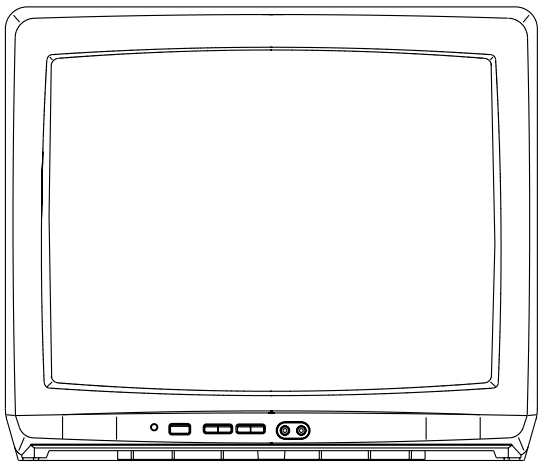
Memorex®

MT1192A

SERVICE MANUAL

COLOR TELEVISION RECEIVER



ORIGINAL
MFR'S VERSION B

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

Inferior silicon grease can damage IC's and transistors.
When replacing an IC's or transistors, use only specified silicon grease (YG6260M).
Remove all old silicon before applying new silicon.

CONTENTS

GENERAL SPECIFICATIONS

G-1	TV System	CRT	CRT Size / Visual Size	19 inch / 480.0mmV	
			CRT Type	Normal	
			Deflection	90	degree
			Magnetic Field BV/BH	+0.45G/0.18G	
		Color System		NTSC	
		Speaker		1Speaker	
			Position	Bottom	
			Size	3 Inch	
			Impedance	8	ohm
		Sound Output	MAX	1.5	W
			10%(Typical)	1.0	W
		NTSC3.58+4.43 /PAL60Hz		No	
G-2	Tuning System	Broadcasting System		US System M	
		Tuner and Receive CH	System	1Tuner	
			Destination	Ohers	
			Tuning System	F-Synth	
			Input Impedance	VHF/UHF 75 ohm	
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84	
		Intermediate Frequency	Picture(FP)	45.75MHz	
			Sound(FS)	41.25MHz	
			FP-FS	4.50MHz	
		Preset CH		No	
		Stereo/Dual TV Sound		No	
		Tuner Sound Muting		Yes	
G-3	Power	Power Source	AC	120V AC 60Hz	
			DC		
		Power Consumption	at AC		
				73 W at AC 120 V 60 Hz	
			Stand by (at AC)	5 W at AC 120 V 60 Hz	
			Per Year	-- kWh/Year	
		Protector	Power Fuse	Yes	
G-4	Regulation		Safety	UL	
			Radiation	FCC	
			X-Radiation	DHHS	
G-5	Temperature		Operation	+5oC ~ +40oC	
			Storage	-20oC ~ +60oC	
G-6	Operating Humidity			Less then 80% RH	
G-7	On Screen Display	Menu		Yes	
			Menu Type	Character	
			Picture	Yes	
			Contrast	Yes	
			Brightness	Yes	
			Color	Yes	
			Tint	Yes	
			Sharpness	Yes	
			Audio	No	
			Bass	No	
			Treble	No	
			Balance	No	
			BBE On/Off	No	
			Stable Sound On/Off	No	
			CH Set Up	Yes	
			TV/CATV	Yes	
			Auto CH Memory	Yes	
			Add/ Delete	Yes	
			Language	Yes	
			V-chip	Yes	
			CH Label	No	
			Favorite CH	No	
			Color Stream DVD/DTV	No	
			Control Level	Yes	
			Volume	Yes	
			Brightness	Yes	
			Contrast	Yes	
			Color	Yes	
			Tint (NTSC Only)	Yes	
			Sharpness	Yes	
			Tuning	No	
			Bass	No	
			Treble	No	
			Balance	No	
			Back Light	No	
			Stereo,Audio Output,SAP	No	
			Video	Yes	
			Color Stream	No	
			Channel(TV/Cable)	Yes	

GENERAL SPECIFICATIONS

			CH Label		No
			Sleep Timer	Yes	
			Sound Mute	Yes	
			V-chip Rating	Yes	
G-8	OSD Language			English French Spanish	
			OSD Language Setting	English	
G-9	Clock and Timer	Sleep Timer	Max Time	120 Min	
			Step	10 Min	
		On/Off Timer	Program(On Tim / Off Tim)	No	
		Wake Up Timer		No	
		Timer Back-up (at Power Off Mode)	more than	-- Min Sec	
G-10	Remote Control	Unit		RC-DW	
		Glow in Dark Remocon		No	
		Format		NEC	
		Custom Code		86-05 h	
		Power Source	Voltage(D.C)	3V	
			UM size x pcs	UM-4 x 2 pcs	
		Total Keys		27 Keys	
		Keys	Power	Yes	
			1	Yes	
			2	Yes	
			3	Yes	
			4	Yes	
			5	Yes	
			6	Yes	
			7	Yes	
			8	Yes	
			9	Yes	
			0	Yes	
			100		No
			CH Up	Yes	
			CH Down	Yes	
			Volume Up	Yes	
			Volume Down	Yes	
			TV/Caption/Text	Yes	
			CH1/CH2	Yes	
			TV/Video(TV/AV)	Yes	
			CH RTN/CH ENT(Quick View)	Yes	
			Sleep	Yes	
			RE Call(Call)	Yes	
			Reset	Yes	
			Menu	Yes	
			Enter	Yes	
			Mute	Yes	
			Exit		No
			MTS(Audio Select)		No
			Set +	Yes	
			Set -	Yes	
		Multi Brand Keys	CH Up(VCR)		No
			CH Down(VCR)		No
			Pause/Still		No
			TV/VCR(VCR)		No
			Code		No
			FF		No
			Rew		No
			Rec		No
			Play		No
			Stop		No
			TV		No
			VCR		No
			Cable		No
G-11	Features	Auto Degauss		Yes	
		Auto Shut Off		Yes	
		Canal+			No
		CATV		Yes	
		Anti-theft			No
		Rental			No
		Memory(Last CH)		Yes	
		Memory(Last Volume)		Yes	
		V-Chip		Yes	
			Type	USA,ORION Type	
		BBE			No
		Auto Search			No
		CH Allocation			No
		SAP			No
		Channel Lock			No
		Just Clock Function			No

GENERAL SPECIFICATIONS

		Game Position				No
		CH Label				No
		VM Circuit				No
		Full OSD				No
		Premiere				No
		Comb Filter				No
					Lines	
		Auto CH Memory			Yes	
		Hotel Lock				No
		Closed Caption			Yes	
		Stable Sound				No
		Favorite CH				No
G-12	Accessories	Owner's Manual		Language	English Spanish	
				w/Guarantee Card	Yes	
		Remote Control Unit			Yes	
		Rod Antenna				No
				Poles		
				Terminal		
		Loop Antenna				No
				Terminal		
		U/V Mixer				No
		DC Car Cord (Center+)				No
		Guarantee Card				No
		Warning Sheet				No
		Circuit Diagram				No
		Antenna Change Plug				No
		Service Facility List				No
		Important Safeguard				No
		Dew/AHC Caution Sheet				No
		AC Plug Adapter				No
		Quick Set-up Sheet				No
		Battery				No
				UM size x pcs		
				OEM Brand		No
		AC Cord				No
		AV Cord (2Pin-1Pin)				No
		Registration Card			Yes	
		PTB Sheet				No
		300 ohm to 75 ohm Antenna Adapter				No
G-13	Interface	Switch	Front	Power	Yes	
				System Select		No
				Main Power SW		No
				Sub Power		No
				Channel Up/Reset	Yes	
				Channel Down/Enter	Yes	
				Volume Up/Set Up	Yes	
				Volume Down/Set Down	Yes	
				MENU=Volume Up+Volume Down	Yes	
			Rear	AC/DC		No
				TV/CATV Selector		No
				Degauss		No
				Main Power SW		No
		Indicator		Power	No	
				Stand-by	No	
				On Timer	No	
		Terminals	Front	Video Input	RCA	
				Audio Input	RCA x 1	
				Other Terminal	No	
			Rear	Video Input(Rear1)	No	
				Video Input(Rear2)	No	
				Audio Input(Rear1)	No	
				Audio Input(Rear2)	No	
				Video Output	No	
				Audio Output	No	
				Euro Scart	No	
				Color Stream	No	
				Diversity		No
				Ext Speaker	No	
				DC Jack 12V(Center +)		No
				VHF/UHF Antenna Input	F Type	
				AC Outlet		No
G-14	Set Size			Approx. W x D x H (mm)	488 x 465 x 416	
G-15	Weight			Net (Approx.)	17.5kg	(38.6 lbs)
				Gross (Approx.)	20.0kg	(44.1lbs)
G-16	Carton		Master Carton			No
				Content	----	Sets
				Material		-- /--

GENERAL SPECIFICATIONS

			Dimensions W x D x H(mm)	-- x -- x --
			Description of Origin	No
		Gift Box		Yes
			Material	Double/Brown
			Dimensions W x D x H(mm)	546 x 526 x 472
			Design	As per Buyer's
			Description of Origin	Yes
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
			Height (cm)	46
		Container Stuffing		436 Sets/40' container
G-17	**Cabinet Material**		Cabinet Front	PS 94V0 DECABROM
			Cabinet Rear	PS 94V0 DECABROM

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground. While holding the plastic part of the insulated screwdriver, touch the support of the Anode with the tip of the screwdriver.
   A cracking noise will be heard as the voltage is discharged.

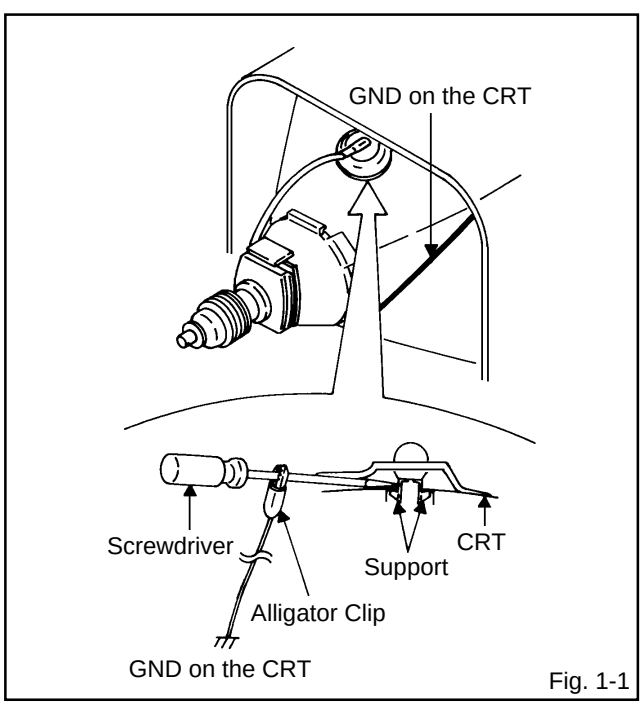


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 1-2.)**

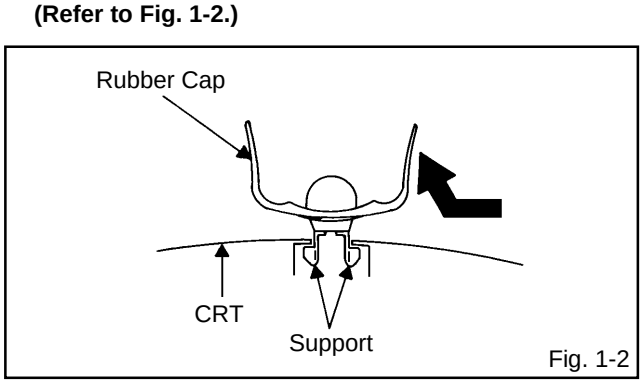


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

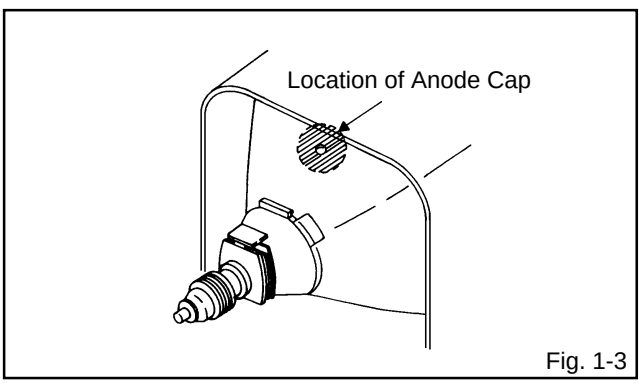


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**

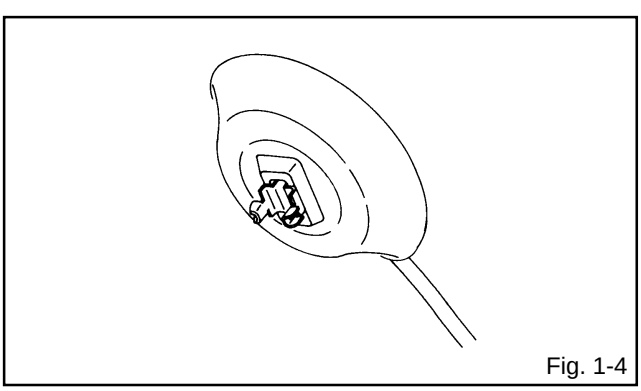


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5**.

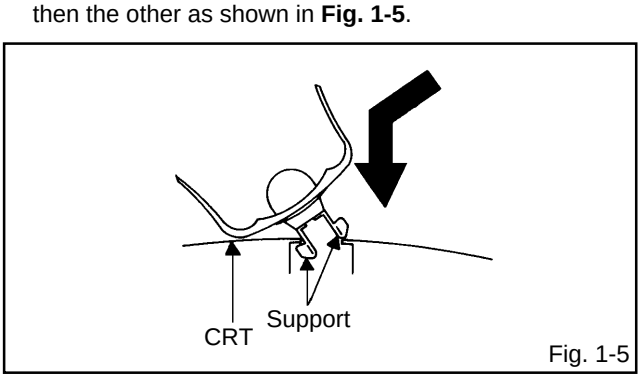


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 1 second.

Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	1	Initialization of the factory. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF USING HOURS". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "NOTE FOR THE REPLACING OF MEMORY IC".
VOL. (-) MIN	8	Writing of EEPROM initial data. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF USING HOURS

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second.
3. After the confirmation of using hours, turn off the power.

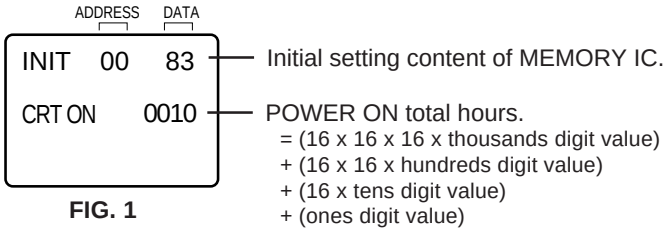


FIG. 1

NOTE FOR THE REPLACING OF MEMORY IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A
70	A8	0A	A2	09	06	63	24	19	21	20	FF

Table 1

1. Enter DATA SET mode by setting VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second. ADDRESS and DATA should appear as FIG 1.
3. ADDRESS is now selected and should "blink". Using the SET + or - keys on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press ENTER to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using SET + or - until required DATA value has been selected.
6. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
  Inferior silicon grease can damage IC's and transistors.
- When replacing IC's and transistors, use only specified silicon grease (YG6260M).
  Remove all old silicon before applying new silicon.

Prepare the following measurement tools for electrical adjustments.

1. Synchro Scope
2. Digital Voltmeter

On-Screen Display Adjustment

1. In the condition of NO indication on the screen. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 1 second to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

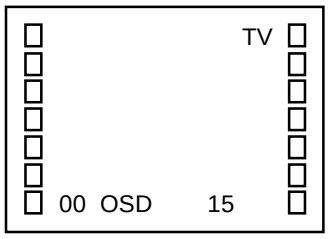


Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
3. Press the MENU button on the remote control to end the adjustments.

NO.	FUNCTION	NO.	FUNCTION
00	OSD H	13	BRIGHTNESS
01	CUT OFF	14	CONTRAST
02	RF AGC DELAY	15	COLOR
03	VIF VCO	16	TINT
04	H VCO	17	SHARPNESS
05	H PHASE	18	FM LEVEL
06	V SIZE	19	LEVEL
07	V SHIFT	20	SEPARATION 1
08	R DRIVE	21	SEPARATION 2
09	B DRIVE	22	TEST MONO
10	R BIAS	23	TEST STEREO
11	G BIAS	24	X-RAY TEST
12	B BIAS		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: RF AGC DELAY

1. Place the set with Aging Test for more than 15 minutes.
2. Receive an 80dB monoscope pattern.
3. Connect the digital voltmeter to **R606**.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "RF AGC DELAY".
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.15 ± 0.05V.

2-2: CUT OFF

1. Adjust the unit to the following settings.
   R.DRIVE=10, B.DRIVE=10, R.BIAS=64, G.BIAS=64, B.BIAS=64, BRIGHTNESS=130, CONTRAST=100.
2. Place the set with Aging Test for more than 15 minutes.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "CUT OFF".
4. Adjust the **Screen Volume** until a dim raster is obtained.

2-3: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-4: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the white 100% signal from the Pattern Generator.
3. Using the adjustment control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(10)** on the remote control to select "R.BIAS".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R.BIAS.
6. Press the CH. UP/DOWN button on the remote control to select the "R.DRIVE", "B.DRIVE", "G.BIAS" or "B.BIAS".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R.DRIVE, B.DRIVE, G.BIAS or B.BIAS.
8. Perform the above adjustments 6 and 7 until the white color is looked like a white.

2-5: SUB TINT/SUB COLOR

1. Receive the color bar pattern. (RF Input)
2. Connect the synchro scope to **TP023**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the waveform becomes as shown in **Fig. 2-1**.
5. Connect the synchro scope to **TP022**.
6. Press the CH DOWN button once to set to "COLOR" mode.
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 120% of the white level. **(Refer to Fig. 2-2)**
8. Receive the color bar pattern. (Audio Video Input)
9. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~7.

ELECTRICAL ADJUSTMENTS

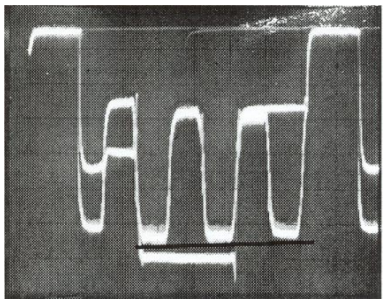


Fig. 2-1

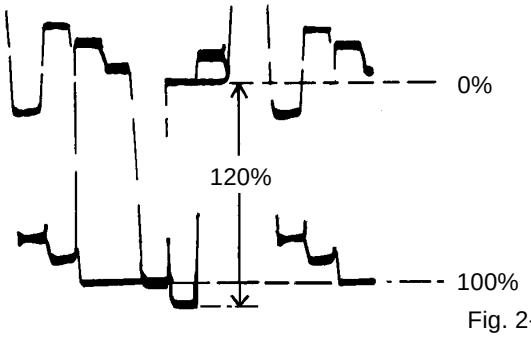


Fig. 2-2

2-6: HORIZONTAL PHASE

1. Receive the center cross signal from the Pattern Generator.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select "H PHASE".
3. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

2-7: VERTICAL SIZE

NOTE: Adjust after performing adjustments in section 2-6

1. Receive the crosshatch signal from the Pattern Generator.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V SIZE".
3. Press the VOL. UP/DOWN button on the remote control until the rectangle on the center of the screen becomes square.
4. Receive a broadcast and check if the picture is normal.

2-8: VERTICAL SHIFT

NOTE: Adjust after performing adjustments in section 2-7

1. Receive the crosshatch signal from the Pattern Generator.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(07)** on the remote control to select "V SHIFT".
3. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask.

2-9: OSD HORIZONTAL

1. Activate the adjustment mode display of **Fig. 1-1**.
2. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum. **(Refer to Fig. 2-3)**

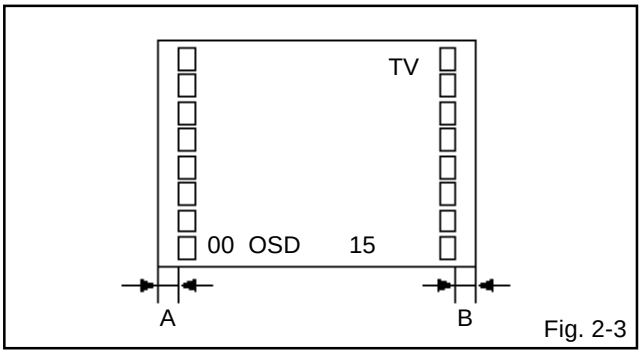


Fig. 2-3

2-10: VIF VCO

1. Place the set with Aging Test for more than 10 minutes.
2. Receive an 80dB monoscope pattern.
3. Connect the digital voltmeter between the **pin 5 of CP601** and the **GND**.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select "VIF VCO".
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.5V.

2-11: SUB CONTRAST MANUAL

1. Receive an 70db the color bar pattern. (RF Input)
2. Activate the adjustment mode display of **Fig. 1-1** press the channel button **(14)** on the remote control to select "CONTRAST".
3. Press the VOL. UP/DOWN button on the remote control until the white color level is adjusted to 250 NIT.
4. Receive an 70db the color bar pattern. (Audio Video Input)
5. Press the INPUT SELECT button on the remote control to set to the AV mode. Then perform the above adjustments 2, 3.

2-12: SUB BRIGHTNESS

1. Receive an 70db the black pattern*. (RF Input)
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(13)** on the remote control to select "BRIGHTNESS".
3. Press the VOL. UP/DOWN button on the remote control unit the screen begin to shine.
4. Receive an 70db the black pattern*. (Audio Video Input)
5. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2, 3.

*The Black Pattern means the whole black raster signal. Select the "RASTER" of the pattern generator, set to the OFF position for each R, G and B.

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

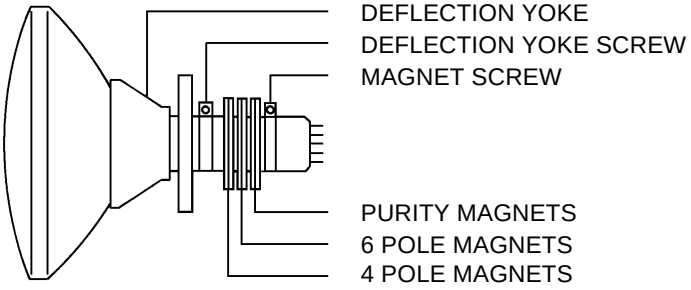


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

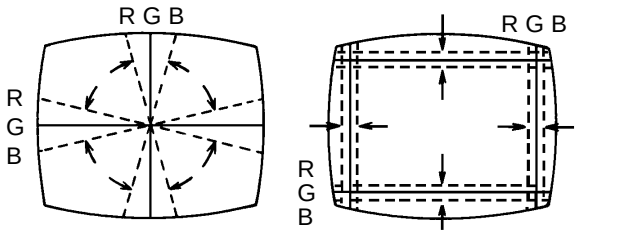
1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

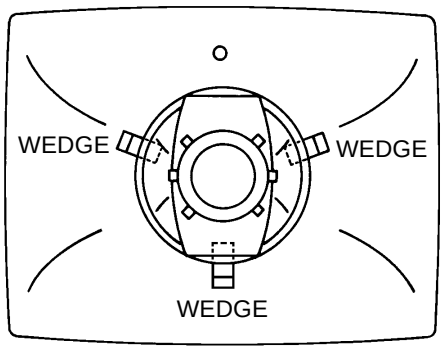
Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

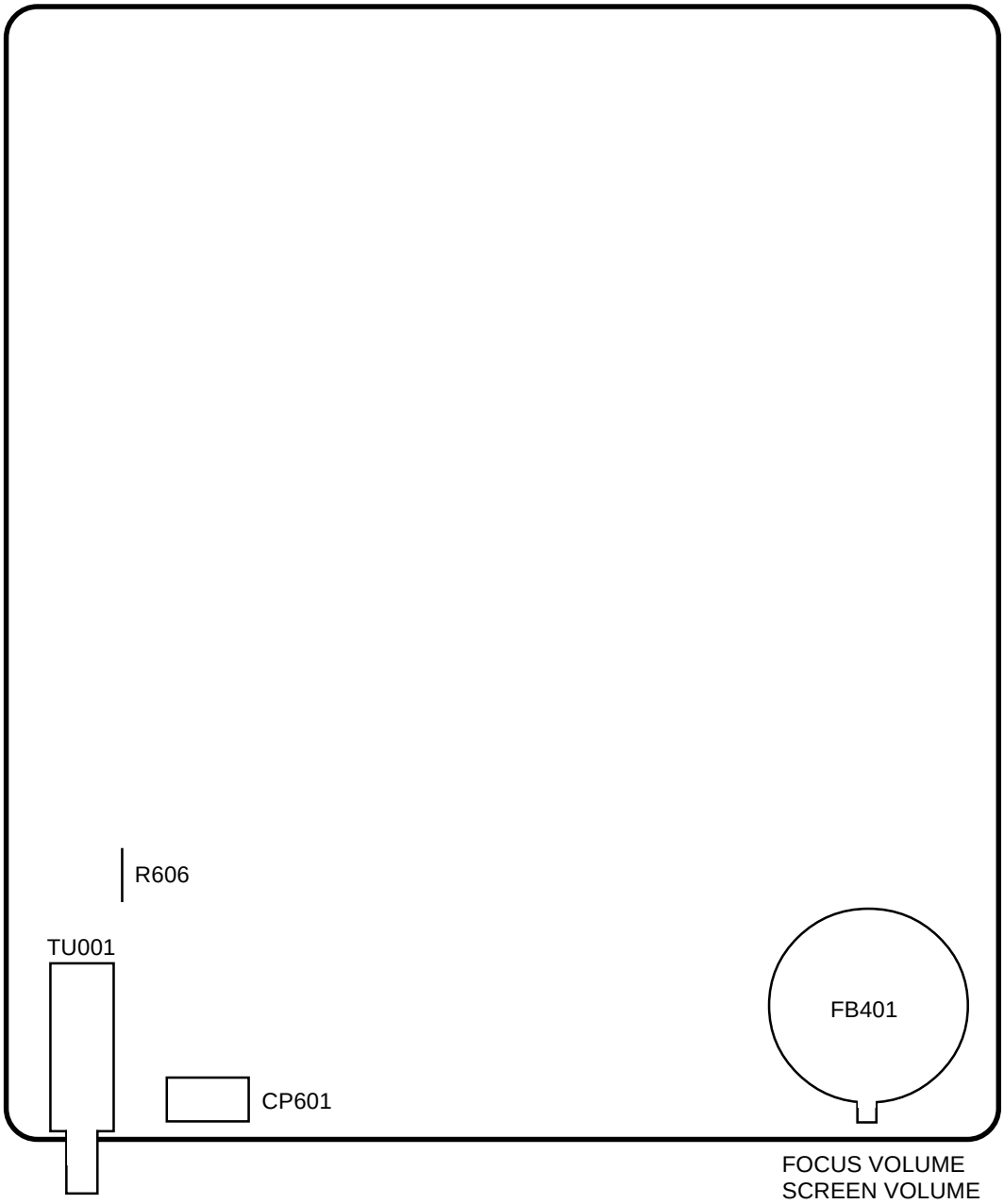
Fig. 3-2-a



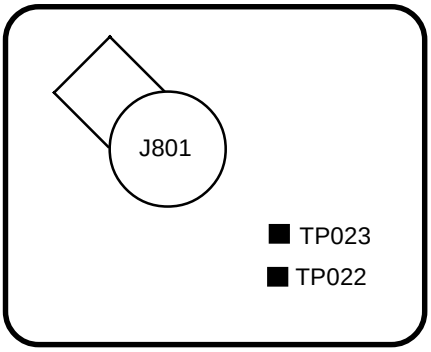
WEDGE POSITION

Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE

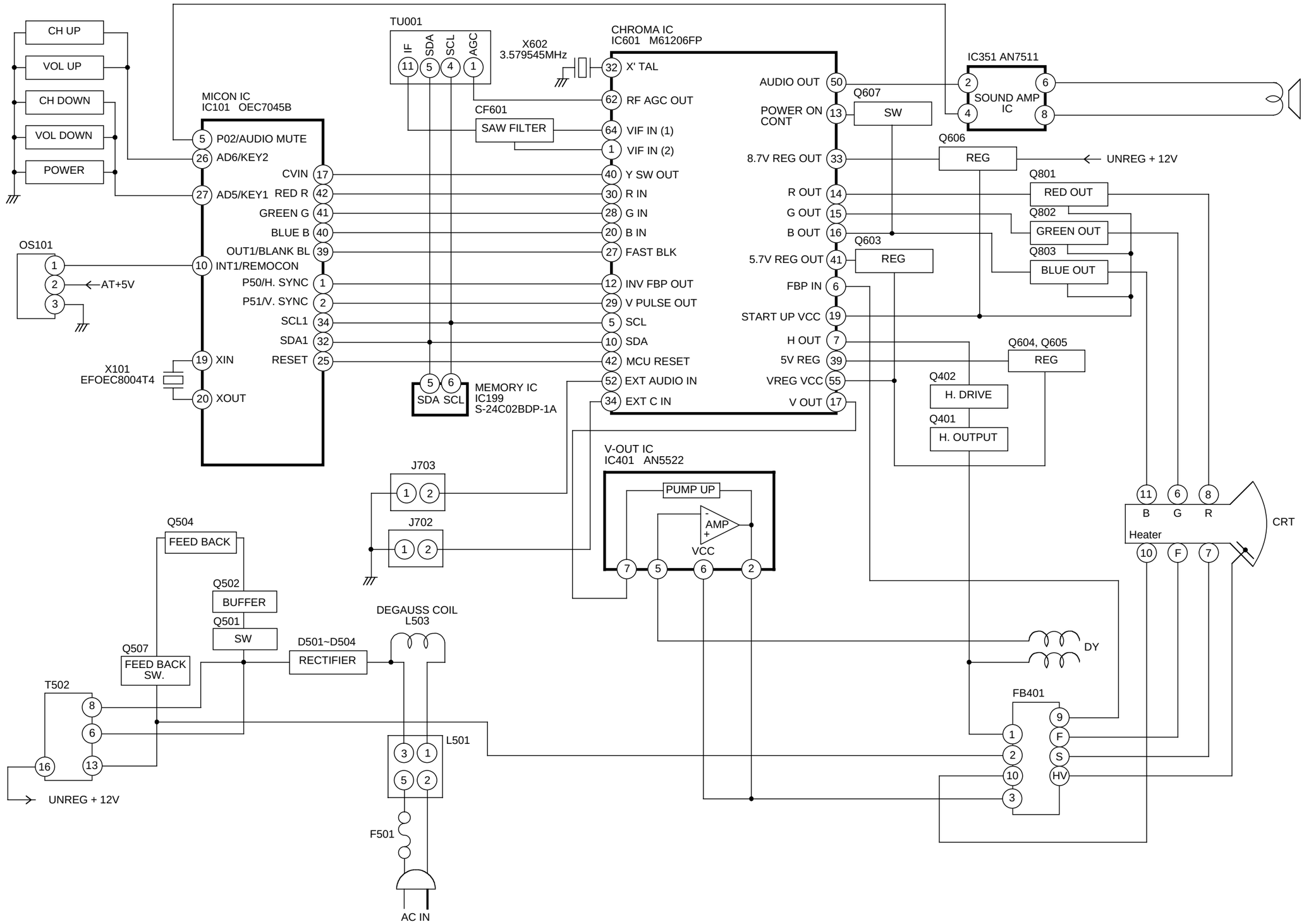


MAIN PCB

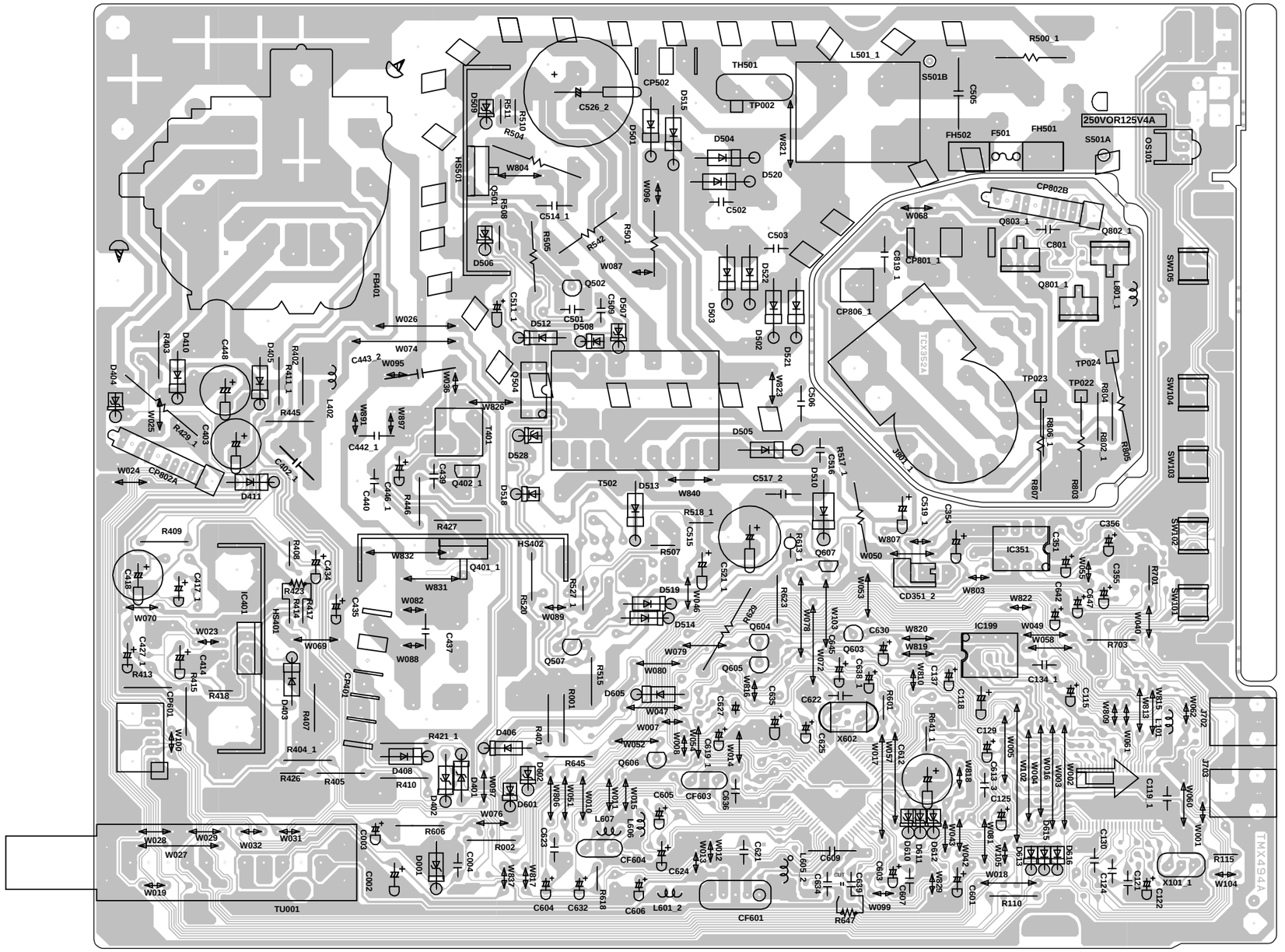


CRT PCB

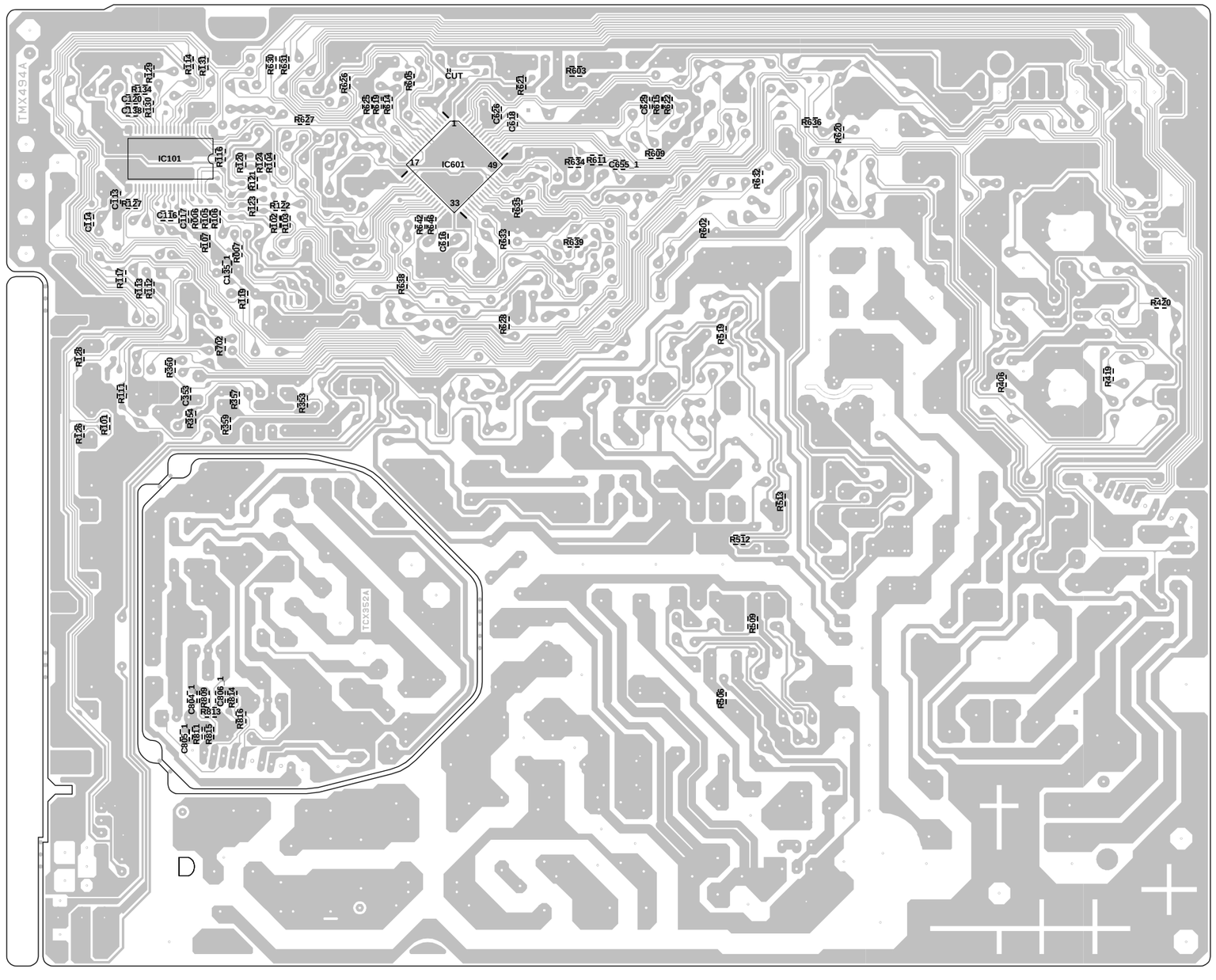
BLOCK DIAGRAM



PRINTED CIRCUIT BOARDS
MAIN/CRT (INSERTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS
MAIN/CRT (CHIP MOUNTED PARTS)
SOLDER SIDE



MICON/TUNER SCHEMATIC DIAGRAM
(MAIN PCB)

ACCESSORY
TM101
RC-DW010

TU001 ENV56D66G3
IF, BTL, BPL, V.S, SDA, SCL, ADRES, AGC

OS101
PIC-28143SY-2
Vout, B+, GND

MICON IC
IC101 OEC7045B

P50/H.SYNC
P51/V.SYNC
P00/EXT MUTE
P01/I2C_OFF
P02/AUDIO MUTE
P03/(Surround)
P04
P05/(Center_SP)
INT2/P.FAIL
INT1/REMOCON
P23/SYNC
P24
P25/ON_TIMER
AVCC
HLF
V.HOLD
CVIN
CNVSS
Xin
Xout
VSS

RED R
GREEN G
BLUE B
OUT1/BLANK BL
P20/AV2
P21/AV1
P22/POWER
P10/DEGAUSS_H
SCL1
SCL2
SDA1
SDA2
X-RAY
AD4/AFT
AD5/KEY1
AD6/KEY2
RESET
OSC1
OSC2
VCC

X101_1
EFOEC8004T4

MEMORY IC
IC102
S-24C02BDP-1A
SDA, SCL, MODE, VCC, VSS, E2, E1, E0

FROM/TO CHROMA
AGC
GND
TUNER+5V
IF
I2C_OFF
VD
HD
OSD_R
OSD_G
OSD_B
OSD_BLK

TO SOUND/AV
AUDIO_MUTE
POWER

FROM DEFLECTION/CRT
+B
X-RAY

FROM/TO CHROMA
POWER
SCL
SDA
AFT

RESET
AT+5V
Y_VIDEO
SYNC

POWER SW105 SKHVBED010
VOL DOWN SW104 SKHVBED010
VOL UP SW103 SKHVBED010
CH DOWN SW102 SKHVBED010
CH UP SW101 SKHVBED010

PCB010
TMX494

R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL
TUNER VIDEO SIGNAL

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CHROMA SCHEMATIC DIAGRAM
(MAIN PCB)

FROM TV POWER

UNREG+12V

REG Q603 KTC3203_Y-AT

REG Q604 KTC3203_Y-AT

REG Q605 KTC3203_Y-AT

REG Q606 KTC3203_Y-AT

CF604 EFCT4R5MW5

CF603 EFCT4R5YS5A

SAW FILTER CF601 SAF45MFY220ZR

CHROMA IC IC601 M61206FP

FROM/TO SOUND/AV

AUDIO_OUT

AUDIO_IN

GND

FROM SOUND/AV

VIDEO_IN

FROM/TO MICON/TUNER

Y_VIDEO
AT+5V
SYNC
TUNER+5V
RESET
AFT
AGC
IF

FROM/TO DEFLECTION/CRT

V_OUT
ABCL
V_FEEDBACK
GND
H_OUT
H_SYNC
B.OUT
G.OUT
R.OUT
CLAMP

TEST POINT CP601 173979-6

B.OUT	6
INT.MONI	5
IIC_OFF	4
SDA	3
SCL	2
GND	1

HD
POWER
OSD_B
OSD_BLK
OSD_G
VD
OSD_R
I2C_OFF
SDA
SCL

46 SW REG CONT
47 LIMITER IN
48 IF AGC
49 QIF OUT

34 EXT C in
33 8.7V REG OUT
32 X'TAL

64 VIF IN (1)
1 VIF IN (2)

17 V OUT
16 B OUT

SWITCHING Q607 DTC114ES

CAUTION: DIGITAL TRANSISTOR

R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL
AUDIO SIGNAL
LUMINANCE SIGNAL
TUNER VIDEO SIGNAL

PCB010
TMX494

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TV POWER SCHEMATIC DIAGRAM
(MAIN PCB)

4A 125V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 4A 125V (F501) FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 4A 125V (F501).

DEGAUSS COIL
L503
8R200029

CP502
TV-50P-02-A1

R500_1
2.7M 1/2W +-10%

W821

TH501
ZPB45BL3R0A

TP002
JWF-50K-1

L501_1
1R5A102F20

NC

4A 125V
F501
51MS040LCC
233004-MB000
FH501 EYF-52BC
FH502 EYF-52BC

C505
250V 0.1 ECOUL

AC120V 60Hz
CD501_2
0R414903

BLACK
WHITE
S501A
S501B

D501 1N4005-EIC
D515 1N4005-EIC
D504 1N4005-EIC
D520 1N4005-EIC
D521 1N4005-EIC
D502 1N4005-EIC
D522 1N4005-EIC
D503 1N4005-EIC

C502
500V 0.001 B

C503
500V 0.001 B

C526_2
200V 330 UP

R501
3.3 5W

R510
1.2M 1/4W

R511
1.2M 1/4W

D509
MTZJ18B

T502
81290184

1.7
NC
144.0
NC
10.3
6.6
10.3
10.0
NC
0
132.3
0
0
11.3
NC
NC

W804

R504
18 3W

C506
250V 0.0047 KH

W823

SWITCHING
Q501
2SK2662

144.0
4.8
0.1

R505
1.5K 1W

C509
0.047 M

C514_1
2KV 680P YR

D508 1SS133
D512 1SS133

C511_1
50V 22 KA

D507 MTZJ15B
R509 1/4W 2.2K
D506 MTZJ18B

BUFFER
Q502
KTC3203_Y-AT

R506
680

R508
2.7K 1/4W

R542
0.47 1W

HS501
763WSAA013

C501
0.0082 M

FEED BACK
Q504
LTV-817M-V

11.5
10.5
0.1
9.5

D505
SB290S
C516
500V 470P B

R517_1
5.6 2W

C519_1
16V 470 YK

TO SOUND/AV
GND
SOUND+B
SOUND_GND

W840

D510
RU2AM-EIC
C517_2
2KV 470P YR

C521_1
160V 100 MHE

TO DEFLECTION/CRT
+B
UNREG+12V
GND

D513
SB290S
C515
16V 470 YK

TO CHROMA
UNREG+12V

D518
1SS133

R520
150K 1/2W

R512
2.2K

R513
5.6K

FEED BACK SWITCHING
Q507
KTC3198-AT(Y,GR)
9.5
6.0
5.5

R515
68K 1/2W

D514 1SS133
D517 1SS133

R519
1.2K

R507
560 1/4W

R527_1
8.2K 1/4W

D528
MTZJ5.6B

R518_1
2.7K 1/4W

PCB010
TMX494

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DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)

FROM CHROMA
CLAMP
G.OUT
R.OUT
B.OUT
V-OUT IC IC401 AN5522
THERMAL PROTECTION
PUMP UP
C414 35V 100 YK
R414 100 1/4W
R423 6.8K
D403 11E1-EIC
R418 33K +-1%
R420 3.3K
R419 470
C417_1 50V 10 YK
R417 12K +-1%
C418 25V 470 YK
R407 1.8 1/2W
R410 330 1/2W
R415 1.8K 1/2W
R413 2.2K 1/2W
C427_1 50V 10 YK
HS401 763WSAA013
R426 2.7K 1/4W
R406 2.2K
R405 18K 1/4W +-1%
R408 10K +-1%
R401 100K 1/4W +-1%
D401 HZ7-1L
D402 HZ11B1L
R409 12K +-1%
TO MICON/TUNER
X-RAY
+B
C434 100V 22 YK
D411 AU02A-EIC
R429_1 1.8 2W
TO DY
CP401 B05B-DVS
CP802A 51048-1000
CD802 2EDA3001
CP802B 51048-1000
GND
CLAMP
G.OUT
R.OUT
B.OUT
NC
HEATER
GND
NC
180V
CD801 8M82025A
CP801_1 TS-80P-02-V1
L801_1 220uH 0305
V801 A48AGY13X77
R
G
B
470P B
330
C804_1
R808
C805_1
R811
C806_1
R814
3.2
2.7
128.0
126.0
120.5
RED OUT Q801_1 2SC4217
GREEN OUT Q802_1 2SC4217
BLUE OUT Q803_1 2SC4217
R813 4.7K
R815 4.7K
R816 4.7K
20
21
22
TP022
TP024
TP023
R803 12K 2W
R802_1 2.7K 1/4W
R805 12K 2W
R804 2.7K 1/4W
R807 12K 2W
R806_1 2.7K 1/4W
C801 330P B
FROM/TO CHROMA
GND
V_FEEDBACK
V_OUT
ABCL
H_OUT
H_SYNC
FROM TV POWER
GND
C439 500V 22P SL
H.DRIVE Q402_1 KTC3207-AT
27.0
0.3
0
C440 500V 0.0022 B
C446_1 50V 22 YK
R446 4.7K 1/2W
T401 305Y002
NC
130.0
0
H.OUTPUT Q401_1 2SD2627LS-CBC11
W832
W831
W891
C437 250V 0.39 PMS
0.0068 MPP
C442_1 2KV 470P YR
R427 100 1/4W
100 1/4W
HS402 763WSAA013
C443_2 1.25KV
W897
FB401 3220052F
130.0 COL
132.5 VIDEO
132.5 B+
48.0 AFC
7.0 HEATER
0 GND
NC E12
25.0 E25
HI
F
S
GND 0
ABL 4.3
GND 0
E8 NC
FOCUS
SCREEN
CP806_1
C819_1 2KV 0.001 B
L402 18uH
C402_1 200V 0.012 PP
R402 6.8 1/2W
R403 10K 1/4W
D404 MTZJ6.2B
UNREG+12V
R645 331/2W
D406 1SS133
D405 AU02A-EIC
D410 AU02A-EIC
R411_1 3.9K 1/4W
R404_1 68 1/4W
R445 120K 1/4W
C403 35V 470 YK
C448 200V 22 MHE
C435 100V 0.1 MHE
R421_1 100K 1/2W
D408 11E1-EIC
PCB010 TMX494
PCB110 TCX352
6.4
96.4
NC
101.6
99.6
J801_1 CVT3275-5102
R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

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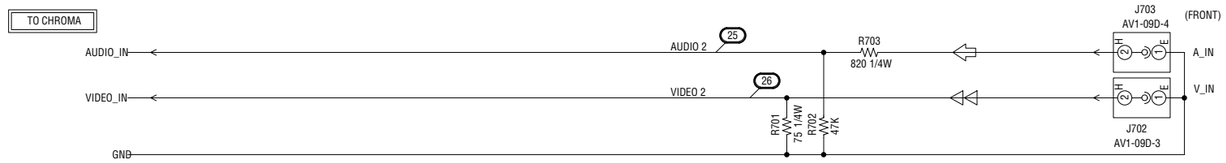
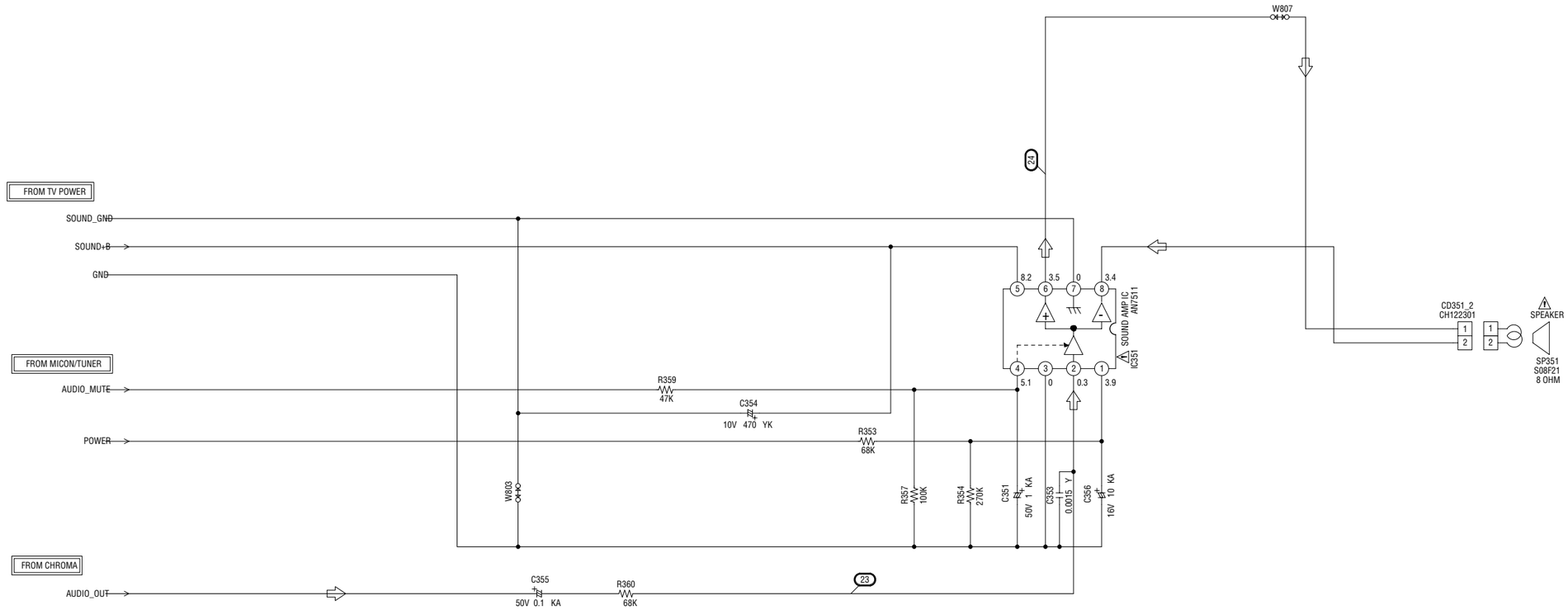
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

SOUND/AV SCHEMATIC DIAGRAM
(MAIN PCB)





PCB010
TMX494

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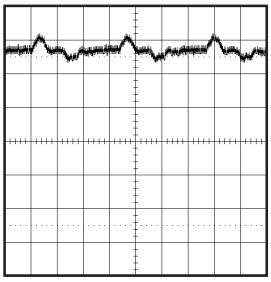
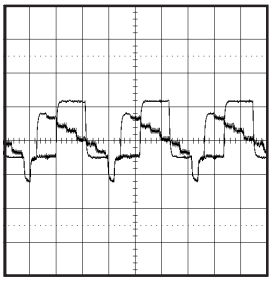
◁◁ TUNER VIDEO SIGNAL
◁ AUDIO SIGNAL

WAVEFORMS

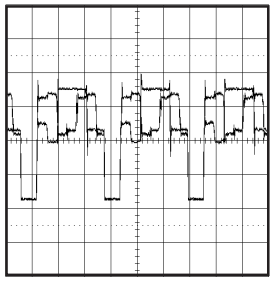
MICON/TUNER



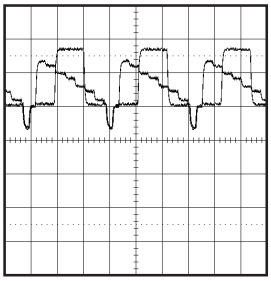
① 200mV 5ms/div



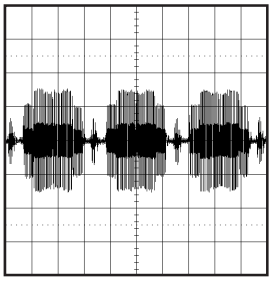
⑥ 0.5V 20µs/div



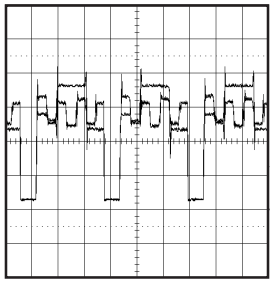
⑪ 1V 20µs/div



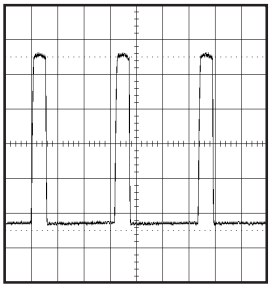
② 0.5V 20µs/div



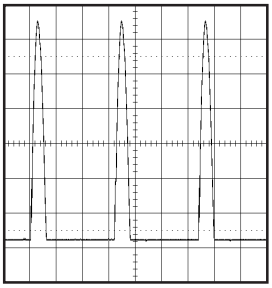
⑦ 200mV 20µs/div



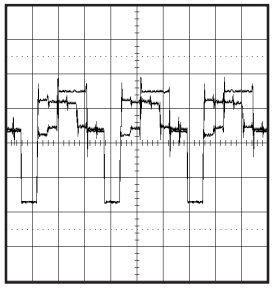
⑫ 1V 20µs/div



③ 200mV 20µs/div

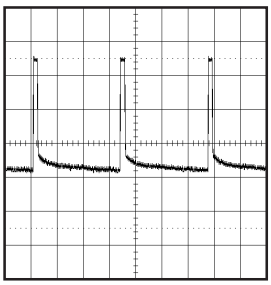


⑧ 20V 20µs/div

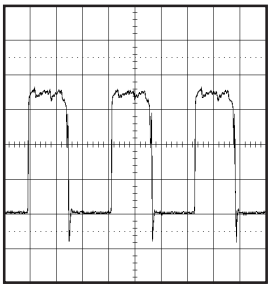


⑬ 1V 20µs/div

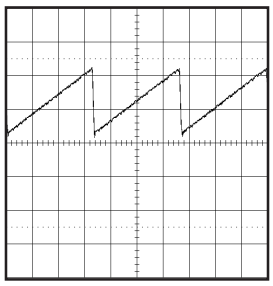
DEFLECTION/CRT



④ 200mV 5ms/div

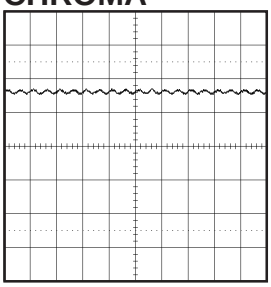


⑨ 200mV 20µs/div

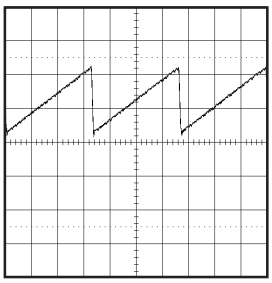


⑭ 0.5V 5ms/div

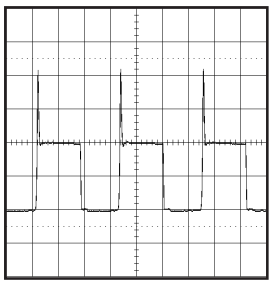
CHROMA



⑤ 0.5V 2ms/div



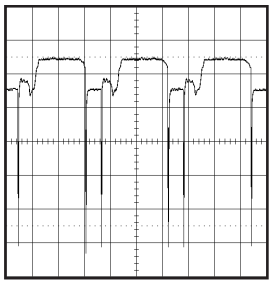
⑩ 0.5V 5ms/div



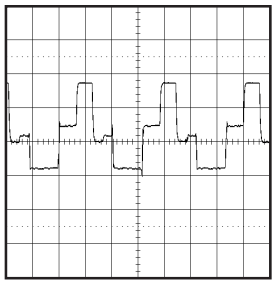
⑮ 20V 20µs/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

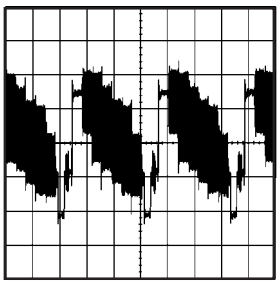
WAVEFORMS



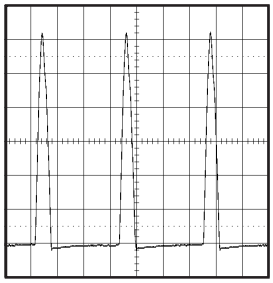
⑯ 2V 20µs/div



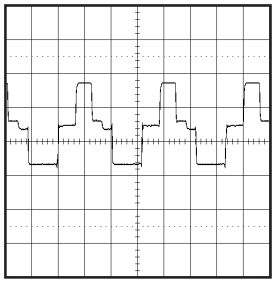
㉑ 50V 20µs/div



㉖ 500mV 20us/div

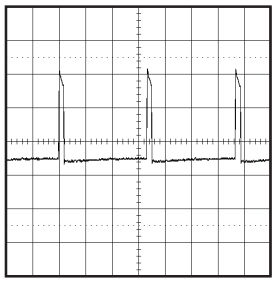


⑰ 200V 20µs/div

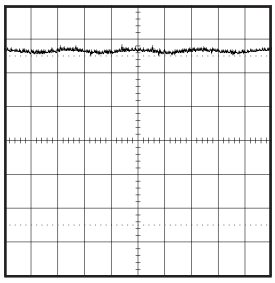


㉒ 50V 20µs/div

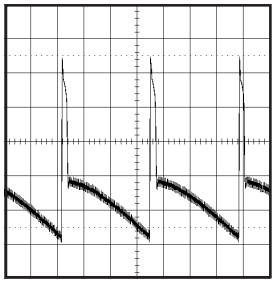
SOUND/AV



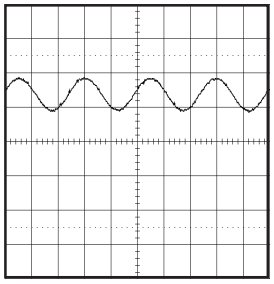
⑱ 10V 5ms/div



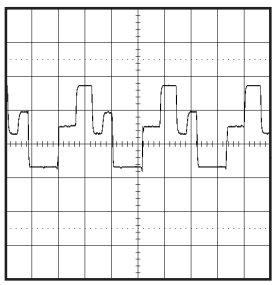
㉓ 0.5V 1ms/div



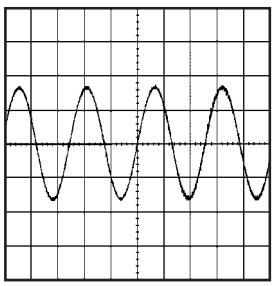
⑲ 10V 5ms/div



㉔ 1V 1ms/div



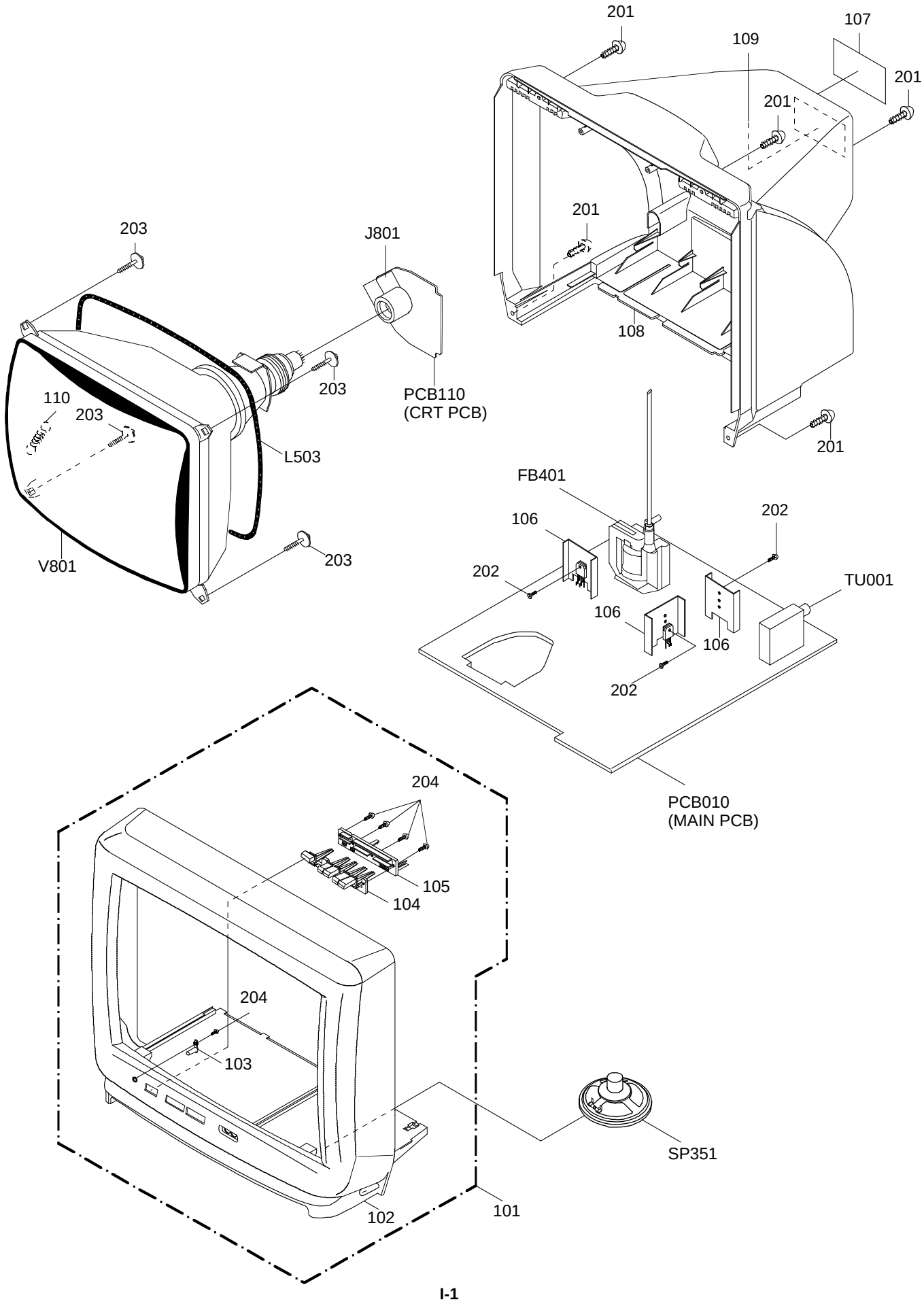
⑳ 50V 20µs/div



㉕ 500mV 1ms/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW



MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
101	A3J906A720	CABINET,FRONT ASS'Y		
102	701WPJB187	CABINET,FRONT		
103	713WPAA020	GUIDE,REMOCON		
104	735WPAA277	BUTTON,FRAME		
105	735WPAA278	BUTTON,HOLDER		
106	---	HEAT SINK		
107	722A08A073	SHEET,RATING		
108	702WPA0557	CABINET,BACK		
109	726000A019	SHEET,CRT SERVICEMAN		
110	741WUA0019	SPRING,EARTH		
201	8117540A64	SCREW,TAPPING (B0)	TRUSS	4x16
202	8109I30A04	SCREW,TAP TITE (B)	WH7	3x10
203	8121F50B84	SCREW,TAPPING (BO)	GW20 FLAT	5x28
204	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
---	JB5U0200	POLYBAG		
---	J3J81201	INSTRUCTION BOOK		
---	J4C80417	REGISTRATION CARD		
---	A3J812A975	INSTRUCTION BOOK KIT		
---	791WHAA017	LAMIFILM BAG		
---	792WHA0279	PACKAGE,BOTTOM		
---	792WHA0280	PACKAGE,TOP		
---	793WCDA920	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		RESISTORS	
⚠ R401	R4X5T4104F	R, METAL	100K OHM 1/4W
⚠ R405	R4X5T4183F	R, METAL	18K OHM 1/4W
⚠ R406	R903N8222J	RC	2.2K OHM 1/8W
⚠ R407	R002T21R8J	RC	1.8 OHM 1/2W
⚠ R408	R4X5T6103F	R, METAL	10K OHM 1/6W
⚠ R409	R4X5T6123F	R, METAL	12K OHM 1/6W
R423	R001T6682J	RC	6.8K OHM 1/6W
⚠ R426	R002T4272J	RC	2.7K OHM 1/4W
⚠ R429	R6558A1R8J	R, FUSE	1.8 OHM 2W
⚠ R500	R0G3K2275K	RC	2.7M OHM 1/2W
⚠ R501	R5X2CD3R3J	R, CEMENT	3.3 OHM 5W
⚠ R504	R3X28B180J	R, METAL OXIDE	18 OHM 3W
⚠ R505	R3X181152J	R, METAL	1.5K OHM 1W
R509	R903N8222J	RC	2.2K OHM 1/8W
R515	R002T2683J	RC	68K OHM 1/2W
⚠ R517	R3X28A5R6J	R, METAL	5.6 OHM 2W
⚠ R518	R002T4272J	RC	2.7K OHM 1/4W
⚠ R519	R903N8122J	RC	1.2K OHM 1/8W
⚠ R542	R3X181R47J	R, METAL	0.47 OHM 1W
⚠ R629	R3X28B330J	R, METAL OXIDE	33 OHM 3W
⚠ R641	R002T4273J	RC	27K OHM 1/4W
R647	R001T6202J	RC	2K OHM 1/6W
⚠ R803	R3X18A123J	R, METAL OXIDE	12K OHM 2W
⚠ R805	R3X18A123J	R, METAL OXIDE	12K OHM 2W
⚠ R807	R3X18A123J	R, METAL OXIDE	12K OHM 2W
		CAPACITORS	
C402	P3N1F2123J	CPP	0.012 UF 200V or
	P341F2123J	CPP	0.012 UF 200V
⚠ C403	E02LT4471M	CE	470 UF 35V
⚠ C414	E02LT4101M	CE	100 UF 35V
⚠ C418	E02LT3471M	CE	470 UF 25V
⚠ C434	E02LT8220M	CE	22 UF 100V
C437	P4J7F3394J	CMPP	0.39 UF 250V PMS
⚠ C440	C0JTB05H3K	CC	0.0022UF 500V B
C442	C0JLYR7Q2K	CC	470 PF 2KV YR
⚠ C443	P4N8FJ682H	CMPP	0.0068UF 1.25KV
⚠ C446	E02LT5220M	CE	22 UF 50V
⚠ C448	E5EZTC220M	CE	22 UF 200V
C502	C0JTB0513K	CC	0.001 UF 500V B
C503	C0JTB0513K	CC	0.001 UF 500V B
⚠ C505	P2122B104M	CMP	0.1 UF 250V ECQUL
⚠ C506	CB3LE0MQ3M	CC	0.0047UF 250V
⚠ C511	E50HU5220M	CE	22 UF 50 V
C514	C0JLYR7U2K	CC	680 PF 2KV YR
⚠ C515	E02LT2471M	CE	470 UF 16V
C517	C0JLYR7Q2K	CC	470 PF 2KV YR
⚠ C519	E02LT2471M	CE	470 UF 16V
⚠ C521	E5EZFB101M	CE	100 UF 160V
⚠ C526	E51CGC331M	CE	330 UF 200V
C819	C0JBB0713K	CC	0.001 UF 2KV B
		DIODES	
D001	D97U03001B	DIODE, ZENER	MTZJ30B T-77
⚠ D401	D94TA27011	DIODE, ZENER	HZ27-1L TD
⚠ D402	D94TA11B11	DIODE, ZENER	HZ11B1L TD
D403	D2WT011E10	DIODE, SILICON	11E1-EIC
D404	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
⚠ D405	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D406	D1VT001330	DIODE, SILICON	1SS133T-77
D408	D2WT011E10	DIODE, SILICON	11E1-EIC
⚠ D410	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D411	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D501	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D502	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D503	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D504	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D505	D2WXB290S0	DIODE, SILICON	SB290S
D506	D97U01801B	DIODE, ZENER	MTZJ18B T-77
D507	D97U01501B	DIODE, ZENER	MTZJ15B T-77
D508	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D509	D97U01801B	DIODE, ZENER	MTZJ18B T-77
⚠ D510	D2WXRU2AM0	DIODE, SILICON	RU2AM-EIC
D512	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D513	D2WXB290S0	DIODE, SILICON	SB290S
D514	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D515	D2WXN40050	DIODE, SILICON	1N4005-EIC
D518	D1VT001330	DIODE, SILICON	1SS133T-77
D519	D1VT001330	DIODE, SILICON	1SS133T-77

REF. NO.	PART NO.	DESCRIPTION	
		DIODES	
⚠ D520	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D521	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D522	D2WXN40050	DIODE, SILICON	1N4005-EIC
D528	D97U05R61B	DIODE, ZENER	MTZJ5.6B T-77
D601	D1VT001330	DIODE, SILICON	1SS133T-77
D602	D97U08R21B	DIODE, ZENER	MTZJ8.2B T-77
D605	D2WT011E10	DIODE, SILICON	11E1-EIC
D610	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D611	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D612	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D613	D1VT001330	DIODE, SILICON	1SS133T-77
D615	D1VT001330	DIODE, SILICON	1SS133T-77
D616	D1VT001330	DIODE, SILICON	1SS133T-77
		ICS	
IC101	I56F07045B	IC	OEC7045B
IC199	A3J906A015	IC	S-24C02BDP-1A
⚠ IC351	I01DP75110	IC	AN7511
⚠ IC401	I01TD55220	IC	AN5522
IC601	I06FC61206	IC	M61206FP
		TRANSISTORS	
⚠ Q401	TD30026270	TRANSISTOR, SILICON	2SD2627LS-CBC11
⚠ Q402	TCAT032070	TRANSISTOR, SILICON	KTC3207-AT
⚠ Q501	T25FK26620	TRANSISTOR, FIELD EFFECT	2SK2662
⚠ Q502	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
⚠ Q504	0002E00610	PHOTO COUPLER	LTV-817M-V
Q507	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
Q603	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q604	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q605	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q606	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q607	TNYTB03001	COMPOUND TRANSISTOR	DTC114ESTP
⚠ Q801	TC3F042170	TRANSISTOR, SILICON	2SC4217(D,E)-RAC
⚠ Q802	TC3F042170	TRANSISTOR, SILICON	2SC4217(D,E)-RAC
⚠ Q803	TC3F042170	TRANSISTOR, SILICON	2SC4217(D,E)-RAC
		COILS & TRANSFORMER	
L101	021LA63R3K	COIL	3.3 UH
L402	02186G180M	COIL	18 UH
⚠ L501	029T00A7M1	COIL, LINE FILTER	1R5A102F20
⚠ L503	028R200029	COIL, DEGAUSS	8R200029
L601	0216731R2K	COIL	1.2 UH
L605	02167F1R0K	COIL	1 UH
L606	021LA62R2K	COIL	2.2 UH
L607	021LA6150K	COIL	15 UH
L801	02167F221J	COIL	220 UH
T401	03305Y002S	TRANS, HORIZONTAL DRIVE	305Y002
⚠ T502	0481290184	TRANSFORMER, SWITCHING	81290184
		JACKS	
J702	060Q401077	RCA, JACK	AV1-09D-3
J703	060Q401076	RCA, JACK	AV1-09D-4
⚠ J801	066C130015	SOCKET, CRT	CVT3275-5102
		SWITCHES	
SW101	0504201T31	SWITCH, TACT	SKHVBED010
SW102	0504201T31	SWITCH, TACT	SKHVBED010
SW103	0504201T31	SWITCH, TACT	SKHVBED010
SW104	0504201T31	SWITCH, TACT	SKHVBED010
SW105	0504201T31	SWITCH, TACT	SKHVBED010
		P.C.BOARD ASSEMBLIES	
PCB010	A3J906A01A	PCB ASS'Y	TMX494A
PCB110	A3J901A11A	PCB ASS'Y	TCX352A
		MISCELLANEOUS	
CD351	06CH122301	CORD, CONNECTOR	CH122301
⚠ CD501	120R414903	CORD, AC	0R414903
CD801	068M82025A	CORD, CONNECTOR	8M82025A
CF601	1022T45R72	FILTER, SAW	SAF45MFY220ZR
CF603	1011T4R504	FILTER, CERAMIC	EFCT4R5YS5A
CF604	1011T4R517	FILTER, CERAMIC	EFCT4R5MW5
⚠ CP401	069X450029	CONNECTOR PCB SIDE	B05B-DVS
⚠ CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1 or
	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP601	0694260139	CONNECTOR PCB SIDE	173979-6
CP801	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1 or
	069S320010	CONNECTOR PCB SIDE	A2361WV2-2P
CP802A	067R010019	WIRE HOLDER	51048-1000 or
	067U010049	WIRE HOLDER	B2013H02-10P
CP802B	067R010019	WIRE HOLDER	51048-1000 or
	067U010049	WIRE HOLDER	B2013H02-10P
⚠ F501	081PC04004	FUSE	51MS040LCC

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		MISCELLANEOUS	
⚠ FB401	043220052F	TRANSFORMER, FLYBACK	3220052F
FH501	06710T0006	HOLDER, FUSE	EYF-52BC
FH502	06710T0006	HOLDER, FUSE	EYF-52BC
OS101	077Q014003	REMOTE RECEIVER	PIC-28143SY-2
⚠ SP351	070Y132018	SPEAKER	S08F21
⚠ TH501	DF5EL3R0A0	DEGAUSS ELEMENT	ZPB45BL3R0A
TM101	076N0DW010	TRANSMITTER	RC-DW010
⚠ TU001	0145S00052	TUNER, VHF-UHF	ENV56D66G3
⚠ V801	098Q200481	CRT W/DY	A48AGY13X77
X101	1001T8R004	CERAMIC, OSCILLATOR	EFOEC8004T4
X602	100CT3R505	CRYSTAL HC-49/C	3.579545MHz

RESISTOR

RC..... CARBON RESISTOR

CAPACITORS

CC..... CERAMIC CAPACITOR
CE..... ALUMI ELECTROLYTIC CAPACITOR
CP..... POLYESTER CAPACITOR
CPP..... POLYPROPYLENE CAPACITOR
CPL..... PLASTIC CAPACITOR
CMP..... METAL POLYESTER CAPACITOR
CMPL..... METAL PLASTIC CAPACITOR
CMPP..... METAL POLYPROPYLENE CAPACITOR

SPEC.NO.	M3J9-06A
O/R NO.	W123002