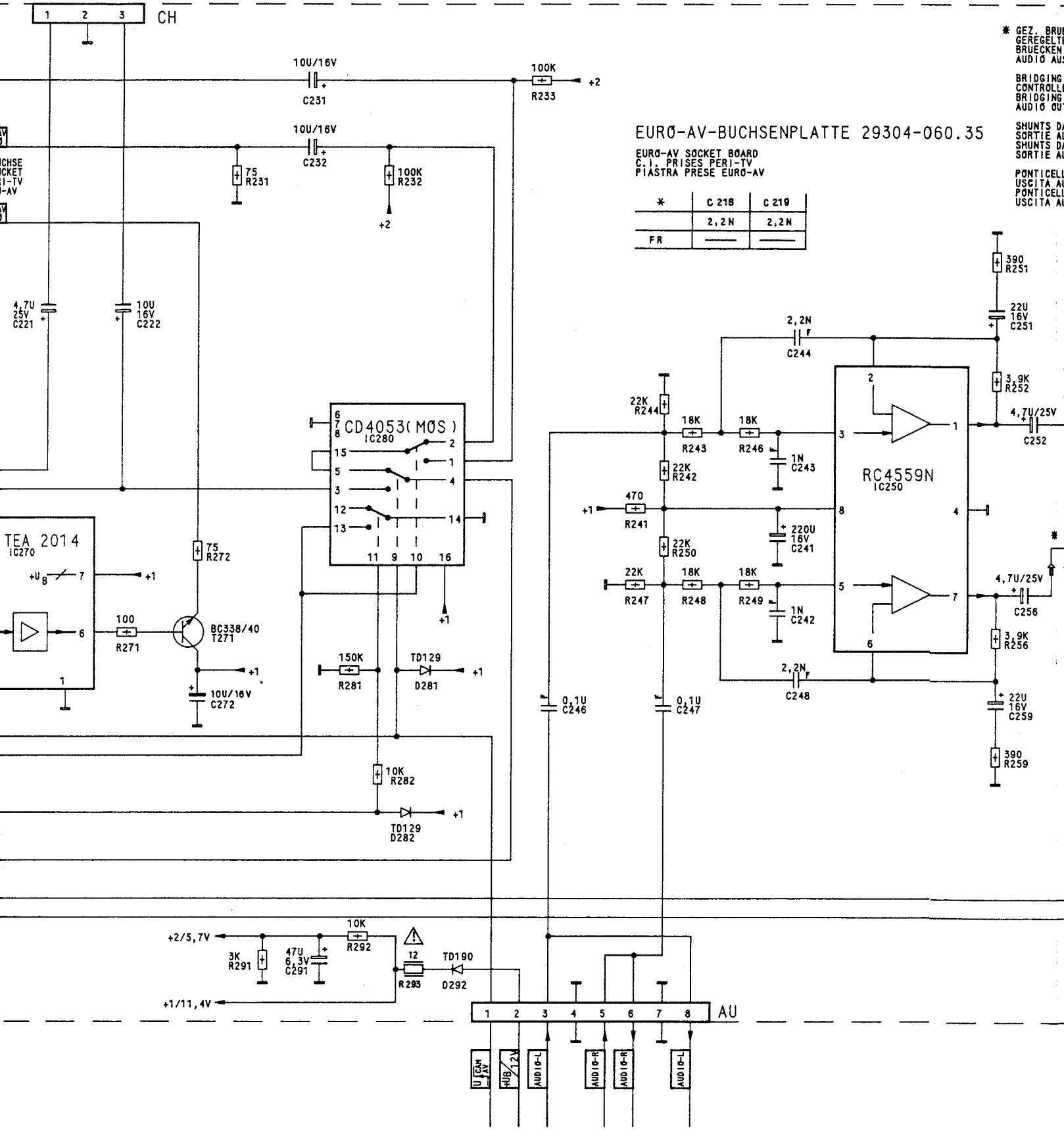


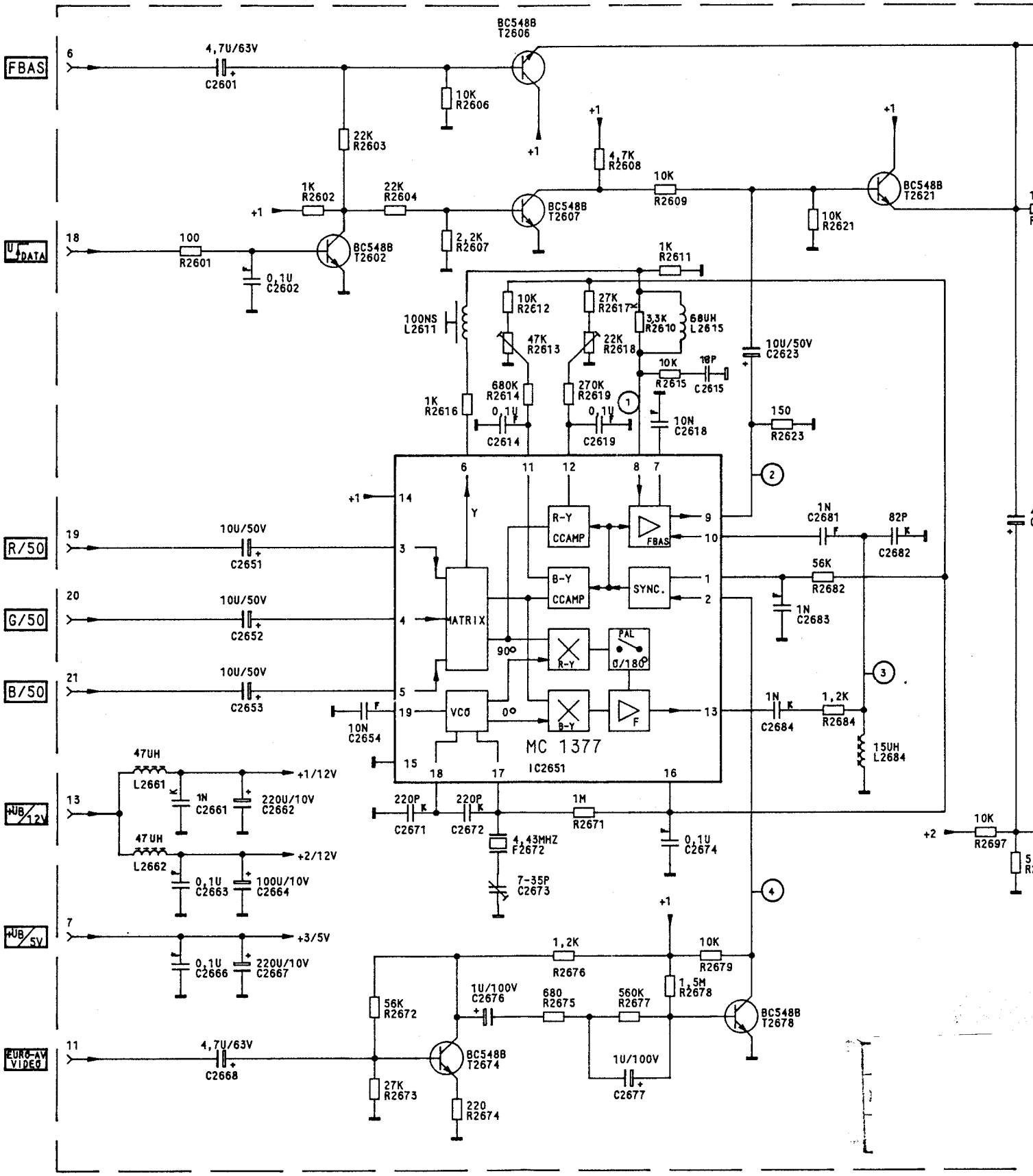
ANSCHLUSSPLATTE FEATURE BOX 29305-015.01
CONNECTION BOARD FEATURE BOX
CI RACCORDEMENT FEATURE BOX
PIASTRA COLLEGAMENTO FEATURE BOX

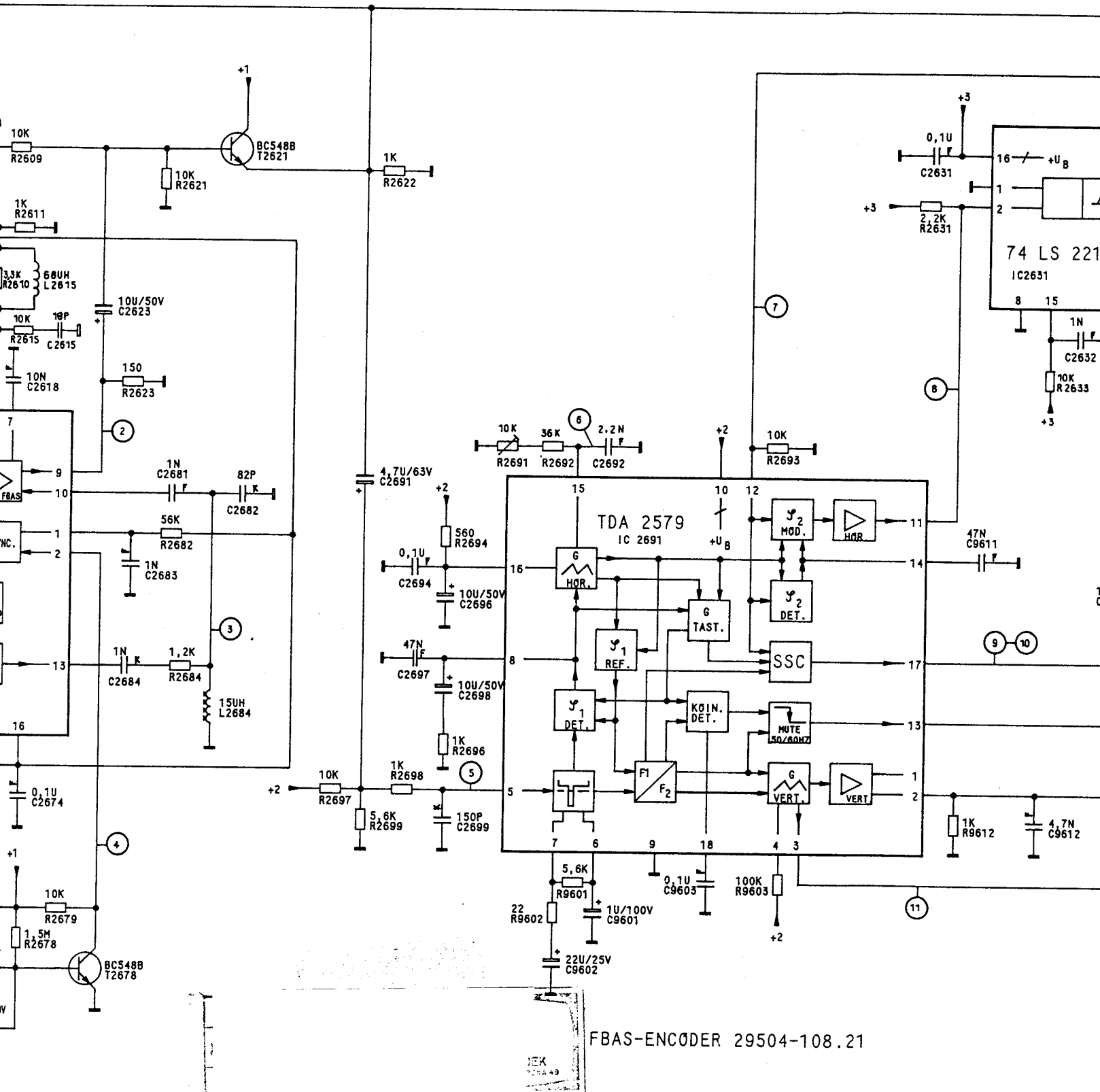

S2
LL1T
GTXT
LL3
LL3D
LL2
MRN1
MRN2
USP
AG
-3,5V
S3
LL6N
USPL
DBK
LL24
MG50
V50N
CBLK UVN
CBLK YN
100HZ/CCD/VIDEOTEXT 29305-014.01
100HZ/CCD/TELETEXT
100HZ/CCD/TELETEXTE
100HZ/CCD/TELEVIDEO
S1
S4
-B
+N
+F
+I
+B
C331
470U 25V
C322
3,3N
C333
47N
C334
47N
L51 10UH
L52 10UH
L53 10UH
L54 10UH
L55 10UH
L56 10UH
L57 10UH
L58 10UH
L59 10UH
L60 10UH
L61 10UH
L62 10UH
L63 10UH
SHIFT VIDEO
SHIFT TEXT
CS100
TE
ICL
SDA
FBAS
+B/12V
+N/5V
+F/5V
-B/-12V
+I/+12V

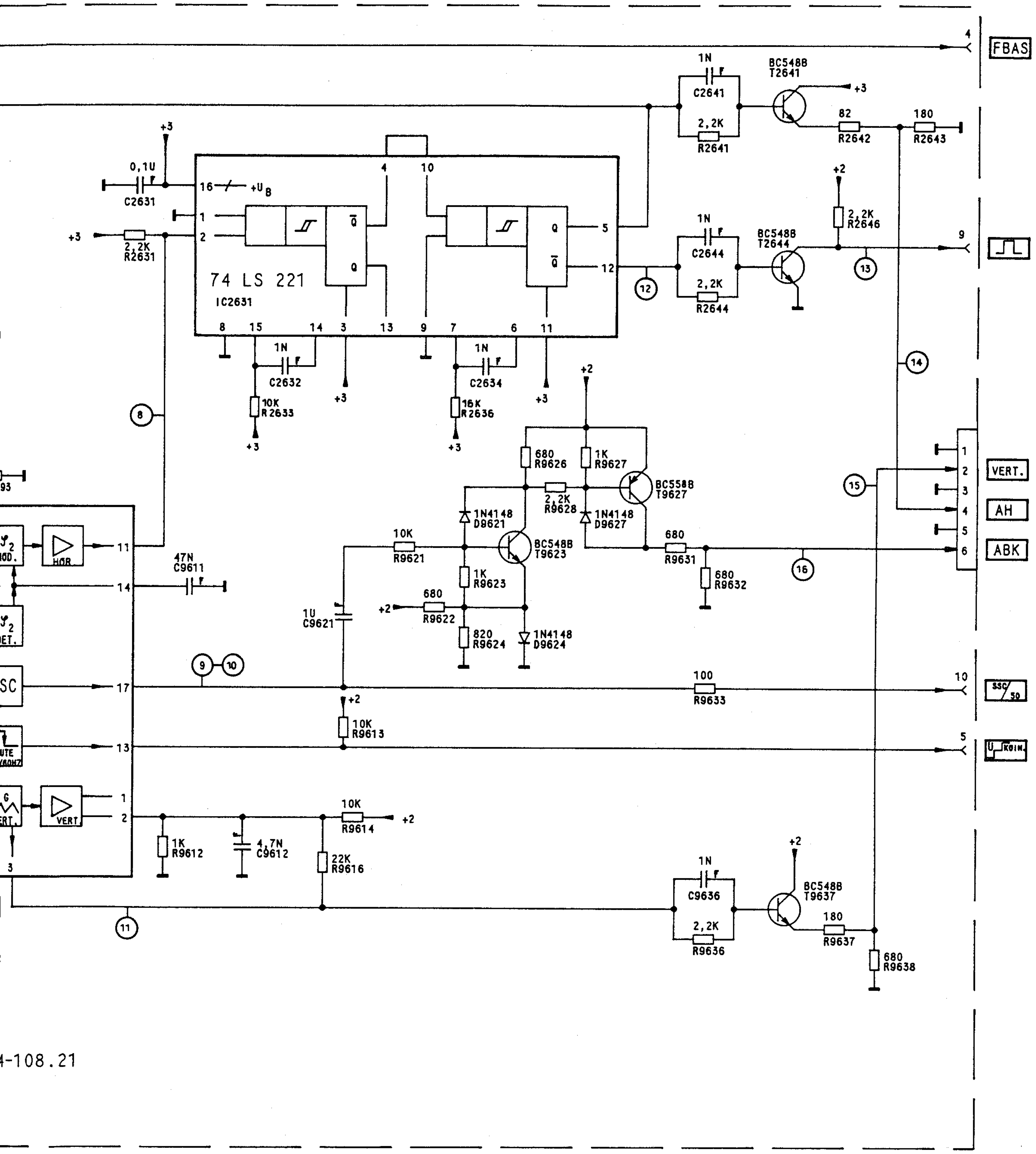

CINCH-BUCHSENPL. 29305-008.01
PHONO SOCKET BOARD
C.I. PRISES CINCH
PIASTRA PRESE CINCH
CH
EURO-AV AUDIO-L
EURO-AV AUDIO-R
EURO-AV VIDEO
DIN-AV-BUCHSE
DIN-AV-SOCKET
EMBASE DIN-TV
PRESA DIN-AV
EURO-AV-BUCHSE
EURO-AV-SOCKET
EMBASE PERI-TV
PRESA EURO-AV
CD4053(MOS)
IC200
CD4053(MOS)
IC260
TEA 2014
IC270
1N4001
D202
TD129
D201
+1
+2
+2/5,7V
+1/11,4V

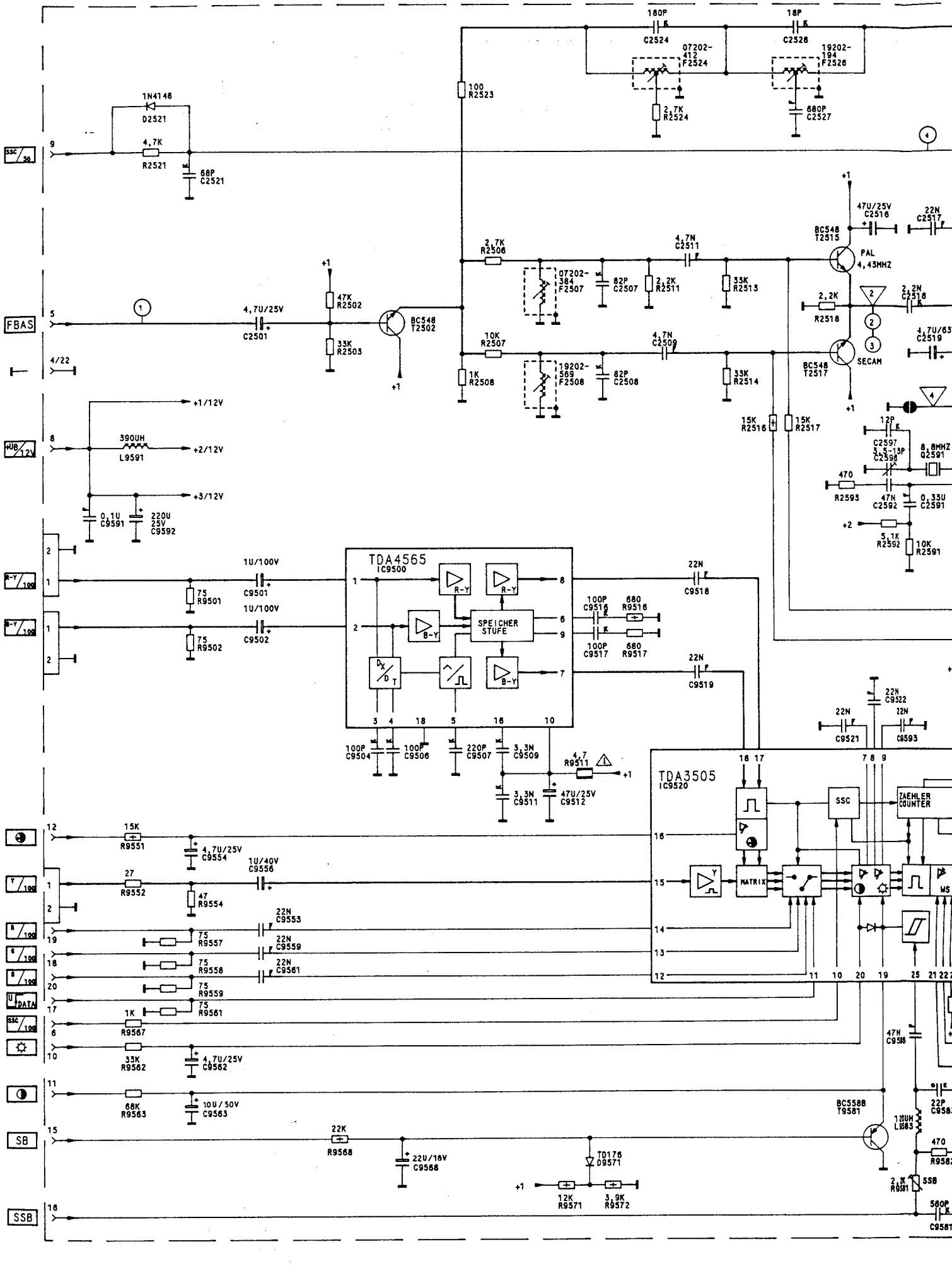
CINCH-BUCHSENPL. 29305-008.01
PHONO SOCKET BOARD
C.I. PRISES CINCH
PIASTRA PRESE CINCH

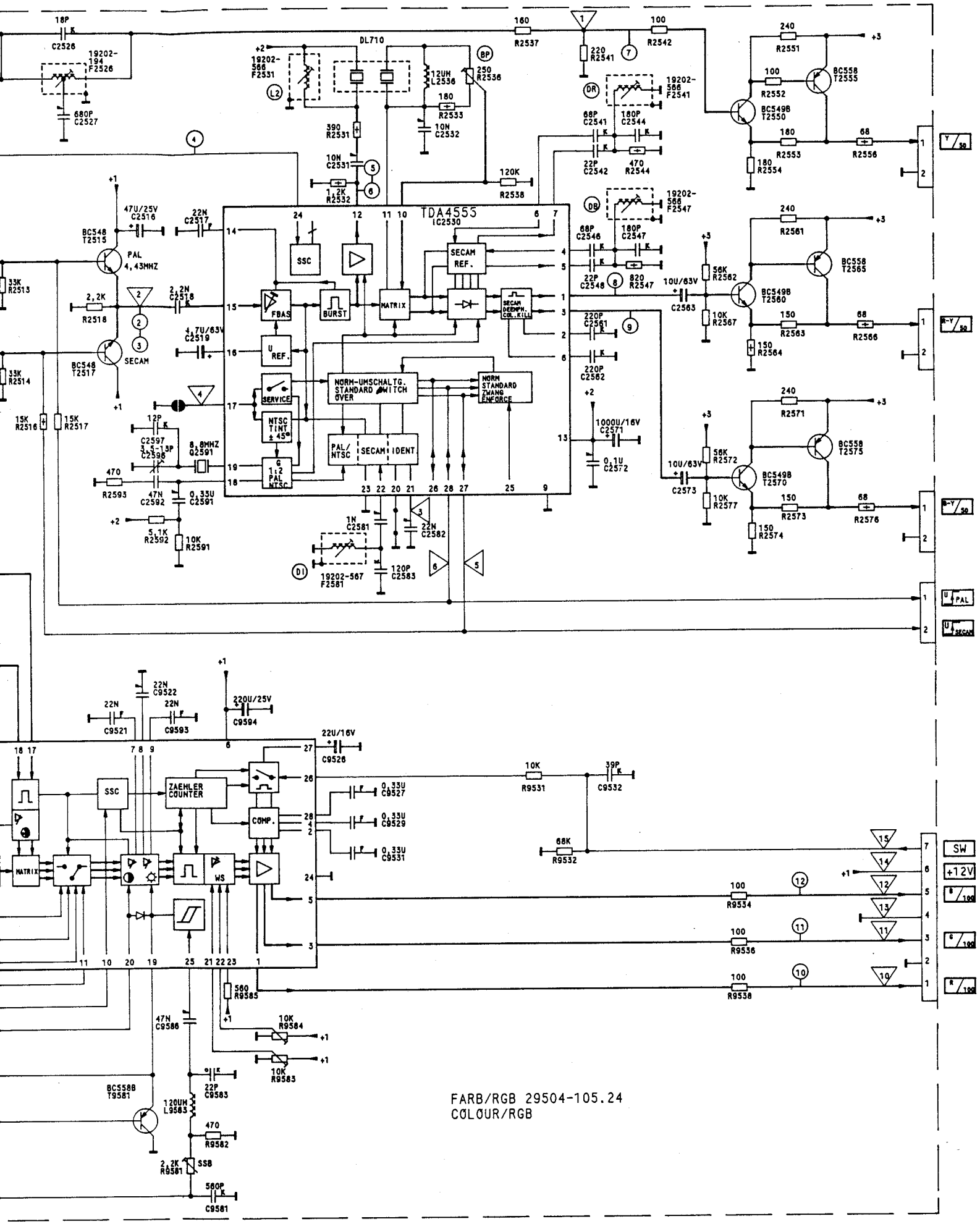



FBAS
R/50
G/50
B/50
+UB/12V
+UB/5V
EURO-AV VIDEO
U DATA
MC 1377
IC2651
MATRIX
VCO
R-Y CCAMP
B-Y CCAMP
SYNC.
FBAS
PAL
0/180
BC548B T2606
BC548B T2607
BC548B T2602
BC548B T2621
BC548B T2678
BC548B T2674
4,7U/63V C2601
10K R2606
22K R2603
1K R2602
22K R2604
2,2K R2607
4,7K R2608
10K R2609
10K R2621
100 R2601
0,1U C2602
1K R2611
100NS L2611
10K R2612
47K R2613
27K R2617
3,3K R2610
68UH L2615
22K R2618
10U/50V C2623
10K R2615
18P C2615
680K R2614
0,1U C2614
1K R2616
270K R2619
0,1U C2619
10N C2618
150 R2623
1N C2681
82P C2682
56K R2682
1N C2683
10U/50V C2651
10U/50V C2652
10U/50V C2653
10N C2654
47UH L2661
1N C2661
220U/10V C2662
+1/12V
47UH L2662
0,1U C2663
100U/10V C2664
+2/12V
0,1U C2666
220U/10V C2667
+3/5V
4,7U/63V C2668
220P C2671
220P C2672
4,43MHZ F2672
7-35P C2673
1M R2671
0,1U C2674
1N C2684
1,2K R2684
15UH L2684
10K R2697
+2
1,2K R2676
10K R2679
1U/100V C2676
680 R2675
560K R2677
1,5M R2678
56K R2672
27K R2673
220 R2674
1U/100V C2677


TDA 2579
IC 2691
74 LS 221
IC2631
BC548B
T2621
BC548B
T2678
R2609
R2611
R2610
L2615
C2623
R2615
C2615
C2618
R2623
C2681
C2682
R2682
C2683
C2684
R2684
L2684
C2674
R2679
R2678
R2691
R2692
C2692
R2693
C2691
R2694
C2694
C2696
C2697
C2698
R2696
R2698
R2697
R2699
C2699
R2622
R2621
C2631
R2631
C2632
R2633
C9611
R9612
C9612
R9601
R9602
C9601
C9602
C9603
R9603
SSC
MUTE
50/60HZ
FBAS-ENCØDER 29504-108.21


FBAS
BC548B T2641
C2641 1N
R2641 2,2K
R2642 82
R2643 180
74 LS 221
IC2631
C2631 0,1U
R2631 2,2K
C2632 1N
C2634 1N
R2633 10K
R2636 16K
BC548B T2644
C2644 1N
R2644 2,2K
R2646 2,2K
BC558B T9627
R9626 680
R9627 1K
R9628 2,2K
1N4148 D8621
1N4148 D9627
BC548B T9623
R9621 10K
R9623 1K
R9622 680
R9624 820
1N4148 D9624
R9631 680
R9632 680
C9621 1U
C9611 47N
R9633 100
R9613 10K
R9614 10K
R9612 1K
C9612 4,7N
R9616 22K
BC548B T9637
C9636 1N
R9636 2,2K
R9637 180
R9638 680
VERT.
AH
ABK
HOR
VERT
4-108.21


TDA4565
IC9500
SPEICHER STUFE
TDA3505
IC9520
SSC
ZAEHLER COUNTER
MATRIX
PAL 4,43MHZ
SECAM
FBAS
SSB
SB
DATA



FARB/RGB 29504-105.24
COLOUR/RGB

1. **Weißabgleich**
   - FuBK-Testbild einspeisen.
   - ◑min., ☼nom, ◑max. einstellen.
   - Regler VG und VB (Bildrohrplatte) so einstellen, daß keine Verfärbungen in den Grauwerten sichtbar sind.

2. **Sperrpunktabgleich**
   Eine manuelle Einstellung ist nicht möglich, da die Steckkarte eine automatische Dunkelstromregelung besitzt. Kontrolle des Sperrpunkts (Oszilloskop erforderlich).
   - FuBK-Testbild einspeisen.
   - ◑min., ☼nom., ◑min., einstellen.
   - Tastkopf an den Kollektoren der Transistoren T 736, T 756, T 776 anhängen (Bildrohrplatte). Die Schwarzwerte der drei Kathodensignale liegen bei ca. 140-150V.

3. **Einstellungen im Farbkanal**
   - PAL-Testbild einspeisen.
   - FK nom., H nom. K max. einstellen.
   - IC-Pin 28 vom TDA 4555 mit +12V 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 Nullinie des (R-Y)-Signals auf Zeilenniveau bringen.
   - Tastkopf an Pin 3 vom TDA 4555 anschließen, mit Spule DB Nullinie des (B-Y)-Signals auf Zeilentastniveau bringen.
   - Spule F 2521 so einstellen, daß das (B-Y)-Signal keine Überschwinger hat.

4. **Strahlstrom**
   - Der Regler "SSB" wird werkseitig auf Mittelwert eingestellt.
   - Sollte bei vollem Kontrast und normal eingestellter Helligkeit in Spitzenweißfeldern des Sendertestbildes eine Defokussierung (starke Unschärfe bei weißen Schriftzeichen in Bildröhrenmitte) auftreten, so muß mit Regler "SSB" auf scharfe Schriftkonturen eingestellt werden (Reduzierung des Spitzenstrahlstromes).

1. **White level adjustment**
   - Display colour bar test pattern.
   - Set ◑ to min., ☼ to nom., ◑ to max.
   - Adjust presets VG and VB (CRT socket board) so that the picture does not show any colouration.

2. **Adjustment of cut-off point**
   Manual adjustment is not possible, as the circuit board employs an automatic dark current control circuit.
   To check cut-off point (oscilloscope required), proceed as follows:
   - Display colour bar test pattern.
   - Set ◑ to min., ☼ to nom., ◑ to min.
   - Connect test probe to collectors of T 736, T 756, T 776 (CRT socket board).
     The black leves of the three cathode signals should be 140-150V.

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 +12V 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. LBring 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.
   - Use 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.

4. **Beam current**
   - During manufacture the control "SSB" is adjusted to middle value.
   - If during max. contrast and normal brightness adjustment the peak-white fields of the test picture should be defocused (in the middle of the screen white letters are very distorted) the contours of the letters must be adjusted using control "SSB" (reducing the peak beam current).

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

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

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 +12V.
   - 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 portare 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) 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 F2581 applicarla cosi in modo che il segnale (B-Y) sia chiaro.

4. **Corrente catodica**
   - Il regolatore "SSB" viene regolato già in fabbrica su valori medi.
   - Se con il contrasto al massimo ed una regolazione normale della luminosità dovesse presentarsi una sfocalizzazione nei campi ultrabianchi del cinescopio (le lettere bianche al centro del cinescopio risultano molto sfuocate), agire sul regolatore "SSB" per mettere a fuoco i contorni delle lettere (riducendo la corrente catodica di picco).

- 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.
- Use 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 over-shooting.

4. Beam current

- During manufacture the control "SSB" is adjusted to middle value.
- If during max. contrast and normal brightness adjustment the peak-white fields of the test picture should be de-focused (in the middle of the screen white letters are very distorted) the contours of the letters must be adjusted using control "SSB" (reducing the peak beam current).

1. Taratura del bianco

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

2. Taratura del punto di blocco

Una regolazione manuale non è possibile, poiché questa scheda incorpora una regolazione automatica della corrente d'interdizione.

Controllo del punto di blocco (é necessario un oscilloscopio):

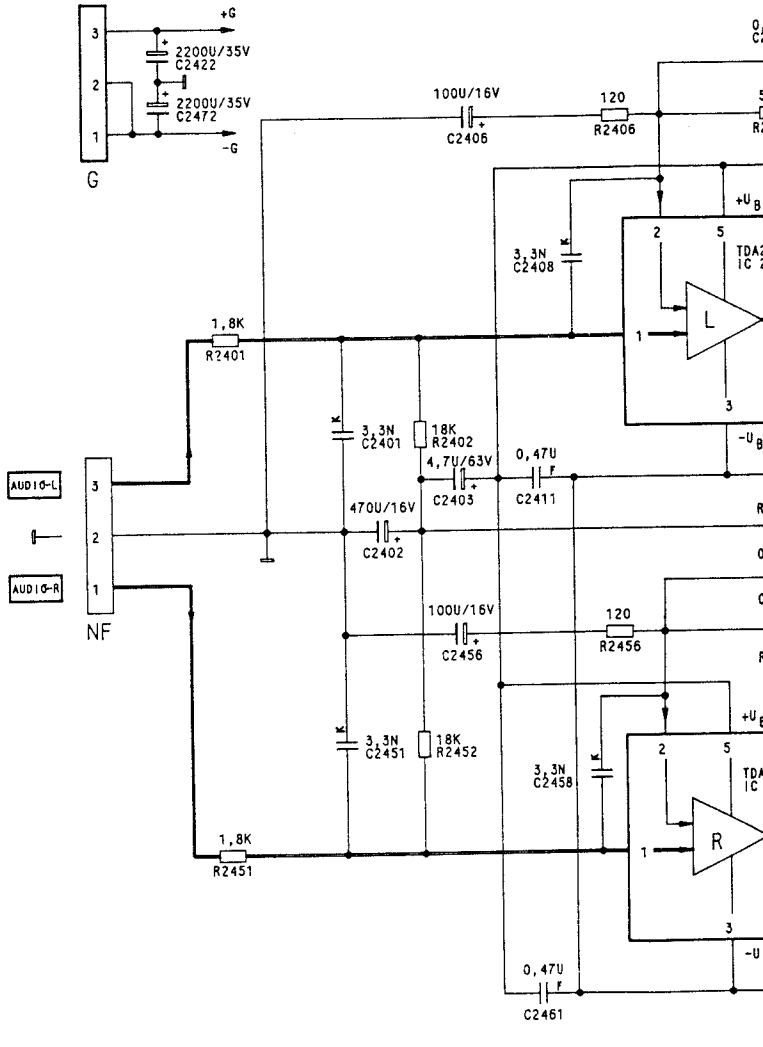
- Applicare un monoscopio FuBK.
- Regolare ◑ al minimo, ☼ sul valore nominale e ◑ al minimo.
- Collegare la sonda ai collettori dei transistori T 736, T 756, T 776 (piastra cinescopio).
  Valore nero dei tre segnali catodici ca. 140-150V.

3. Regolazione del canale colore

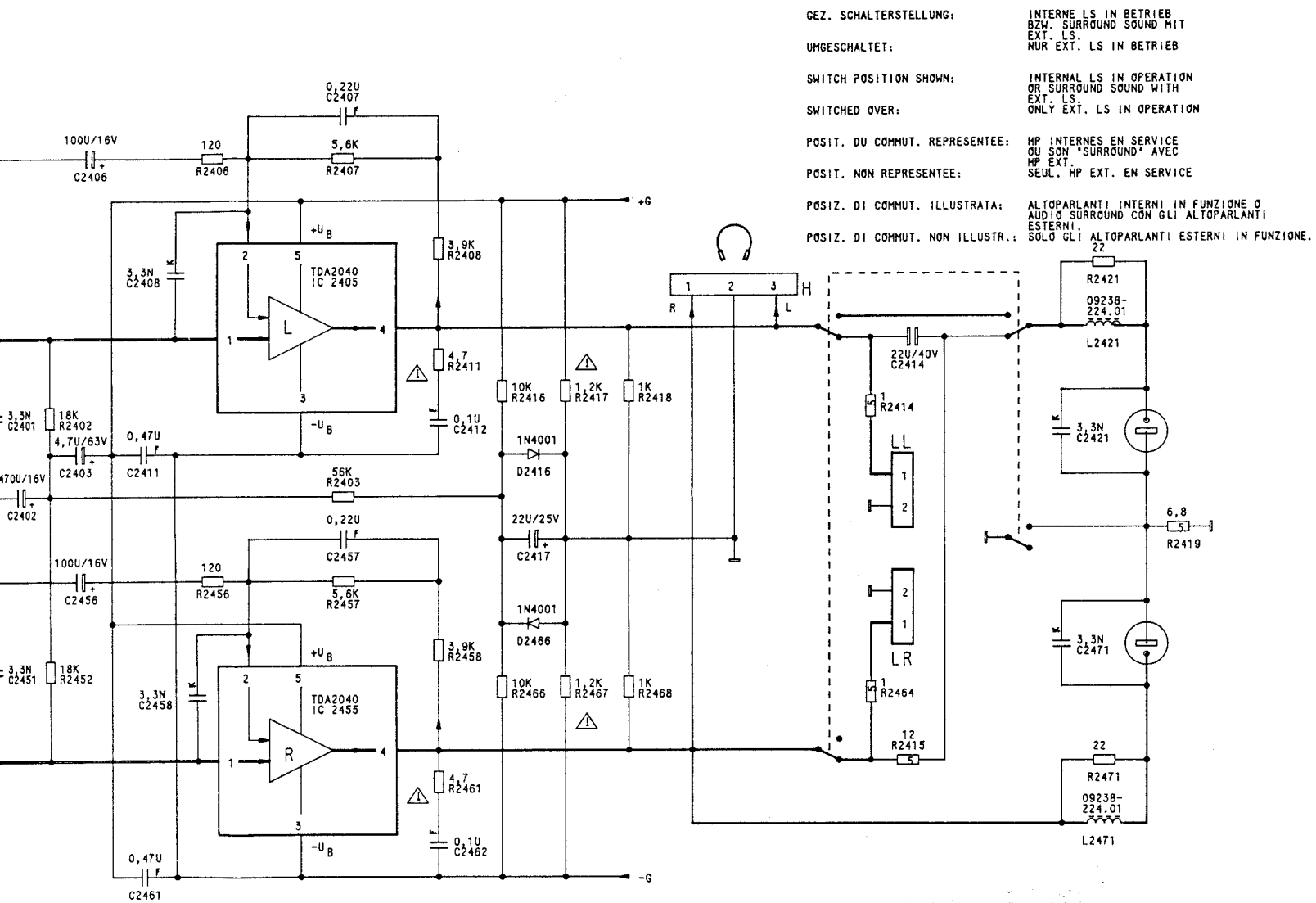
- Applicare un monoscopio PAL.
- Regolare FK e H sul valore nominale, K al massimo.
- Sull'integrato TDA 4555 collegare pin 28 a +12V.
- Sull'integrato TDA 4555 collegare pin 17 a massa.
- Con C9516 fermare le barre colorate scorrevoli.
- Togliere i cortocircuiti.
- Collegare la sonda a MP 12, con il regolatore BP e la bobina LZ portare 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) 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 F2581 applicarla cosi in modo che il segnale (B-Y) sia chiaro.

4. Corrente catodica

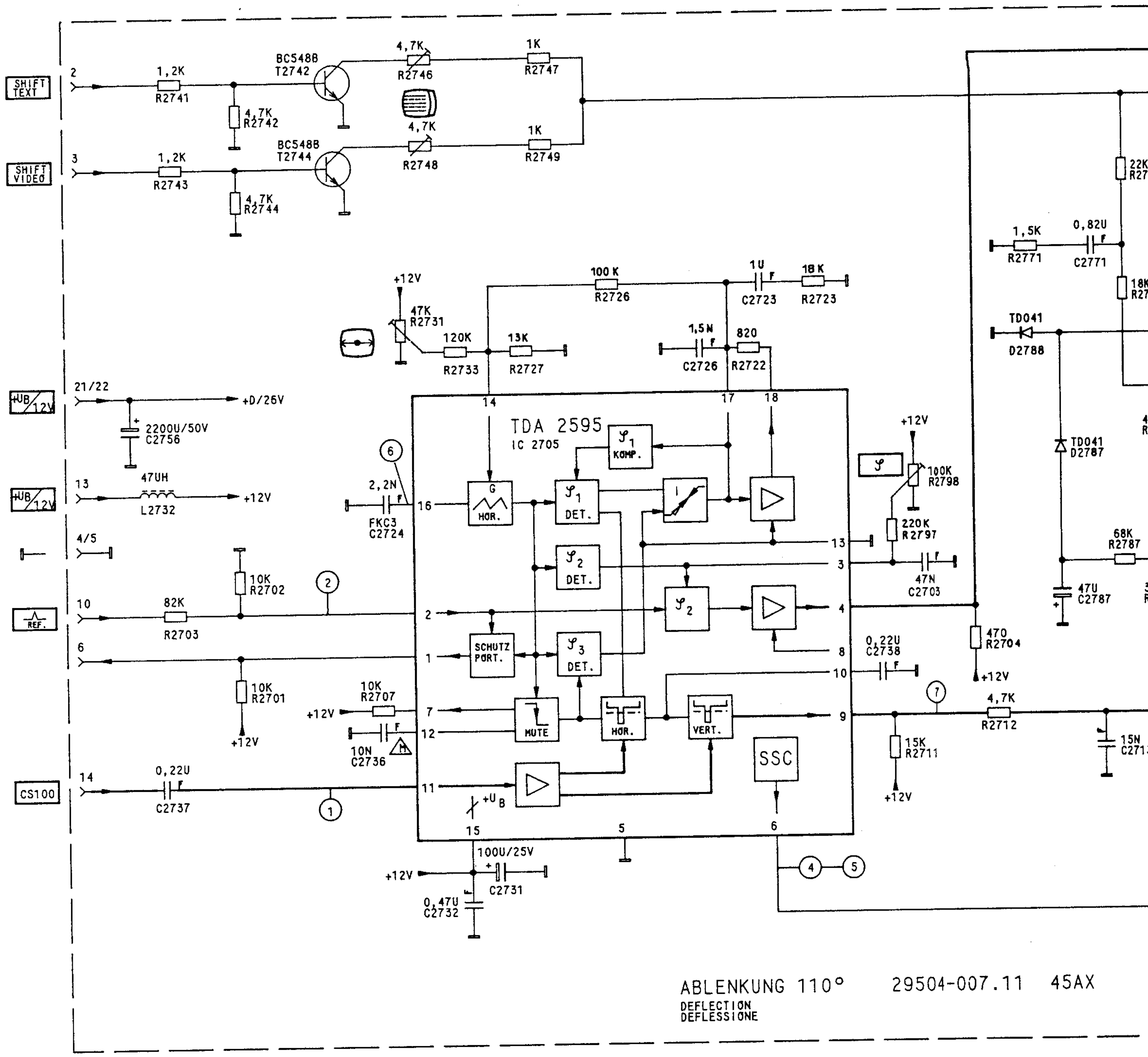
- Il regolatore "SSB" viene regolato già in fabbrica su valori medi.
- Se con il contrasto al massimo ed una regolazione normale della luminosità dovesse presentarsi una sfocalizzazione nei campi ultrabianchi del cinescopio (le lettere bianche al centro del cinescopio risultano molto sfuocate), agire sul regolatore "SSB" per mettere a fuoco i contorni delle lettere (riducendo la corrente catodica di picco).

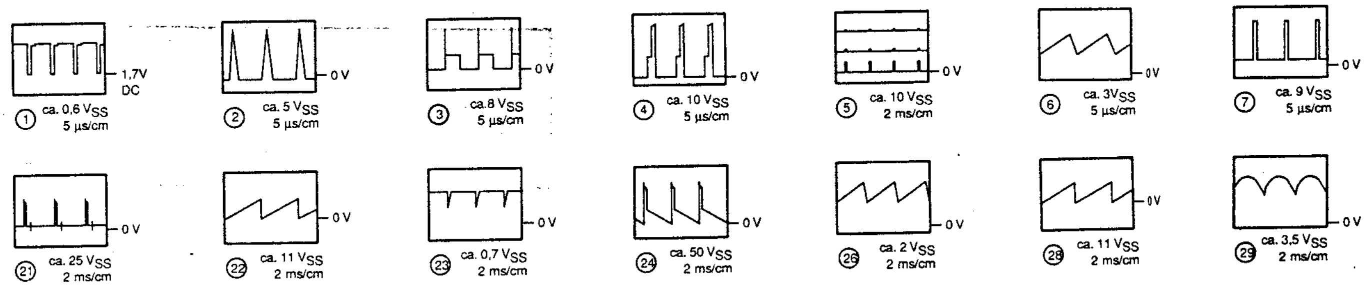


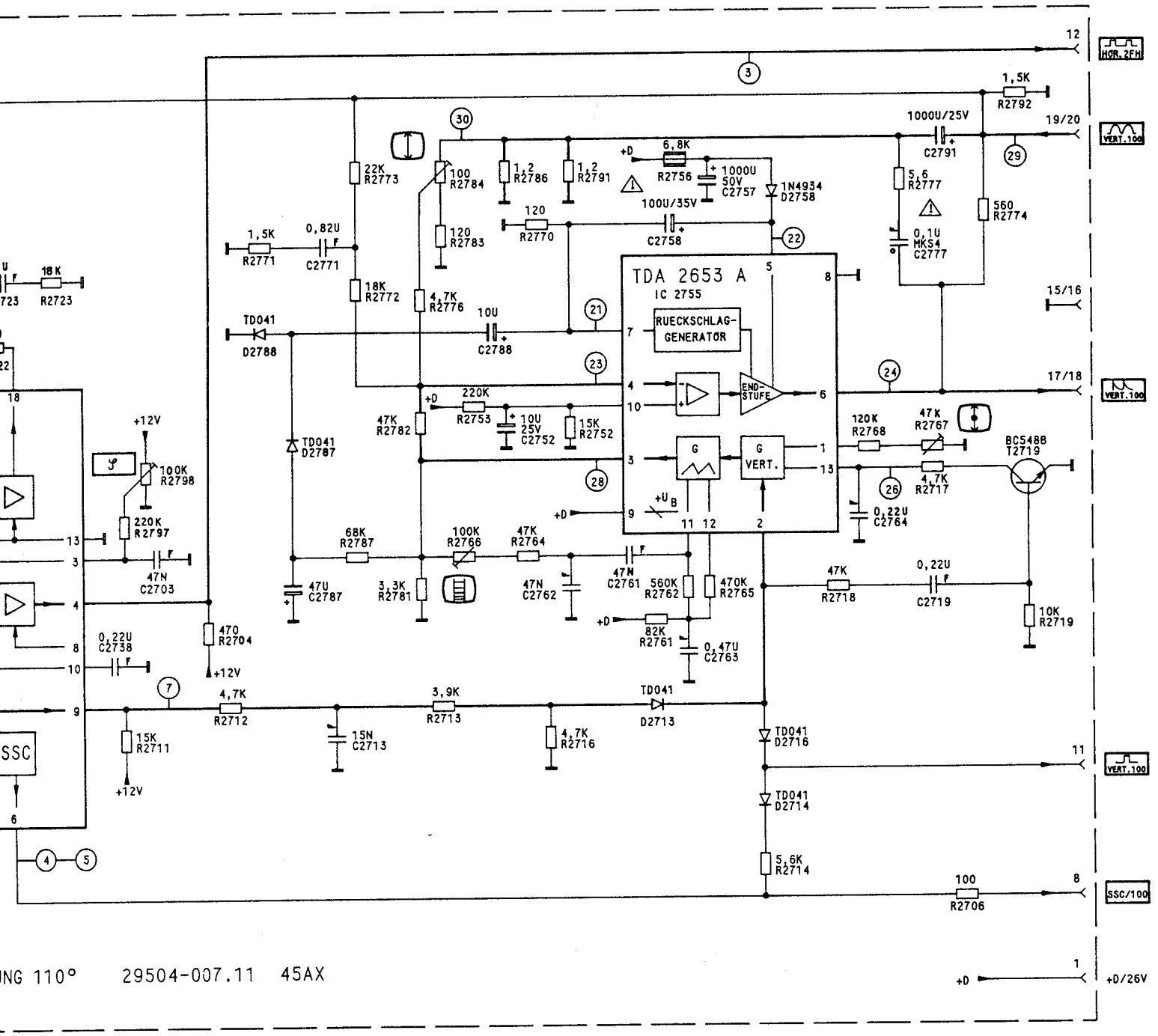
NF-ENDSTUFE 2x35W 29504-104.15
AF OUTPUT STAGE
STADIO FINALE BF

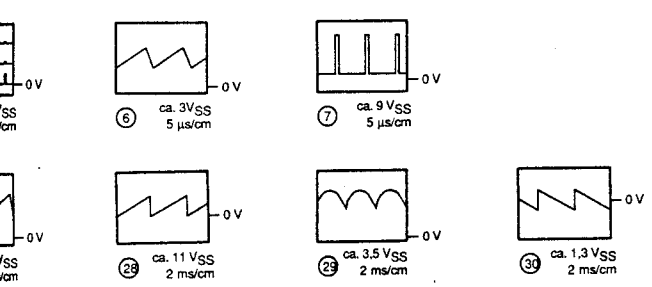


Kein Anpassungsabgleich bei Austausch der Steckkarte notwendig
When replacing the plug-in board, no alignment is necessary
Non è necessaria nessuna taratura di adattamento dopo la sostituzione di una scheda ad innesto


SHIFT TEXT
SHIFT VIDEO
BC548B T2742
BC548B T2744
1,2K R2741
1,2K R2743
4,7K R2742
4,7K R2744
4,7K R2746
4,7K R2748
1K R2747
1K R2749
+12V
47K R2731
120K R2733
13K R2727
100 K R2726
1U C2723
18 K R2723
1,5N C2726
820 R2722
TDA 2595
IC 2705
KOMP.
HOR.
DET.
SCHUTZ PORT.
MUTE
VERT.
SSC
+UB/12V
21/22
+D/26V
2200U/50V C2756
47UH L2732
REF.
82K R2703
10K R2702
10K R2701
10K R2707
10N C2736
2,2N FKC3 C2724
CS100
0,22U C2737
100U/25V C2731
0,47U C2732
100K R2798
220K R2797
47N C2703
0,22U C2738
470 R2704
4,7K R2712
15K R2711
1,5K R2771
0,82U C2771
TD041 D2788
TD041 D2787
68K R2787
47U C2787
15N
ABLENKUNG 110° 29504-007.11 45AX
DEFLECTION
DEFLESSIONE


1,7V DC
① ca. 0,6 VSS 5 µs/cm
② ca. 5 VSS 5 µs/cm
③ ca. 8 VSS 5 µs/cm
④ ca. 10 VSS 5 µs/cm
⑤ ca. 10 VSS 2 ms/cm
⑥ ca. 3VSS 5 µs/cm
⑦ ca. 9 VSS 5 µs/cm
㉑ ca. 25 VSS 2 ms/cm
㉒ ca. 11 VSS 2 ms/cm
㉓ ca. 0,7 VSS 2 ms/cm
㉔ ca. 50 VSS 2 ms/cm
㉖ ca. 2 VSS 2 ms/cm
㉘ ca. 11 VSS 2 ms/cm
㉙ ca. 3,5 VSS 2 ms/cm


TDA 2653 A
IC 2755
RUECKSCHLAG-GENERATOR
END-STUFE
G
G
VERT.
HOR. 2FH
VERT. 100
SSC/100
+D/26V
29504-007.11
45AX


ca. 3VSS 5 µs/cm
ca. 9VSS 5 µs/cm
ca. 11VSS 2 ms/cm
ca. 3,5VSS 2 ms/cm
ca. 1,3VSS 2 ms/cm

Ersatzteilliste (Auszug) · List of Spare-Parts (extract) · Lista ricambi (estratto)
CUC 3870

Pos. No.	Fig. No.	Bestell-Nr. Part No./Ref. Nr.d'ordinazioni		Benennung	Description	Denominazione
				Steckkarten	Plug-in circuit boards	Schede
1		29504-101.01		Kabeltuner	Cable tuner	Tuner per TV cavo
2		29504-162.02		ZF-Verstärker	IF-amplifier	Amplificatore FI
3		29504-103.01		Feature-Box	Feature-Box	Feature-Box
5		29504-105.24		Farb/RGB	Colour-RGB	Colore-RGB
7		29504-007.11		Ablenkung	Deflection	Deflessione
8		29504-108.21		FBAS-Encoder/Sandcast.		
				Mechanische Teile	Mechanical parts	Part meccaniche
15		29304-070.30		Bildrohrplatte kpl.	Picture tube plate	Piastra cinescopio
15.1		29303-752.96		Bildrohrfassung	Picture tube socket	Zoccola cinescopio
15.2		8104-982-014		Dämpfungsperle	Anti-vibration	Perlina ammortizzatore
16		29700-277.01		Bausteinhalter (Multi)	Module holder (Multi)	Supporto modulare (Multi)
17		29700-317.01		Bausteinhalter	Module holder	Supporto modulare
18		29500-807.01		Abdeckung(Ant.-Buchse)	Cover (ant.plug)	Copertura (ant.spina)
19		09621-113.02	10x	Sicherungshalter	Fuse holder	Portafusibile
20		29303-153.12	3x	Montageclip f. IC	Mounting f. IC	Archetto di montaggio p.IC
21		29303-153.02		Montageclip f. Trans.	Mounting f. trans.	Archetto di montaggio p. tras.
22		29303-156.03		Isolierscheibe f.BU508	Insulating wash.f.BU508	Rondella solante p.BU 508
24		29701-212.00		Widerstandshalter	Resistor holder	Support resistance Supporto resistenza
25		29304-060.35		Euro-AV-Buchsenpl.kpl.	Euro-AV-socket	Euro-AV-embase cpl.
25.1		29303-119.05		Peri-Buchse	Peri-socket	Presa peri
25.2		27511-403.00		Mehrfachbuchse (Video)	Multiple socket	Presa multiple
25.3		29303-168.01	2x	Cinch-Buchse	Cinch socket	Presa cinch
30		29303-364.01		Tuneraufnahme	Tuner holder	Supporto tuner
31		29700-282.01		Kabelhalter	Cable clamp	Supporto cavo
32		29700-283.01		Kabelhalter (f. Röder Kaskade)	Cable clamp (EHT-tripler Röder)	Support cavo (per Molt. EAT Röder)
oder/or						
		29700-324.01		Kabelhalter (f. Siemens Kaskade)	Cable clamp (EHT-tripler Siemens)	Supporto cavo (per Molt. EAT Siemens)
				Elektrische Teile	Electrical parts	Parti elettriche
K536		8324-800-045		Kaskade BG2087/642-1011(Röder) B9245-S 8154 M073 Sie.	Kascade BG2087/642-1006(Röder) B9245-S 8154-M473 Sie.	Moltiplicadore in cascate BG2087/642-1006(Röderst). B9245-S 8154- M 473 (Sie.
oder/or/oppure:						
		72008-090.02		Fokusregler	Focusing control	Regolatore fuoco
T501		09245-812.21		Treiber-Übertrager	Driver transformer	Traformatore pilota
OK6110		8306-000-014		Optokoppler CNY 17/I	Optocoupler CNY 17/I	Optoaccoppiatore CNY 17/I
OK6130		8306-000-012		Optokoppler CNY 17FI	Optocoupler CNY 17FI	Optoaccoppiatore CNY 17 FI

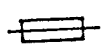
FFS-Einbauchassis CUC 3800 29701-051.01/51

atto)

Pos. No.	Fig. No.	Bestell-Nr. Part No. Réf. Nr. d'ordinazioni	Benennung Description Désignation Denominazione
		09066-333.01	Netztrafo
TR 526		29201-025.01	
TR 651		29500-609.34	
L 336		8140-526-451	
L 337		8140-526-451	
L 351		09240-113.21	
L 355		8140-525-969	
L 506		8140-525-884	AX 0411 GA
L 521		29203-117.01	
L 526		09240-110.21	
L 560		29500-817.01	
L 562		09245-816.01	
L 570		29500-804.07	
L 571		29500-804.07	
L 572		29500-804.08	
L 573		09246-859.21	
L 668		09245-815.21	O/W-Auskoppelspule
L 747		8140-526-406	AX 0411 GA
L 767		8140-526-406	AX 0411 GA
L 787		8140-526-406	AX 0411 GA
L6201		29500-809.97	
L6147		29500-804.06	
		29500-806.97	
IC 200		8305-201-953	CD 4053 BE (MOS)
IC 250		8305-293-559	RC 4559 BN (!)
IC 260		8305-201-953	CD 4053 BE (MOS)
IC 270		8305-362-014	TEA 2014 (MOS)
IC 280		8305-201-953	CD 4053 BE (MOS)
IC 350		8305-338-442	TDA 8442 (MOS)
IC 555		8305-338-145	TDA 8145
IC 631		8305-302-459	TDA 4601
IC6100		29701-820-17	Kühlblech mit IC-TDA 4601
IC6110		8305-205-212	MC 1455 P 1
IC6207		8305-112-012	78 L 12 A CS
IC6211		8305-204-317	LM 317 T
IC6227		8305-205-701	78 M 05
IC6257		8305-204-337	LM 337 T
T 111		8303-205-548	BC 548 B
T 271		8303-274-338	BC 338-40
T 321		8303-205-558	BC 558 B
T 352		8303-205-548	BC 548 B
T 354		8303-204-548	BC 548 B
T 504		8302-200-877	BC 877
T 531		8303-401-299	BF 299
T 692		8303-270-337	BC 337-16

Pos. No.	Fig. No.	Bestell-Nr. Part No. Réf. Nr. d'ordinazioni	Benennung Description Désignation Denominazione
T 742		8303-406-420	BF 420
T 744		8302-220-421	BF 421
T 746		8302-220-871	BF 871 S
T 748		8303-203-548	BC 548 A
T 762		8303-406-420	BF 420
T 764		8302-220-421	BF 421
T 766		8302-220-871	BF 871 S
T 768		8303-203-548	BC 548 A
T 782		8303-406-420	BF 420
T 784		8302-220-421	BF 421
T 786		8302-220-871	BF 871 S
T 788		8303-203-548	BC 548 A
T 794		8303-206-558	BC 558 C
T6100		8303-204-548	BC 548 B
T6105		8303-205-558	BC 558 B
T6110		8303-205-548	BC 548 B
T6120		8303-204-548	BC 548 B
T6125		8303-204-548	BC 548 B
T6130		8303-205-548	BC 548 B
T6140		8303-205-548	BC 548 B
T6211		8303-271-337	BC 327-16
T6241		8302-200-289	BC 327-16
D 201		8309-214-010	TD 129
D 202		8309-215-006	1 N 4001
D 281		8309-214-010	TD 129
D 282		8309-214-010	TD 129
D 292		8309-214-018	TD 190
D 320		8309-720-068	ZPD 6,8
D 321		8309-214-010	TD 129
D 322		8309-214-010	TD 129
D 331		8309-720-056	ZPD 5,6
D 336		8309-201-105	BA 157
D 351		8309-720-068	ZPD 6,8
D 352		8309-215-045	1 N 4148
D 502		8309-215-006	1 N 4001
D 504		8309-214-010	TD 129
D 525		8309-215-466	1 N 4936
D 529		8309-204-268	BYV 16
D 533		8309-201-103	BA 157
D 534		8309-215-020	1 N 4004
D 541		8309-200-021	BAV 21
D 543		8309-215-045	1 N 4148
D 544		8309-215-045	1 N 4148
D 554		8309-215-050	1 N 4148
D 562		8309-720-331	ZPD 30
D 570		8309-517-096	BYW 96 E
D 571		8309-517-096	BYW 96 E
D 572		8309-517-096	BYW 96 E
D 616		8309-215-127	1 N 4007
D 621		8308-560-520	GLR.B 380
D 633		8309-517-033	BYW 32
D 647		8309-517-033	BYW 32
D 651		8309-712-822	MR 824-400
D 656		8309-517-077	BYW 76

Pos. No.	Fig. No.	Bestell-Nr. Part No. Réf. Nr. d'ordinazioni	Benennung Description Désignation Denominazione
			
D 661		8309-712-822	MR 824-400
D 671		8309-712-822	MR 824-400
D 681		8309-712-822	MR 824-400
D 687		8309-215-020	1 N 4004
D 708		8309-720-048	ZPD 4,7
D 746		8309-215-045	1 N 4148
D 766		8309-215-045	1 N 4148
D 786		8309-215-045	1 N 4148
D 796		8309-214-026	TD 176
D 797		8309-214-026	TD 176
D6131		8309-215-032	1 N 4003
D6142		8309-214-018	TD 190
D6143		8309-214-018	TD 190
D6146		8309-215-127	1 N 4007
D6147		8309-215-127	1 N 4007
			
C 511		8515-911-104	8200pF/2000 V (!)
C 512		8515-912-057	0,027uF/630 V (!)
C 513		8515-942-131	1800pF/100 V (!)
C 514		8515-911-001	150pF/1600 V (!)
C 516		8515-721-238	0,33uF/250 V (!)
C 517		8515-721-238	0,33uF/250 V (!)
C 521		8515-721-231	0,25uF/250 V (!)
C 522		8515-721-231	0,25uF/250 V (!)
C 526		8563-731-622	0,022 uF/1000 V (!)
C 528		8563-731-622	0,022uF/1000 V(!)
C 529		8650-090-792	100pF/1 KV
C 530		8660-097-219	220pF (!)
C 537		8563-720-206	0,068uF/100 V
C 573		8515-722-485	0,47uF/400 V (!)
C 601		8599-990-025	0,15uF/250 V (!)
C 609		8563-732-425	0,1uF/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 626		8443-306-057	300 uF (!)
C 634		8515-911-091	2200pF/2000 V (!)
C 651		8650-090-477	270 pF/2 KV
C 656		8650-090-477	270 pF/2 KV
C 661		8650-090-477	270pF/2 KV
C 668		8415-166-147	1000uF/25 V
C 671		8650-090-477	270pF/2 KV
C 681		8650-090-477	270pF/2 KV
C 722		8563-731-655	0,15uF/1000 V
C 727		8650-131-012	150 pF/2 KV
C6210		8599-990-025	MP3 0,15 uF 250 W

Pos. No.	Fig. No.	Bestell-Nr. Part No. Réf. Nr. d'ordinazioni	Benennung Description Désignation Denominazione
			
R 504		8705-269-039	AX 0617 39 Ohm (!)
R 515		8703-441-095	AX 0411-8,2 kOhm NB (!)
R 523		8705-269-257	AX 0617 220 Ohm (!)
R 524		8766-397-017	4,7 Ohm (!)
R 525		8735-003-033	0,33 Ohm (!)
R 527		8730-270-021	7 ST/6,8 Ohm
R 528		8705-221-225	10 Ohm (!)
R 534		8705-329-025	L I 0411-10 Ohm (!)
R 535		8765-044-123	AX 0414 GA 120 kOhm (!)
R 550		8765-097-997	0,68 Ohm
R 554		8790-047-135	1 kOhm
R 557		8700-229-089	AX 0207-GA 4,7 kOhm NB (!)
R 561		8790-047-164	100 kOhm
R 571		8701-230-817	4,7 Ohm (!)
R 609		8311-200-010	DUO-PTC (!)
R 610		8311-005-017	NTC 4,7 Ohm (!)
R 620		8730-179-205	1,5 Ohm (!)
R 623		8311-400-125	VZA 275 (!)
R 624		8718-250-158	3,6 Mohm VDE (!)
R 626		8705-369-325	150 Kohm (!)
R 627		8718-250-014	4,7 Mohm VDE (!)
R 647		8796-101-142	2,2 kOhm
R 651		8735-002-013	2 W 0,1 Ohm (!)
R 661		8735-002-013	2 W 0,1 Ohm (!)
R 671		8735-003-010	0,1 Ohm (!)
R 672		8735-003-010	0,1 Ohm (!)
R 681		8735-002-022	0,22 Ohm (!)
R 688		8705-269-109	33 kOhm
R 690		8730-252-001	5,5 W/ 1 Ohm (!)
R 704		8705-269-019	5,6 Ohm (!)
R 721		8700-051-073	100 kOhm (!)
R 724		8797-215-674	470 kOhm (!)
R6201		8718-250-014	4,7 MOhm (!)
			
Si 644		8315-619-003	1,6 A/T (!)
Si6201		8315-614-001	500 MA/T (!)
Si6202		8315-617-006	2,5 A/T (!)
Si6220		8315-609-005	160 MA/T (!)
Si6221		8315-617-004	1 A/T (!)
Si6251		8315-614-001	500 MA/T (!)
		09623-394.05	Thermosicherung

MOS = Vorschriften beachten

(!) = Bauteilhinweis: Bauelemente nach VDE- bzw. IEC-Richtlinien. Im Ersatzfall nur Teile mit gleicher Spezifikation verwenden.

Service am I²C-Bus (mit MOTEROLA-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-Verst., 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 6221, IC 6227, IC 850
Reset	LOW nur im Einschaltmoment	Pin 2	T 811, D 811
4 MHz Takt	4 MHz, 3 V_{ss}	Pin 5, 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-Verst., Buchsenplatte 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

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, +I,	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	+A 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	+I', +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	34 V	Stecker G
	+ I', + 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

IC 350 Pin 4/5 Farb/RGB-Baustein: Stift 10 (Helligk.) Sift 11 (Kontrast) Stift 12 (Farbkon.)
Buchsenplatte Euro-AV-Buchse 10 Euro-AV-Buchse 12

„2" B (Norm I)	„3" OIRT (Norm D)
0	1
1	1
0	0
/	

Service checks on the I²C Bus (with MOTOROLA processor)

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

Via the I²C bus the microcomputer in the control unit IC 850 supplies control signals for the tuner, IF-Ampl., socket board (Euro AV socket) including the VCR remote control, and the RGB analog signals.

Note:

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

Table 1

Test	Measured Value	Test Point	Possible Faults
+H	5 V	Pin 4, IC 850	D 6221, IC 6227, IC 850
Reset	LOW only at moment of switch on	Pin 2	T 811, D 811
4 MHz clock	4 MHz, 3 V_{pp}	Pin 5, IC 850	F 808, IC 850
I²C bus	5 V_{pp}	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-Ampl., Socket Board successively or unsolder Pins 4,5 of IC 350. If there are still no data replace the control unit.

Table 2

Possible faults which can occur in any part of set.

Fault	Possible Cause	Measured Value	Test Point
No functions accepted by keyboard	+ H IC 850	5 V see Table 1	IC 850, Pin 4
Channel No. cannot be changed with remote control	IR preamplifier D 1201, T 1204, + I,	12 V	Pin 6, IC 1211
Dark display, no indication	+ H	5 V	Pins 17, 18 ICs 860, 870
	C 862, C 863, R 861	5 V	Pin 16, ICs 860, 870
	ICs 860, 870	LOW output signals, approx. 3 V	on the cathodes of the LEDs
Dark display or defective display segments	Short circuit or interruption in CLOCK, DATA and release lines	approx. 5 V_{pp}	ICs 860, 870 Pins 19, 21, 20
No frequency tuning	+ A via R 337	approx. 44 V	Tuner, Pin 1
	+ B, + H	12 V, 5 V	Tuner, Pins 16, 2
	Data (SDA)/clock (SCL) I²C bus	5 V_{pp}	Tuner, Pins 6, 5
Noise-infested picture	Variable tuning voltage as function of channel selection	0.2-30 V	Tuner, Pins 13, 15
Dark screen – no noise	Tuner, Pin 3 HIGH	HF 0 V AV > 8 V	Tuner, Pin 3
No CCVS at IF module, contacts 7, 9	+ I', + B' I²C bus, SDA, SCL missing at tuner, IF Pin 10 HIGH	12 V 5 V_{pp}	IF, Pins 21, 17 Tuner, Pins 6, 5 IF, Pin 10
No sound	IF amplifier	approx. 1.5 V_{pp} at max. volume	IF, Pins 28, 29
	Socket board	"	AU plug, Pins 6, 8
	AF plug-in board	"	AF, plug, Pins 1, 3
	+ G and -G	34 V	Plug G
	+ I', + B' I²C bus, SDA, SCL no coincidence	12 V 5 V_{pp} 12 V 5 V	IF, Pins 21, 17 IF, Pins 25, 24 IF, Pin 20 IC 850, Pin 35

deflection system,
Table 2.
uner, IF-Ampl., so-
als.

not be unplugged

850
e present even ne remote control Take out the ket Board older Pins 4,5 of still no data unit.

int
Pin 4
C 1211
, 18 , 870
ICs 860, 870
cathodes of Ds
, 870 , 21, 20
Pin 1
Pins 16, 2
Pins 6, 5
Pins 13, 15
Pin 3
21, 17 Pins 6, 5 10
28, 29
g, Pins 6, 8
g, Pins 1, 3
21, 17 25, 24 20 Pin 35

No analog signals, Brightness Contrast Colour contrast	I^2C bus, IC 350 D/A converter D/A converter D/A converter	5 V_{pp} 1-3 V 2-4 V 2-4 V	IC 350, Pins 4/5 Colour/RGB module: Pin 10 (brightness) Pin 11 (contrast) Pin 12 (col. contrast)
Only in case of remote control with Video 1 button No VCR remote control	 T 823, VCL I^2C bus SDA/T 111	 4 V 4 V_{pp}	Socket board Euro-AV socket 10 Euro-AV socket 12

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)	„2" GB (st. I)	„3" OIRT (st. D)
		IF Pin 2 (st. 1)	0	1	0	1
		IF Pin 3 (st. 2)	0	0	1	1
		IF Pin 1 (st. 3)	0	0	0	0
		1 = 12 V approx.				

Servizio per

Se si riscontr
trollare prima
bella 2.

Il microcomp
Scart) per m

Avviso:

Mentre si sos

Non estrarre
norme MOS.

Tabella 1

Misura
+H
Reset
Cadenza 4
I^2C Bus

Tabella 2

Possibili gua

Guasto
Le funzioni con tastiera vengono ac
Non viene c to da canal programma te TP
Display osc Non appaio indicazioni
Display osc oppure erro d'indicazion
La frequenz viene sintor
Rumore sul schermo
Schermo os Il rumore no presente
Manca il se FBAS sul m cont. 7, 9

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

	„2" GB (st. I)	„3" OIRT (st. D)
	0	1
	1	1
	0	0
2 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 deflessione, controllare prima di tutto il sistema I²C-Bus secondo la tabella 1 e successivamente effettuare i lavori riportati in tabella 2.

Il microcomputer dell'unità comandi IC 850 fornisce istruzioni o tuner, ampl. FI, Televideo e piastra prese (Euro-Scart) 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 alle norme MOS.

Tabella 1

Misura	Valore di misura	Punto di misura	Possibili guasti
+H	5 V	Pin 4, IC 850	D 6221, IC 6227, IC 850
Reset	LOW solo all'atto dell'accensione	Pin 2	T 811, D 811
Cadenza 4 MHz	4 MHz, 3 V_{pp}	Pin 5, IC 850	F 808, IC 850
I²C Bus	5 V_{pp}	Pin 21, 23, IC 811	I dati nel sistema I²C-Bus sono presenti anche senza immissione mediante TP o tastiera. Se i dati mancano: staccare una dopo l'altra le schede tuner, ampl. FI, piastra prese risp.te dissaldare i pin 4 e 5 di IC 350. Se malgrado ciò i dati non sono presenti: sostituire l'unità comandi.

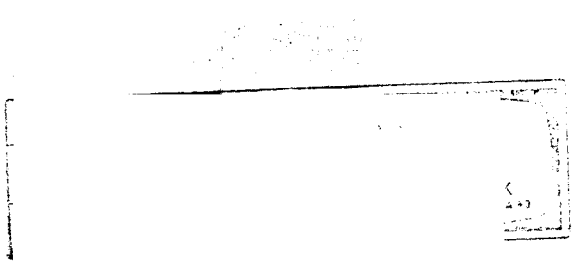
Tabella 2

Possibili guasti dell'apparecchio.

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, + I,	+ 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	+ A 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	+ I', + B' I² 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

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	34 V	Spina G
	+ B, + B' I^2C 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 Manca la luminosità Manca il contrasto Manca il contr. colore	I^2C Bus, IC 350 Convertitore D/A Convertitore D/A Convertitore D/A	5 V_{pp} 1-3 V 2-4 V 2-4 V	IC 350 pin 4/5 Modulo colore/RGB: spinotto 10 (luminosità) spinotto 11 (contrasto) spinotto 12 (contr. colore)
Solo col tasto Video 1 del TP Il videoregistratore non viene telecomandato.	T 823, VCL I^2C Bus SDA/T 111	4 V 4 V_{pp}	Piastra prese Presa Euro-Scart 10 Presa Euro-Scart 12

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				



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-Verst., 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 6221, IC 6227, IC 850
Reset	LOW nur im Einschaltmoment	Pin 9	T 811, D 811
12 MHz Takt	12 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-Verst., Buchsenplatte 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

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, +I,	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	+A 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	+I', +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	34 V	Stecker G
	+ I', + 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

lenkung zurückzuführen sind, ist
Tabelle 2 durchgeführt werden.
-Verst., Buchsenplatte (Euro-AV-
Bus.

ndling beachten.

iche Fehler
21, IC 6227, IC 850
, D 811
, IC 850
C-Bus-Daten sind auch ohne edienung oder Keyboardein- vorhanden. Bei fehlenden : Tuner-, ZF-Verst., senplatte nacheinander ziehen IC 350 Pin 4,5 ablöten. en sich trotz dieser ahmen keine Daten ein ist die eneinheit zu wechseln.

	Meßpunkt
	IC 850 Pin 40
	Pin 6 IC 1211
	Pin 17, 18 IC 860, 870
	Pin 16 IC 860, 870
	an den Katoden der LED's.
	IC 860, 870 Pin 19, 21, 20
	Tuner Pin 1
	Tuner Pin 16, 2
	Tuner Pin 6, 5
	Tuner Pin 13, 15
	Tuner Pin 3
	ZF 21, 17 Tuner 6, 5 ZF Pin 10
	ZF Pin 28, 29
	Stecker AU Pin 6, 8
	Stecker NF Pin 1, 3
	Stecker G
	ZF 21, 17 ZF 25, 24 ZF 20 IC 850 Pin 35

Keine Analogwerte	I^2C Bus, IC 350	5 V_{ss}	IC 350 Pin 4/5 Farb/RGB-Baustein:
Keine Helligkeit	D/A-Converter	1-3 V	Stift 10 (Helligk.)
Kein Kontrast	D/A-Converter	2-4 V	Sift 11 (Kontrast)
Kein Farbkontrast	D/A-Converter	2-4 V	Stift 12 (Farbkon.)
Nur bei TP-Bedienung in Verbindung mit Video 1 Taste			
Keine VCR-Fern-steuerung	T 823, VCL I^2C Bus SDA/T 111	4 V 4 V_{ss}	Buchsenplatte Euro-AV-Buchse 10 Euro-AV-Buchse 12

Fehler	Mögliche Ursache	Meßpunkt	Meßwert			
Keine Norm-um-schal-tung	Bedienungseinheit Tuner, ZF-Verstärker	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 processor)

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

Via the I²C bus the microcomputer in the control unit IC 850 supplies control signals for the tuner, IF-Ampl., socket board (Euro AV socket) including the VCR remote control, and the RGB analog signals.

Note:

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

Table 1

Test	Measured Value	Test Point	Possible Faults
+H	5 V	Pin 40, IC 850	D 6221, IC 6227, IC 850
Reset	LOW only at moment of switch on	Pin 9	T 811, D 811
12 MHz clock	12 MHz, 3 V_{pp}	Pin 19, IC 850	F 808, IC 850
I²C bus	5 V_{pp}	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-Ampl., Socket Board successively or unsolder Pins 4,5 of IC 350. If there are still no data replace the control unit.

Table 2

Possible faults which can occur in any part of set.

Fault	Possible Cause	Measured Value	Test Point
No functions accepted by keyboard	+ H IC 850	5 V see Table 1	IC 850, Pin 40
Channel No. cannot be changed with remote control	IR preamplifier D 1201, T 1204, + I,	12 V	Pin 6, IC 1211
Dark display, no indication	+ H	5 V	Pins 17, 18 ICs 860, 870
	C 862, C 863, R 861	5 V	Pin 16, ICs 860, 870
	ICs 860, 870	LOW output signals, approx. 3 V	on the cathodes of the LEDs
Dark display or defective display segments	Short circuit or interruption in CLOCK, DATA and release lines	approx. 5 V_{pp}	ICs 860, 870 Pins 19, 21, 20
No frequency tuning	+ A via R 337	approx. 44 V	Tuner, Pin 1
	+ B, + H	12 V, 5 V	Tuner, Pins 16, 2
	Data (SDA)/clock (SCL) I²C bus	5 V_{pp}	Tuner, Pins 6, 5
Noise-infested picture	Variable tuning voltage as function of channel selection	0.2-30 V	Tuner, Pins 13, 15
Dark screen – no noise	Tuner, Pin 3 HIGH	HF 0 V AV > 8 V	Tuner, Pin 3
No CCVS at IF module, contacts 7, 9	+ I', + B' I²C bus, SDA, SCL missing at tuner, IF Pin 10 HIGH	12 V 5 V_{pp}	IF, Pins 21, 17 Tuner, Pins 6, 5 IF, Pin 10
No sound	IF amplifier	approx. 1.5 V_{pp} at max. volume	IF, Pins 28, 29
	Socket board	"	AU plug, Pins 6, 8
	AF plug-in board	"	AF, plug, Pins 1, 3
	+ G and -G	34 V	Plug G
	+ I', + B' I²C bus, SDA, SCL no coincidence	12 V 5 V_{pp} 12 V 5 V	IF, Pins 21, 17 IF, Pins 25, 24 IF, Pin 20 IC 850, Pin 35

unit, the EHT or the deflection system,
ork is carried using Table 2.
ntrol signals for the tuner, IF-Ampl., so-
ie RGB analog signals.

d off. Modules must not be unplugged

ossible Faults
6221, IC 6227, IC 850
811, D 811
808, IC 850
ne I^2C bus data are present even ithout input from the remote control keyboard. there are no data: Take out the ner, IF-Ampl., Socket Board uccessively or unsolder Pins 4,5 of 350. If there are still no data place the control unit.

e	Test Point
	IC 850, Pin 40
	Pin 6, IC 1211
	Pins 17, 18 ICs 860, 870
	Pin 16, ICs 860, 870
nals,	on the cathodes of the LEDs
	ICs 860, 870 Pins 19, 21, 20
	Tuner, Pin 1
	Tuner, Pins 16, 2
	Tuner, Pins 6, 5
	Tuner, Pins 13, 15
	Tuner, Pin 3
	IF, Pins 21, 17 Tuner, Pins 6, 5 IF, Pin 10
	IF, Pins 28, 29
	AU plug, Pins 6, 8
	AF, plug, Pins 1, 3
	Plug G
	IF, Pins 21, 17 IF, Pins 25, 24 IF, Pin 20 IC 850, Pin 35

No analog signals, Brightness Contrast Colour contrast	I^2C bus, IC 350 D/A converter D/A converter D/A converter	5 V_{pp} 1-3 V 2-4 V 2-4 V	IC 350, Pins 4/5 Colour/RGB module: Pin 10 (brightness) Pin 11 (contrast) Pin 12 (col. contrast)
Only in case of remote control with Video 1 button No VCR remote control	T 823, VCL I^2C bus SDA/T 111	4 V 4 V_{pp}	Socket board Euro-AV socket 10 Euro-AV socket 12

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)	„2" GB (st. I)	„3" OIRT (st. D)
		IF Pin 2 (st. 1)	0	1	0	1
		IF Pin 3 (st. 2)	0	0	1	1
		IF Pin 1 (st. 3)	0	0	0	0
		1 = 12 V approx.				

Servizio per I^2C-Bus (con processore SIEMENS)

Se si riscontrano anomalie che non sono dovute nè all'alimentatore, nè all'alta tensione o alla deflessione, controllare prima di tutto il sistema I^2C-Bus secondo la tabella 1 e successivamente effettuare i lavori riportati in tabella 2.

Il microcomputer dell'unità comandi IC 850 fornisce istruzioni o tuner, ampl. FI, Televideo e piastra prese (Euro-Scart) per mezzo del sistema I^2C-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 alle norme MOS.

Tabella 1

Misura	Valore di misura	Punto di misura	Possibili guasti
+H	5 V	Pin 40, IC 850	D 6221, IC 6227, IC 850
Reset	LOW solo all'atto dell'accensione	Pin 9	T 811, D 811
Cadenza 12 MHz	12 MHz, 3 V_{pp}	Pin 19, IC 850	F 808, IC 850
I^2C Bus	5 V_{pp}	Pin 21, 22, IC 811	I dati nel sistema I^2C-Bus sono presenti anche senza immissione mediante TP o tastiera. Se i dati mancano: staccare una dopo l'altra le schede tuner, ampl. FI, piastra prese risp.te dissaldare i pin 4 e 5 di IC 350. Se malgrado ciò i dati non sono presenti: sostituire l'unità comandi.

Tabella 2

Possibili guasti dell'apparecchio.

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, + I,	+ 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	+ A mediante R 337	ca. 44 V	Tuner pin 1
	+ B, + H	12 V, 5 V	Tuner pin 16, 2
	Dati (SDA)/Clock (SCL) I^2C-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	+ I', + B' I^2C-Bus, SDA, SCL manca nel tuner, FI pin 10 HIGH	12 V 5 V_{pp}	FI 21, 17 Tuner 6, 5 FI pin 10

'alta tensione o alla deflessione, con-
mente effettuare i lavori riportati in ta-

ol. FI, Televideo e piastra prese (Euro-
VCT e ai valori analogici RGB.

one d'attesa! Prestare attenzione alle

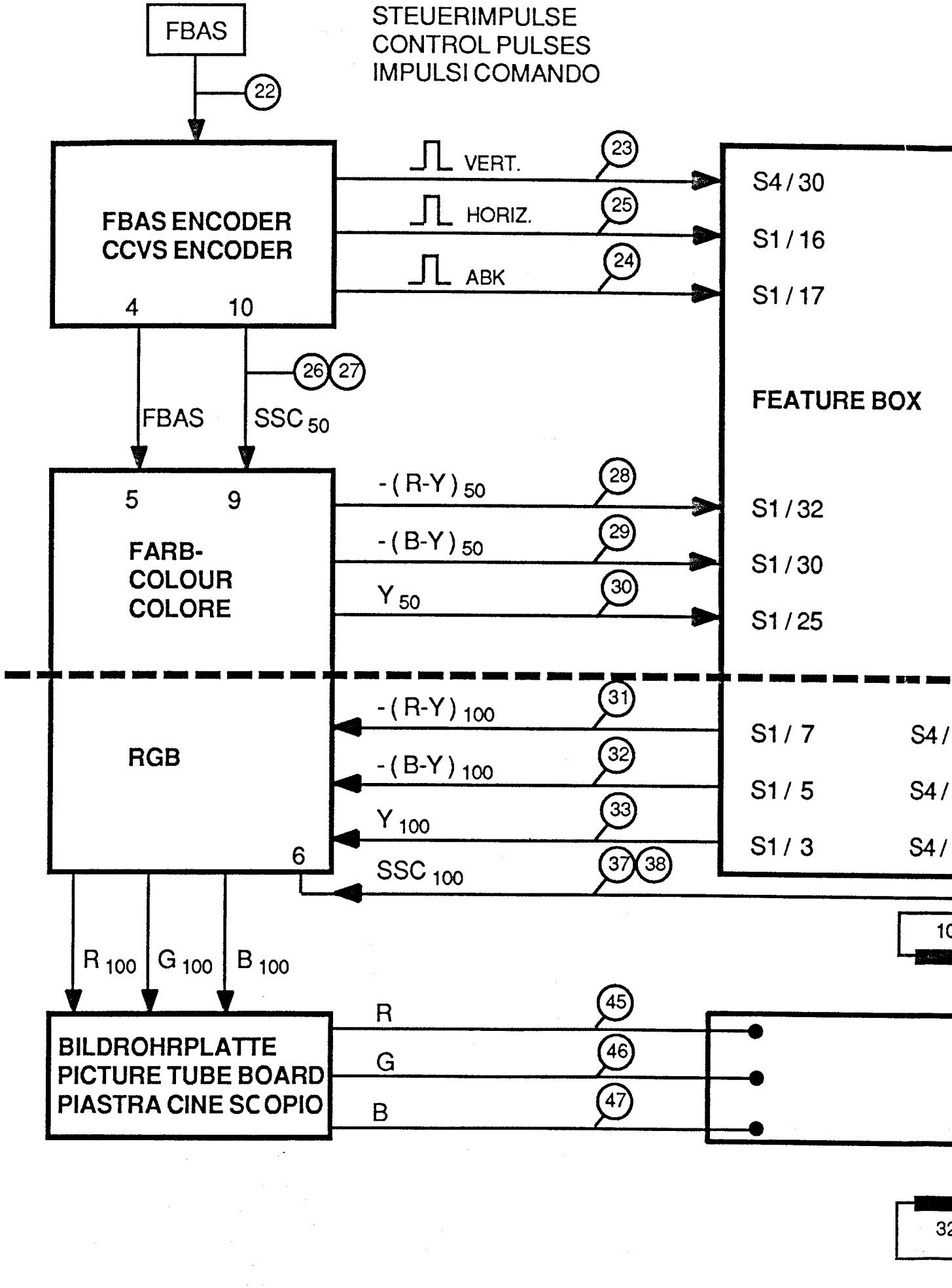
ssibili guasti
6221, IC 6227, IC 850
311, D 811
08, IC 850
ati nel sistema I^2C-Bus sono esenti anche senza immissione diante TP o tastiera. Se i dati ncano: staccare una dopo l'altra schede tuner, ampl. FI, piastra se risp.te dissaldare i pin 4 e 5 C 350. malgrado ciò i dati non sono esenti: sostituire l'unità mandi.

nto di misura
350, pin 40
1211, pin 6
17, 18 360, 870
16 – IC 860, 870
catodi dei LED
360, 870 19, 21, 20
er pin 1
er pin 16, 2
er pin 6, 5
er pin 13, 15
er pin 3
1, 17 er 6, 5 n 10

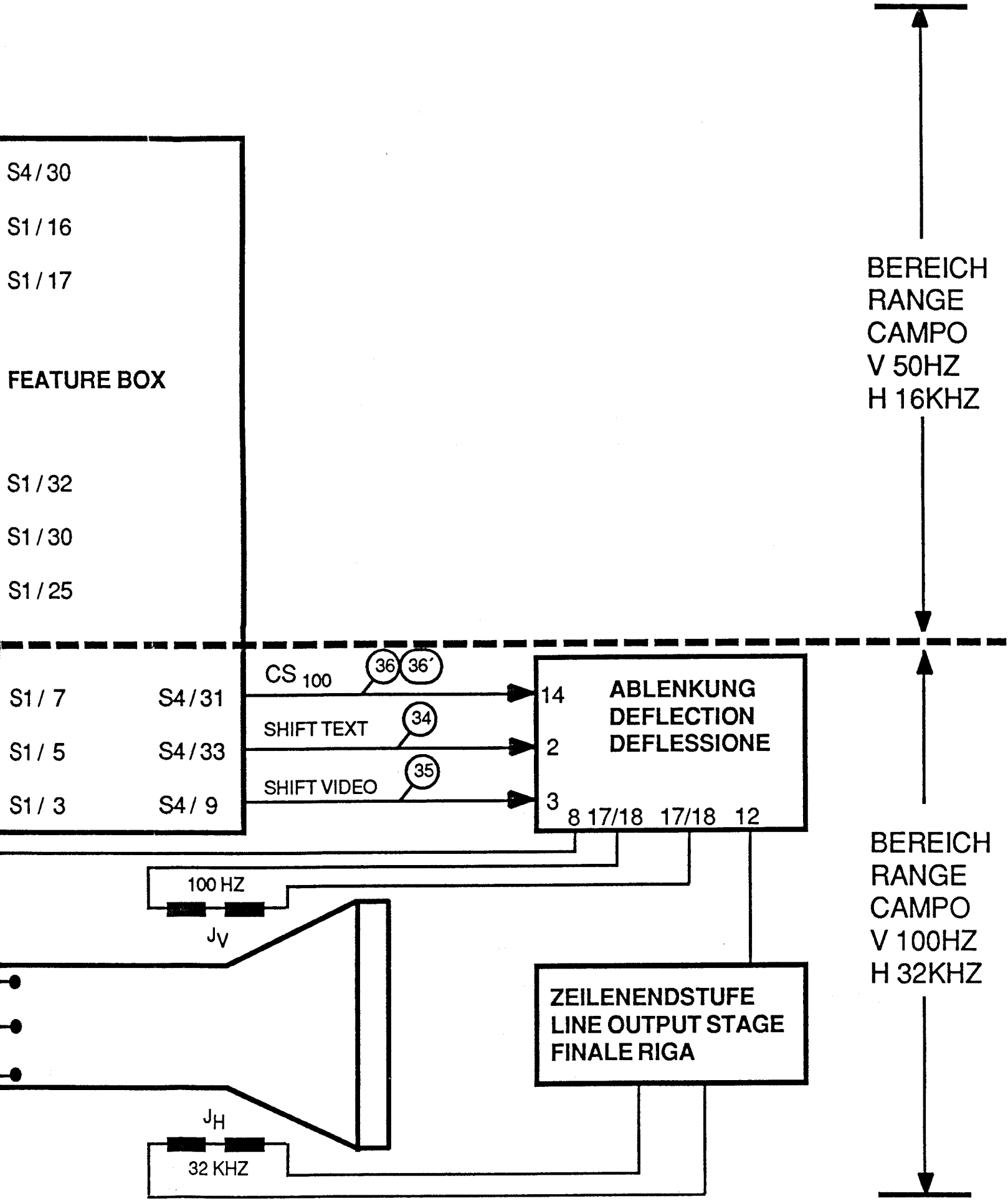
Manca l'audio	Amplificatore FI	a massimo volume ca. 1,5 V_{pp}	FI pin 28, 29
	Piastra prese	"	Spina AV pin 6, 8
	Modulo BF	"	Spina BF pin 1, 3
	+ G e -G	34 V	Spina G
	+ B, + B' I^2C Bus, SDA, SCL Manca la coincidenza	12 V 5 V_{pp} 12 V 5 V	FI 21, 17 FI 25, 24 FI 20 IC 850 pin 35
Mancano i valori analogici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

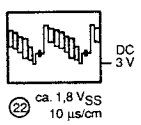
Guasto	Possibile cause	Punto di misura	Valore di misura			
Non avviene la commutazione di norma sion	Unità comandi Tuner, amplificatore FI	Indicazione sul display (premere tasto "Norm")	„0" CCIR Norma B/G	„1" FR Norma L	„2" GB Norma I	„3" OIRT Norma D
		FI pin 2 (norma 1)	0	1	0	1
		FI pin 3 (norma 2)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

SIGNALVERFOLGUNG / SIGNAL TRACING

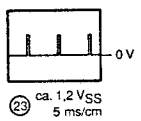


IAL TRACING / DIAGRAMMA SEGNALI 50 / 100 HZ

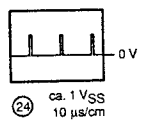




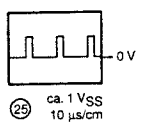
(22) ca. 1,8 V_{SS}
10 µs/cm



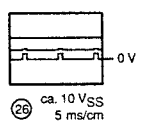
(23) ca. 1,2 V_{SS}
5 ms/cm



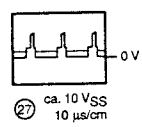
(24) ca. 1 V_{SS}
10 µs/cm



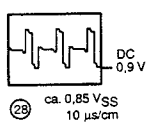
(25) ca. 1 V_{SS}
10 µs/cm



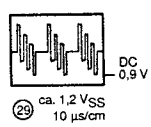
(26) ca. 10 V_{SS}
5 ms/cm



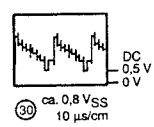
(27) ca. 10 V_{SS}
10 µs/cm



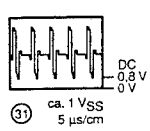
(28) ca. 0,85 V_{SS}
10 µs/cm



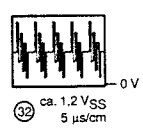
(29) ca. 1,2 V_{SS}
10 µs/cm



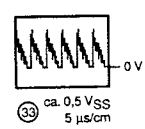
(30) ca. 0,8 V_{SS}
10 µs/cm



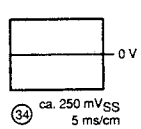
(31) ca. 1 V_{SS}
5 µs/cm



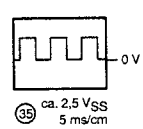
(32) ca. 1,2 V_{SS}
5 µs/cm



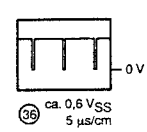
(33) ca. 0,5 V_{SS}
5 µs/cm



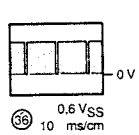
(34) ca. 250 mV_{SS}
5 ms/cm



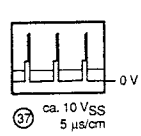
(35) ca. 2,5 V_{SS}
5 ms/cm



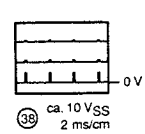
(36) ca. 0,6 V_{SS}
5 µs/cm



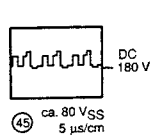
(36) 0.6 V_{SS}
10 ms/cm



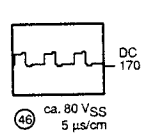
(37) ca. 10 V_{SS}
5 µs/cm



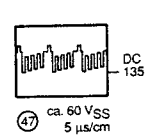
(38) ca. 10 V_{SS}
2 ms/cm



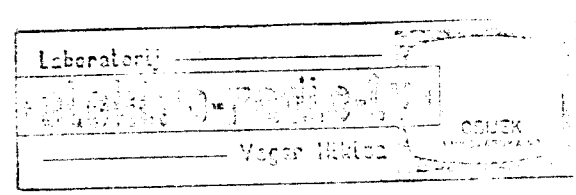
(45) ca. 80 V_{SS}
5 µs/cm



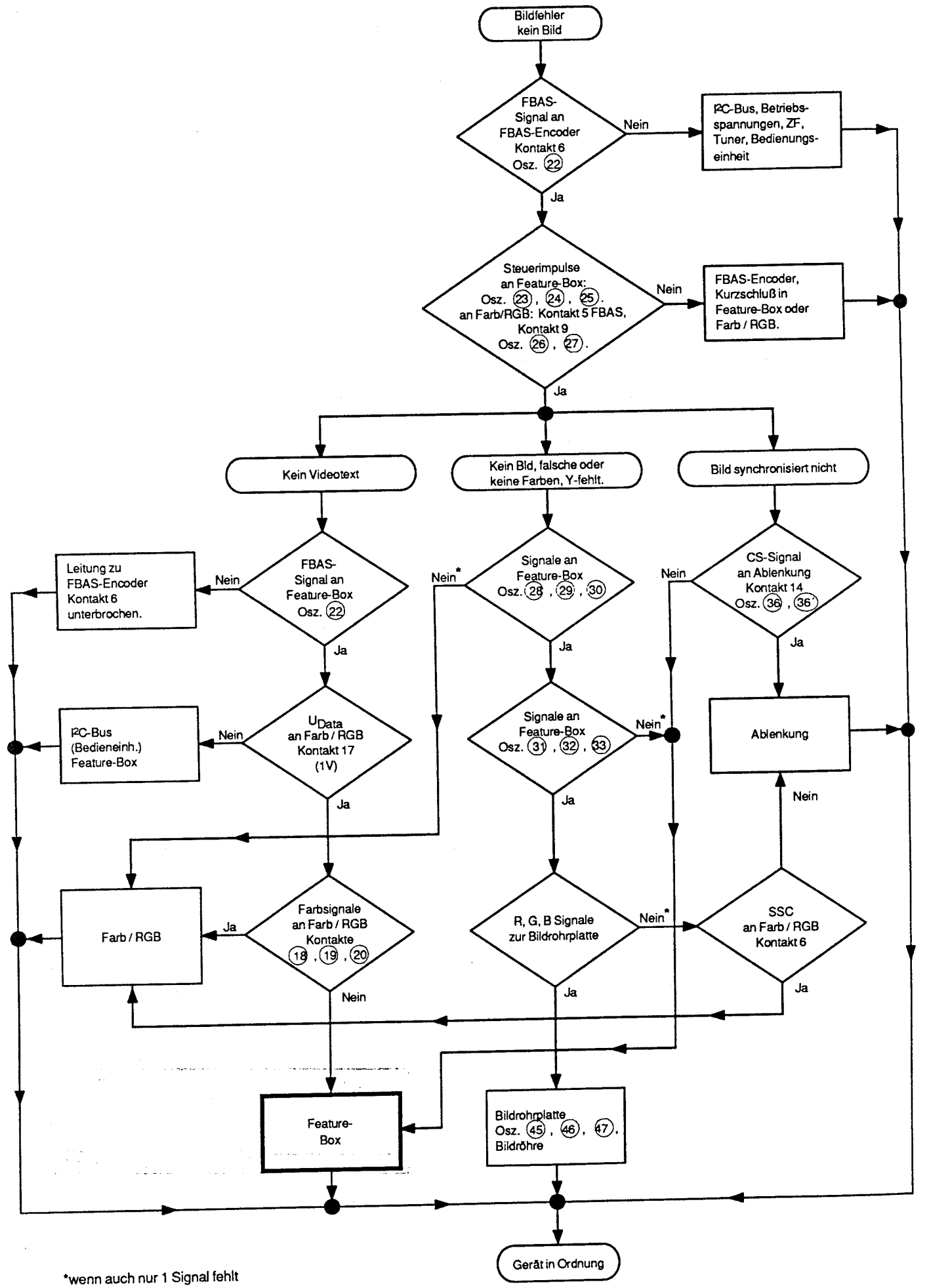
(46) ca. 80 V_{SS}
5 µs/cm



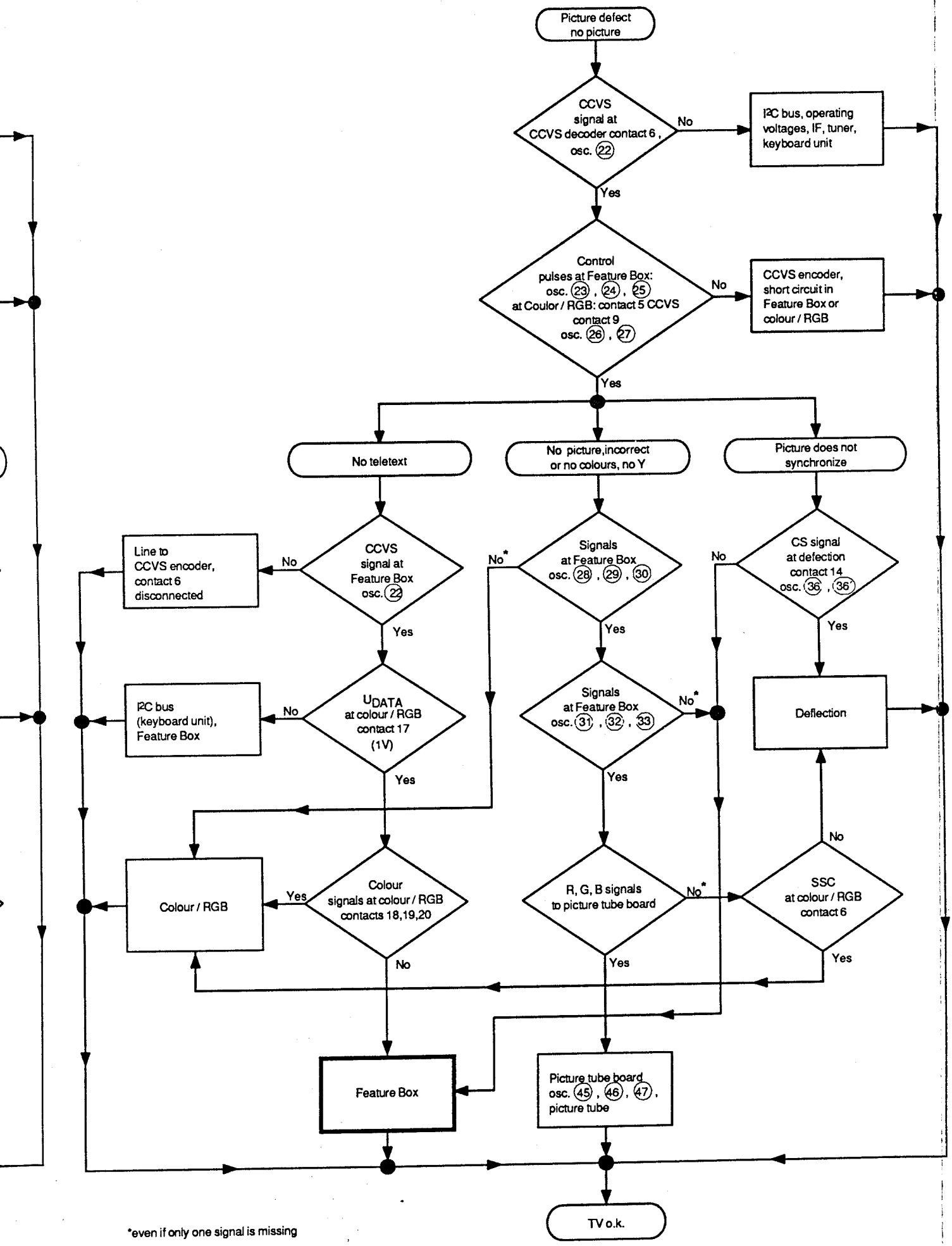
(47) ca. 60 V_{SS}
5 µs/cm



(D) Tips zur Fehlersuche

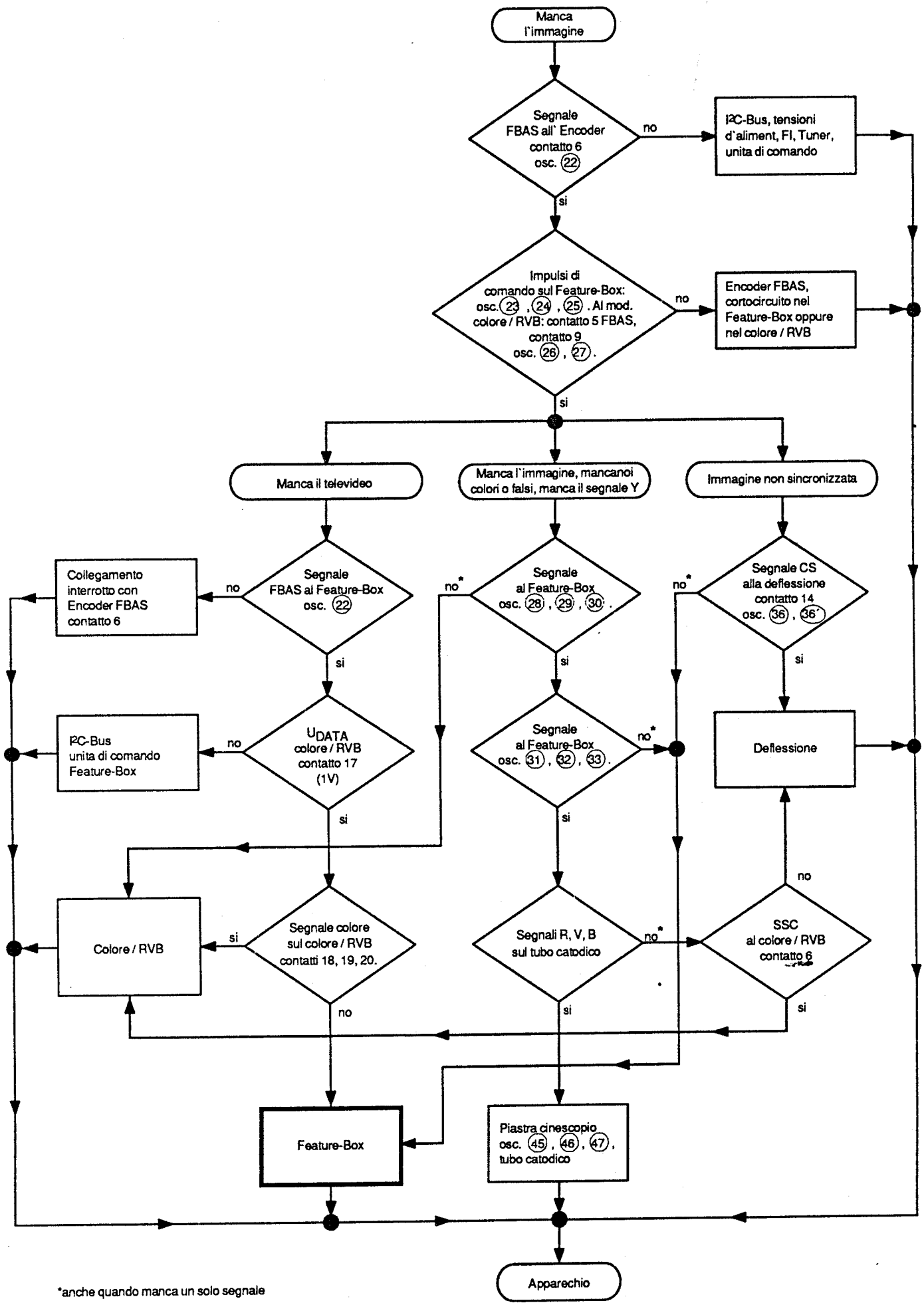


*wenn auch nur 1 Signal fehlt



*even if only one signal is missing

(I) Ricerca guasti



*anche quando manca un solo segnale