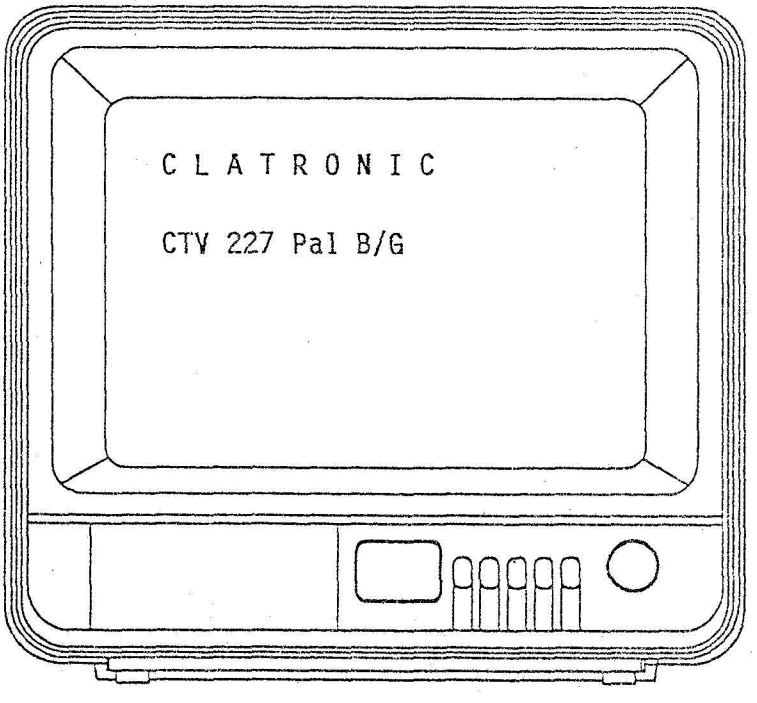
SERVICE MANUAL

Solid State
10" Colour Television
Receiver
AC/DC Operating

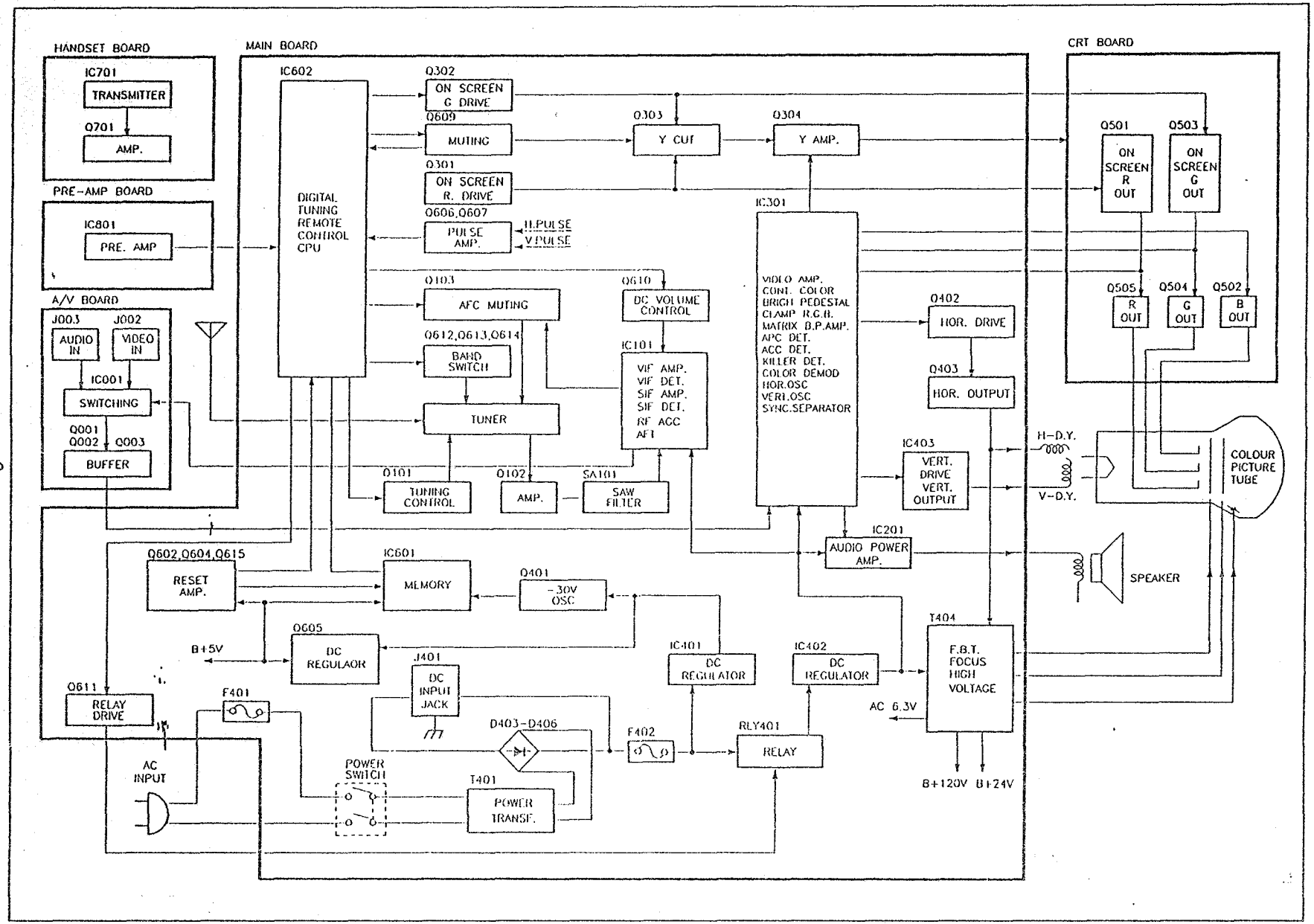


MODEL : K-3911CF

CONTENTS

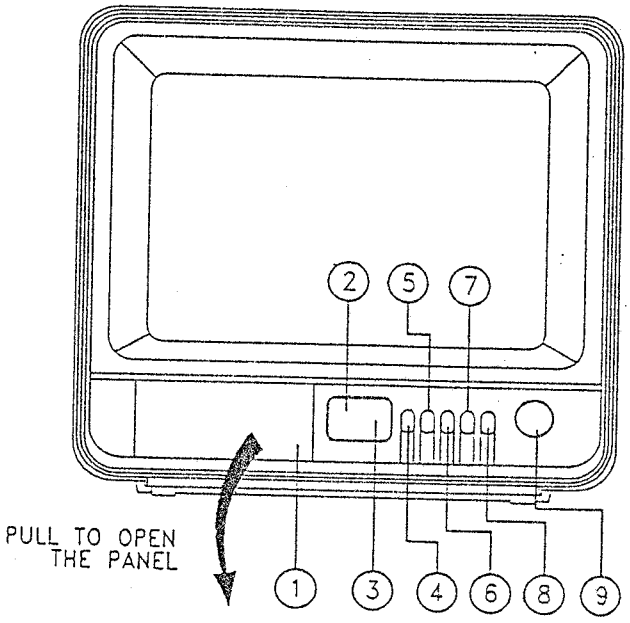
This manual is the latest at the time of printing, and does not include the modification which may be made after the printing, by the constant improvement of product.

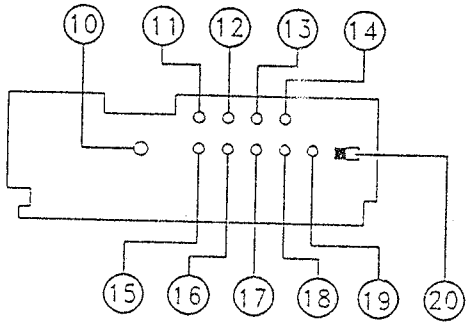
BLOCK DIAGRAM

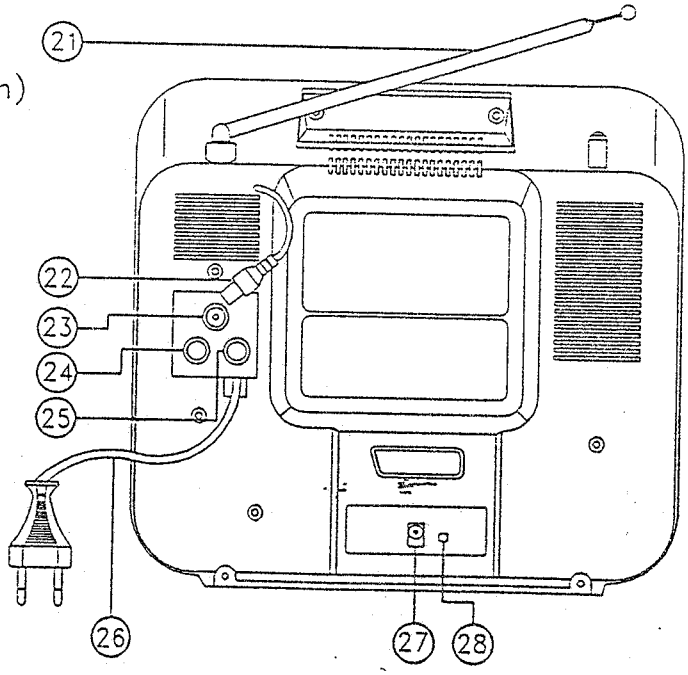


CONTROL LOCATION

1. Panel Door
2. Power Indicator
3. Remote Sensor
4. Channel Down Control
5. Channel Up Control
6. Volume Down Control
7. Volume Up Control
8. Stand By Control
9. AC Power Switch (ON/OFF)
10. V-Hold Control
11. TV/AV Selector Button
12. Picture Selector Button
13. Picture Function Button (-)
14. Picture Function Button (+)
15. Band Selector Button
16. Fast Button
17. Tune Button (-)
18. Tune Button (+)
19. Storage Button
20. Preset Switch (ON/OFF)
21. Rod Antenna
22. Rod Antenna Connector
23. Antenna Input Socket (75 Ohm)
24. Video In Jack
25. Audio In Jack
26. AC Main Lead
27. DC Jack
28. Degauss Switch







ALIGNMENT INSTRUCTION

I. PLEASE READ BEFORE ATTEMPTING SERVICE

1. Never disconnect any leads while receiver is in operation.
2. Disconnect all power before attempting any repairs.
3. Do not short any portion of the circuit while power is on.
4. For reason of safety, all parts replaced should be identical, (For parts and part number see PARTS LIST).
5. Before alignment the set must be pre-heated for 30 minutes or more and erase magnetism thoroughly from CRT front chassis frame by erase coil.

II. TEST EQUIPMENT

1. VIF Sweep Generator
2. SIF Sweep Generator
3. Colour Bar/Dot/Cross Hatch Generator
4. DC Power Supply (+14V)
5. Oscilloscope
6. Vacuum Tube Voltmeter
7. Volt Ohm Meter
8. High Voltage Meter
9. Ampere Meter (0.5 Class, DC 3mA Max.)
10. Demagnetizing Coil
11. Philips Pattern Generator
12. Frequency Counter
13. Continuous Waveform Generator

NOTE: Unsolder the solder link (A) and solder link (B) on the foil side of Main Board before alignment step. (See bottom view of component diagram on Main Board.)

III. TANK COIL ALIGNMENT

A. PREPARATION STEP (SEE FIG.2)

1. Connect OUTPUT lead of VIF Sweep Generator between tuner test point TP and tuner case.
2. Connect lead of FROM DET between TP201 and GND.
3. Supply DC +20V to (+) lead of C430.
4. Supply RF AGC bias voltage to TP101. (See Fig.1)

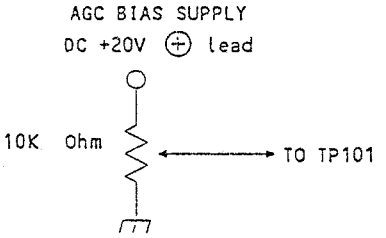


Fig.1

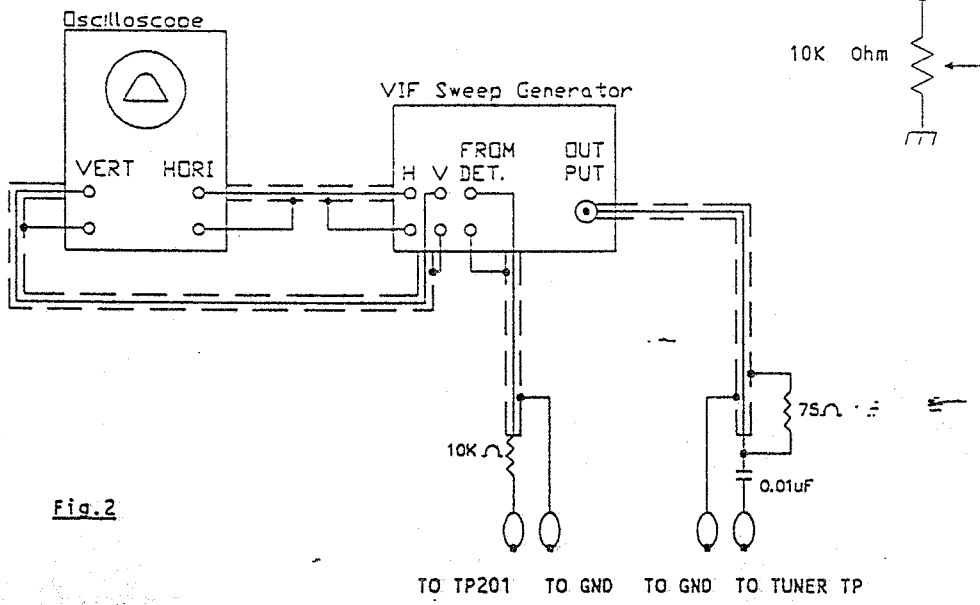
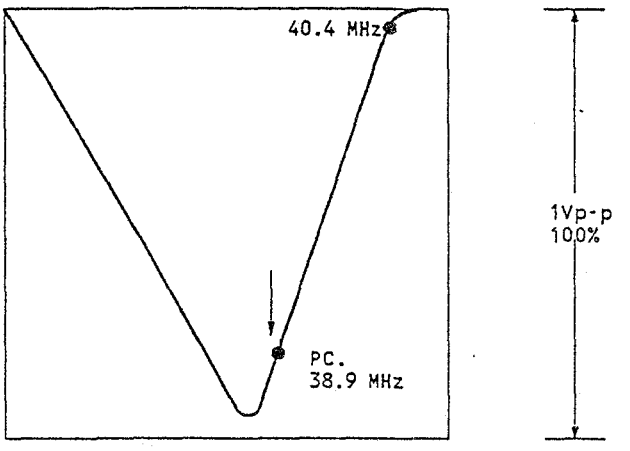


Fig.2

B. ALIGNMENT STEP (SEE FIG.3)

1. Adjust AGC bias voltage for maximum amplitude of waveform.
2. Adjust the level of Sweep Generator to achieve 1Vp-p output.
3. Adjust T102 to obtain maximum amplitude of response cause at PC (38.9 MHz) as in Fig.3.

Fig.3



IV. VIF ALIGNMENT

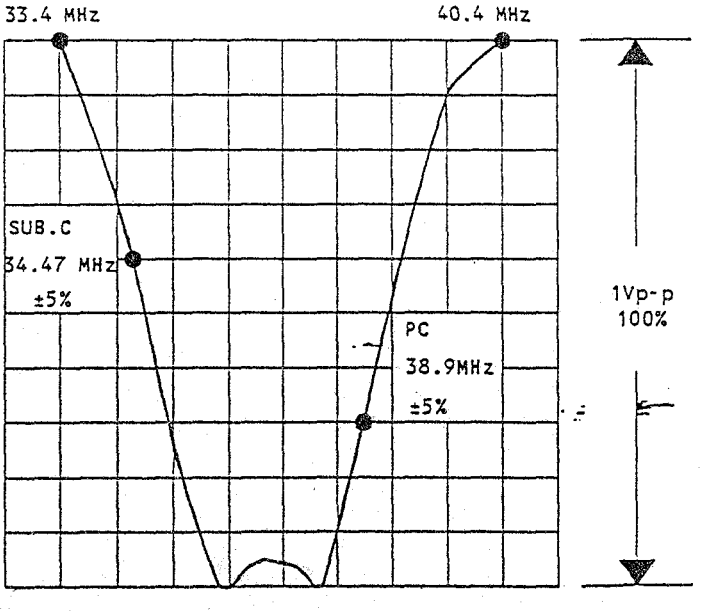
A. PREPARATION STEP (SEE FIG.2)

1. Connect output lead of VIF Sweep Generator between tuner test point TP and tuner case.
2. Connect resistor (100 Ohm) between TP105 and TP106.
3. Connect lead of FROM DET between TP201 and GND.
4. Supply DC +20V ⊕ lead of C430.
5. Supply RF AGC bias voltage to TP101. (See Fig.1)

B. ALIGNMENT STEP

1. Adjust AGC bias voltage for maximum amplitude of waveform.
2. Adjust the level of Sweep Generator to achieve 1Vp-p output.
3. Increase the output level of Sweep Generator in 20dB.
4. Adjust AGC bias voltage to achieve 1Vp-p output (on Oscilloscope).
5. Adjust tuner converter coil to obtain the waveform as in Fig.4.

Fig.4



V. AFC ALIGNMENT

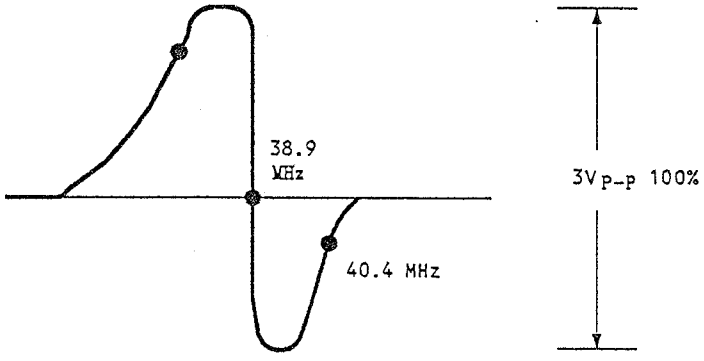
A. PREPARATION STEP

1. Connect RF AGC bias voltage at TP101.
2. Remove the damping resistor (100 Ohm) at TP105, TP106.
3. Connect output lead of Sweep Generator to tuner test point TP and tuner case.
4. Increase the output level of Sweep Generator in 10dB.
5. Connect lead of FROM DET between TP104 and GND.
6. Supply DC +20V to ⊕ lead of C430.

B. ALIGNMENT STEP

1. Adjust the AGC bias to achieve 3Vp-p output.
2. Adjust T104 so that picture carrier 38.9MHz is centered as in Fig.5.

Fig.5



VI. SIF ALIGNMENT

A. PREPARATION STEP (SEE FIG.6)

1. Connect output lead of SIF Sweep Generator between TP201 and GND.
2. Connect lead of FROM DET between TP103 and GND.
3. Supply DC +20V to ⊕ lead of C430.

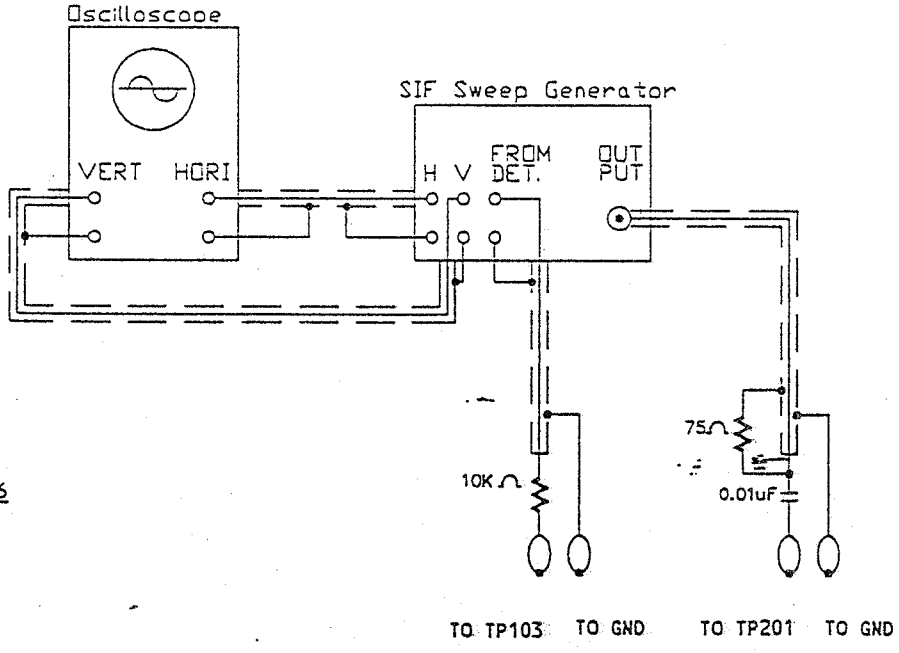
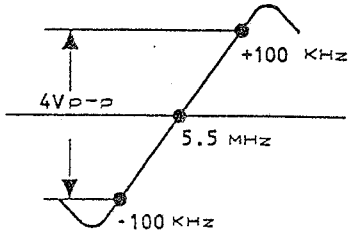


Fig.6

B. ALIGNMENT STEP

1. Adjust output of Sweep Generator to achieve 4Vp-p between markers of 100KHz.
2. Adjust T103 that sound carrier is centered as in Fig.7.

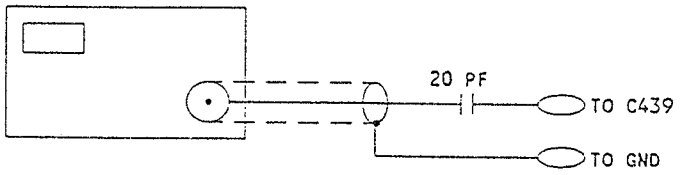
Fig.7



VII. -30 VOLTAGE OSCILLATOR CIRCUIT ADJUSTMENT

1. Supply DC +14V to ⊕ lead of C403.
2. Connect the DIGITAL COUNTER ⊕ lead to C439 and ⊖ lead to GND.
3. Adjust the T402 to 85KHz (± 1KHz) of the DIGITAL COUNTER. (See Fig.8)

Fig.8



VIII. HORIZONTAL CIRCUIT ADJUSTMENT

1. Receive Monoscope Pattern. Input signal 80dBuV.
2. Connect terminal TP302 and the earth with the short jumper wire.
3. Adjust VR301 to obtain the picture running at center.
4. Adjust VR305 to obtain the picture at center.

IX. VERTICAL CIRCUIT ADJUSTMENT

1. Receive the Monoscope Pattern.
2. Adjust V-Size (VR302) to obtain a normal picture.

X. WHITE BALANCE ADJUSTMENT

1. Set the SCREEN control on the FBT to minimum position.
2. Turn the red Low Light control (VR505) and turn the green, blue DRIVER controls (VR502, VR504) to middle position, and turn the green, blue Low Light controls (VR503, VR501) to minimum position, and turn the green, blue Low Light (VR503, VR501) controls to minimum position.
3. Receive the Monoscope Pattern.
4. Set the "SERVICE" switch (S301) to "SERVICE" position.
5. Slowly turn the SCREEN control clockwise to the point where a horizontal line just illuminates.
6. Adjust VR505 to get a red horizontal line on CRT.
7. Adjust VR503 to get a yellow horizontal line on CRT.
8. Adjust VR501 to get a white horizontal line on CRT.
9. Reset the SERVICE switch (S301) to normal position.
10. Set BRIGHTNESS control (VR401) to middle position.
11. Adjust DRIVE control (VR502, VR504) to obtain a uniform white picture.

XI. FOCUS ADJUSTMENT

1. Set CONTRAST control and BRIGHTNESS control to middle position.
2. Adjust FOCUS control (on the FBT) to obtain a sharpest picture on the CRT.

XII. RF AGC ALIGNMENT

1. Receive the signal of UHF channel and set the AFC ON. (PRESET SWITCH TO OFF POSITION)
2. Set the input field strength in 62 ± 3dB.
3. Adjust RF AGC control (VR101) to the point where noise is disappeared.

XIII. COLOUR SYNC. ADJUSTMENT

1. Receive PHILIPS pattern and warm up for five minutes.
2. Connect terminal TP304 and the earth with the short jumper wire.
3. Connect the TP305 and TP303 with 10K Ohm resistor so that the colour killer turns off.
4. Then the colour stripes appear on the screen when the adjustment is incorrect. Adjust the colour sync. (CT301) so that the PHILIPS pattern stands still or drifts slowly across the picture screen.
5. Remove the 10K Ohm resistor and jumper wire.

XIV. COLOUR DEMODULATOR ALIGNMENT, DELAY LINE ALIGNMENT

1. Receive Philips Pattern and set the AFC switch to 'ON' position. (PRESET SWITCH TO OFF POSITION)
2. Set the 'SERVICE' switch (S301) to 'SERVICE' position.
3. Set COLOUR (VR401) to maximum position.
4. Connect Oscilloscope to TP309 (B-out).
5. Adjust (VR303, T301, T302) to obtain the waveform as in Fig.9.

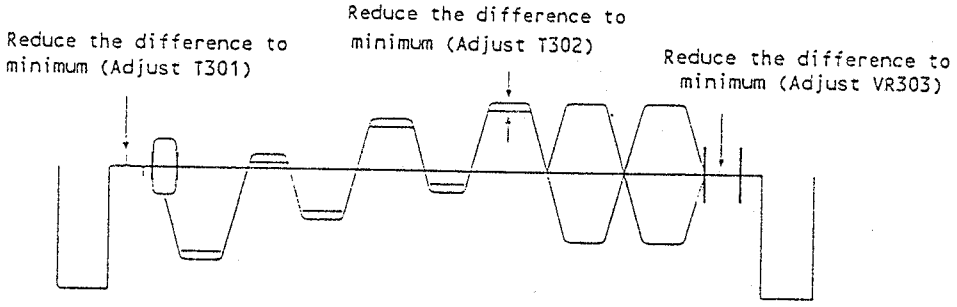


Fig.9

XV. SUB-BRIGHTNESS ALIGNMENT

1. Connect the negative side to TP402 and positive side to TP401 of DC Ampere Meter (3 mA full scale range).
2. Receive PHILIPS Pattern and set AFC switch set 'ON' position. (PRESET SWITCH TO OFF POSITION)
3. Receive Monoscope Pattern and set AFC switch set "ON" position. (PRESET SWITCH TO OFF POSITION)

BRIGHTNESS	control	.....	Min. Position
CONTRAST	control	.....	Max. Position
COLOUR	control	.....	Max. Position

4. Adjust SUB-BRIGHTNESS control (VR405) control to get the second step of the GREY SCALE in the Monoscope Pattern.

XVI. COLOUR PURITY ADJUSTMENT (SEE FIG.10)

BEFORE All ADJUSTMENTS DESCRIBED BELOW ARE ATTEMPTED, V-HOLD, H-HOLD, V-HIGH, B+ VOLTAGE AND FOCUSING ADJUSTMENT MUST BE COMPLETED.

1. Place the TV receiver facing NORTH or SOUTH.
2. Plug in TV receiver and turn it on.
3. Operate the TV receiver over 30 minutes.
4. Fully degauss the TV receiver by using an external degaussing coil.
5. Receive a crosshatch pattern and adjust the static convergence control roughly.
6. Loosen the clamp screw of the deflection yoke and pull the deflection yoke toward you.
7. Fully turn the red and blue Low Light controls (VR503, VR505, VR501) counter clockwise.
8. Adjust the purity magnets so that green field is obtained at the center of the screen.
9. Slowly push the deflection yoke towards bell of CRT and set it where a uniform green field is obtained.
10. Tighteen the clamp screw of the deflection yoke.

XVII. ON SCREEN DISPLAY CENTER ADJUSTMENT

1. Receiver the Monoscope Pattern.
2. Adjust the center V.R. (VR601) to make the on screen lettering at the center of picture tube, when the preset switch to "OFF" position from "ON" position.

XVIII. CONVERGENCE ADJUSTMENT (SEE FIG.10)

1. Receive a dotted pattern.
2. Unfix the convergence magnet clamper and align red with blue dots at the center of the screen by rotating (R,B) static convergence magnets.
3. Align Red/Blue with green dots at the center of the screen by rotating (RB-G) static convergence magnet.
4. Fix the convergence magnets by turning the clamper.
5. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good overall convergence.
6. Fix the deflection yoke by wedges.
7. If purity error is found, follow 'PURITY ADJUSTMENT' instructions.

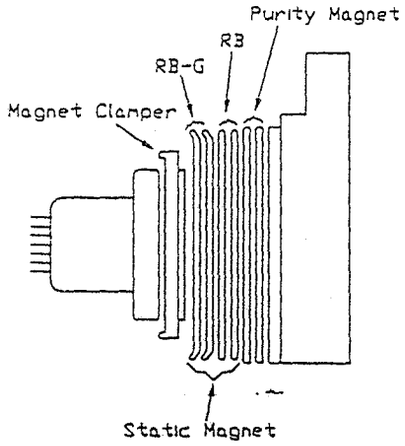


Fig.10

VOLTAGE TABLE FOR TRANSISTOR							
SYMBOL	B (V)	C (V)	E (V)	SYMBOL	B (V)	C (V)	E (V)
Q001	3.6	11.70	2.90	Q602	4.66	0	4.66
Q002	0.05	10.20	GND	Q604	0.75	0	GND
Q003	0.10	7.56	GND	Q605	6.07	11.90	5.38
Q101	0.12	23.80	GND	Q606	-0.09	4.21	GND
Q102	1	8.00	0.38	Q607	-0.04	4.49	GND
Q301	0.02	7.43	GND	Q609	0.02	0.70	GND
Q302	0.02	7.43	GND	Q610	0.37	2.87	GND
Q303	0.70	0.11	GND	Q611	0.62	0.15	GND
Q304	6.90	1	7.50	Q612	11.70	0	11.70
Q401	-1.47	9.77	0.47	Q613	11.50	0	11.70
Q402	0.47	8.00	GND	Q614	11.70	11.70	11.70
Q403	-0.32	0.10	GND	Q615	0	4.63	GND
Q501	2.00	83.30	2.85	Q201	0.17	0.53	GND
Q502	6.42	83.70	6.08	Q202	0.65	0.17	GND
Q503	2.00	82.50	2.85		S(V)	G(V)	D(V)
Q504	6.43	82.50	6.80	Q103	5.47	0	6.55
Q505	6.42	83.70	6.09				

NOTE : Voltage are taken under tuned condition with
CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOUR : Center Position
SIGNAL INPUT : 80dBuV
CHANNEL SETTING : The Last Channel of UHF High

VOLTAGE TABLE FOR IC

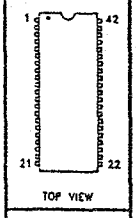
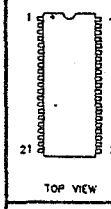
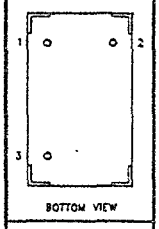
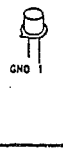
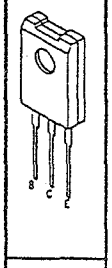
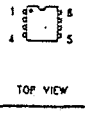
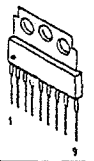
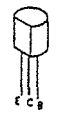
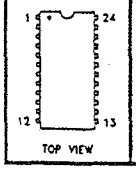
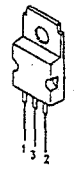
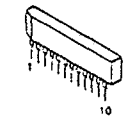
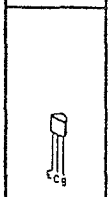
SYMBOL / PIN NO.	IC101 (V)	IC201 (V)	IC301 (V)	IC401 (V)	IC402 (V)
1	5.13	0.66	4.50	15.60	16.50
2	2.67	0.52	12.00	11.80	GND
3	7.60	0	4.45	GND	10.30
4	GND	GND	4.33		
5	7.20	5.05	1.02		
6	5.10	9.80	10.00		
7	5.10	9.80	5.90		
8	5.10	NC	10.60		
9	5.10		6.20		
10	7.22		7.90		
11	2.00		GND		
12	GND		9.50		
13	8.70		10.00		
14	5.20		3.50		
15	4.12		3.60		
16	4.46		8.75		
17	8.31		4.30		
18	8.31		8.79		
19	4.46		4.32		
20	12.00		7.77		
21	4.50		7.74		
22	4.51		7.75		
23	6.00		6.66		
24	4.51		0.72		
25			NC		
26			8.50		
27			8.40		
28			0		
29			3.00		
30			GND		
31			GND		
32			0.38		
33			8.36		
34			4.67		
35			4.58		
36			3.22		
37			0		
38			0.68		
39			4.11		
40			6.80		
41			7.40		
42			9.11		

NOTE : Voltage are taken under tuned condition with
- CONTRAST : Maximum Position
- BRIGHTNESS : Center Position
- COLOUR : Center Position
- SIGNAL INPUT : 80dBuV
- CHANNEL SETTING : The Last Channel of UHF High

VOLTAGE TABLE FOR IC					
SYMBOL / PIN NO.	IC001 (V)	IC403 (V)	IC601 (V)	IC602 (V)	IC801 (V)
1	NC	GND	0	GND	1.77
2	10.30	11.30	GND	2.32	0.86
3	3.80	NC	0	0	4.52
4	9.00	20.60	NC	4.43	NC
5	3.68	NC	NC	4.62	GND
6	9.00	0.70	NC	4.60	GND
7	GND	-0.31	NC	3.80	2.22
8	3.00	0.56	4.73	4.64	2.24
9	3.80	20.30	-32.7	4.50	4.53
10	3.70		NC	4.61	1.20
11	4.50		0	4.61	
12	3.00		NC	4.61	
13	9.00		NC	4.61	
14	NC		NC	4.58	
15	NC			4.57	
16	NC			4.58	
17				0.10	
18				0.02	
19				0.02	
20				0.02	
21				0.02	
22				NC	
23				0	
24				0	
25				2.97	
26				NC	
27				NC	
28				NC	
29				NC	
30				0.02	
31				NC	
32				NC	
33				NC	
34				1.17	
35				2.56	
36				2.88	
37				NC	
38				NC	
39				11.00	
40				2.25	
41				2.17	
42				4.64	

NOTE : Voltage are taken under tuned condition with
CONTRAST : Maximum Position
BRIGHTNESS : Center Position
COLOUR : Center Position
SIGNAL INPUT : 80dBuV
CHANNEL SETTING : The Last Channel of UHF High

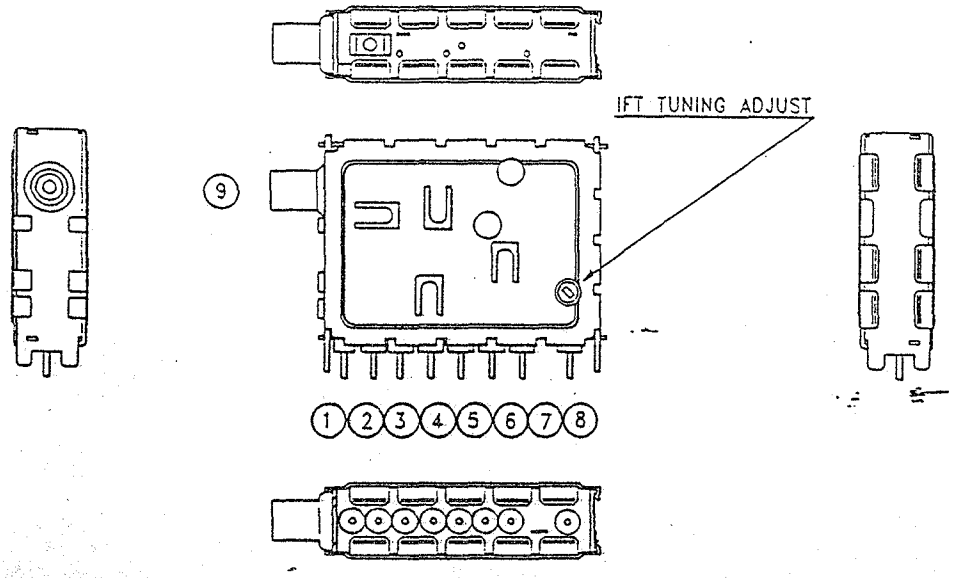
TRANSISTOR AND IC IDENTIFY

	TA7698AP		MN15245		AL2710		BSX20		2SD1680
	TBA820M		MN1220 M51326		AN5512		2SD400F 2SC1573		
	TA7680AP		L7812		AN5026K		2SC2209		2SA562 2SA1015 2SC1815Y 2SK30A 2SC388A

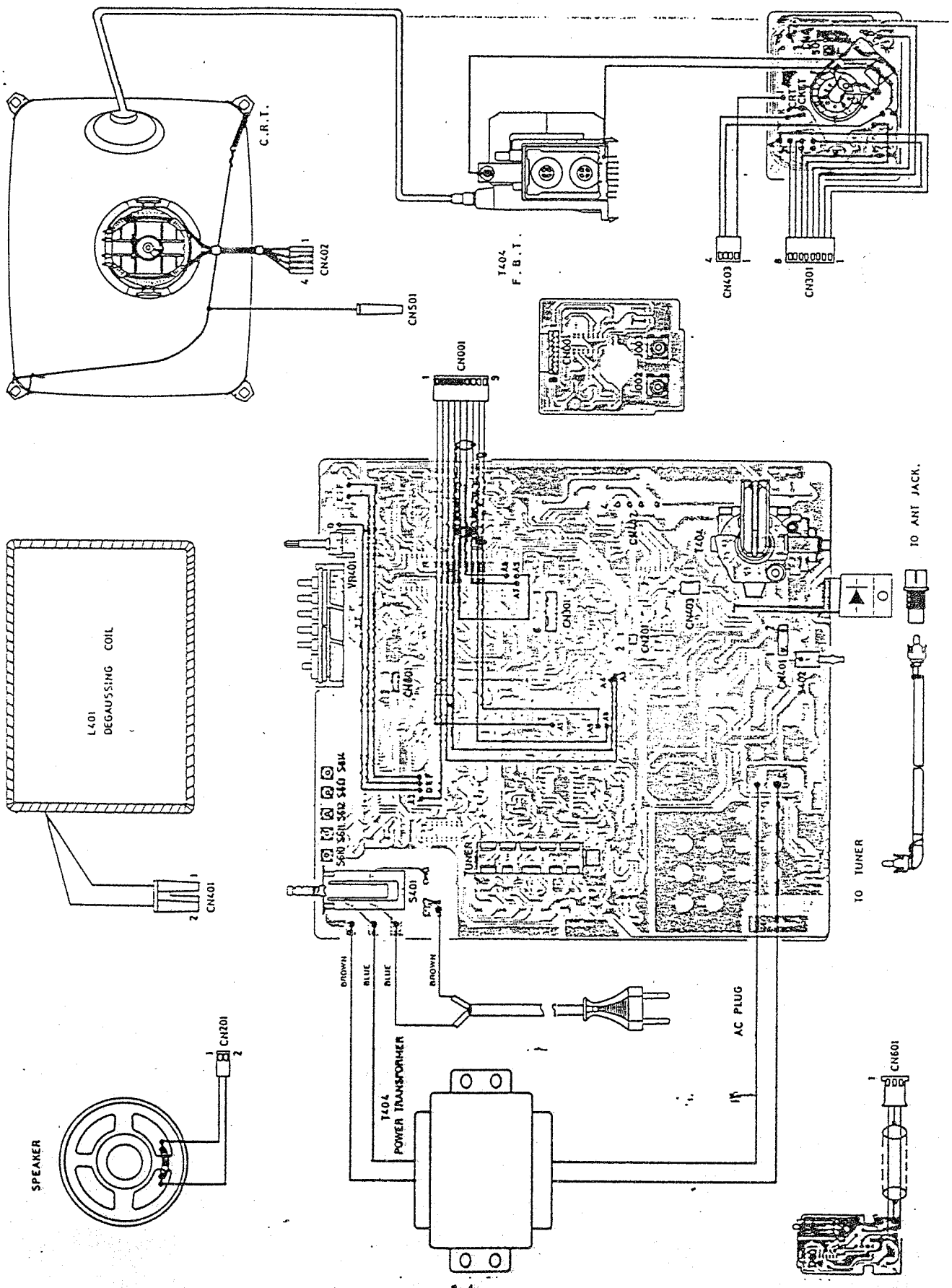
PICTORIAL VIEW OF TUNER

TERMINAL NO.	1	2	3	4	5	6	7	8	9
TERMINAL NAME	BU	VT	BH	AGC	BL	AFT	BM	IF	V/U ANT

SUPPLY VOLTAGE (V)				
TERM.	ch.	VHF LO	VHF HI	UHF
7	BM	12	12	12
5	BL	12	OPEN	12
3	BH	OPEN	12	OPEN
1	BU	OPEN	OPEN	12

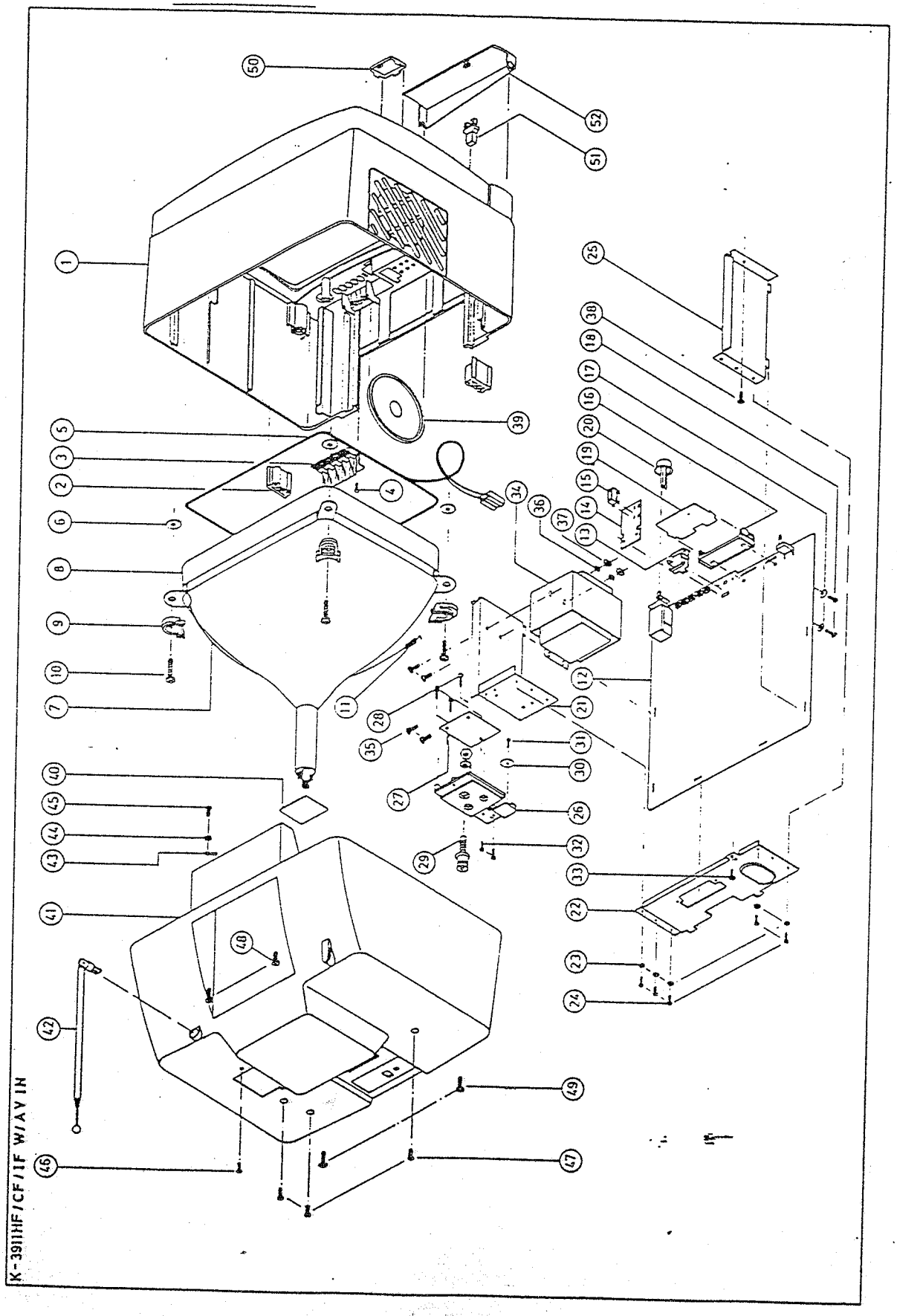


WIRING DIAGRAM



M3911-04

EXPLODED VIEW DIAGRAM



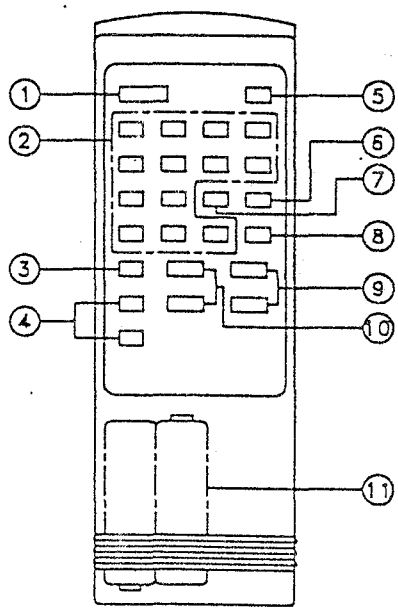
EXPLODED VIEW PARTS LIST :

LOCATION	PARTS NO.	DESCRIPTION	QTY
1	200-391101-XX	CABINET FRONT	1
2	229-391004-XX	MTG BRACKET	1
3	277-391101-XX	CHANNEL/VOLUME AND STAND BY KNOB	1
4	610-300080-10	SELF-TAPPING SCREW R/T 3 x 8 mm	2
5		DEGAUSSING COIL ASS'Y	1
6	334-380401-01	RUBBER WASHER	4
7	072-830000-48	FLAT BRAIDED WIRE	1
8		C.R.T.	1
9	229-371501-01	C.R.T. MTG CLIP	4
10	614-500425-10	SELF-TAPPING SCREW B/T 5 x 25 mm	4
11	477-371610-01	C.R.T. SPRING	1
12		MAIN P.C. BOARD ASS'Y	1
13	229-391001-01	REMOTE P.C. BOARD MTG BRACKET	1
14		PRE-AMP P.C. BOARD ASS'Y	1
15	229-391002-01	LED MTG BRACKET	1
16	229-391003-01	CHANNEL P.C. BOARD MTG BRACKET	1
17	530-080032-08	FIBER WASHER	2
18	610-300110-10	SELF-TAPPING SCREW R/T 3 x 10 mm	2
19		CONTROL P.C. BOARD ASS'Y	1
20	292-391101-XX	POWER KNOB	1
21	428-391004-01	TRANSFORMER MTG BRACKET	1
22	428-391001-01	FLYBACK MTG BRACKET	1
23	633-055032-07	SPRING WASHER	5
24	600-305008-10	MACHINE SCREW P/H 3 x 8 mm	5
25	428-391003-01	MTG BRACKET	1
26	280-391006-XX	ANTENNA TERMINAL	1
27		ANTENNA P.C. BOARD ASS'Y	1
28	612-300110-10	SELF-TAPPING SCREW R/T 3 x 10 mm	3
29	061-480006-00	ANTENNA SOCKET	1
30	530-140033-16	FIBER WASHER 14 x 3.3 x 1.6 mm	1
31	610-300108-10	SELF-TAPPING SCREW B/T 3 x 8 mm	1
32	600-305010-10	MACHINE SCREW P/H 3 x 10 mm	2
33	614-400412-10	SELF-TAPPING SCREW B/T 4 x 12 mm	1
34		POWER TRANSFORMER	1
35	603-407008-10	MACHINE SCREW T/H 4 x 8 mm	4
36	633-055042-07	SPRING WASHER	2
37	620-407030-70	NUT M4	2
38	614-400412-10	SELF-TAPPING SCREW B/T 4 x 12 mm	2
39		SPEAKER	1
40		C.R.T. P.C. BOARD ASS'Y	1
41	202-391002-XX	CABINET BACK	1
42	482-607181-01	ROD ANTENNA	1
43	450-701201-01	SOLDERING LUG	1
44	630-060032-10	EXT. TOOTH WASHER	1
45	610-300110-10	SELF-TAPPING SCREW R/T 3 x 10 mm	1
46	610-300114-X0	SELF-TAPPING SCREW R/T 3 x 14 mm	1
47	600-407012-X0	MACHINE SCREW P/H 4 x 12 mm	3
48	614-500416-X0	SELF-TAPPING SCREW B/T 5 x16 mm	2
49	614-400416-X0	SELF-TAPPING SCREW B/T 4 x 16 mm	2
50	263-391101-XX	CABINET FRONT LENS	1
51	702-391201-01	DOOR LOCKER ASS'Y	1
52	219-391101-XX	FRONT CONTROL PANEL DOOR	1

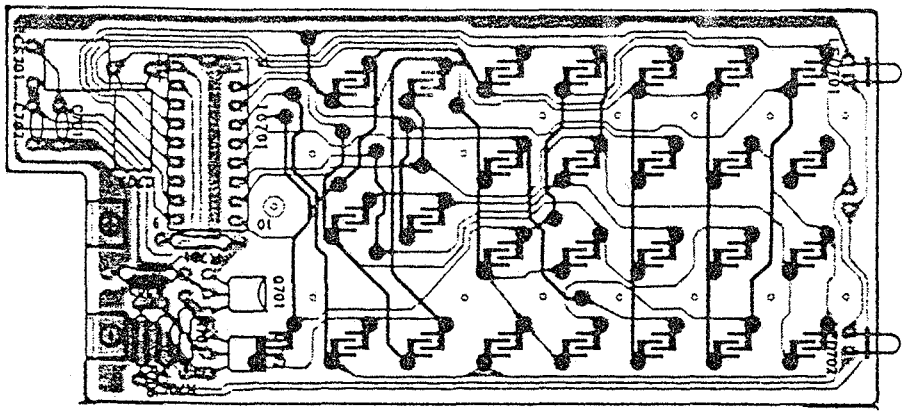
REMOTE HANDSET UNIT

CONTROL LOCATION

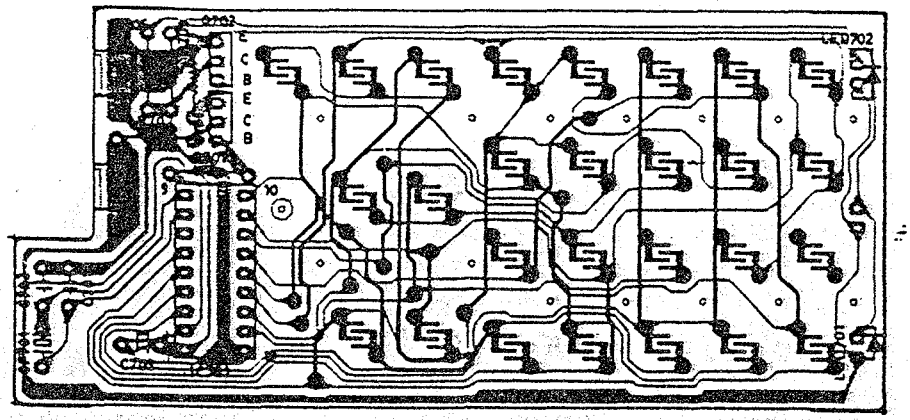
1. Stand By Button
2. Number Buttons
3. Picture Selector Button
4. Picture Up/Down Button
5. Mute Button
6. Sleep Button
7. TV/AV Button
8. Recall Button
9. Volume Up/Down Buttons
10. Channel Up/Down Buttons
11. Battery Compartment Lid



COMPONENT DIAGRAM OF REMOTE HANDSET P.C. BOARD :

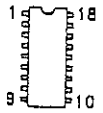


(TOP VIEW)



(BOTTOM VIEW)

TRANSISTOR AND IC IDENTIFY

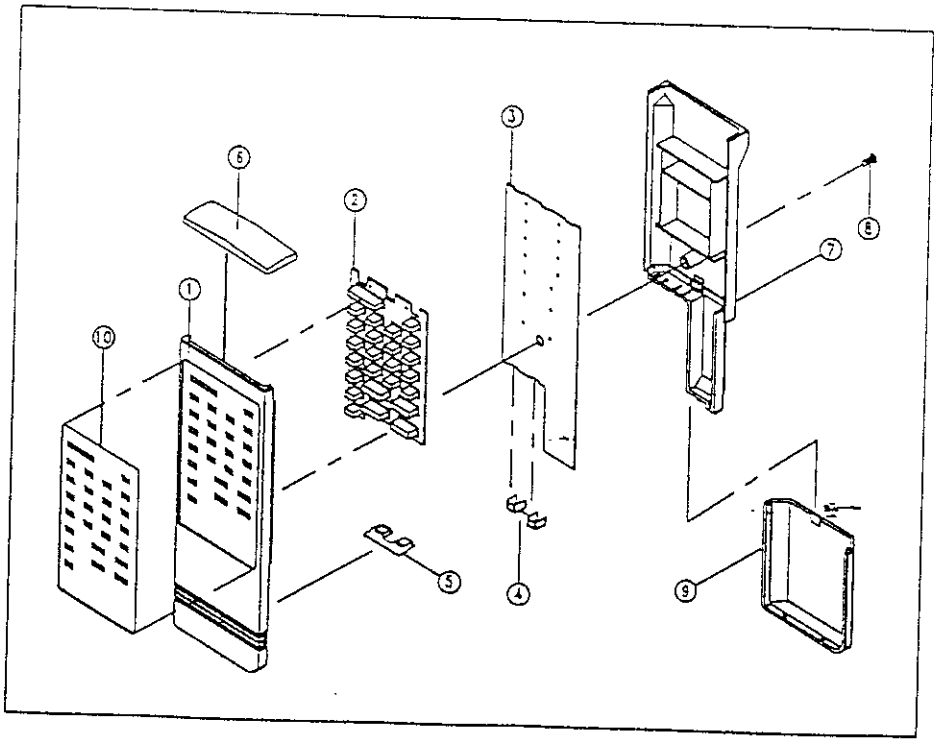
 TOP VIEW	
MN6014A	2SC2001L 2SC945

VOLTAGE FOR IC							
PIN NO.	1	2	3	4	5	6	7
	3	0	3	3	3	3	0
PIN NO.	8	9	10	11	12	13	14
	0	3	0	0	0	0	0
PIN NO.	15	16	17	18			
	0	0	0	0			

VOLTAGE FOR TRANSISTOR			
SYMBOL	B (V)	C (V)	E (V)
Q701	0	3	0
Q702	0	2.4	GND

REMOTE HANDSET UNIT OF EXPLODED VIEW PARTS LIST :

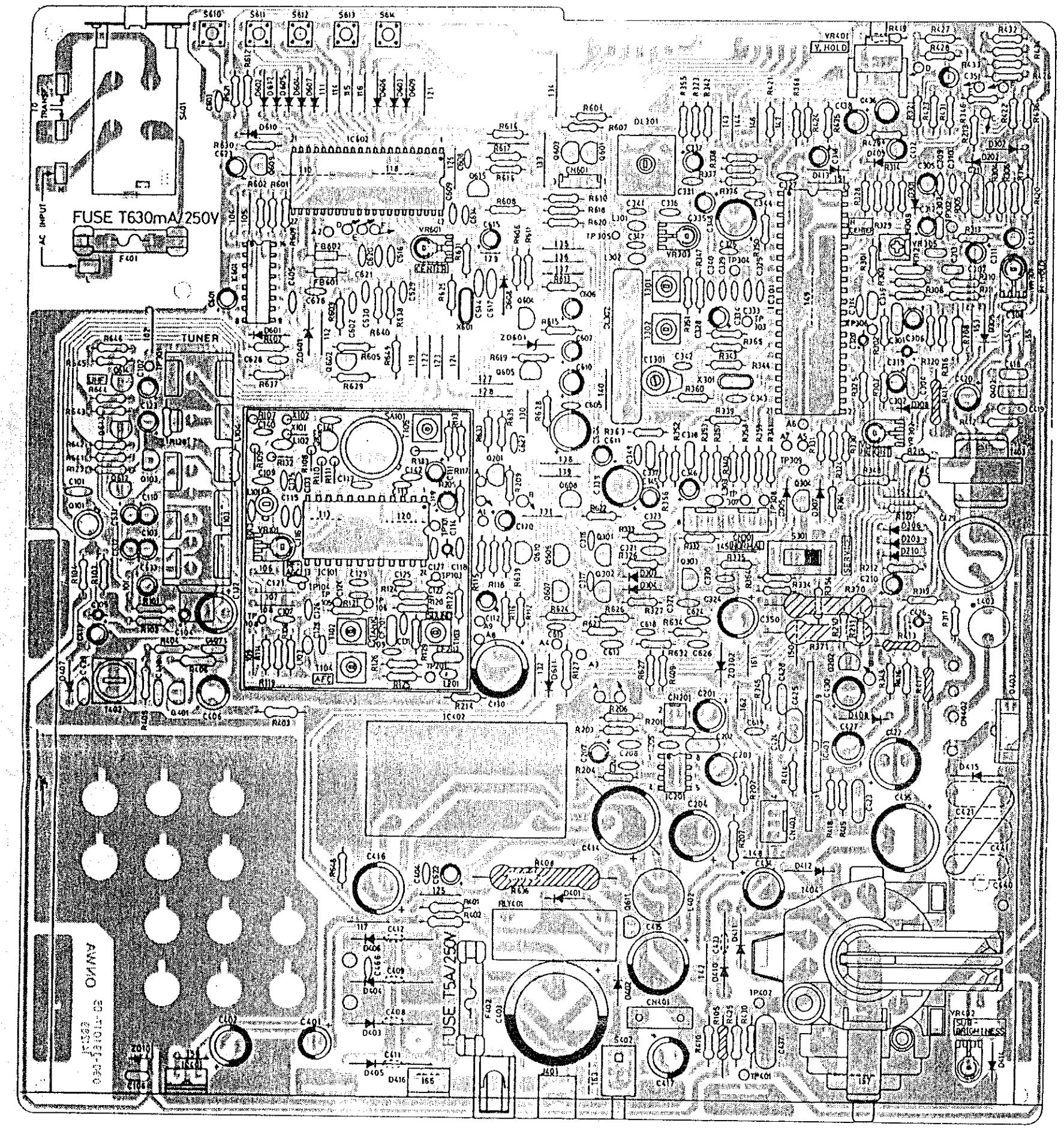
LOCATION	PARTS NO.	DESCRIPTION	QTY
1	201-390021-XX	TOP CABINET	1
2	334-390021-01	CONDUCTIVE RUBBER	1
3		HANDSET P.C. BOARD ASS'Y	1
4	472-390008-01	BATTERY CONTACT PLATE	1
5	472-390006-01	BATTERY CONTACT PLATE +,- VE	1
6	263-390001-01	FRONT LENS	1
7	203-390002-XX	BOTTOM CABINET	1
8	610-260108-00	SELF-TAPPING SCREW R/T 2.6 x 8 mm	1
9	210-390001-XX	BATTERY COVER	1
10	411-390021-XX	NAME PLATE	1



SPECIFICATION

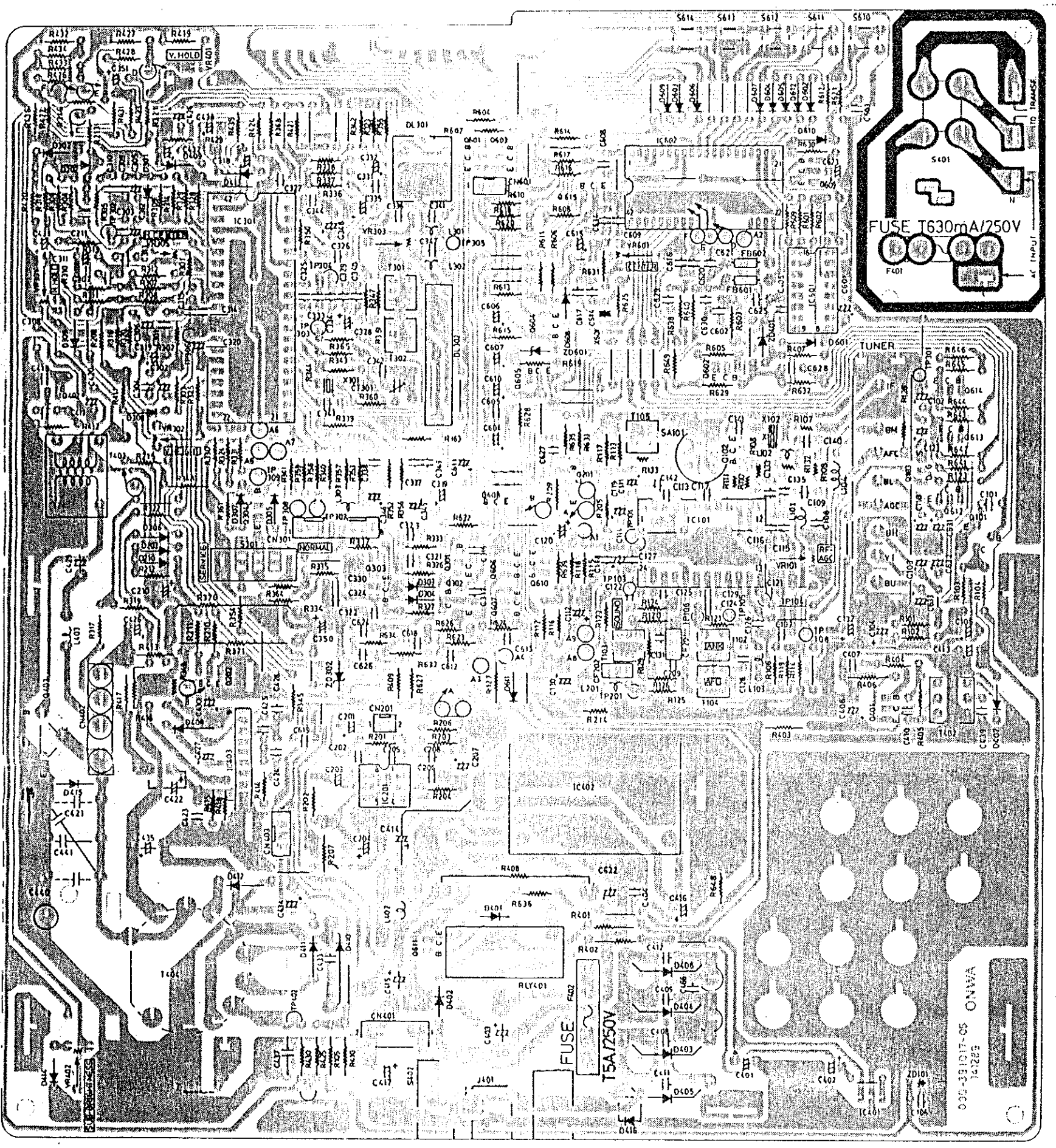
SYSTEM		:	PAL-B/G	
DESTINATION		:	ITALY	W.GERMANY
CHANNEL COVERAGE	VHF LOW	:	A - C CH	2 - S2 CH
	VHF HIGH	:	D - H2 CH	S3 - S20 CH
	UHF	:	21 - 69 CH	21 - 69 CH
FREQUENCY RANGE	VHF LOW	:	48.25 - 112.25 MHz	
	VHF HIGH	:	119.25 - 294.25 MHz	
	UHF	:	471.25 - 855.25 MHz	
SCANNING	LINES	:	625 LINES	
	HORIZONTAL	:	15625 Hz	
	VERTICAL	:	50 Hz	
IF FREQUENCY	VIDEO	:	38.9 MHz	
	SOUND	:	33.4 MHz	
VISION / SOUND SEPARATION		:	5.5 MHz	
SENSITIVITY	VHF LOW	:	32 uV	
	VHF HIGH	:	56 uV	
	UHF	:	80 uV	
OUTPUT POWER	MAXIMUM	:	700 mW	
	10% THD	:	500 mW	
CRT		:	10"(25.4 cm) Diagonal, 22.5 mm Neck Diameter, 76° Deflection Angle	
SPEAKER		:	3" (7.6 cm) (16 Ohm 1W)	
ANTENNA IMPEDANCE		:	75 Ohm	
POWER SUPPLY		:	AC 200V 50 Hz DC 12V - 15V	
POWER CONSUMPTION		:	60 Watts	
VIDEO INPUT		:	1V p-p (POSITIVE VIDEO) 75 Ohm IMPEDANCE	
AUDIO INPUT		:	0.5V r.m.s. (1 KHz) 47K Ohm IMPEDANCE	

COMPONENT DIAGRAM OF MAIN BOARD (TOP VIEW)



M3911-04

COMPONENT DIAGRAM OF MAIN BOARD (BOTTOM VIEW)

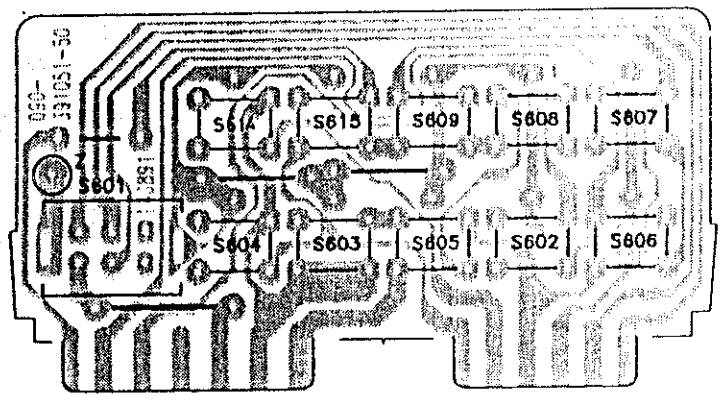


M3911-04

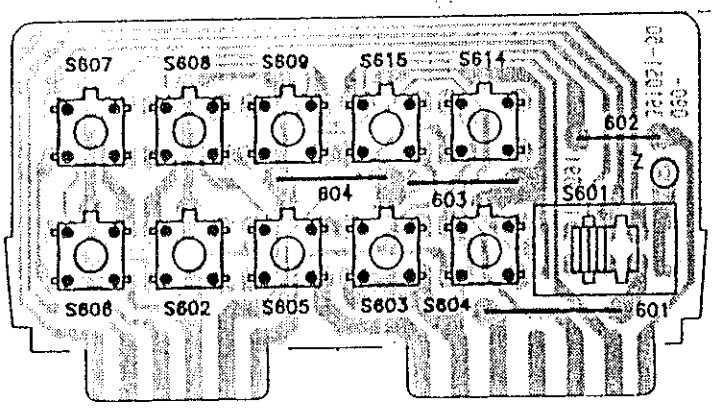
COMPONENT DIAGRAM

CONTROL FUNCTION BOARD

(BOTTOM VIEW)

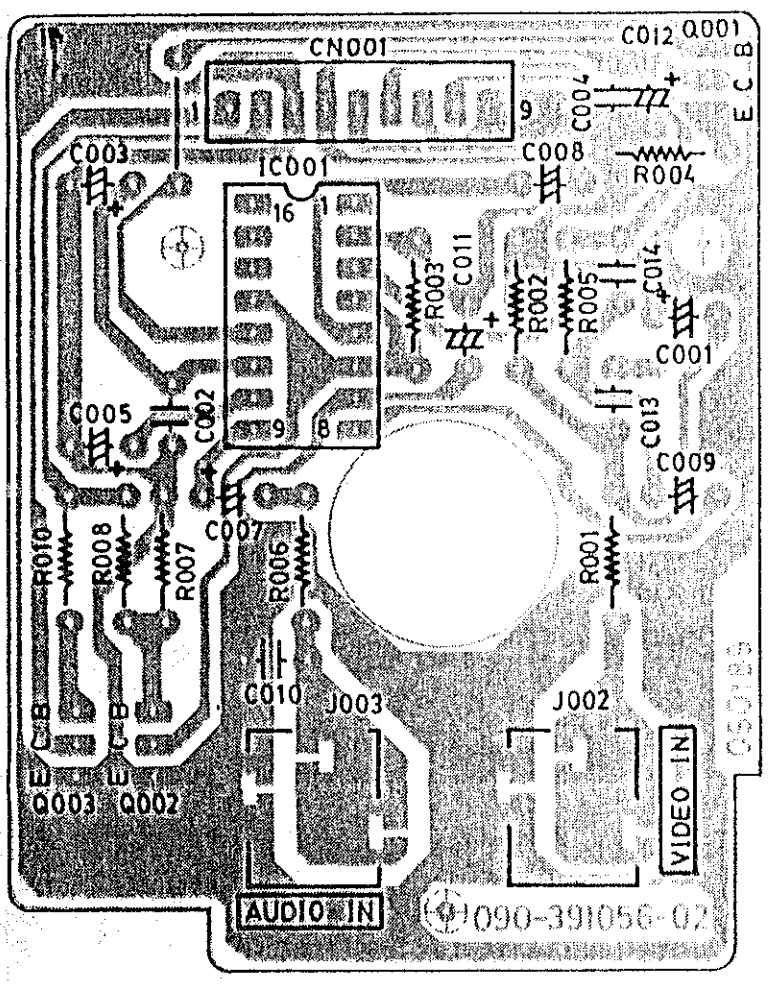


(TOP VIEW)

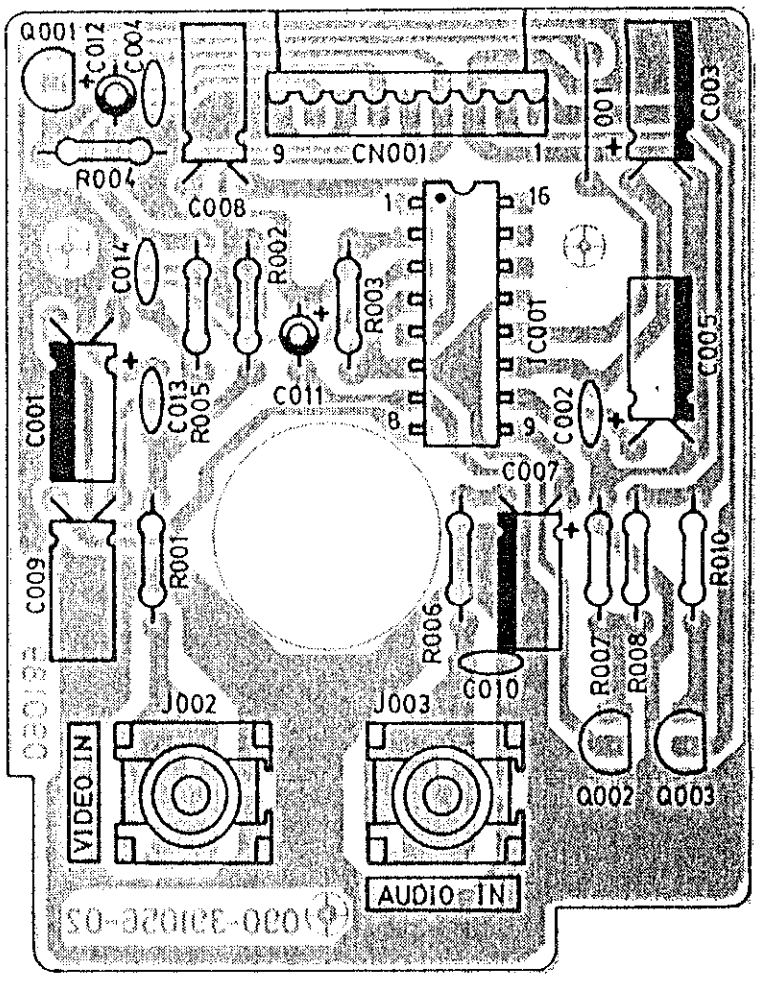


A/V BOARD

(BOTTOM VIEW)



(TOP VIEW)

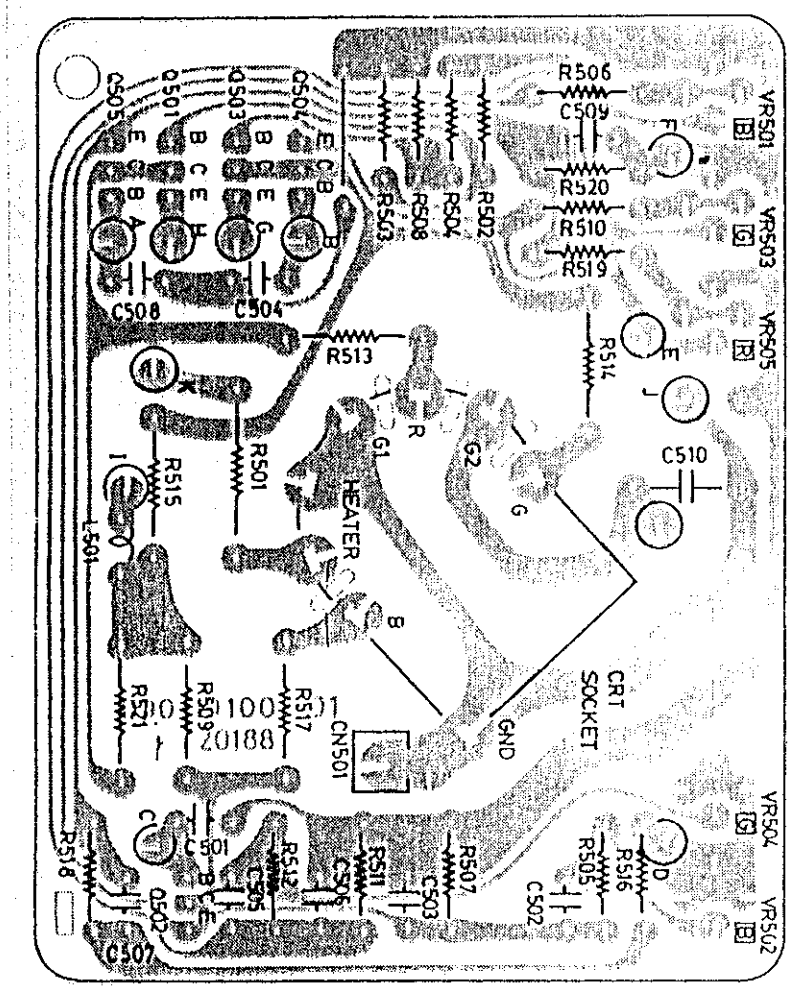


M3911-04

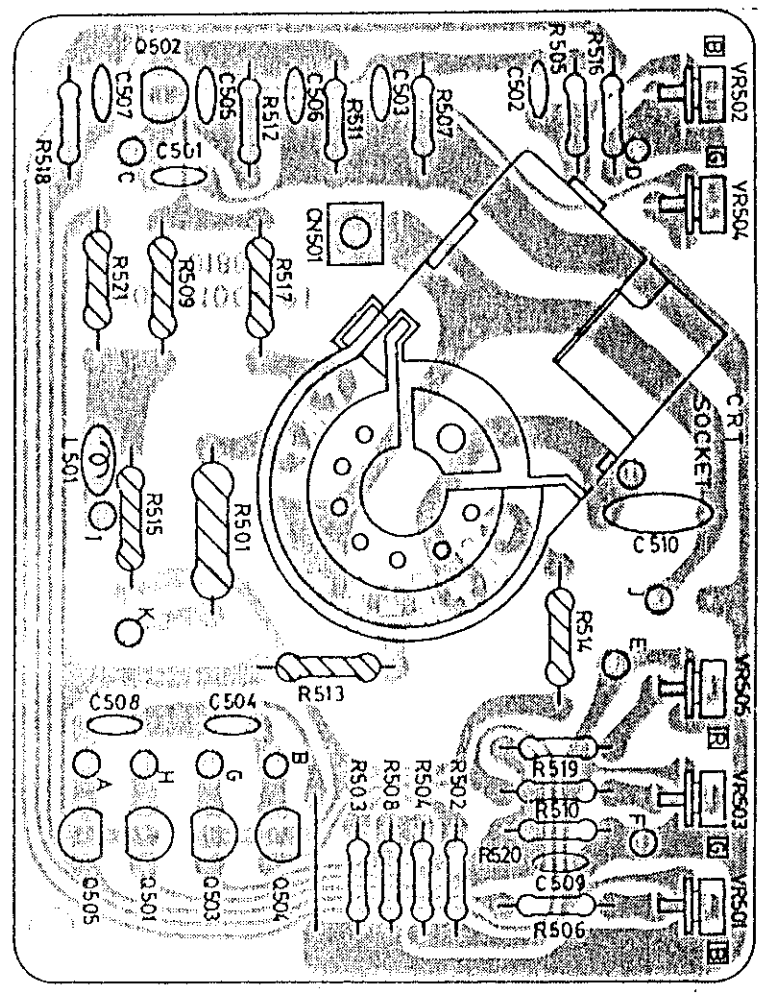
COMPONENT DIAGRAM OF IF BOARD

CRT BOARD

(BOTTOM VIEW)

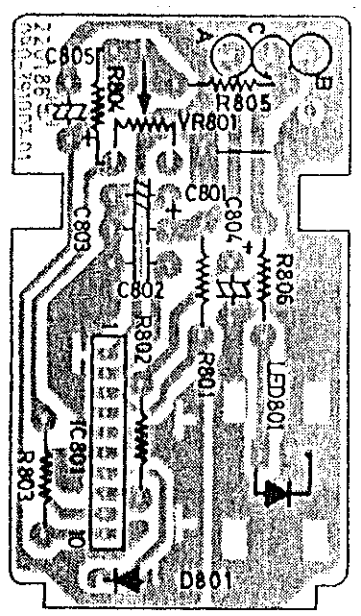


(TOP VIEW)

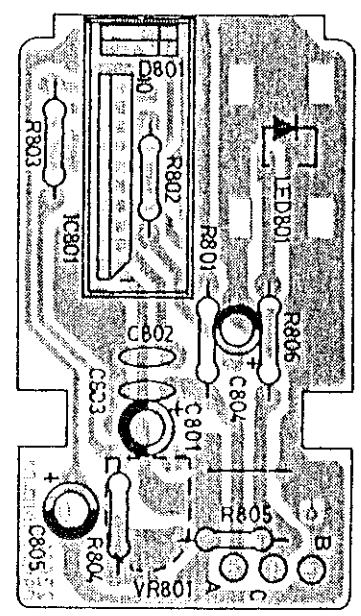


AMP BOARD

(BOTTOM VIEW)

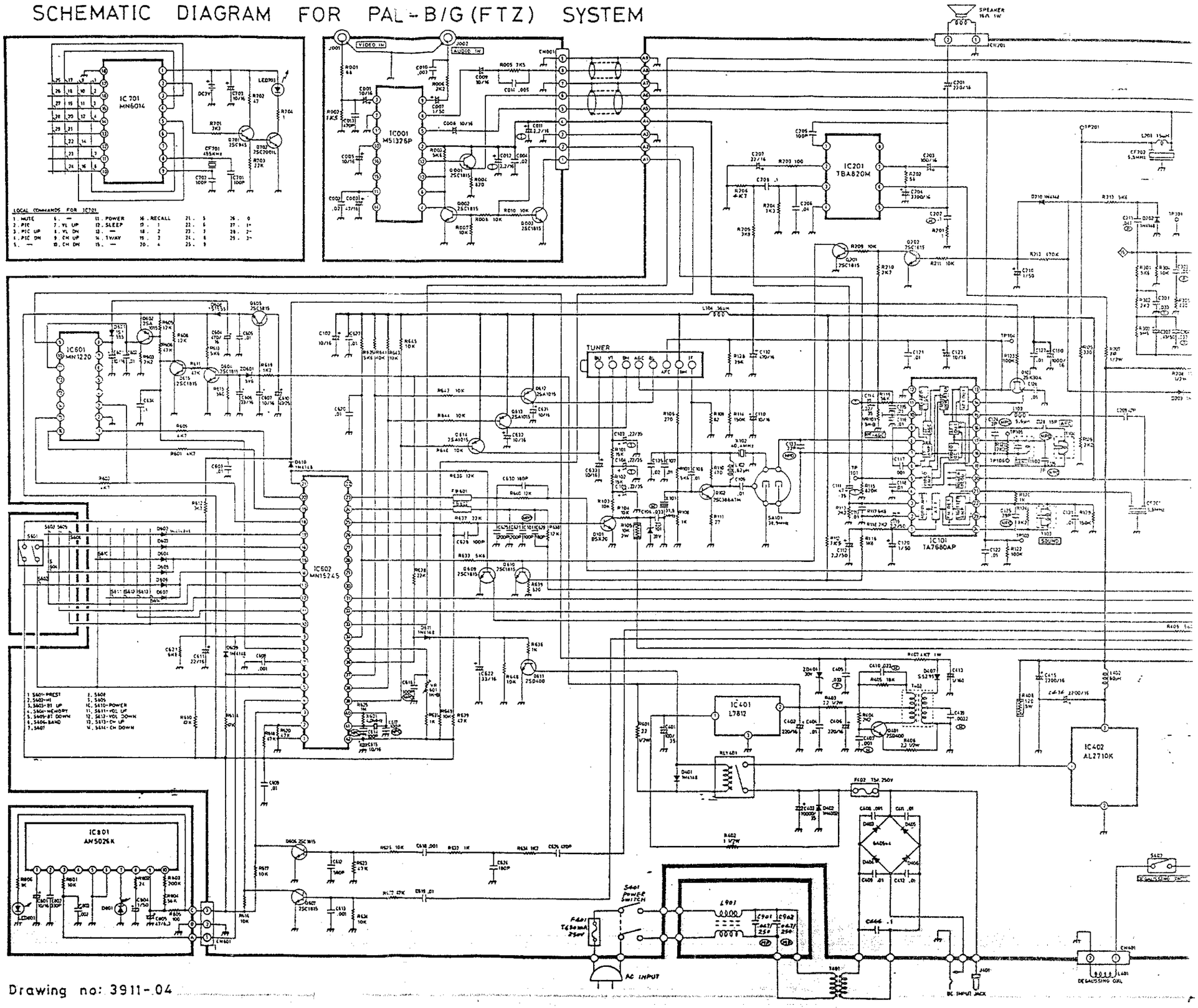


(TOP VIEW)

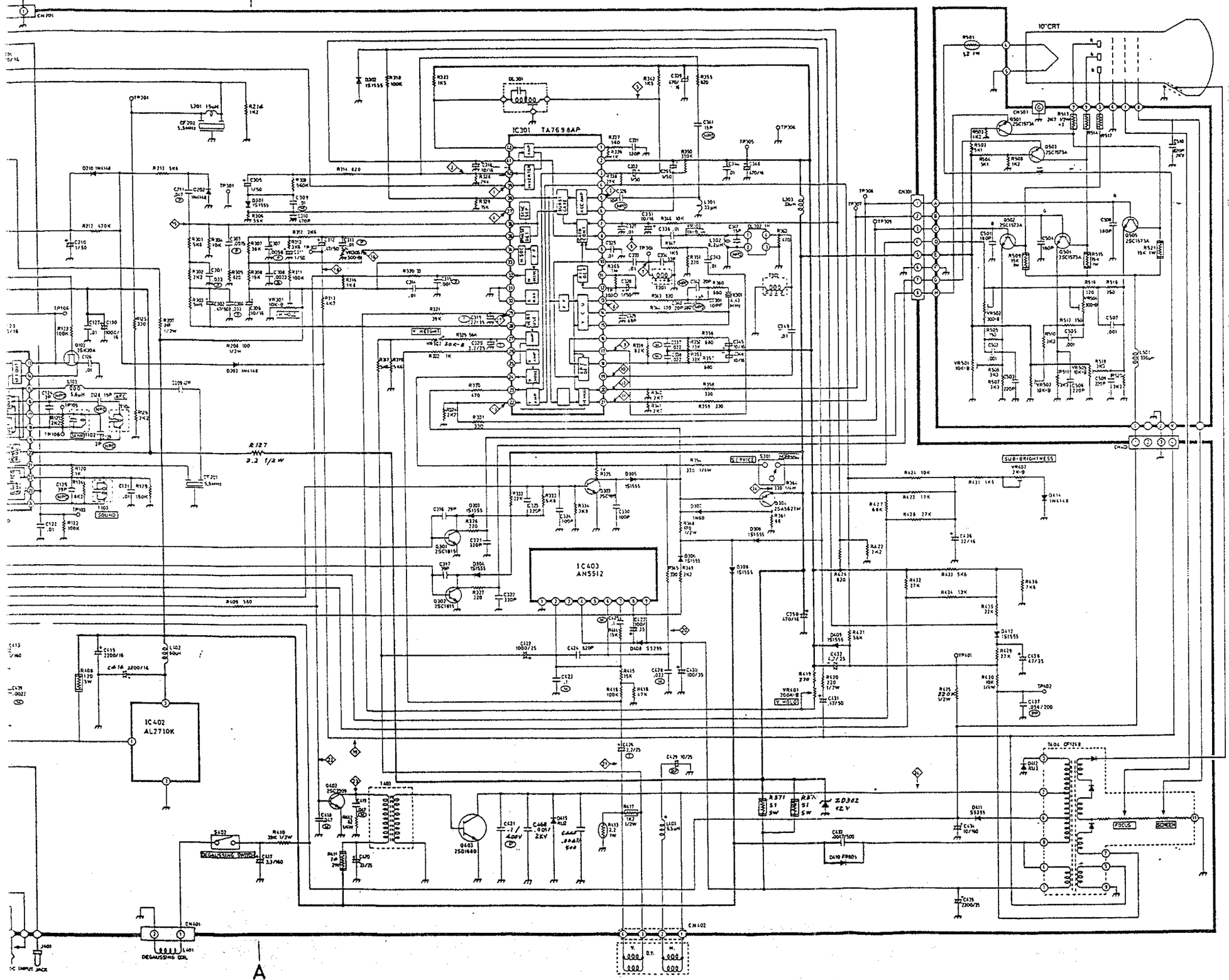


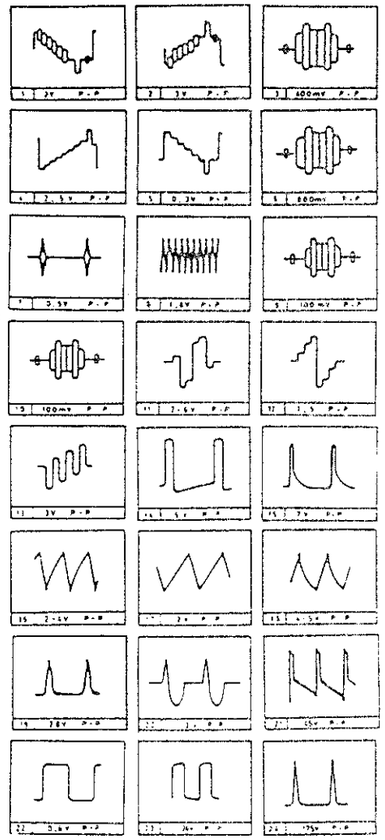
M3911-04

SCHEMATIC DIAGRAM FOR PAL - B/G (FTZ) SYSTEM



Drawing no: 3911-04





NOTE :

(1) ALL CAPACITORS ARE IN μF UNLESS OTHERWISE NOTED.
ALL CAPACITORS ARE 50WV UNLESS OTHERWISE NOTED.

(2) CAPACITOR NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS.
a) ELECTROLYTIC CAPACITOR
b) BI-POLAR ELECTROLYTIC CAPACITOR
c) TANTALUM CAPACITOR
d) MET METALLIZED POLYESTER.
e) PE POLYESTER FILM CAPACITOR.
f) PP POLYPROPYLENE CAPACITOR.
g) PC MYLAR CAPACITOR.

(3) ALL RESISTORS ARE IN OHM 1/16 WATT UNLESS OTHERWISE NOTED.

(4) RESISTOR NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS.
a) NFR NONFLAMMBLE RESISTOR.
b) FR FUSEBLE RESISTOR.
c) CEMENT RESISTOR.
d) MO METAL OXIDE RESISTOR.
e) THERMISTOR.

(5) DC VOLTAGE ARE MEASURED FROM POINTS INDICATED TO THE CIRCUIT GROUND WITH A DIGITAL MULTIMETER TEST.

(6) WAVEFORMS ARE TAKEN WITH SETTING CONTROLS TO A NORMAL CONDITIONS (COLOR PHILIPS PATTERN).

(7) THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

KONG WAH VIDEO ENGINEERING LTD.		
TITLE SCHEMATIC DIAGRAM		
MODEL: K-3917/0970	SYSTEM: PTZ	
DRAWING NO: 3971-040	COUNTRY:	
DATE: 28-10-97	REV: E(11-10-97)	
DRAWN:	CHECKED:	APPRO: