Produced By:

Commodore International Spare Parts GmbH
Braunschweig, West Germany

SERVICE MANUAL

1084S-P1
PAL VERSION

SEPTEMBER, 1990 **PN-314688-01**

1059

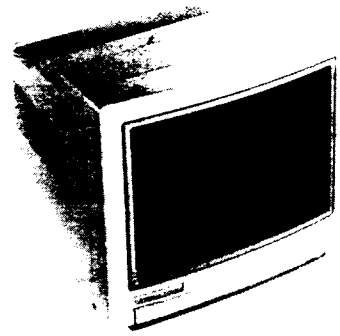
INTERNATIONAL EDITION

COMMODORE "INTERNATIONAL EDITION" SERVICE MANUALS CONTAIN PART NUMBER INFORMATION WHICH MAY VARY ACCORDING TO COUNTRY. SOME PARTS MAY NOT BE AVAILABLE IN ALL COUNTRIES.

TECHNICAL DATA

General

• mains voltage	220-240 V (10%)
• mains frequency	50 Hz
• power consumption	75 W



Picturetube

• size	14″
• deflection angle	90°
• EHT	25KV
• slot triplet pitch	0.42 mm
• type	M34EAQ10X

Video

• vertical frequency	50 Hz (47-62,5 Hz)
• horizontal frequency	15625 Hz (±60 Hz)
• bandwidth	8 Mz
• characters	2000

Audio

• loudspeaker	16Ω/1 W/3″
• output power	1 W

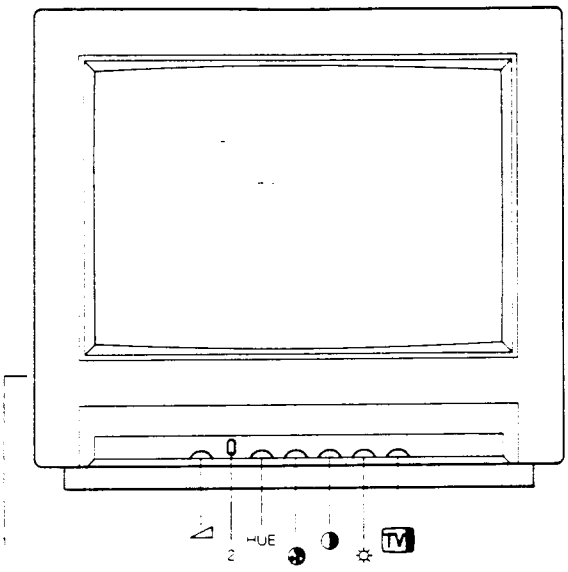
REMARKS

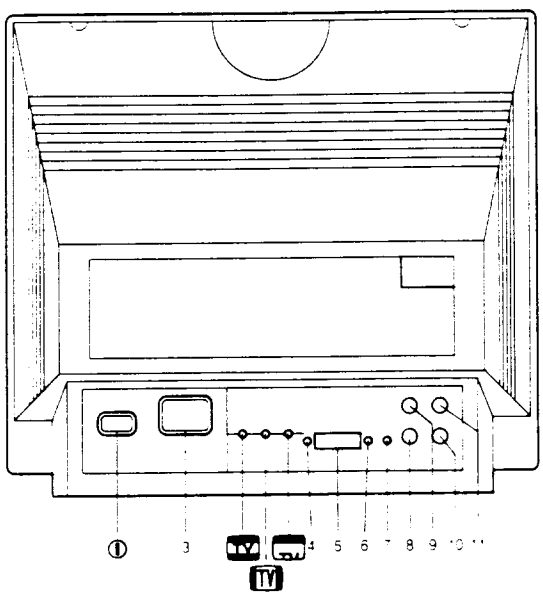
1) The direct voltages indicated in the circuit diagram are average voltages. They have been measured under the following conditions:
   Contrast and brightness to minimum.

2) The oscillograms have been measured under the following conditions:
   Signal from a RGB pattern generator (SBC 522) on colour bar pattern.
   Adjust brightness and contrast for mechanical mid-position (click position).

WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep conponents and tools also at this potential.

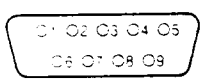


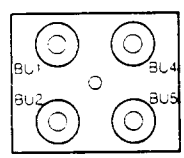


1. Headphones connection
2. "GREEN" switch
3. Mains voltage connector
4. RGB ANALOG/TTL switch
5. "D" SHELL connector
6. RGB/CVBS, LCA switch
7. LCA/CVBS switch
8. Luminance/CVBS input
9. Chrominance input
10. AUDIO–L input
11. AUDIO–R input

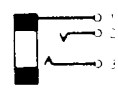
INPUT AND OUTPUT SOCKETS

BU3
D SHELL CONNECTOR





BU6

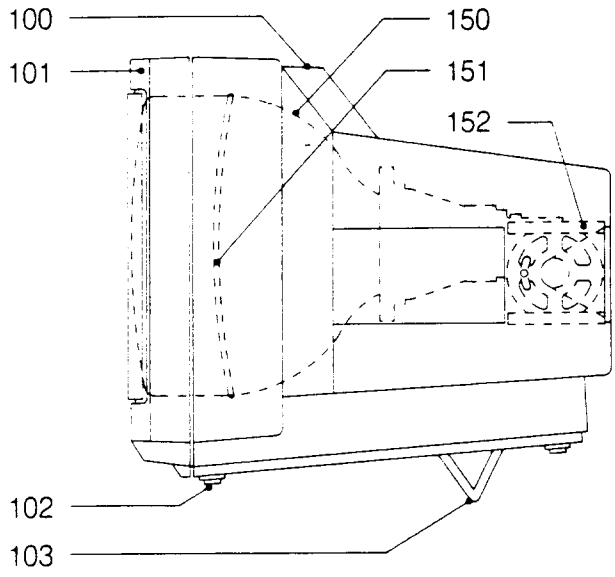


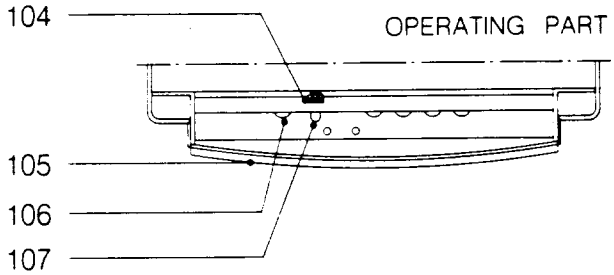
PIN	SIGNAL (RGA	SENSITIVITY	IMPEDANCE
1	⊥		
2	N.C		
3	RED	Linear 0.7V	75Ω
4	GREEN	TTL 0.0/0.8V	75Ω
5	BLUE	TTL 2.4/5V	75Ω
6	INTENSITY	TTL LEVEL	75Ω
7	COMP.SYNC	0.4Vp	
8	H/COR SYNC	TTL LEVEL	75Ω
9	V/EO SYNC	WAVE POLARITY	

BU	SIGNAL	SENSITIVITY	IMPEDANCE
BU1	CHROMINANCE	0.35V rms	75Ω
BU2	LUMINANCE CVBS	0.35V rms	75Ω
BU4	AUDIO R	447mV rms	10kΩ
BU5	AUDIO L	447mV rms	10kΩ

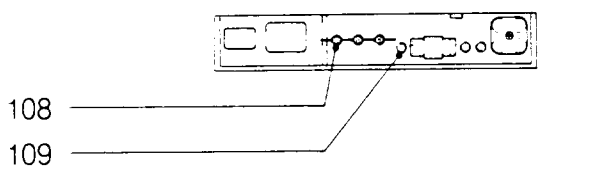
PIN	SIGNAL	SENSITIVITY	IMPEDANCE
1	⊥		
2	LEFT CHANNEL	2.1V rms	32Ω
3	RIGHT CHANNEL	2.1V rms	32Ω

CABINET

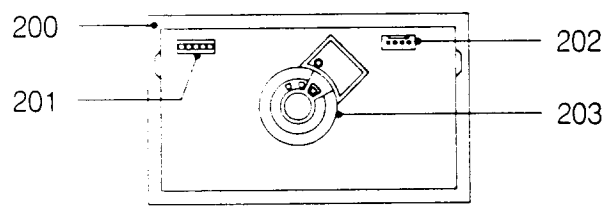




CONNECTION PART



CRT PANEL



Cabinet parts

100	3138 107 70460	Back cover
101	3138 107 70440	Front
102	3138 104 12540	Foot
103	3138 104 12500	Stand
104	4822 417 50231	Lock
105	3138 107 70450	Lid
106	3138 104 12520	Knob (5x)
107	3138 104 12620	Push button
108	4822 535 91695	Adjust rod (3x)
105	4822 410 60444	Push button (3x)

General electrical parts

150	4822 131 20279	Picture tube (type M34EAQ01X+AT1460)
151	4822 157 60478	Degaussing coil
152	4822 240 30296	Loudspeaker

Accessories

4822 321 10657	mains cable
4822 154 50148	Interface cable (9 pole "D" SHELL - 9 pole "D" SHELL)
4822 154 50149	Interface cable (8 DIN-3RCA)
4822 321 60297	Interface cable (1 RCA-2RCA)
4822 154 50147	Interface cable (9 pole "D" SHELL-23 pole "D" SHELL)

Mechnical parts

200	**4822 212 23316**	**CRT panel complete**
201	4822 265 30784	Socket (5 pins)
202	4822 265 30783	Socket (4 pins)
203	4822 255 70216	Socket for CRT

CAUTION

1) Safety requirements stipulate that, during repair, the set should be restored in its original state and that parts, indentical to the specified ones, should be applied.
2) For safety reasons, the parts provided with the sign ⚠ should be replaced by identical parts (for code numbers see electrical parts lists.
3) To avoid damages to ICs and transistors, flash-over of the high-tension should be avoided.
4) Be careful when performing measurements in the high-tension section and on the picture tube.
5) Never change parts when the set is still switched on.
6) Safety goggles must be worn during replacement of the picture tube.

ELECTRICAL SETTINGS

1. SETTINGS ON THE CHASSIS

1.1 +128V supply voltage(3414)
- Apply video signal to the monitor.
- Set volume control 3295, brightness control 3662 and contrast control 3658 to minimum.
- Set trimming potentiometer 3414 in mid-position. (This is a presetting).
- Connect DC voltmeter to junction of resistor 3520 and diode 6453.
- Switch on monitor.
- With trimming potentiometer 3414 set the DC voltage at junction 3524/6453 to 128V.

1.2 Horizontalsynchronisation (3257)
- Apply video signal (cross-hatch pattern) to the monitor.
- Short capacitor 2270. (This capacitor is connected to pin 5 of IC 7270.)
- With trimming potentiometer 3257 adjust the picture so that it is straight.
- Remove the short-circuit on 2270.

1.3 Picture positionsettings
General: For the following settings apply a video signal (cross-hatch pattern) to the monitor.

1.3.1 East-west correction (3537)
- With potentiometer 3537 make the vertical lines on the left and right-hand side of the screen as straight as possible.

1.3.2 Picture width (3534)
- With potentiometer 3534 set the picture width for 14 blocks to 260 mm.

1.3.3 Horizontal picture centering (3264)
- With potentiometer 3264 set the correct horizontal centering.

1.3.4 Vertical picture centering (3583)
- With potentiometer 3583 set the correct vertical picture centering.

1.3.5 Picture height (3550)
- With potentiometer 3550 set the picture height for 10 blocks to 186 mm.

1.3.6. Vertical linearity (3573)
- Adjust the correct vertical linearity with Pre-set potentiometer 3573 IF necessary repeat 1.3.5 and 1.3.6.

1.4 Setting of:
- VG2 (bottom knob on the line output transformer)
- cut-off points of the picture tube (3107, 3117 and 3127)
- white "D" (3671, 3680)

- Set the brightness to 1/4 of its range and set the contrast to minimum.
- Set the potentiometers 3107, 3117, 3127, 3671 and 3680 in mechanical mid-position.
- Set VG2 potentiometer to minimum.
- Set the signal generator in "pur" position and introduce the respective colours red, green and blue.
- Using potentiometers 3107, 3117 and 3127 with the corresponding colour pattern, set the voltage on the picture tube pins 8, 6 and 11 to 100V.
- Apply a white frame and adjust the VG2 potentiometer so that any colour among red, green or blue becomes visible.
- Set the pattern generator to purity with the colour that was first visible.
- Reset VG2 potentiometer to just visible light.
- Adjust the two remaining colours with their corresponding purity colour to the same light output using potentiometers 3107, 3117 or 3127.
- Return the signal generator to white frame and adjust the potentiometers 3107, 3117 and 3127 so that an optimum background colour is obtained.
- Using potentiometers 3671 and 3680 (with white frame) adjust the background colour so that at minimum brightness and maximum brightness the background colour is the same.

1.5 Focusing (top knob on line outputtransformer)
- Apply white pattern to monitor.
- Adjust focusing so that the picture at 2/3 of the diagonal lines (counting from center to four corners) of the displayed screen is as sharp as possible.

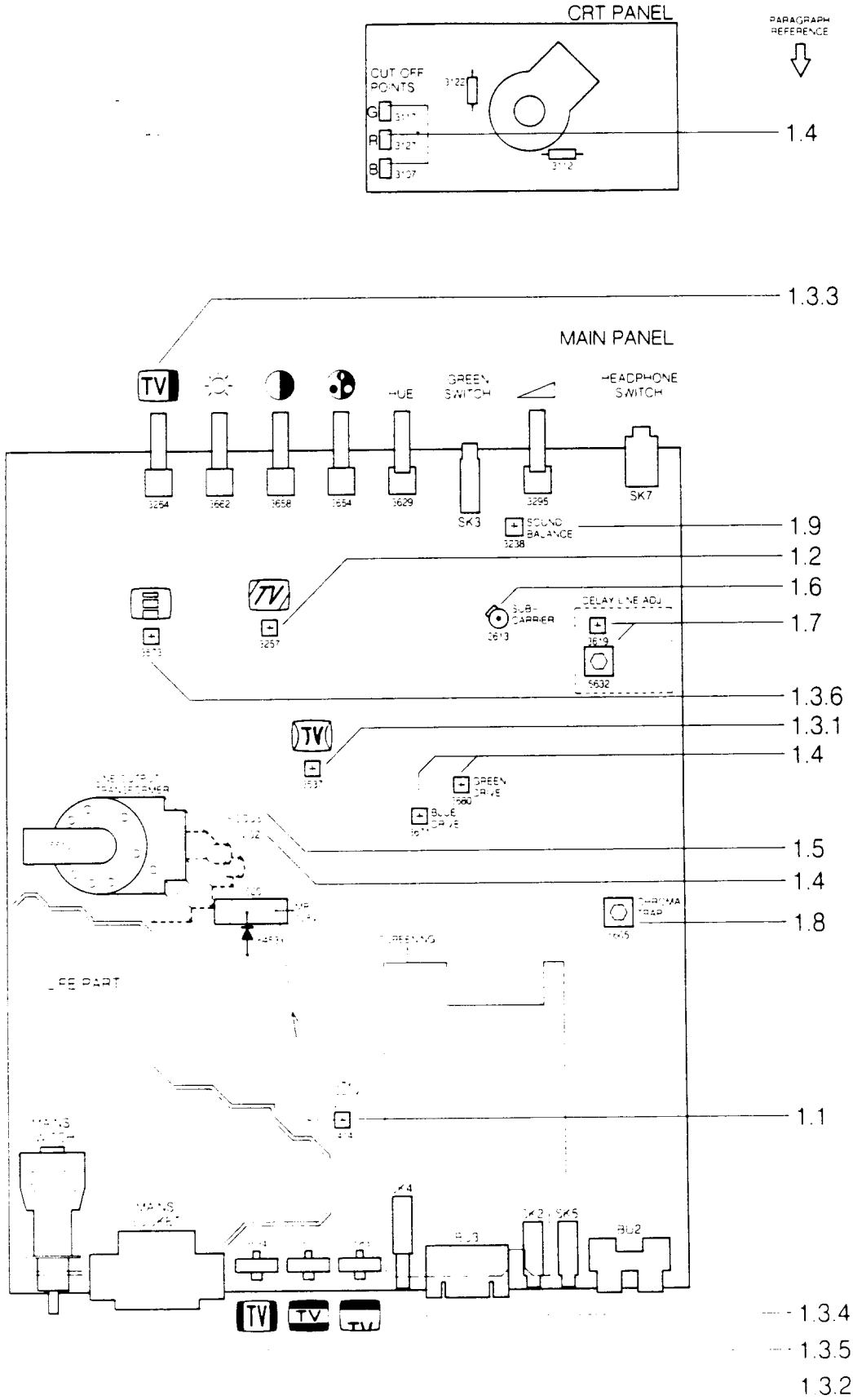
1.6 Subcarrier oscillator(2613)
- Apply colour bar pattern to monitor.
- Connect 470Ω resistor between point 11 of IC 7610 and earth.
- Adjust 2613 so that the colour picture on the screen is stationary.
- Remove the 470Ω resistor.

1.7 PAL delay line (3619, 5632)
- Apply DEM pattern from a pattern generator to the monitor.
- Set brightness control 3662, contrast control 3658 and colour saturation control 3654 to 3/4 of the range.
- Adjust 3619 so that the "venetian blinds" in the third bar disappear.
- Then adjust 5632 until the "venetian blinds" in the first and fourth bar disappear.
- Readjust 3619 as described above.

1.8 Chrominance suppression(5605)
- Apply colour bar pattern to the monitor.
- Connect oscilloscope to pin 15 of IC 7640.
- Set 5605 so that the chrominance signal is minimum. (The chrominance signal is superimposed on the grey steps of the luminance signal).

1.9 Audio balance (3298)
- Apply sinusoidal signal of 177mVrms (1KHz) to both audio inputs L/R.
- Set volume control in mid-position.
- Replace the two loudspeakers with a 16Ω resistor.
- Set 3298 so that the output level on both 16Ω resistors is the same.

LOCATION OF ADJUSTING COMPONENTS



2. PICTURE SETTINGS

Remarks:

- The following adjustments only apply to monitors which are fitted with a replaceable deflection unit.
- In case of combi tube replacement, no picture settings is required because it has been done by factory already
- The colour purity and convergence adjustments described hereafter need only to be carried out if a completely new setting is required or if a new picture tube has been fitted. In other cases, for example after replacing the deflection unit, it will not usually be necessary to remove the rubber wedges (G in figure 3). Corrections by means of the multi-pole unit will then suffice.
- Focusing adjustment described in item 1.5 must be done prior to picture settings.

2.1 Colourpurity, see figure 3

- Unscrew the fixing screw "F" on the deflection unit.
- Move the deflection unit and remove the three rubber wedges "G".
- Move the deflection unit forward as far as possible against the glass of the picture tube cone and tighten fixing screw "F" so that the deflection unit can only be shifted slightly.
- Place the multi-pole unit in the position drawn: tighten screw "A" and turn locking ring "B" anticlockwise.
- Position the monitor to face east or west and switch it on. Apply a cross-hatch pattern and set the brightness control to maximum. Allow the monitor to warm up for ten minutes.
- Adjust the static convergence using tags "C" and "D" (if necessary, refer to point 2.2.).
- Turn 3583 for the vertical centering to its mid-position. Switch off the green and blue gun by disconnecting resistors 3122 and 3112.
- By turning the colour purity rings with the "E" tags, the vertical red bar is brought as close as possible to the centre of the screen, whilst the central horizontal line should be as straight as possible.
- Apply a white pattern signal and check that the red bar is in fact in the centre of the screen. If not, switch on the cross-hatch pattern again and move the red bar in the right direction, ensuring that the picture does not move too much in the vertical direction.
- Apply the white pattern signal and move the deflection unit until the whole picture surface is uniformly red.
- Switch on the green and the blue gun. There may be no colour patches in the white picture now obtained. If there are, a minor correction can be made by turning the colour purity rings "E" slightly and/or moving the deflection unit slightly.
- Tighten screw "F" securely.
- Adjust the vertical centering with 3583.
- Proceed to the static and then the dynamic convergence setting.

2.2 Staticconvergence, see figure 3

- Apply a cross-hatch pattern and allow the monitor to warm up for ten minutes.
- Switch off the green gun by disconnecting resistor 3122 and turn locking ring "B" anticlockwise.
- By turning the four-pole rings with the "C" tags the red and blue cross-hatch patterns are placed on top of each other in the centre of the screen.
- Switch on the green gun by connecting resistor 3122 back to its orginal position and switch off the blue gun by disconnecting 3112.
- By turning the six-pole rings with the "D" tags the red and green patterns are placed on top of each other in the centre of the screen.
- Switch on the blue gun by connecting resistor 3112 back to its orginal position and tighten ring "B".

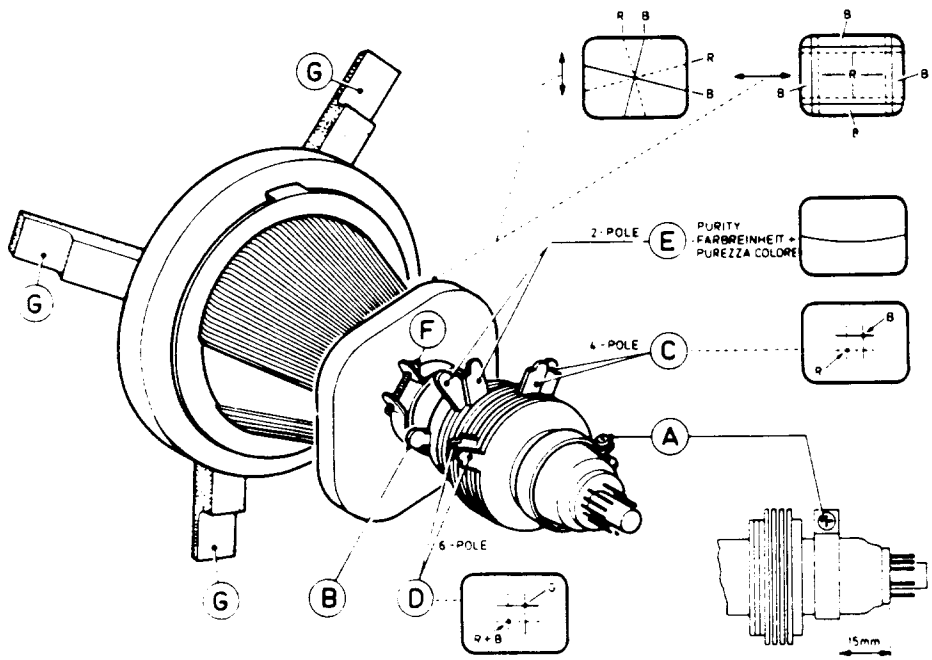


Fig. 3

2.3 Dynamicconvergence

Remark:
The dynamic convergence is achieved by tilting the deflection unit vertically and horizontally. In order to fix the deflection unit in the right position, three rubber wedges are fitted between the glass of the picture tube cone and the deflection unit, as shown in fig. 4d or 5d. Two wedge thicknesses are available, one 7 mm thick, code number 4822 462 40356 and the other 11 mm thick, code number 4822 462 40357.

- First check the colour purity and the static convergence.
- Apply a cross-hatch pattern and switch off the green gun by disconnecting resistor 3122.
- Eliminate the crossing of the central horizontal blue and red line and the crossing of the central vertical blue and red line by vertically tilting the deflection unit. If the deflection unit is in the correct position, then place rubber wedge (1), without removing the paper strip, at the top (figure 4a) or at the bottom (figure 5a). Figure 4a applies when the unit is tilted upwards and figure 5a applies when the unit is tilted downwards.
- Through the horizontal tilting of the deflection unit, both the horizontal blue and red lines in the upper and lower halves of the picture and the vertical blue and red lines on the left and right-hand side of the picture are placed on top of each other.
  If the deflection unit is in the correct position, then place the wedges (2) and (3), remove the paper strips and formly press the adhesive side of these wedges against the glass of the picture tubes as shown in figure 4b or 5b.
- Now place wedge (4) as shown in figure 4c or 5c,remove the paper strip and firmly press the adhesive side of this wedge against the glass of the picture tube cone.
- Remove wedge (1) so that the situation according to figure 4d or 5d arises.
- Switch on the green gun by connecting resistor 3122 back to its original position.

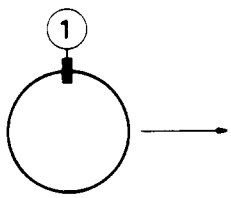


Fig. 4a

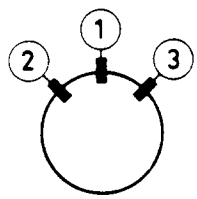


Fig. 4b

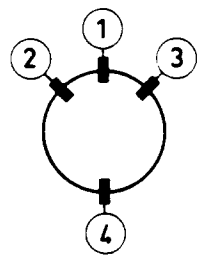


Fig. 4c

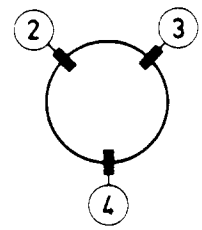


Fig. 4d

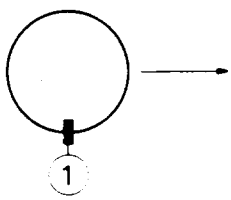


Fig. 5a

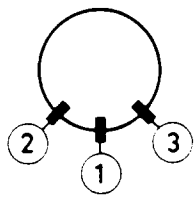


Fig. 5b

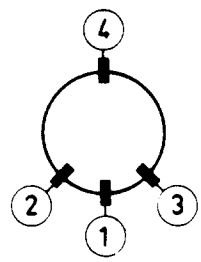


Fig. 5c

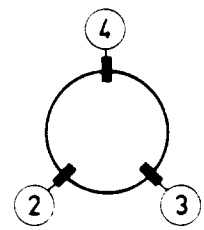
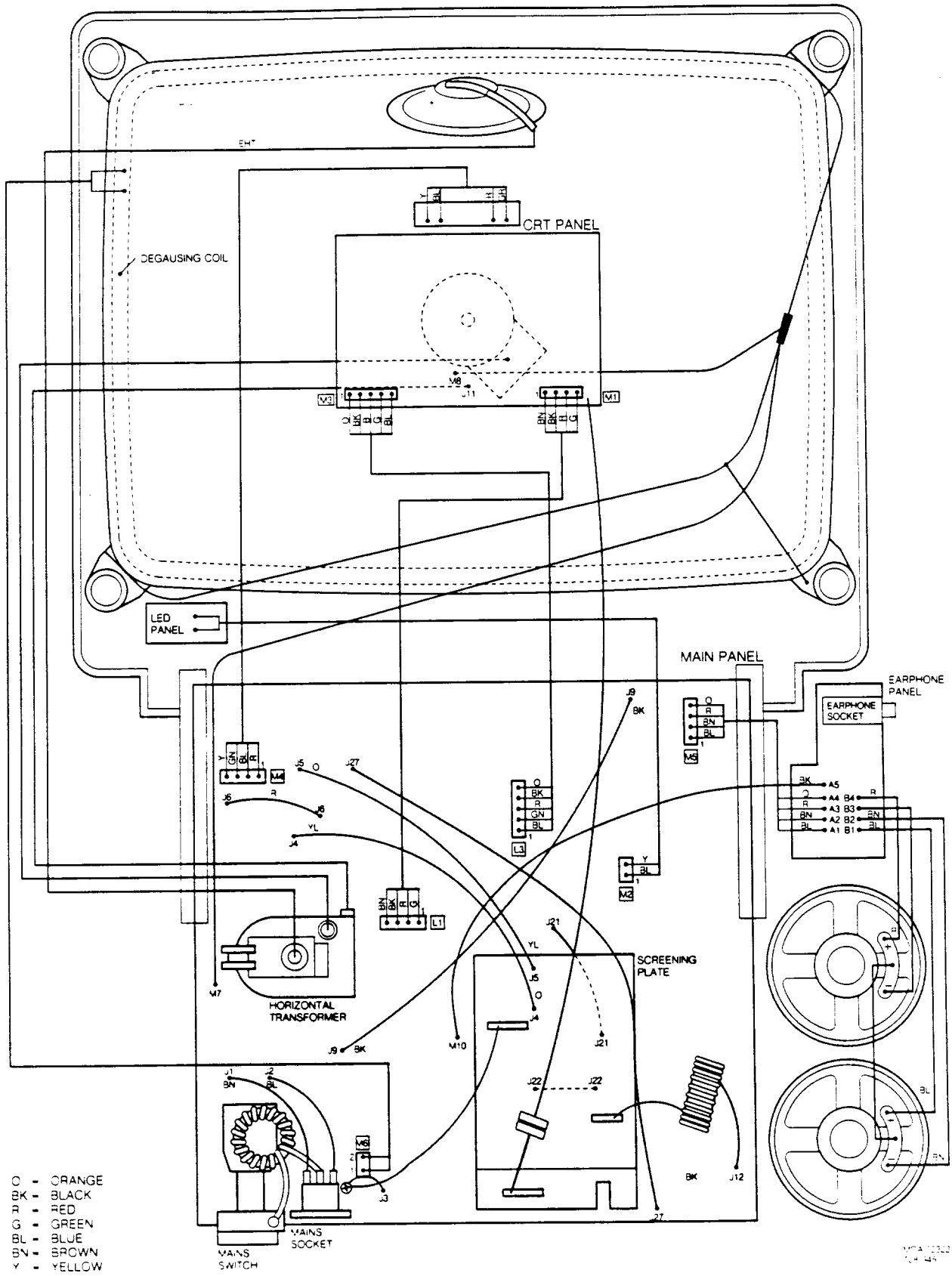


Fig. 5d

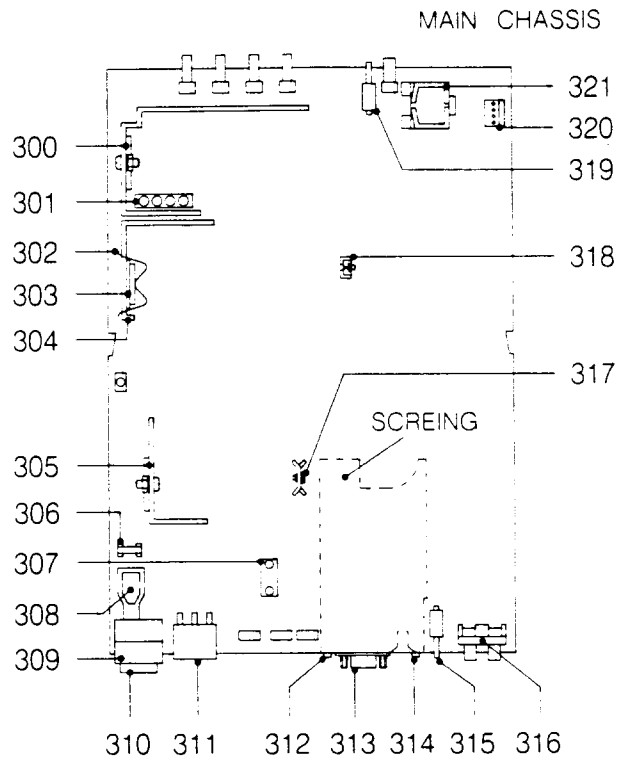
WIRING DIAGRAM



MAIN CHASSIS PANEL

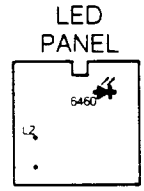
Mechanical parts

300	4822 390 20011	Silicon grease
301	4822 265 30375	Connector
302	4822 492 62076	Spring
303	4822 255 40893	Insulation plate
304	4822 390 20011	Silicon grease
305	4822 390 20011	Silicon grease
306	4822 492 60063	Fuse holder
307	4822 267 40646	Socket
308	4822 276 12445	Power switch (SK1)
309	4822 256 91564	Holder
310	4822 410 60456	Power push button
311	4822 265 30752	Mains socket
312	4822 276 12677	Switch (TTL/analog, SK4)
313	4822 267 40893	"D" SHELL socket (BU3)
314	4822 276 15505	Switch (RGB/CVBS, SK2)
315	4822 276 11505	Switch (LCA/CVBS, SK5)
316	4822 267 40894	Socket (BU1, BU2, BU4, BU5)
317	4822 390 20011	Silicon grease
318	4822 265 20235	Connector
319	4822 276 11505	Switch (SK3)
320	4822 265 30408	Connector
321	4822 390 20011	Silicon grease
	4822 535 30095	EYE LET (1,89x0,18x2,29)
	4822 535 30096	EYE LET (1,52x0,18x2,23)



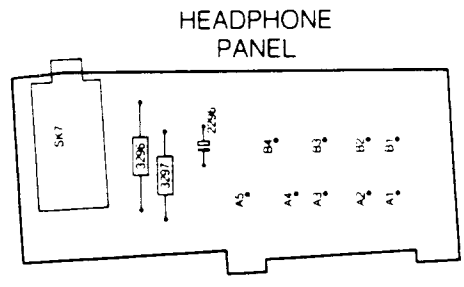
LED PANEL

	4822 212 23302	**LED panel complete**
3460	4822 116 52391	1K 0,5W 5%
6460	4822 130 81701	LED GREEN



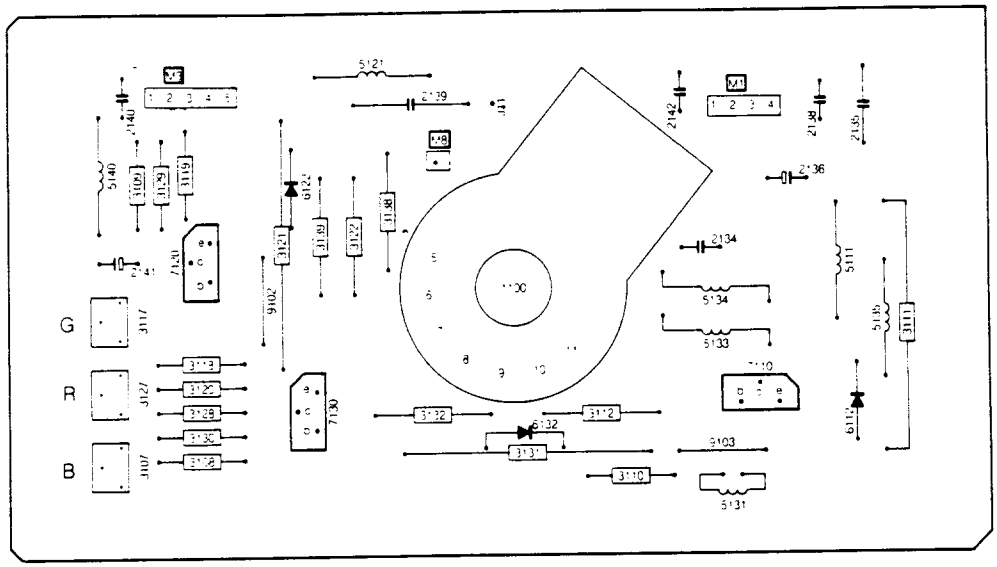
HEADPHONE PANEL

	4822 212 23312	**Headphone panel complete**
	4822 267 31144	Socket for headphone
	4822 265 30778	Connector assy
2296	4822 124 22681	ELCO 47µF 16V 20%
3296	4822 116 52389	100Ω 0,5W 5%
3297	4822 116 52389	100Ω 0,5W 5%



Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

CRT PANEL



ELECTRICAL PARTS CRT PANEL

2134	4822 122 33646	470pF 10% 500V
2135	4822 121 41677	10nF 10% 400V
2136	4822 124 22023	4,7µF 200V
2138	4822 122 33966	10nF 10% 50V
2139	4822 121 41926	33nF 5% 630V
2140	4822 122 33966	10nF 10% 50V
2141	4822 124 23129	22µF 20% 50V
2142	5322 122 32332	1,5nF 10% 100V

3107	5322 100 11542	4k7 TRIM LINEAR
3108	4822 116 52391	1k 5% 0,5W
3109	4822 116 52367	47Ω 5% 0,5W
3110	4822 116 52391	1k 5% 0,5W
3111	4822 116 82126	3k9 3W
3112	4822 116 53423	470Ω 1% 0,6W
3117	5322 100 11542	4k7 TRIM LINEAR
3118	4822 116 52391	1k 5% 0,5W
3119	4822 116 52367	47Ω 5% 0,5W
3120	4822 116 52391	1k 5% 0,5W
3121	4822 116 82126	3k9 3W
3122	4822 116 53423	470Ω 1% 0,6W
3127	5322 100 11542	4k7 TRIM LINEAR
3128	4822 116 52391	1k 5% 0,5W
3129	4822 116 52367	47Ω 5% 0,5W

3130	4822 116 52391	1k 5% 0,5W
3131	4822 116 82126	3k9 3W
3132	4822 116 53423	470Ω 1% 0,6W
3138	4822 116 80547	1k5 5% 0,5W
3139	4822 116 80547	1k5 5% 0,5W

5111	4822 157 60485	
5121	4822 157 60485	
5131	4822 157 60485	
5133	4822 152 20587	7,5µH
5134	4822 152 20587	7,5µH
5135	4822 157 60483	
5140	4822 157 60483	

6112	4822 130 30842	BAV21
6122	4822 130 30842	BAV21
6132	4822 130 30842	BAV21

7110	4822 130 41773	BF869
7120	4822 130 41773	BF869
7130	4822 130 41773	BF869

ELECTRICAL PARTS MAIN CHASSIS

1401	4822 253 30025	T2A
1627	4822 242 70304	8,867 238 MHz
2251	4822 121 50994	100 nF 100V
2258	4822 121 51258	2,7nF 500V
2261	4822 121 42636	150nF 10% 63V
2262	4822 121 50994	100 nF 100V
2264	4822 122 31125	4,7nF 80% 63V
2266	4822 124 41659	4,7µF 20% 25V
2267	4822 121 50994	100 nF 100V
2268	4822 124 22669	1µF 20% 50V
2269	4822 124 23129	22µF 20% 50V
2270	5322 122 32343	47pF 2% 100V
2272	4822 124 23129	22µF 20% 50V
2273	4822 122 30103	22nF 80% 63V
2274	4822 124 22678	100µF 20% 16V
2275	4822 122 33966	10nF 10% 50V
2289	4822 121 50994	100 nF 100V
2290	4822 122 30027	1nF 10% 100V
2291	5322 124 10623	1000µF 20% 16V
2292	4822 121 50994	100 nF 100V
2294	4822 121 50994	100 nF 100V
2295	4822 122 30027	1nF 10% 100V
2301	4822 124 23129	22µF 20% 50V
2302	4822 122 30103	22nF 80% 63V
2303	5322 122 32143	22pF 100V
2304	4822 121 42637	220nF 20% 63V
2305	4822 122 30057	2,7nF 10% 100V
2307	4822 122 32185	10pF 2% 100V
2319	4822 122 33966	10nF 10% 50V
2320	4822 122 30103	22nF 80% 63V
2327	4822 124 23129	22µF 20% 50V
2328	4822 124 23129	22µF 20% 50V
2350	4822 122 33643	100pF 10% 50V
2360	4822 122 31353	330pF 2% 100V
2361	4822 124 23131	10µF 20% 50V
2363	4822 122 30103	22nF 80% 63V
2365	4822 122 30103	22nF 80% 63V
2368	4822 122 33645	220pF 500V
2369	4822 126 10453	3,3nF 50V
2370	4822 122 30103	22nF 80% 63V
2402	5322 121 44212	1µF 10% 275B
2403	4822 122 33652	2,2nF 20% 400V
2404	4822 122 33652	2,2nF 20% 400V
2405	4822 121 43385	47nF 20% 250V
2406	4822 121 41984	47nF 10% 400V
2407	4822 122 40348	2,2µF 1kV
2408	4822 122 32154	2,2nF 10% 1kV
2409	4822 122 40348	2,2µF 1kV
2410	4822 122 40348	2,2µF 1kV
2412	4822 124 21722	100µF 50% 400V
2416	4822 124 23131	10µF 20% 50V
2417	4822 122 33966	10nF 10% 50V
2422	4822 124 22669	1µF 20% 50V
2423	4822 121 50994	100nF 100V
2424	4822 121 41925	15nF 10% 100V
2429	4822 121 42637	220nF 20% 63V
2431	5322 122 32818	2,2nF 10% 100V
2432	4822 121 50966	2,2nF 20% 1kV
2433	4822 121 41984	47nF 10% 400V
2441	4822 122 33645	220pF 500V
2442	4822 122 33645	220pF 500V
2443	4822 122 33645	220pF 500V
2444	4822 122 33645	220pF 500V
2445	4822 124 41865	470µF 20% 35V
2446	4822 124 22357	470µF 25V
2447	4822 124 22357	470µF 25V
2450	4822 124 23131	10µF 20% 50V
2451	4822 124 41281	47 µF 200V
2452	4822 124 23129	22µF 50V
2510	4822 122 33969	27pF 5% 500V
2511	4822 124 22672	2,2µF 20% 63V
2512	4822 124 23129	22µF 20% 50V
2514	4822 122 40427	2kV 470pF
2515	4822 124 41867	1µF 20% 250V
2517	4822 121 43061	8,2nF 5% 1,6kV
2518	4822 121 43392	22nF 10%
2519	4822 121 43511	560nF 10% 250V
2520	4822 124 22499	10µF 160V
2524	4822 124 90034	4MU7 50V
2526	4822 124 22669	1µF 20% 50V
2531	4822 121 41879	120nF 10% 100V
2532	4822 122 33966	10nF 10% 50V
2536	4822 124 22669	1µF 20% 50V
2537	4822 124 23129	22µF 20% 50V
2540	4822 122 33645	220pF 500V
2541	4822 124 23129	22µF 20% 50V
2543	4822 121 41925	15nF 10% 100V
2544	4822 121 40336	47nF 10% 250V
2547	4822 124 22672	2,2µF 20% 63V
2554	4822 122 31125	4,7nF 80% 63V
2555	4822 122 31125	4,7nF 80% 63V
2556	5322 122 32052	680pF 10% 100V
2560	5322 124 41431	22µF 20% 35V
2561	5322 124 41431	22µF 20% 35V
2563	4822 124 41865	470µF 20% 35V
2571	4822 124 41866	680µF 20% 35V
2573	4822 124 41975	1,5µF 63V
2575	4822 121 50994	100nF 100V
2601	4822 124 22678	100µF 20% 16V
2602	4822 122 30103	22nF 80% 63V
2603	4822 122 30027	1nF 10% 100V
2604	4822 124 22669	1µF 20% 50V
2605	4822 121 41681	470nF 10% 40V
2606	4822 121 41676	47nF 10% 250V
2607	4822 121 50994	100nF 100V
2608	4822 121 50994	100nF 100V
2609	4822 122 31823	15pF 2% 100V
2610	4822 122 31056	12pF 2% 100V
2611	4822 122 33966	10nF 10% 50V
2612	4822 121 41681	470nF 10% 40V
2613	4822 125 50088	27pF Trimmer
2614	4822 122 33966	10nF 10% 50V
2616	4822 122 30103	22nF 80% 63V
2617	4822 122 30103	22nF 80% 63V
2618	4822 121 42637	220nF 20% 63V
2640	4822 124 22678	100µF 20% 16V
2641	4822 122 30103	22nF 80% 63V
2642	4822 122 30103	22nF 80% 63V
2643	4822 122 30103	22nF 80% 63V
2644	4822 122 30103	22nF 80% 63V
2645	4822 121 50992	330nF 10% 63V
2646	4822 121 50992	330nF 10% 63V
2647	4822 124 41659	4,7µF 20% 25V
2648	4822 122 30103	22nF 80% 63V
2649	4822 121 50992	330nF 10% 63V

ELECTRICAL PARTS MAIN CHASSIS

2651	4822 122 30103	22nF 80% 63V
2652	4822 121 50994	100nF 100V
2653	4822 121 50994	100nF 100V
2654	4822 121 50994	100nF 100V
2669	4822 124 23131	10µF 20% 50V
2673	5322 122 34148	330pF 2% 100V
2682	5322 122 34148	330pF 2% 100V
2688	5322 122 34148	330pF 2% 100V
2695	4822 122 30103	22nF 80% 63V
2696	4822 124 22681	47µF 20% 16V
2697	4822 124 22681	47µF 20% 16V

3257	4822 100 11319	4k7 pot.m.
3258	4822 116 52467	33k 5% 0,5W
3261	4822 116 53083	15k 1% 0,6W
3262	4822 116 52426	4k7 5% 0,5W
3263	4822 116 52463	22k 5% 0.5W
3264	4822 100 90079	10k pot.m.
3266	4822 116 52399	1k5 5% 0,5W
3268	4822 116 52441	6k8 5% 0,5W
3269	4822 116 52389	100Ω 5% 0,5W
3271	4822 116 52502	1M5 5% 0.5W
3272	4822 116 52425	470Ω 5% 0,5W
3273	4822 111 30499	4Ω7 5% 0,33W
3274	4822 116 52452	10k 5% 0,5W
3288	4822 116 52463	22k 5% 0,5W
3289	4822 116 52463	22k 5% 0,5W
3293	4822 116 52463	22k 5% 0,5W
3294	4822 116 52463	22k 5% 0,5W
3295	4822 100 90082	20k pot.m.
3298	4822 100 11392	47k LIN. pot.m.
3301	4822 116 52463	22k 5% 0,5W
3302	4822 116 52452	10k 5% 0,5W
3303	5322 116 53339	75Ω 1% 0,6W
3304	4822 116 52425	470Ω 5% 0,5W
3306	4822 116 52391	1k 5% 0,5W
3307	4822 116 52428	560Ω 5% 0.5W
3308	4822 116 53025	2k2 1% 0,6W
3309	4822 116 53025	2k2 1% 0,6W
3311	5322 116 53339	75Ω 1% 0,6W
3315	4822 116 53025	2k2 1% 0,6W
3316	4822 116 53025	2k2 1% 0.6W
3317	4822 116 53025	2k2 1% 0,6W
3318	4822 116 53025	2k2 1% 0,6W
3319	4822 116 52391	1k 5% 0,5W
3320	4822 111 30487	1Ω5 5% 0,33W
3321	4822 116 52416	330Ω 5% 0,5W
3322	4822 116 52416	330Ω 5% 0,5W
3323	4822 116 52425	470Ω 5% 0,5W
3324	4822 116 52416	330Ω 5% 0,5W
3325	4822 116 52416	330Ω 5% 0,5W
3326	4822 116 52416	330Ω 5% 0,5W
3327	4822 116 52425	470Ω 5% 0,5W
3328	4822 116 52849	220Ω 1% 0,6W
3329	4822 116 52452	10k 5% 0,5W
3330	4822 111 30499	4Ω7 5% 0,33W
3331	4822 116 52941	430Ω 1% 0,6W
3332	4822 116 52941	430Ω 1% 0,6W
3333	4822 116 52941	430Ω 1% 0,6W
3334	4822 116 52941	430Ω 1% 0,6W
3335	4822 116 52425	470Ω 5% 0,5W
3336	4822 116 52389	100Ω 5% 0,5W
3337	5322 116 53339	75Ω 1% 0,6W
3340	4822 116 52391	1k 5% 0,5W

3341	4822 116 52391	1k 5% 0,5W
3342	4822 116 52391	1k 5% 0,5W
3344	4822 116 52846	150Ω 1% 0,6W
3345	4822 116 52416	330Ω 5% 0,5W
3346	4822 116 52416	330Ω 5% 0,5W
3347	4822 116 52389	100Ω 5% 0,5W
3350	4822 116 52465	27k 5% 0,5W
3351	4822 116 52452	10k 5% 0,5W
3352	4822 116 52425	470Ω 5% 0,5W
3353	4822 116 52389	100Ω 5% 0,5W
3360	4822 116 52391	1k 5% 0,5W
3361	4822 116 52391	1k 5% 0,5W
3362	4822 116 52509	220k 5% 0,5W
3363	4822 116 52417	3k3 5% 0,5W
3364	4822 116 53025	2k2 1% 0,6W
3365	4822 116 52509	220k 5% 0,5W
3368	4822 116 52456	12k 5% 0,5W
3369	4822 116 52472	47k 5% 0,5W
3370	4822 116 52441	6k8 5% 0,5W
3404	4822 116 40161	DUAL PTC
3410	4822 113 80466	4Ω7 10% 7W
3411	4822 116 52463	22k 5% 0,5W
3412	4822 116 52467	33k 5% 0,5W
3413	4822 116 52413	2k7 5% 0,5W
3414	4822 100 11348	1k 30% LIN
3415	4822 116 52413	2k7 5% 0,5W
3416	4822 116 52426	4k7 5% 0,5W
3417	4822 116 52416	330Ω 5% 0,5W
3420	4822 116 52302	750k 5% 0,5W
3421	4822 116 52302	750k 5% 0,5W
3422	4822 116 52846	150Ω 1% 0,6W
3425	4822 116 52412	270Ω 5% 0,5W
3426	5322 116 53734	24Ω 5% 0,5W
3427	4822 116 52417	3k3 5% 0,5W
3428	4822 116 52422	3k9 5% 0,5W
3429	4822 116 82128	100Ω 5% 1W
3430	4822 116 82128	100Ω 5% 1W
3431	4822 116 82128	100Ω 5% 1W
3432	4822 116 80388	22k 5W
3436	4822 116 52184	18Ω 5% 0,5W
3443	4822 111 30487	1Ω5 5% 0,33W
3451	4822 111 30499	4Ω7 5% 0,33W
3452	4822 116 52391	1k 5% 0,5W
3460	4822 116 52391	1K 5% 0,5W
3470	4822 116 52389	100Ω 5% 0,5W
3509	4822 116 52849	220Ω 1% 0,6W
3510	4822 116 53025	2k2 1% 0,6W
3511	4822 116 60239	1k 2W
3512	4822 111 30499	4Ω7 5% 0,33W
3513	4822 113 60185	2,2Ω 2W
3514	4822 116 52375	68Ω 5% 0,5W
3515	4822 116 52467	33k 5% 0,5W
3520	4822 113 80465	10Ω 5% 5W
3522	4822 116 52253	2k 5% 0,5W
3523	4822 116 52253	2k 5% 0,5W
3526	4822 111 30499	4Ω7 5% 0,33W
3530	4822 116 53025	2k2 1% 0,6W
3531	4822 116 52472	47k 5% 0,5W
3533	4822 116 52453	100k 5% 0,5W
3534	4822 101 10547	10k 20% 0,25W
3536	4822 116 52472	47k 5% 0.5W
3537	4822 100 11585	22k LIN.
3540	4822 111 30487	1Ω5 5% 0,33W
3541	4822 116 52367	47Ω 5% 0,5W
3543	4822 116 52527	470k 5% 0,5W

ELECTRICAL PARTS MAIN CHASSIS

3544	4822 116 53083	15k 1% 0,6W
3545	4822 116 52527	470k 5% 0,5W
3546	4822 116 52453	100k 5% 0,5W
3548	4822 111 30487	1Ω5 5% 0,33W
3550	4822 100 10915	220k pot.m.
3551	4822 116 53798	270k 1% 0,6W
3553	4822 116 52389	100Ω 5% 0,5W
3554	4822 116 52426	4k7 5% 0,5W
3555	4822 116 52426	4k7 5% 0,5W
3556	4822 116 52461	18k 1% 0,6W
3560	4822 116 52215	220Ω 5% 0,5W
3563	4822 111 30499	4Ω7 5% 0,33W
3570	4822 116 52416	330Ω 5% 0,5W
3571	5322 116 53729	180k 1% 0,6W
3572	4822 116 53083	15k 1% 0,6W
3573	4822 100 11141	10k pot.m.
3574	5322 116 53283	1Ω2 1% 0,6W
3575	4822 116 52532	560k 5% 0,5W
3580	4822 116 52416	330Ω 5% 0,5W
3581	4822 116 53025	2k2 1% 0,6W
3583	4822 101 10547	10k 20% 0,25W
3585	4822 116 52412	270Ω 5% 0,5W
3586	4822 116 52422	3k9 5% 0,5W
3601	4822 111 30499	4Ω7 5% 0,33W
3602	5322 116 53339	75Ω 1% 0,6W
3603	4822 116 52463	22k 5% 0,5W
3604	4822 116 52452	10k 5% 0,5W
3605	4822 116 52433	820Ω 5% 0,5W
3606	4822 116 52403	180Ω 5% 0,5W
3607	4822 116 52425	470Ω 5% 0,5W
3608	4822 116 52416	330Ω 5% 0,5W
3609	4822 116 53025	2k2 1% 0,6W
3612	4822 116 52426	4k7 5% 0,5W
3614	4822 116 52395	1k2 5% 0,5W
3615	4822 116 52421	390Ω 5% 0,5W
3616	4822 116 52849	220Ω 1% 0,6W
3617	4822 116 52849	220Ω 1% 0,6W
3618	4822 116 52403	180Ω 5% 0,5W
3619	4822 100 11562	220Ω 30%
3620	4822 116 52452	10k 5% 0,5W
3621	5322 116 53737	3M3 1% 0,6W
3622	5322 116 53737	3M3 1% 0,6W
3640	4822 111 30499	4Ω7 5% 0,33W
3641	4822 116 52426	4k7 5% 0,5W
3642	4822 116 52426	4k7 5% 0,5W
3643	4822 116 52426	4k7 5% 0,5W
3644	4822 116 52437	5k1 5% 0,5W
3645	4822 116 52391	1k 5% 0,5W
3646	4822 116 52452	10k 5% 0,5W
3647	4822 116 52454	11k 5% 0,5W
3648	4822 116 52416	330Ω 5% 0,5W
3649	5322 116 53479	22Ω 1% 0,6W
3651	4822 116 52476	68k 5% 0,5W
3652	4822 116 53083	15k 1% 0,6W
3653	4822 116 53083	15k 1% 0,6W
3654	4822 100 90079	10k pot.m.
3655	4822 116 52848	200k 1% 0,6W
3656	4822 116 52923	56k 1% 0,6W
3657	4822 116 53547	150k 1% 0,6W
3658	4822 100 90081	10k pot.m.
3659	4822 116 53547	150k 1% 0,6W
3660	4822 116 53083	15k 1% 0,6W
3661	4822 116 52455	110k 5% 0,5W
3662	4822 100 90081	10k pot.m.
3663	4822 116 52452	10k 5% 0,5W
3665	4822 116 52389	100Ω 5% 0,5W
3666	4822 116 53025	2k2 1% 0,6W
3667	4822 116 52426	4k7 5% 0,5W
3668	4822 116 52467	33k 5% 0,5W
3669	4822 111 30499	4Ω7 5% 0,33W
3670	4822 116 52389	100Ω 5% 0,5W
3671	4822 105 11023	1k 30% 0,1W
3672	4822 116 52399	1k5 5% 0,5W
3673	4822 116 52375	68Ω 5% 0,5W
3674	4822 116 52441	6k8 5% 0,5W
3675	4822 116 52846	150Ω 1% 0,6W
3679	4822 116 52389	100Ω 5% 0,5W
3680	4822 105 11023	1k 30% 0,1W
3681	4822 116 52399	1k5 5% 0,5W
3682	4822 116 52375	68Ω 5% 0,5W
3683	4822 116 52441	6k8 5% 0,5W
3685	4822 116 52846	150Ω 1% 0,6W
3686	4822 116 52425	470Ω 5% 0,5W
3687	4822 116 53025	2k2 1% 0,6W
3688	4822 116 52375	68Ω 5% 0,5W
3689	4822 116 52441	6k8 5% 0,5W
3691	4822 116 52846	150Ω 1% 0,6W
3692	4822 116 52417	3k3 5% 0,5W
3694	4822 116 52413	2k7 5% 0,5W
3695	4822 116 52399	1k5 5% 0,5W
3696	4822 116 52416	330Ω 5% 0,5W
3697	4822 116 52196	51Ω 5% 0,5W
3698	4822 116 52196	51Ω 5% 0,5W

5301	4822 158 10837	
5401	4822 148 60218	
5402	4822 157 60489	
5431	4822 157 52233	10µH
5436	4822 242 71344	2µH
5510	4822 140 10381	
5512	4822 142 40322	
5513	4822 152 20587	7,5µH
5522	4822 157 60488	
5523	4822 157 53122	
5524	4822 157 60486	
5541	4822 157 60483	
5605	4822 157 60487	
5606	4822 157 51056	DL330
5608	4822 157 52697	27µH
5631	4822 320 40096	DL 701
5632	4822 157 60484	
5637	4822 157 52494	6µH
5661	4822 152 20626	
5662	4822 152 20626	
5663	4822 152 20626	

6304	4822 130 30621	1N4148
6315	4822 130 30621	1N4148
6316	4822 130 30621	1N4148
6317	4822 130 30621	1N4148
6318	4822 130 30621	1N4148
6320	4822 130 30621	1N4148
6321	4822 130 30621	1N4148
6322	4822 130 30621	1N4148
6323	4822 130 30621	1N4148
6324	4822 130 30621	1N4148
6328	4822 130 34167	BZX79-B6V2
6329	4822 130 30621	1N4148

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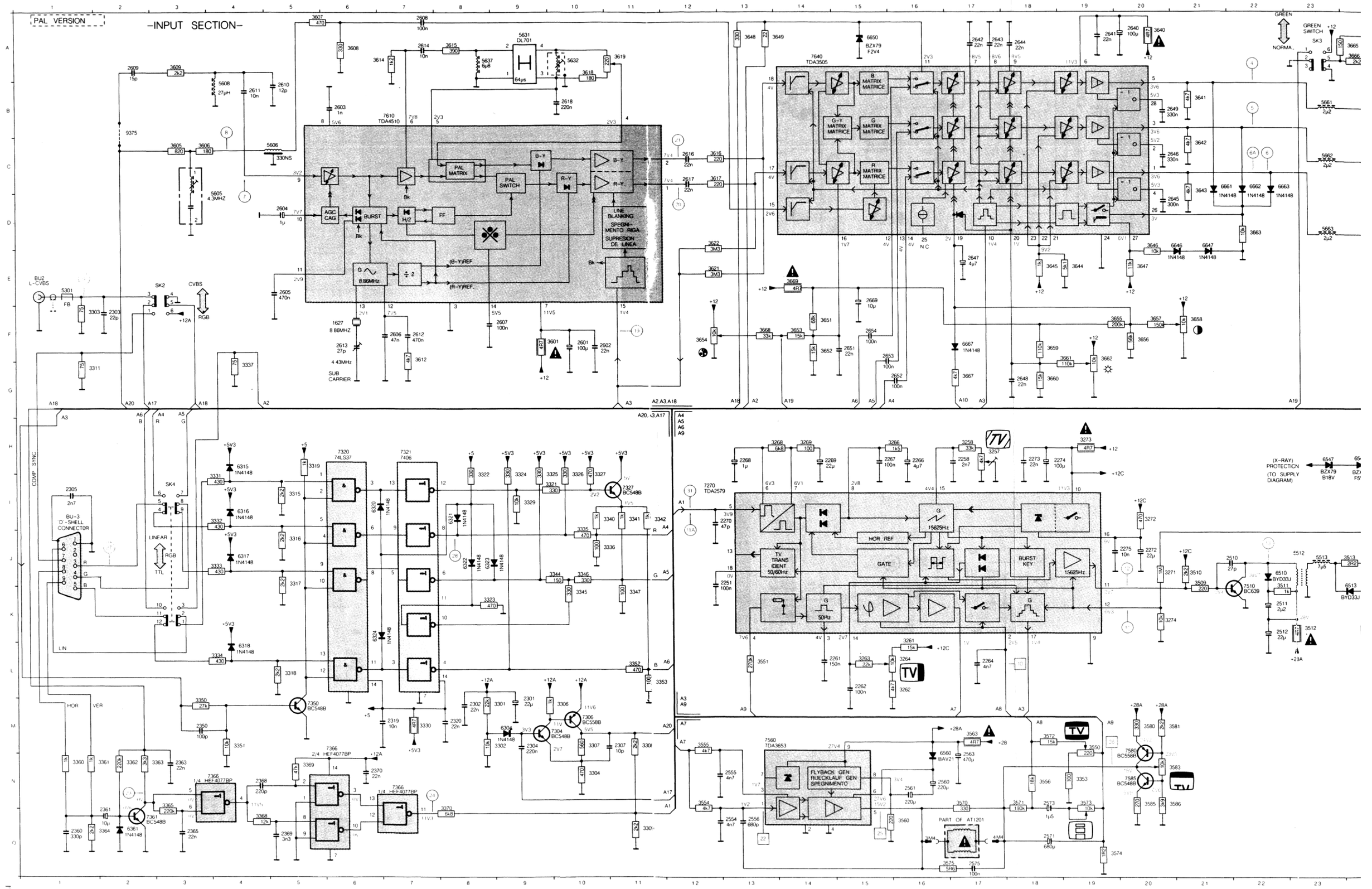
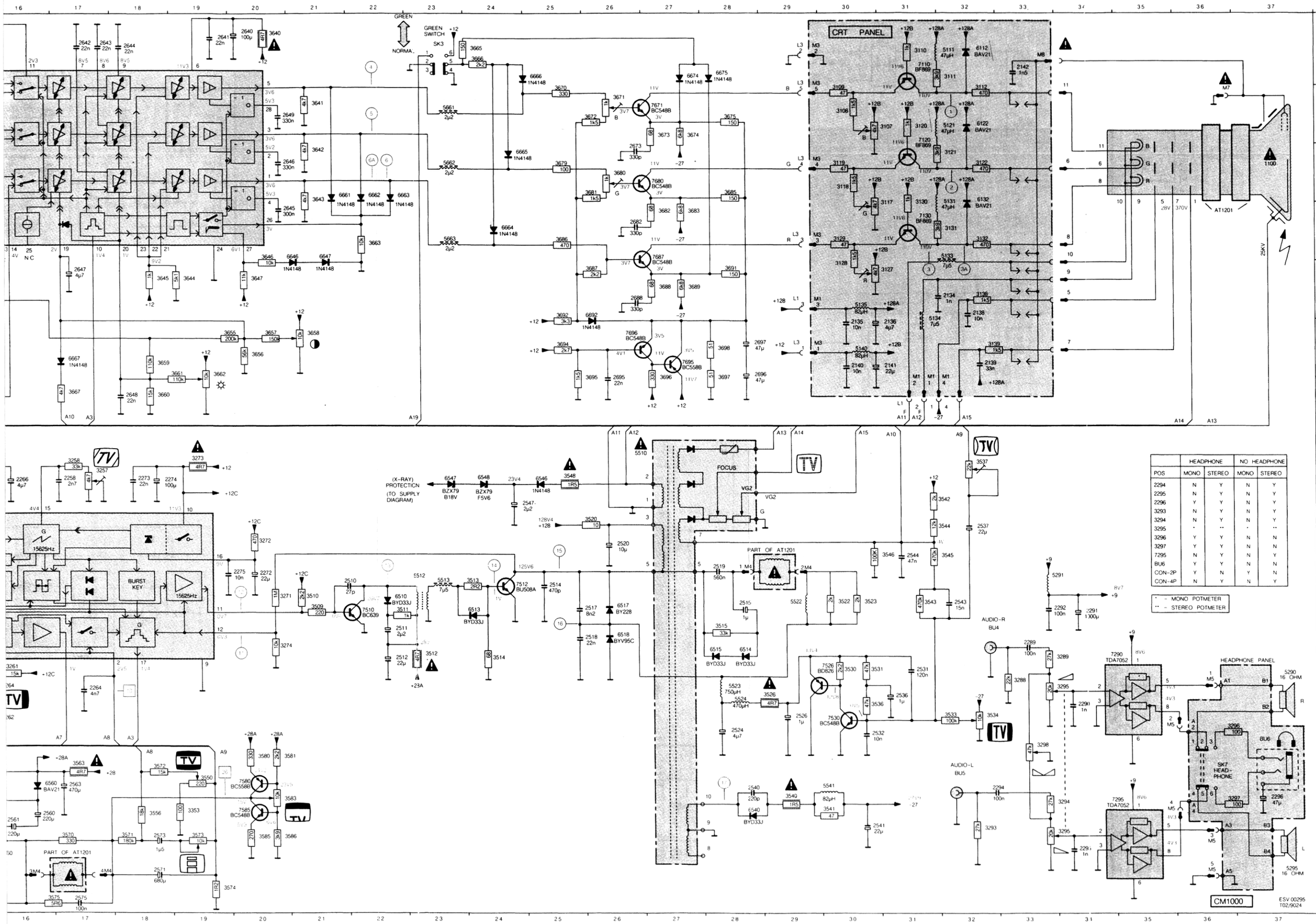
6361	4822 130 30621	1N4148
6407	4822 130 31933	1N5061
6408	4822 130 31933	1N5061
6409	4822 130 31933	1N5061
6410	4822 130 31933	1N5061
6415	4822 130 34167	BZX79-B6V2
6421	4822 130 30621	1N4148
6425	4822 130 30621	1N4148
6426	4822 130 30621	1N4148
6427	4822 130 30621	1N4148
6428	4822 130 80227	BZX79-C9V1
6429	4822 130 30621	1N4148
6430	4822 130 30621	1N4148
6431	4822 130 30621	1N4148
6432	4822 130 30621	1N4148
6433	4822 130 34174	BZX79-C4V7
6434	4822 130 80216	1N5062
6435	4822 130 80216	1N5062
6440	4822 130 32833	RGP15k
6441	4822 130 32833	RGP15k
6442	4822 130 42606	BYD33J
6443	5322 130 31971	RGP15D
6444	5322 130 31971	RGP15D
6452	4822 130 34281	BZX79-F15
6453	4822 130 42606	BYD33J
6454	4822 130 34281	BZX79-F15
6470	4822 130 34167	BZX79-B6V2
6510	4822 130 42606	BYD33J
6513	4822 130 42606	BYD33J
6514	4822 130 42606	BYD33J
6515	4822 130 42606	BYD33J
6517	4822 130 41275	BY228
6518	4822 130 41487	BYV95C
6540	4822 130 42606	BYD33J
6546	4822 130 30621	1N4148
6547	4822 130 34281	BZX79-F15
6548	4822 130 80239	BZX79-F8V2
6560	4822 130 30842	BAV21
6646	4822 130 30621	1N4148
6647	4822 130 30621	1N4148
6650	4822 130 80655	BZX79-F2V4
6661	4822 130 30621	1N4148
6662	4822 130 30621	1N4148
6663	4822 130 30621	1N4148
6664	4822 130 30621	1N4148
6665	4822 130 30621	1N4148
6666	4822 130 30621	1N4148
6667	4822 130 30621	1N4148
6674	4822 130 30621	1N4148
6675	4822 130 30621	1N4148
6692	4822 130 30621	1N4148

7270	4822 209 72363	TDA2579A/N8
7290	4822 209 60956	TDA7052/N1
7295	4822 209 60956	TDA7052/N1
7304	4822 130 40938	BC548
7306	4822 130 44197	BC558B
7320	4822 209 80916	N74LS37N
7321	5322 209 86327	N7406N
7327	4822 130 40938	BC548
7328	4822 130 41344	BC337-40
7350	4822 130 40938	BC548
7361	4822 130 44196	BC548C
7366	4822 209 10223	HEF4077BP
7401	4822 209 71634	TCDT1101G
7417	4822 130 40937	BC548B
7421	4822 130 41344	BC337-40
7432	4822 130 42679	BUT11AF
7450	4822 209 81726	MC7812CT
7452	5322 130 24081	BT151-500R
7470	4822 130 44197	BC558B
7510	4822 130 41053	BC639
7512	4822 130 61265	BU508AF
7526	4822 130 41774	BD826
7530	4822 130 40937	BC548B
7560	4822 209 60955	TDA3653B/N1
7580	4822 130 44197	BC558B
7585	4822 130 40937	BC548B
7603	4822 130 40937	BC548B
7610	4822 209 70019	TDA4510/V2
7640	4822 209 71971	TDA3505/V4
7671	4822 130 40937	BC548B
7680	4822 130 40937	BC548B
7687	4822 130 40937	BC548B
7695	4822 130 44197	BC558B
7696	4822 130 40937	BC548B

MAIN CIRCUIT DIAGRAM (signal part)



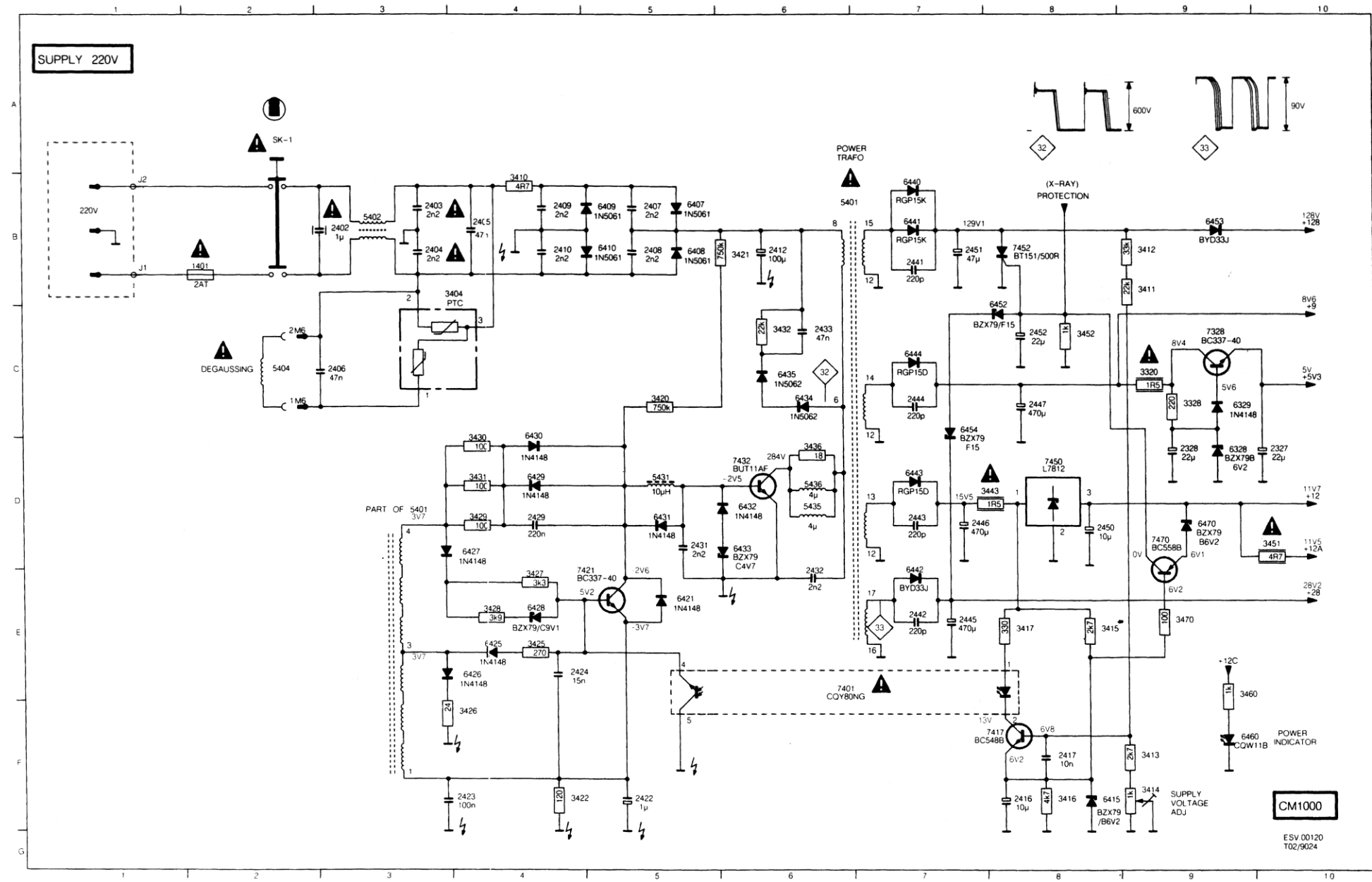


	HEADPHONE		NO HEADPHONE	
POS	MONO	STEREO	MONO	STEREO
2294	N	Y	N	Y
2295	N	Y	N	Y
2296	Y	Y	N	Y
3293	N	Y	N	Y
3294	N	Y	N	Y
3295	·	··	·	··
3296	Y	Y	N	N
3297	Y	Y	N	N
7295	N	Y	N	N
BU6	Y	N	N	N
CON-2P	Y	Y	N	Y
CON-4P	N	Y	N	Y

· - MONO POTMETER
·· - STEREO POTMETER

BU2	E1	3269	H14	3667	G17
BU4	K32	3271	J20	3668	F13
BU5	M32	3272	I20	3669	E14
SK2	E3	3273	H19	3670	B25
SK3	A23	3274	K20	3671	B26
SK4	I3	3288	L33	3672	B26
SK7	M36	3289	K34	3673	B27
1627	F6	3293	N32	3674	B27
2134	E32	3294	N34	3675	B28
2135	F30	3295	L34	3679	C25
2136	F31	3295	M34	3680	C26
2138	E32	3296	M36	3681	C26
2139	F32	3297	N36	3682	D27
2140	F30	3298	M33	3683	D27
2141	F31	3301	M9	3685	C26
2142	A33	3302	M9	3686	D25
2251	J13	3303	F1	3687	E26
2258	H17	3304	N10	3688	E27
2261	L14	3306	M10	3689	E27
2262	L15	3307	M10	3691	E28
2264	L17	3308	M11	3692	E25
2266	H16	3309	O11	3694	F25
2267	H15	3311	G1	3695	G26
2268	H13	3315	I5	3696	G27
2269	H14	3316	J5	3697	G28
2270	I13	3317	J5	3698	F28
2272	J20	3318	L5	5111	A32
2273	H18	3319	H5	5121	B32
2274	H18	3321	I10	5131	D32
2275	J20	3322	I8	5133	D32
2289	K33	3323	K8	5134	F31
2290	L34	3324	I9	5135	E30
2291	K34	3325	I10	5140	F30
2292	J34	3326	I10	5290	L37
2294	N32	3327	I10	5291	J34
2295	O34	3329	I9	5295	O37
2296	N37	3330	M7	5301	E1
2301	M9	3331	I4	5510	H26
2302	M8	3332	I4	5512	J23
2303	F2	3333	J4	5513	J23
2304	M9	3334	L4	5522	J29
2305	I1	3335	J10	5523	L28
2307	M11	3336	J11	5524	L28
2319	M7	3337	G4	5541	N30
2320	M8	3340	I11	5605	D4
2350	M3	3341	I11	5606	C5
2360	O1	3342	I11	5608	B4
2361	O2	3344	J10	5631	A9
2363	N3	3345	K10	5632	A10
2365	O3	3346	J10	5637	A8
2368	N4	3347	K11	5661	B23
2369	O5	3350	M3	5662	C23
2370	N6	3351	M4	5663	D23
2510	J22	3352	L11	6112	A32
2511	K22	3353	L11	6122	B32
2512	K22	3353	N19	6132	C32
2514	J25	3360	N1	6304	M9
2515	J28	3361	N2	6315	H4
2517	J26	3362	N2	6316	I4
2518	K26	3363	N3	6317	J4
2519	J28	3364	O2	6318	L4
2520	I26	3365	N3	6320	I6
2524	M28	3368	O4	6321	I8
2526	L29	3369	N5	6322	J8
2531	L31	3370	O8	6323	J8
2532	M30	3509	J21	6324	K6
2536	L31	3510	J21	6361	O2
2537	I32	3511	K22	6510	J22
2540	N28	3512	K23	6513	K24
2541	N30	3513	J24	6514	K28
2543	J32	3514	K24	6515	K28
2544	J31	3515	K28	6517	J26
2547	I25	3520	I26	6518	K26
2554	O13	3522	J30	6540	N28
2555	N13	3523	J30	6546	H25
2556	O13	3526	L29	6547	H23
2560	N16	3530	L30	6548	H24
2561	N16	3531	L30	6560	N16
2563	N17	3533	L32	6646	D21
2571	O18	3534	L32	6647	D21
2573	N18	3536	L30	6650	A15
2575	O17	3537	H32	6661	C21
2601	F10	3540	N29	6662	C22
2602	F10	3541	N30	6663	C22
2603	B6	3542	I32	6664	D24
2604	D5	3543	J31	6665	C24
2605	E5	3544	I32	6666	A25
2606	F7	3545	J32	6667	F17
2607	F9	3546	J31	6674	A27
2608	A7	3548	H25	6675	A28
2609	A2	3550	M19	6692	E26
2610	B5	3551	L13	7110	A31
2611	B4	3554	N12	7120	B31
2612	F7	3555	M12	7130	D31
2613	F6	3556	N18	7270	I12
2614	A7	3560	O16	7290	K35
2616	C12	3563	M17	7295	N35
2617	C12	3570	N17	7304	M9
2618	B10	3571	N18	7306	M10
2640	A20	3572	M18	7320	H6
2641	A19	3573	N19	7321	H7
2642	A17	3574	O19	7327	I11
2643	A17	3575	O16	7350	M5
2644	A18	3580	M20	7361	O2
2645	D21	3581	M20	7366	M6
2646	C21	3583	N20	7366	N4
2647	E17	3585	N20	7366	N7
2648	G18	3586	N20	7510	K22
2649	B21	3601	F10	7512	J24
2651	F15	3605	C3	7530	L30
2652	G16	3606	C3	7560	M13
2653	F15	3607	A5	7585	N20
2654	F15	3608	A6	7610	B7
2669	E15	3609	A3	7640	A14
2673	C26	3612	F7	7671	B27
2682	D26	3614	A7	7680	C27
2688	E26	3615	A8	7687	D27
2695	G26	3616	C12	7696	F26
2696	F28	3617	C12	9375	B2
2697	F28	3618	A10		
3107	B31	3619	A11		
3108	B30	3621	E12		
3109	B30	3622	D12		
3110	A31	3640	A20		
3111	A32	3641	B21		
3112	B32	3642	C21		
3117	D31	3643	C21		
3118	C30	3644	E19		
3119	C30	3645	E18		
3120	B31	3646	D20		
3121	C32	3647	E20		
3122	C32	3648	A13		
3127	E31	3649	A14		
3128	E30	3651	F14		
3129	D30	3652	F14		
3130	D31	3653	F14		
3131	D32	3654	F12		
3132	D32	3655	F20		
3138	E32	3656	F20		
3139	F32	3657	F20		
3257	H17	3658	F21		
3258	H17	3659	F18		
3261	K16	3660	G18		
3262	L16	3661	F19		
3263	L15	3662	F19		
3264	L16	3663	D22		
3266	H16	3665	A24		
3268	H14	3666	A24		

POWER SUPPLY CIRCUIT DIAGRAM (on main panel)



1401-B2
2327-D10
2328-D9
2402-B3
2403-B3
2404-B3
2405-B4
2406-C3
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2408-B5
2409-B4
2410-B4
2412-B6
2416-F8
2417-F8
2422-F5
2423-F3
2424-E4
2429-D4
2431-D5
2432-E6
2433-C6
2441-B7
2442-E7
2443-D7
2444-C7
2445-E7
2446-D7
2447-C8
2450-D8
2451-B7
2452-C8
3320-C9
3328-C9
3404-C3
3410-B4
3411-B9
3412-B9
3413-F9
3414-F9
3415-E8
3416-F8
3417-E8
3420-C5
3421-B6
3422-F4
3425-E4
3426-E3
3427-E4
3428-E4
3429-D4
3430-D4
3431-D4
3432-C6
3436-D6
3443-D7
3451-D10
3452-C8
3460-E9
3470-E9
5401-B6
5401-C7
5401-E3
5402-B3
5404-C2
5431-D5
5435-D6
5436-D6
6328-C9
6329-C9
6407-B5
6408-B5
6409-B5
6410-B5
6415-F8
6421-E5
6425-E4
6426-E3
6427-E3
6428-E4
6429-D4
6430-D4
6431-D5
6432-D6
6433-E6
6434-C6
6435-C6
6440-B7
6441-B7
6442-E7
6443-D7
6444-C7
6452-C7
6453-B9
6454-D7
6460-F9
6470-D9
7328-C9
7401-E5
7417-F8
7421-E5
7432-D6
7450-D8
7452-B8
7470-F9
J1 -B1
J2 -B1
M6 -C2
SK-1-B2

(GB) REMARKS

1) The direct voltages indicated in the circuit diagram are average voltages. They have been measured under the following conditions:

   Contrast and bringhtness to minimum.

2) The oscillograms have been measured under the following conditions:

   Signal from a RGB pattern generator (SBC 522) on colour bar pattern.

   Adjust brightness and contrast for mechanical mid-position (click position).

(NL) OPMERKINGEN

1) De gelijkspanningen, die in het principe schema zijn aangegeven, zijn gemiddelde spanningen. Ze zijn gemeten onder de volgende kondities:

   Contrast en helderheid op minimum.

2) De oscillogrammen zijn onder de volgende kondities gemeten:

   Signaal van een RGB generator (SBC522) op kleurenbalk patroon.

   Helderheid en contrast op mechanische middenstand (click positie)

(D) ANMERKUNGEN

1) Die Gleichspannungen im Prinzipschaltbild sind Durchschnittsspannungen. Sie wurden unter folgenden Bedingungen gemessen:

   Konstrast und Helligkeit auf Mindestwert.

2) Die Oszillogramme wurden unter folgenden bedingungen gemessen:

   Signal von einem RGB generator (SBC 522) an Farbbalkenmuster.

   Helligkeit und Kontrast in mechanischer Mittelstellung (Einschnappstellung).

(F) REMARQUES

1) Les tensions continues données au schéma de principe sont des tensions moyennes, elles ont été prélevées dans les conditions suivantes:

   Contraste et luminosité, au minimum.

2) Les oscillogrammes ont été prélevés dans les conditions suivantes:

   Signal d'un générateur SBC522 sur mire de barres de couleur.

   Luminosité et contraste en position médiane (position à déclic).

(I) NOTA

1) Le tensioni continue date nello schema di principio sono tensioni medie, sono state prelevate nelle condizioni seguenti:

   Contrastor e luminosità, al minimo.

2) Gli oscillogrammi sono stati prelevati nelle condizioni seguenti:

   Segnale di un generatore RVB (SBC522) su un segnale di barre colori.
   Luminosità e contrasto in posizione media (posizione a scatto).

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

ESD

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) ATTENTION

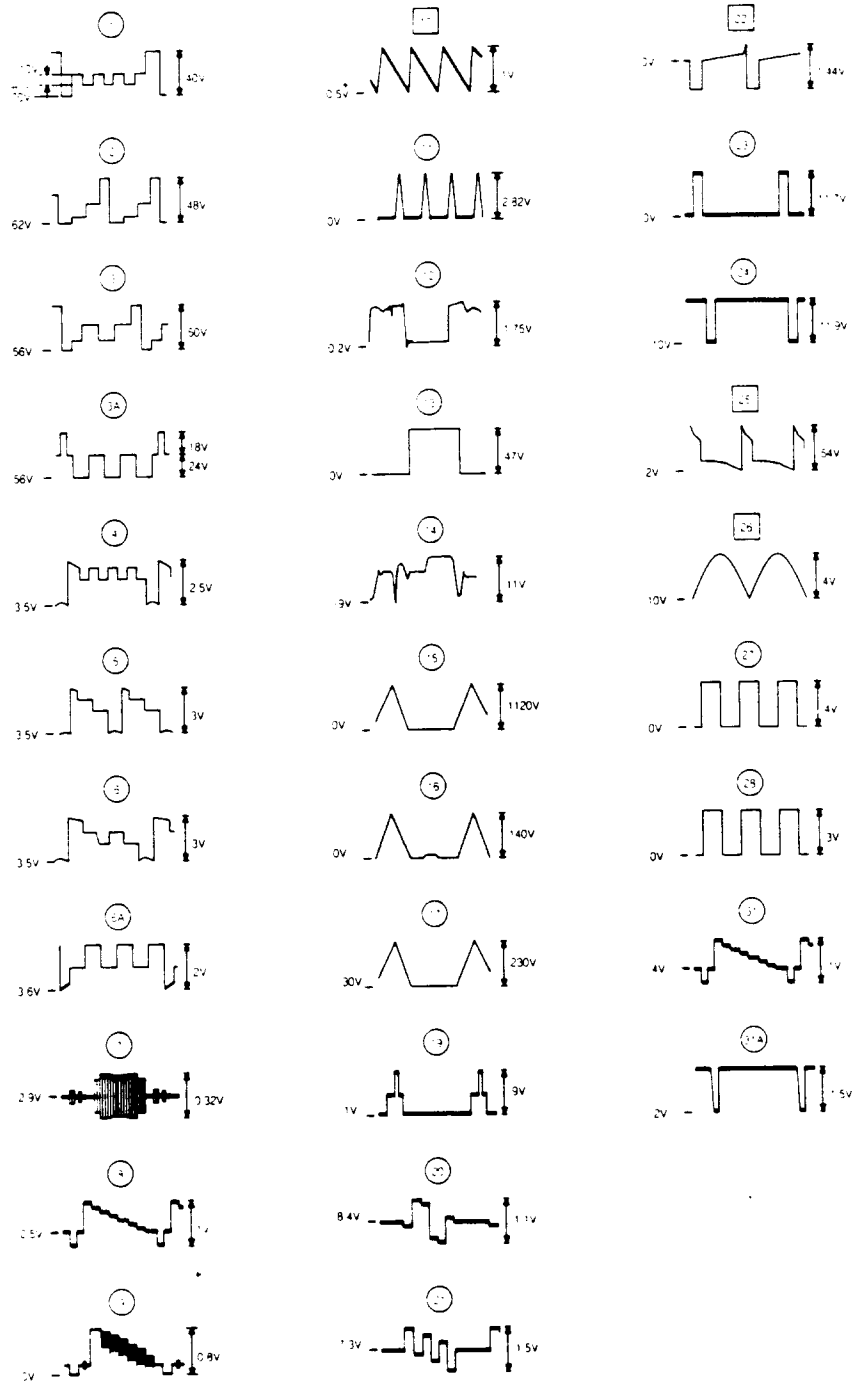
Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

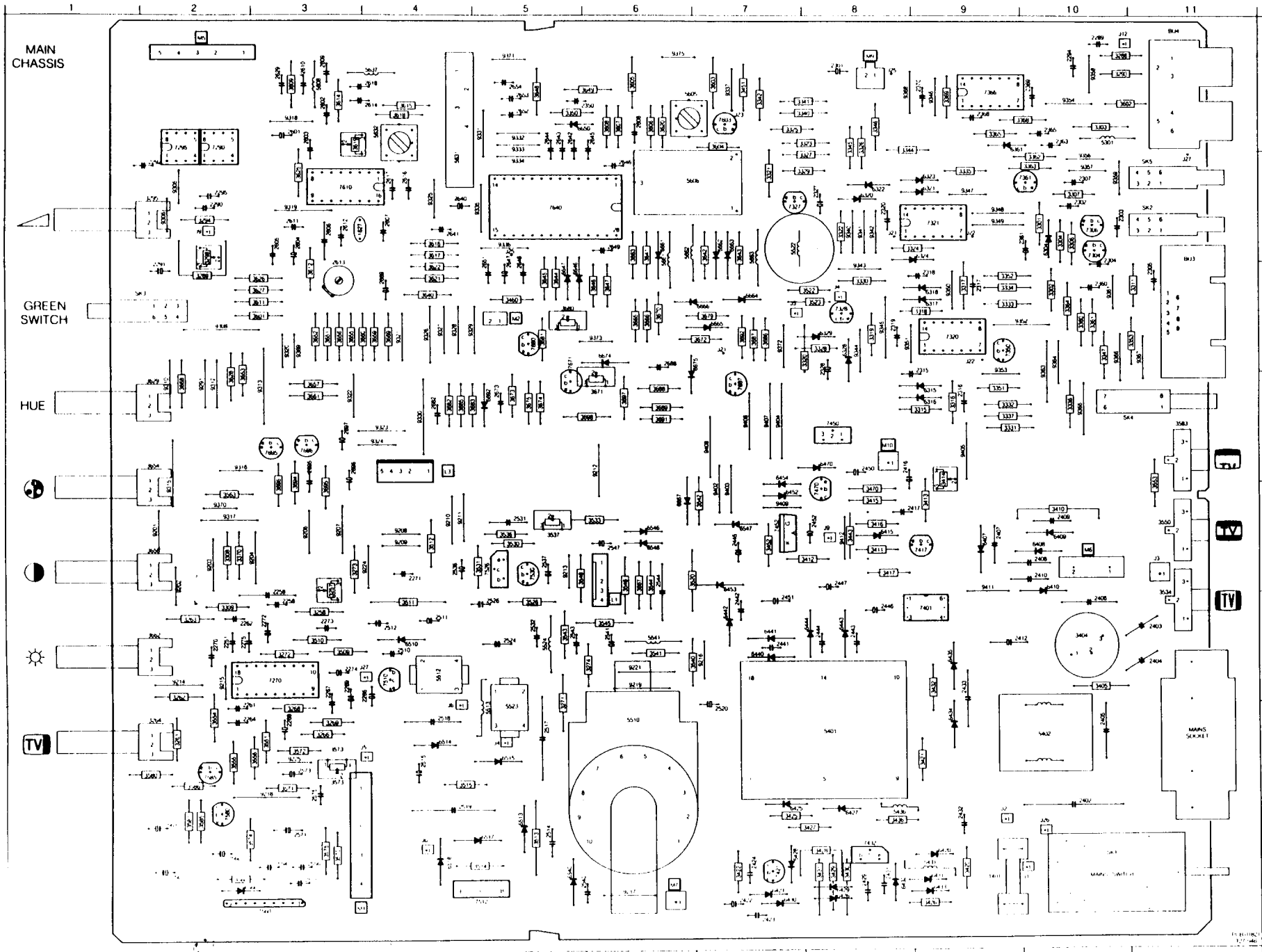
Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) AVVERTIMENTO

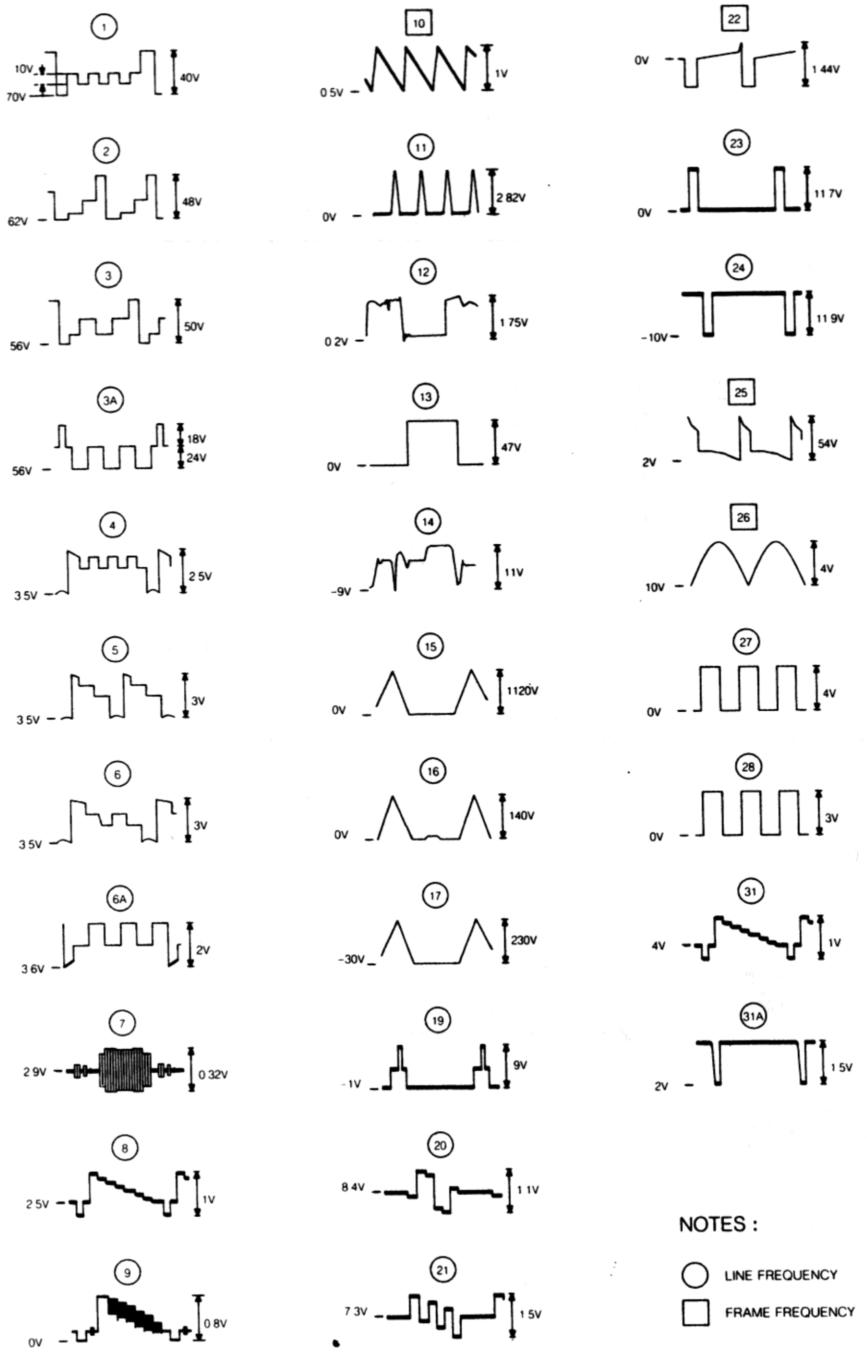
Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.


40V
48V
50V
18V
24V
2.5V
3V
3V
2V
0.32V
1V
0.8V
2.82V
1.75V
47V
11V
1120V
140V
230V
9V
1.1V
1.5V
84V
1V
54V
4V
4V
3V
1V
5V

ESV 30146


MAIN CHASSIS
GREEN SWITCH
HUE
TV
TV
TV

WAVE FORMS



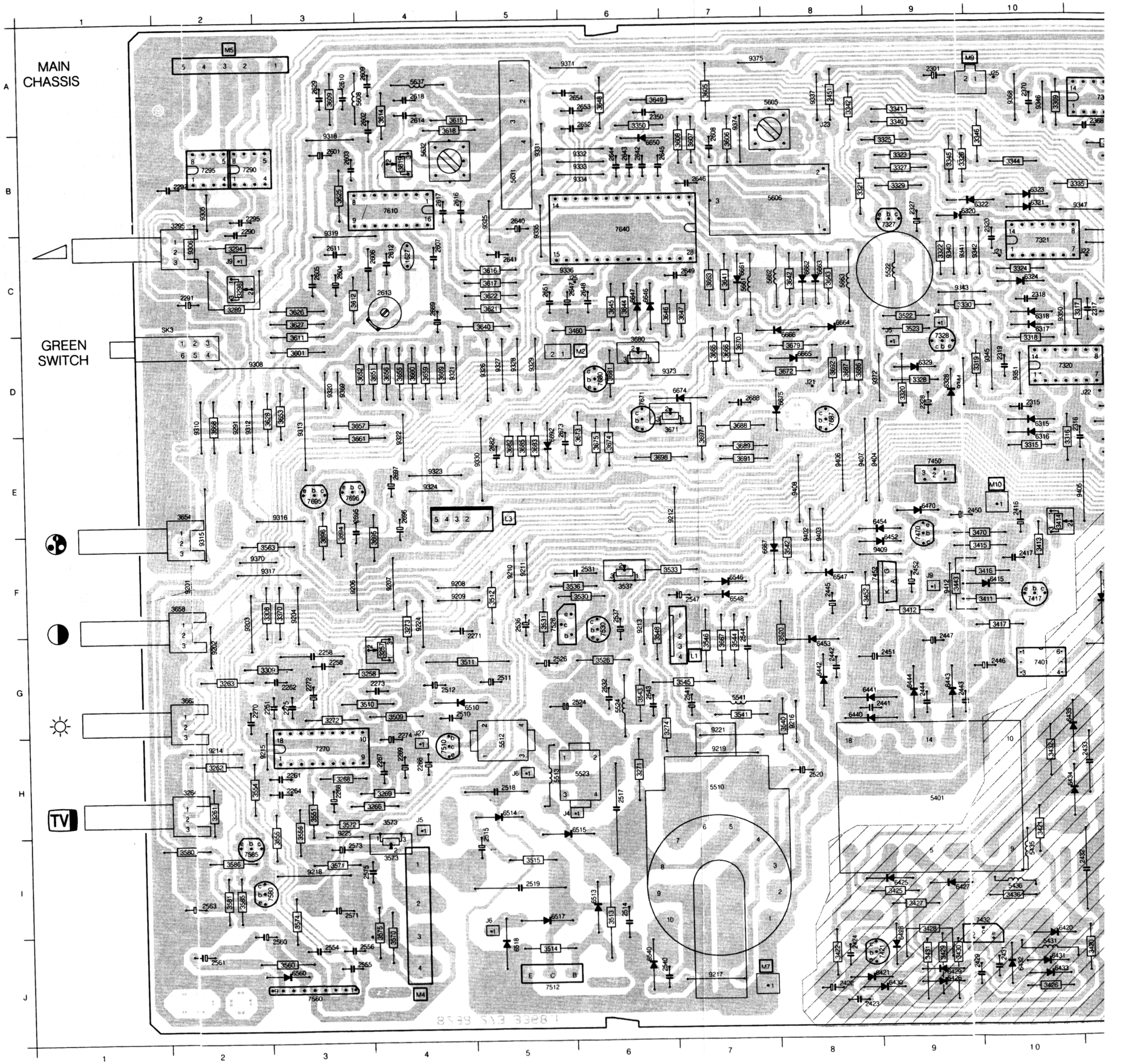
NOTES :

◯ LINE FREQUENCY

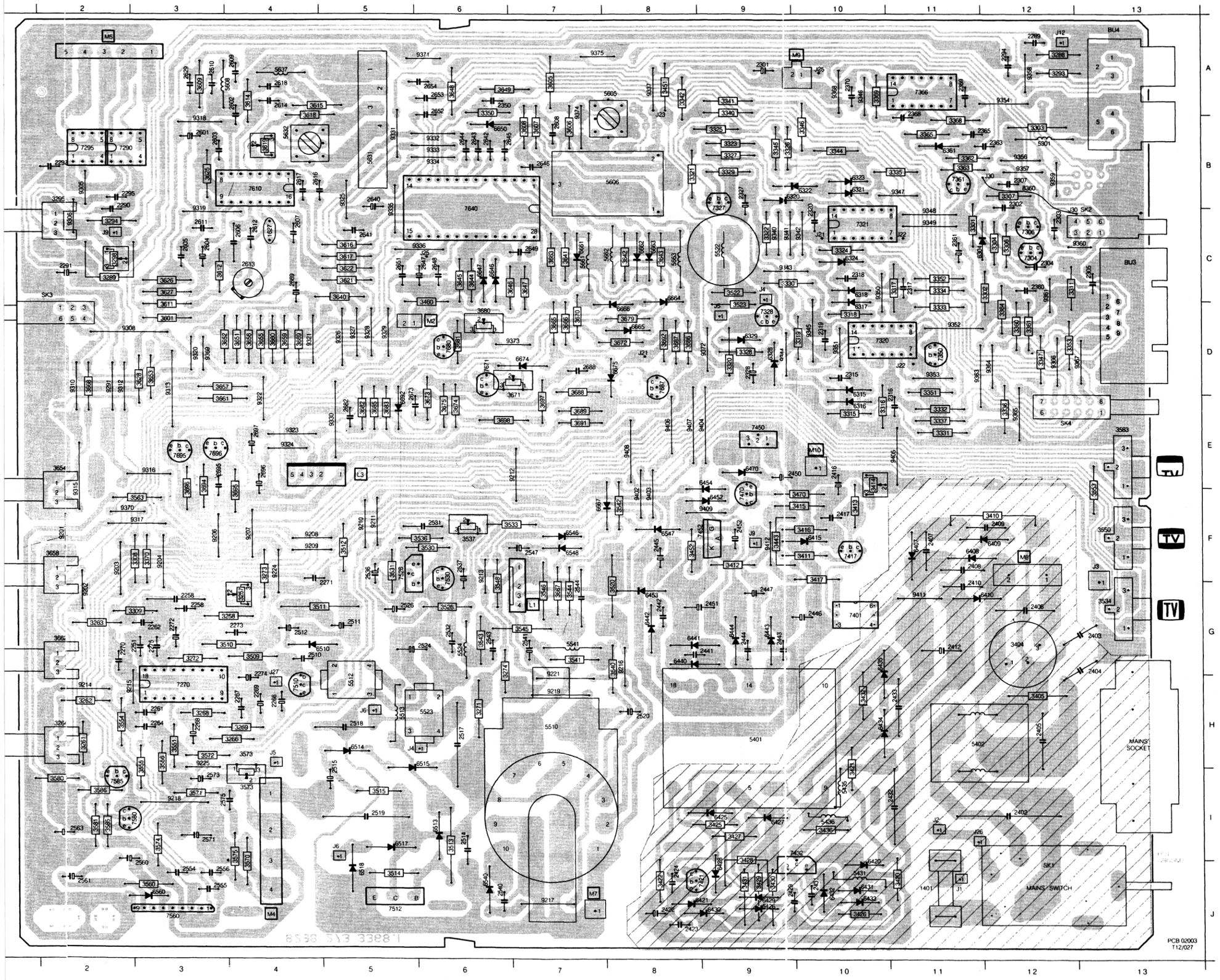
☐ FRAME FREQUENCY

ESV 00146
OSC CM1000
T06-9012

MAIN PANEL (viewed from the component side)



MAIN PANEL (viewed from the component side)



J1 J11	2555 J3	3404 G12	3671 E6	7680 D6	
J2 I11	2556 J3	3405 H12	3672 D8	7687 D8	
J3 F13	2560 J3	3410 F12	3673 E6	7695 E3	
J4 C9	2561 J2	3411 F10	3674 E6	7696 E3	
J4 H5	2563 I2	3412 F9	3675 E6	8360 B12	
J5 D9	2571 I3	3413 F10	3679 D8	9201 F2	
J5 H4	2573 I3	3414 F10	3680 D6	9202 G2	
J6 H5	2575 I3	3415 F9	3681 D6	9203 F2	
J6 I5	2601 B3	3416 F10	3681 D6	9204 F3	
J9 C2	2602 A4	3417 G10	3682 E5	9206 F3	
J9 F9	2603 B3	3420 J11	3683 E5	9207 F4	
L1 G7	2604 C3	3421 I10	3685 E5	9208 F4	
L3 E5	2605 C3	3422 J8	3686 D8	9209 F4	
M2 D6	2606 C4	3425 I9	3687 D8	9210 F5	
M4 J4	2607 C4	3426 J10	3688 D7	9211 F5	
M5 A2	2608 B7	3427 I9	3689 E7	9212 E7	
M6 F12	2609 A4	3428 J9	3689 E7	9213 G6	
M7 J7	2610 A3	3429 J9	3691 E7	9214 H2	
BU3 C13	2610 A3	3430 J9	3691 E7	9215 H2	
BU4 A13	2611 C3	3431 J9	3692 D8	9216 G8	
J12 A12	2612 C4	3432 H10	3694 F3	9217 J7	
J21 C10	2613 C4	3436 I10	3694 F3	9218 I3	
J21 D8	2614 A4	3443 F9	3695 F4	9219 H7	
J22 C11	2614 A4	3451 A8	3695 F4	9221 H7	
J22 D11	2616 B4	3452 F8	3696 F3	9224 F4	
J23 B8	2617 B4	3460 D6	3697 E7	9225 H3	
J25 A10	2618 A4	3470 F9	3698 E6	9291 D2	
J25 C6	2629 A3	3509 G4	5301 B12	9305 B2	
J26 I11	2640 B5	3510 G3	5401 H9	9306 C2	
J27 H4	2641 C5	3510 G3	5402 H11	9308 D2	
M10 E10	2641 C5	3511 G4	5431 J10	9310 D2	
SK1 J12	2642 B6	3512 F5	5435 I10	9312 D2	
SK2 C13	2642 B6	3513 I6	5436 I10	9313 E3	
SK3 C2	2643 B6	3514 J5	5510 H7	9315 F2	
SK4 E12	2643 B6	3515 I5	5512 H5	9316 E3	
1401 J11	2644 B6	3520 G8	5513 H5	9317 F2	
1627 C4	2644 B6	3522 C9	5522 C9	9318 B3	
2251 G3	2645 B7	3523 D9	5523 H6	9319 C3	
2258 A3	2645 B7	3526 G6	5524 G6	9320 D3	
2258 G3	2647 C6	3530 F6	5541 G7	9321 D4	
2261 H3	2648 C6	3530 F6	5605 A8	9322 E4	
2262 G3	2648 C6	3531 F5	5606 B8	9323 E4	
2264 H3	2649 A4	3531 F5	5608 A4	9324 E4	
2266 H4	2651 C5	3533 F6	5631 B5	9325 B5	
2267 H4	2652 A6	3534 G13	5632 B4	9326 D5	
2268 H3	2653 A6	3536 F5	5637 A4	9327 D5	
2269 H4	2654 A6	3536 F5	5661 C7	9328 D5	
2270 G2	2669 C6	3537 F6	5662 C8	9329 D5	
2270 G2	2673 E5	3540 H8	5663 C8	9330 E5	
2271 G4	2673 E6	3541 G7	6304 C12	9331 B5	
2272 G3	2682 E5	3542 F8	6315 E10	9332 B6	
2273 G4	2682 E5	3543 G6	6316 E10	9333 B6	
2273 G4	2688 D7	3543 G6	6317 D10	9334 B6	
2274 H4	2695 E3	3544 G7	6318 C10	9335 C5	
2275 G3	2695 F3	3545 G7	6320 B9	9336 C5	
2275 G3	2696 E4	3546 G7	6321 B10	9337 A8	
2289 A12	2697 E4	3548 G6	6322 B10	9340 C9	
2290 B2	3257 G4	3550 F13	6323 B10	9341 C9	
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2295 B2	3262 H2	3555 I3	6361 B11	9345 D10	
2301 A9	3263 G2	3556 I3	6407 F11	9346 A10	
2302 B12	3264 H2	3556 I3	6408 F11	9347 B11	
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2305 C13	3268 H3	3570 J4	6415 F10	9350 C10	
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2315 D10	3271 H6	3572 H3	6421 J8	9352 D11	
2316 E11	3272 G4	3573 H4	6425 J9	9353 D11	
2316 E11	3273 F4	3573 I4	6426 J9	9354 A12	
2317 C11	3274 H6	3574 I3	6427 I9	9356 B12	
2318 C10	3288 A12	3575 J4	6428 J9	9357 B12	
2318 B10	3289 C2	3580 I2	6429 J9	9358 A12	
2319 D10	3293 A12	3581 I2	6430 J9	9359 B12	
2319 D10	3294 C2	3583 E13	6431 J10	9360 C12	
2320 C10	3295 B2	3585 I2	6432 J10	9361 D12	
2320 C10	3298 C2	3586 I2	6433 J10	9363 D11	
2327 B9	3301 D3	3601 D3	6434 J10	9364 D12	
2328 D9	3302 C12	3604 B8	6435 G10	9365 E12	
2350 A6	3302 C12	3605 A7	6440 G8	9366 D12	
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2404 G13	3318 D10	3619 B4	6518 J5	9406 E8	
2405 H12	3318 D10	3620 B7	6540 J6	9407 E8	
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2407 F11	3320 D9	3622 C5	6547 F8	9409 F9	
2408 F11	3321 B8	3625 B3	6548 F7	9411 G11	
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2442 G8	3331 E11	3646 C7	6692 E5		
2443 G9	3332 E11	3647 C7	7270 H3		
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2445 F8	3334 C11	3648 A6	7295 B2		
2446 G10	3335 B11	3649 A6	7304 C12		
2447 G9	3336 E12	3649 A6	7306 C12		
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2451 G9	3337 E11	3652 D4	7321 C10		
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2510 G4	3341 A9	3653 D3	7328 D9		
2511 G5	3342 A8	3654 E2	7350 D11		
2512 G4	3344 B10	3655 D4	7361 B11		
2514 I6	3344 B10	3656 D4	7366 A11		
2515 I5	3345 B9	3656 D4	7401 G10		
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2519 I6	3347 D12	3657 D3	7421 J9		
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2528 G5	3353 D12	3661 E3	7470 F9		
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2540 J6	3364 D12	3665 D7	7560 J3		
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2543 G6	3365 B11	3667 G7	7585 I2		
2544 G7	3368 B11	3668 D2	7610 B4		
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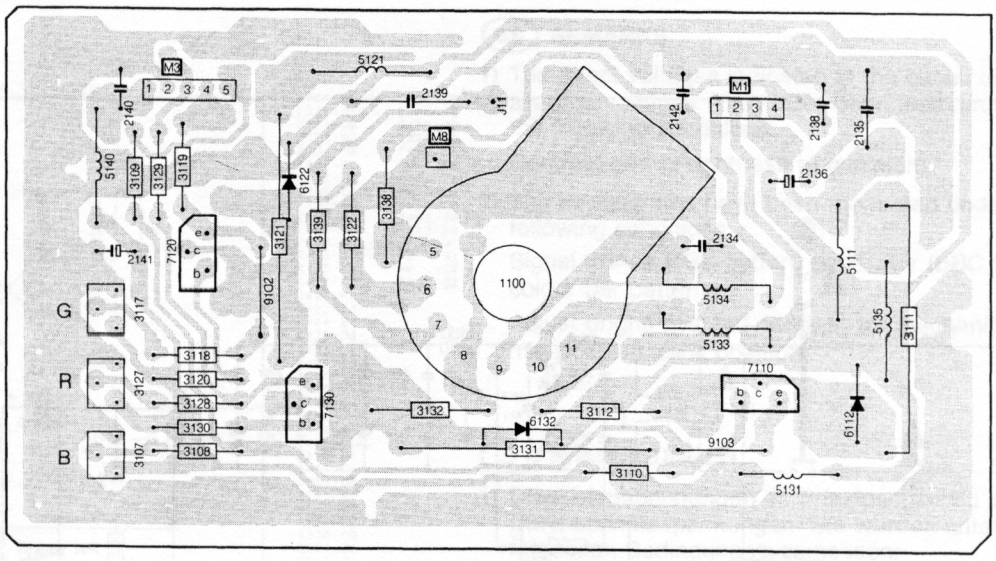
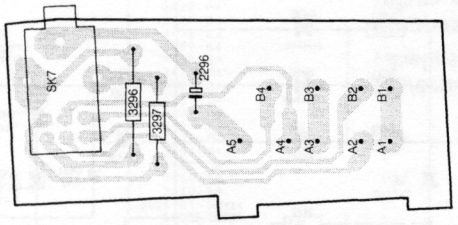
CRT PANEL

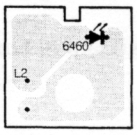


PCB 01828
T06-9012

HEADTELEPHONE PANEL



LED PANEL



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T27/945

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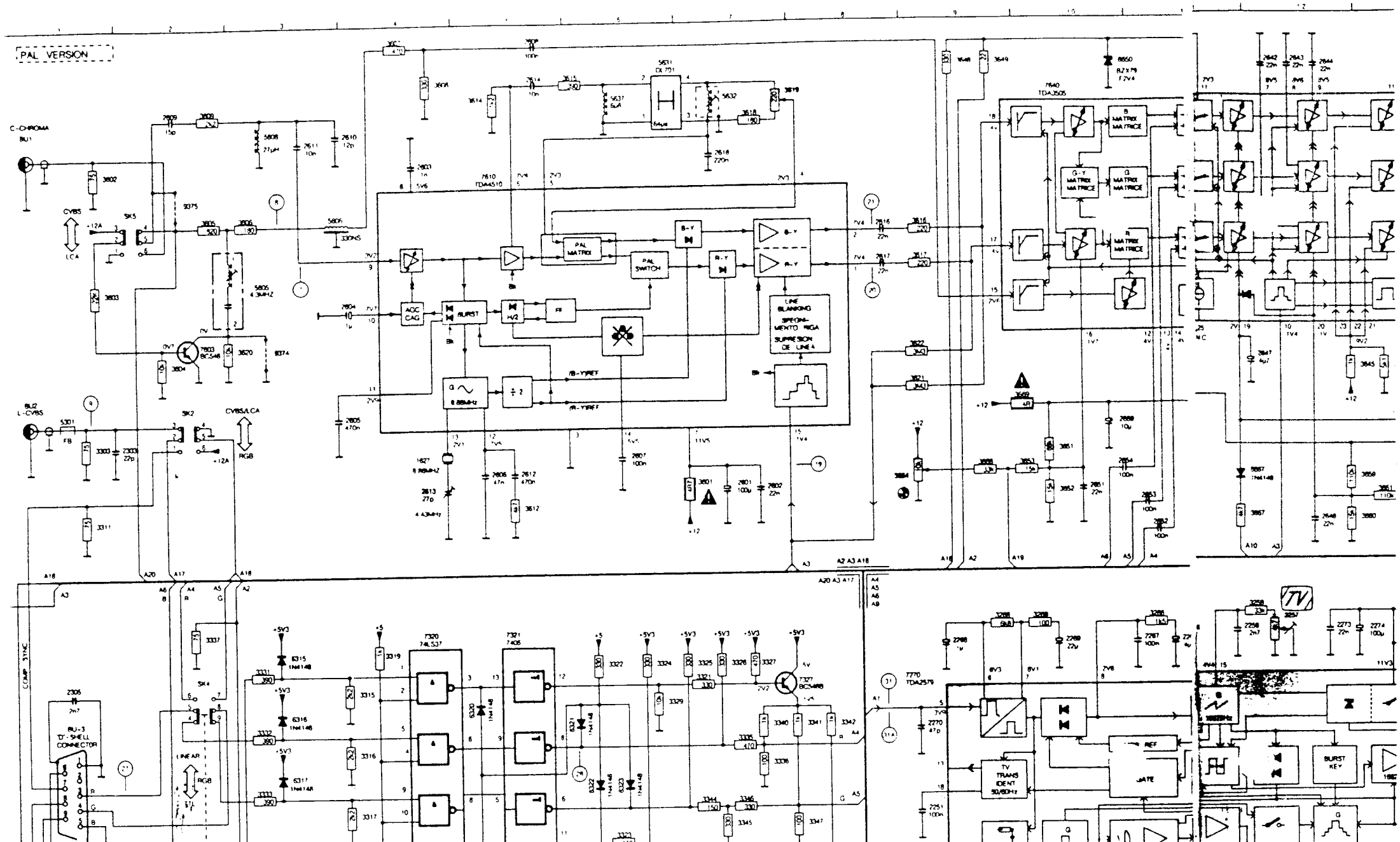
PAL VERSION
C-CHROMA
BU1
CVBS
LCA
SK5
BU2
L-CVBS
SK2
CVBS/LCA
RGB
FB
+12A
+12
7610
TDA4510
PAL MATRIX
PAL SWITCH
B-Y
R-Y
AGC CAG
BURST
HV2
FF
LINE BLANKING
SUPPRESSION DE LIGNE
7640
TDA3505
MATRICE
7770
TDA2579
TV TRANS IDENT 50/60Hz
REF
GATE
BURST KEY
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7321
7406
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BC548
COMP SYNC
BU3
D-SHELL CONNECTOR
LINEAR
RGB
TV

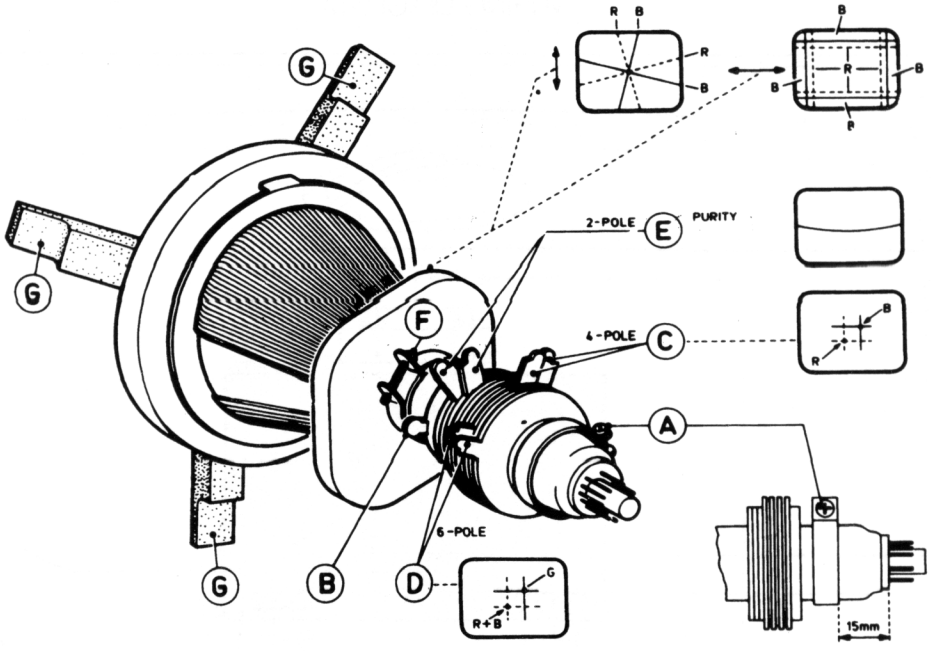


Fig. 3

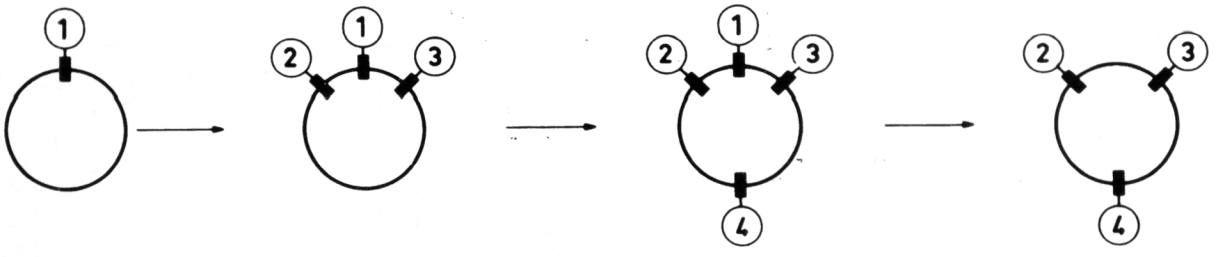


Fig. 4a Fig. 4b Fig. 4c Fig. 4d

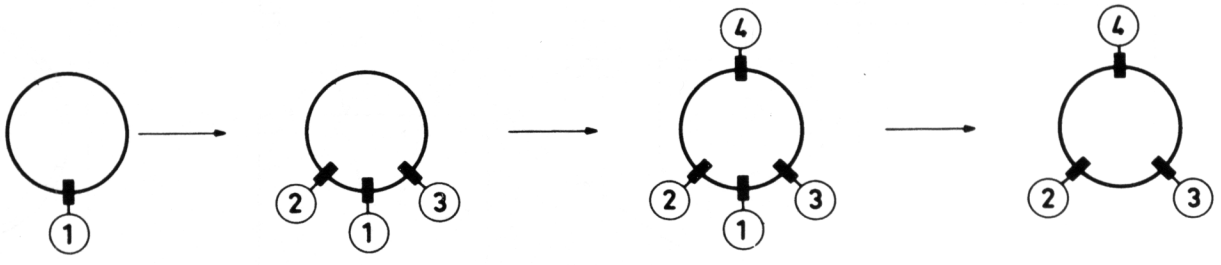
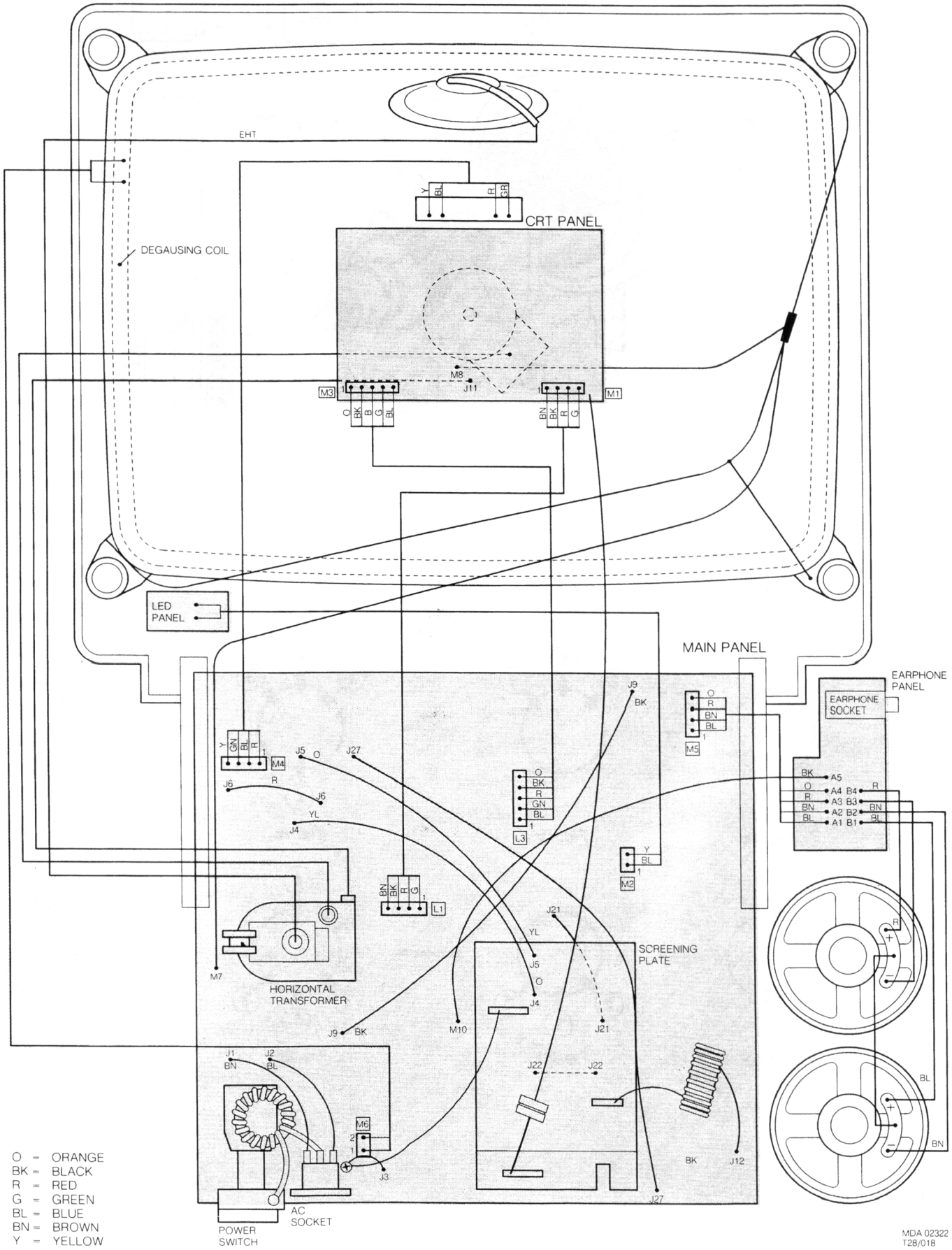


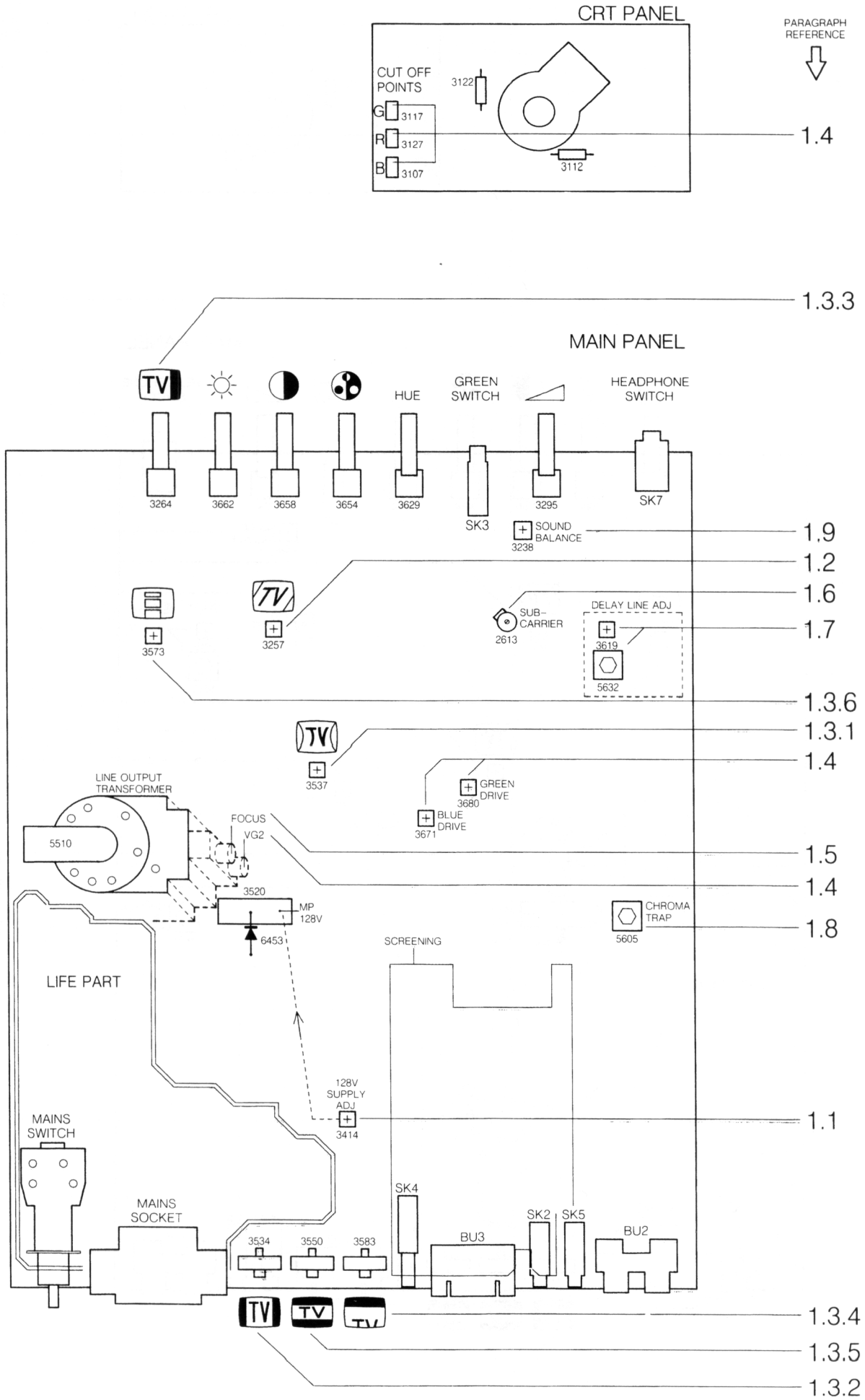
Fig. 5a Fig. 5b Fig. 5c Fig. 5d

28772 E12.

WIRING DIAGRAM



LOCATION OF ADJUSTING COMPONENTS



LOCATION OF ADJUSTING COMPONENTS