

TEAC

SERVICE MANUAL

CT-M1413

34cm CTV

SAFETY INSTRUCTIONS

WARNING : BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" DESCRIBED BELOW.

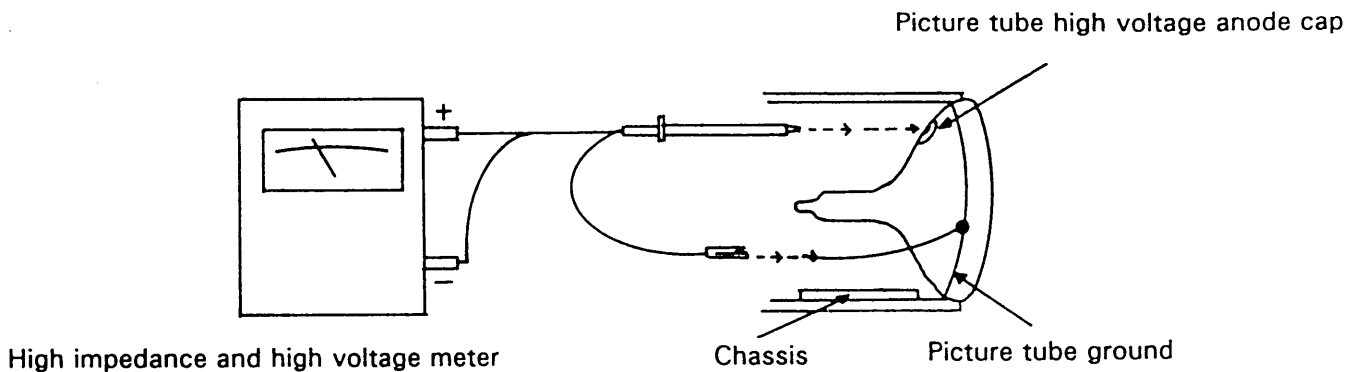
X-RAY RADIATION PRECAUTION

1..Extremely high voltage of the picture tube may result in producing potentially hazardous **X-RAY RADIATION**. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 30.4 kV at zero beam current (minimum brightness) under 175-245V AC power source.

The high voltage must, under any circumstances, not exceed 32kV.

Each time this receiver requires servicing, the high voltage should be checked according to the **HIGH VOLTAGE CHECK** procedure at the back of this manual. It is recommended to record the reading of the high voltage in the service record each time. Using an accurate and reliable high impedance and high voltage meter is quite important.

Connect the **NEGATIVE** and **POSITIVE** probe of a high voltage meter to the "ground" and the high voltage anode cap of the picture tube respectively.



HIGH VOLTAGE CHECK CONNECTION DIAGRAM

2..The only source of **X-RAY RADIATION** in this receiver is the picture tube. For ensuring the intensity of **X-RAY RADIATION** from the picture tube being within the specified safety limit, the replacement picture tube must be exactly the same type specified in the parts list.

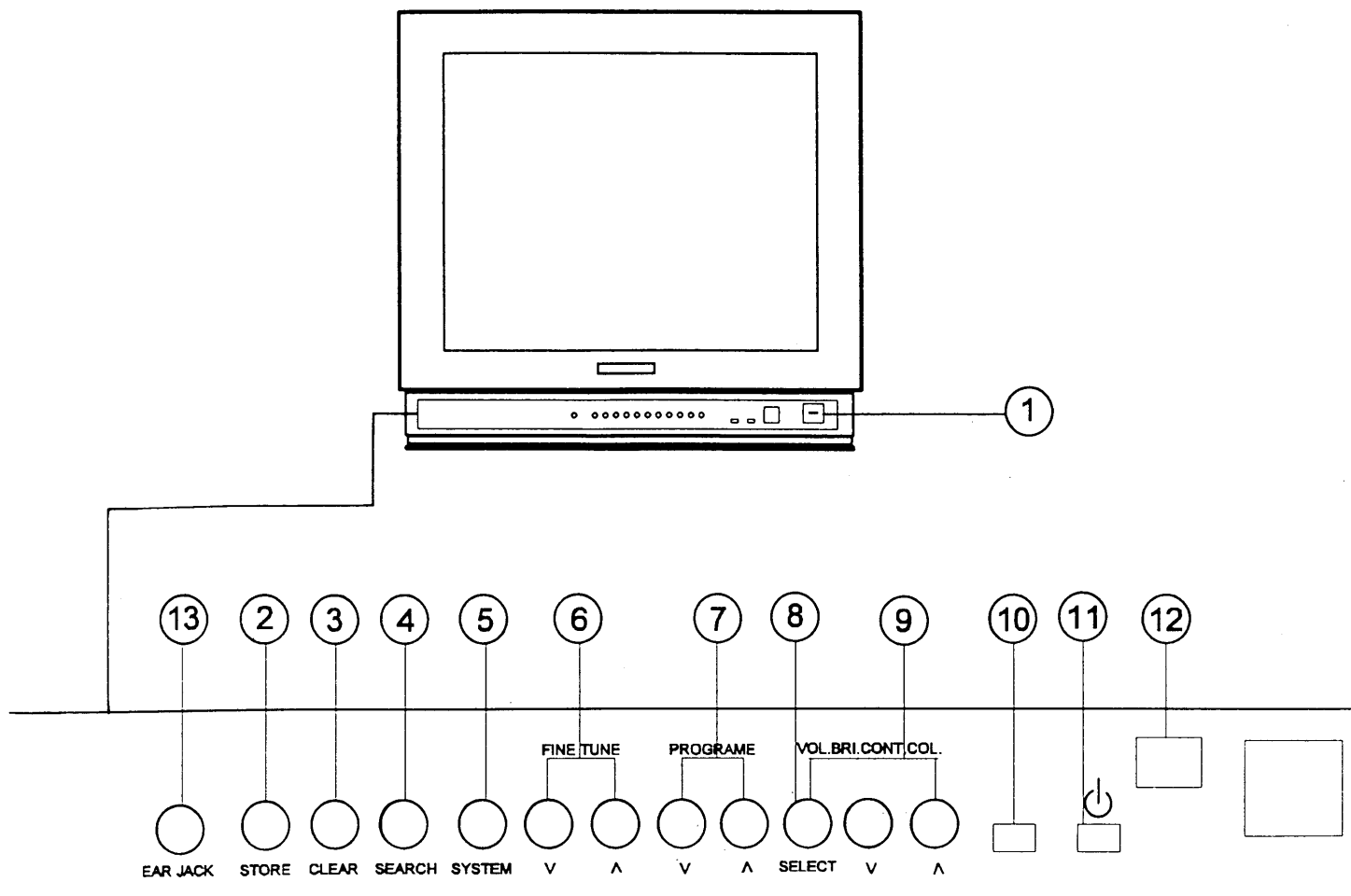
3..Some parts in this receiver have special safety-related characteristics which would affect **X-RAY RADIATION** protection. For safety, parts replacement should be carried out only after referring to the "PRODUCT SAFETY NOTICE" below.

PRODUCT SAFETY NOTICE

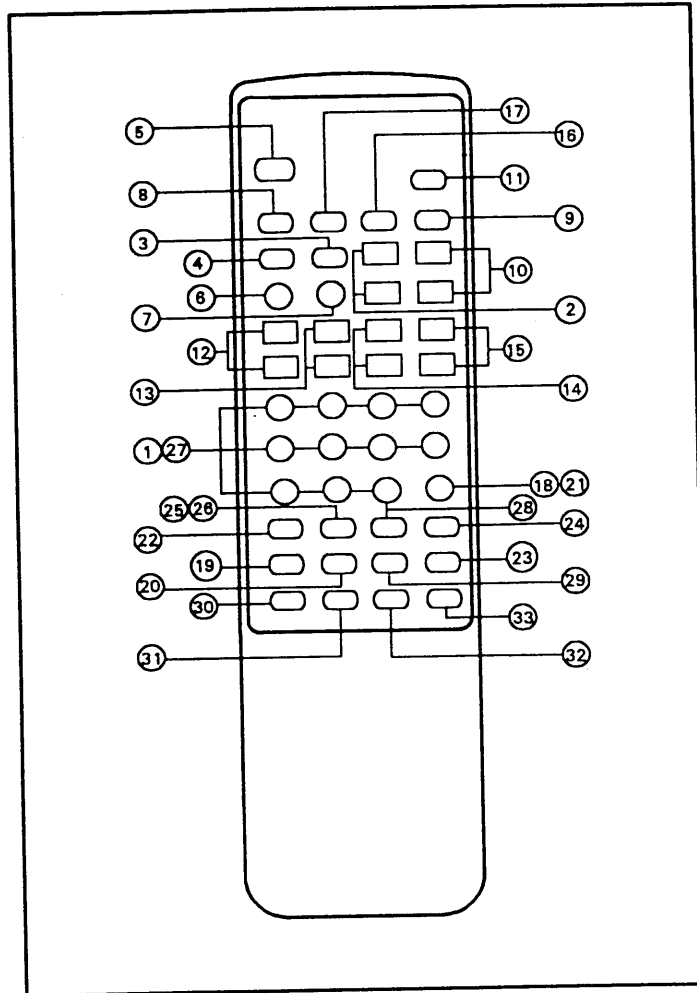
Many electrical and mechanical parts in this receiver have special safety-related characteristics (directly relate to high voltage, high temperature or electric shock) which are not easily seen by visual inspection. Whenever replacing such components, make sure that the replacement parts can provide effective **X-RAY RADIATION** protection even though their high voltage and wattage can meet the specification of the original design. Such parts can be identified by shading and marking with \triangle in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. Using substitute parts which do not have the same safety characteristics as the ones specified in the parts list may create excessive **X-RAY RADIATION**.

LOCATION OF CONTROLS AND SWITCHES



1. Main Power Switch Button
2. Store Button
3. Clear Button
4. Search Button
5. System Button (Optional)
6. Fine Tune Up/Down Button
7. Programme No. Up/Down Button
8. Function Selection Button: Volume/Colour/Contrast/Brightness (Tint/Balance/Treble/Bass) Optional.
9. Function Control Up/Down Button
10. Power On Indicator
11. Standby Indicator
12. Infrared Sensor
13. Ear phone Jack



REMOTE CONTROL UNIT

- | | |
|--|--------------------------------------|
| (1) PROGRAMME NUMBER BUTTONS (0-9) & DIGIT SWAP BUTTON | (14) CONTRAST CONTROL BOTTONS |
| (2) PROGRAMME NO.(UP/DOWN) BUTTONS(P.) | (15) TINT CONTROL BOTTONS |
| (3) AV BUTTON | (16) EFFECT BUTTON |
| (4) TV BUTTON | (17) STEREO/MONO AND DUAL (OPTIONAL) |
| (5) POWER STANDBY BUTTON BUTTON | (18) SYSTEM BOTTON (OPTIONAL) |
| (6) OFF TIMER BUTTON | (19) TXT. |
| (7) SOUND MUTING BUTTON | (20) MIX. |
| (8) RECALL BUTTON | (21) CANCEL(X) |
| (9) FUNCTION SELECTION BUTTON (OPTIONAL) | (22) HOLD |
| (10) FUNCTION VOLUME CONTROL BUTTONS | (23) SIZE |
| (11) PERSONAL PRESET BUTTON (PP) | (24) REVEAL |
| (12) BRIGHTNESS CONTROL BOTTONS | (25) STATUS |
| (13) COLOUR CONTROL BOTTONS | (26) SUBCODE |
| | (27) DIGIT ENTRY (0-9) |
| | (28) PAGE NUMBER UP/DOWN (▲ PAGE ▼) |
| | (29) INDEX BUTTON |
| | (30-33) COLOUR (PAGE) BUTTONS |

GENERAL INFORMATION

All adjustments are thoroughly done before shipping. Therefore the receiver should operate normally and produce proper colour upon good installation.

Insert the power plug into a 220/240 volt 50 Hz AC power outlet. Never connect the DC supply or other power outlet or frequency. Switch on the TV receiver. Adjust the controls for optimum picture. For testing and adjustment the luminance and chrominance controls should be preset at normal positions while the volume control at one third position of maximum output.

AUTOMATIC DEGAUSSING

An automatic degaussing coil is attached around the picture tube. Degauss the tube properly about one second after the set is switched on. If the receiver is moved or faced in a different direction, the power must be switched off at least 30 minutes in order that the automatic degaussing circuit operates properly.

External degaussing is necessary if the automatic degaussing proves ineffective after the set is moved. External degaussing is done by moving a degaussing coil clockwise in front of the face plate and then moving it away step by step until it is about two meters from the screen, when the power is switched off.

B+ VOLTAGE ADJUSTMENT

NOTE : TO AVOID X-RAY HAZARDS, B+ VOLTAGE MUST BE SET CORRECTLY AT 105V (14") / 108V (20",21") POSITIONS.

1. Switch on the TV receiver, tune in an active channel with contrast and luminance controls at normal positions.
2. Make sure the AC power supply is 220V \pm 5% 50 Hz.
3. Connect test point (socket C1) on the PCB 60-A0544920-01 with high impedance DC voltmeter.
4. Adjust VR600 (on the PCB 60-A0544920-01) for B+ 105V(14") / 108V (20",21") voltage reading.

S1 ALIGNMENT

Apply a DC 12V at the C120 and a sweep PIF signal to the TUNER TP.

Connect the vertical input of sweep oscilloscope to the TP2, adjust L109 for 40.2MHz and L110 for 31.9MHz to get the wave form like fig.1.

AFC ALIGNMENT

Change the sweep PIF signal to a CW signal. Connect with a high impedance DC voltmeter to the C142 and the GND.

Adjust L100 to get the reading of 3.5V. Increased the frequency then the reading will be decreased. Contrarily, the reading will be increased.

AGC ALIGNMENT

Apply a 60dbu level with standard colour bar signal to the antenna input.

Connect the probes of the high impedance DC voltmeter to C153.

Adjust VR101 to get the reading of 5 -- 5.5V till obtaining a clear picture.

HORIZONTAL POSITION ADJUSTMENT

Apply a cross hatch signal.

Adjust VR100 to move the picture at the center.

VERTICAL ADJUSTMENT

Apply a cross hatch signal.

Adjust VR301 to obtain rightful high picture.

Adjust VR300 to obtain a linear picture.

Adjust VR302 to move the picture at the center.

FS (Failure Safety) CIRCUIT CHECK

Turn the power switch on and adjust all controls for normal operation.

Temporarily connect a 15 Kohm resistor across R391 on the main board. Raster and sound will disappear. The receiver must remain in this state even after removing the resistor. This is the evidence that the FS circuit is functioning properly.

To obtain a picture again, temporarily turn the receiver off and allow the FS circuit more than 30 seconds to reset. Then turn the power switch on to product a normal picture.

SCREEN VOLTAGE ADJUSTMENT

Press the AV button on the hand set unit to obtain a darkest picture.

Turn the SCREEN VR anti clockwise to get the minimum value. Connect the test probe of the high impedance voltmeter to the BLUE GUN OF THE CRT.

Turn the SCREEN VR clockwise slowly to get the reading of 145 -- 155V.

WHITE BALANCE ADJUSTMENT

Apply a white balance alignment signal with the white balance checker.
Adjust brightness and contrast suitable for the adjustment.
Adjust VR404/VR405 (BLUE), VR402/VR403 (GREEN) and VR401 (RED) to obtain a 6500 K or 9300 K colour temperature.

STEREO AND NICAM SOUND ALIGNMENT (BG-38.9MHz, I-39.5MHz)

Apply IF signal (38.9 MHz, 10mV) to pin 2 of B socket.
Set signal generator to pulse and bar. Set TV generator to dual transmission with internal modulation of 3 KHz on channel 1 and 1 KHz on channel 2.
Connect oscilloscope to pin 15 of IC201 (TDA3857). Align the 38.9MHz (L202) for minimum picture contents.

DUAL SIF ALIGNMENT

Set transmitter to BG mono sound mode, connect the dual vertical input of the oscilloscope to R210 (MAIN SOUND) 5.5MHz and R208 (SUB SOUND) 5.74MHz.
Adjust L201 5.5MHz tank coil to minimum THD.
Change the sound to D/K system, adjust L205 6.5MHz tank coil to minimum THD.
Re-align L201 and L205 to minimum THD both. Set transmitter to dual sound mode and off the main sound modulation.
Adjust L200 5.74MHz tank coil to minimum THD.

COLOUR PURITY ADJUSTMENT

NOTE: Before attempting any convergence adjustments, this receiver should be operated for at least fifteen minutes. Convergence magnet assembly and rubber wedges need mechanical position as shown in Fig. 5.

1. Demagnetize the picture tube and cabinet using an external degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS controls to maximum.
3. Adjust RED and BLUE bias controls (VR401) and (VR405) to provide only a green raster. Advance the green bias control (VR403) if necessary.
4. Loosen the clamp screw holding the yoke and slide the yoke and slide the yoke backward to provide vertical green belt zone in the picture screen.
5. Remove the rubber wedges.
6. Rotate and spread the tabs of the purity magnet (See Fig. 5. around the neck of the picture tube until the green belt is in the center of the screen.) At the same time center the raster vertically.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue rasters by adjusting the bias controls.
9. Obtain a white raster, referring to "WHITE BALANCE ADJUSTMENT".
10. Proceed with convergence adjustment.

CENTER CONVERGENCE ADJUSTMENT

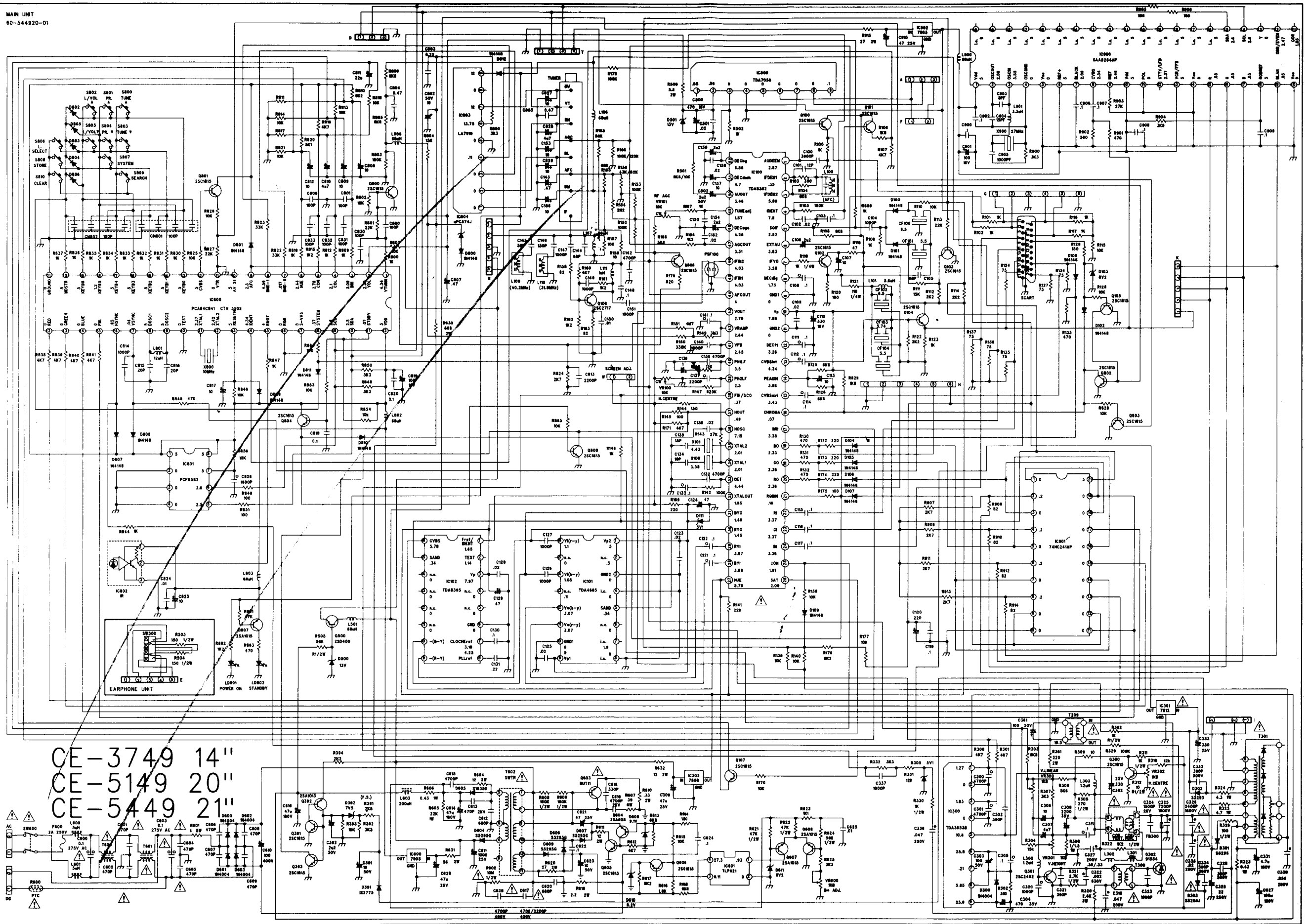
1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST controls for well defined pattern.
3. Adjust two tabs of the 4 pole magnets to change the angle between them (see Fig.6) and obtain a blue vertical line in the center area of the picture screen. (see Fig.7).
4. Turn both tabs at the same time keeping their angles constant to superimpose red and blue horizontal lines at the center of the screen. (see Fig.7).
5. Adjust two tabs of 6 pole magnets to superimpose red and blue line with green one . Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 1,2,3, keeping in mind red, green and blue movements because 4 pole magnets and 6 pole magnets interact and make dot movement complex.

CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Place a wedge as shown in Fig.5 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (see Fig.7).
Push the mounted wedge into the space between picture tube and the yoke to hold the yoke temporarily.
4. Place other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference (see Fig.7).
6. Hold the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to hold the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space, stick it on picture tube to fix the yoke. After placing three wedges, recheck overall convergence.
8. Tighten the screw firmly to hold the yoke tightly in place. Stick 3 adhesive tapes on wedges as shown in Fig.5.

BLOCK DIAGRAM

MAIN UNIT
60-544920-01



CE-3749 14"
CE-5149 20"
CE-5449 21"

NOTICE:

SINCE THIS IS A BASIC CIRCUIT DIAGRAM THE VALUE OF COMPONENTS ARE SUBJECT TO BE CHANGE FOR IMPROVEMENT

M=1,000,000
K=1,000

WARNING:

BEFORE SERVICING THIS CHASSIS, READ THE X-RAY RADIATION PRECAUTION & PRODUCTS SAFETY NOTICE OF THIS MANUAL

CAUTION:

THE WARNING SYMBOLS IN THE SCHEMATIC DIAGRAM AND THE PART LIST DESIGNATE COMPONENTS WHICH HAVE SPACIAL CHARACTERISTICS IMPORTANT FOR SAFETY SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS LIST BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE PRODUCTS SAFETY NOTICE OF THE MANUAL DO NOT DEGRADE THE SAFETY OF THE RECEIVER THROUGH IMPROPER SERVICING.

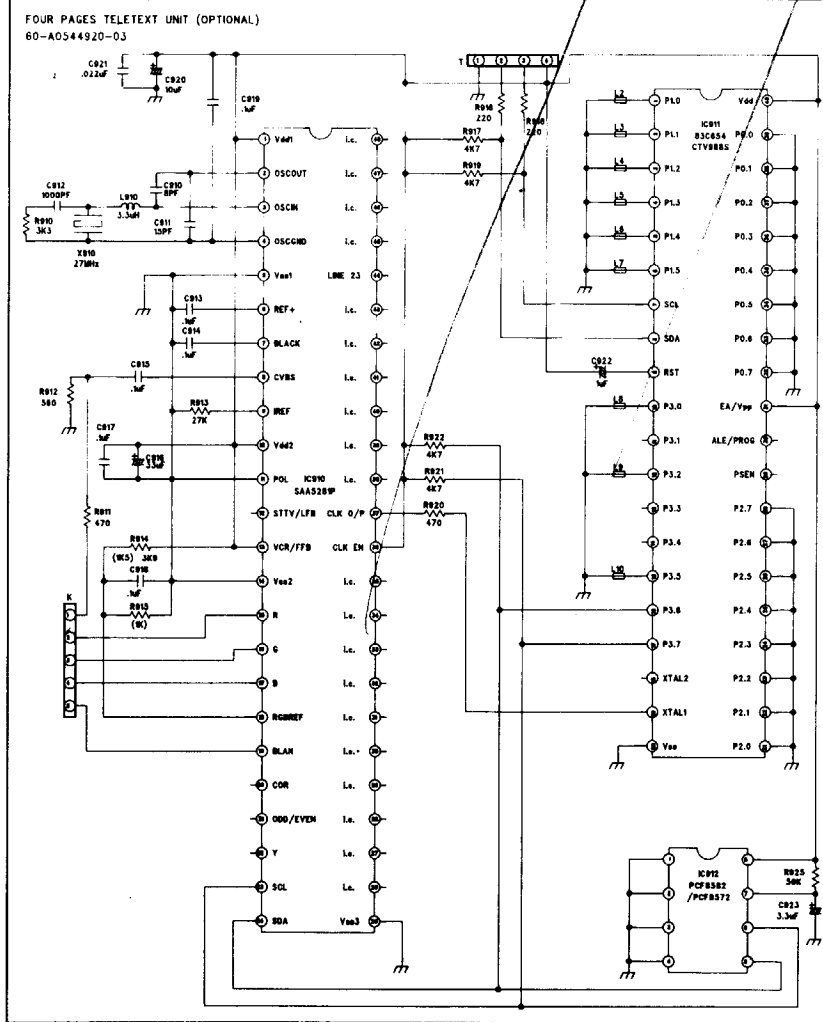
4 ALL CAPACITOR ARE 50VW CEREMIC CAPACITOR UNLESS OTHERWISE LISTED CAPACITANCE UNIT IS uF, UNLESS OTHERWISE LISTED.

NOTE:

- VOLTAGES ARE MEASURED WITH DVM FROM POINT INDICATED TO CHASSIS GROUND, USING COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL POSITION.
- WAVEFORMS ARE MEASURED WITH SYNCHROSCOPE FROM POINT INDICATED TO CHASSIS GROUND, USING COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL POSITION.
- ALL RESISTORS ARE 1/8W +/-5% CARBON FLIM RESISTOR UNLESS OTHERWISE LISTED. RESISTANCE UNIT IS IN OHM

RESISTOR TYPES	SIMBOL
CARBON FILM	
CARBON COMPOSITION	P
METAL OXIDE +/-5%	M
METAL OXIDE +/-2%	M
FUSIBLE	F
NON INFLAMMABLE	
PTC THERMISTOR	
VARIABLE	

CAPACITOR TYPES	SYMBOL
CERAMIC	
TANTALUM	
POLYESTER FILM	
POLYPROPYLENEM FLIM	
METAL POLYESTER FILM	
POLY POLYESTER FILM	
ELECTROLYTIC	
TRIMMER	



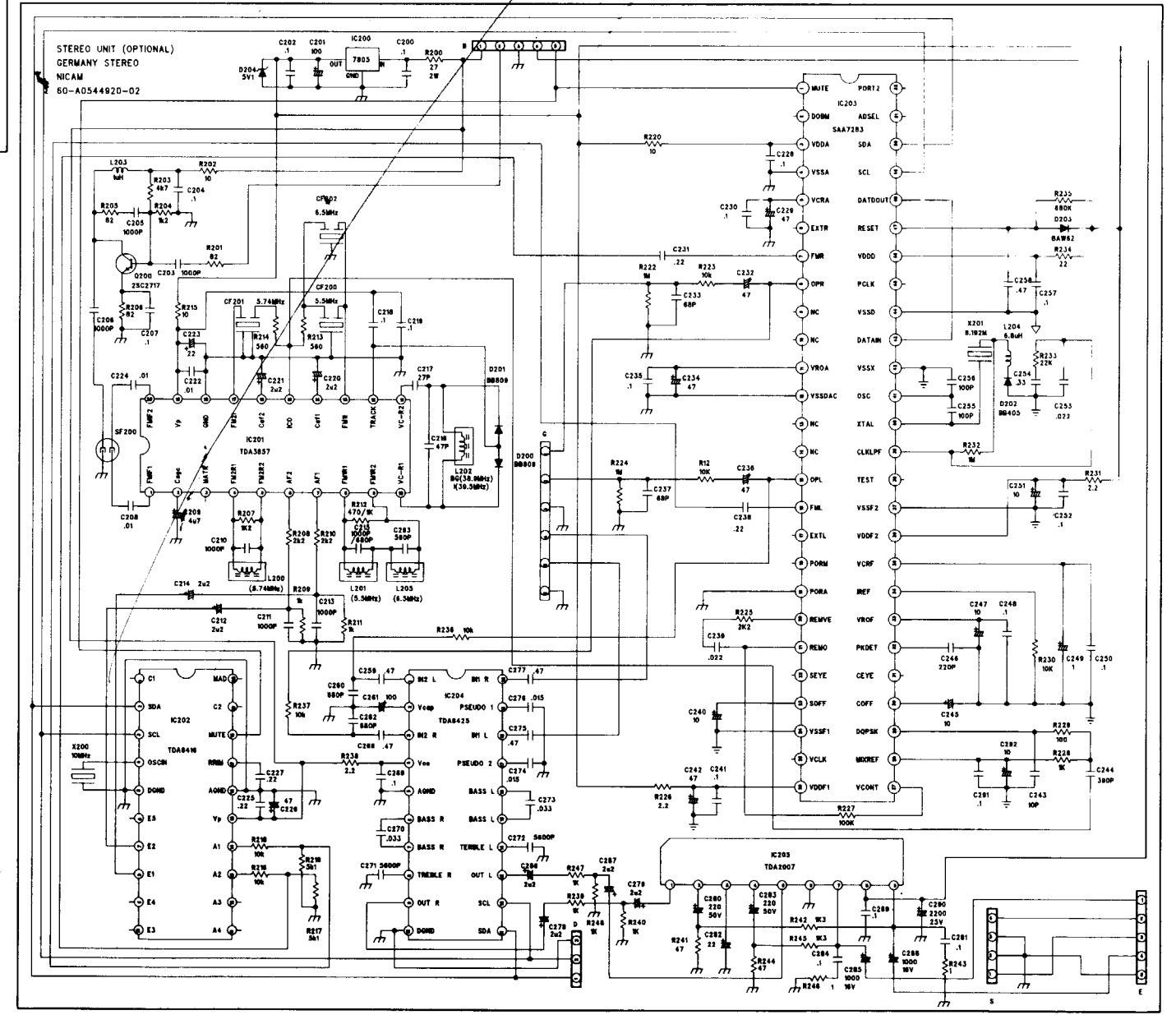
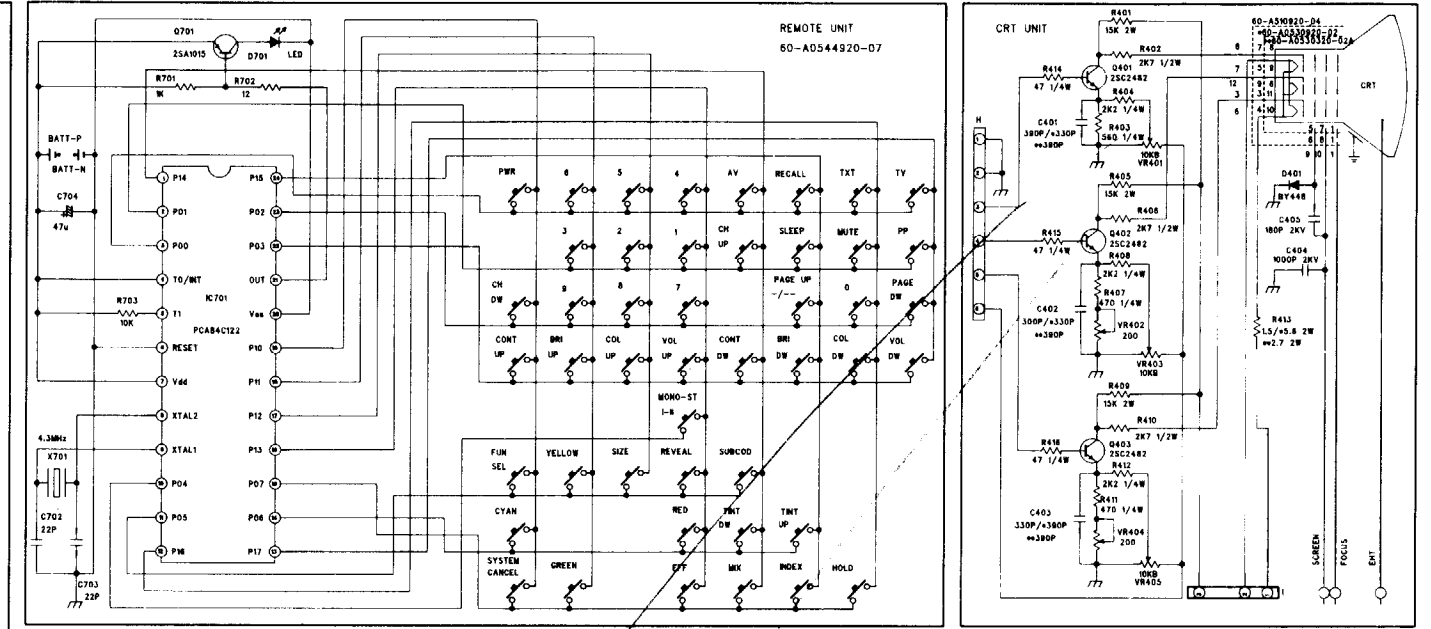
CE-3749 14"
CE-5149 20"
CE-5449 21"

PAL/SECAM
NTSC AV

1 PAGE
OR
4 PAGES
TELETEXT

MONO SOUND
OR
ST. SOUND

GERMANY ST.
AND/OR
NICAM B/G
* NICAM I



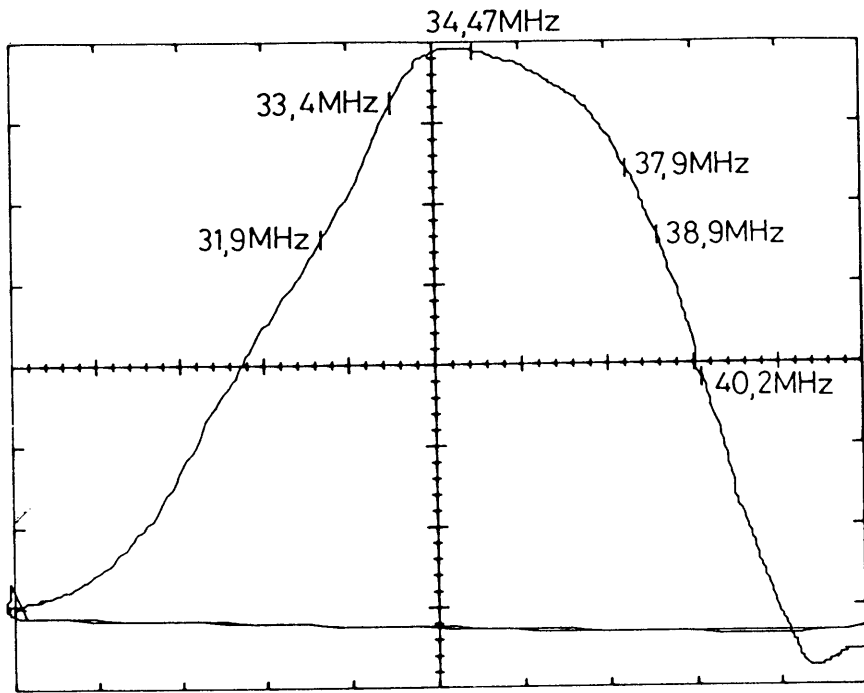


Fig. 1

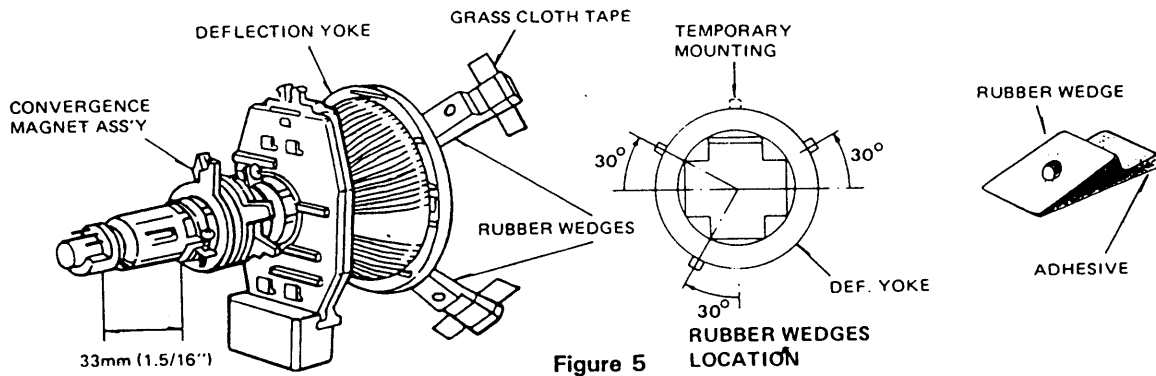


Figure 5

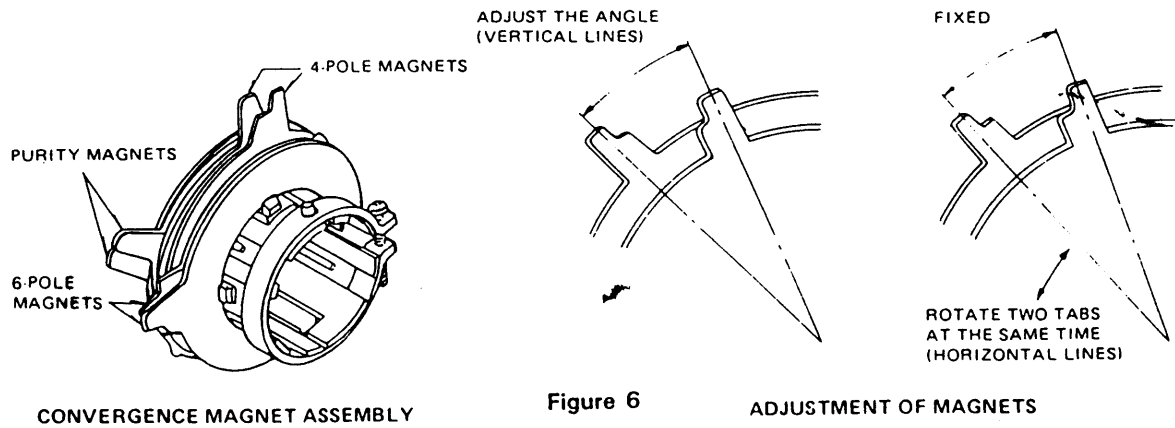


Figure 6

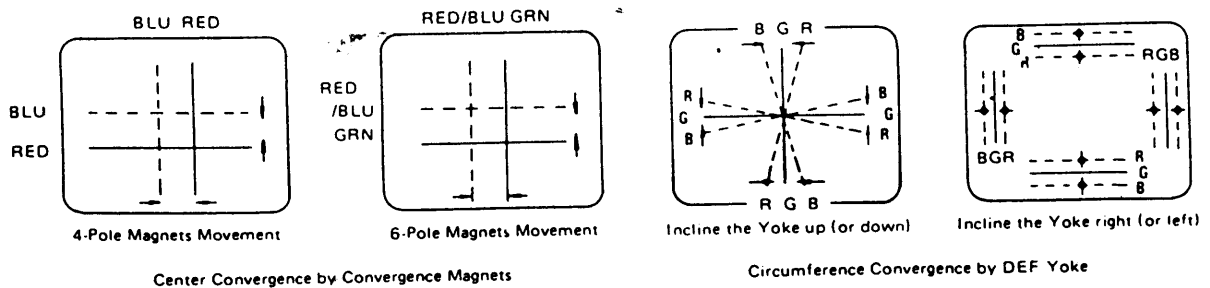
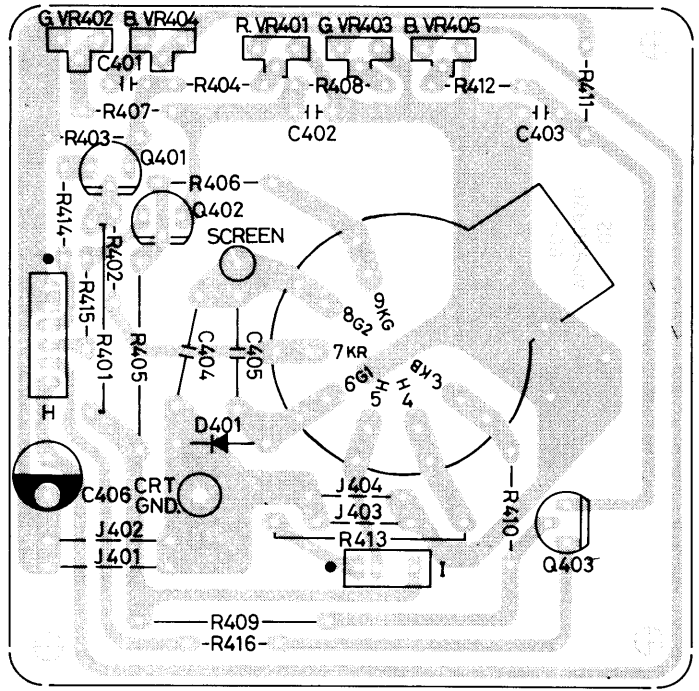
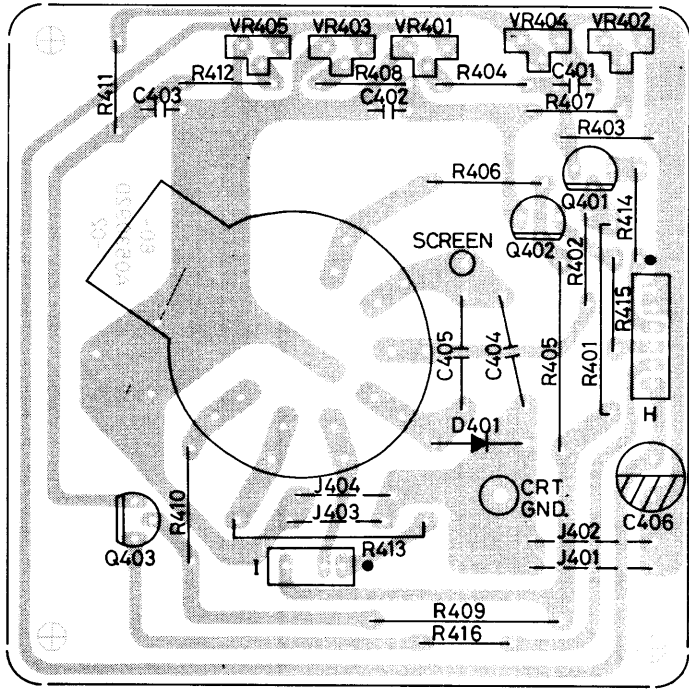
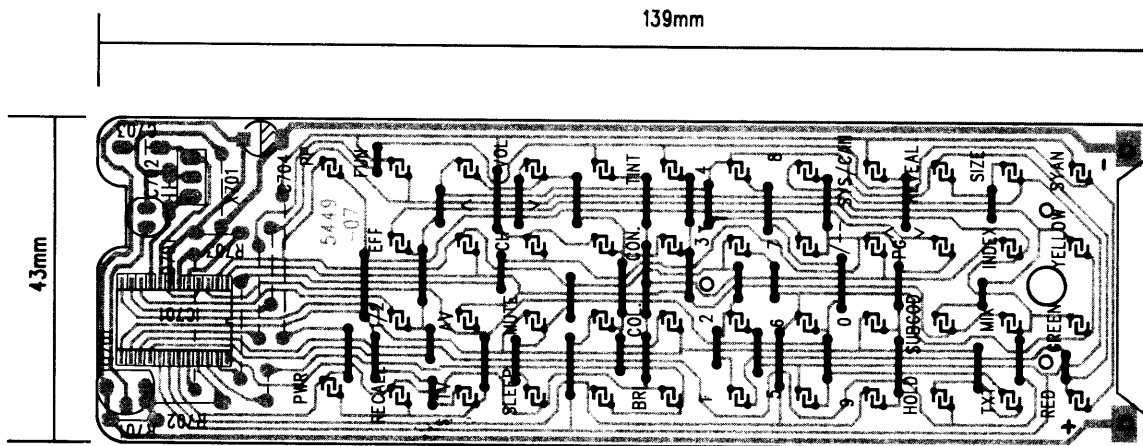


Figure 7 Dot Movement Pattern

CRT BOARD

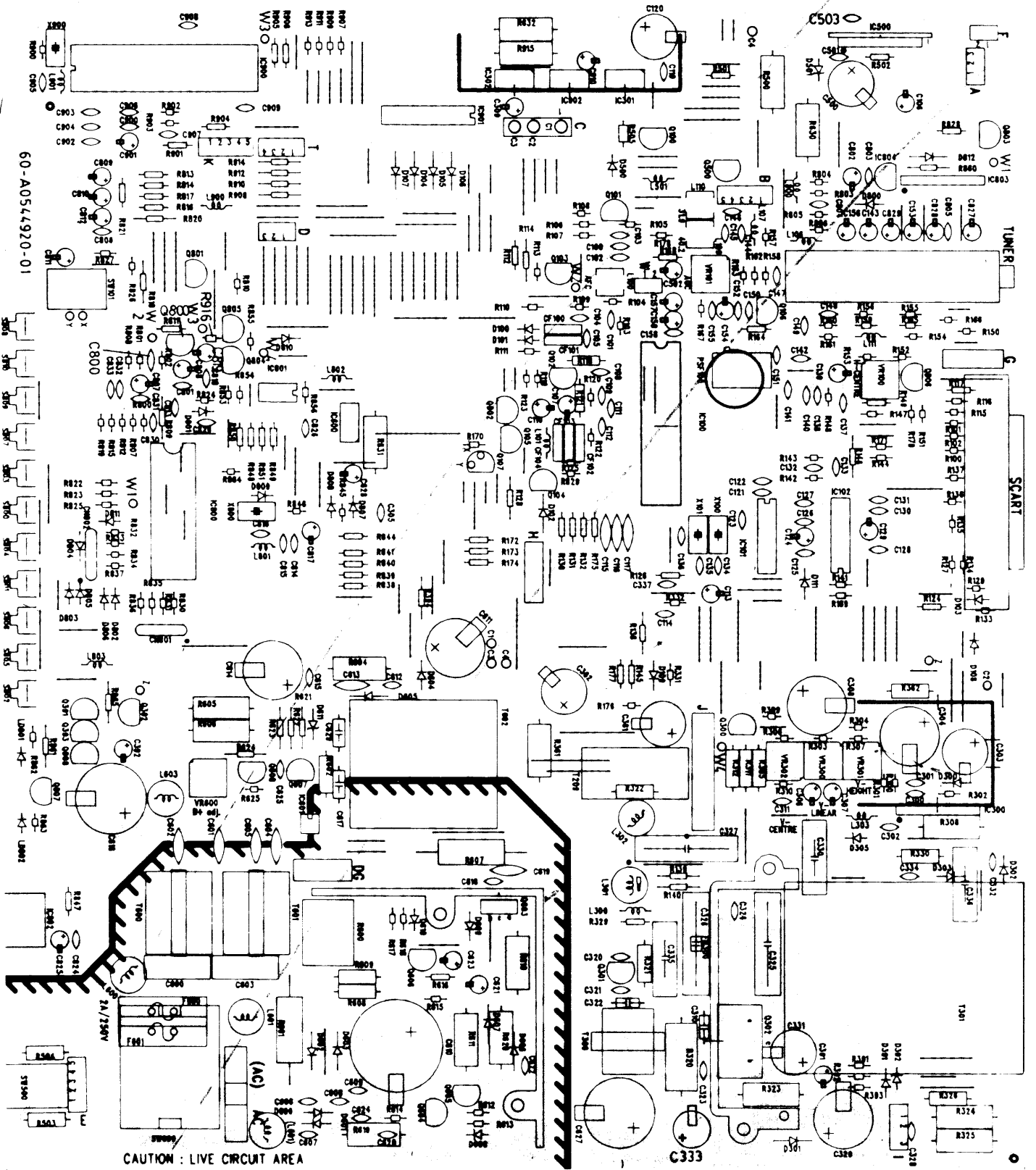


HANDSET BOARD

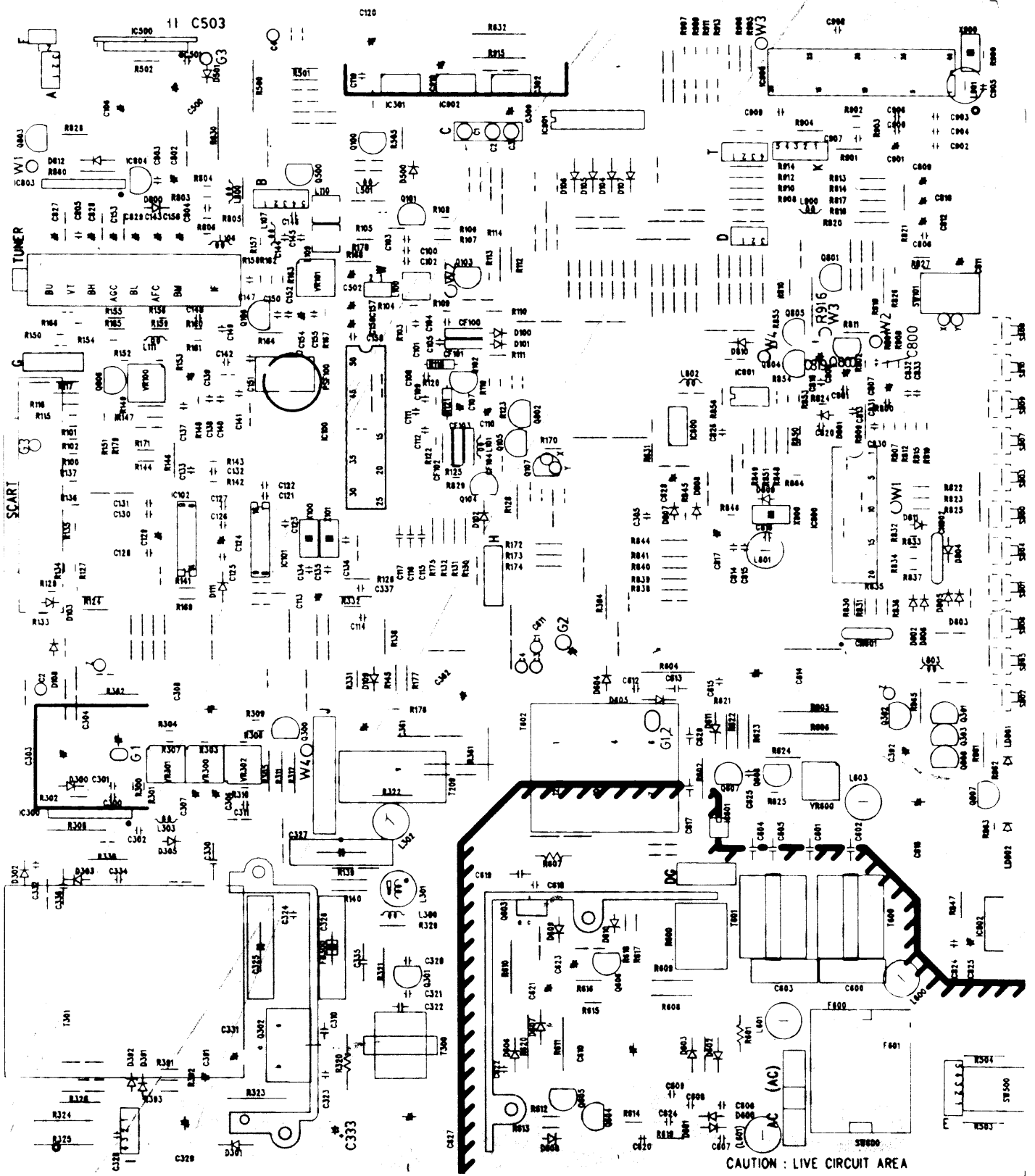


CONTEC
 CE-5449
 60-A0544920-07
 DEC 94

TOP VIEW OF MAIN BOARD



BOTTOM VIEW OF MAIN BOARD



ELECTRICAL PARTS LIST

LOC	CHILD	DESC	LOC	CHILD	DESC
C0100	54-I3902CM6-00	0.0039UF 100V +5% POLYPROPYLENE FILM CAPACITOR (DTG TYPE)	C0307	54-04705EAD-00	4.7UF 25V +20% ELECTROLYTIC CAPACITOR (SMR TYPE)
C0101	54-H1200CBF-00	12 PF 50V +5% CERAMIC CAP (DD104SL120J)	C0308	54-A2208EAE-01	2200 UF 35V +20% ELECTROLYTIC CAP. (UVS1V222MRA)
C0102	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0309	54-04706EAD-00	47 UF 25V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0103	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0310	54-42003-89	0.02 UF 200V +5% POLYPROPYLENE FILM CAP (DTW TYPE)
C0104	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0311	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR
C0105	54-E4700CBF-00	47 PF 50V +5% CERAMIC CAPACITOR (D470J22S2LF52L2H) TEMP. COMPENSATING	C0321	54-E3901DKL-00	390 PF 500V +10% CERAMIC CAP (D391K22Z5FL62L3H)
C0105	54-E4700CBF-00	47 PF 50V +5% CERAMIC CAPACITOR (D470J22S2LF52L2H) TEMP. COMPENSATING	C0322	54-42202-99	0.0022 UF 630V +5% POLYPROPYLENE FILM CAP (DTW TYPE)
C0106	54-02205EAF-00	2.2 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0323	54-51002-75	0.001 UF 50V +10% CERAMIC CAP
C0107	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0325	54-I8202CM0-00	0.0082 UF 1600V +5% POLYPROPYLENE FILM CAP
C0108	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0326	54-42402-19	0.0024 UF 1600V +5% POLYPROPYLENE FILM CAP (DKR TYPE)
C0109	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0327	54-I3904DEI-00	0.39 UF 200V +10% POLYPROPYLENE FILM CAP
C0110	54-A3307EAC-00	330 UF 16V +20% ELECTROLYTIC CAPACITOR (UVX1C331MPA)	C0328	54-E3901DKL-00	390 PF 500V +10% CERAMIC CAP (D391K22Z5FL62L3H)
C0111	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0329	54-A2208EAE-00	22 UF 250V +20% ELECTROLYTIC CAPACITOR (UVX2E220MHA)
C0112	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0330	54-55603-89	0.056 UF 200V +10% POLYPROPYLENE FILM CAP (DTW TYPE)
C0113	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0332	54-E3901DKL-00	390 PF 500V +10% CERAMIC CAP (D391K22Z5FL62L3H)
C0114	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0333	54-A3307EAD-01	330 UF 25V +20% ELECTROLYTIC CAP. (UVX1E331MPA)
C0115	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0334	54-E3901DKL-00	390 PF 500V +10% CERAMIC CAP (D391K22Z5FL62L3H)
C0116	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0335	54-42003-89	0.02 UF 200V +5% POLYPROPYLENE FILM CAP (DTW TYPE)
C0117	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0337	54-51002-75	0.001 UF 50V +10% CERAMIC CAP
C0119	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0391	54-A1006EAF-00	10 UF 50V +20% ELECTROLYTIC CAP
C0120	54-A2207EAC-00	220 UF 16V +20% ELECTROLYTIC CAPACITOR (UVX1C221MPA)	C0392	54-02205EAF-00	2.2 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0121	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0401	54-E3301CBF-00	330 PF 50V +5% CERAMIC CAP (D331J31S2LF52L5)
C0122	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0402	54-E3301CBF-00	330 PF 50V +5% CERAMIC CAP (D331J31S2LF52L5)
C0123	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0403	54-43901-75	390 PF 50V +5% CERAMIC CAP
C0124	54-04706EAD-00	47 UF 25V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0404	54-E10020BP-00	1000 PF 2KV +10% CERAMIC CAP (D102K39Y5PP62L6A)
C0125	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0500	54-04707EAC-00	470 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0126	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0501	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP
C0127	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0502	54-02205EAF-00	2.2 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0128	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0503	54-E22030CF-00	0.022 UF 50V +10% POLYESTER FILM CAPACITOR
C0129	54-04706EAD-00	47 UF 25V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0600	54-01004EFJ-01	0.1 UF 275V +20% METALLIZED POLYESTER FILM CAP. (XG-VS)
C0130	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0601	54-H4701DGK-00	470 PF 400 VAC +10% CERAMIC CAP (DE10108471KACT4K-KD)
C0131	54-02204CFV-01	0.22 UF 63V +5% METALLIZED POLYESTER CAPACITOR (MS-CON TYPE, 6X1J224J-B0)	C0602	54-H4701DGK-00	470 PF 400 VAC +10% CERAMIC CAP (DE10108471KACT4K-KD)
C0132	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)	C0603	54-01004EFJ-01	0.1 UF 275V +20% METALLIZED POLYESTER FILM CAP. (XG-VS)
C0133	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0606	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)
C0135	54-E1500CBF-00	15 PF 50V +5% CERAMIC CAP. (D150J20C0G52L2H)	C0607	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)
C0136	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0608	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)
C0137	54-E2202DCF-00	0.0022 UF 50V +10% POLYESTER FILM CAPACITOR	C0609	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)
C0138	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)	C0610	54-A1007EAK-01	1000UF 400V +20% ELECTROLYTIC CAPACITOR (LLK2G101MHSZ)
C0139	54-01005EAF-00	1 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0611	54-A1008EAD-01	1000UF 25V +20% ELECTROLYTIC CAPACITOR (UVX1E102MHA)
C0140	54-51803-76	0.018 UF 50V +10% POLYESTER FILM CAP	C0612	54-E6801DBL-00	680 PF 500V +10% CERAMIC CAP (D681K25Z5PL52L5H)
C0141	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0613	54-H4701DBP-00	470 PF 2KV +10% CERAMIC CAP (DE070B471K2K)
C0142	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)	C0614	54-A4706EAE-00	47 UF 160V +20% ELECTROLYTIC CAP (UVX2C470MHA)
C0143	54-04704EAF-00	0.47 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0615	54-E4702EBL-00	0.0047 UF 500V +20% CERAMIC CAP (D472M31Z5UL62L5A)
C0144	54-46800-75	68 PF 50V +5% CERAMIC CAP	C0616	54-A4706EAE-00	47 UF 160V +20% ELECTROLYTIC CAP (UVX2C470MHA)
C0147	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0617	54-E4702EGK-00	4700 PF 400VAC +20% CERAMIC CAP (S472M76Z5UQ83L9)
C0148	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0619	54-E4702HBP-00	4700 PF 2KV +80 -20% CERAMIC CAP. (D472Z59Z5UP63L9)
C0149	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0620	54-E6801DBL-00	680 PF 500V +10% CERAMIC CAP (D681K25Z5PL52L5H)
C0150	54-71003-75	0.01 UF 50V +80% -20% CERAMIC CAP	C0621	54-A4706EAD-01	47 UF 25V +20% ELECTROLYTIC CAPACITOR 105C (UPR1E470MDH)
C0151	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	C0622	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)
C0152	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0623	54-A1006EAF-00	10 UF 50V +20% ELECTROLYTIC CAP
C0153	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0624	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)
C0154	54-02205EAF-00	2.2 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0627	54-A1007EAE-00	100 UF 160V +20% ELECTROLYTIC CAP (UVX2C101MHA)
C0155	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104Z29Y5VF62J5H)	C0629	54-E4702EGK-00	4700 PF 400VAC +20% CERAMIC CAP (S472M76Z5UQ83L9)
C0156	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0704	54-A4706EAE-00	47 UF 10V +20% ELECTROLYTIC CAP
C0157	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0800	54-41001-75	100 PF 50V +5% CERAMIC CAP
C0158	54-72203-75	0.022 UF 50V +80% -20% CERAMIC CAP	C0801	54-41001-75	100 PF 50V +5% CERAMIC CAP
C0159	54-02205EAF-00	2.2 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)	C0802	54-A1006EAF-00	10 UF 50V +20% ELECTROLYTIC CAP
C0300	54-E4702DCF-00	0.0047 UF 50V +10% POLYESTER FILM CAPACITOR	C0803	54-02204CFV-01	0.22 UF 63V +5% METALLIZED POLYESTER CAPACITOR (MS-CON TYPE, 6X1J474J-B0)
C0301	54-E4702DCF-00	0.0047 UF 50V +10% POLYESTER FILM CAPACITOR	C0804	54-04704CFV-01	0.47 UF 63V +5% METALLIZED POLYESTER CAPACITOR (MS-CON TYPE, 6X1J474J-B0)
C0302	54-E3901DKL-00	390 PF 500V +10% CERAMIC CAP (D391K22Z5FL62L3H)	C0805	54-04704CFV-01	0.47 UF 63V +5% METALLIZED POLYESTER CAPACITOR (MS-CON TYPE, 6X1J474J-B0)
C0303	54-A1007EAF-01	1000UF 50V +20% ELECTROLYTIC CAPACITOR (UVX1H101MHA)	C0807	54-04704EAF-00	0.47 UF 50V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0304	54-04707EAE-00	470 UF 35V +20% ELECTROLYTIC CAPACITOR (WG TYPE,DF1<0.09)	C0808	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0305	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	C0809	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)
C0306	54-A1006EAF-00	10 UF 50V +20% ELECTROLYTIC CAP	C0810	54-04705EAD-00	4.7UF 25V +20% ELECTROLYTIC CAPACITOR (SMR TYPE)

LOC	CHILD	DESC	LOC	CHILD	DESC
C0811	54-02206EAF-00	22UF 50V +20% ELECTROLYTIC CAPACITOR (SMR TYPE)	D0800	51-08001-23	DIODE 1N4148
C0813	54-52202-75	0.0022 UF 50V +10% CERAMIC CAP	D0801	51-08001-23	DIODE 1N4148
C0814	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	D0806	51-08001-23	DIODE 1N4148
C0815	54-42000-75	20 PF 50V +5% CERAMIC CAP	D0807	51-08001-23	DIODE 1N4148
C0816	54-42000-75	20 PF 50V +5% CERAMIC CAP	D0808	51-08001-23	DIODE 1N4148
C0817	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	D0809	51-08001-23	DIODE 1N4148
C0818	54-E1004DCF-00	0.1 UF 50V +10% POLYESTER FILM CAPACITOR	D0810	51-08001-23	DIODE 1N4148
C0819	54-01007EAC-00	100 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	D0812	51-08001-23	DIODE 1N4148
C0820	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	F0800	72-01078-01	FUSE SST 2A 250V (0652-2000-11) "BEL"
C0824	54-71003-75	0.01 UF 50V +80% -20% CERAMIC CAP	IC0100	67-AF008362-01	I.C. TDA8362
C0825	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	IC0101	67-AF004665-01	I.C. TDA4665
C0827	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	IC0102	67-AF008395-01	I.C. TDA8395
C0828	54-04705EAD-00	4.7UF 25V +20% ELECTROLYTIC CAPACITOR (SMR TYPE)	IC0300	67-05740-01	I.C. TDA3653B
C0829	54-01006EAC-00	10 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	IC0301	67-84735-01	I.C. L7812CV
C0830	54-41001-75	100 PF 50V +5% CERAMIC CAP	IC0302	67-AJ7808CV-01	I.C. L7808CV
C0831	54-41001-75	100 PF 50V +5% CERAMIC CAP	IC0500	67-AF007056-01	I.C. TDA7056
C0832	54-41001-75	100 PF 50V +5% CERAMIC CAP	IC0801	69-02006-02	PHOTOCOUPLER TLP621 GB
C0833	54-41001-75	100 PF 50V +5% CERAMIC CAP	IC0701	67-AF84C122-01	I.C. PCA84C122
C0900	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	IC0800	67-AF84C841-01	I.C. PCA84C841 CTV 350S
C0901	54-01007EAC-00	100 UF 16V +20% ELECTROLYTIC CAP. (SMR SERIES)	IC0802	69-02015-02	PHOTO RECEIVER MODULE SPS-409-1-L
C0902	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	IC0803	67-14215-01	I.C. LA7910
C0903	54-10800-75	8 PF 50V +0.25PF CERAMIC CAP	IC0804	67-90430-01	I.C. UPC574J
C0904	54-E1500CBF-00	15 PF 50V +5% CERAMIC CAP. (D150J20C0G6F52L2H)	IC0900	67-AF005254-02	I.C. SAA5254 PJH
C0905	54-51002-75	0.001 UF 50V +10% CERAMIC CAP	IC0901	67-32705-02	I.C. TC74HC241P
C0906	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	IC0902	67-84735-02	I.C. L7805CV
C0907	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	L0100	59-08401-01	COIL (TYPE NO. : 292DCS-A491HM)
C0908	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	L0101	59-06401-10	5.6 UH +5% PEAKING COIL EC24-5R6J TAPED REELED PACKAGE
C0909	54-E1004HBF-00	0.1 UF 50 VDC +80% -20% CERAMIC CAP. (U104229Y5VF62J5H)	L0105A	59-06401-12	8.2 UH +5% COIL EC36-8R2J
C0910	54-04706EAD-00	47 UF 25V +20% ELECTROLYTIC CAP. (SMR SERIES)	L0106	59-06401-04	68 UH +10% COIL EC36-680K
CF0100	66-65001-02	CERAMIC FILTER 6.5 MHZ, TYPE NO. SFSH6.5MCR (SFE6.5MB)	L0107	59-06401-13	0.56 UH +20% COIL EC24-R56M
CF0101	66-65001-02	CERAMIC FILTER 5.5 MHZ, TYPE NO. SFSH5.5MCR (SFE5.5MB)	L0111	59-06401-05	1 UH +10% PEAKING COIL (EC24-1R0K)
CF0102	66-65001-03	CERAMIC FILTER 6.5MHZ TPS8.5MB	L0300	59-06401-01	1.2 UH +10% COIL EC24-1R2K
CF0104	66-65001-03	TPS 5.5MB CERAMIC FILTER 5.5MHZ	L0301	59-53102-01	LINEARITY COIL LS-11379
D0100	51-08001-23	DIODE 1N4148	L0302	59-03301-01	CHOKE COIL 200 UH +10% (HIGH CURRENT)
D0101	51-08001-23	DIODE 1N4148	L0303	59-06401-01	1.2 UH +10% COIL EC24-1R2K
D0102	51-08001-23	DIODE 1N4148	L0501	59-06401-04	68 UH +10% COIL EC36-680K
D0103	51-02030-01	ZENER DIODE 8.2V HZ9A3 1/2W TAPED REELED PACKAGE	L0803	59-03301-01	CHOKE COIL 200 UH +10% (HIGH CURRENT)
D0104	51-08001-23	DIODE 1N4148	L0800	59-06401-04	68 UH +10% COIL EC36-680K
D0105	51-08001-23	DIODE 1N4148	L0801	59-06401-03	12 UH +10% COIL EC24-120K
D0106	51-08001-23	DIODE 1N4148	L0802	59-06401-04	68 UH +10% COIL EC36-680K
D0107	51-08001-23	DIODE 1N4148	L0803	59-06401-04	68 UH +10% COIL EC36-680K
D0108	51-08001-23	DIODE 1N4148	L0800	59-06401-04	68 UH +10% COIL EC36-680K
D0109	51-08001-23	DIODE 1N4148	L0901	59-72907-01	PEAKING COIL 3.3UH +10% (EL0606SKI-3R3K)
D0111	51-02023-01	ZENER DIODE 5.1V HZ5C2	L0801	69-01014-38	LED L-413RD
D0300	51-03017-19	1N4004 RECTIFIER DIODE	L0802	69-01014-38	LED L-413RD
D0301	51-03020-02	DIODE S5295 G	PSF010	68-18001-22	SAW FILTER F1027C (38.9 MHZ)
D0302	51-03020-02	DIODE S5295 G	Q0100	50-40708-07	TRANSISTOR 2SC1815-Y
D0303	51-03020-02	DIODE S5295 G	Q0101	50-40708-07	TRANSISTOR 2SC1815-Y
D0305	51-02023-01	ZENER DIODE 5.1V HZ5C2	Q0102	50-40708-07	TRANSISTOR 2SC1815-Y
D0391	51-03018-01	DIODE 1S2775 "TOSHIBA" TAPED REELED PACKAGE	Q0103	50-40708-07	TRANSISTOR 2SC1815-Y
D0392	51-02026-01	ZENER DIODE 7.5V HZ7C2	Q0104	50-40708-07	TRANSISTOR 2SC1815-Y
D0600	51-03017-19	1N4004 RECTIFIER DIODE	Q0105	50-40708-07	TRANSISTOR 2SC1815-Y
D0601	51-03017-19	1N4004 RECTIFIER DIODE	Q0106	50-40725-06	TRANSISTOR 2SC2717
D0602	51-03017-19	1N4004 RECTIFIER DIODE	Q0300	50-40708-07	TRANSISTOR 2SC1815-Y
D0603	51-03017-19	1N4004 RECTIFIER DIODE	Q0301	50-40733-04	TRANSISTOR 2SC2482
D0604	51-03020-02	DIODE S5295 G	Q0302	50-40748-03	TRANSISTOR 2SD1554
D0605	51-03024-02	DIODE 1S1835 TPA2 TAPED REELED PACKAGE	Q0391	50-40708-07	TRANSISTOR 2SC1815-Y
D0606	51-03020-02	DIODE S5295 G	Q0392	50-30715-07	TRANSISTOR 2SA1015-Y
D0607	51-03020-02	DIODE S5295 G	Q0393	50-40708-07	TRANSISTOR 2SC1815-Y
D0608	51-02027-01	ZENER DIODE 9.1V 1/2W HZ9C1 TAPED REELED PACKAGE	Q0401	50-40733-04	TRANSISTOR 2SC2482
D0609	51-03020-02	DIODE S5295 G	Q0402	50-40733-04	TRANSISTOR 2SC2482
D0610	51-02030-01	ZENER DIODE 8.2V HZ9A3 1/2W TAPED REELED PACKAGE	Q0403	50-40733-04	TRANSISTOR 2SC2482
D0611	51-02001-30	DIODE RD6.2E8 0.5W 6.2V	Q0603	50-40219-04	TRANSISTOR BUT11AX
D0701	69-02005-01	INFRARED LED TLM111	Q0604	50-30528-07	PNP TRANSISTOR - 2SA608NP-G

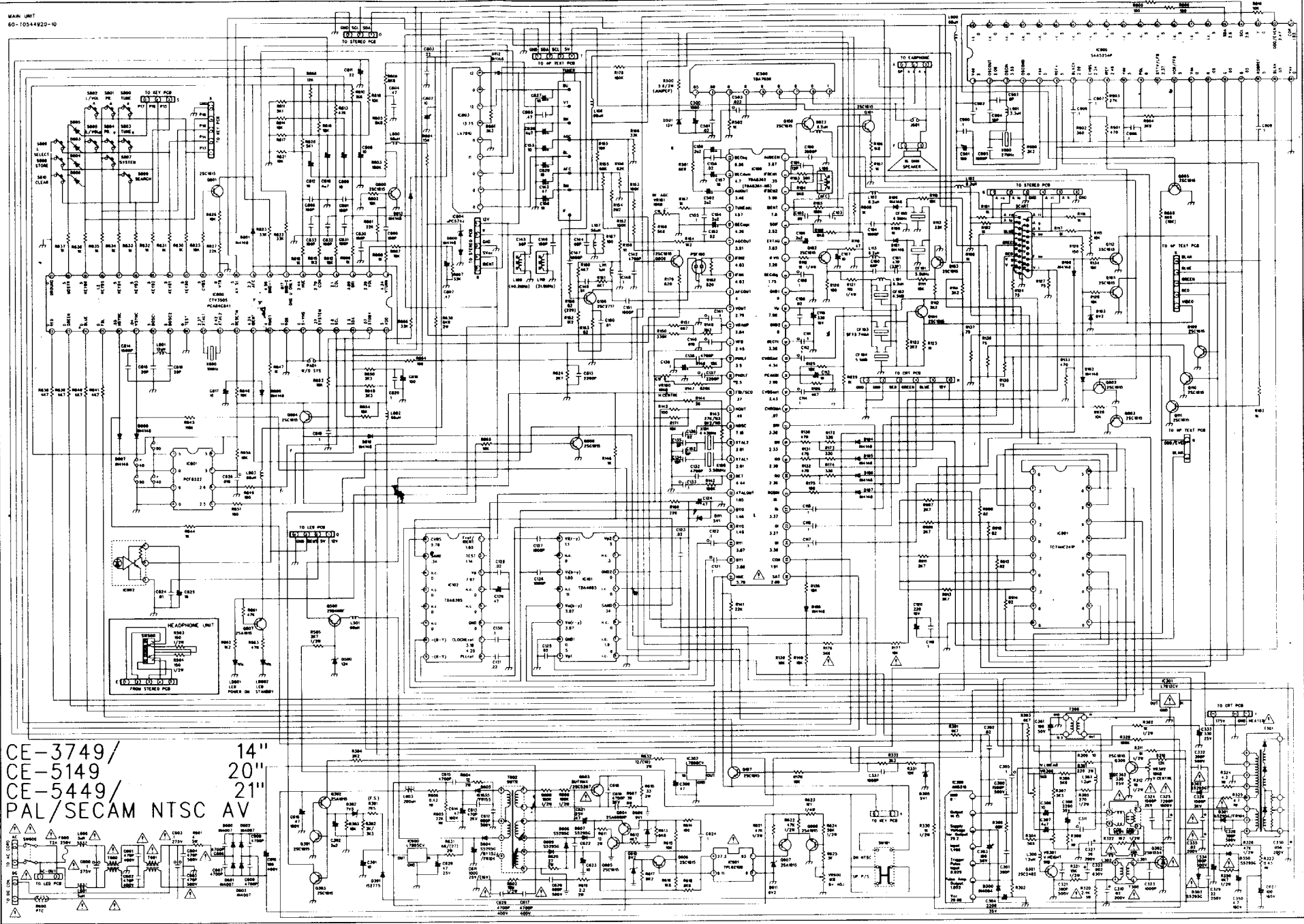
LOC	CHILD	DESC	LOC	CHILD	DESC
Q0605	50-40708-07	TRANSISTOR 2SC1815-Y	R0151	52-A14706CAS-00	4.7 MOHM 1/6W + 5% CARBON FILM RESISTOR
Q0606	50-40708-07	TRANSISTOR 2SC1815-Y	R0152	52-A11005CAS-00	100 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0607	50-30715-07	TRANSISTOR 2SA1015-Y	R0153	52-A11005CAS-00	100 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0608	50-30715-07	TRANSISTOR 2SA1015-Y	R0154	52-A12206CAS-00	2.2 MOHM 1/6W + 5% CARBON FILM RESISTOR
Q0701	50-30715-08	TRANSISTOR 2SA1015GR	R0155	52-A16804CAS-00	68 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0800	50-40708-07	TRANSISTOR 2SC1815-Y	R0156	52-A14304CAS-00	43 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0801	50-40708-07	TRANSISTOR 2SC1815-Y	R0157	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
Q0802	50-40708-07	TRANSISTOR 2SC1815-Y	R0158	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
Q0803	50-40708-07	TRANSISTOR 2SC1815-Y	R0159	52-A11001CAS-00	10 OHM 1/6W 5% CARBON FILM RESISTOR
Q0804	50-40708-07	TRANSISTOR 2SC1815-Y	R0160	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0805	50-40708-07	TRANSISTOR 2SC1815-Y	R0161	52-A11203CAS-00	1.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0806	50-40708-07	TRANSISTOR 2SC1815-Y	R0162	52-A11203CAS-00	1.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
Q0807	50-30715-07	TRANSISTOR 2SA1015-Y	R0163	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
Q0808	50-40708-07	TRANSISTOR 2SC1815-Y	R0164	52-A11203CAS-00	1.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0100	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0165	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0101	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0166	52-A13304CAS-00	33 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0102	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0167	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0103	52-A13902CAS-00	390 OHM 1/6W + 5% CARBON FILM RESISTOR	R0168	52-A15603CAS-00	5.6 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0104	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0169	52-A12202CAS-00	220 OHM 1/6W + 5% CARBON FILM RESISTOR
R0105	52-A11805CAS-00	180 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0171	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0106	52-A11803CAS-00	1.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0172	52-A12202CAS-00	220 OHM 1/6W + 5% CARBON FILM RESISTOR
R0107	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0173	52-A12202CAS-00	220 OHM 1/6W + 5% CARBON FILM RESISTOR
R0109	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0174	52-A12202CAS-00	220 OHM 1/6W + 5% CARBON FILM RESISTOR
R0110	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0175	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0111	52-A11504CAS-00	15 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0176	52-A18203CAS-00	8.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0112	52-A12203CAS-00	2.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0177	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0113	52-A12204CAS-00	22 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0178	52-A11805CAS-00	180 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0114	52-A12203CAS-00	2.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0179	52-A18202CAS-00	820 OHM 1/6W + 5% CARBON FILM RESISTOR
R0115	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0300	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0116	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0301	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0117	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0302	52-A15102CAS-00	510 OHM 1/6W + 5% CARBON FILM RESISTOR
R0118	52-A11003CAC-01	1 KOHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0303	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0119	52-A14701CAS-00	47 OHM 1/6W + 5% CARBON FILM RESISTOR	R0304	52-A11504CAS-00	15 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0120	52-A11802CAS-00	180 OHM 1/6W + 5% CARBON FILM RESISTOR	R0305	52-A12702C8D-00	270 OHM 1/2W + 5% METAL OXIDE FIXED RESISTOR (RSS1/2W SMK2700HMJ)
R0121	52-A11102CAC-01	110 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0306	52-A15603CAS-00	5.6 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0122	52-A12203CAS-00	2.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0307	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0123	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0308	52-B0910C8E-00	0.91 OHM 1W + 5% METAL OXIDE RESISTOR (RSN-18 TYPE)
R0124	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0309	52-A11001CAS-00	10 OHM 1/6W 5% CARBON FILM RESISTOR
R0125	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0310	52-A11204CAS-00	12 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0126	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0311	52-A11003CAD-0	1 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0127	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0312	52-A11001CAD-0	10 OHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0129	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0320	52-B2403C8G-00	2.4 KOHM 3W + 5% METAL OXIDE RESISTOR (RSN TYPE)
R0129	52-A11502CAS-00	150 OHM 1/6W + 5% CARBON FILM RESISTOR	R0321	52-A11504CAD-0	15 KOHM 1/2W + 5% CARBON FILM RESISTOR
R0130	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR	R0322	52-A11203CAD-0	1.2 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0131	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR	R0323	52-80430CDE-00	0.43 OHM 1W + 5% FUSIBLE METAL FILM RESISTOR (FRN TYPE) (MG FORM)
R0132	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR	R0324	52-F4300CDE-00	4.3 OHM 1W + 5% FUSIBLE RESISTOR
R0133	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR	R0325	52-A14700C8E-00	4.7 OHM 1W + 5% METAL OXIDE FILM RESISTOR (RSS-SMF TYPE)
R0134	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0326	52-A11002CAD-0	100 OHM 1/2W + 5% CARBON FILM RESISTOR
R0135	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0329	52-A11005CAS-00	100 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0136	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0330	52-A11003CAD-0	1 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0137	52-A17501CAS-00	75 OHM 1/6W + 5% CARBON FILM RESISTOR	R0331	52-A11204CAS-00	12 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0138	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0332	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0139	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0391	52-A17503CAS-00	7.5 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0140	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0392	52-A13003CAS-00	3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0141	52-A12204CAS-00	22 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0393	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0142	52-A11005CAS-00	100 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0394	52-A12203CAS-00	2.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0143	52-A12704CAS-00	27 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0401	52-A11504CBF-00	15 KOHM 2W + 5% METAL OXIDE RESISTOR (RSS-SMF TYPE)
R0144	52-A11502CAS-00	150 OHM 1/6W + 5% CARBON FILM RESISTOR	R0402	52-A12703CAD-0	2.7 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0145	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR	R0403	52-A15602CAC-01	560 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE
R0146	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0404	52-A12203CAC-01	2.2 KOHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE
R0147	52-A18205CAS-00	820 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0405	52-A11504CBF-00	15 KOHM 2W + 5% METAL OXIDE RESISTOR (RSS-SMF TYPE)
R0148	52-A11204CAS-00	12 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0406	52-A12703CAD-0	2.7 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)
R0149	52-A13306CAS-00	3.3 MOHM 1/6W + 5% CARBON FILM RESISTOR	R0407	52-A14702CAC-01	470 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE
R0150	52-A13305CAS-00	330 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0408	52-A12203CAC-01	2.2 KOHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE

LOC	CHILD	DESC	LOC	CHILD	DESC
R0409	52-A11504CBF-00	15 KOHM 2W + 5% METAL OXIDE RESISTOR (RSS-SMF TYPE)	R0828	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0410	52-A12703CAD-0	2.7 KOHM 1/2W + 5% CARBON FILM RESISTOR (RD-050-TP)	R0829	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0411	52-A14702CAC-01	470 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0830	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0412	52-A12203CAC-01	2.2 KOHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0831	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0413	52-86800CBF-00	6.8 OHM 2W + 5% METAL OXIDE RESISTOR (RSN TYPE)	R0832	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0414	52-A14701CAC-01	47 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0833	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0415	52-A14701CAC-01	47 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0834	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0416	52-A14701CAC-01	47 OHM 1/4W + 5% CARBON FILM RESISTOR RD25-TP52 TYPE	R0835	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0500	52-A15600CBF-00	5.6 OHM 2W + 5% METAL OXIDE FILM RESISTOR (RSS-SMF TYPE)	R0836	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0501	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0837	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0502	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0838	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0600	52-L1801FIX-00	PTC THERMISTOR PTH451A0286 180N270	R0839	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0601	52-B4000DCI-00	4 OHM 5W + 10% NON-INFLAMMABLE RESISTOR (SQP TYPE)	R0840	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0602	52-11007DFD-00	10 MOHM 1/2W + 10% CARBON COMPOSITION RESISTOR (RC1/2GF TYPE)	R0841	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0604	52-A11201CBF-00	12 OHM 2W + 5% METAL OXIDE FIXED RESISTOR (RSS2S SMF120HMJ)	R0844	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0605	52-82204CBE-00	22 KOHM 1W + 5% METAL OXIDE RESISTOR (RSN TYPE)	R0845	52-A14704CAS-00	47 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0606	52-B0430CDE-00	0.43 OHM 1W + 5% FUSIBLE METAL FILM RESISTOR (FRN TYPE) (MG FORM)	R0846	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0607	52-M3901DCO-01	39 OHM 6W + 10% WIRE WOUND RESISTOR (KW-KNP TYPE)	R0847	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0608	52-11805DFD-00	180 KOHM 1/2W + 10% CARBON COMPOSITION RESISTOR (RC1/2GF)	R0848	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0609	52-11805DFD-00	180 KOHM 1/2W + 10% CARBON COMPOSITION RESISTOR (RC1/2GF)	R0849	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0610	52-A10330CBF-00	0.33 OHM 2W + 5% METAL OXIDE RESISTOR (RSS-SMF TYPE)	R0850	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0611	52-A11201CBF-00	12 OHM 2W + 5% METAL OXIDE FIXED RESISTOR (RSS2S SMF120HMJ)	R0851	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0612	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0853	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0613	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0854	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0614	52-A11502CAS-00	150 OHM 1/6W + 5% CARBON FILM RESISTOR	R0855	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0615	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0860	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0616	52-A11803CAS-00	1.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0861	52-A14704CAS-00	47 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0617	52-A18203CAS-00	8.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0862	52-A11203CAS-00	1.2 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0618	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0863	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR
R0619	52-82200CCF-00	2.2 OHM 2W + 5% WIRE WOUND RESISTOR (KNP TYPE, NON-INFLAMMABLE)	R0864	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0620	52-A12701CBF-00	27 OHM 2W + 5% METAL OXIDE FIXED RESISTOR (RSS2W SMF270HMJ)	R0865	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0621	52-A14704CBD-00	47 KOHM 1/2W + 5% METAL OXIDE FILM RESISTOR (RSS-SMK TYPE)	R0900	52-A13303CAS-00	3.3 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0622	52-A14704CBD-00	47 KOHM 1/2W + 5% METAL OXIDE FILM RESISTOR (RSS-SMK TYPE)	R0901	52-A14702CAS-00	470 OHM 1/6W + 5% CARBON FILM RESISTOR
R0623	52-A11103CAS-00	1.1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0902	52-A12704CAS-00	27 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0624	52-A15604CBD-00	56 KOHM 1/2W + 5% METAL OXIDE RESISTOR (RSS-SMK TYPE)	R0903	52-A15602CAS-00	560 OHM 1/6W + 5% CARBON FILM RESISTOR
R0625	52-A13003CAS-00	3 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0904	52-A13903CAS-00	3.9 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0630	52-86803CBF-00	6.8 KOHM 2W + 5% METAL OXIDE RESISTOR (RSN TYPE)	R0905	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0632	52-A11201CBF-00	12 OHM 2W + 5% METAL OXIDE FIXED RESISTOR (RSS2S SMF120HMJ)	R0906	52-A11002CAS-00	100 OHM 1/6W + 5% CARBON FILM RESISTOR
R0701	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0907	52-A12703CAS-00	2.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0702	52-A11201CAS-00	12 OHM 1/6W + 5% CARBON FILM RESISTOR	R0908	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
R0703	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0909	52-A12703CAS-00	2.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0800	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0910	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
R0801	52-A12204CAS-00	22 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0911	52-A12703CAS-00	2.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0802	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0912	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
R0803	52-A11805CAS-00	180 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0913	52-A12703CAS-00	2.7 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0804	52-A11504CAS-00	15 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0914	52-A18201CAS-00	82 OHM 1/6W + 5% CARBON FILM RESISTOR
R0805	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0915	52-02701CBF-00	27 OHM 2W + 5% METAL OXIDE RESISTOR (RSS TYPE)
R0806	52-A16803CAS-00	6.8 KOHM 1/6W + 5% CARBON FILM RESISTOR	R0918	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR
R0807	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0800	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0808	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0801	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0809	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0802	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0810	52-A18203CAS-00	6.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0803	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0812	52-A11003CAS-00	1 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0804	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0813	52-A11804CAS-00	18 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0805	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0814	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0806	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0815	52-A11203CAS-00	1.2 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0807	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0816	52-A14703CAS-00	4.7 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0808	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0818	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0809	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0822	52-A13304CAS-00	33 KOHM 1/6W + 5% CARBON FILM RESISTOR	S0810	64-30101-46	TACT SWITCH 1PIT (TS-03PV)
R0823	52-A13304CAS-00	33 KOHM 1/6W + 5% CARBON FILM RESISTOR	SW060	64-30202-42	POWER SWITCH 2P2T (TYPE NO.: ES891632A)
R0824	52-A12703CAS-00	2.7 KOHM 1/6W + 5% CARBON FILM RESISTOR	T0300	58-28135-03	HORIZONTAL DRIVE TRANSFORMER
R0825	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	T0301	58-65309-02	FLYBACK TRANSFORMER DNF-FA2054B
R0826	52-A11004CAS-00	10 KOHM 1/6W + 5% CARBON FILM RESISTOR	T0601	58-75191-02	LINE FILTER (LB16U23)
R0827	52-A12204CAS-00	22 KOHM 1/6W + 5% CARBON FILM RESISTOR	T0602	58-95164-02	SWITCHING POWER TRANSFORMER

LOC	CHILD	DESC	LOC	CHILD	DESC
VR010	53-10420-40	10 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B14)			
VR010	53-10420-40	10 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B14)			
VR030	53-10320-18	1 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B13)			
VR030	53-10320-18	1 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B13)			
VR030	53-10420-40	10 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B14)			
VR040	53-10420-24	10 KOHM B + 25% SEMI-FIXED RESISTOR (RVF8W01A-103)			
VR040	53-20220-05	200 OHM B + 25% SEMI-FIXED RESISTOR (RVF8W01-201)			
VR040	53-10420-24	10 KOHM B + 25% SEMI-FIXED RESISTOR (RVF8W01A-103)			
VR040	53-20220-05	200 OHM B + 25% SEMI-FIXED RESISTOR (RVF8W01-201)			
VR040	53-10420-24	10 KOHM B + 25% SEMI-FIXED RESISTOR (RVF8W01A-103)			
VR060	53-10320-18	1 KOHM B + 30% SEMI-FIXED RESISTOR (EVN-D8A A03 B13)			
W0101	56-33181-00	180 MM BLACK (AWG 24) 1015 STRAND JUMPER WIRE			
W0102	56-33181-02	180 MM RED (AWG 24) 1015 STRAND JUMPER WIRE			
W0103	56-33221-09	220 MM WHITE (AWG 24) 1015 STRAND JUMPER WIRE			
W0104	56-33221-00	220 MM BLACK (AWG 24) 1015 STRAND JUMPER WIRE			
W0105	56-23241-05	240 MM GREEN (AWG 24) 1007 STRAND JUMPER WIRE			
W0106	56-33131-00	130 MM BLACK (AWG 24) 1015 S.J.W			
W0107	56-33161-00	160 MM BLACK (AWG 24) 1015 STRAND JUMPER WIRE			
W0109	56-23101-03	100 MM ORANGE (AWG 24) 1007 STRAND JUMPER WIRE			
W0110	56-23131-02	130 MM RED (AWG 24) 1007 STRAND JUMPER WIRE			
W0111	56-23181-04	180 MM YELLOW (AWG 24) 1007 STRAND JUMPER WIRE			
W0112	56-23291-01	280 MM BROWN (AWG 24) 1007 STRAND JUMPER WIRE			
W0113	56-33101-04	100 MM YELLOW (AWG 24) 1015 STRAND JUMPER WIRE			
W0114	56-33101-00	100 MM BLACK (AWG 24) 1015 STRAND JUMPER WIRE			
X0101	66-44331-10	CRYSTAL 4.43MHZ HC18-U 'SHEN FENG'			
X0701	66-43001-01	CERAMIC RESONATOR 4.300 MHZ (TYPE : CST 4.30MGW)			
X0800	66-10002-01	CRYSTAL 10MHZ			
X0900	66-27002-02	CRYSTAL 27MHZ			

* Power Sources and Consumption : Refer to the back plate of the TV Receiver.

* Design and Specifications are subjected to change without notice.



CE-3749/
 CE-5149/
 CE-5449/
 PAL/SECAM NTSC AV

14"
 20"
 21"

J.C.T. *juwong*
 10-7-86

CE-3
 CE-5
 CE-5

new version

Circuit diagram

RESISTOR TYPES	SYMBOL	NON INFLAMMABLE	SYMBOL	POLYPROPYLENE FILM	SYMBOL
CARBON FILM		PTC THERMISTOR		METAL POLYESTER FILM	
CARBON COMPOSITION		VARIABLE		POLY POLYESTER FILM	
METAL OXIDE +/-5%		CAPACITOR TYPES	SYMBOL	ELECTROLYTIC	
METAL OXIDE +/-2%		TANTALUM		TRIMMER	
FUSIBLE		POLYESTER FILM		CERAMIC	

NOTICE:
 SINCE THIS IS A BASIC CIRCUIT DIAGRAM THE VALUE OF COMPONENTS ARE SUBJECT TO BE CHANGE FOR IMPROVEMENT.

WARNING:
 BEFORE SERVICING THIS CHASSIS, READ THE X-RAY RADIATION PRECAUTION & PRODUCTS SAFETY NOTICE OF THIS MANUAL.

CAUTION:
 THE WARNING SYMBOLS IN THE SCHEMATIC DIAGRAM AND THE PART LIST DESIGNATE COMPONENTS WHICH HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OF SPECIFIED IN THE PARTS LIST BEFORE REPLACING. ANY OF THESE COMPONENTS, READ CAREFULLY THE PRODUCTS SAFETY NOTICE OF THE MANUAL DO NOT DEGRADE THE SAFETY OF THE RECEIVER THROUGH IMPROPER SERVICING.

NOTE:
 1. VOLTAGES ARE MEASURED WITH DVM FROM POINT INDICATED TO CHASSIS GROUND, SINCE COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL POSITION.
 2. WAVEFORMS ARE MEASURED WITH SYNCHROSCOPE FROM POINT INDICATED TO CHASSIS GROUND, USING COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL.
 3. ALL RESISTORS ARE 1/8W +/-5% CARBON FILM RESISTOR UNLESS OTHERWISE LISTED.
 RESISTANCE UNIT IS IN OHM
 K=1000000
 M=10000
 4. ALL CAPACITOR ARE 50MV CERAMIC CAPACITOR UNLESS OTHERWISE LISTED CAPACITANCE UNIT IS UF, UNLESS OTHERWISE LISTED.

