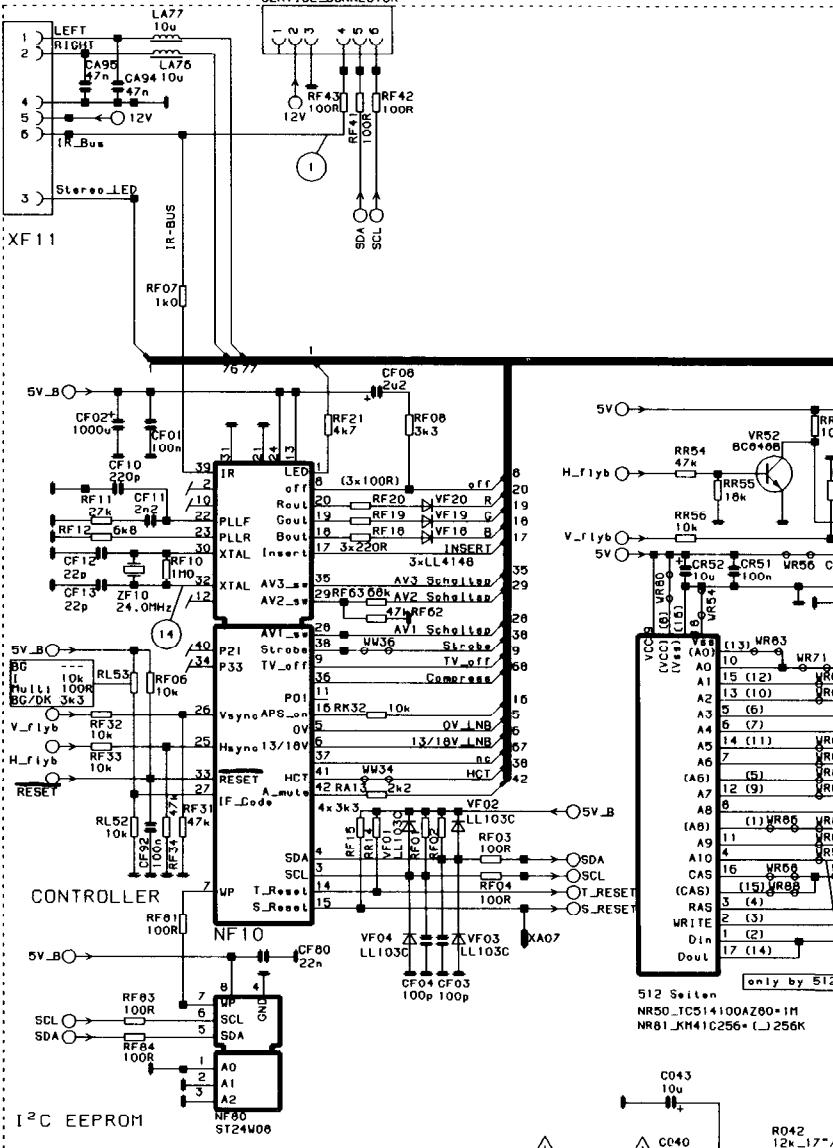
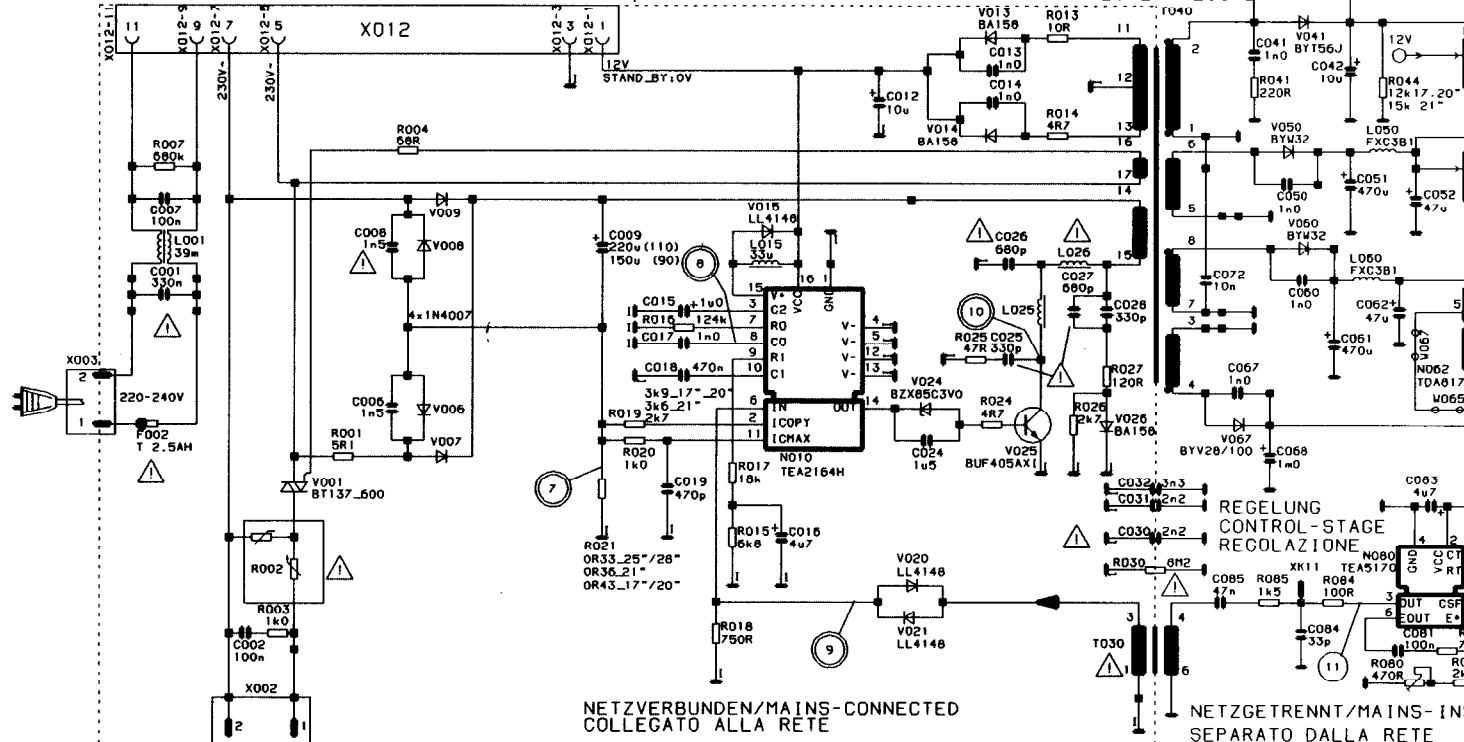


XF01
SERVICE CONNECTOR



SCHALTNETZTEIL/SWITCH MODE/CIRC.[⚠]ALIMENTAZIONE

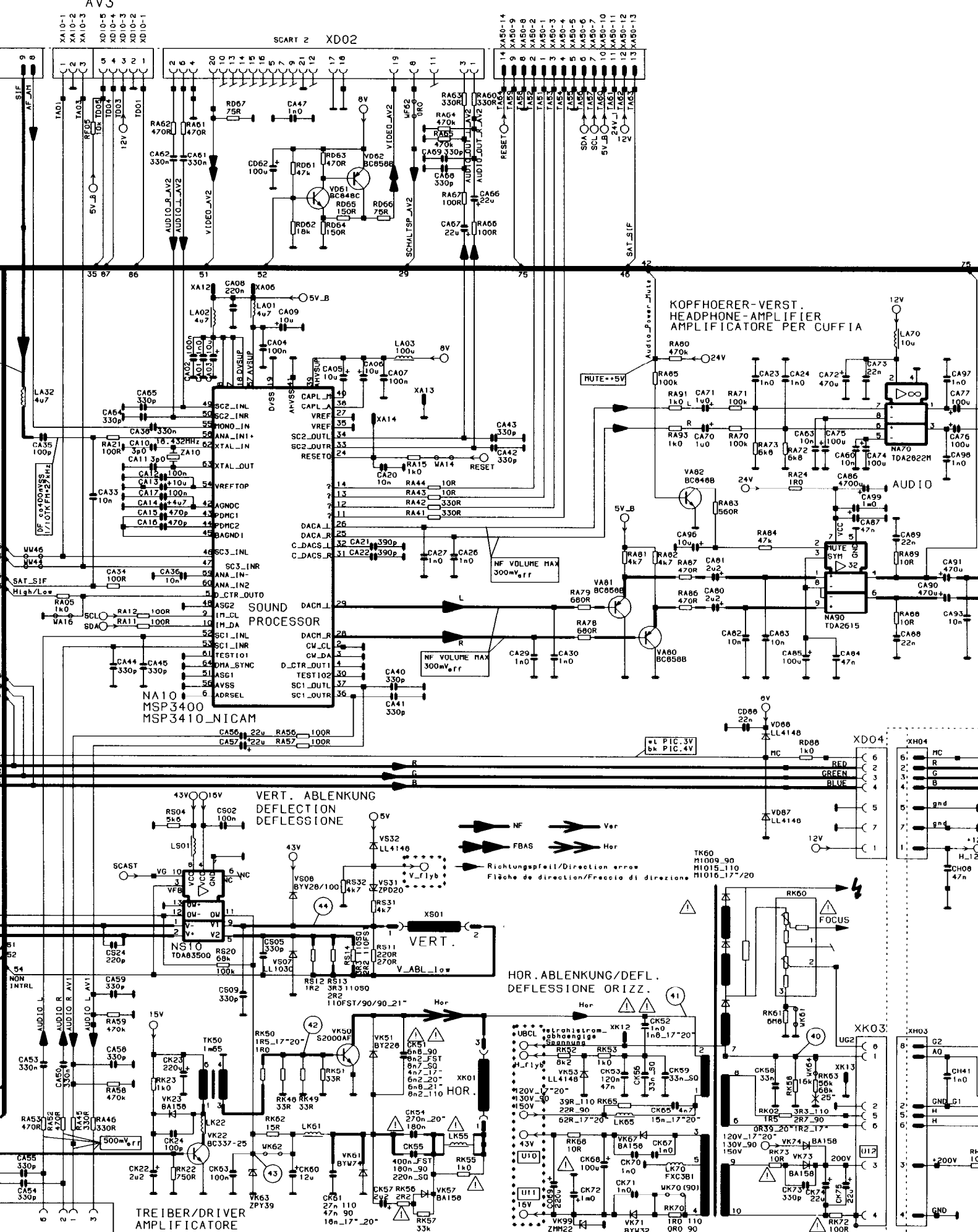


ENTMAGNETISIERUNG
DEGAUSSING COIL
BOBINA SMAGNETIZZAZIONE

NETZVERBUNDEN/MAINS-CONNECTED
COLLEGATO ALLA RETE

• NETZGETRENNT/MAINS- IN
SEPARATO DALLA RETE

○ Oszillogramm-Meßpunkt auf Masse an **TEA 2164 G** Pin 1 ect. bezogen./ Waveforms referenced to earth on **TEA 2164 G** pin 1 ect.
Tous les oscillogrammes se rapportant au la masse **TEA 2164 G** pin 1./ Riferire tutti gli oscillogrammi alla massa **TEA 2164 G**.
Pulser mätta mot TEA 2164G: jord, stift 1.



Baugruppenkurzbezeichnungen/ Assembly group abbreviations/ Codifica dei moduli/ Désignations abrégées des sous-ensembles Blockförkortningar

D = Color decoder/ Decodificatore colore/ Färgdekoder
K = Hor. deflection/ Deflessione orizzontale/ Horisontal avlänkning
S = Vertical/ Verticale
I = HF/ AF
L = ZF/ IF/ MF
F = Control unit/ Unità di comando/ Kontrollenhet
A = Audio
O = Schaltenteil/ Power supply/ Circuito aliment. rete/ Nätdel
H = Bildröhrenanschluß/ C.R.T. board/ Colleg. cinescopio/ Bildrörsplattan
R = Videotext/ Teletext/ Televideo/ Text- TV

(D)

Achtung! Die Oszilloskopmasse muß in der Nähe der zu messenden Baugruppe angeschlossen werden.

Alle **Decoderoszillogramme** sind unter folgenden Bedingungen aufgenommen: Normfarbbalken PAL, max. Kontrast, ca. Nennhelligkeit u. nom. Sättigung.

(GB)

N.B.! The oscilloscope frame must be connected near the module being measured.

The **decoder waveforms** are taken under following conditions: Standard PAL, contrast at maximum and brightness and colour saturation at nominale value.

(F)

Attention! La masse de l'oscilloscope doit être raccordée à proximité du module devant être mesuré.

Tous les **oscillogrammes mesurés sur le décodeur** sont pris sous les conditions suivantes: Norme de mire de barre PAL, contrast au maximum, luminosité et intensité couleur aux valeurs nominales.

(I)

Attenzione! La massa dell'oscilloscopio deve essere collegata vicino al componente da misurare.

Tutti gli **oscillogrammi decoder** sono stati fatti nelle seguenti condizioni: generatore di barre PAL, massimo contrasto, approssimativamente luminosità e saturazione normali.

(S)

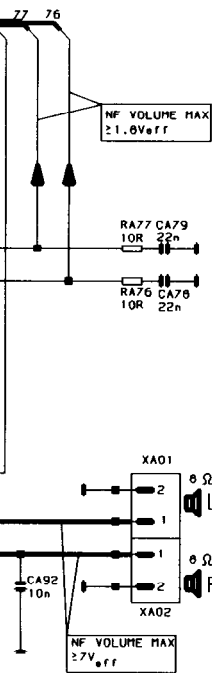
Obs! Oskilloskopets maste jordas i närheten av modulen som man gör mätningar på. Dekoderpulser är mätta under följande förhållande: Standard PAL signal, kontrasten i maximum och ljus och färgmättnad i normalläge.

Variable components for picture tube.

Bildröhrenabhängige Bauteile.

Componenti che differiscono a seconda del tipo di cinescopio.

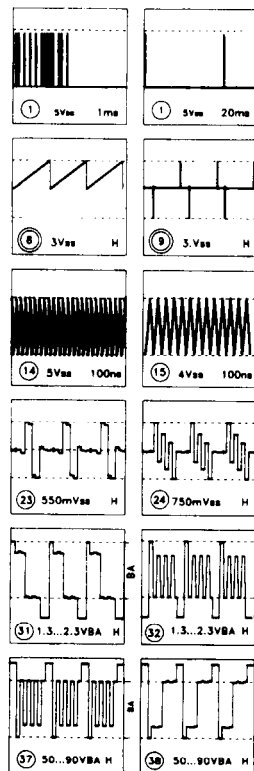
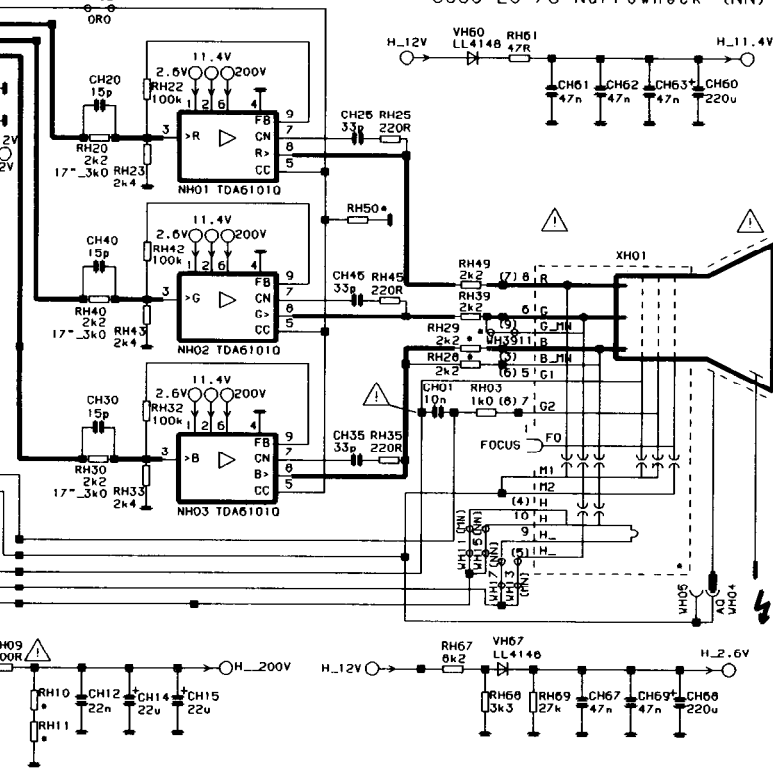
*POS	A59/66 EAF10X01	A59/66 ECY13X01	A59/66 EAS13X01	A59/66 ECF20X
U1	150V	150V	150V	150V
CO09	220U	220U	220U	220U
CS26	33N	15N	33N	33N
CK51	8N7	8N2	8N7	8N7
CK52	1N5	1N5	1N5	1N5
CK53	120N	120N	120N	120N
CK55	400N	300N	400N	360N
CK56	33N	33N	33N	33N
CK61	27N	27N	27N	27N
CK65	4N7	4N7	4N7	4N7
LK55	227U	227U	227U	227U
LK61	490UH	490UH	490UH	490UH
LK65	82U	82U	82U	82U
RK02	3R3	1R2	3R3	3R3
RK06	10K	10K	10K	10K
RK50	1R0	1R0	1R0	1R0
RK58	16K	16K	16K	16K
RK63	56K	56K	56K	56K
RK65	39R	39R	39R	39R
RK70	1R0	1R0	1R0	1R0
RK80	150K	470K	150K	150K
RK85	3M3	2M2	3M3	2M2
RK88	100K	100K	220K	100K
RO19	2K7	2K7	2K7	2K7
RO21	0K36	0K36	0K36	0K36
RO42	15K	15K	15K	15K
RO43	2K2	2K2	2K2	2K2
RO44	-	-	-	-
RO75	18K	18K	18K	18K
Hotel	27K	27K	27K	27K
RO78	51K	51K	51K	51K
Hotel	59K	59K	59K	59K
RS11	300R	220R	300R	220R
RS12	300R	220R	270R	220R
RS13	3R0	4R7	3R0	2R0
RS14	3R0	4R7	3R0	2R0
RS20	68K	68K	100K	68K
RS25	560K	-	560K	560K
RS26	150K	330K	150K	82K
RS28	10K	100K	10K	10K
TK60	M1015	M1015	M1015	M1015
C.R.T. board				
RH20	2k2	2k2	2k2	2k2
RH30	2k2	2k2	2k2	2k2
RH40	2k2	2k2	2k2	2k2



**BILDROHRENANSCHLUSSPLATTE
C.R.T. BASE BOARD
COLLEGAMENTO CINESCOPIO**

5858 20 75 Minineck (MN)

5858 20 76 Narrowneck (NN)



**CHASSIS
SP-SERIE**

Note! Before other adjustments U1 voltage must be adjusted.

Service mode

Select the service mode by pressing the Mute, OK and TV buttons on the remote control unit.

Use the cursor button $\blacktriangle$ or $\blacktriangledown$ to select required adjustment and adjust it by using the cursor buttons $\blacktriangleleft$ and $\blacktriangleright$.

Store into memory by pressing the red OK button.

Return to normal TV mode by pressing the TV button.

Service adjustment which are made in service mode

Display	Note
V.MID-POS.	Adjust centre of the test picture vertical to a centred pos. (bottom half is black).
V.TOP-POS.	Adjust top edge (bottom half is black).
V.AMPL.	Adjust bottom edge.
H.SHIFT	Adjust centre of the test picture horizontal to a centred position.
H.AMPL.	Horizontal amplitude
P.AMPL.	Horizontal cushion
P.TILT	Horizontal trapeze
P.CORN.	Corner correction (starting SPL21 R 02)
S.COR.	Vertical linearität (starting SPL21 R 02)
GREEN	See adj. "G2- and colour temperature"
BLUE	See adj. "G2- and colour temperature"
RED	See adj. "G2- and colour temperature"
ACI	(ON/OFF)SPL70
EQUALIZER	(ON/OFF)SPL70
OSD SHIFT	
INVAR:	(ON/OFF) starting SPL50 R 01
FRONT AV:	(ON/OFF)
LOUDNESS:	(ON)
C4 BIT CHECK:	(ON)
NICAM:	(ON/OFF)
CARRIER-MUTE:	(OFF)
VT CHAR:	West / East1 / West Turkey / East2
FLYB MODE:	(ON=NTSC) as from SPL21 R 02
AGC	See adjustment "AGC".
ZOOM	(ON/OFF)
CORING	(ON/OFF)

G2- and colour temperature

1. Set the TV set to the service mode (see "Service mode").
2. Adjust the green, blue and red OSD values to 60 with the cursor button $\blacktriangleleft$ or $\blacktriangleright$.
3. Set the G2 trimmer (RK60) to its centre position.
4. Adjust the brightness to normal level (black bar of the grey scale is black).
5. By using an oscilloscope (Probe 100:1) determine the highest black value at the picture-tube cathodes (R, G, B).
6. Adjust with G2 (RK60) the highest black value to 150 V.
7. Use a colour neutral picture and adjust the light areas in green, blue and red drives to white (lower the OSD value) with the cursor button $\blacktriangleleft$ or $\blacktriangleright$. At least one of the level controls should be remain at 60.
8. Store by pressing the OK button.
9. Return to normal TV mode by pressing the TV button.

AGC

1. Feed in a RF signal (70 dB μ V) tuned on a mid range UHF channel and without sound carrier via the aerial input.
2. Set the TV set to the service mode (see "Service mode").
3. Select the AGC-adjustment with the cursor button $\blacktriangle$ or $\blacktriangledown$.
4. Connect an oscilloscope (bandwidth > 50 MHz) to the IF output on the tuner (TL01 or TL02).
5. Press the yellow button on the remote control unit (OSD = OKAY).
6. Adjust the signal to 450 mVpp $\pm$ 50 mV. (with reference to the signals synchronizing peaks) with the cursor button $\blacktriangleleft$ or $\blacktriangleright$.
7. Store the value in the memory by pressing the red OK button.
8. Return to normal TV mode by pressing the TV button.

U1 voltage

1. Set the contrast and brightness to minimum.
2. Connect an universal voltmeter to the capacitor CO43.
3. Adjust the U1 voltage to 150 V $\pm$ 0.5 V (110° 25"/28"), 130 V $\pm$ 0.5V (90° 21") or 120 V $\pm$ 0.5V (90° 17") with the trimmer RO80 by black picture.

Focus

Adjust the focus to optimum with the focus trimmer (RK60).

Other service adjustments

Picture reference calibration

1. Press the blue MENU button twice.
2. Activate TV-PROGR option by pressing the cursor button $\blacktriangleleft$ or $\blacktriangleright$.
3. Enter one of the mid range UHF channels by using the number buttons, e.g. ch..38 (607.25 MHz).
4. Select the frequency tuning menu by pressing the green button.
5. Select AFC option and change it to ON by using the cursor buttons $\blacktriangleleft$ or $\blacktriangleright$.
6. Adjust the frequency to 607.25 MHz with ZL22 (even with other channels, always set to xxx.25 MHz).
7. Return to normal TV mode by pressing the TV button.

Audio IF calibration

1. Feed in a test picture.
2. Connect an oscilloscope to pin 12 of TDA 2545.
3. Adjust for minimum picture content with the ZL02.

