

# MONO PLUS 2 CHASSIS (MP2)

# TV

10/1998

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- Ⓓ Service-Manual
- Ⓔ Serviceanvisning

- Ⓕ Manuel de service
- Ⓖ Manuale di servizio

## AKAI

TV 1420-UK  
TV 1420-T UK  
TV 1420-Euro  
TV 1420-T Euro  
TV 1421  
TV 1421-T  
TV 1421-T Euro  
TV 2020 UK  
TV 2020-T UK  
TV 2020-Euro  
TV 2021  
TV 2021-T  
TV 2021-T Euro  
TV 2120-T UK  
TV 2120-Euro  
TV 2120-T Euro  
TV 2121  
TV 2121-T  
TV 2121-T Euro

## FINLUX

14A1 TX  
51A1 TX  
55A1 TX

## LUXOR

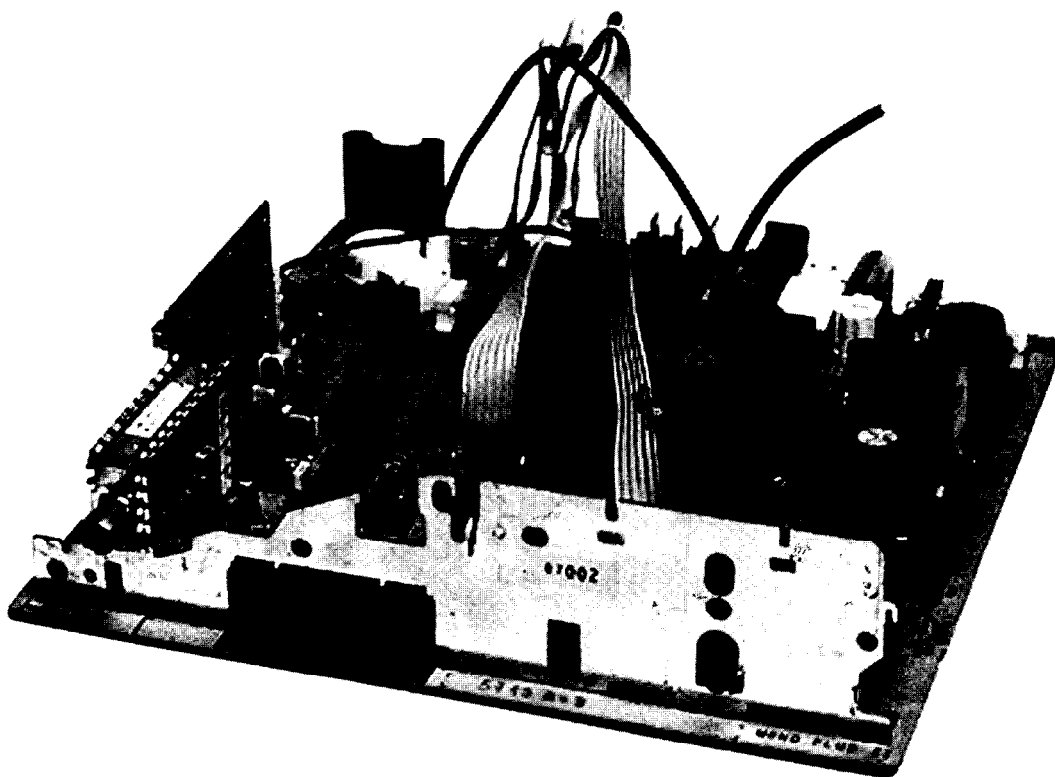
3392 TX  
5192 TX  
5592 TX

## NOKIA

3721  
3721-T Euro  
5121  
5121-T  
5121-T Euro  
5521  
5521-T  
5521-T Euro

## SALORA

14MP50 VT TICO  
20MP50 VT TICO  
21MP50 VT TICO





# Service adjustments

**Note! Before other adjustments U1 voltage must be adjusted.**

If the set cannot be switched on with the number buttons, please see under "RC Mode" (Service menu 2).

**Wait!** Allow the TV set to be switched on for 10 minutes before any adjustment.

## Service mode

Select the service mode by pressing the Mute, OK (M) and TV buttons in sequence on the remote control unit. Use the blue button to call up the Service Menu 2, 3 (or Service Menu 1 again).

- Cursor button ▲ or ▼ = To select required adjustment
- Cursor button ◀ or ▶ = To adjust it
- OK (M) button = To store the adjustment into the memory.
- TV button = To return to normal TV mode.

## Service adjustments which are made in service mode

Display	Note
Start APS	<b>Service Menu 1</b> YES = APS; search function will be run automatically when the set is switched on for the first time and stores all stations into the memory.
V-Amplitude	Adjust the bottom edge.
H-Shift	Stereo set: Adjust centre of the test picture horizontally to a centered position. Mono set: Adjust centre of the test horizontal to a centered position with RK 45.
U1	U1 operating voltage, see adj. "U1 voltage".
AGC	See adjustment "AGC".
Set Standard	<b>Service Menu 2</b> Select required standard.
APS Standard	Set to appropriate television standard.
RC Mode	(Remote Control), select the other remote control units.
Front AV	YES, if front AV socket is available.
Text Characters	Teletext character sets: OFF, EU+CS, EU+TR, East 1, East 2
Equalizer	<b>Service Menu 3</b> (only with stereo sets) YES/NO ; YES = on
C4 Bit	Yes: Switches back to FM-sound, if FM-sound ≠ Nicam sound. No: Switches Nicam during Nicam-transmission.
Loudness	YES/NO
AVC	Yes: Suppresses sound cracks.
Carrier Mute	Yes: Switches sound off, if carrier missing.
Hi-Dev	Displays "HDM" line in the audio menu, use in case of overmodulation of sound.

## Adjustment U1 voltage

- Set the contrast and brightness to minimum.
- Connect test point XF01 (chassis board) to ground.
- Go to service menu 1 (see service mode).
- Use cursor button ▲ or ▼ to select U1-adjustment.
- Adjust with cursor button ◀ or ▶
  - 110V ± 1V 14" (Philips/Samtel ) and 20" (Videocolor)
  - 135V ± 1V 21" (Philips)
  - 150V ± 1V 25" and 28" (Videocolor)
- Use OK (M) memory button to store the value into the memory.
- Remove XF01/ground connection.
- Return to normal TV mode by pressing the TV button.

## AGC

- Connect test point XF01 (Chassis board) to ground.
- Feed in RF signal without sound carrier with 72 dBµV (= 4mV) on a medium UHF channel via the aerial input.
- Go to service menu 1 (see service mode).
- Use cursor button ▲ or ▼ to select AGC adjustment.
- Connect oscilloscope (Bandwidth > 50 MHz) to the tuner's IF output (test point XL03 or XL04) and to ground (XL02).
- Use cursor button ◀ and ▶ to adjust 350 mVpp +0/-50mV with reference to the signal's synchronizing peaks.
- Use OK (M) memory button to store the value into the memory.
- Remove XF01/ground connection.
- Return to normal TV mode by pressing the TV button.

## Other service adjustments

### Horizontal amplitude

Adjust 90° CRT's horizontal amplitude with coil LK 12.  
Adjust 110° SQ - and FST - CRT's with resistor RK66.

### Vertical position

Adjust vertical position by severing resistor RS24, and/or RS14.

### Focus

Use focus adjuster TKO2 (at horizontal transformer) to set the focus to optimum sharpness.

### Cushion

Adjust 110° SQ and FST CRT's with resistor RK60.

### G2 and colour temperature

- Set the UG2 adjustment (the lower adjustment at horizontal transformer) to its middle position.
- Select the IDEAL picture setting and switch the set to AV programme number or other black screen picture.
- Using the oscilloscope with 100:1 probe determine the colour cathode with the highest black level measuring pulse at IC NH01, pins 9, 12 and 15.
- Adjust the highest measuring pulse to 150V (measured against ground).

### AFC

- Feed in symmetric IF signal (ca. 0,8 Vpp) by means of 4:1 transmitter at test points XL 03 and XL 04. (38,9 MHz for standard BG, DK and 39,5 MHz for standard I)
- At test point XL 01 (XL 02 to ground) set 3,5 V DC ± 0,5 V with coil ZL 01 (AFC reference).
- Multistandard set, standard L': After proper BG adjustment select a channel in band 1 (L'-range). Activate standard L in Tuning menu. Feed in symmetric IF signal (ca. 0,8 Vpp) by means of 4:1 transmitter at test points XL 03 and XL 04. (33,9 MHz for standard L') At test point XL 01 (XL 02 to ground) set 3,5 V DC ± 0,5 V with capacitor CL 05.

### AFC check

Detune the IF signal to approx. 39 MHz (39,7 MHz, 34 MHz). Then the voltage must drop to approx. 1V.

### Sound of multistandard sets

#### (standard BG, DK or standard I)

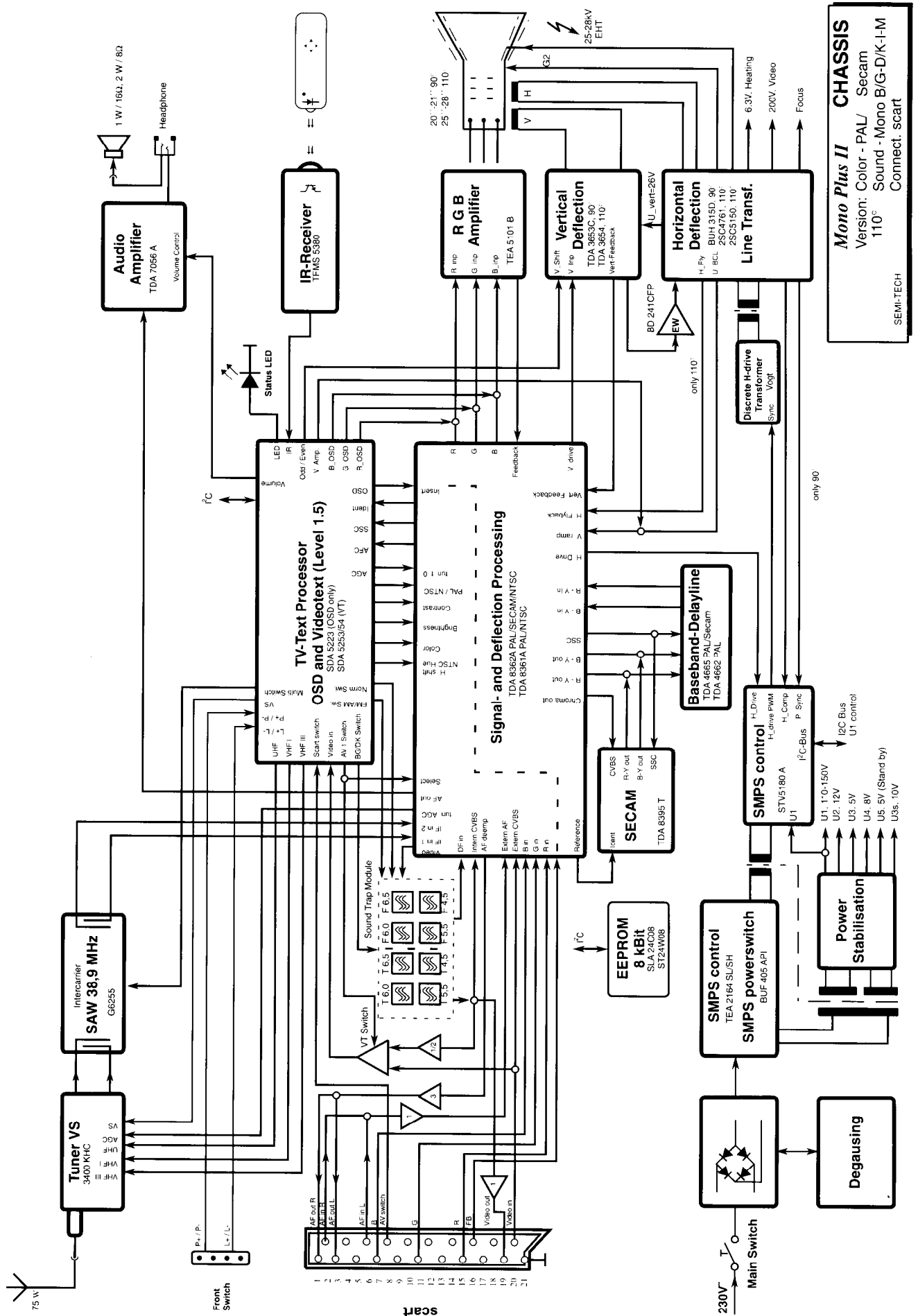
Make the standard adjustment as follows:

- RCF remote control unit: Press the PROG button.  
RCN remote control unit: Press the blue MENU button twice.
- Select the menu line Tuning, Manual tuning.
- Select STANDARD BG, DK or I with cursor buttons ◀ and ▶.
- Store the setting by pressing the OK (M) button.
- Return to normal TV viewing by pressing the TV button.

### AM sound (multistandard module)

- Connect a sweep generator with 30-40 MHz marking to pin 14 of AL-connector.
- Connect an oscilloscope to pin 11 of AL-connector.
- Connect a control voltage supply to pin 3 of TDA 9830.
- L standard: The voltage at pin 09 of AL-connector = 0 V.  
Set the output amplitude to 200 mV by means of the control voltage and keep this value during the adjustment.  
Adjust the amplitude of 34,2 MHz to maximum with ZL 651 and ZL 652.
- After proper L-adjustment:  
L' standard: The voltage at pin 10 of AL-connector = 12 V.  
Set the output amplitude to 200 mV by means of the control voltage and keep this value during the adjustment.  
Adjust the amplitude of 40,4 MHz to maximum with RL 673.

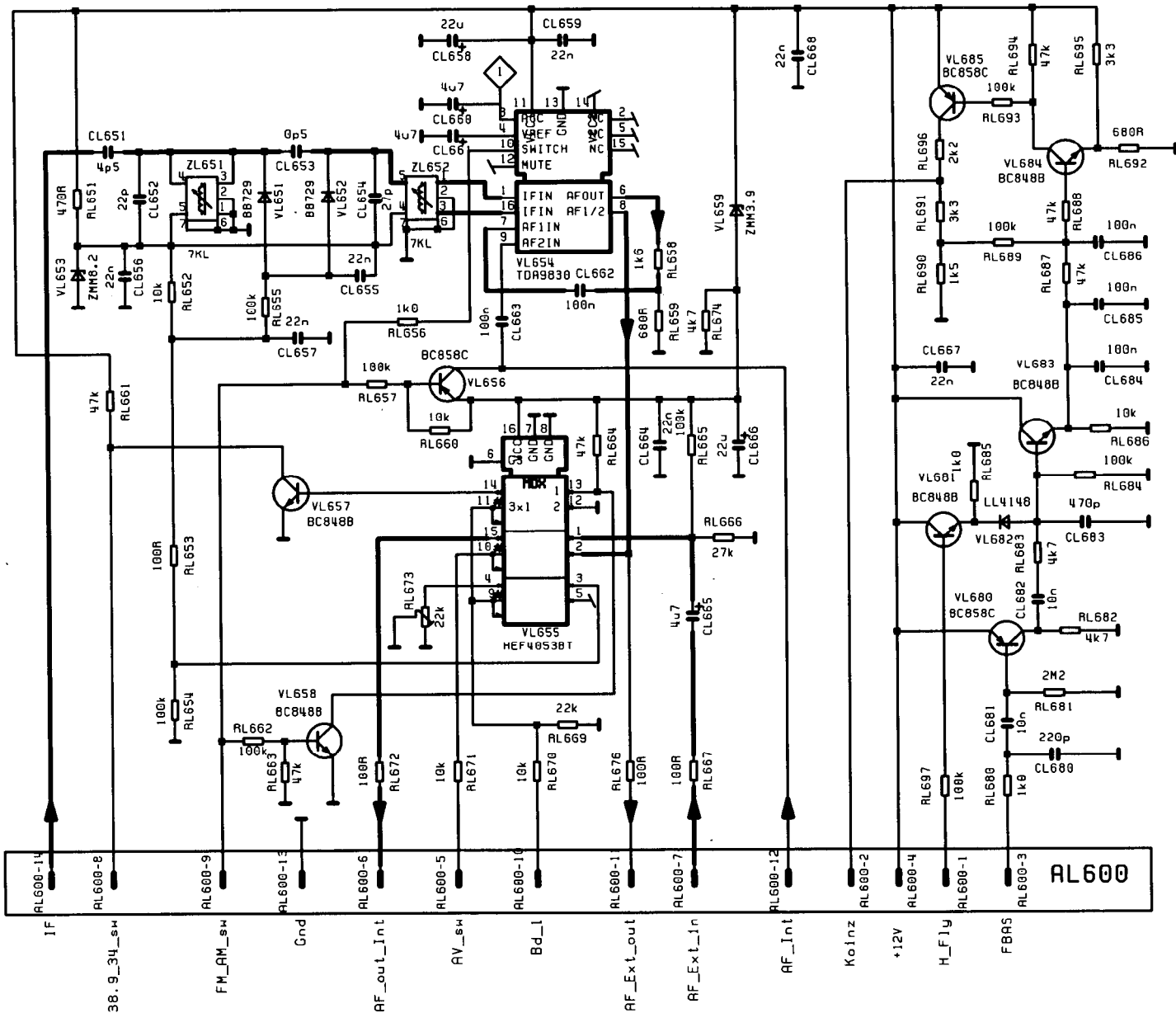
# Block diagram



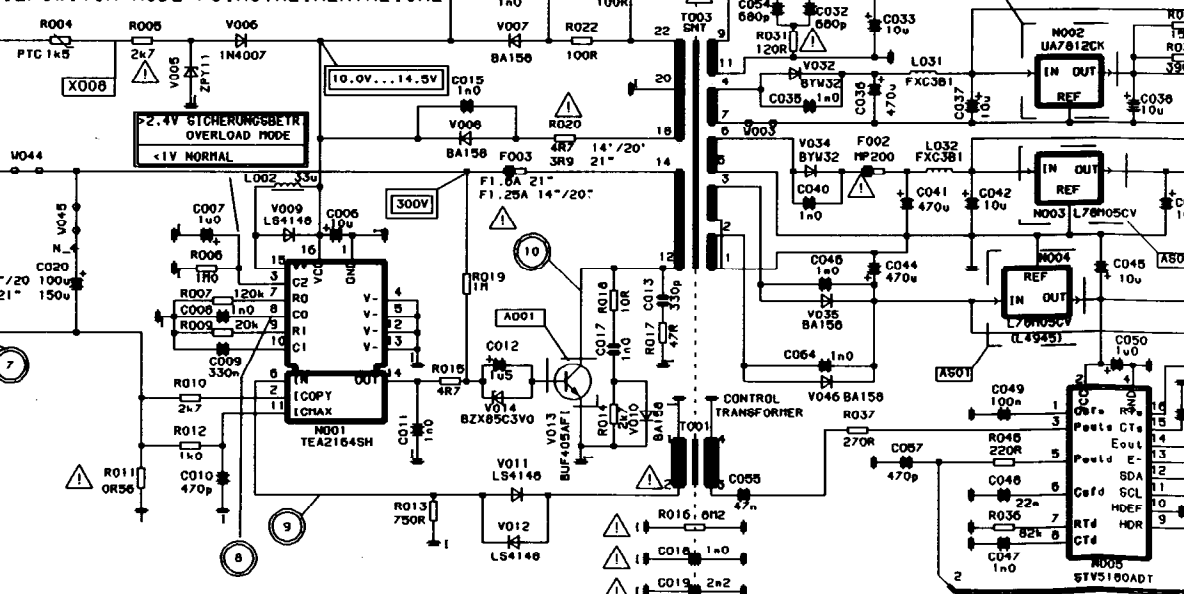
**Mono Plus II**  
 Version: Color - PAL/ Secam  
 110° Sound - Mono B/G-D/K-I-M  
 Connect. scart

SEMI-TECH

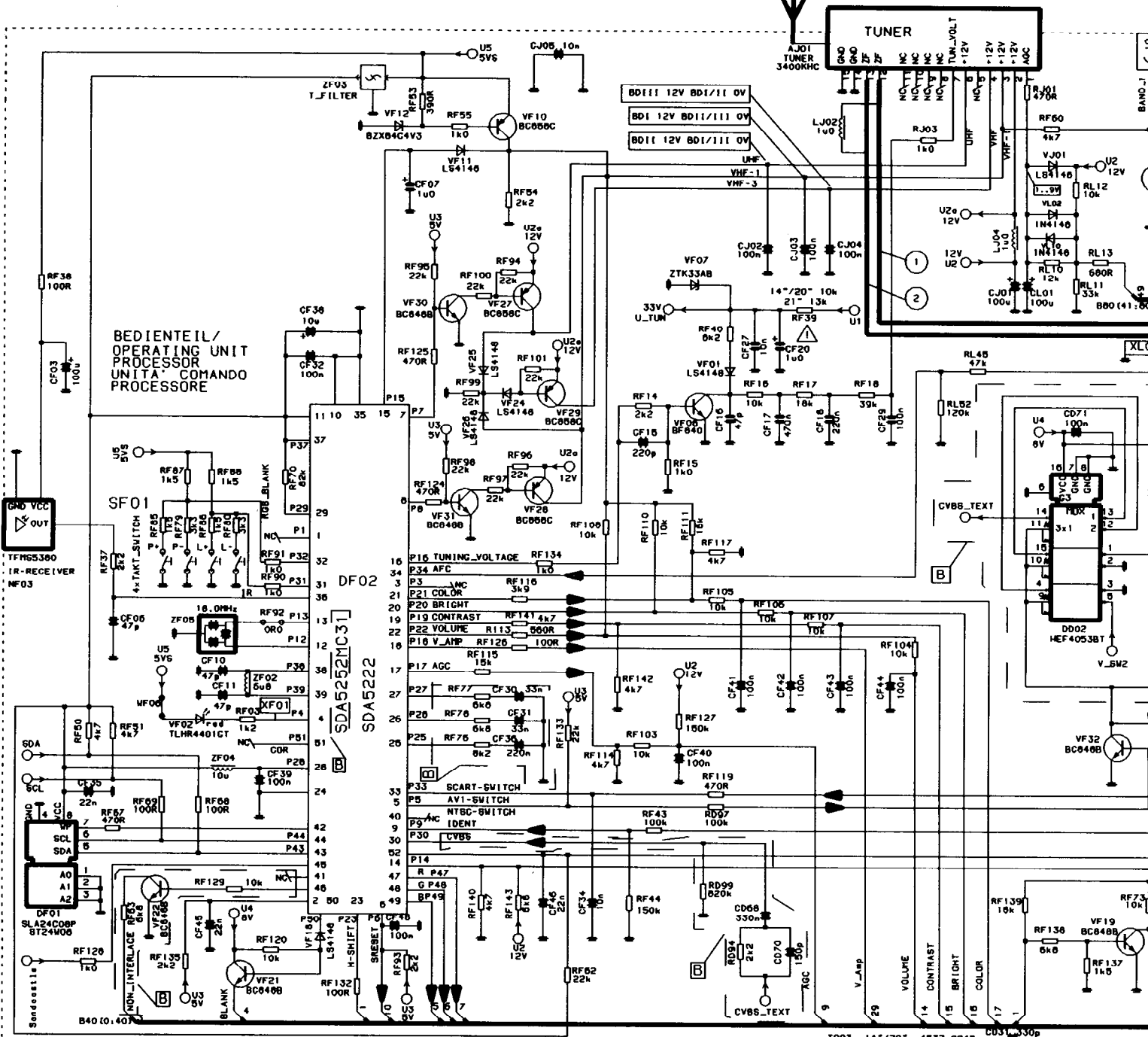
# AM-Module 5825 20 26



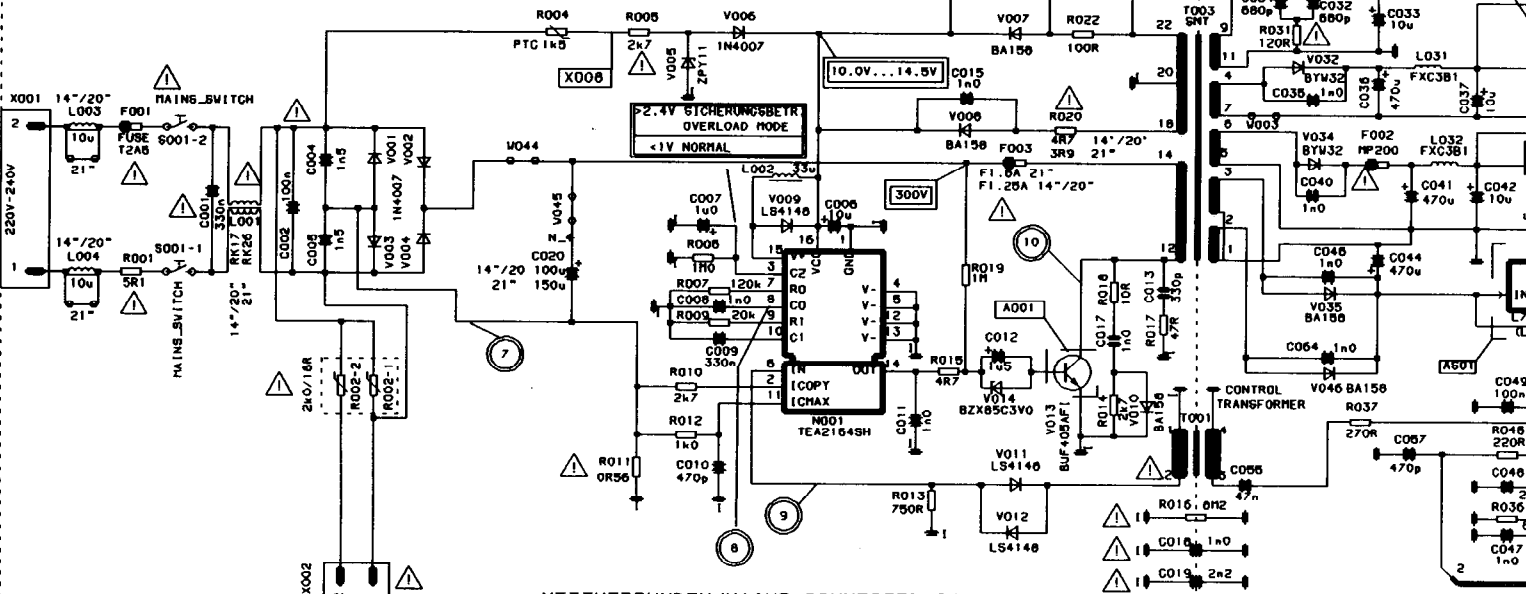
IL/SWITCH MODE / CIRC. ALIMENTAZIONE

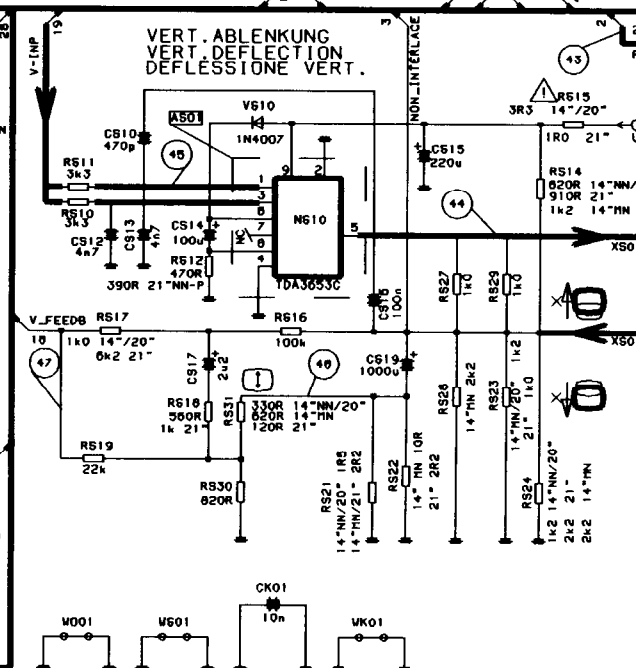
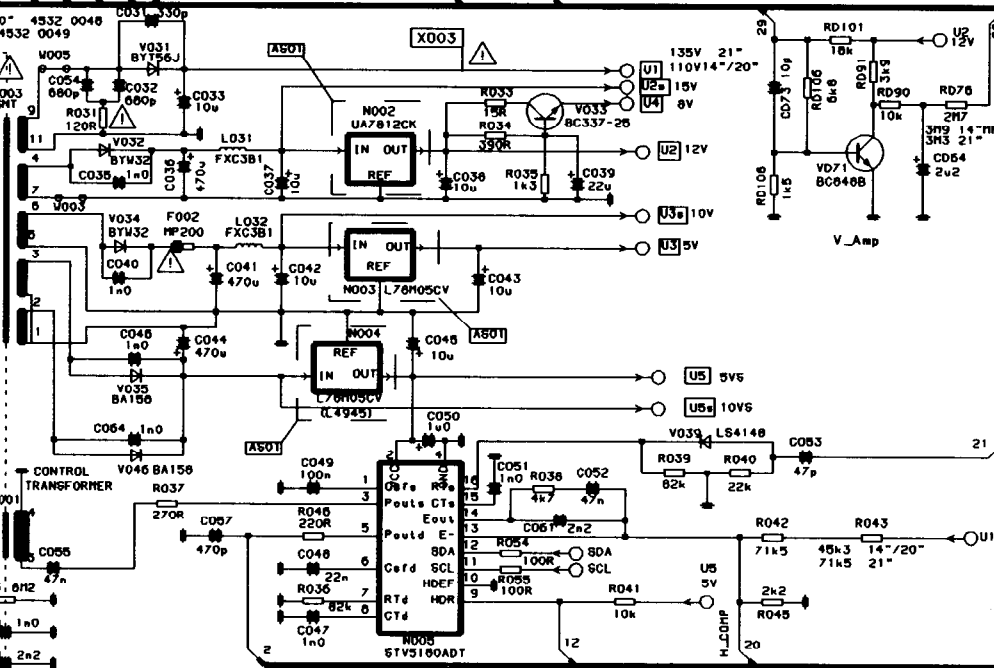
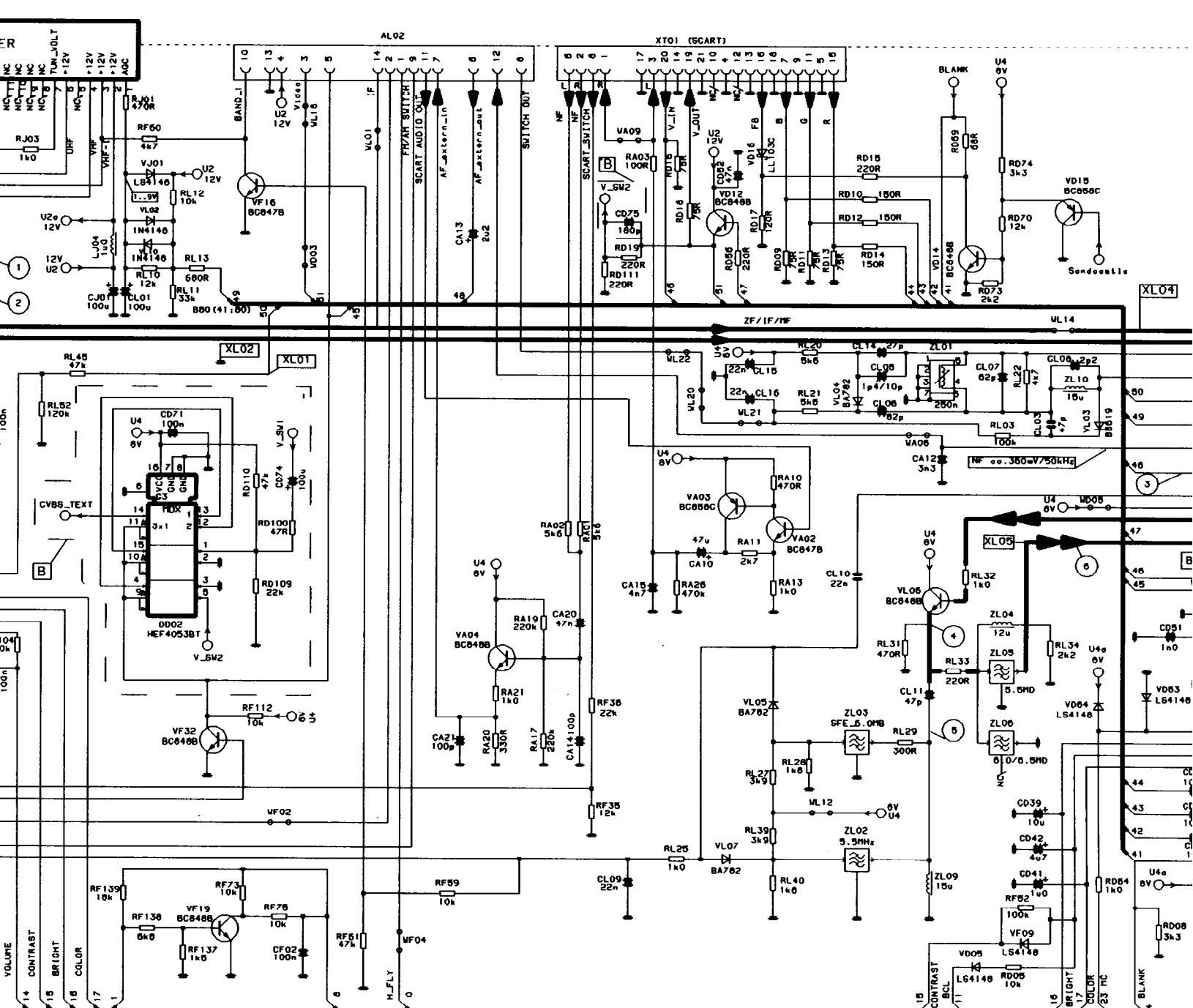


NETZVERBUNDEN/MAINS-CONNECTED/COLLEGATO ALLA RETE : NETZGETRENNT/MAINS-INSULATED/SEPARATI

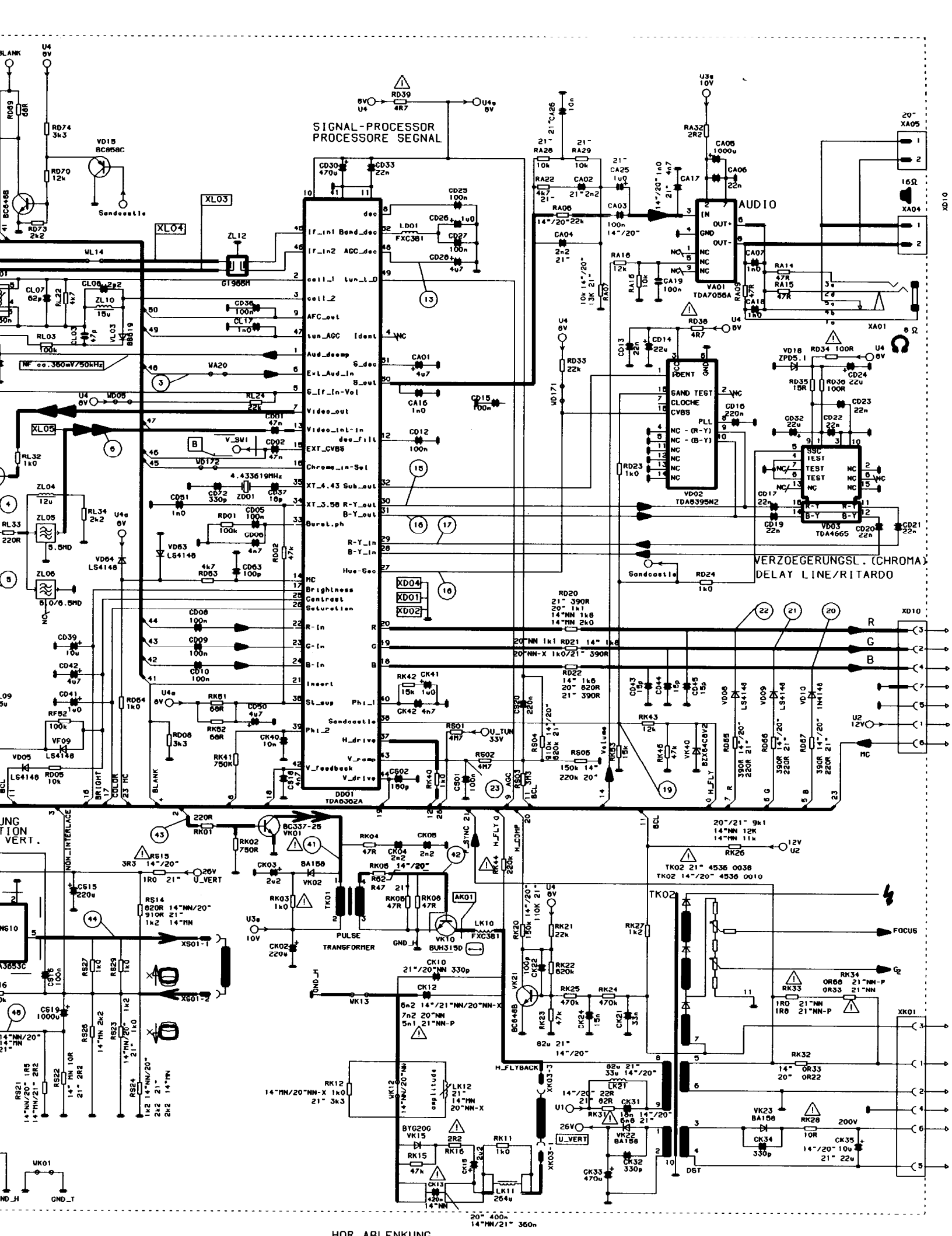


**SCHALTNETZTEIL / SWITCH MODE / CIRC. ALIMENTAZIONE**

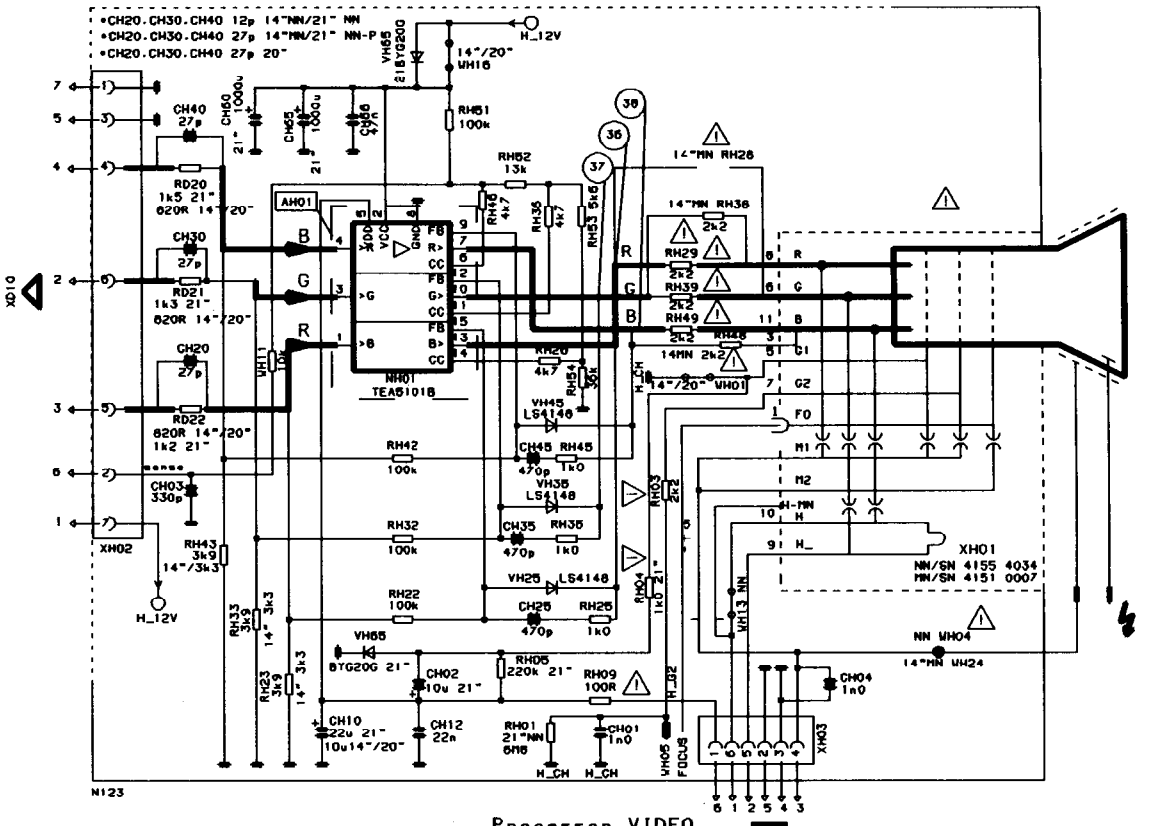
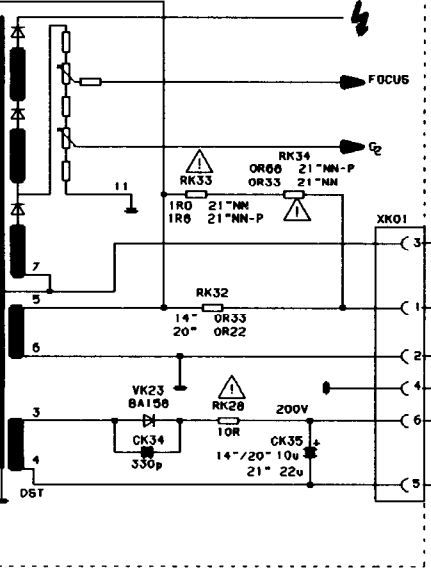
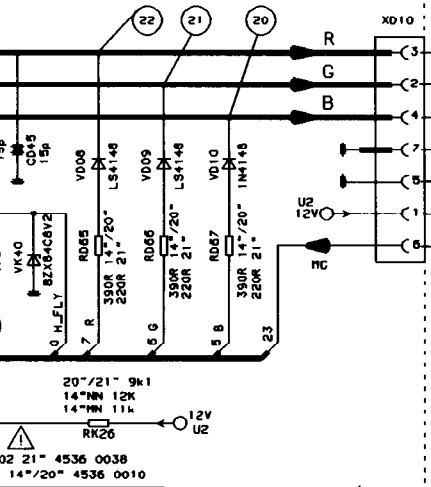
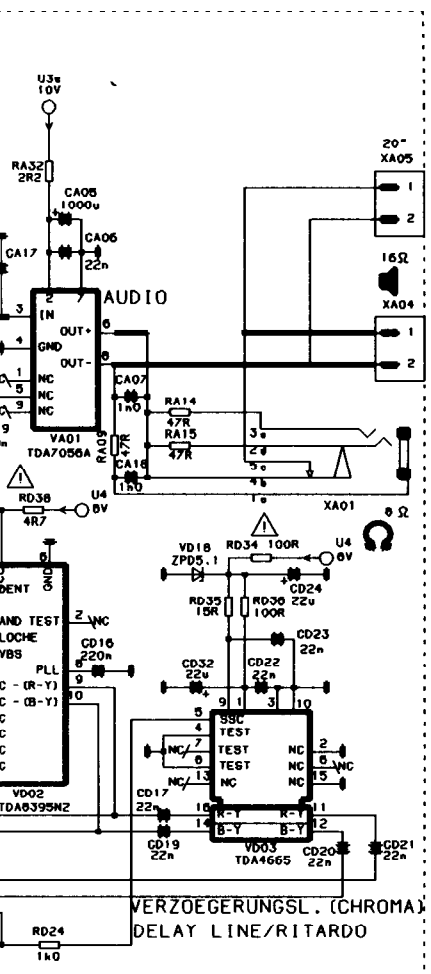




NETZGETRENNT/MAINS-INSULATED/SEPARATO DALLA RETE







**Processor VIDEO**

DD01

1	AUDEEM	DEC6g
2	IFDEM1	DECdem
3	IFDEM2	AUOUT
4	VIDENT	TUNEed
5	SOIF	DEC6go
6	EXTAU	ACCOUT
7	IFVO	IFIN2
8	DECdig	IFIN1
9	AFCOUT	VOUT
10	Vp	VRAMP
11	GND1	VFB
12	DECL	GND2
13	CVBSint	PHILF
14	BLCUR1	PH2LF
15	CVBSext	FBI/SCO
16	CHROMA	HOUT
17	BRIGHT	MOSC
18	BO	XTAL2
19	GO	XTAL1
20	RO	DET
21	RGBIN	XTALOUT
22	RI	B-Y0
23	GI	R-Y0
24	BI	R-Y1
25	CONTR	B-Y1
26	BAT	HUE

TDA6362AN3

**Operating-Unit Processor-Symbol**

