

NOKIA Stereo (Mono Plus) 90° & 110° Chassis 337

General Information

1995

Covers Models:

Nokia 5556 / 6356 / 7156

Chassis: Stereo (Mono Plus) 5864/7-

CRT's:

A51EFS43X191MP

A59EAS13X01

A66EAS13X01

Remote Control:

56521910 (RCN620)

Main Power Buttons:

84680410 (5556)

84680480 (6356 / 7156)

Battery Cover: 84431011

Matrix

Item	See Model
Safety Notes	Nokia FS Chassis

Specifications

Mains Power:	176V - 246V
Power Consumption:	ca. 65W
Stand-by	5.5W
Picture Tube:	21": 55cm (90°), 25" : 63cm (110°), 28": 71cm (110°)
Programme Memory Loc:	99
AV Memory Locations:	1
Sound Output:	2 x 3W RMS (16Ω)
Chassis	Mains isolated, APS
Connections:	
On the front panel:	5-pin 3.5mm REG
On the rear panel:	
SCART	Audio out: 0.5V 1kΩ Audio in: 0.5V 10kΩ Video out: 1V 75Ω Video in: 1V 75Ω RGB: 0.7V 75Ω
Aerial	75Ω

Recommended Safety Parts

Item	Part No.	Description
	48886255	High Voltage Cable (90°)
	47740006	High Voltage Cable (110°)
	48886253	Cable Focus (90°)
	47770004	Cable Focus (110°)
	48886953	Deflection Cable
RL29	31512650	10kΩ 0.25W
2	43642103	Picture Tube A51 EFS 43X191 MP
2	43642511	Picture Tube A59 EAS 13X01
2	43642813	Picture Tube A66 EAS 13X01
29	47920003	Mains Cord 5556
29	47920010	Mains Cord 6356 NICAM F
29	41312527	Mains Cord 6356 UK SFN, 7156 UK SFN

Service Adjustments

Safety Regulations

X-Ray Regulations

The picture tube type and the maximum permissible high voltage ensure that the X-ray intensity within the set remains far below the permissible value.
The high voltage must not exceed 28kV. The high voltage is within the permissible limits when the operating voltage of the horizontal deflection stage equals 134.5V ± 0.5V (21") and 150V ± 0.5V (25", 28") at minimum beam current.
During servicing check and adjust this U1 voltage to the nominal value.

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 MODE.

Service Mode

Select the service mode by pressing the MUTE, OK (M) and TV buttons on the remote control unit. You can use the yellow button to call up service menu 2, 3 or 4 (or service menu 1 again).

Use the cursor buttons \bar{Y} or \bar{X} to select required adjustment and adjust it by using the cursor buttons $\bar{>}$ and $\bar{<}$. Store into memory by pressing the red OK (M) button.
Return to normal TV mode by pressing the TV button.

Adjustment U1 Voltage

- 1: Set the contrast and brightness to minimum.
- 2: Connect the test point XF01 (chassis board) to the ground.
- 3: Go to service menu 1 (see Service Mode).
- 4: Use the cursor button \bar{Y} or \bar{X} to select U1 adjustment.
- 5: Adjust the U1 voltage to 109.5V ± 0.5V (14", 17" and 20") / 134.4V ± 0.5V (21"), 150V ± 0.5V (25", 28") with the cursor button $\bar{>}$ and $\bar{<}$ at test point XO03.
- 6: Use the M button to store the value in the memory.

Service adjustment which are made in service mode

OSD	Note!
Service menu 1	
U1	U1 operating voltage, see adjustment "U1 voltage"
AGC	See adjustment "AGC"
H-SHIFT	Adjust centre of the test picture horizontal to a centred position. (Advice on software)
Service menu 2	
TXT	Teletext character sets: EAST, WEST, WEST TURK
SCART	SCART socket, YES: 1= When a switching voltage is being received at pin 8 (+2V), the set switches from standby to the "ON" operating status (programme memory location E1). YES:2= as for YES:1, however, the set switches back to the standby operating status when the switching voltage (at pin 8) is switched off. This does not apply if you have changed programmes during operation. NO=E1 cannot be selected
TXT H-SHIFT	Adjust teletext picture horizontal to centre on screen
APS	Set to the appropriate television standard. Specifies APS sequence, e.g. first the BG standard, then L or L, and then BG.
Service menu 3	
AUTOAPS	YES=APS, search function will be run automatically when the set is switched on for the first time and stores all stations in memory. NO= No automatic search function when the set is switched on for the first time.
MODE	1= NOKIA, SALORA 2= Other sets 3= UNIVERSUM, MELETRONIC If the set cannot be switched on with the number buttons on the remote control, then switch the set on with the TV button and go to the service menu 3 (see service mode). Select the MODE setting and alter it to correspond your set. Store the setting in memory with the OK (M) button.
Service menu 4	
NICAM	(ON/OFF)
LOUDNESS	(OFF=linear frequency response)
C4 CHECK	(ON)
CAR. MUTE	(ON/OFF)

- 7: Disconnect the test point XF01/ground again.
- 8: Return to normal TV mode by pressing the TV button.

AGC

- 1: Connect the test point XF01 to the ground.
- 2: Feed in a RF signal (70 dBmV) without sound carrier and tuned on a mid range UHF channel via the aerial input.
- 3: Go to service menu 1.
- 4: Use the cursor button \bar{Y} or \bar{X} to select AGC adjustment.
- 5: Connect an oscilloscope (bandwidth >50 MHz) to the tuner's IF output, test point XL03 or XL04 and to ground XL02. Use cursor button $\bar{>}$ or $\bar{<}$ to adjust to 400 mVpp ± 50 mV with reference to the signal's synchronising peaks.
- 7: Use the M button to store the value in the memory.
- 8: Disconnect the test point XF01/ground again.
- 9: Return to normal TV mode by pressing the TV button.

Horizontal Amplitude

Adjust horizontal amplitude with the coil LK12 (21") or to resistor RK66 (25", 28").

Vertical Amplitude

Adjust vertical amplitude by severing resistor RS20.

Vertical Position

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

Pincushion Distortion Correction (25", 28")

Adjust pincushion distortion correction to resistor RK60.

Focus

Use the focus adjuster TK02 (at the horizontal transformer) to set the focus to optimum sharpness.

G2

- 1: Test picture with medium beam current, e.g. Fubeka or Philips test picture.
- 2: Set contrast, brightness and colour saturation to an ideal setting.
- 3: Determine the colour cathode with the highest blacklevel measuring pulse.
- 4: Use the G2 adjuster to set the measuring pulse to 140V ± 2V.

AFC

- 1: Feed in a symmetrical IF signal by means of a 4:1 transmitter at test points XL03 XL04 (the BG DK standard 38.9 MHz or the I standard 39.5 MHz; approx. 0.8 Vpp).
- 2: At test point XL01 (XL02 = ground), set to 3.5V DC ± 0.5V with the coil ZL01 (AFC reference).

AFC Check

Re-tune the IF signal to approx. 39 MHz (39.7 MHz); when you do this the voltage must drop to approx. 1V.

Sound

The BG or I standards are independent of the STANDARD setting. With the BG/DK

standard: STANDARD 2 = DK and STANDARD 3 = BG. To select the STANDARD proceed as follows:

- 1: Press the PROG button (RCF ...remote control).
- 2: Press the blue button twice (RCN ...remote control).
- 3: Select the menuline STANDARD.
- 4: Use the cursor button $\bar{>}$ or $\bar{<}$ to switch to STANDARD 3 or 2.
- 5: Use the M (memory) button to store the value in the memory.
- 6: Return to normal TV mode by pressing the TV button.

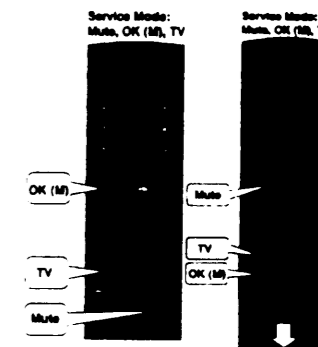
Audio IF Calibration

- 1: Feed in a test picture.
- 2: Connect an oscilloscope at pin 12 of TDA2545A (stereo module).
- 3: Use coil ZA61 to calibrate to minimise video signal.

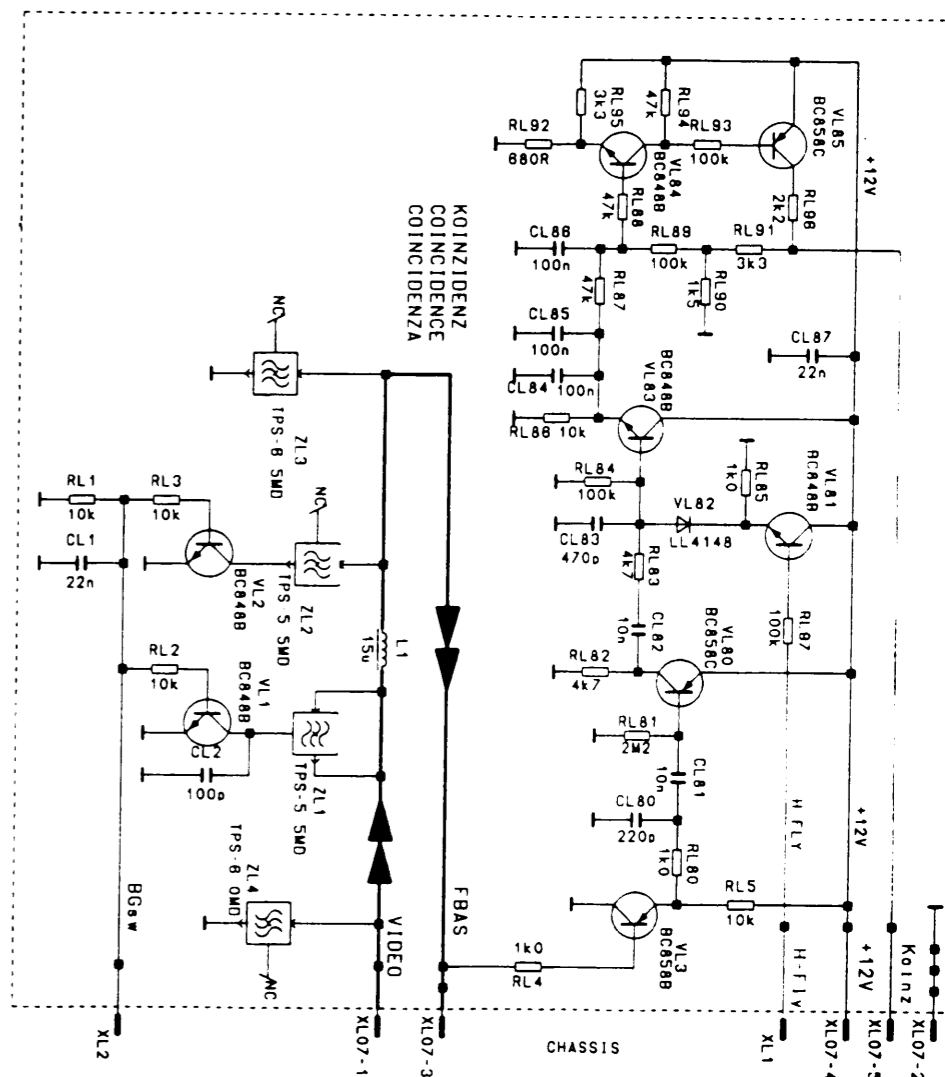
Audio IF Calibration (Multinorm Module)

- 1: Go to service menu 2 (see service mode).

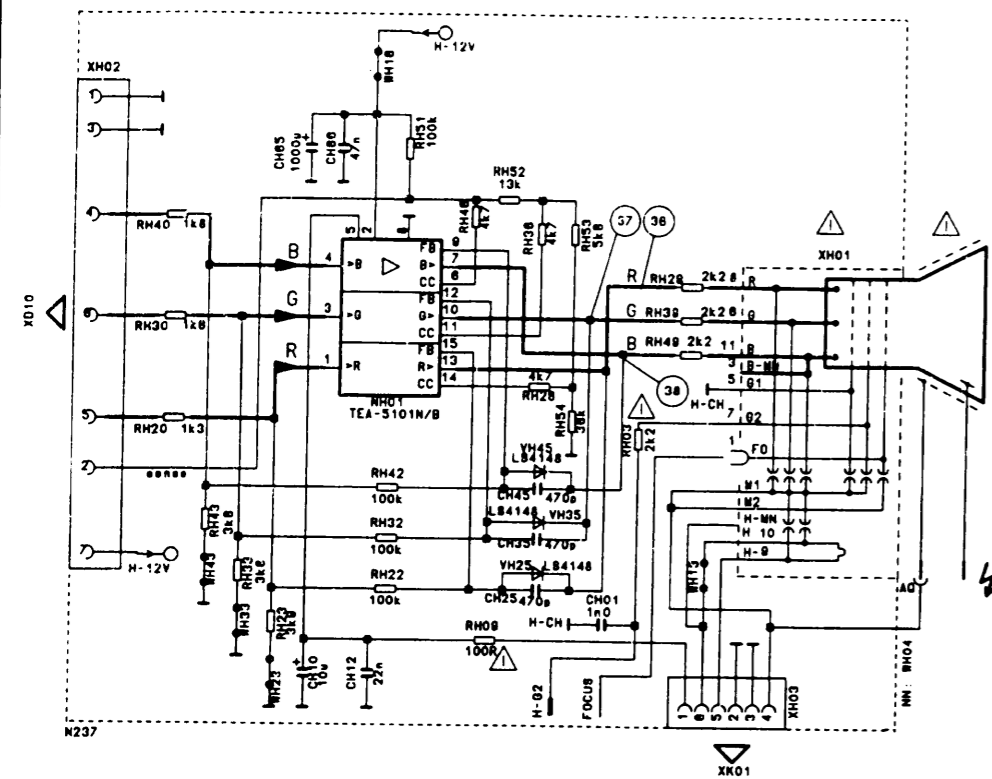
- 2: Use cursor button \bar{Y} or \bar{X} to select APS.
- 3: Use cursor button $\bar{>}$ and $\bar{<}$ to adjust to standard BG.
- 4: Connect signal generator 38.9 MHz (approx. 350 mV) to test points TP2/TP4
- 5: Connect voltmeter to test point TP16.
- 6: Use coil ZL58 to calibrate the AFC DC voltage to 2.5V ± 0.5V
- 7: AFC check: If the IF is increased, the AFC voltage decreases.
- 8: Return to normal TV by pressing the TV button.



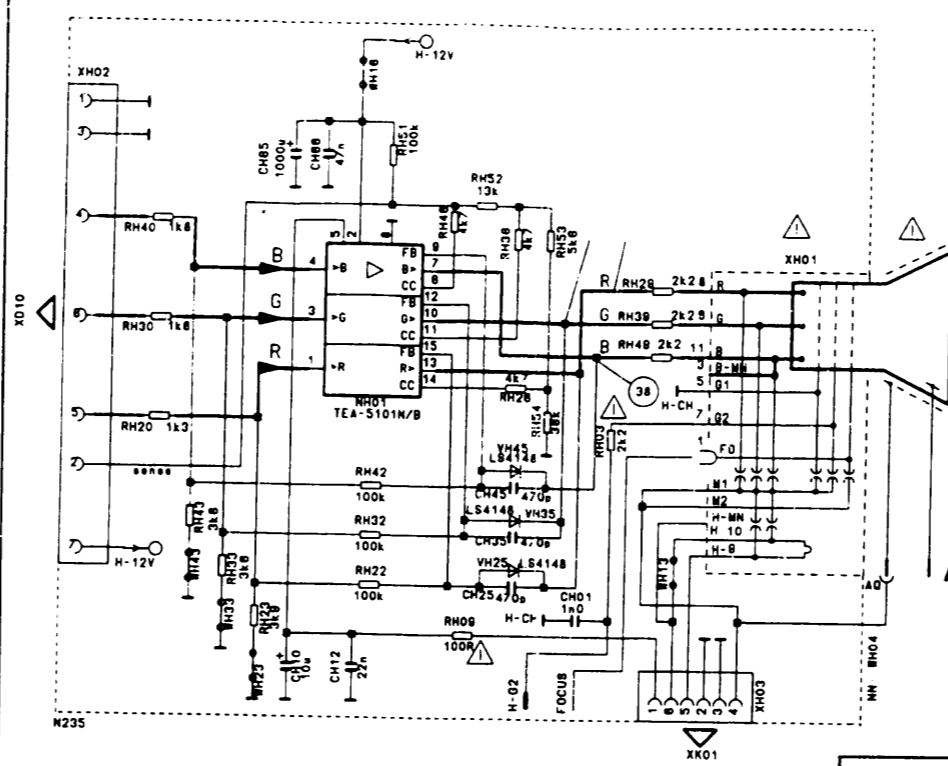
Coincidence Module Diagram



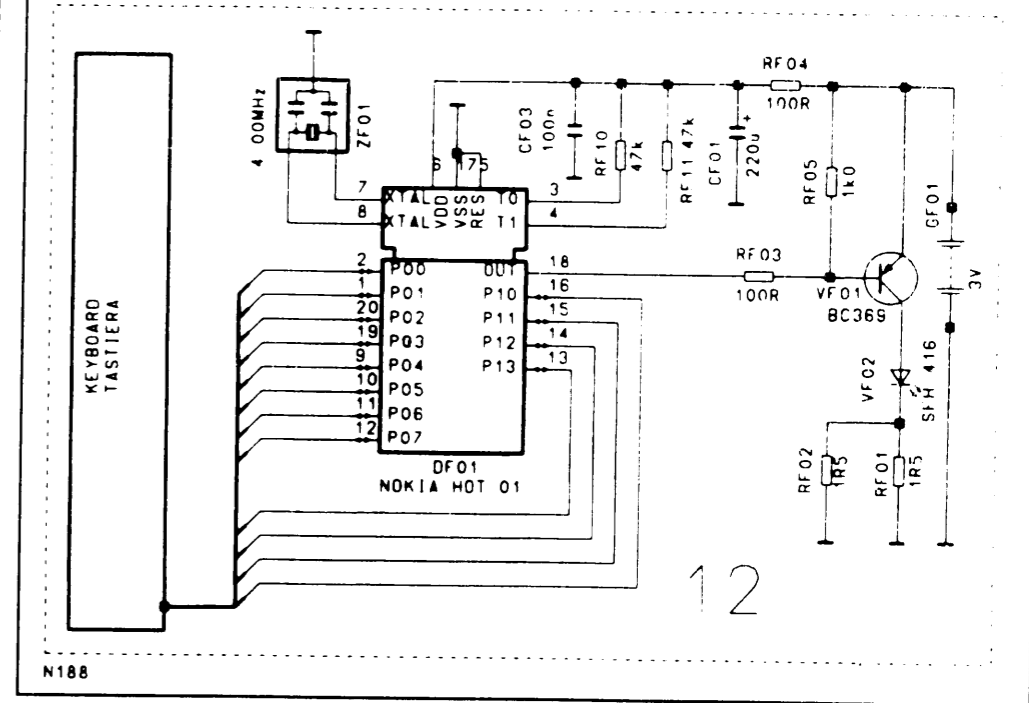
CRT 110° Diagram



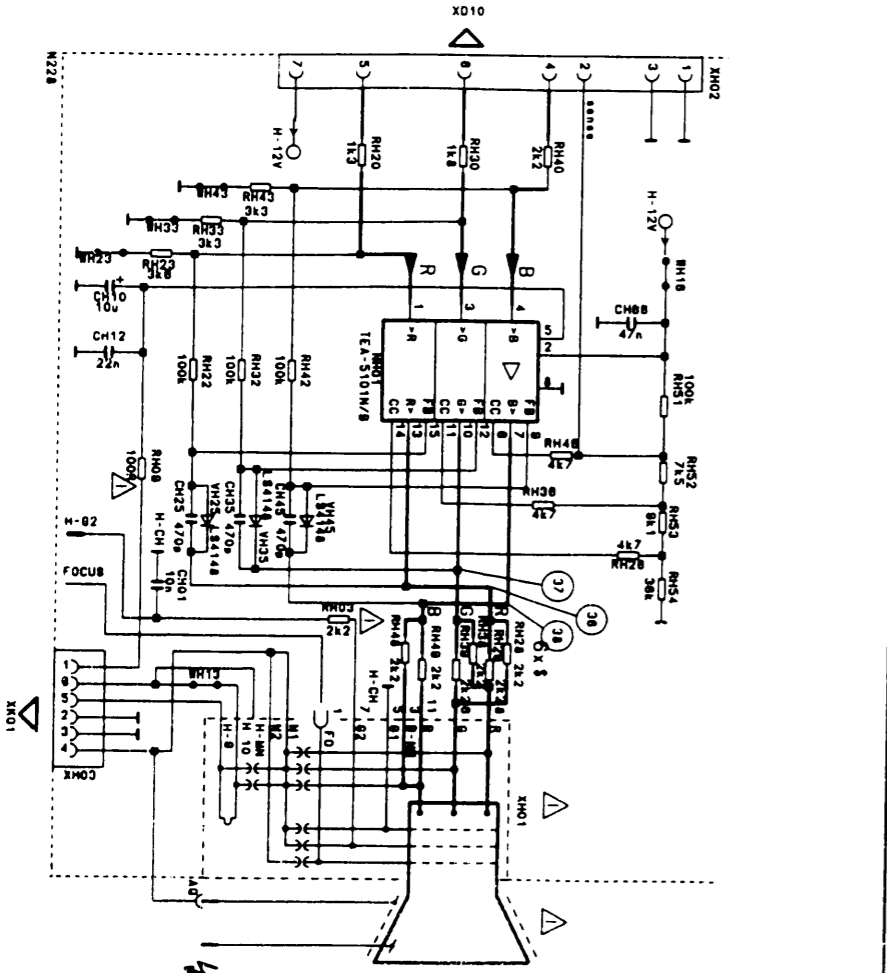
CRT 110° Multi Diagram



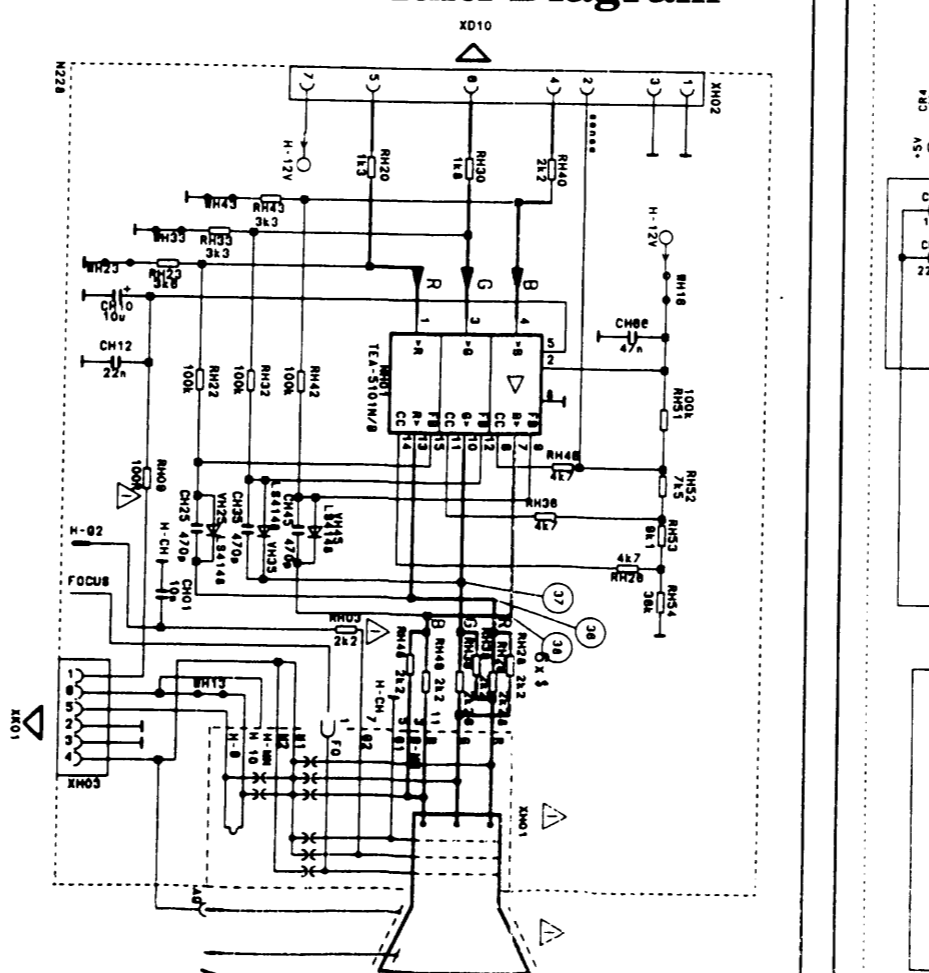
Remote Control Diagram



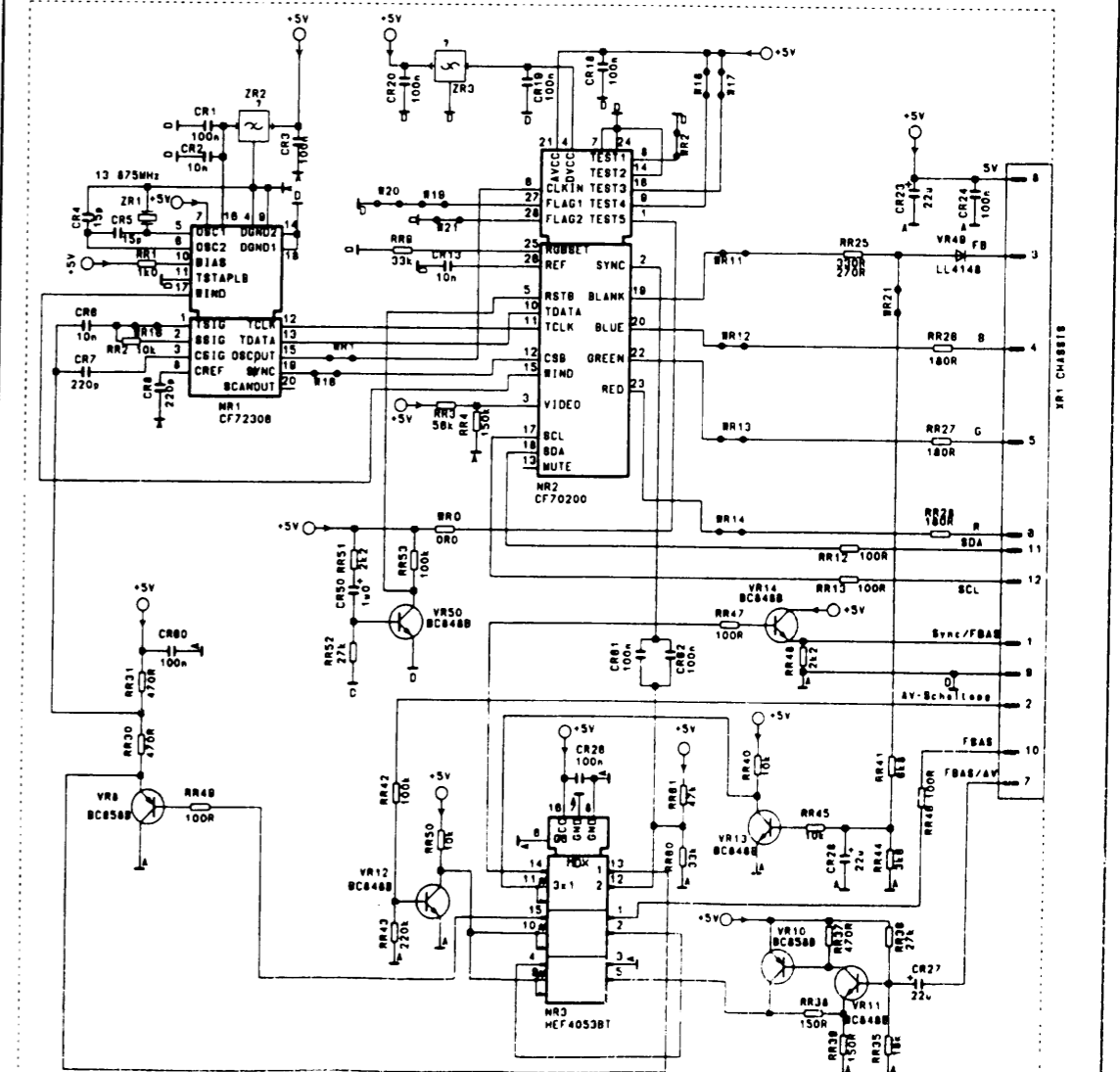
CRT 90° Diagram



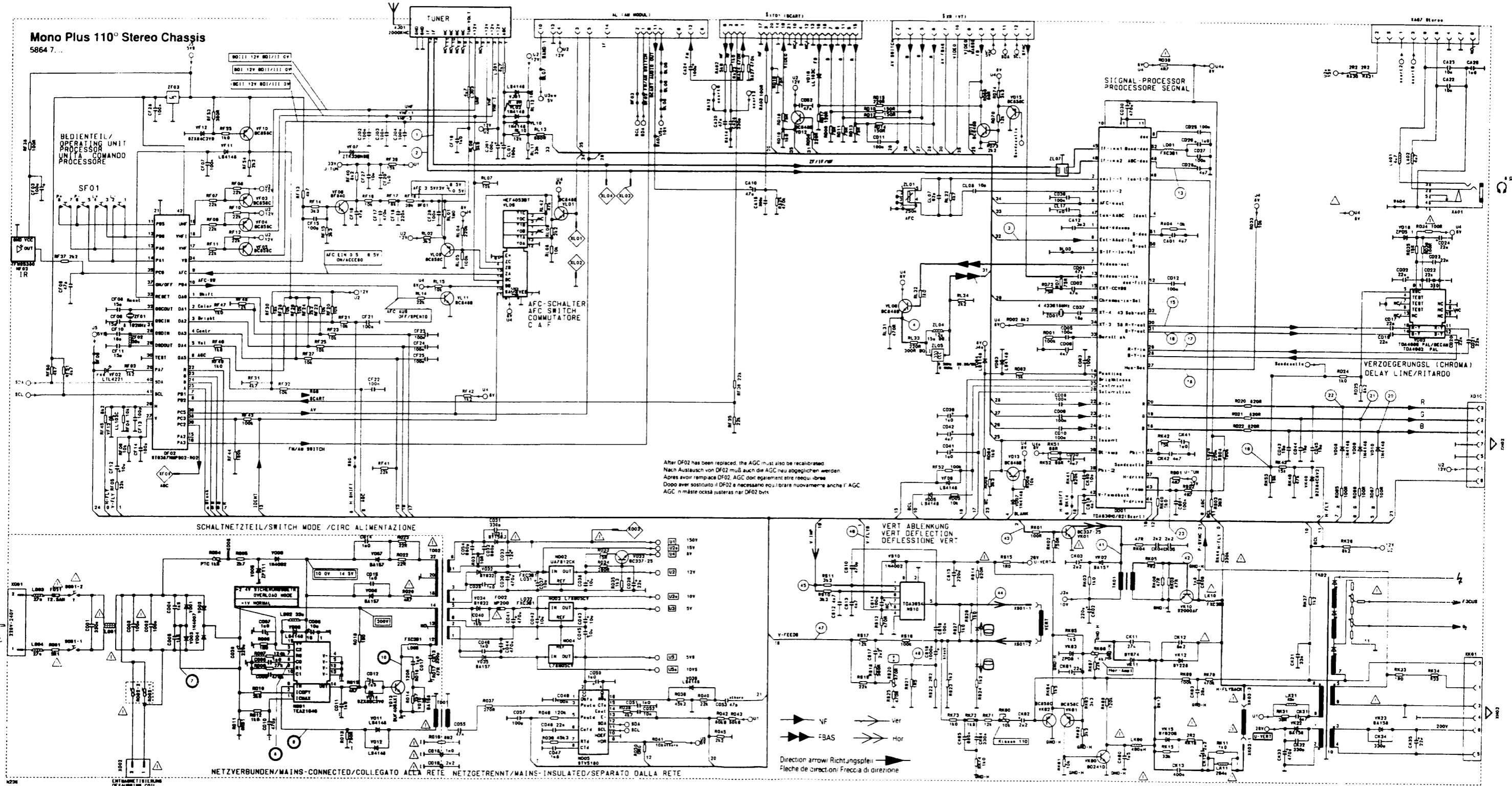
CRT 90° Multi Diagram



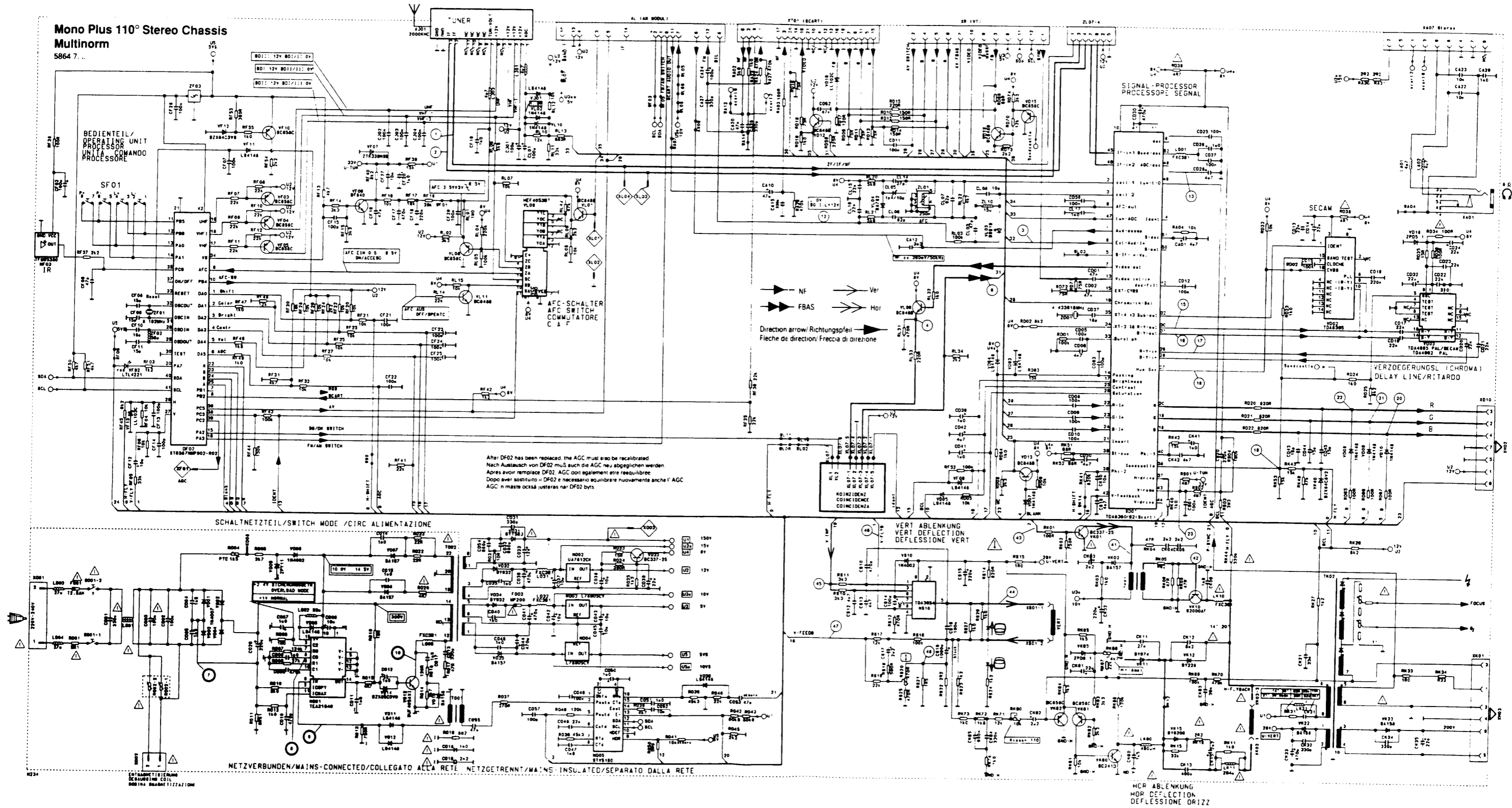
Teletext Diagram



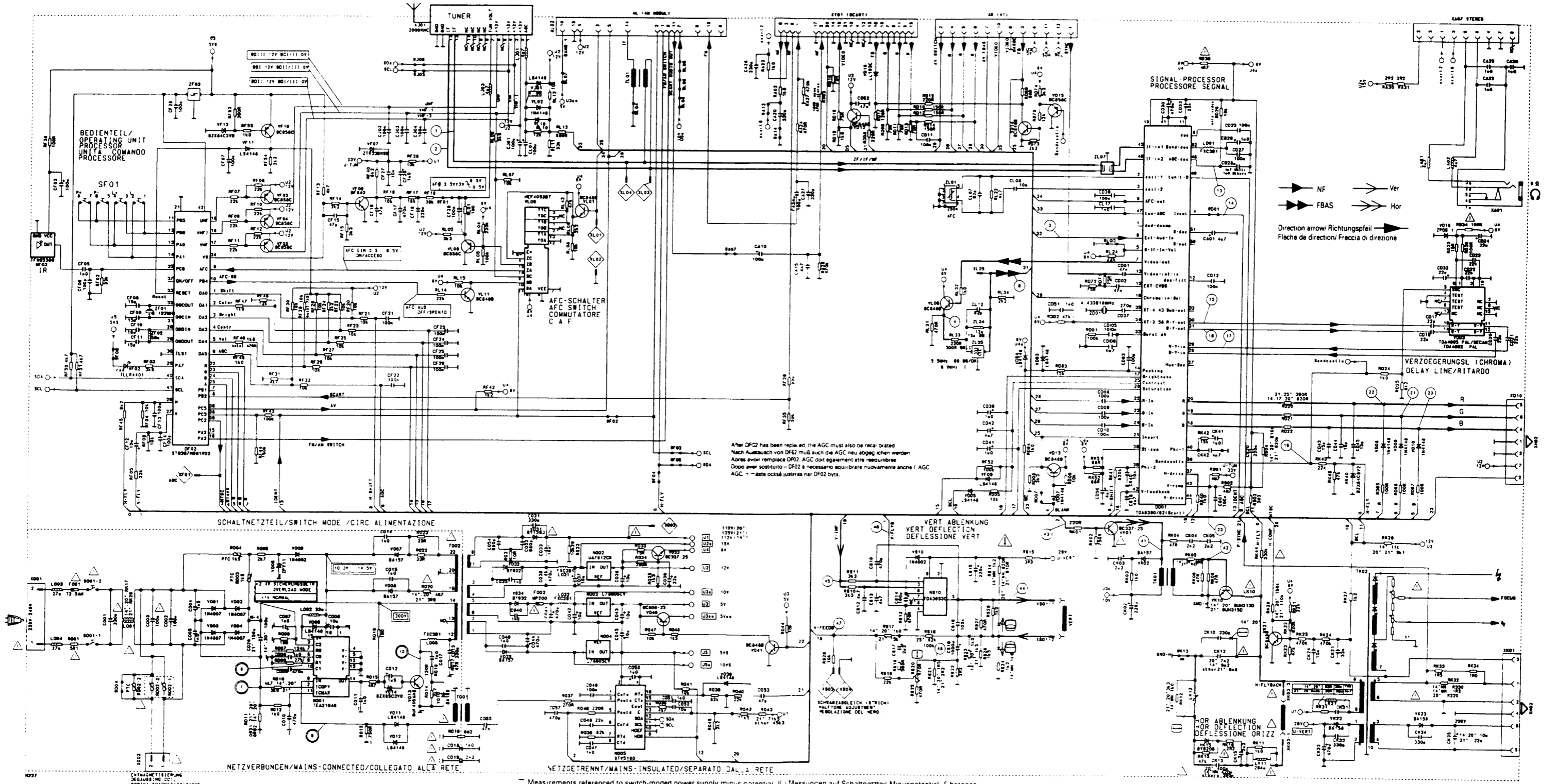
Main 110° Diagram



Main 110° Multinorm Diagram



Main 90° Diagram



After DF02 has been replaced, the AGC must also be recalibrated.
 Nach Austausch von DF02 muß auch die AGC neu abgeglichen werden.
 Après avoir remplacé DF02, AGC doit être réajustée.
 Dopo aver sostituito DF02 è necessario squilibrare nuovamente anche l'AGC.
 AGC - "Aste också justeras när DF02 byts.

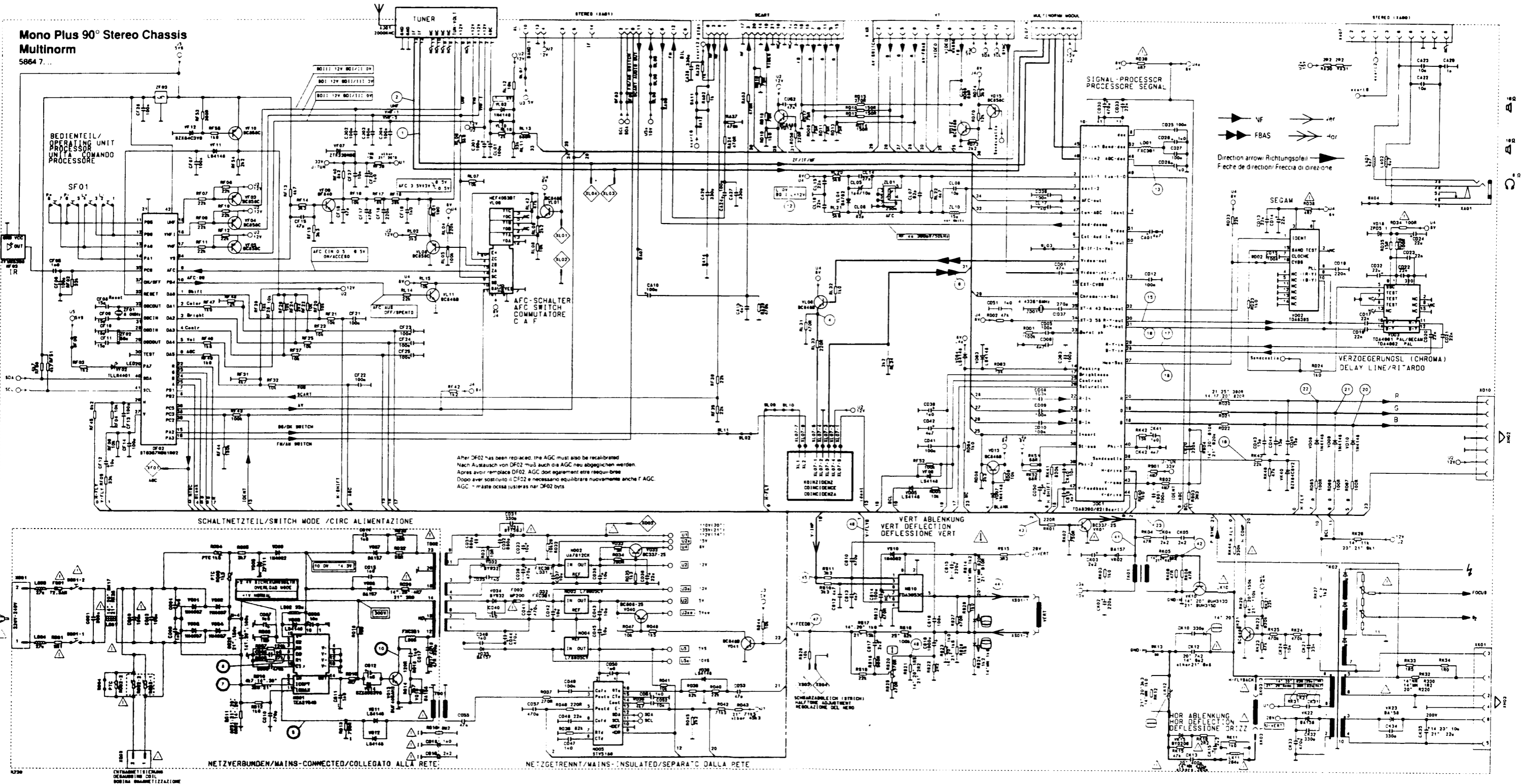
VERT. ABLENKUNG
 VERT. DEFLECTION
 DEFLESSION VERT.

SCHWARZÄRBEI / STRICH
 HALF-TONE ADJUSTER
 REGOLAZIONE DEL NERO

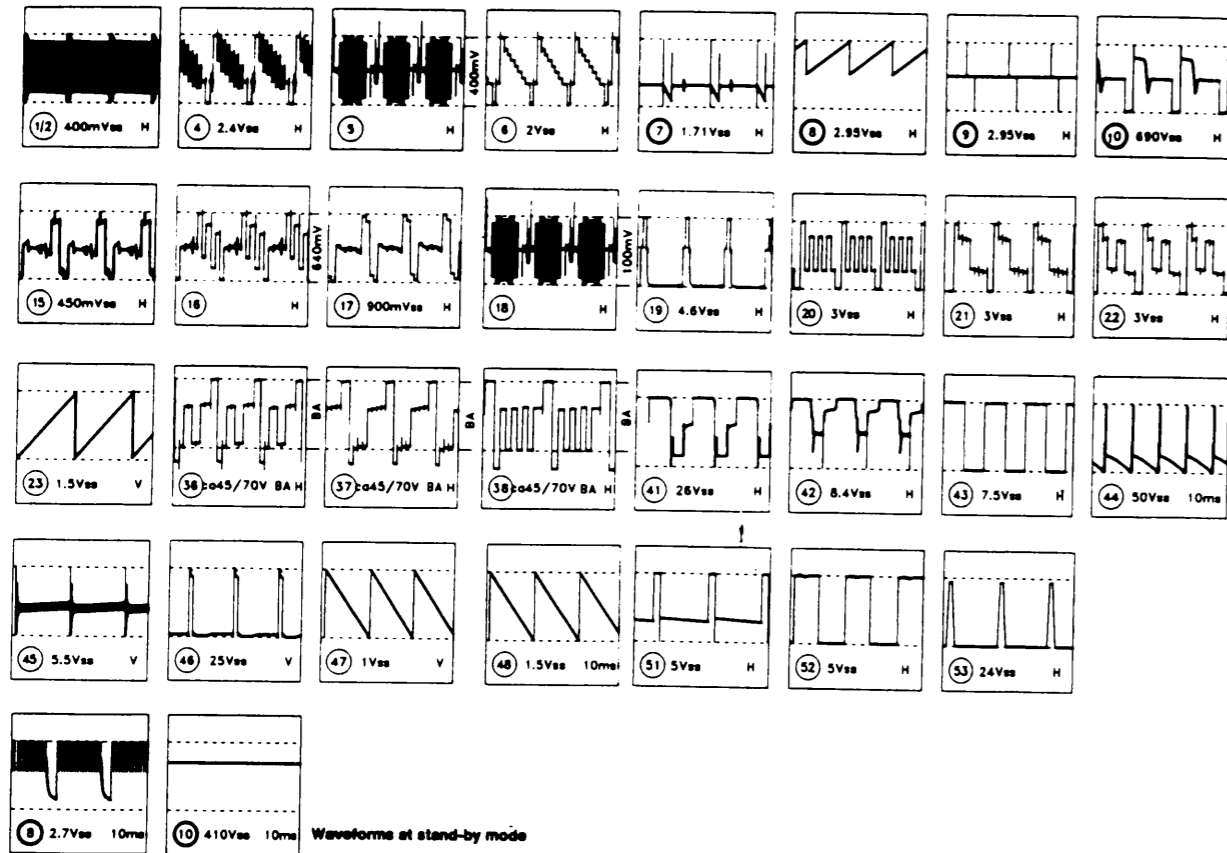
HOR. ABLENKUNG
 HOR. DEFLECTION
 DEFLESSION ORIZZ.

Measurements referenced to switch-mode power supply minus potential. / Messungen auf Schaltnetzteil-Minuspotential bezogen

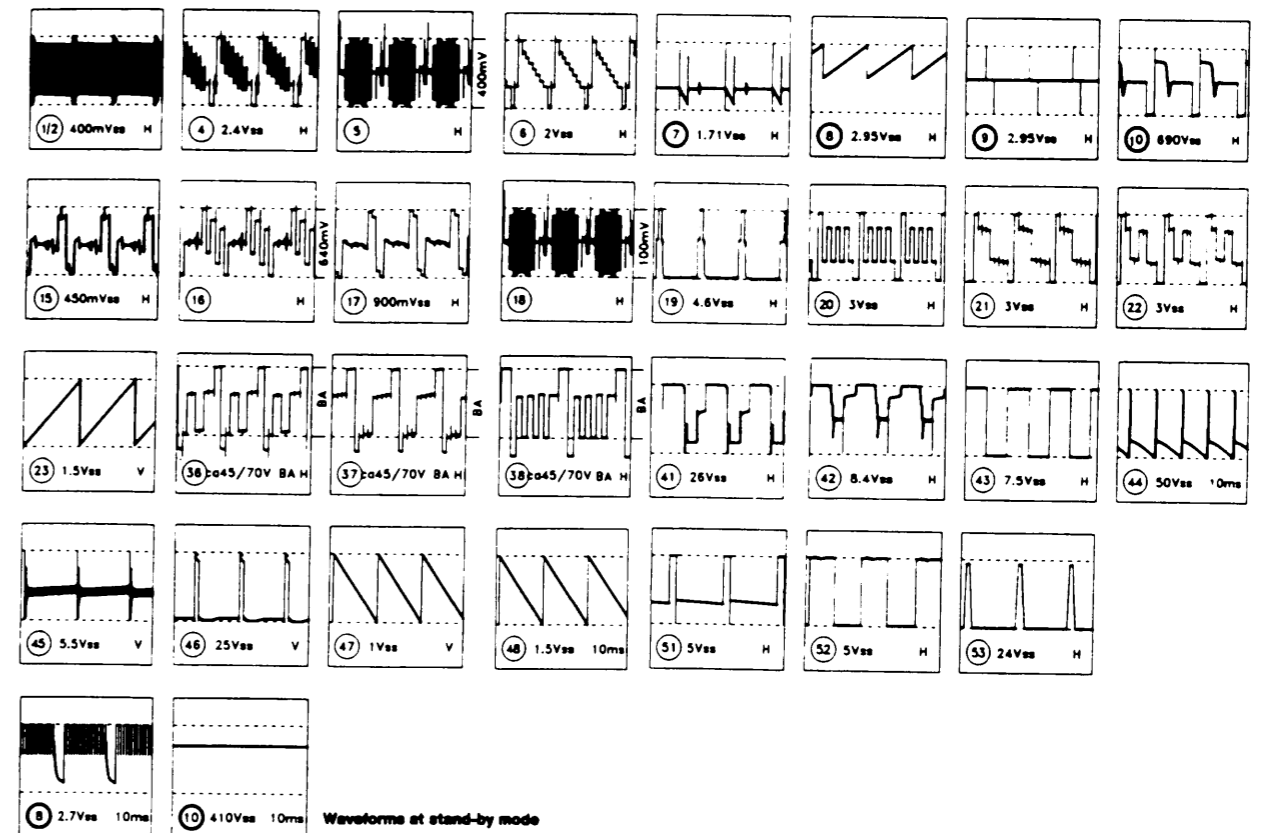
Main 90° Multinorm Diagram



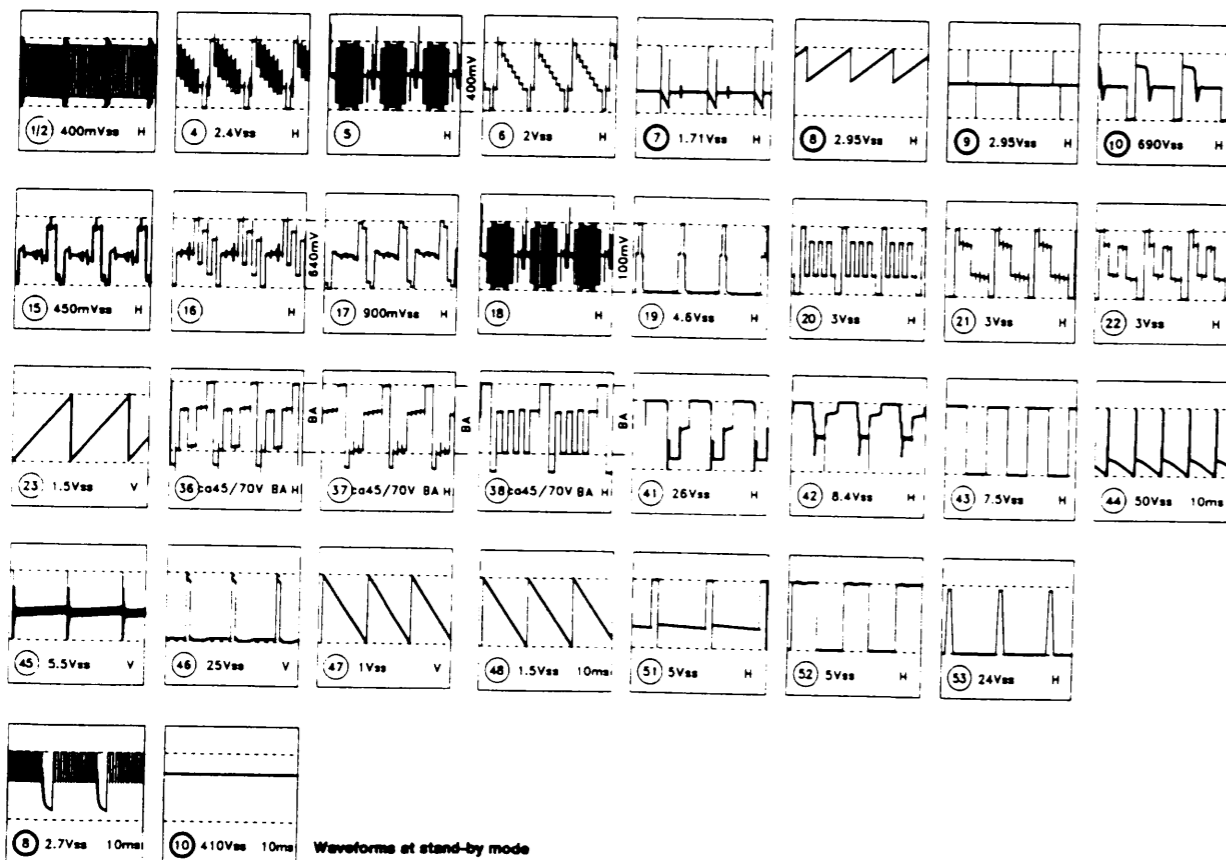
Waveforms - Main 110° Multinorm Diagram



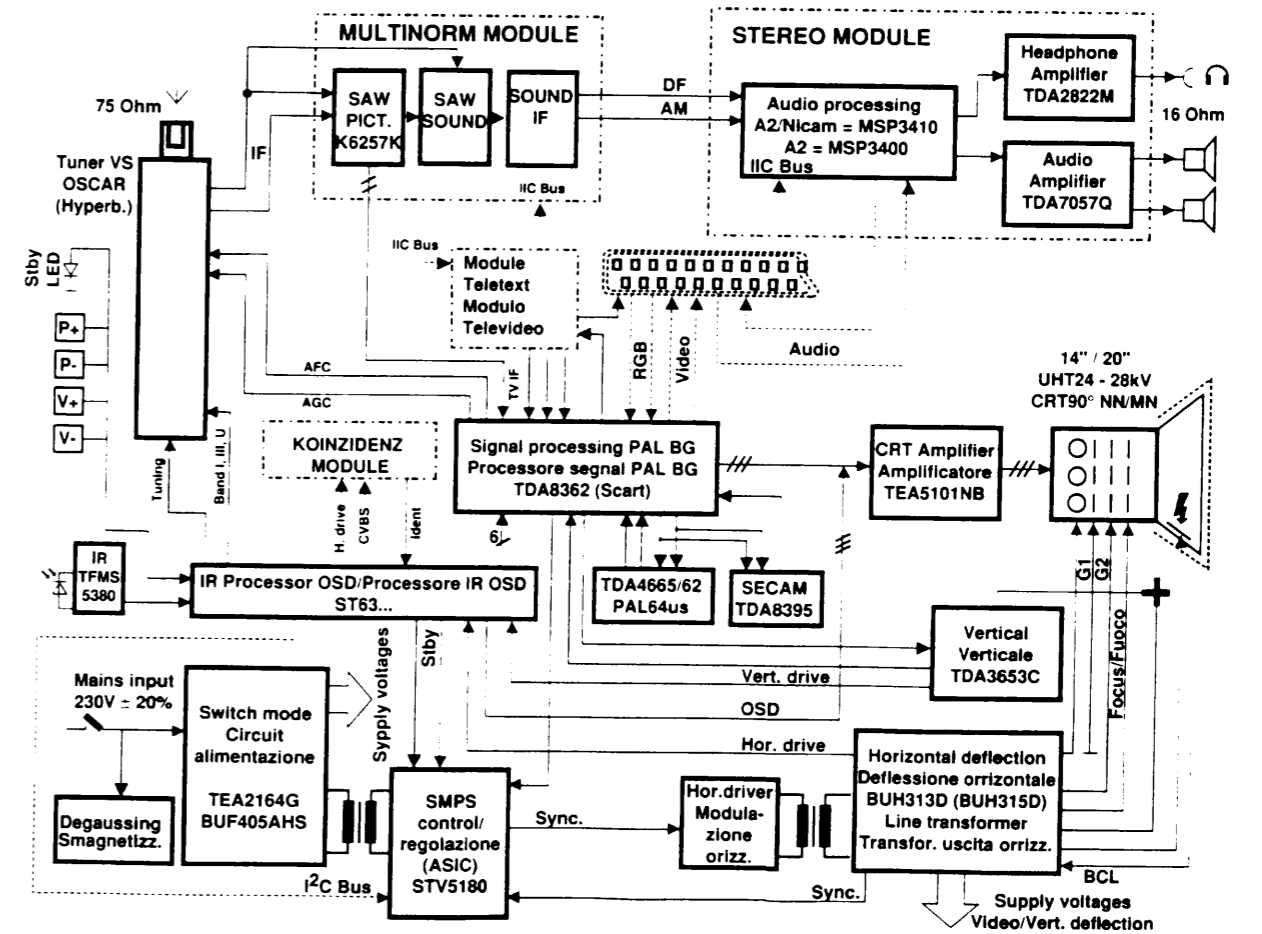
Waveforms - Main Diagram



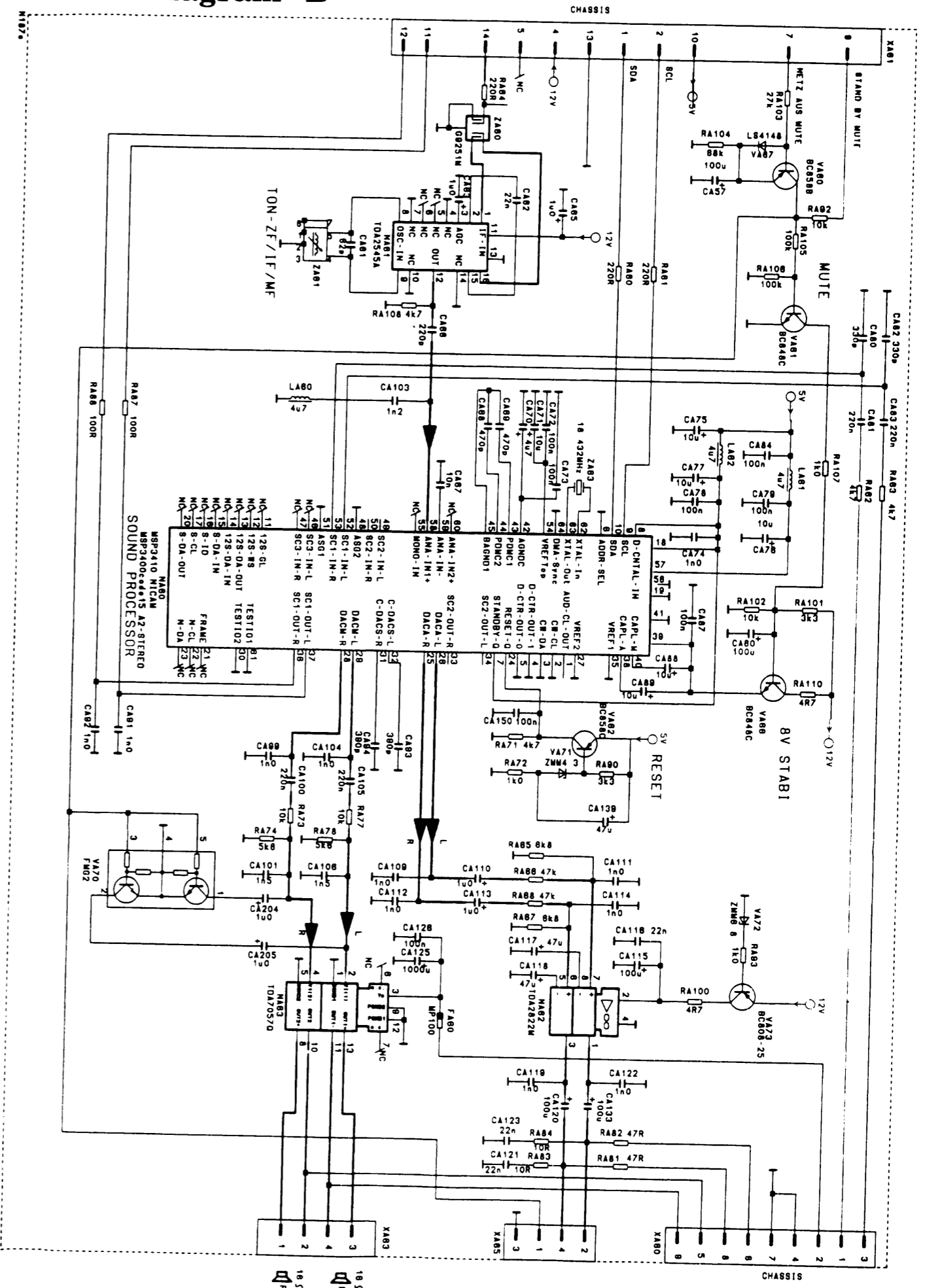
Waveforms - Main 90° Multinorm Diagram



Block Diagram



NICAM Diagram "B"



NICAM Diagram "A"

