

General Information

1994

CRT:

A59ECY13X611

A66ECY13X611

Remote Control:

48B2822A01 (R-22A01)

Door Flap:

4852814801 (2595WF/2590WA)

4852814701 (2895WF/2890WA)

Door Lock: 4857923300

Main Power Button:

4854836501 (2595WF/2590WA)

4854836401 (2895WF/2890WA)

Specifications

Main Voltage	230-240V AC, 50Hz
Power Consumption	130W (25") 140W (28")
Sound Output Power	140W (25" - with super woofer) 150W (28" - with super woofer) 10W x2 approx (at 1KHz, 60% MOD) With super woofer - 10W approx (at 100Hz, 60% MOD)
Antenna Impedance	75 ohm unbalanced 300 ohm unbalanced with supplied balun
Stereo System	2 Carrier or NICAM Stereo
Tuning System	Voltage Synthesizer Tuning System
Number of Program	100
Reception channel	VHF low: ch 2-4 VHF high: ch 5-12 UHF: ch 21 - 69 (PAL-I) CATV: ch S1', S2', S3' S1 - S20 (S40 Hyper band)
Remote Control	Type R-22 or R-23
Screen Size (Diagonal)	25": 590mm 28": 660mm
Teletext System	8 page memory TOPTXT or FLOF (LIST)
Channel Indication	On-screen display
Memory channel	100 channels
Aux Terminal	Video and Audio Input Jack 21 pin Euro-SCART Jack S-VHS Jack

Service Adjustments

Safety Instructions.

X-Ray Radiation Precaution

- Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not exceed the specified limit. The nominal value of the high voltage of these receivers is 28kv (25": 27.5kv, 28" 28.5kv) at max beam current (minimum brightness) operating at 230v A.C. The maximum

- voltage permissible in any operating circumstances must not exceed 29.5kv. When checking the E. H. T. follow the HIGH VOLTAGE CHECK and an accurate E. H. T. voltmeter.
- The only source of X-RAY RADIATION in this TV receiver is the C. R. T. To prevent X-ray radiation occurring when changing a faulty C. R. T., the replacement C. R. T. must be identical to the original fitted as specified in the parts list.
- Some components used in this receiver have safety related characteristics preventing the C. R. T. emitting X-ray radiation.

Installation and Service Adjustments

High Voltage Check

- Connect an accurate high voltage meter to the anode of the picture tube.
- Turn on the receiver. Set the BRIGHTNESS and CONTRAST controls to minimise (zero beam current).
- High voltage should be below 30kv.

Screen and White Balance Adjustment

- This adjustment is to be made only after warming up for at least 15 minutes.
- Receive RETMA pattern signal.
- Set the R. G. B. Bias VR (VR953, VR954, VR955) to the Mid position.
- Set the G. B Drive VR (VR951, VR952) to centre.
- Set the CONTRAST, BRIGHTNESS and COLOUR control to MIN, and Sub-brightness control to centre.
- Rotate the SCREEN control to clockwise or CCW so as to obtain 78% of CONTRAST CHART.
- Rotate the R, G, and B Bias VR of the other colour which did not appear on the screen clockwise, until a dim white line is obtained.
- Set the CONTRAST, BRIGHT, COLOUR control to MAX.
- Set the G, B Drive VR to obtain the best white uniformity on the screen.
- Rotate the CONTRAST, BRIGHTNESS, COLOUR controls until a dim raster is obtained and touch-up adjustment of R G B Bias VR to obtain the best white uniformity on the screen.

Focus Adjustment

Adjust FOCUS control on FBT to obtain well defined scanning lines in the central area of the screen.

Sub-Brightness Adjustment.

- White balance adjustment must proceed this procedure.
- Set the CONTRAST, BRIGHTNESS, COLOUR controls to MIN.
- Rotate the SUB-BRIGHTNESS VR (VR213) gradually CCW until the last beam disappears on the screen.

Vertical Height Adjustment

- Receive RETMA pattern signal.
- Set the BRIGHTNESS and CONTRAST control to Max., and COLOUR control to the centre.
- Adjust VR351 for the optimum vertical height and over scanning.

Vertical Centre Adjustment

- Receive RETMA pattern signal.
- Adjust VR316 so that the vertical centre of the picture may be coincident with the mechanical centre of CRT.

Horizontal Centre Adjustment

- Receive RETMA pattern signal.
- Adjust VR432 so that the horizontal centre of the picture may be coincident with the mechanical centre of CRT.

Picture Width and Distortion Adjustment (Width, Pincushion Distortion)

- Perform this adjustment after H. CENTRE adjustment are complete.
- Receive the WG PHILLIPS pattern.
- Set the contrast and colour to minimum and the brightness to maximum.
- Adjust H. WIDTH control (VR320) for the horizontal width then the white fangs on the left and right of the pattern are just hidden. So the raster width 46.5m sec.
- Adjust PINCUSHION CORRECTION control (VR321) to correct the vertical line on left and right straight.
- Re-adjust H. WIDTH control precisely.

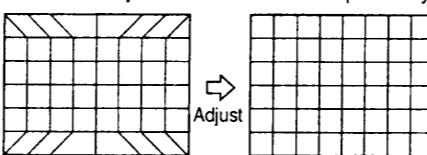


Fig 1.

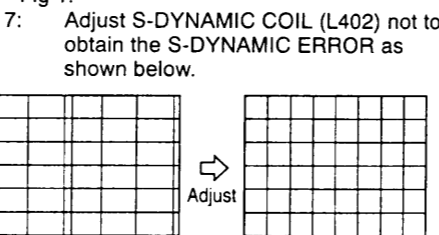


Fig 2.

Focus Voltage Adjustment

- Receive RETMA pattern signal.
- Adjust the FOCUS VOLUME on the FBT and make the picture on the screen be finest.

RF AGC Adjustment

- Receive PAL COLOUR BAR signal in the VHF high band where the strength of signal can be 60 - 65 dB.
- Set the CONTRAST control to MAX., the BRIGHTNESS control to provide adequate black and grey scales.
- Maintain the fine tuning on the screen, and adjust VR117 (AGC DELAY CONTROL VR.) in order that it may be located on the position which the picture noise disappears on the image.

PIF Adjustment

1: Apparatus Connection and Presetting

Connection:

- Disconnect SLIT 1.
- Connect H-out of LSW-480 to X-axis of the oscilloscope and V-out of LSW-480 to Y-axis of the oscilloscope.
- Connect the sweep signal output to TP1.
- Set ATTENUATOR of LSW-480 to 30dB.

- Supply 15v D.C. voltage (B+) to TP9.
- Supply 4-5v D.C. voltage to TP6.
- Connect wire lead between cathode of I501 #36 and I202 #3

1: Oscilloscope Scaling

- Put the scale of X and Y of the oscilloscope to D.C. level.
- Set the horizontal time display to X-Y.
- Put horizontal axis (X) to 1V/div. and the vertical axis (Y) to 2V/div.

2: LSW-480 MARKER FREQ. SETTING

	fp(n+1)	fs	fc	fp-2	fp	fs(n-1)
P/S-B/G-L/L'	31.9	33.4	34.47	36.9	38.9	40.4
P/S-B/G	31.9	33.4	34.47	36.9	38.9	40.4
P-1	31.9	33.5	35.07	37.5	39.5	41

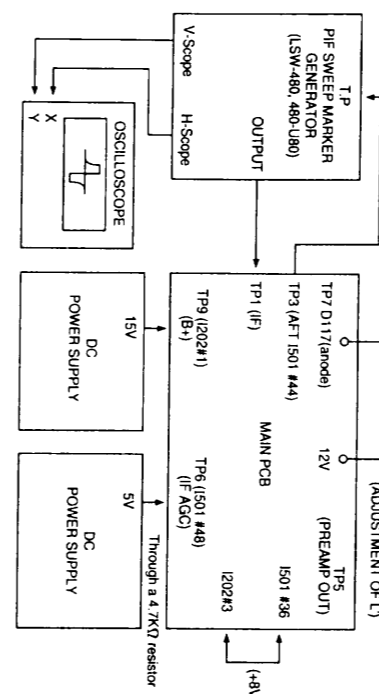


Fig 3. Connection for PIF Adjustment

2: Adjustment of AFT (B/G, L)

- Connect the test point of LSW-480 to TP2.
- Adjust L104 (AFT COIL) so that the P marker point is located on the reference level.

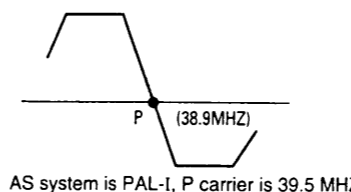


Fig 4.

3: Adjustment of SECAM-L' AFT

- Connect TP7, D117 (anode) to 12v.
- Adjust VC150 (L'AFT TRIMMER) so that the C marker point (34.47MHz) is located on the reference level.

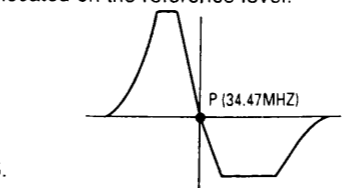
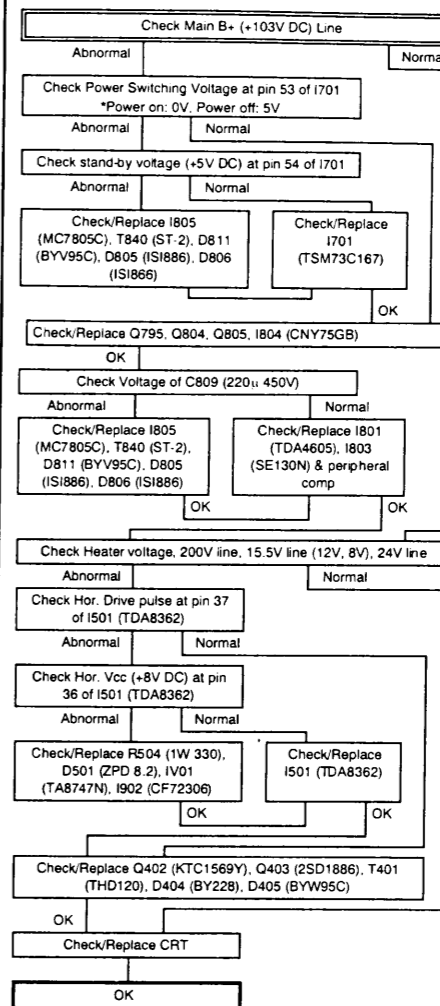


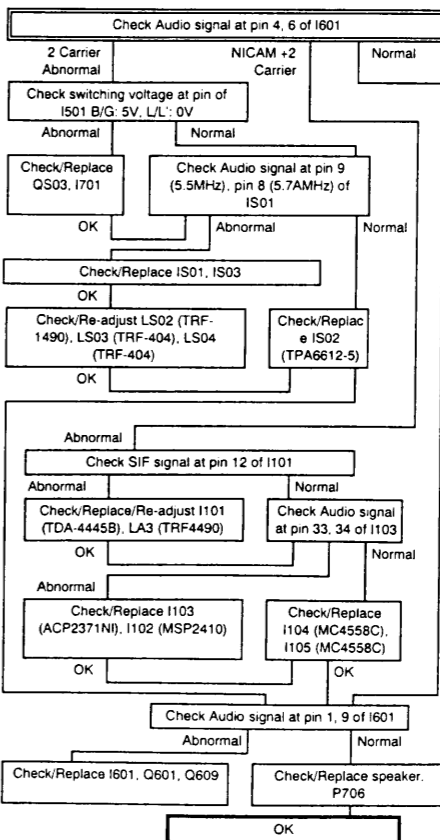
Fig 5.

Trouble Shooting Guides

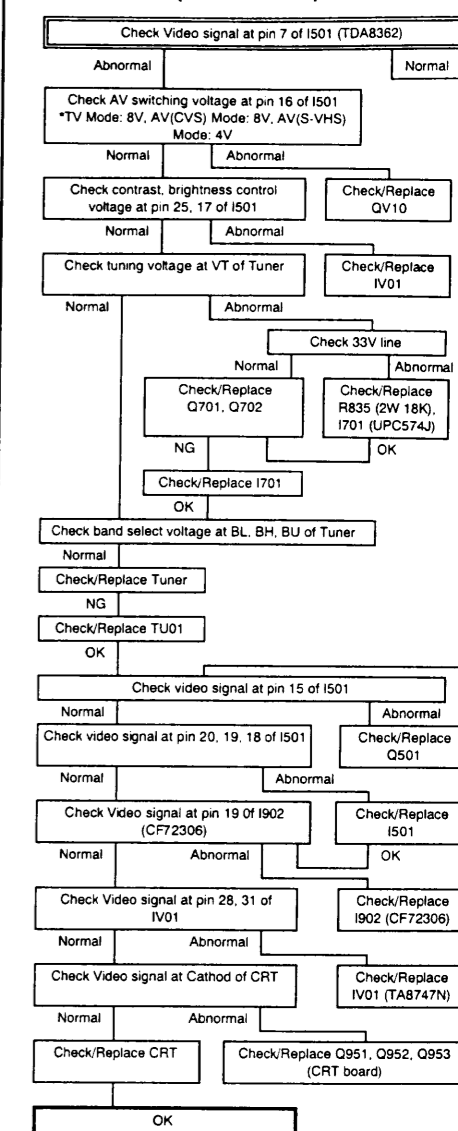
No Raster



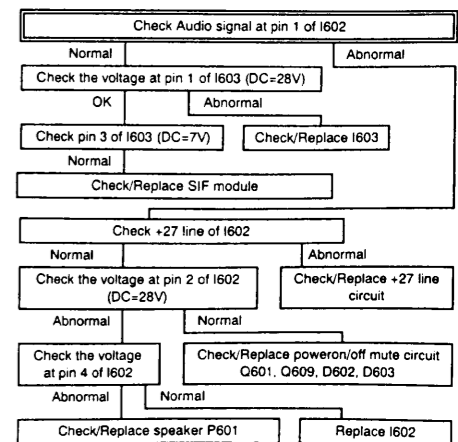
No Sound (Picture OK)



No Picture (Raster OK)



No Super-Woofer Sound



Trouble Shooting Guides Cont'd.

Pin-Cushion

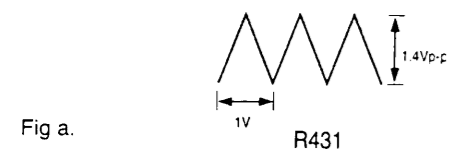
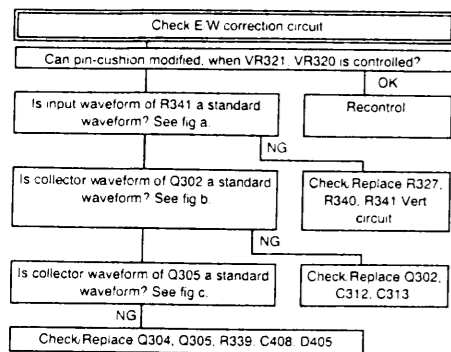


Fig a.

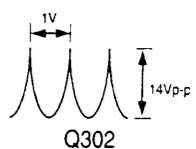


Fig b.

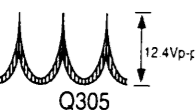
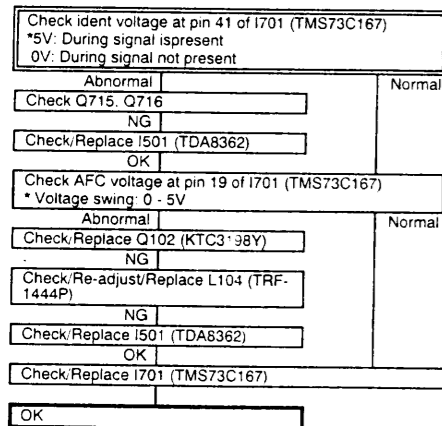
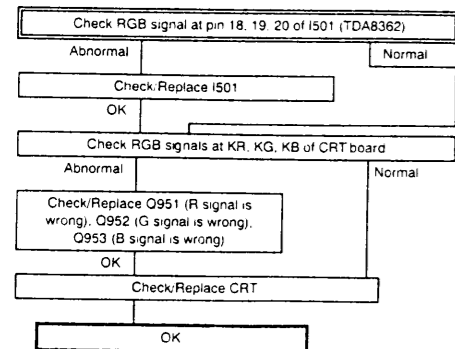


Fig c.

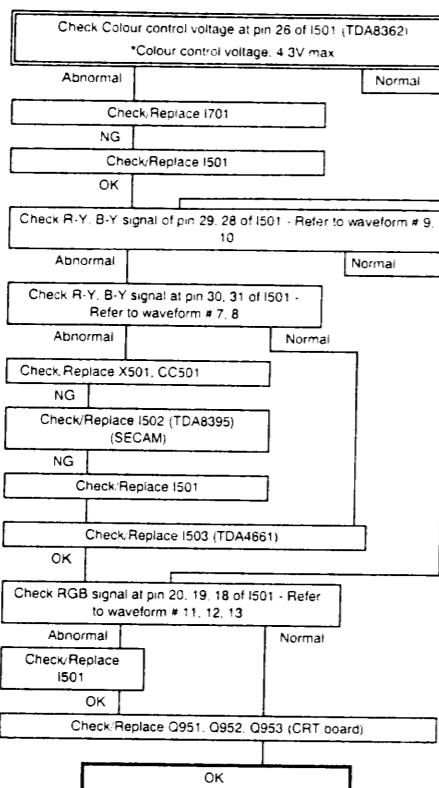
Auto Search Trouble (Channel Skip)



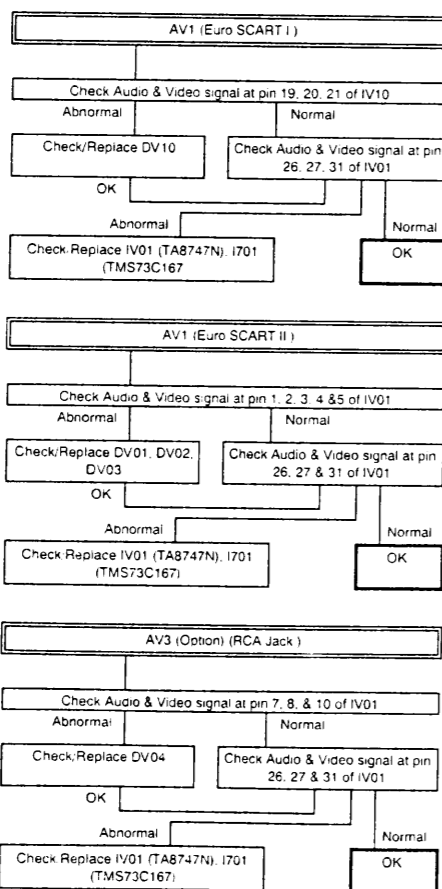
No Specific Colour



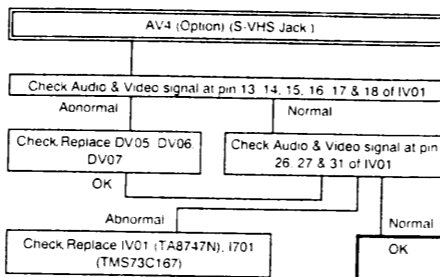
No Colour



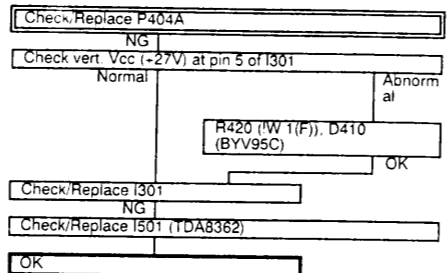
No External AV



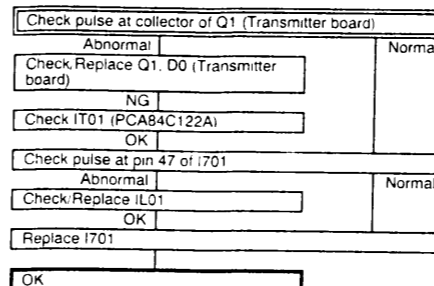
No External AV



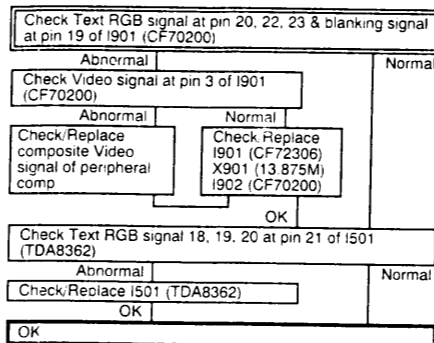
No Vert Scan (One Horiz Line Raster)



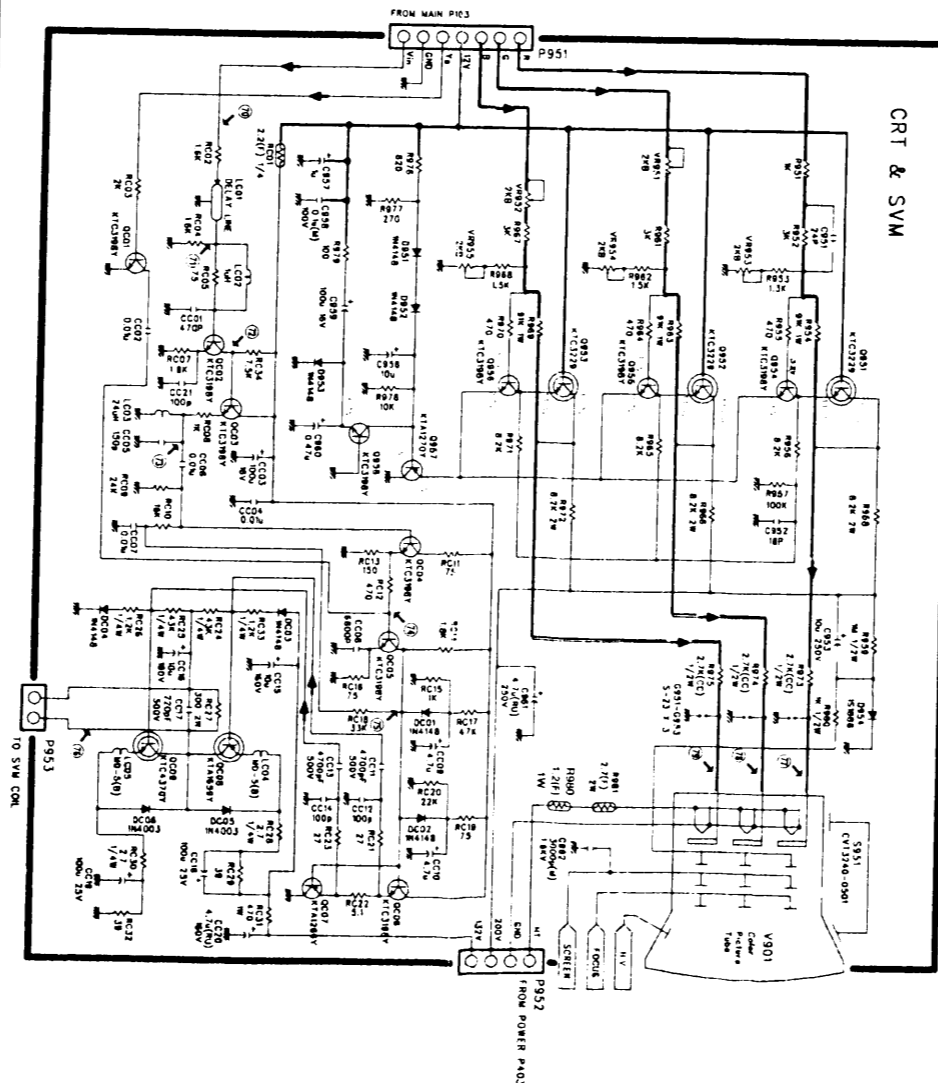
Remote Control Trouble (Local Control OK)



No Teletext



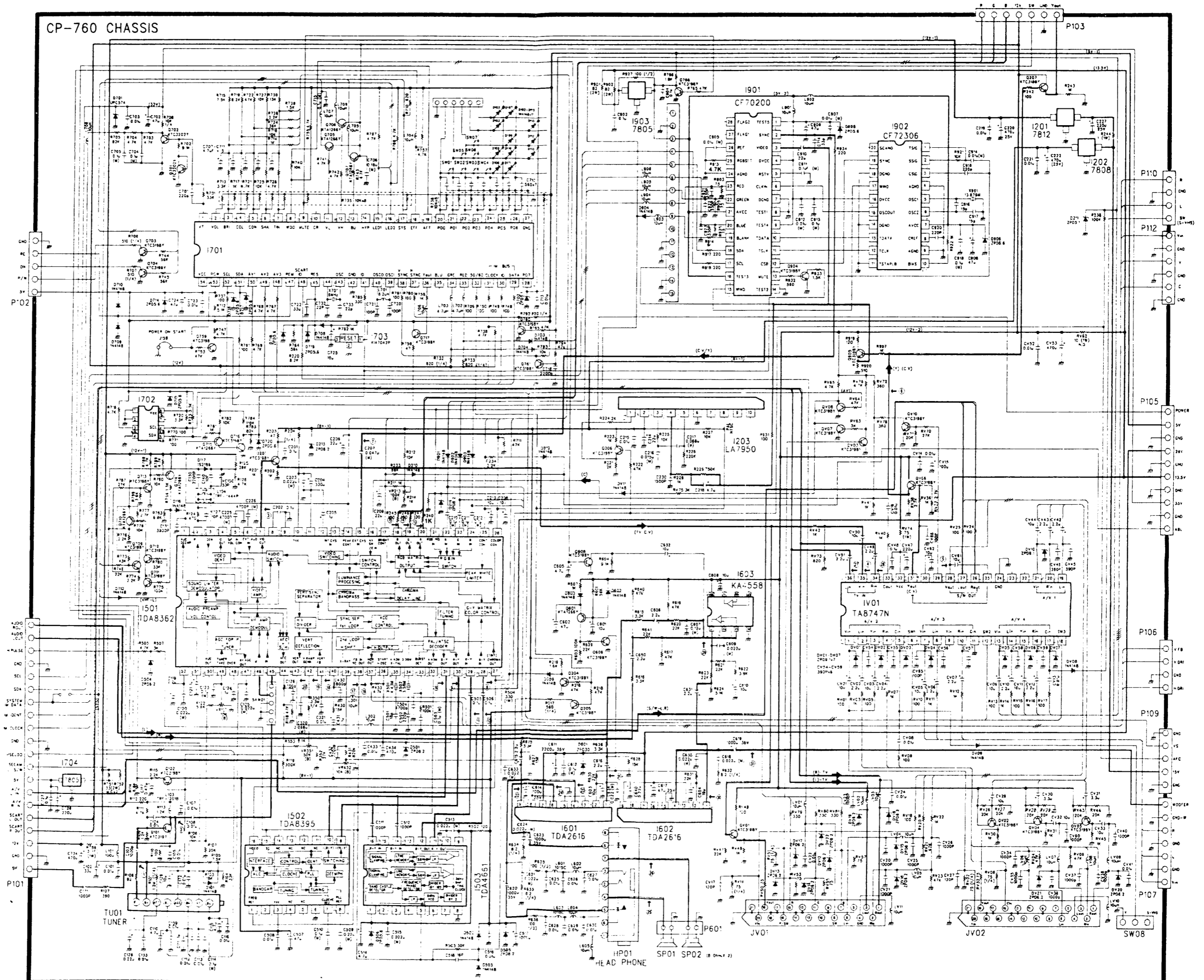
CRT Diagram



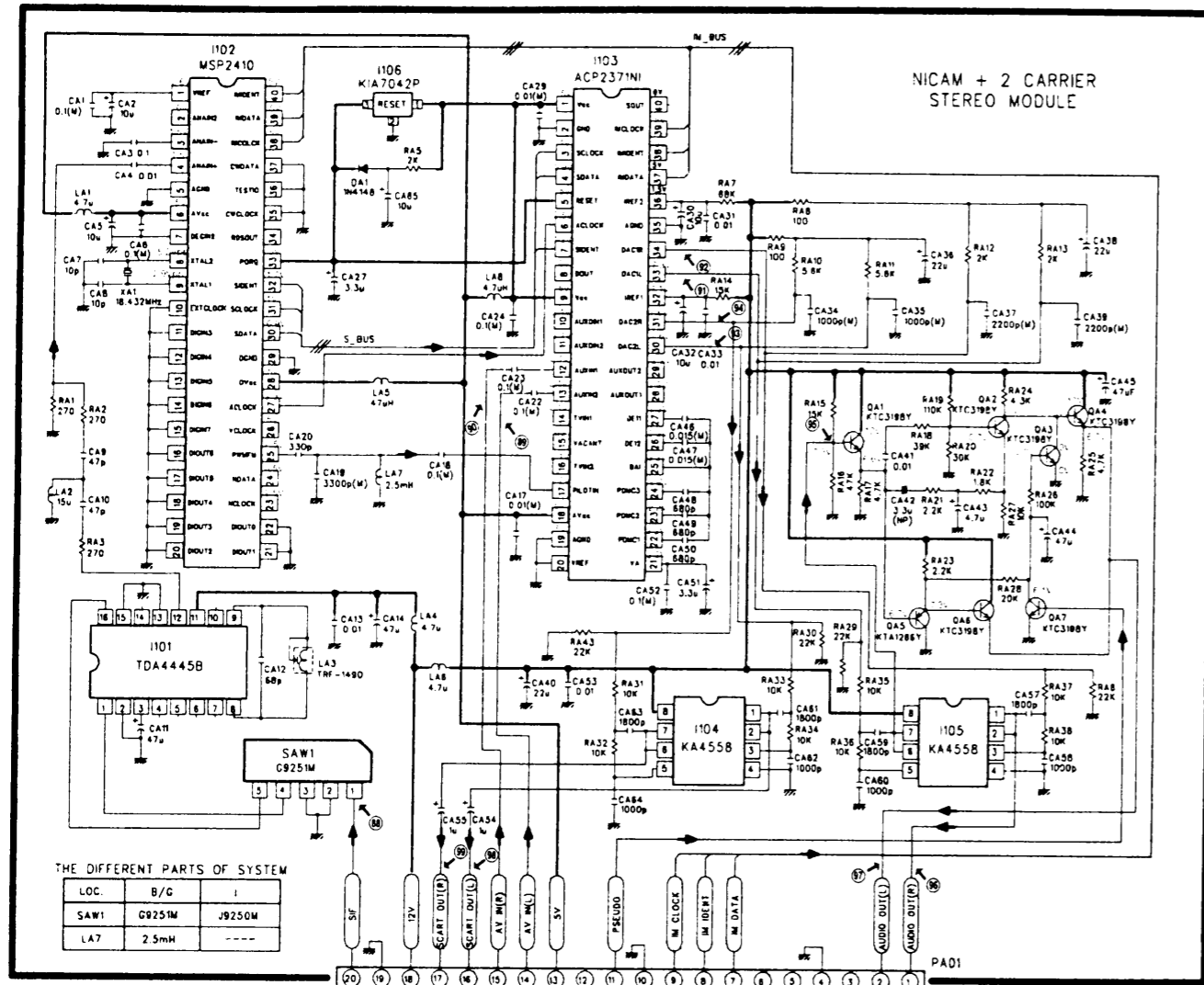
Different Parts for System

System	P/S-B/G-D/K SECAM-L/L	P/S-B/G-D/K (WK)	PAL - B/G (WF)	PAL - B/G (WS)	PAL - I (WU)	Remark	
Stereo sys	2-Carrier	2-Carrier	2-Carrier	NICAM	NICAM	Sound Module	
1	P801	KKP-419C	KKP-419C	CW-4232	KKP-419C	CW-3201	Power Cord
2	TU01	TEKE4-073A	TEKE4-073A	TEKE4-073A	DE17BZ	DE17BZ	Tuner
3	SAW01	G3962M	G3962M	G3962M	J3950M	J3950M	PIF SAW
4	D105	X	X	X	1N4148	1N4148	IM Bus
5	D107	1N4148	X	X	X	X	SECAM-L/L
6	D109	X	X	X	X	1N4148	UHF only
7	D111	X	1N4148	X	X	X	EAST TTX
8	J249	Jumper	X	X	X	X	SECAM-L/L
9	R738	X	X	X	4.7K	4.7K	IM Bus
10	R748	X	X	X	100	100	
11	R748	X	X	X	100	100	
12	R750	X	X	X	100	100	
13	C603	50V 10uF	50V 10uF	50V 10uF	50V 4.7uF	50V 4.7uF	POP Noise
14	C814	25V 100uF	25V 100uF	25V 100uF	25V 4.7uF	25V 4.7uF	
15	I501	TDA8362	TDA8362B	-	-	-	SECAM-L/L
16	VC150	T203R300B	X	-	-	-	
17	CT30	2200pF	X	-	-	-	
18	C140	10pF	X	-	-	-	
19	D116	1N4148	X	-	-	-	
20	D117	1S2186	X	-	-	-	
21	D712	1N4148	X	-	-	-	
22	Q709	KTC3198Y	X	-	-	-	
23	Q710	KTA1266Y	X	-	-	-	
24	Q711	KTC3198Y	X	-	-	-	
25	Q712	KTC3198Y	X	-	-	-	
26	Q713	KTC3198Y	X	-	-	-	
27	Q714	KTA1266Y	X	-	-	-	
28	R125	39K	X	-	-	-	
29	R126	4.7K	X	-	-	-	
30	R710	620	X	-	-	-	
31	R746	22K	X	-	-	-	
32	R754	1.3K	X	-	-	-	
33	R763	6.8K	X	-	-	-	
34	R773	4.3K	X	-	-	-	
35	R774	2.2K	X	-	-	-	
36	R775	100K	X	-	-	-	
37	R776	2.2K	X	-	-	-	
38	R777	2.7K	X	-	-	-	
39	R778	10K	X	-	-	-	
40	R780	33K	X	-	-	-	
41	R787	27K	X	-	-	-	
42	R788	4.7K	X	-	-	-	
43	R789	4.7K	X	-	-	-	
44	R790	10K	X	-	-	-	
45	R799	3.6K	X	-	-	-	
46	C109	0.01uF	-	-	-	X	Three Band Only
47	C110	4.7uF	-	-	-	X	
48	C111	1uF	-	-	-	X	
49	C112	0.01uF	-	-	-	X	
50	R741	4.7K	-	-	-	X	
51	R742	4.7K	-	-	-	X	
52	Q705	KTA1266Y	-	-	-	X	
53	Q706	KTA1266Y	-	-	-	X	
54	I502	TDA8395	-	X	-	-	SECAM Parts
55	C509	0.22uF (M)	-	X	-	-	
56	C510	0.1uF (M)	-	X	-	-	
57	O806E	X	X	X	X	4855801719	
58	V901A	X	X	X	X	4859704500	
59	M723	X	X	4857234700	X	X	Shield Case
60	M724	X	X	4857234600	X	X	Shield Case

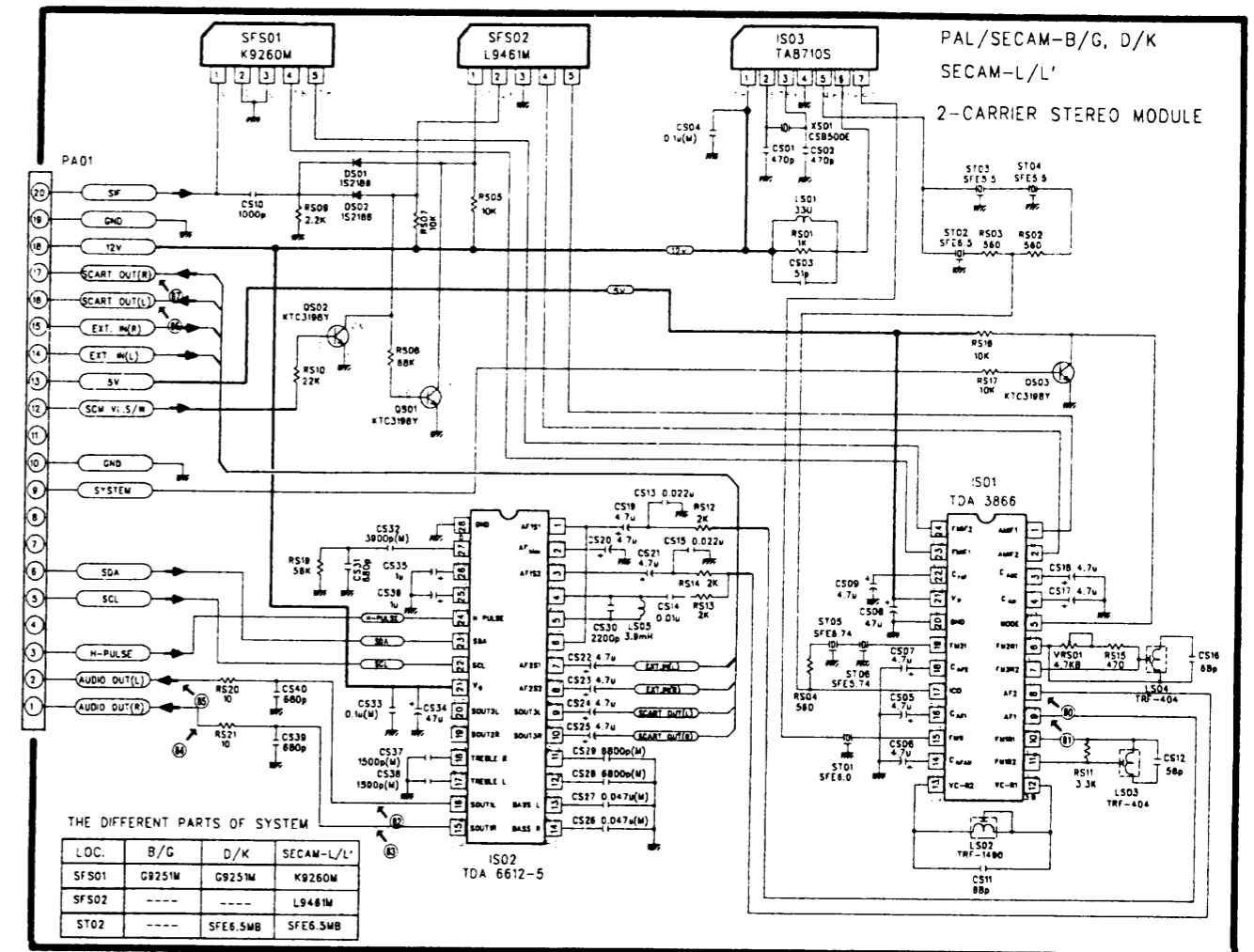
Main Diagram



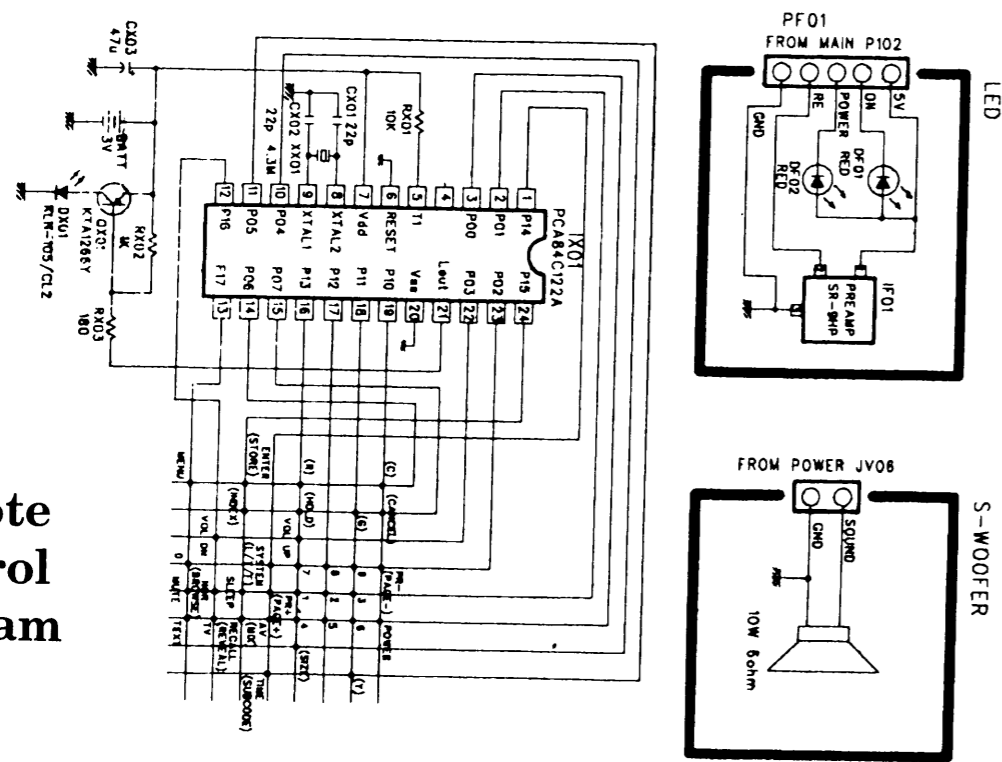
NICAM Diagram



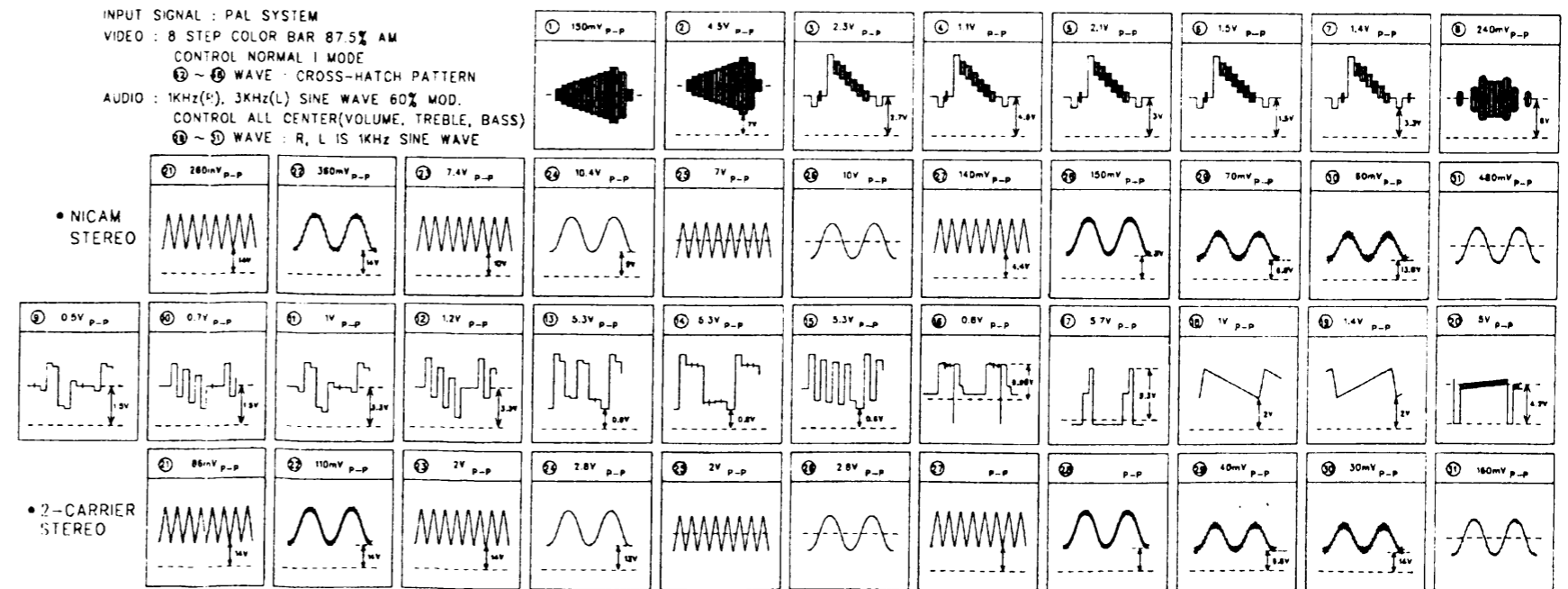
PAL Secam Diagram



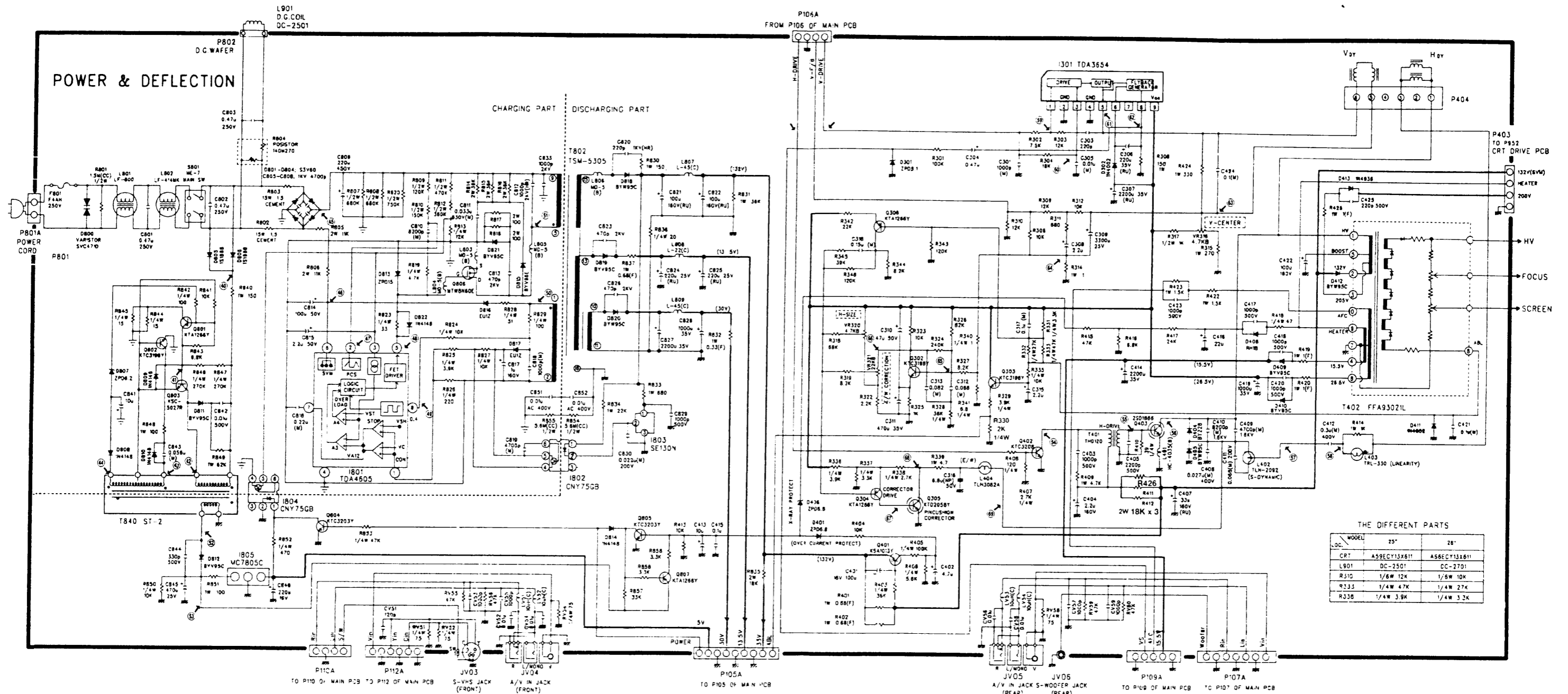
Remote Control Diagram



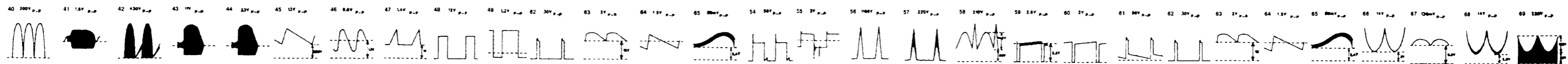
Waveforms (Main)



Power Def Audio Diagram



Waveforms



Waveforms

CRT

Nicam

PAL Secam

