

Service Adjustments Cont'd.

adjustments were made. In each adjustment it is mentioned if the adjustment must be done separately for different picture format, repeat only those adjustments.

Note: The picture geometry adjustments must be done with 16:9 picture format.

Making the Service Adjustment

- 1: Give a two numbered code which determines the adjustment (e.g. 05 = horizontal phase. see the following tables) with the number buttons.

Note: The adjustment can also be selected with the cursor button (up/downwards).



- 2: Adjust with the cursor button (left/right).



- 3: Store the new value by pressing the OK button.

Note: To avoid incomplete adjustments store each adjustment in the memory immediately after adjusting. If the adjustment has to be made separately for different picture format, select the normal user mode by pressing the TV button and change the picture format with the zoom button. Return to service mode by pressing the "I" button.

O Power Supply Block

Supply Voltage (U1) and Protection Circuit

- 1: Set the brightness and contrast to normal level. Connect an universal voltmeter to the cathode of Do11.
- 2: Adjust with Po1 the DC voltage (U1) for +155V or (±1V).
- 3: Check the over-current protection after making any service operations in the primary circuit of the power supply. Set the receiver to the stand-by mode. Short circuit the cathode of Do 13 to the ground and keep the short circuit connected. When the over-current works correctly the power supply stops. Remove the short circuit and switch on the receiver by pressing the mains button.

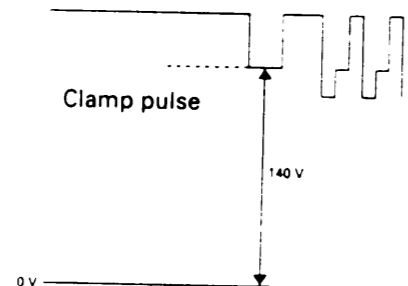
K Horizontal Deflection Block

Focusing

- 1: Set brightness and contrast to normal level.
- 2: Use cross hatch pattern and adjust the picture for optimum resolution.

Ug2 Voltage (Screen Grid Voltage)

- 1: Set contrast to minimum, brightness and colour saturation to normal level.
- 2: At the end of vertical blanking, there is a black current measurement pulse (clamp pulse) at pins 9, 12 and 15 of ICh1. Use an oscilloscope and find the output stage with the highest cut-off (i.e. the highest voltage during the black current measurement pulse).
- 3: Adjust the voltage of the clamp pulse to +140V with Ug2.



Note: Adjust the voltage with clamp pulse.

LL Picture and Sound IF Module

Video Demodulator

- 1: Apply a test signal (1mV = 60 dBmV).
- 2: Connect an universal voltmeter to the module connector X1 pin 6.
- 3: Adjust with LL6 the DC voltage to the point where it changes from 0 to 5V.

Sound Demodulator

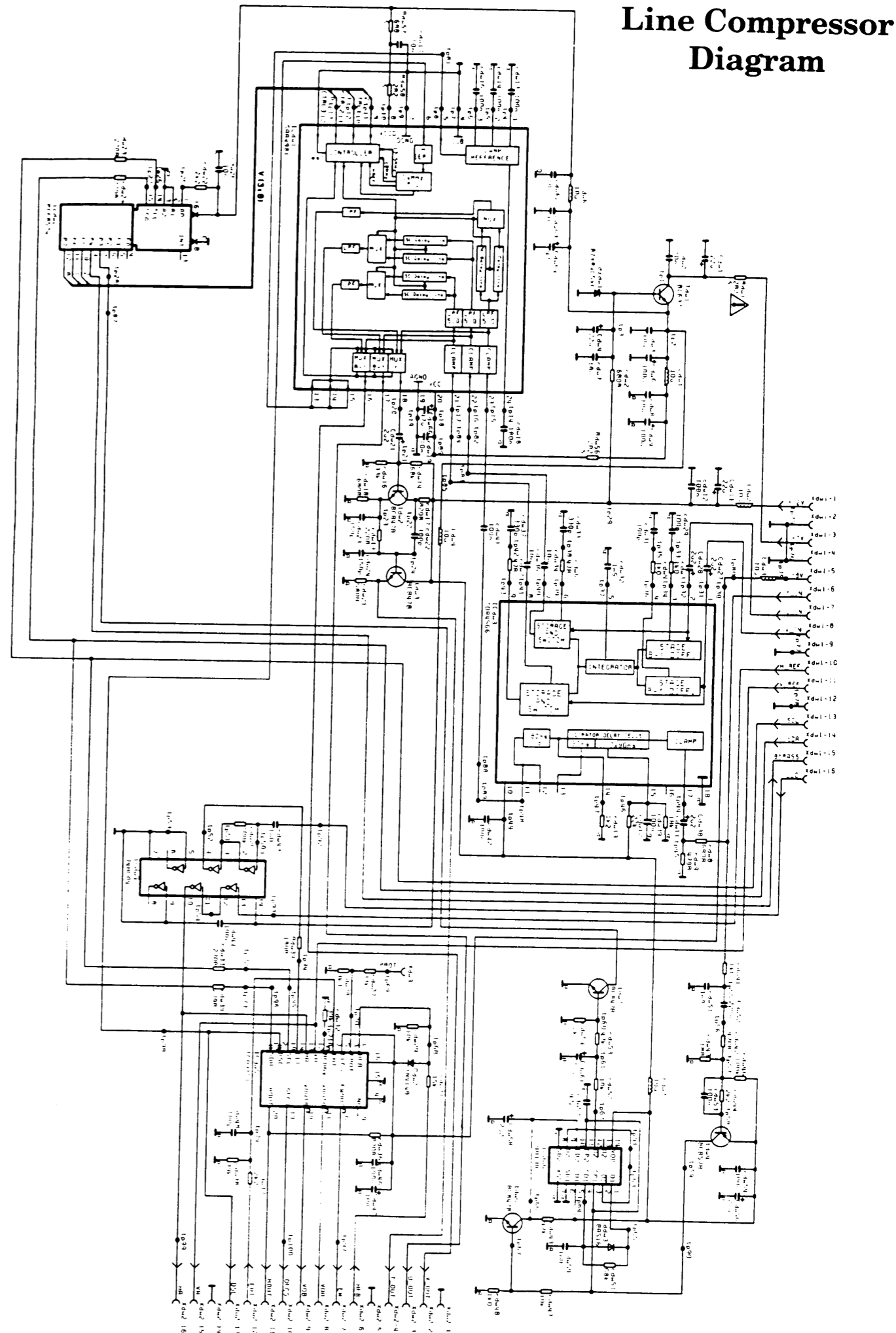
- 1: Apply a CCIR B/G standard (FM modulated sound) test signal.
- 2: Connect a universal voltmeter to IC1 pin 13.
- 3: Adjust with LL1 the DC voltage for +2.7V.

VERTICAL PICTURE ADJUSTMENTS				
Adjustment	Code	OSD name	Init. value	Note!
Vertical amplitude	00	V-ampl.	43	Adjust the picture height to the correct ratio.
Vertical off-centre shift	01	V-shift	3	
Vertical start scan	02	V-start	6	
Vertical slope 4:3 zoom (coarse)	12	Zoom-H	71	Select 4:3 zoom picture format and adjust the picture to correct ratio
Vertical slope 4:3 zoom (fine)	13	Zoom-L	0	
Centre value, 4:3 zoom shift (V Wait)	14	Shift	28	Separate adjustment for 60Hz NTSC transmission! Before adjustment select 4:3 zoom picture format!

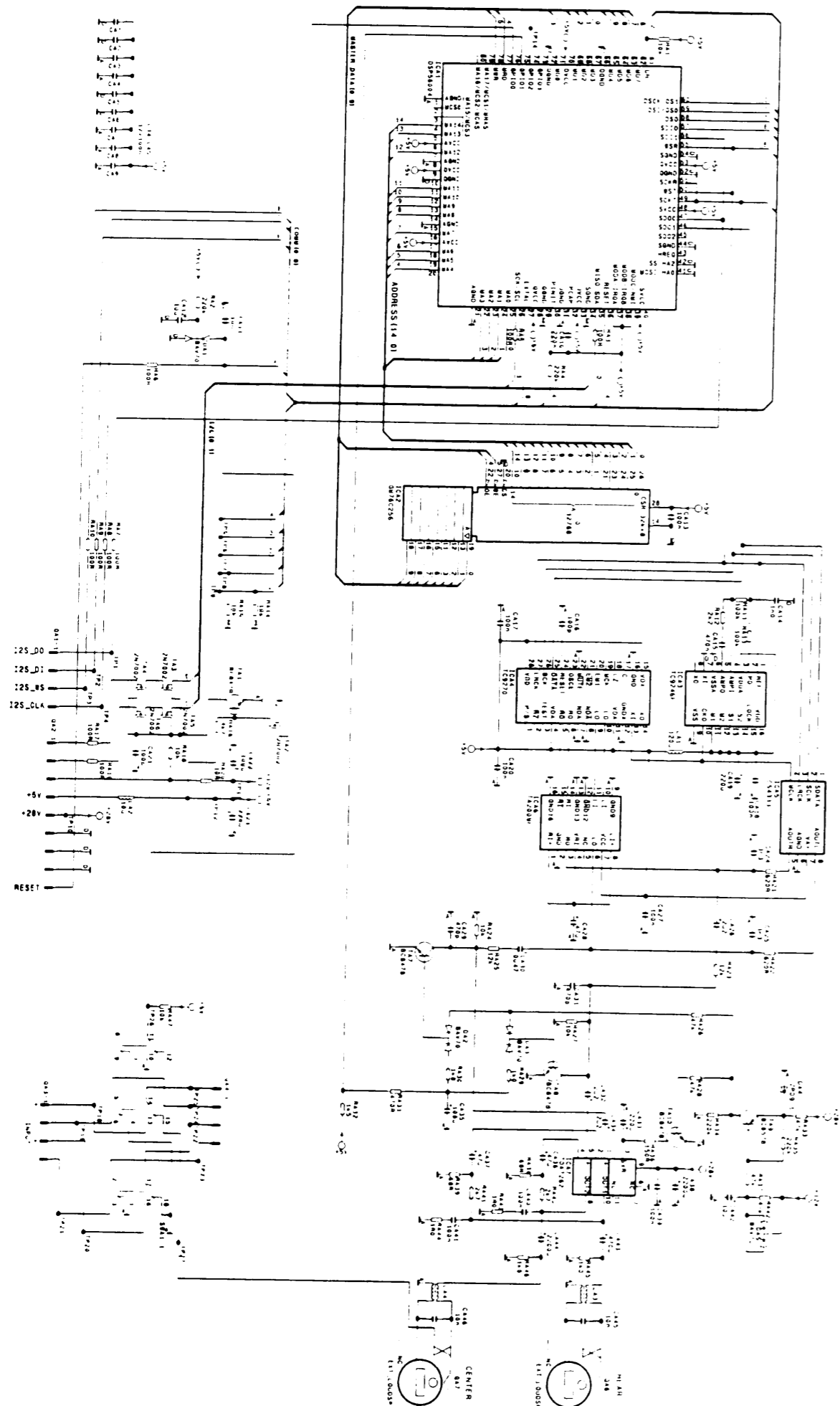
HORIZONTAL PICTURE ADJUSTMENTS				
Adjustment	Code	OSD name	Init. value	Note!
EW width	04	Width	36	Set brightness and contrast to 10% Separate adjustments for normal 4:3, H-phase zoom 4:3 zoom and full screen picture format (4:3 zoom or 16:9 format; adjust with only one of these picture formats)! In addition make same adjustments by using RGB signal!
Horizontal phase	05	H-shift	27	
H-phase RGB H-phase RGB zoom				
EW parabola	06	Parab.	13	Set brightness and contrast to 90% and compensate the change in picture size.
EW corner	07	Corner	0	
EW trapezium	08	Trapez	2	
EHT compensation	09	EHT	18	

OTHER ADJUSTMENTS				
Adjustment	Code	OSD name	Init. value	Note!
Red gain	17	R gain	41	This procedure is necessary e.g. when the picture tube, CRT-module etc. Has been replaced! Apply a test picture and adjust the R, G and B references. Then adjust the R, G and B gains.
Green gain	18	G gain	32	
Blue gain	9	B gain	32	
Red reference	20	R ref.	52	Normally no need to adjust.
Green reference	21	G ref.	21	
Blue reference	22	B ref.	16	
Clamp shift	11	Ciamo	0	Normally no need to adjust.
Peak white limit	23	PWL	63	Normally no need to adjust.
Gamma correction	24	GAMMA	32	Normally no need to adjust.
Tuner AGC	25	TV AGC	170	Apply a 1 mV (60dBuV) test signal. Adjust the picture just without noise.

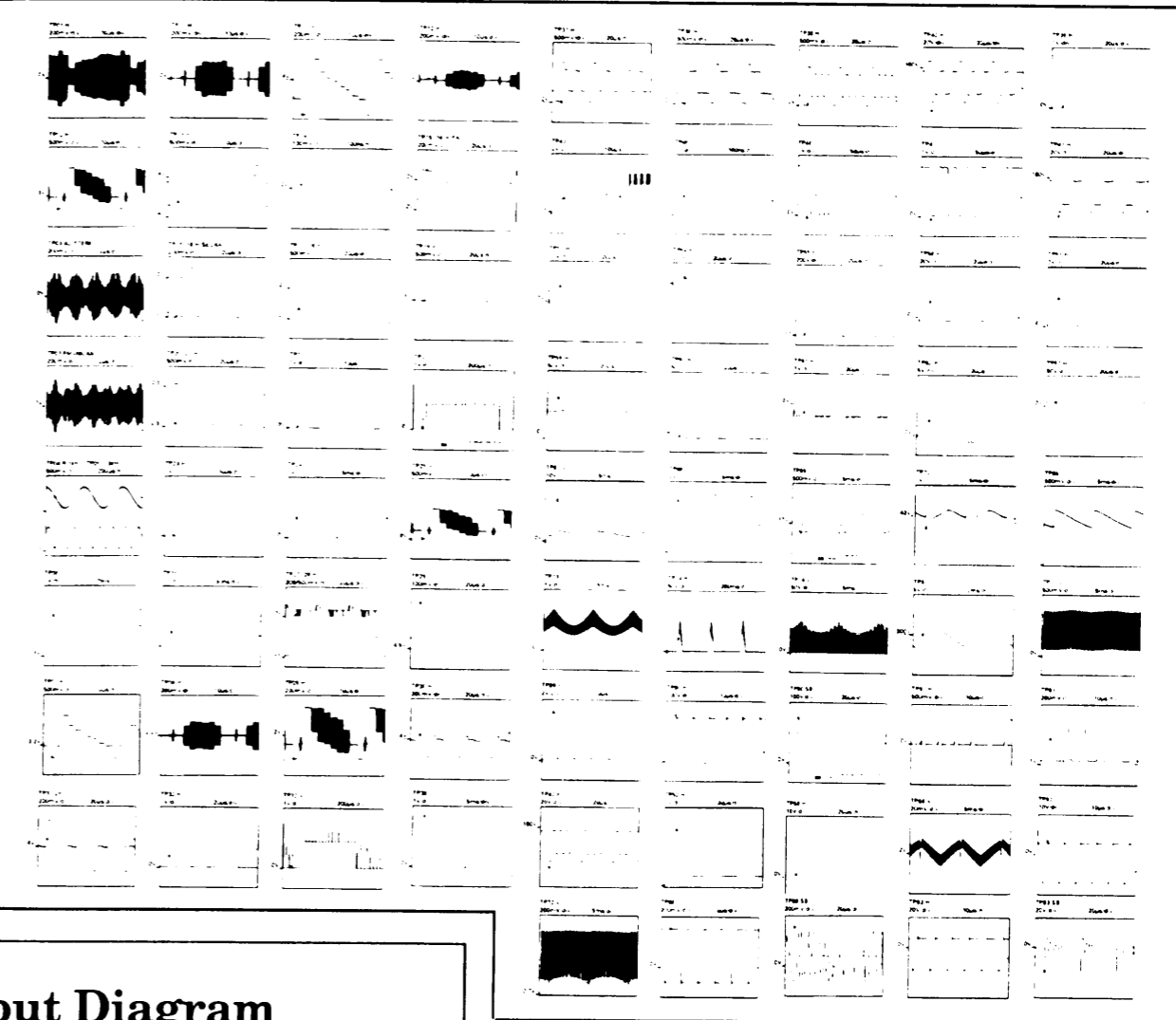
Line Compressor Diagram



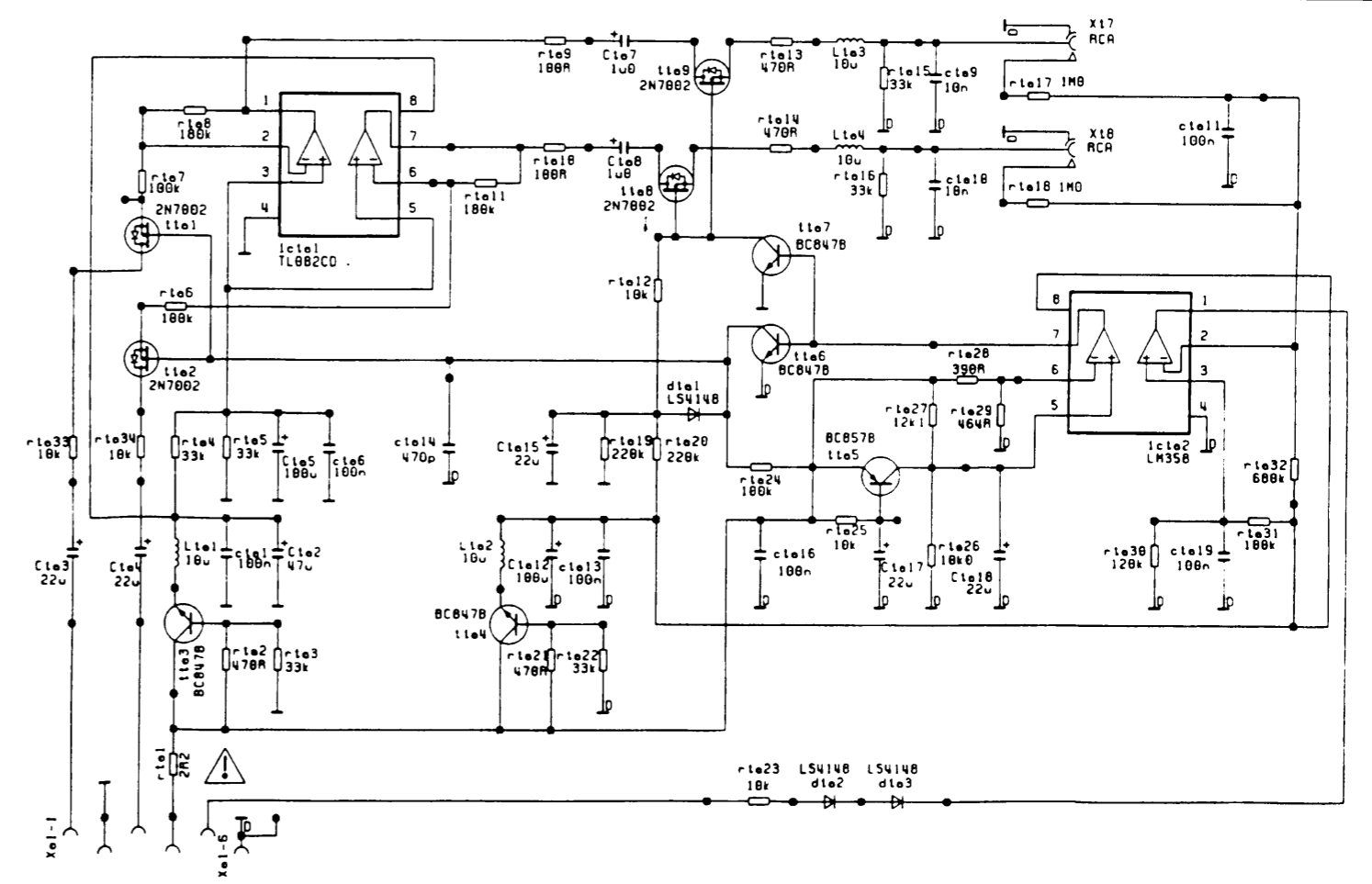
Surround Sound Diagram



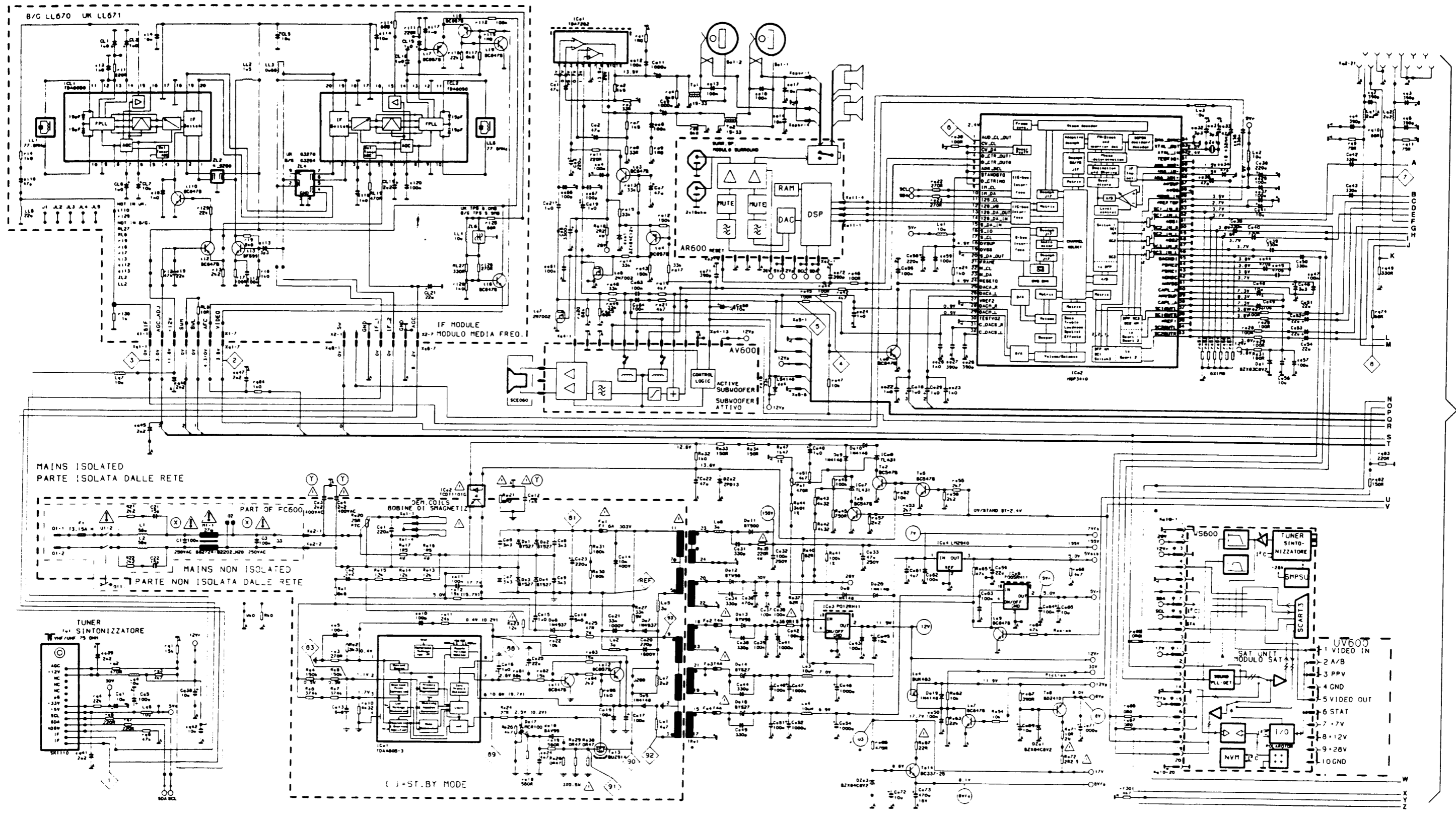
Waveforms - Main Diagram



Line Output Diagram

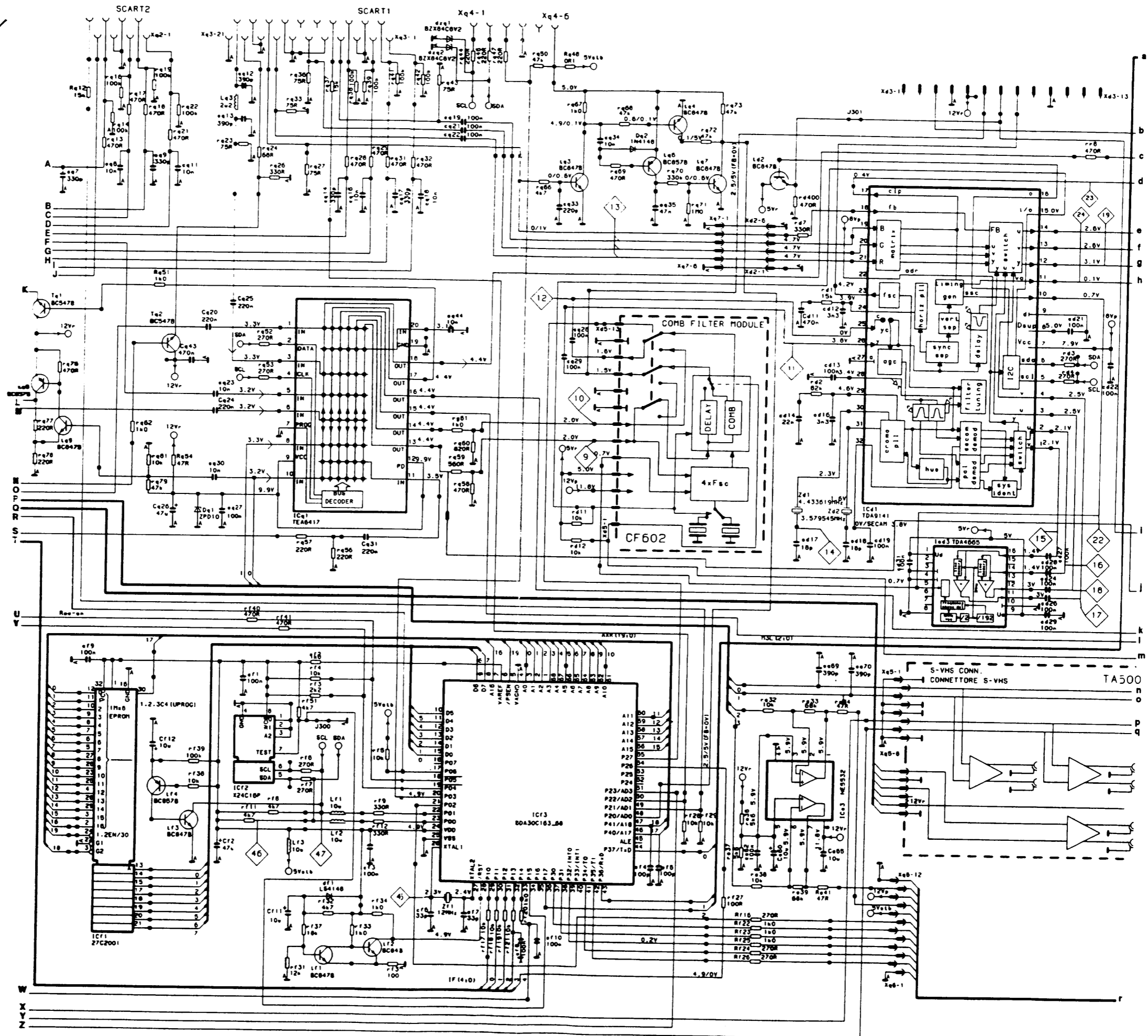


Main Diagram



Continued at 1

Main Diagram Cont'd.



1

	V128	Ta24
	EDX	W56LCZ
	012 x 001	093 x 01
	AP ^{HH}	Ap ^{KK}
	PW-673	PW-674
Rk 3	68k	150k
Rk 15	1R2 0.5W	3R0 0.5W
Rk 16	4R7	
Rk 10		470R
Rs 1	1k8	1k8
Rs 2	1R2	0R82
Rs 3	1R2	0R82
Rs 8	470R	470R
Ck 52	9n1	10n
Ck 54	240n	180n
TRk 1	Eldor	Eldor
TRo 1	FM3602B	FM3602B
dk 4	BZ084C91	BZ084C9V1
Lk 52	5820903700	5820903700
CRT-Base	HH654	HH654
Rk 44	100k	100k
U3	14V	14V

Continued at 2

Main Diagram Cont'd.

2

