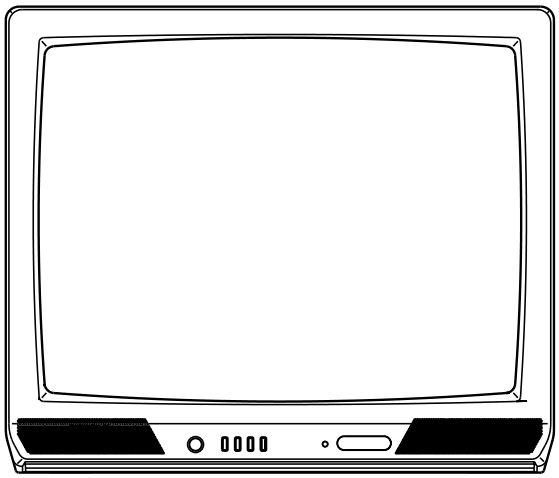
Memorex®

MT2251 (SERIES C)

SERVICE MANUAL

COLOR TELEVISION RECEIVER



ORIGINAL
MFR'S VERSION C

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.Outline of the Product

25 inch(626 mmV):Measured diagonally

Color CRT 100 degree deflection

G-2.Broadcasting System

US System M

G-3.Color System ☒NTSC ☐PAL ☐SECAM or Monochrome signal

G-4.NTSC Playback(PAL 60Hz) ☐Yes ☒No

G-5.NTSC 3.58+4.43/PAL60Hz ☐Yes ☒No

G-6.Antenna Input Impedance

VHF/UHF 75 ohm unbalanced

G-7.Tuner and Receiving Contactless Electric tuner ☒1Tuner System ☐2Tuner System

channel Tuner ☐Oscar(W/O HYPER) ☐Oscar(W/ HYPER) ☐France CATV) ☒Others

Receiving channel

(USA) 2-69 , 4A , A-5~A-1 , A~I , J~W , W+1~W+84

Tuning System

☒Frequency syn. ☐Voltage syn. ☐Others

G-8.Preset Channel

-- channels

G-9.Intermediate Frequency

Picture(fP)	45.75 MHz	_____ MHz	_____ MHz
Sound (fS)	41.25 MHz	_____ MHz	_____ MHz
fP-fS	4.50 MHz	_____ MHz	_____ MHz

G-10.Stereo/Dual TV Sound

☐ Yes(☐NICAM ☐GERMAN ☐USA ☐JAPAN) ☒No

G-11.Tuner Sound Muting ☒Yes ☐No

G-12.Power Source 120 V ☐AC 50Hz ☒AC 60Hz

G-13.Power Consumption: 110 W at AC 120 V 60 Hz

(Approx.) _____ W at DC _____ V

Stand by: 4 W at AC 120 V 60 Hz

Per Year: - kWh / Year

G-14.Dimensions(Approx.)

618 mm(W) 504 mm(D) 525 mm(H)

G-15.Weight(Approx.) Net : 27 kg (59.9 lbs)

Gross: 29 kg (64.3 lbs)

G-16.Cabinet Material

Cabinet Front:	☒PS	☐94HB	☒DECABROM
	☐ABS	☐94V2	☐NON-DECA
		☒94V0	
Back Panel:	☒PS	☐94HB	☒DECABROM
	☐ABS	☐94V2	☐NON-DECA
		☒94V0	

GENERAL SPECIFICATIONS

G-17.Protector: ☒Power Fuse

G-18.Regulation

Safety

☒UL	☐CSA	☐SAA	☐SI	☐CE	☐SEV
☐BS	☐NF	☐NEMKO	☐FEMKO	☐DEMKO	☐IEC65
☐SEMKO	☐NZ	☐HOMOLO	☐SABS	☐CNS	☐SISIR
☐NOM	☐AS3159	☐DENTORI	☐UNE	☐GOST	☐NONE

Radiation

☒FCC	☐DOC	☐FTZ	☐PTT	☐CE	☐SEV
☐SABA	☐SI	☐NF	☐NZ	☐HOMOLO	☐UNE
☐CNS	☐CISPR13	☐DENTORI	☐AS/NZS	☐NONE	

X-Radiation

☐PTB	☒DHHS	☐HWC	☐DENTORI	☐NONE

G-19.Temperature

Operation 5 ºC~ 40 ºC

Storage -20 ºC~ 60 ºC

G-20.Operating Humidity Less than 80 %RH

G-21.Clock and Timer

Sleep Timer	☒Yes Max 120 Min.(10 Min. Step)	☐No
On/Off Timer	☐Yes _____ Programs	☒No
Wake Up Timer	☐Yes _____ Programs	☒No

G-22.Timer back up Time

More than -- Minutes (at Power Off Mode)

G-23.Terminals

☒VHF/UHF Antenna Input ☐ Din Type ☒ F-Type ☐ France Type

☐Front Video Input	(RCA ø8.3)		
☐Rear Video Input	(RCA ø8.3)		
☐Rear Video Output	(RCA ø8.3)		
☐Front Audio Input	(RCA ø8.3)		
☐Rear Audio Input	(RCA ø8.3)		
☐Rear Audio Output	(RCA ø8.3)		
☐21 Pin		☐DC Jack(Center +)	☐Ear Phone Jack(ø3.5)
☐Head Phone Jack(ø3.5)		☐AC Outlet	☐Ext Speaker
☐Diversity		☐S Input(Front)	☐S Input(Rear)

G-24.Indicator

☐Power (____)	☐Stand By (____)	☐On Timer (____)	☒NONE

G-25.Display

On Screen Display

☒Menu	☐Clock Set(☐12H ☐24H)	☐System Selec	☐On/Off Timer
	☐Hotel Lock	☐Area Code	☒CH Tuning
	☐Sound 1/2	☐NICAM Auto Off	☒Picture
	☐Guide CH Set	☐Audio	☒Language
	☐CATV	☐Pin Code Registration	☒V-Chip
☒Control Level	☒Sound	☒Brightness	☒Contrast
	☒Color	☒Tint(NTSC Only)	☒Sharpness
	☐Tuning	☐Bass	☐Treble
	☐Balance	☐Back Light	
☐Stereo,Audio Output,Bilingual		☐Picture Menu	
☐Stereo,Audio Output, SAP		☐Mid Night Theater	
☐Stereo,Audio Output		☐GAME	
☐AV	☒Channel	☐Clock	☐Hotel Lock
☒Sleep Timer	☒Sound Mute	☐Pin Code	

GENERAL SPECIFICATIONS

G-26.OSD Language

☒Eng ☐Ger ☒Fre ☒Spa ☐Ita ☐Por ☐Jpn

OSD Language Setting

☒Eng ☐Ger ☐Fre ☐Spa ☐Ita ☐Por ☐Jpn

☐Not Applicable

G-27.Speaker

Position ☒Front ☐Side ☐Bottom

Size 1.5 x 2.7 inches

Imp. 4 ohm x 2 pcs

Power Max 075 + 0.75 W

10% 0.5 + 0.5 W (Typical)

G-28.EXT Speaker

☐Yes -- W Imp -- ohm

G-29.Carton

Master Carton: ☐Need ☒No Need

Content: ---- Set

Material: ---- / ---- Corrugated Carton

Dimensions: ---- mm(W) ---- mm(D) ---- mm(H)

Description of Origin ☐Yes ☐No

Gift Box

Material ☐ Double/Brown Corrugated Carton (☐with Photo Label)

☒ Double/White Corrugated Carton (☐with Photo Label)

☐ Double Full Color Carton W/Photo

Dimensions: 689 mm(W) 577 mm(D) 620 mm(H)

Design: As Per BUYER 's

Description of Origin: ☒Yes ☐No

Drop Test Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces

Height ☐25cm ☒31cm ☐46cm ☐62cm ☐80cm

Container Stuffing: 204 Sets / 40' container

G-30.Accessories

☒Owner's Manual (☐W/Guarantee Card) [English/Spanish]

☐AC Plug Adapter

☐Battery (UM- 4 x 2)

☐Safety Tip

☐Guarantee Card

☒Registration Card

☐Quick Set-Up Sheet

☐Information Sheet

☐75 ohm Coaxial Cable (☐Single Shield ☐Double Shield)

☐300 ohm to 75 ohm VHF Antenna Adaptor

☐21pin Cable

☐Rod Antenna

☐One Pole ☐Two Pole (☐F-Type ☐Din Type ☐France Type)

☐Loop Antenna (☐F-Type ☐Din Type ☐France Type)

☐Channel Film

☒Remote Control Unit

☐Toll Free Insert Sheet

☐Audio-Video Cord (RCA)

☐Warning Sheet

☐Schematic Diagram

☐U/V Mixer

☐Car Cord

G-31.Other Features

☒Auto Degauss	☐Auto Search	☐Full OSD
☒Auto Shut Off	☐CH Allocation	☐Premiere
☐Canal+	☐SAP	☐Comb Filter
☒CATV(181CH)	☐Channel Lock	☒Auto CH Memory
☐Anti-Theft	☐Just Clock Function	☐Hotel Lock
☐Rental	☐Game Position	☐Fastext
☐Unitext	☐TopText	☒Closed Caption
☐Picture Menu	☐Mid Night Theater	☒V-Chip

GENERAL SPECIFICATIONS

G-32.Switch

Front

☒Power(Tact)	☒Channel Up/Reset	☒Volume Up/Set Up
☐System Select	☒Channel Down/Enter	☒Volume Down/Set Down
☐Main Power SW	☐Sub Power	☒Menu:Vol UP + Vol Down

Rear

☐AC/DC	☐TV/CATV Selector
☐Degauss	☐Main Power SW

G-33.Magnetic Field

☒BV : +0.45G BH : 0.18G	☐BV : +0.35G BH : 0.30G	☐BV : +0.25G BH : 0.30G
☐BV : -0.15G BH : 0.15G	☐BV : -0.25G BH : 0.15G	☐BV : -0.50G BH : 0.30G

G-34.Remote Control Unit: RC- 74

Glow in Dark Remocon ☐Yes ☒No

Power Source: D.C 3 V Battery UM - 4 x 2

Total 26 Key

☒ Power	☒Quick View	☐TV/AV
☐ Stand By	☐Status	☐Bar Select
☒ 0	☐Time Select	☐PAL/SECAM
☒ 1	☐Time Set	☒Volume Up
☒ 2	☒Muting	☒Volume Down
☒ 3	☐CH Skip	☐CH Call
☒ 4	☒CH1/CH2	☒CH Down
☒ 5	☐Channel	☒CH Up
☒ 6	☐Text/Mix/TV	☐CH Down/Page Down
☒ 7	☐Display Cancel	☐CH Up/Page Up
☒ 8	☐Initial	☐Page +/-
☒ 9	☐Store	☐Program
☐10	☐Reveal	☐F/T/B
☐11	☒Sleep	☐Hold
☐12	☐Aft/Skip	☐List
☐1	☐Preset	☐Rotate
☐2	☐5.5/6.5MHz	☐Browse
☐0/10	☐Auto Memory	☐Std/Auto
☐Tone 1/2	☐Auto	☐Memory
☐Info	☒Call	☐Band Select
☐Mono/Auto	☒Reset	☐Search
☒TV/Caption/Text	☒Menu	☐Clock/Program
☐Expand	☒Enter	☐Clock/Set
☐Red	☐Add	☐Ch Set
☐Cyan	☐Delete	☒Set +
☐Normal	☐Yellow	☒Set -
☐Color System	☐Random	☐Green
☐Wide Selecy	☐Tuning Up/Time Text	☐Nicam/Mono
☐Auto Wide On/Off	☐Tuning Down/Reset	☐Tone A/B
☐Picture Position	☐Navi	☐FM Transmitter
☐Direct Change/Auto Search	☐Back Light	
☐Picture Menu	☐Mid Night Theater	☐Audio Select

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.

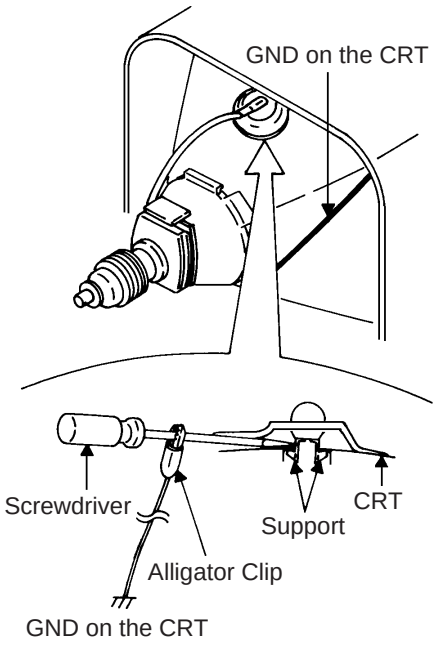


Fig. 1-1

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.)**

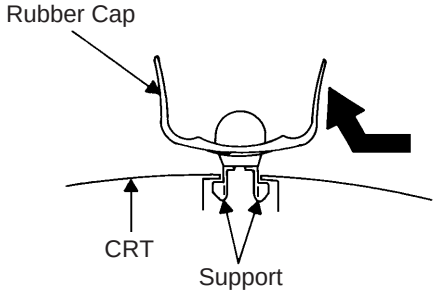


Fig. 1-2

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.)**

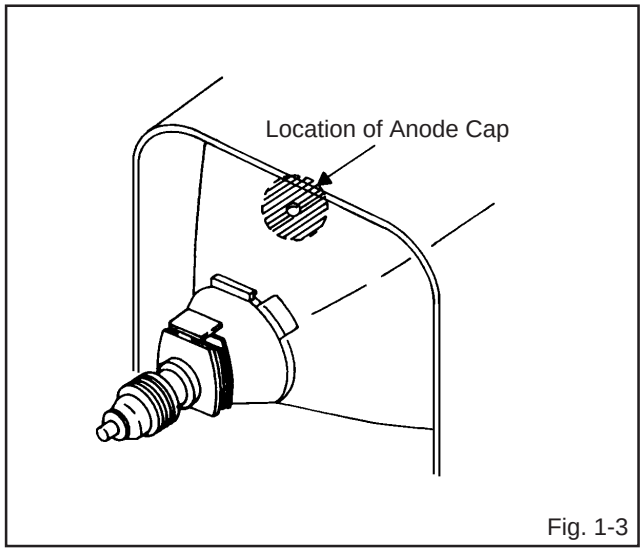


Fig. 1-3

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.)**

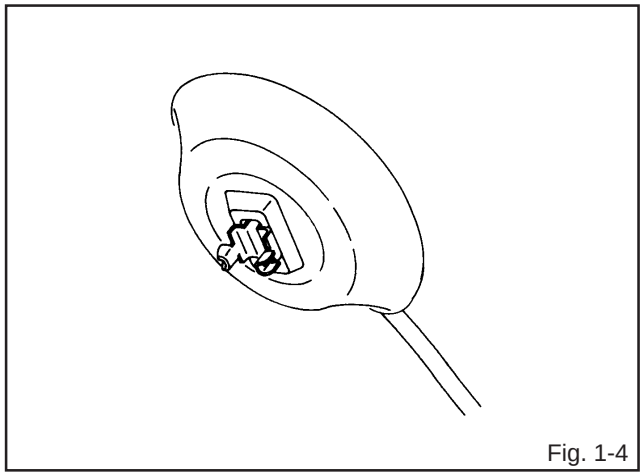


Fig. 1-4

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

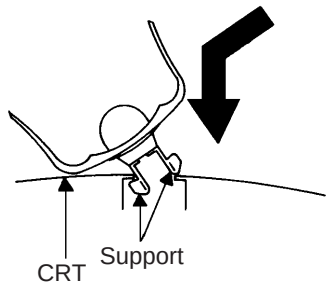


Fig. 1-5

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

2. REMOVAL OF DEFLECTION YOKE

(Refer to Fig. 2-1)

1. Loosen the screw ①.
2. Remove the Convergence • Purity Magnet in the direction of arrow (A).
3. Loosen the screw ②.
4. Remove the 3 Wedges.
5. Remove the Deflection Yoke in the direction of arrow (B).

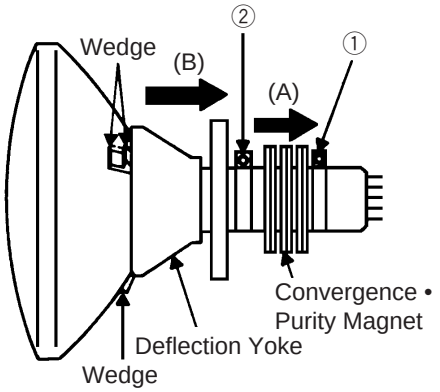


Fig. 2-1

INSTALLATION

Install new Deflection Yoke in reverse steps of REMOVAL.

NOTE

After adjusting the purity and the convergence, fix the screw ② and lock the wedges.

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.

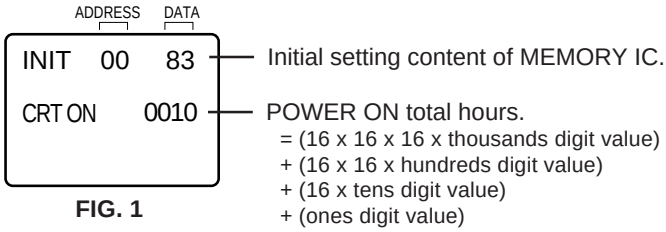


FIG. 1

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.

ADDRESS	INI 00	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A
DATA	A0	5A	A2	39	02	63	24	38	A1	21	44

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**.

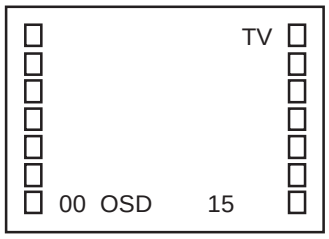


Fig. 1-1

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	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. Receive an 64dB monoscope pattern.
2. Connect the digital voltmeter to **TP001**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "RF AGC".
4. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 3.00 ± 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=135, 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 15 minutes.
2. Receive the color bar pattern.
3. Using the remote 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 **TP024**.
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 110% 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

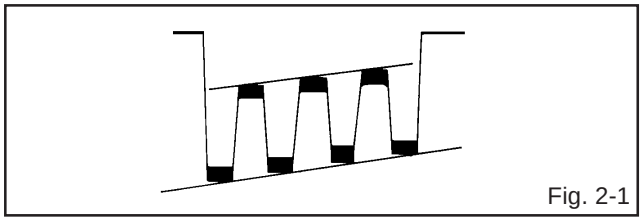


Fig. 2-1

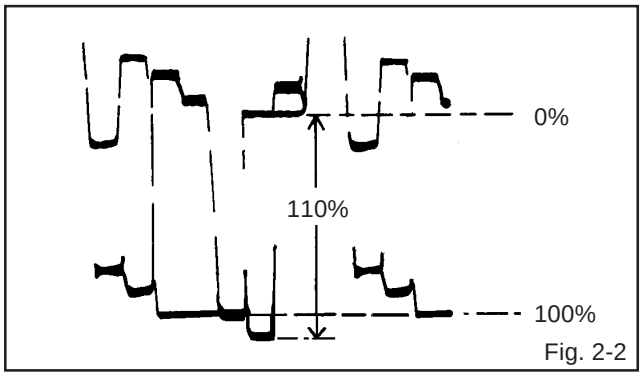


Fig. 2-2

2-6: VERTICAL SHIFT

1. Receive the color bar pattern.
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 of the color bar comes to approximate center of the CRT.

2-7: VERTICAL SIZE

1. Receive the crosshatch pattern.
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 center of crosshatch is square.

2-8: HORIZONTAL PHASE

1. Receive the color bar pattern.
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.

2-9: 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)**

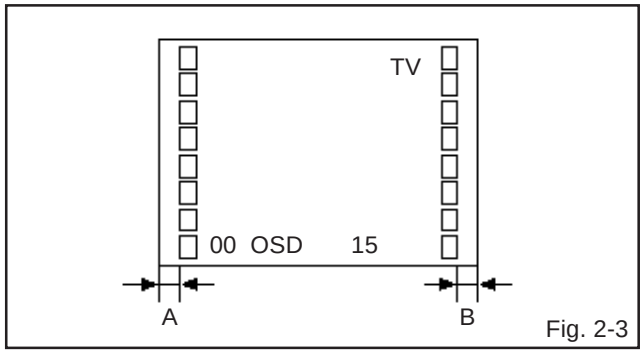


Fig. 2-3

2-10: VERTICAL VCO

1. Place the set with Aging Test for more than 15 minutes.
2. Receive an 80dB monoscope pattern.
3. Connect the digital voltmeter between the **pin 5 of CP601**.
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: CONSTANT VOLTAGE

1. Connect the digital voltmeter to **TP402**.
2. Adjust the **VR502** until the digital voltmeter is 130 ± 0.5V.

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.

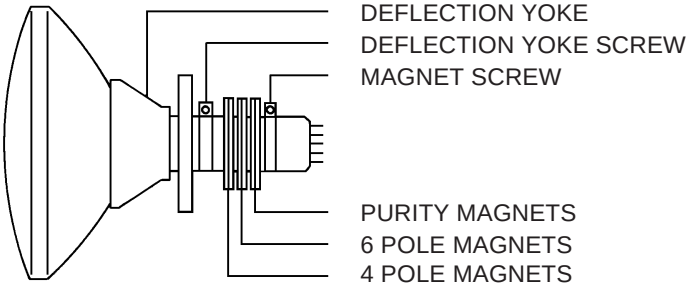


Fig. 3-1

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)**

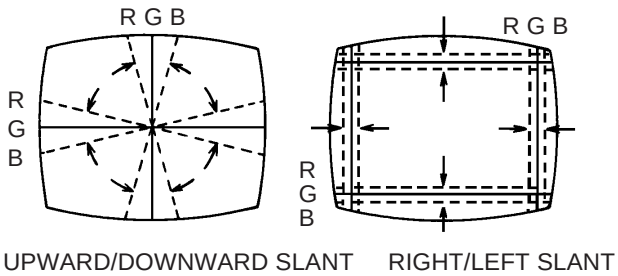


Fig. 3-2-a

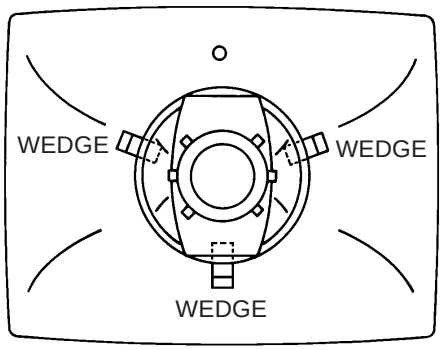
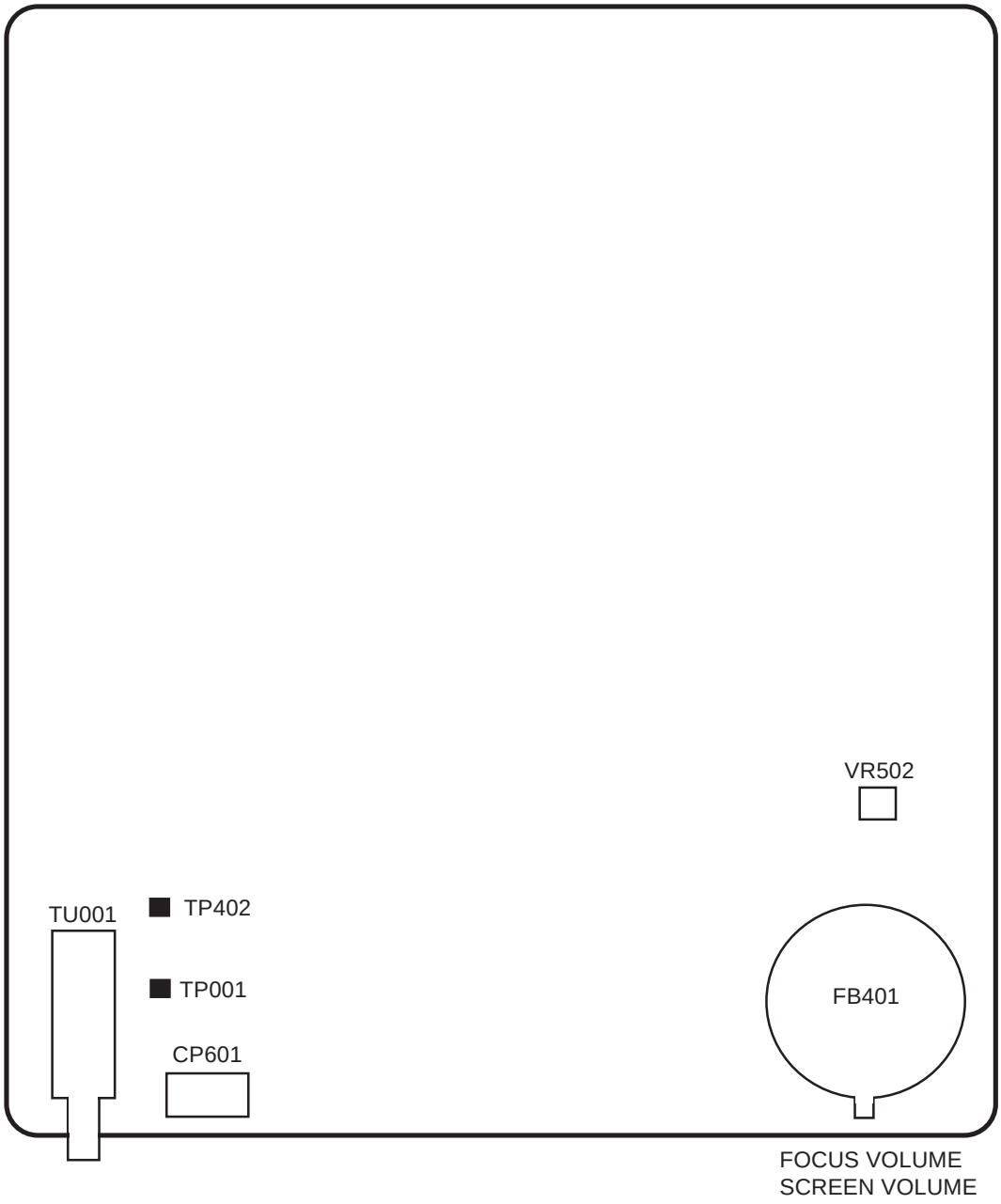
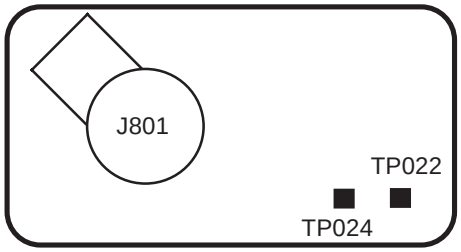


Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE

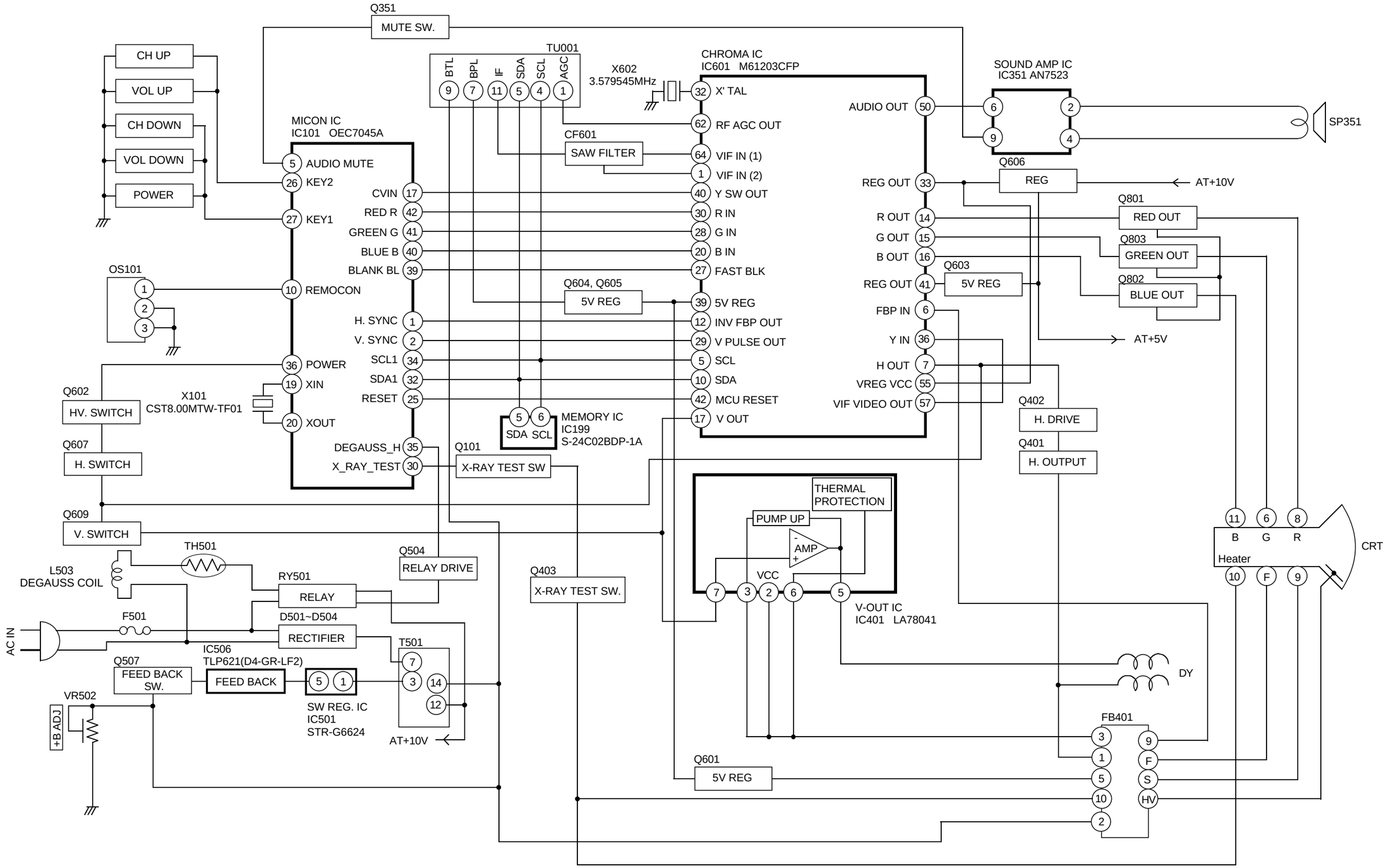


MAIN PCB

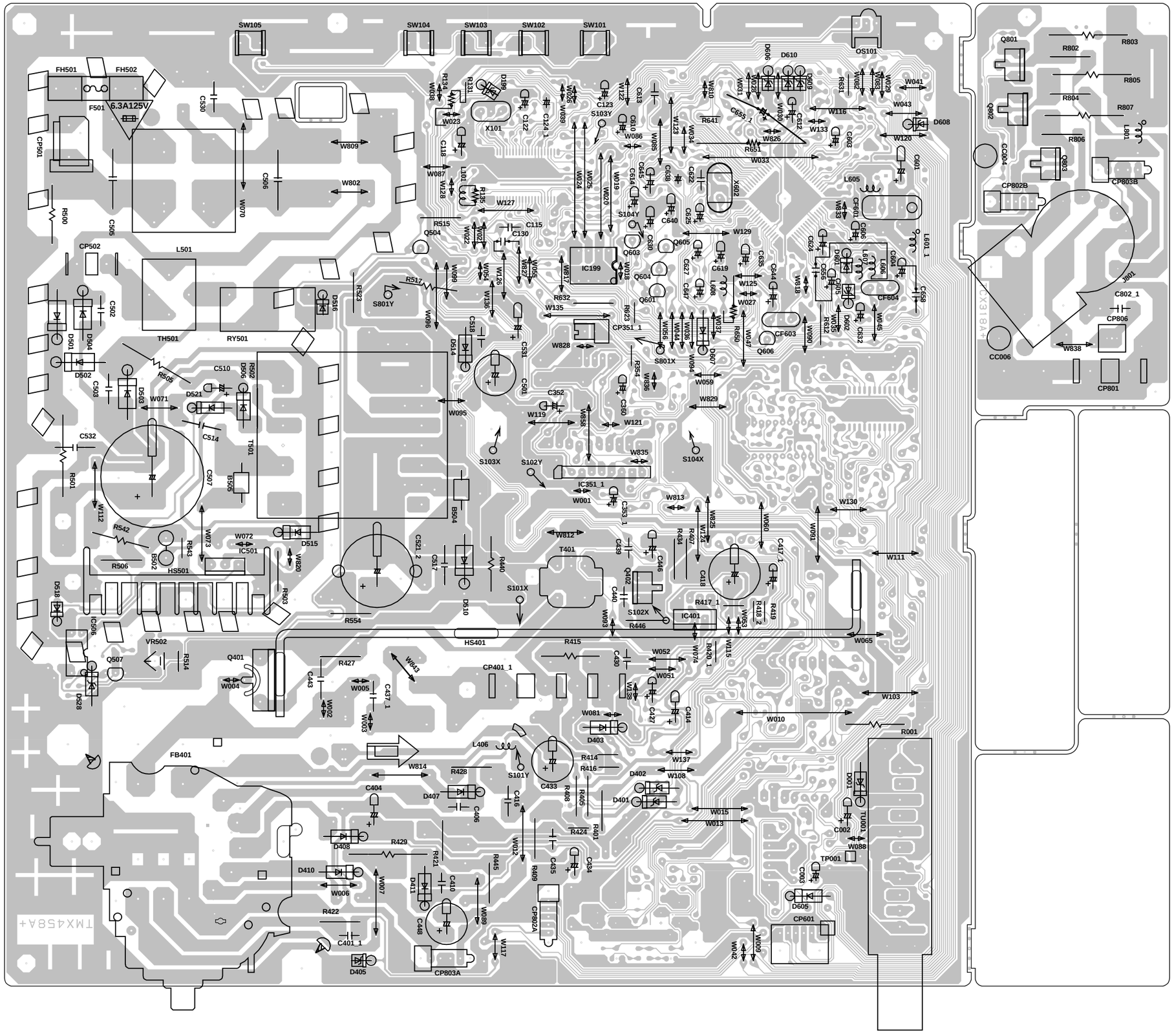


CRT PCB

BLOCK DIAGRAM



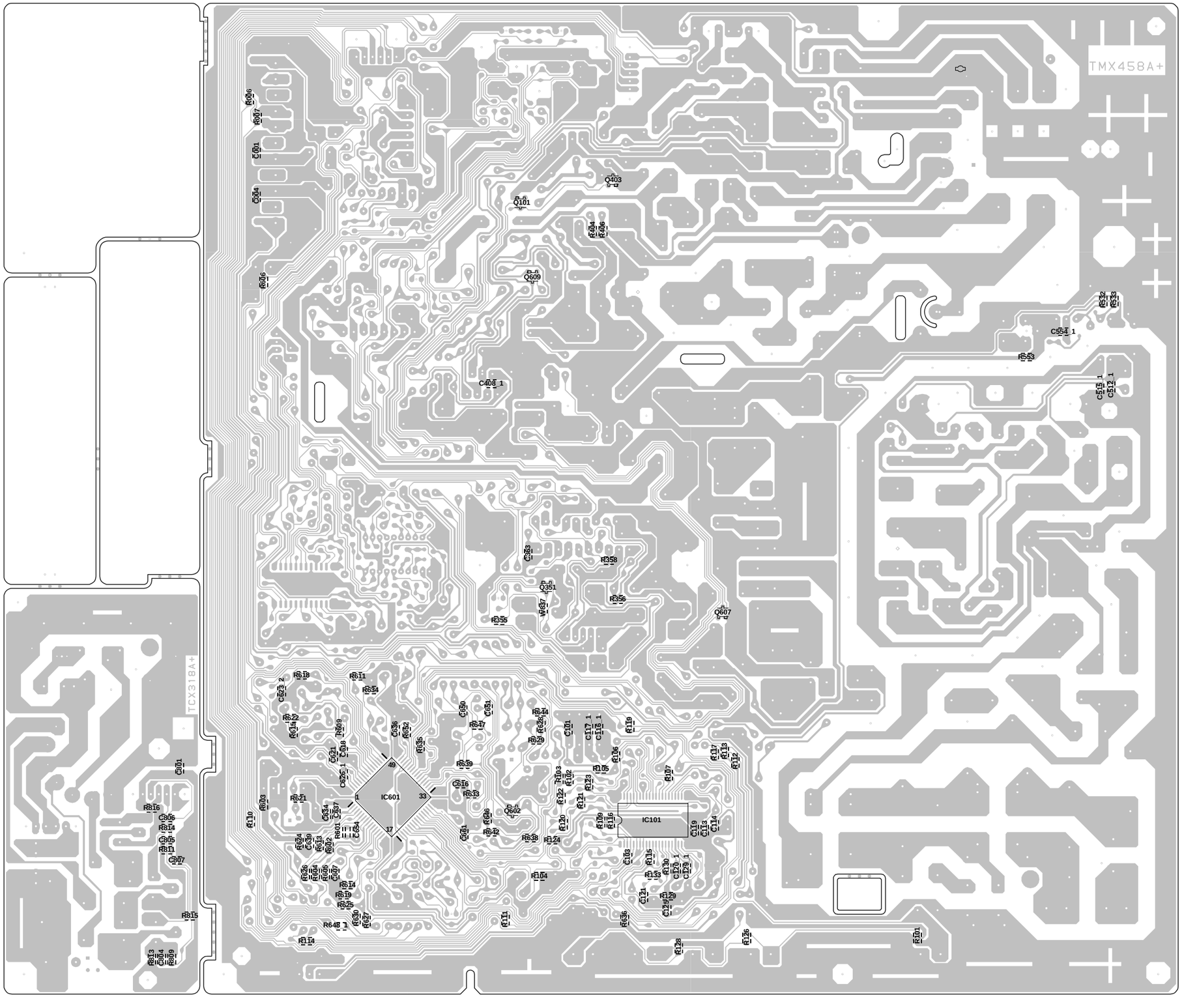
PRINTED CIRCUIT BOARDS
MAIN/CRT (INSERTED PARTS)
SOLDER SIDE



F-1

F-2

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



MICON/TUNER SCHEMATIC DIAGRAM
(MAIN PCB)

ACCESSORY
TM101
R25-1127

TU001 TECC1040PG32D
IF BTL BPL V-S SDA SCL AUDRES AGC
AGC TP001 JWF-50K-1
C004 0.022 F
D001 HZ30-3L
C001 0.01 F
C002 6.3V 470 YK
R006 270
R007 270
C003 50V 4.7 KA
R001 68K 1W

FROM/TO CHROMA
AGC
TUNER+5V
IF
SYNC
I2C_OFF
Y_VIDEO
VD
HD

MICON IC
IC101 OEC7045A
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
AD1/X_RAY_TEST
X-RAY
AD4/AFT
AD5/KEY1
AD6/KEY2
RESET
OSC1
OSC2
VCC

R110 1K
R123 4.7K
R122 4.7K
R121 4.7K
R120 4.7K
R102 2.2K
R103 2.2K
R104 2.2K
R124 4.7K
OSD_R
OSD_G
OSD_B
OSD_BLK
GND

OS101
PIC-28143SY-2
Vout B+ GND
C125 0.01 F
C123 16V 10 KA
R131 47
R134 10K 1/4W
R109 4.7K
R116 47K
R117 4.7K
R115 47K
D199 MTZJ6.2B
C103 0.1 F

POWER
AT+5V
AFT
SCL
SDA
RESET

FROM/TO DEFLECTION/CRT
X-RAY
X-RAY_TEST

FROM/TO POWER
DEGAUSS_H
+B
GND

R105 3.3K
C117_1 47P SL
R106 3.3K
C116_1 47P SL
R114 220
R111 220
R119 1K
W827
C130 220P B
X-RAY TEST SW
Q101 DTC114TKA
R107 10K

C122 50V 1 KA
R130 1K
C121 200P SL
C120_1 0.001 Y
C124_1 50V 0.1 KANP
R133 1.5K
R129 680K
C129 220P B
X101 CST8.00MTW-TF01
R135 2.7K
L101 2.70uH
C114 15P CH
C115 0.68 TF
C113 15P CH
C119 0.1 F
C118 6.3V 470 YK

R101 560
R126 2.7K
R128 560
R112 2.2K
R113 2.2K
POWER SW105 SKHVBED010
VOL DOWN SW104 SKHVBED010
VOL UP SW103 SKHVBED010
CH DOWN SW102 SKHVBED010
CH UP SW101 SKHVBED010

TO SOUND
AUDIO_MUTE

C101 0.022 F
MEMORY IC
IC199
S-24C02BD0P-1A
SDA SCL MODE VCC VSS E2 E1 E0

PCB010
TMX458

CAUTION: DIGITAL TRANSISTOR

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

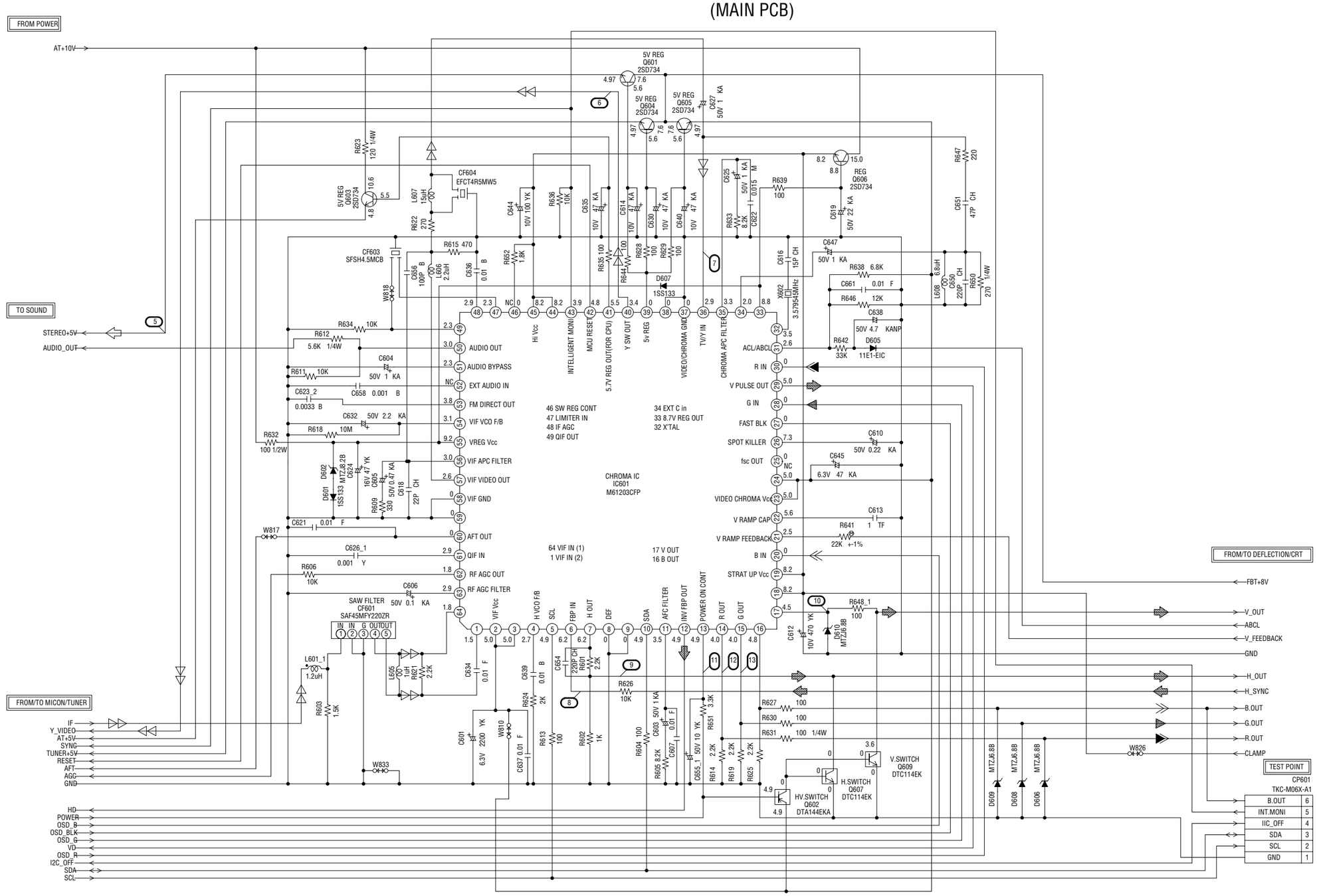
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

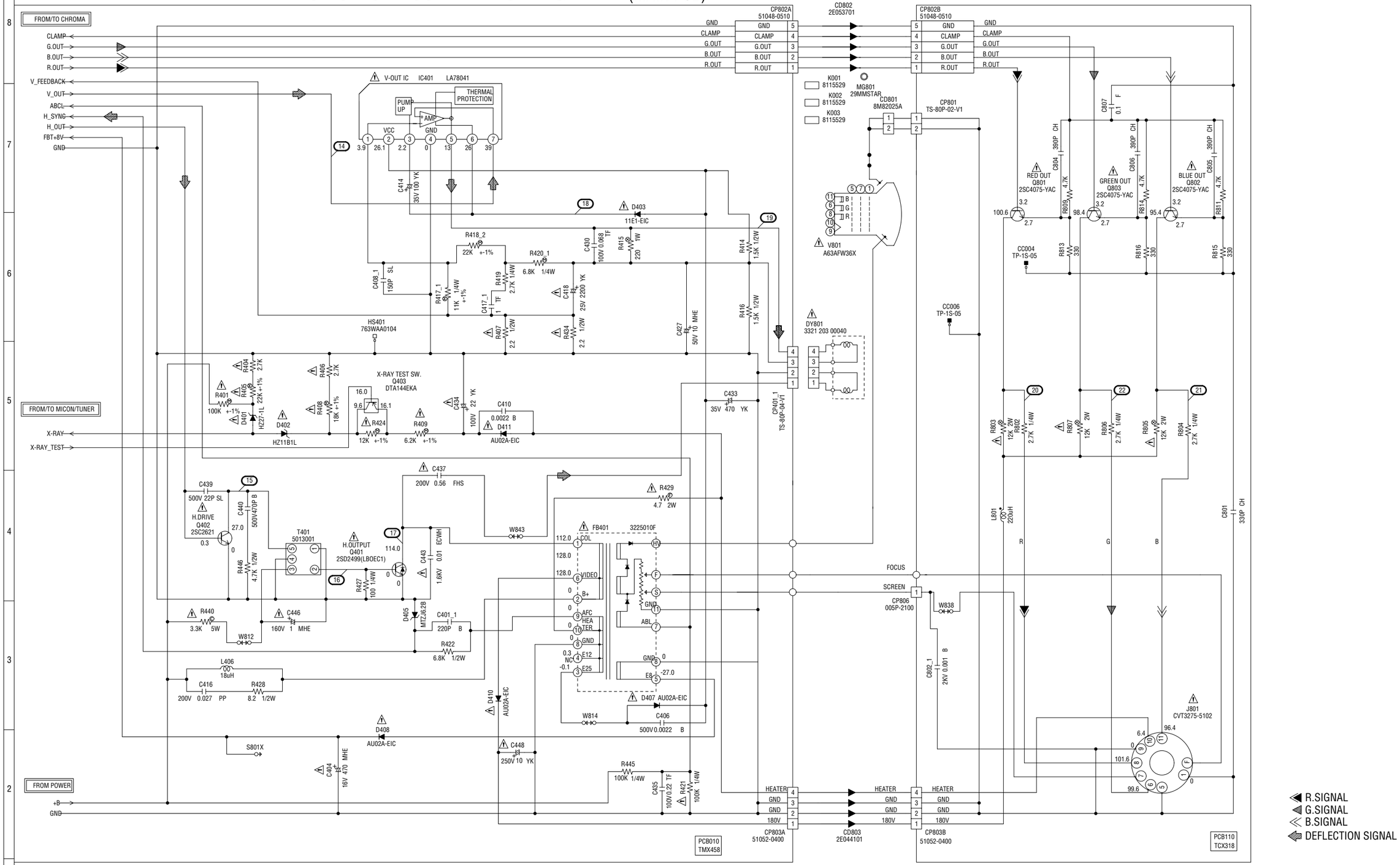
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

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

CHROMA SCHEMATIC DIAGRAM
(MAIN PCB)



DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



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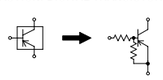
CAUTION: DIGITAL TRANSISTOR



POWER SCHEMATIC DIAGRAM
(MAIN PCB)

6.3A 125V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F501)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F501)

TO CHROMA
AT+10V
TO DEFLECTION/CRT
GND
+B
TO SOUND
SOUND+B
GND
SOUND_GND
FROM/TO MICON/TUNER
+B
DEGAUSS_H
GND

D516 1SS133
RELAY DRIVE Q504 2SC1815Y
R515 10K 1/4W
R523 10K 1/4W
RY501 SDT-S-109LMR
DEGAUSS COIL L503 8R250009
CP502 TV-50P-02-A1
TH501 PTBD14K2-3R0Q141
R500 2.7M 1/2W +-10%
C530 250V 0.001 KH
R501 1.2 7W
D501 RM11C-EIC
D502 RM11C-EIC
D504 RM11C-EIC
D503 RM11C-EIC
C502 2KV 0.0022 B
C503 2KV 0.0022 B
C507 200V 470 USR
W802
W809
6.3A 125V
F501
C505 250V 0.1 ECQUL
C506 250V 0.1 ECQUL
L501 FET24S-H22502
FH501 EYF-52BC
23706.3 6.3A125V
FH502 EYF-52BC
AC120V_60Hz CD501 0R614909
BLACK
WHITE
BLADE WIDE
CP501 THL-P03P-B1
T501 8135048S
SW REG. IC IC501 STR-G6624
DRIVER
FB/ OCP
CONT
VCC
GND
S
D
R505 47K 3W
W820
23
24
C512_1 470P B
D515 11EQS04N
C514 2KV 0.0012 BP
B505 BL01RN1-A63
R502 22 1/2W
FEED BACK IC506 TLP621(D4-GR-LF2)
R503 3.3K 1/4W +-1%
D506 RMPG06J
C554_1 0.0022 Y
R543 680 1/2W
B502 BL02RN2-R6274
C510 35V 100 MHE
D518 1SS133
R506 2.2K 1/2W
D521 1SS133
FEED BACK SWITCHING Q507 2SC1815Y
+B ADJ VR502 330
R553 1.8K
R554 56K 1/2W
R514 2.7K 1/4W
R532 330
R533 390
C515_1 470P B
HS501 763WAAA023
R542 0.15 1W
GND1
D528 MTZJ5.6B
C532 250V 0.0022 KH
CAUTION: ⏚ IS THE LIVE CONNECTION

S801Y
R517 6.8 2W
C501 25V 1000 MHE
B504 BL01RN1-A63
D510 RU2AM
C517 2KV 0.0015 BP
C521_2 160V 100 YXF
C518 500V 470P B
D514 11EQS04N
C531 16V 1000 MHE

PCB010
TMX458

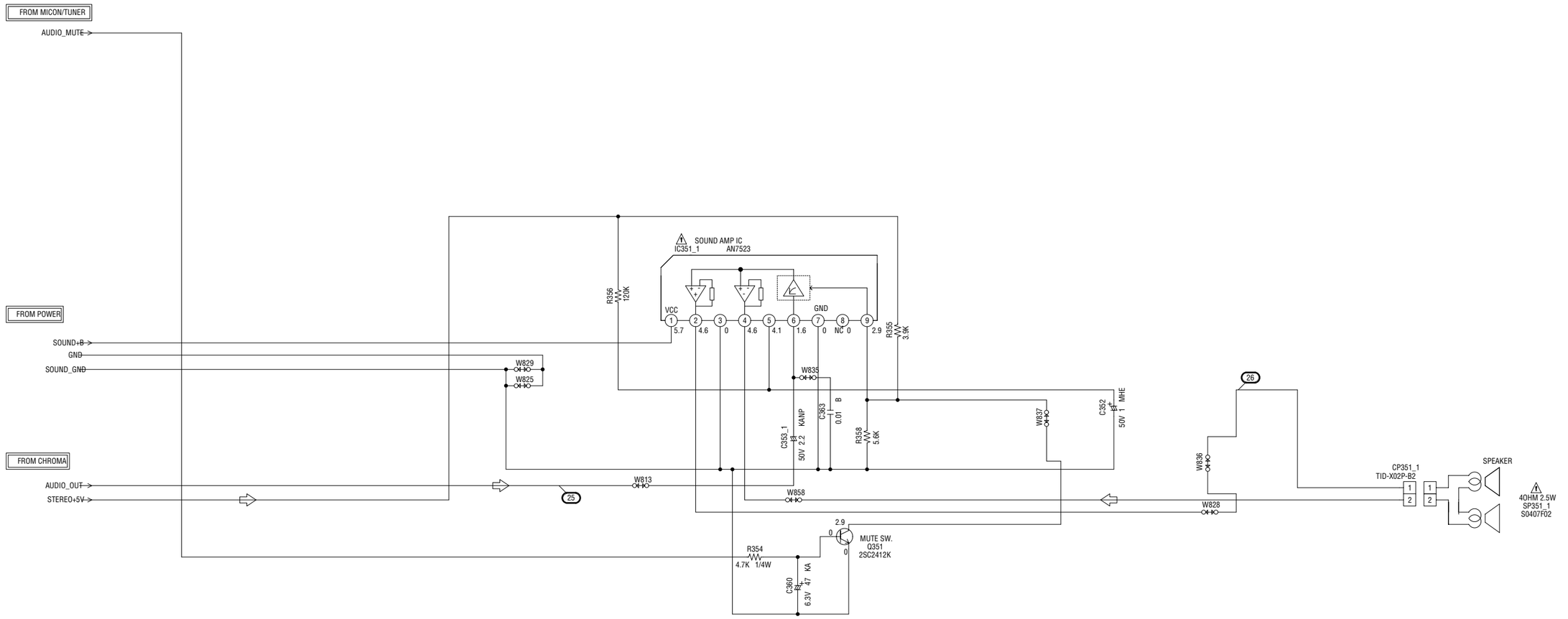
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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.

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 。

SOUND SCHEMATIC DIAGRAM
(MAIN PCB)



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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.

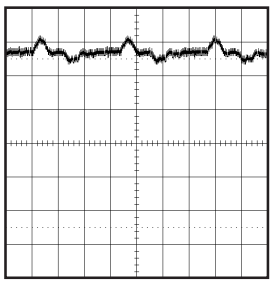
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

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

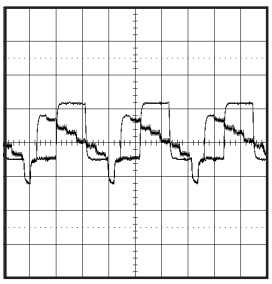
⇦ AUDIO SIGNAL

WAVEFORMS

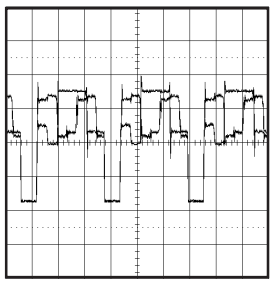
MICON/TUNER



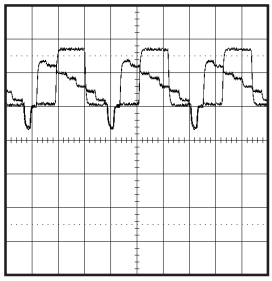
① 200mV 5ms/div



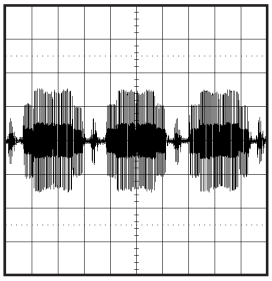
⑥ 0.5V 20µs/div



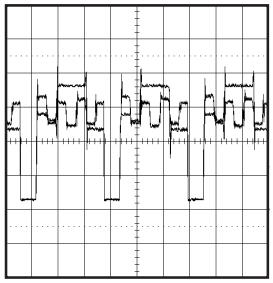
⑪ 1V 20µs/div



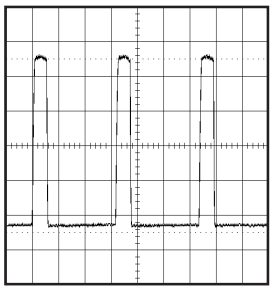
② 0.5V 20µs/div



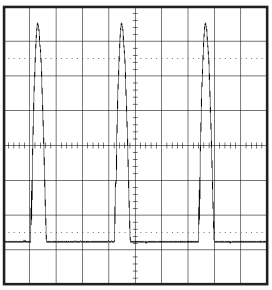
⑦ 200mV 20µs/div



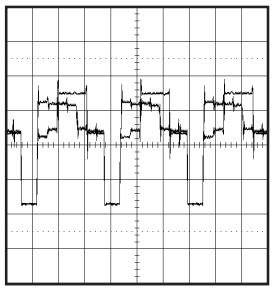
⑫ 1V 20µs/div



③ 200mV 20µs/div

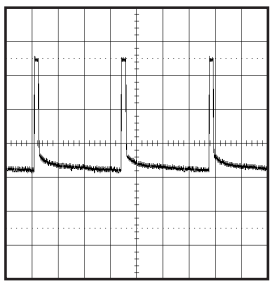


⑧ 20V 20µs/div

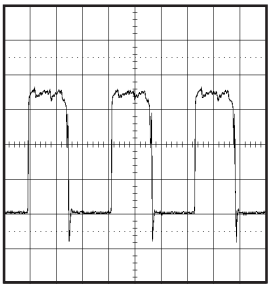


⑬ 1V 20µs/div

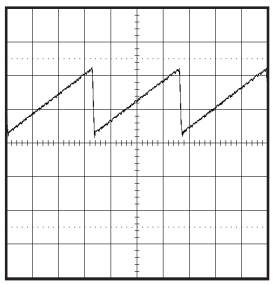
DEFLECTION/CRT



④ 200mV 5ms/div

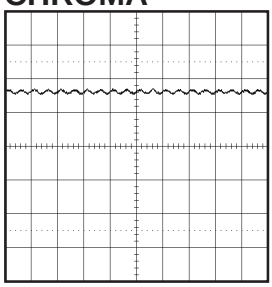


⑨ 200mV 20µs/div

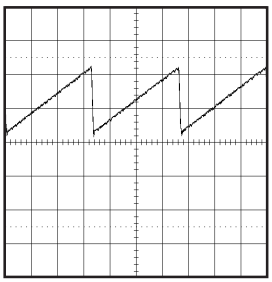


⑭ 0.5V 5ms/div

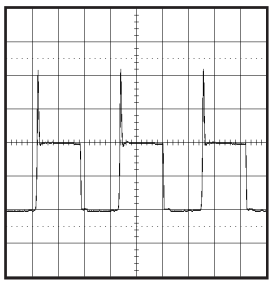
CHROMA



⑤ 0.5V 2ms/div



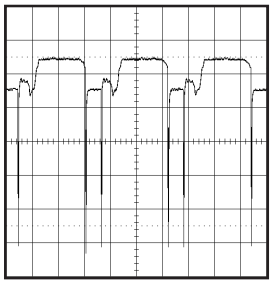
⑩ 0.5V 5ms/div



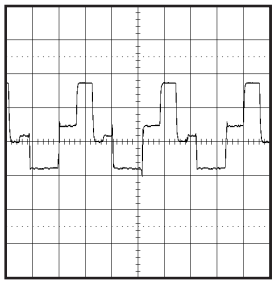
⑮ 20V 20µs/div

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

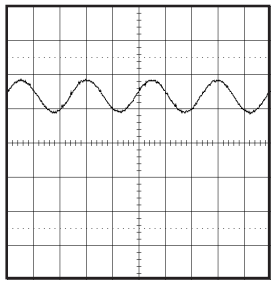
WAVEFORMS



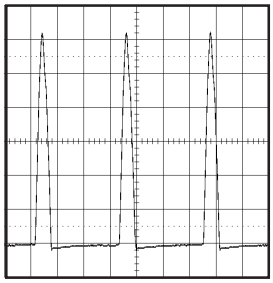
⑯ 2V 20µs/div



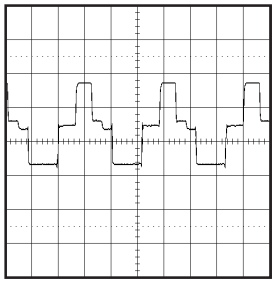
㉑ 50V 20µs/div



㉖ 1V 1ms/div

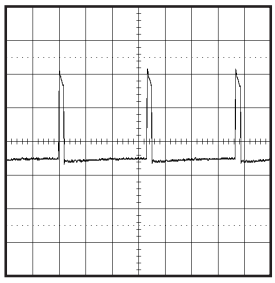


⑰ 200V 20µs/div

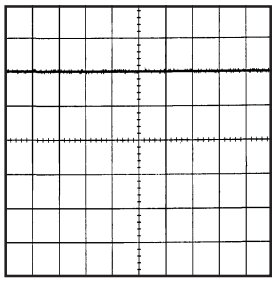


㉒ 50V 20µs/div

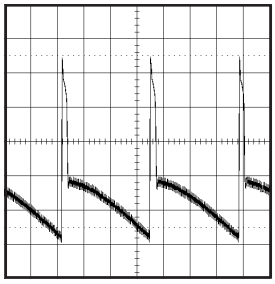
POWER



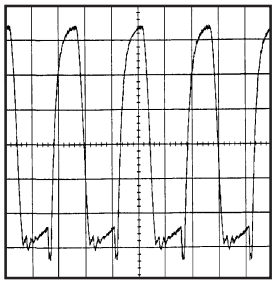
⑱ 10V 5ms/div



㉓ 5.0V 20ms/div

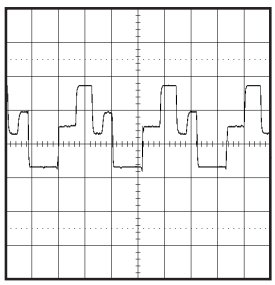


⑲ 10V 5ms/div

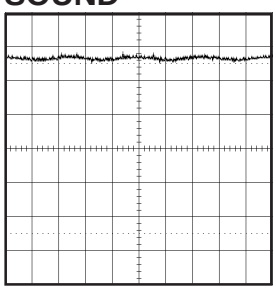


㉔ 500mV 5µs/div

SOUND



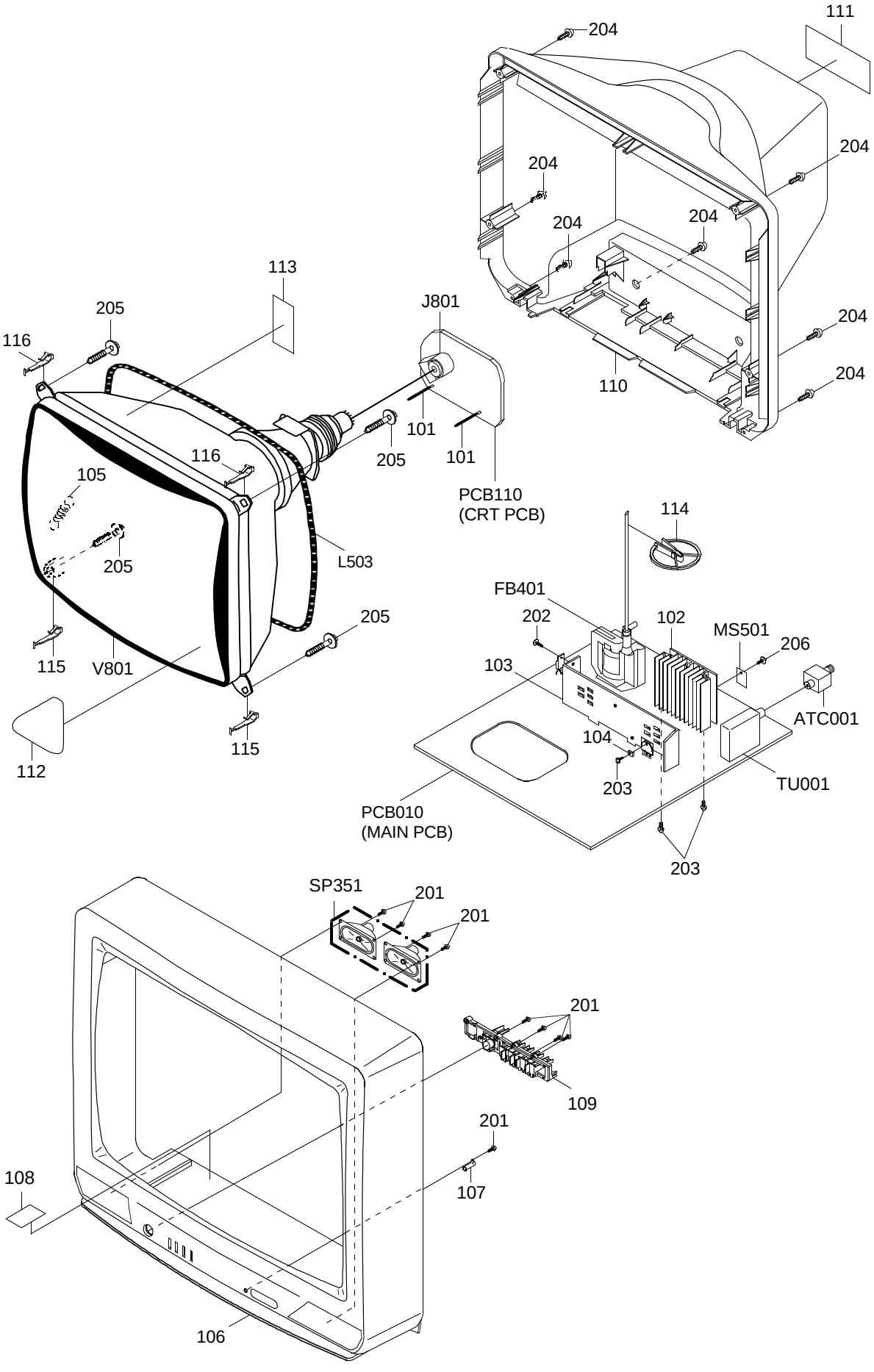
⑳ 50V 20µs/div



㉕ 0.5V 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	---	COATING CLIP		
102	---	HEAT SINK		
103	---	HEAT SINK		
104	---	METAL SPACER		
105	741WUA0021	SPRING,EARTH		
106	701APJA034	CABINET,FRONT		
107	713WPA0096	GUIDE,REMOCON		
108	7260000306	SHEET,CAUTION		
109	735WPA0426	BUTTON ASS'Y		
110	702APA0121	CABINET,BACK		
111	722A08A066	SHEET,RATING		
112	723000B114	FILM,DECORATION		
113	7230006873	SHEET,BRAND		
114	899HV3T001	HOLDER,ANODE WIRE		
115	762WPA0009	HOLDER,CRT WIRE		
116	8994201000	HOLDER,CRT WIRE		
201	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
202	8117D30A04	SCREW,TAPPING (B0)	WH8 BRAZIER	3x10
203	8109630802	SCREW,TAP TITE (B)	BRAZIER	3x8
204	8117540B04	SCREW,TAPPING (B0)	TRUSS	4x20
205	8111J50D04	SCREW,TAPPING (A)	GW22	5x40
206	810B130A04	SCREW/WASHER (B)		M3x10
---	JB5U0200	POLY & BAG		
---	J3I0A201	INSTRUCTION BOOK		
---	J4C80417	REGISTRATION CARD		
---	792AHA0073	PACKAGE,TOP		
---	792AHA0074	PACKAGE,BOTTOM		
---	791AHA0021	FILM,BAG		
---	793ACDA086	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		RESISTORS	
R001	R3X181683J	R, METAL	68K OHM 1W
R134	R002T4103J	RC	10K OHM 1/4W
R135	R00106272J	RC	2.7K OHM 1/6W
⚠ R401	R4X5T6104F	R, METAL	100K OHM 1/6W
⚠ R404	R903N8272J	RC	2.7K OHM 1/8W
⚠ R405	R4X5T6223F	R, METAL	22K OHM 1/6W
⚠ R406	R903N8272J	RC	2.7K OHM 1/8W
⚠ R407	R002T22R2J	RC	2.2 OHM 1/2W
⚠ R408	R4X5T6183F	R, METAL	18K OHM 1/6W
⚠ R409	R4X5T6622F	R, METAL	6.2K OHM 1/6W
R415	R3X181221J	R, METAL OXIDE	220 OHM 1W
⚠ R421	R001T4104J	RC	100K OHM 1/4W
⚠ R424	R4X5T6123F	R, METAL	12K OHM 1/6W
⚠ R429	R6558A4R7J	R, FUSE	4.7 OHM 2W
⚠ R434	R002T22R2J	RC	2.2 OHM 1/2W
⚠ R440	R5X2CD332J	R, CEMENT	3.3K OHM 5W
⚠ R500	R0G3K2275K	RC	2.7M OHM 1/2W
⚠ R501	R5X2CE1R2J	R, CEMENT	1.2 OHM 7W
R502	R002T2220J	RC	22 OHM 1/2W
R503	R4X5T4332F	R, METAL	3.3K OHM 1/4W
⚠ R505	R3X28B473J	R, METAL OXIDE	47K OHM 3W
R506	R002T2222J	RC	2.2K OHM 1/2W
R514	R002T4272J	RC	2.7K OHM 1/4W
R515	R002T4103J	RC	10K OHM 1/4W
⚠ R517	R3X18A6R8J	R, METAL OXIDE	6.8 OHM 2W
⚠ R542	R33681R15J	R, METAL	0.15 OHM 1W
⚠ R543	R635U2681J	R, FUSE	680 OHM 1/2W
R650	R00104271J	RC	270 OHM 1/4W
R651	R00106332J	RC	3.3K 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	
C130	CHG0B04H2K	CC	220 PF 50V B
⚠ C404	E5EZT2471M	CE	470 UF 16V
C414	E02LT4101M	CE	100 UF 35V
C416	P3N1F2273J	CPP	0.027 UF 200V
⚠ C418	E02LF3222M	CE	2200 UF 25V
C433	E02LT4471M	CE	470 UF 35V
⚠ C434	E02LT8220M	CE	22 UF 100V
⚠ C437	P447F2564J	CMPP	0.56 UF 200V FHS
⚠ C443	P414F9103H	CMPP	0.01 UF 1.6KV ECWH
⚠ C446	E5EZTB010M	CE	1 UF 160V
⚠ C448	E0ELTD100M	CE	10 UF 250V
C501	E5EZF3102M	CE	1000 UF 25V
⚠ C502	C13HB07H3K	CC	0.0022UF 2KV B
⚠ C503	C13HB07H3K	CC	0.0022UF 2KV B
⚠ C505	P2122B104M	CMP	0.1 UF 250V ECQUL
⚠ C506	P2122B104M	CMP	0.1 UF 250V ECQUL
⚠ C507	E52DGC471M	CE	470 UF 200V
⚠ C510	E5EZT4101M	CE	100 UF 35V
C514	C01BBP7B3K	CC	0.0012UF 2KV BP
C517	C01BBP7E3K	CC	0.0015UF 2KV BP
C521	E62NFB101M	CE	100 UF 160V
⚠ C530	CB3LE0M13M	CC	0.001 UF 250V
⚠ C531	E5EZT2102M	CE	1000 UF 16V
⚠ C532	CB3LE0MH3M	CC	0.0022UF 250V
C654	CS0RCH4H2J	CC	220 PF 50V CH
C655	E02L05100M	CE	10 UF 50V
C656	CHG0B0412K	CC	100 PF 50V B
C658	CHGTB0413K	CC	0.001 UF 50V B
		DIODES	
D001	D94TA30013	DIODE, ZENER	HZ30-3L TD
D199	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
⚠ D401	D94TA27011	DIODE, ZENER	HZ27-1L TD
⚠ D402	D94TA11B11	DIODE, ZENER	HZ11B1L TD
⚠ D403	D2WT011E10	DIODE, SILICON	11E1-EIC
D405	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77 or
	D92UA6R2B2	DIODE, ZENER	RD6.2ES AB2
⚠ D407	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D408	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D410	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D411	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D501	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D502	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D503	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D504	D2WTRM11C0	DIODE, SILICON	RM11C-EIC

REF. NO.	PART NO.	DESCRIPTION	
		DIODES	
⚠ D506	D2LTPG06J0	DIODE, SILICON	RMPG06J-G3
⚠ D510	D2BTRU2AM0	DIODE, SILICON	RU2AM V1
⚠ D514	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
D515	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
D516	D1VT001330	DIODE, SILICON	1SS133T-77
D518	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D521	D1VT001330	DIODE, SILICON	1SS133T-77
D528	D97U05R61B	DIODE, ZENER	MTZJ5.6B T-77
D601	D1VT001330	DIODE, SILICON	1SS133T-77
D602	D97U08R21B	DIODE, ZENER	MTZJ8.2B T-77 or
	D92UA8R2B2	DIODE, ZENER	RD8.2ES AB2
D605	D2WT011E10	DIODE, SILICON	11E1-EIC
D606	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D607	D1VT001330	DIODE, SILICON	1SS133T-77
D608	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D609	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D610	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
		ICS	
IC101	I56F07045A	IC	OEC7045A
IC199	A3I0A2E015	IC	S-24C02BDP-1A
⚠ IC351	I0FSP75230	IC	AN7523
⚠ IC401	I03TD80410	IC	LA78041
⚠ IC501	I2BT06624G	IC	STR-G6624
⚠ IC506	0002500560	PHOTO COUPLER	TLP621(D4-GR-LF2
IC601	I06FC1203C	IC	M61203CFP
		TRANSISTORS	
Q101	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146
Q351	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
⚠ Q401	TDUU024990	TRANSISTOR, SILICON	2SD2499(LB0EC1)
⚠ Q402	TC3Q026210	TRANSISTOR, SILICON	2SC2621(D,E)-RAC
Q403	TPYJD05001	COMPOUND TRANSISTOR	DTA144EKAT146
Q504	TC5T018154	TRANSISTOR, SILICON	2SC1815Y(TPE2) or
	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
Q507	TC5T018154	TRANSISTOR, SILICON	2SC1815Y(TPE2) or
	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
Q601	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q602	TPYJD05001	COMPOUND TRANSISTOR	DTA144EKAT146
Q603	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q604	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q605	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q606	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q607	TNYTB05001	COMPOUND TRANSISTOR	DTC114EKT147
Q609	TNYTB05001	COMPOUND TRANSISTOR	DTC114EKT147
⚠ Q801	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q802	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q803	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
		COILS &TRANSFORMERS	
L101	021LA62R7K	COIL	2.7 UH
L406	021U6D180K	COIL	18 UH
⚠ L501	029F000074	COIL, LINE FILTER	FET24S-H22502
⚠ L503	028R250009	COIL, DEGAUSS	8R250009
L601	0216731R2K	COIL	1.2 UH
L605	021LA61R0M	COIL	1 UH
L606	021LA62R2K	COIL	2.2 UH
L607	021LA6150K	COIL	15 UH
L608	021LA66R8K	COIL	6.8 UH
L801	021673221K	COIL	220 UH
T401	045013001J	TRANS, HORIZONTAL DRIVE	5013001
⚠ T501	048135048S	TRANSFORMER, SWITCHING	8135048S
		JACK	
⚠ 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
		VARIABLE RESISTOR	
VR502	V1163L2BTC	VOLUME, SEMI FIXED	EVNCYAA03BY2
		P.C.BOARD ASSEMBLIES	
PCB010	A3I0A2E01A	PCB ASS'Y	TMX458A
PCB110	A3I0A2E11A	PCB ASS'Y	TCX318A
		MISCELLANEOUS	
B502	024AT03482	CORE, BEADS	BL02RN2-R62T4
B504	024AT03655	CORE, BEADS	BL01RN1-A63T6
B505	024AT03655	CORE, BEADS	BL01RN1-A63T6
⚠ CD501	120R614909	CORD, AC	0R614909

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		MISCELLANEOUS	
CD801	068M82025A	CORD, CONNECTOR	8M82025A
CD802	122E053701	CORD, JUMPER	2E053701
CD803	122E044101	CORD, JUMPER	2E044101
CF601	1022T45R72	FILTER, SAW	SAF45MFY220ZR
CF603	1012T4R509	FILTER, CERAMIC	SFSH4.5MCB-TF21
CF604	1011T4R517	FILTER, CERAMIC	EFCT4R5MW5
CP351	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
CP401	069W340018	CONNECTOR PCB SIDE	TS-80P-04-V1
CP501	0697320039	CORD, UX CONNECTOR	THL-P03P-B1 or
	069S320419	CONNECTOR PCB SIDE	A3963WV2-3PD
CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1
CP601	0697260650	CONNECTOR PCB SIDE	TKC-M06X-A1
CP801	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1
CP806	069W010010	CONNECTOR PCB SIDE	005P-2100
CP802A	067R005019	WIRE HOLDER	51048-0510
CP802B	067R005019	WIRE HOLDER	51048-0510
CP803A	067R104019	WIRE HOLDER	51052-0400
CP803B	067R104019	WIRE HOLDER	51052-0400
⚠ DY801	027Q062501	DY	3321 203 00040
⚠ F501	081PA6R302	FUSE	23706.3
⚠ FB401	043225010F	TRANSFORMER, FLYBACK	3225010F
FH501	06710T0006	HOLDER, FUSE	EYF-52BC
FH502	06710T0006	HOLDER, FUSE	EYF-52BC
K001	129A000010	WEDGE	8115529
K002	129A000010	WEDGE	8115529
K003	129A000010	WEDGE	8115529
MG801	026A062704	MAGNET, CONVERGENCE	29MMSTAR
OS101	077Q014003	REMOTE RECEIVER	PIC-28143SY-2 or
	077Q047001	REMOTE RECEIVER	PIC-47143SY
⚠ RY501	0560Q10201	RELAY	SDT-S-109LMR
⚠ SP351	070Y533002	SPEAKER	S0407F02
⚠ TH501	DF40B3R0Q0	DEGAUSS, ELEMENT	PTBD14K2-3R0Q141
TM101	076R074180	TRANSMITTER	R25-1127
⚠ TU001	0145K00055	TUNER, VHF-UHF	TECC1040PG32D
⚠ V801	092T250501	COLOR PICTURE TUBE	A63AFW36X
X101	1002T00801	CERAMIC OSILLATOR	CST8.00MTW-TF01
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

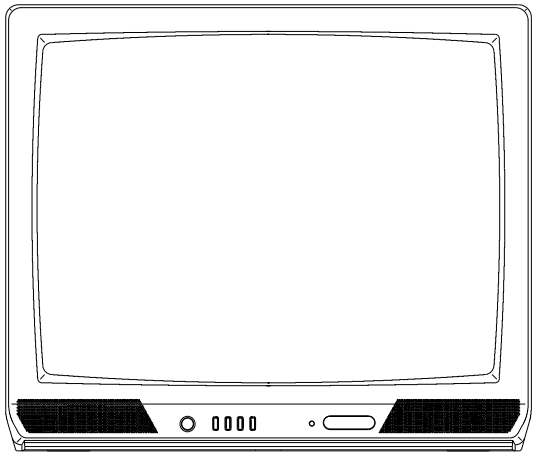
SPEC.NO.	M3I0-A2E
O/R NO.	A0X3524

Memorex®

MT2251 SERIES D

SERVICE MANUAL

COLOR TELEVISION RECEIVER



ORIGINAL
MFR'S VERSION A

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		25 inch / 626mmV
			CRT Type		Normal
			Deflection		100 degree
			Magnetic Field BV/BH		+0.45G/0.18G
		Color System			NTSC
		Speaker			2Speaker
			Position		Front
			Size		1.5 x 2.7 Inch
			Impedance		4 ohm
		Sound Output	MAX		0.75 + 0.75 W
			10%(Typical)		0.5 + 0.5 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	
					110 W at AC 120 V 60 Hz
			Stand by (at AC)		8 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
				CH Program	Yes
				Add/Erase	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		No
			Color Stream		No
			Channel(TV/Cable)		Yes
			CH Label		No
			Sleep Timer		Yes
			Sound Mute		Yes
			V-chip Rating		Yes

GENERAL SPECIFICATIONS

G-8	OSD Language	OSD Language Setting		English French Spanish 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		26 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)	No
			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

GENERAL SPECIFICATIONS

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
		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
		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

GENERAL SPECIFICATIONS

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: Vol Up + Vol 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	No
				Audio Input	No
				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)	618 x 504 x 525
G-15	**Weight**			Net (Approx.)	27kg (59.9 lbs)
				Gross (Approx.)	29Kg (64.3 lbs)
G-16	**Carton**		Master Carton		No
				Content	---- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
			Gift Box		Yes
				Material	Double/White
				Dimensions W x D x H(mm)	689 x 577 x 620
				Design	As per Buyer's
				Description of Origin	Yes
			Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	31
			Container Stuffing		204 Sets/40' container
G-17	**Cabinet Material**			Cabinet Front	PS 94V0 DECABROM
				Cabinet Rear	PS 94V0 DE

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.

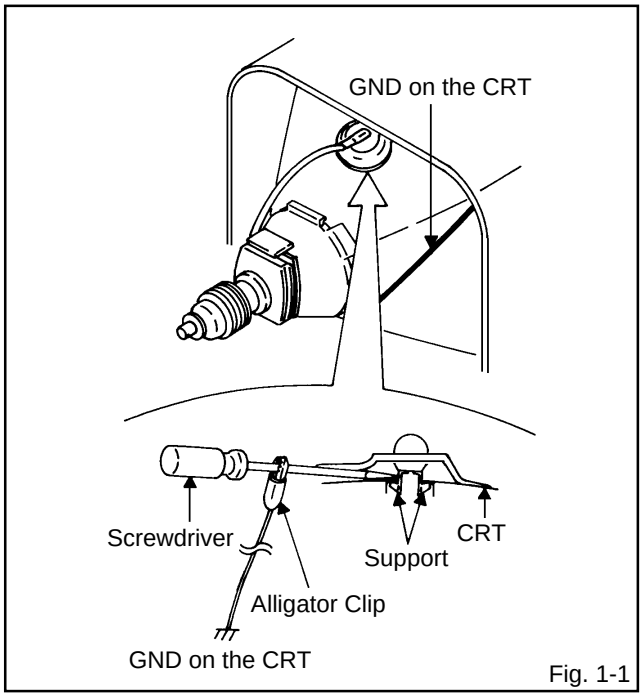


Fig. 1-1

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.)**

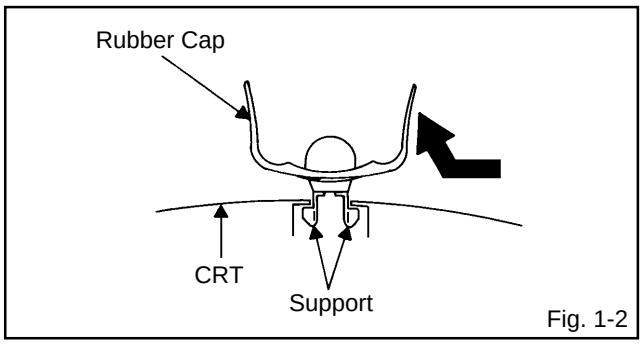


Fig. 1-2

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.)**

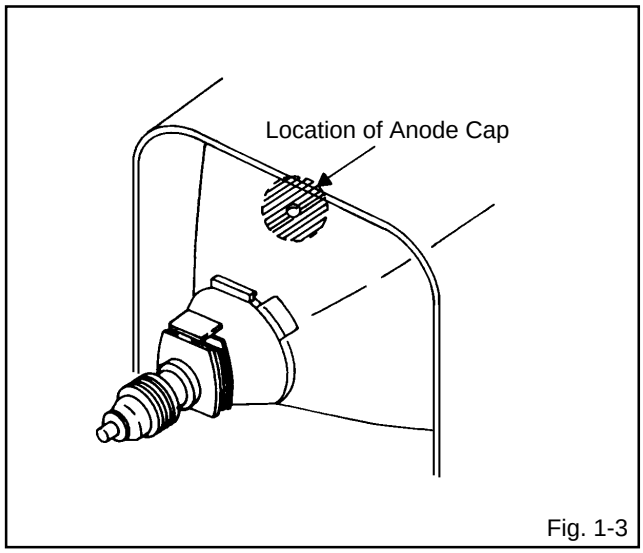


Fig. 1-3

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.)**

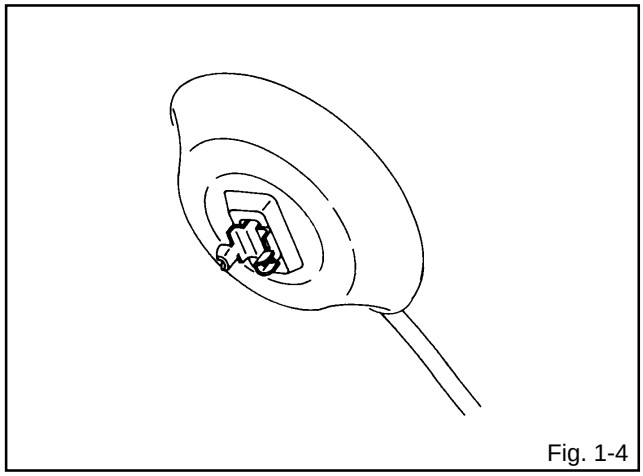


Fig. 1-4

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

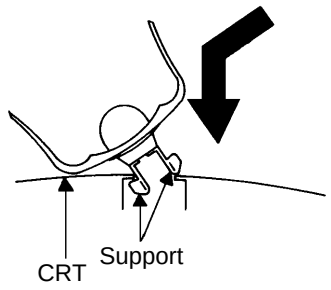


Fig. 1-5

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

2. REMOVAL OF DEFLECTION YOKE

(Refer to Fig. 2-1)

1. Loosen the screw ①.
2. Remove the Convergence • Purity Magnet in the direction of arrow (A).
3. Loosen the screw ②.
4. Remove the 3 Wedges.
5. Remove the Deflection Yoke in the direction of arrow (B).

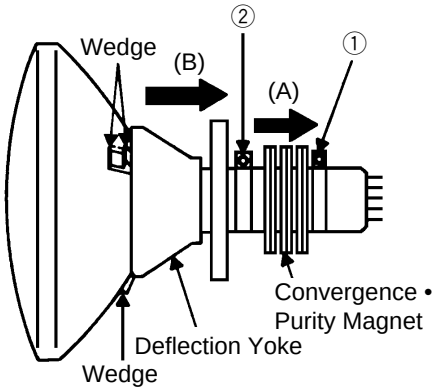


Fig. 2-1

INSTALLATION

Install new Deflection Yoke in reverse steps of REMOVAL.

NOTE

After adjusting the purity and the convergence, fix the screw ② and lock the wedges.

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.

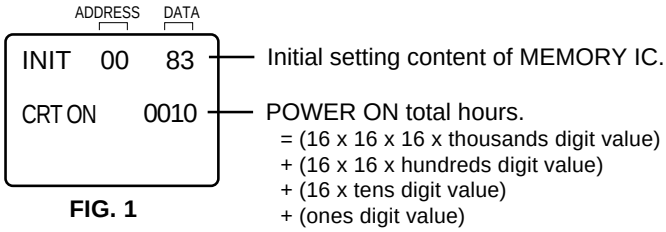


FIG. 1

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
00	A0	5A	A2	39	02	63	24	3A	A1	21	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**.

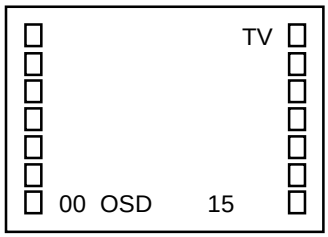


Fig. 1-1

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	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. Receive an 60dB monoscope pattern.
2. Connect the digital voltmeter to **R606**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "RF AGC".
4. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.65 ± 0.05V.

2-2: CUT OFF

1. Adjust the unit to the following settings.
   R.DRIVE=74, B.DRIVE=56, R.BIAS=68, G.BIAS=85, B.BIAS=64, BRIGHTNESS=135, 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 color bar pattern.
3. Using the remote 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 oscilloscope to **TP024**.
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 section "A" becomes as straight line. **(Refer to 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 110% 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

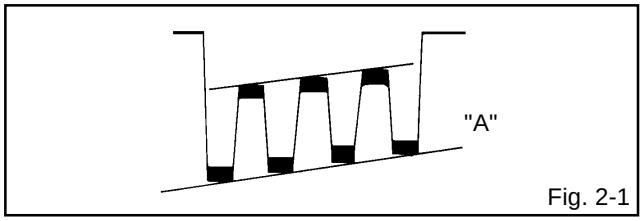


Fig. 2-1

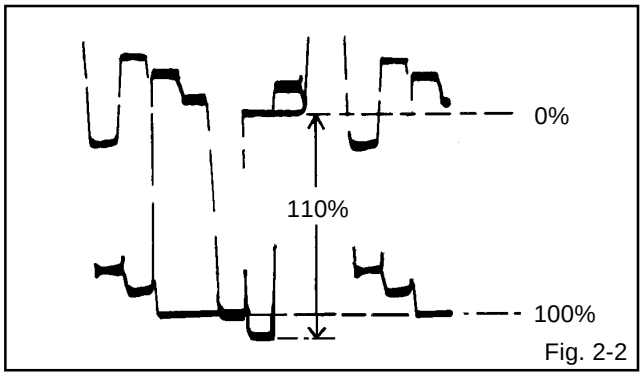


Fig. 2-2

2-6: HORIZONTAL PHASE

1. Receive the center cross signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select "H.PHASE".
4. 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 center cross signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V.SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the rectangle on the center of the screen becomes square.
5. 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 center cross signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(07)** on the remote control to select "V.SHIFT".
4. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shabow mask.

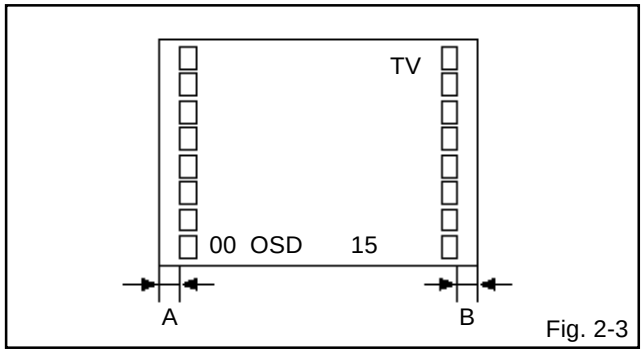


Fig. 2-3

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)**

2-10: VERTICAL VCO

1. Place the set with Aging Test for more than 15 minutes.
2. Receive an 80dB monoscope pattern.
3. Connect the digital voltmeter between the **pin 5 of CP601.**
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: CONSTANT VOLTAGE

1. Using the remote control, set the brightness and contrast to normal position.
2. Connect the digital voltmeter to **TP402**.
3. Set condition is AV MODE without signal.
4. Adjust the **VR502** until the digital voltmeter is 130 ± 0.5V.

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 rastezr 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.

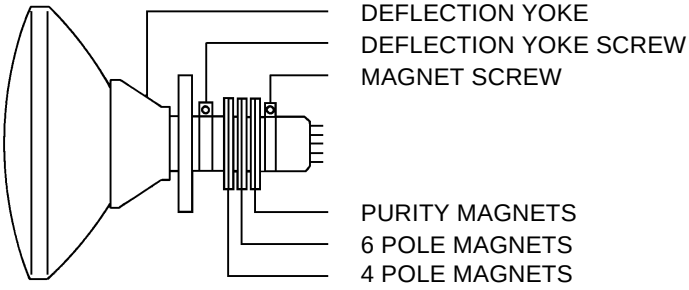


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

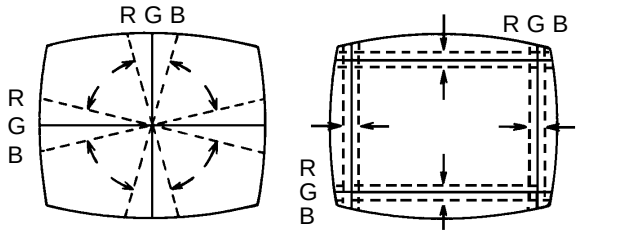
1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

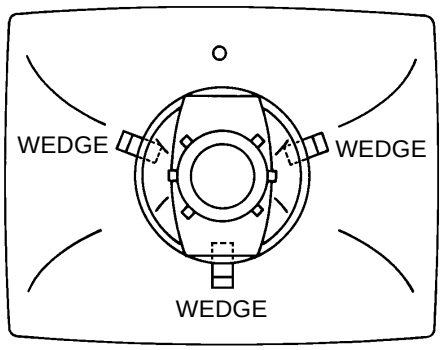
Adjust after performing adjustments in section 3-3.

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

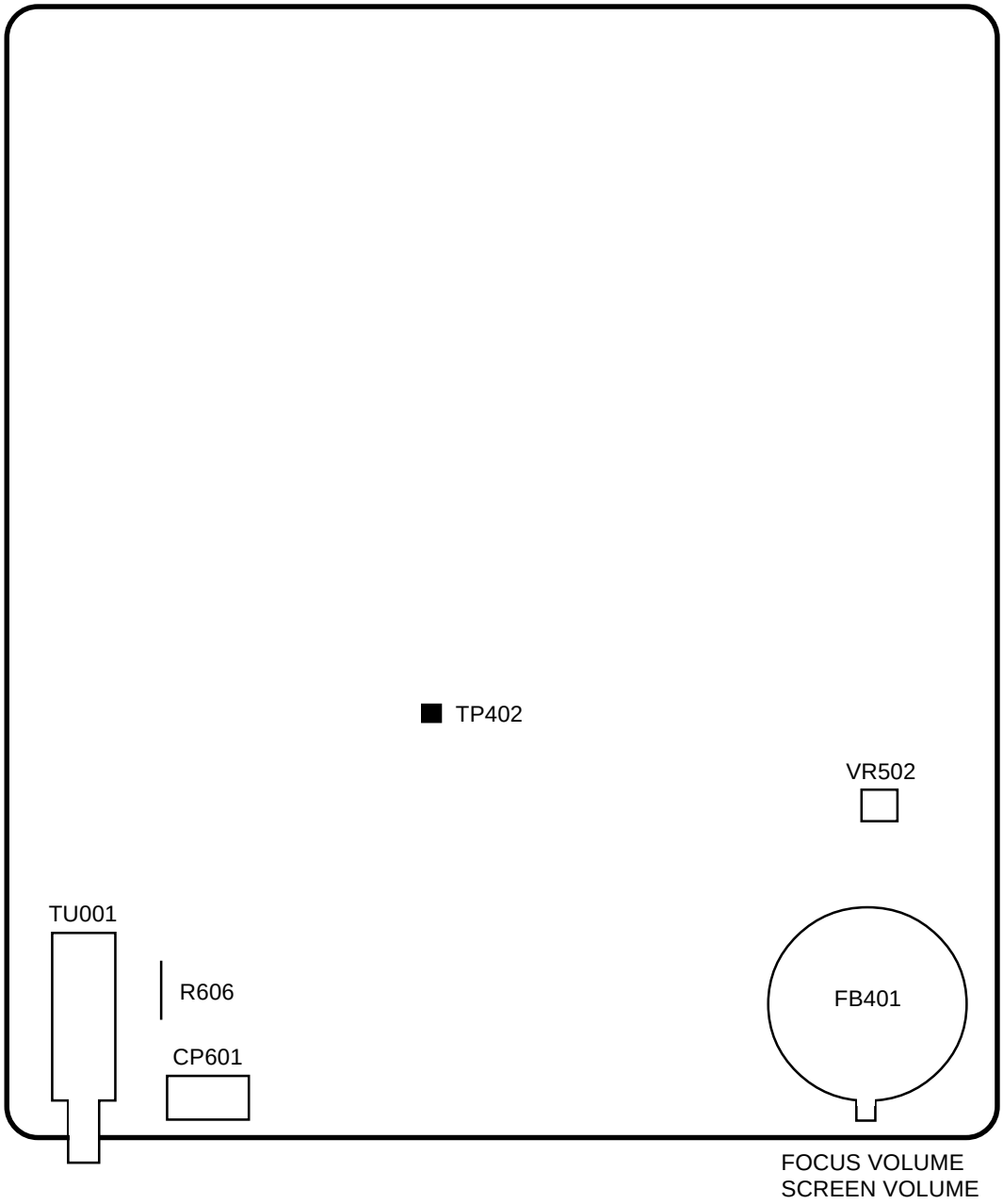
Fig. 3-2-a



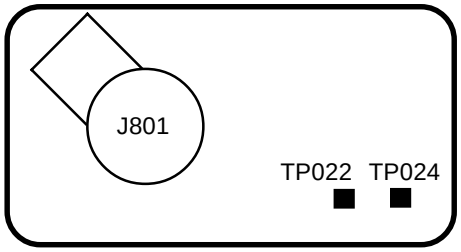
WEDGE POSITION

Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE

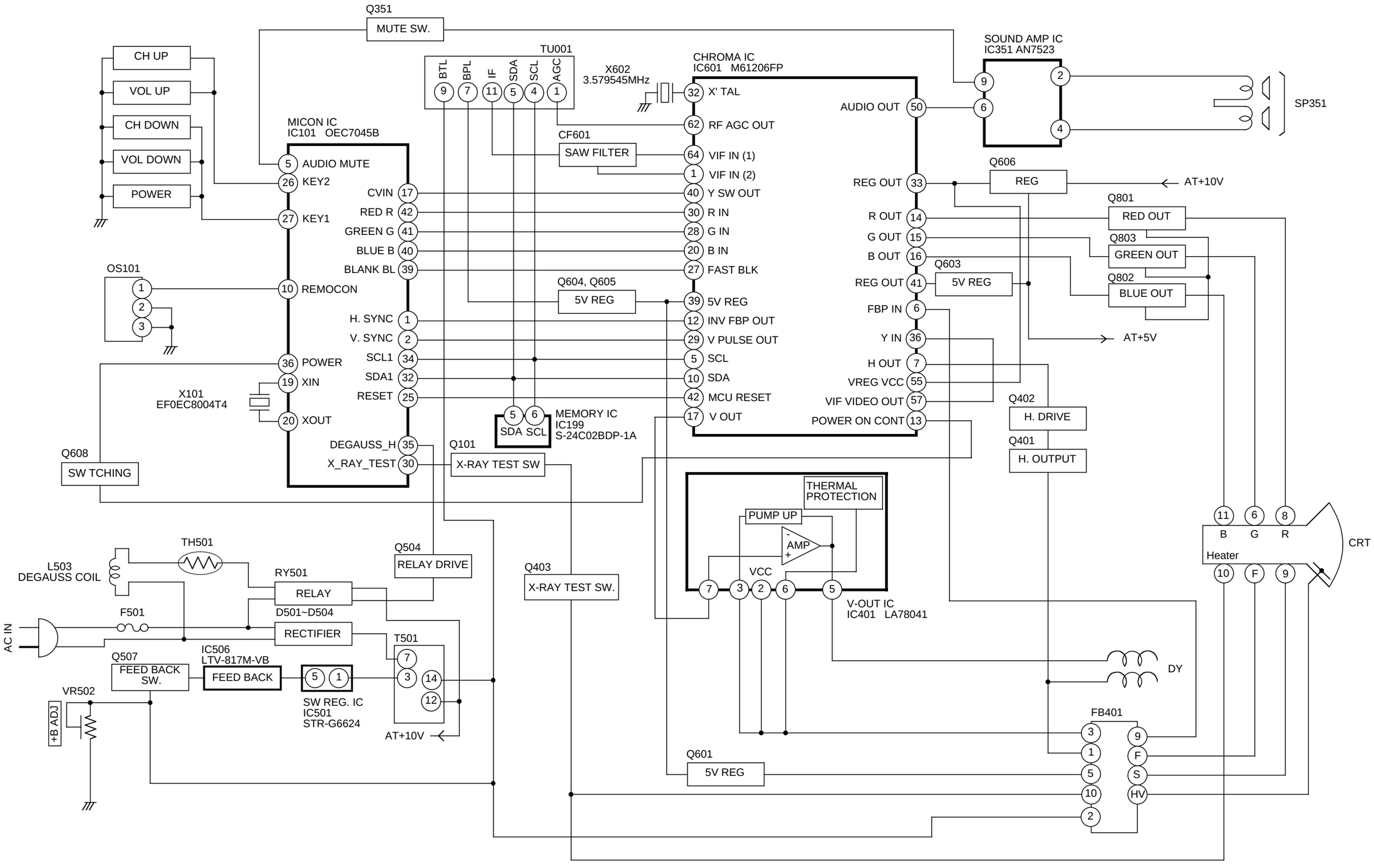


MAIN PCB

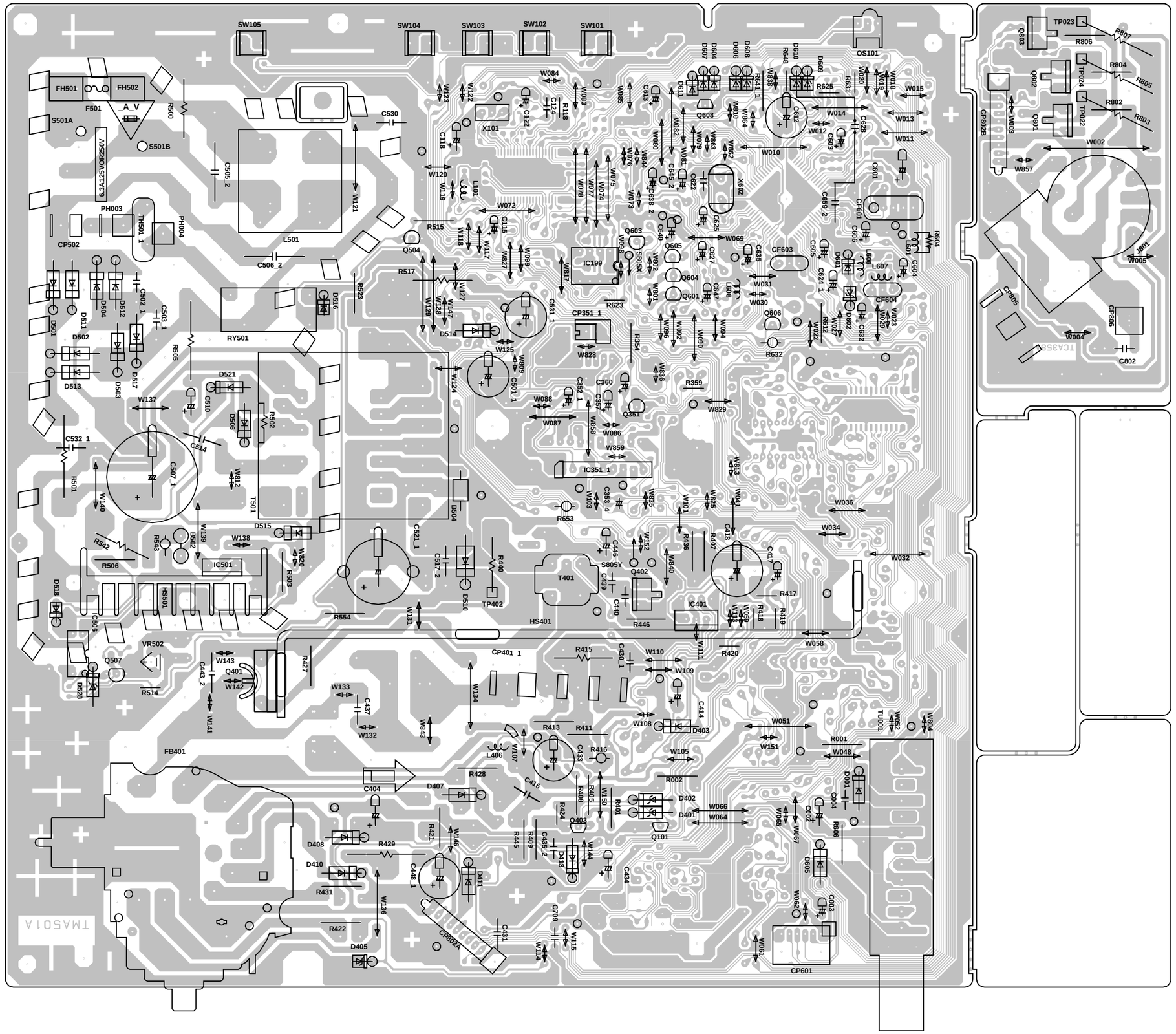


CRT PCB

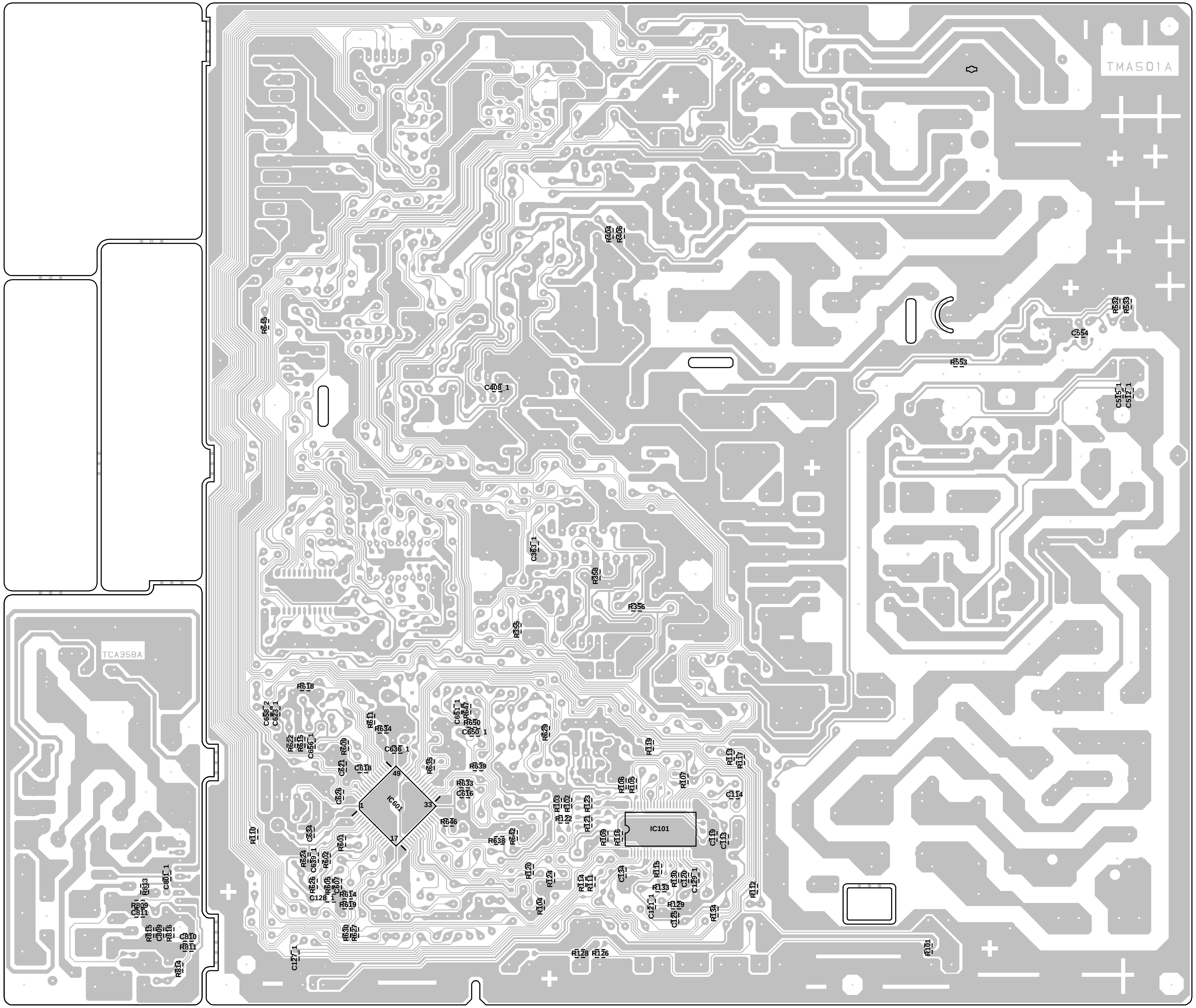
BLOCK DIAGRAM



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



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



F-3

F-4

MICON/TUNER SCHEMATIC DIAGRAM(MAIN PCB)

TU001 ENV56D66G3

ACCESSORY

TM101
RC-DW020

MICON IC
IC101 OEC7045B

OS101
PIC-28143SY-2

X101
EFOEC8004T4

MEMORY IC
IC199
S-24C02BDP-1A

L101
2.7UH

FROM/TO CHROMA
AGC
TUNER+5V
IF
SYNC
I2C_OFF
Y_VIDEO
VD
HD
OSD_R
OSD_G
OSD_B
OSD_BLK
GND
POWER
AT+5V
AFT
SCL
SDA
RESET

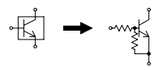
FROM/TO DEFLECTION/CRT
X-RAY
X-RAY_TEST

FROM/TO POWER
DEGAUSS_H
+B
GND

TO SOUND
AUDIO_MUTE

S805X

CAUTION: DIGITAL TRANSISTOR



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 。

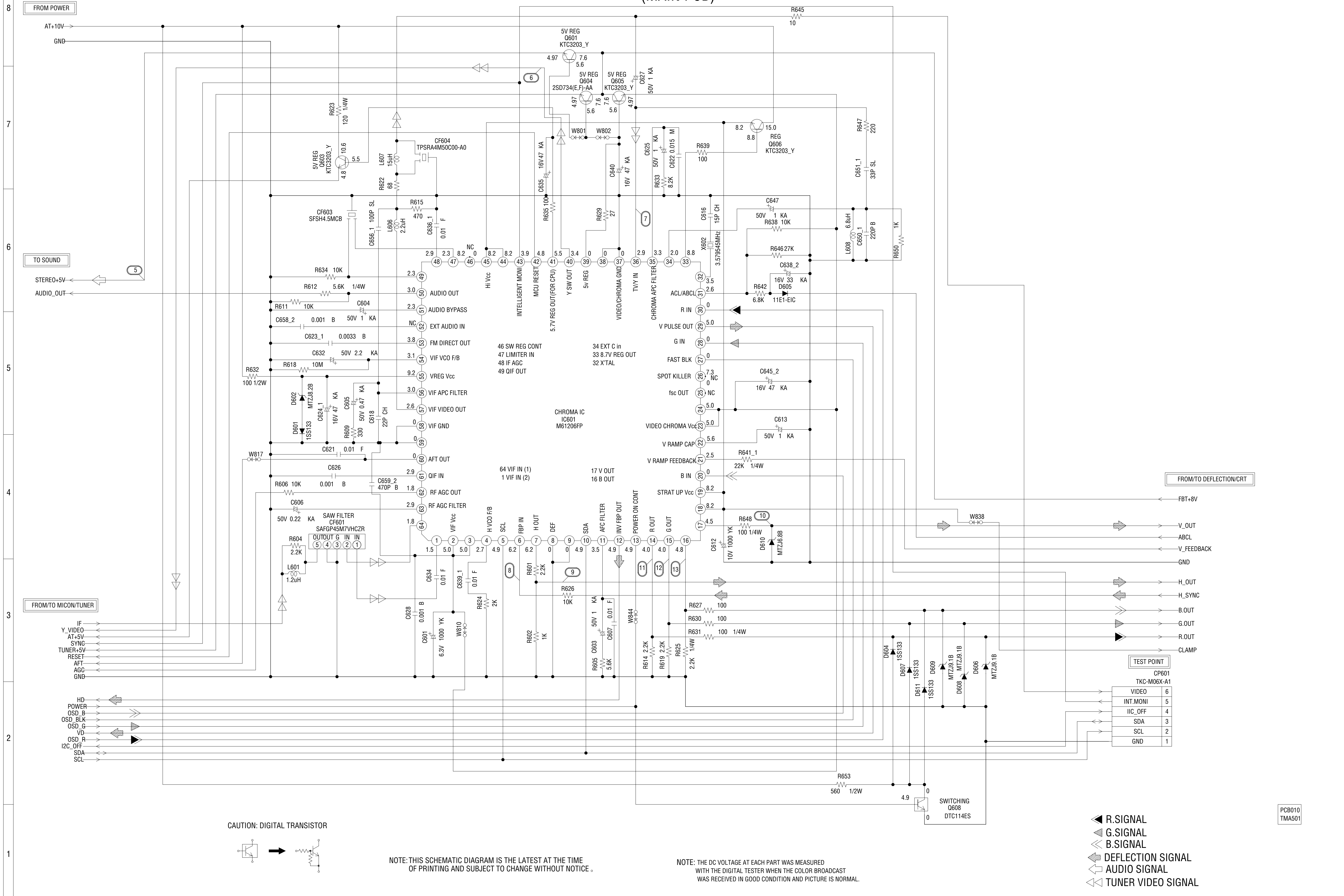
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

◀ R.SIGNAL
◀ G.SIGNAL
≪ B.SIGNAL
◀ DEFLECTION SIGNAL
◁◁ TUNER VIDEO SIGNAL

PCB010
TMA501

G-1 G-2

CHROMA SCHEMATIC DIAGRAM
(MAIN PCB)

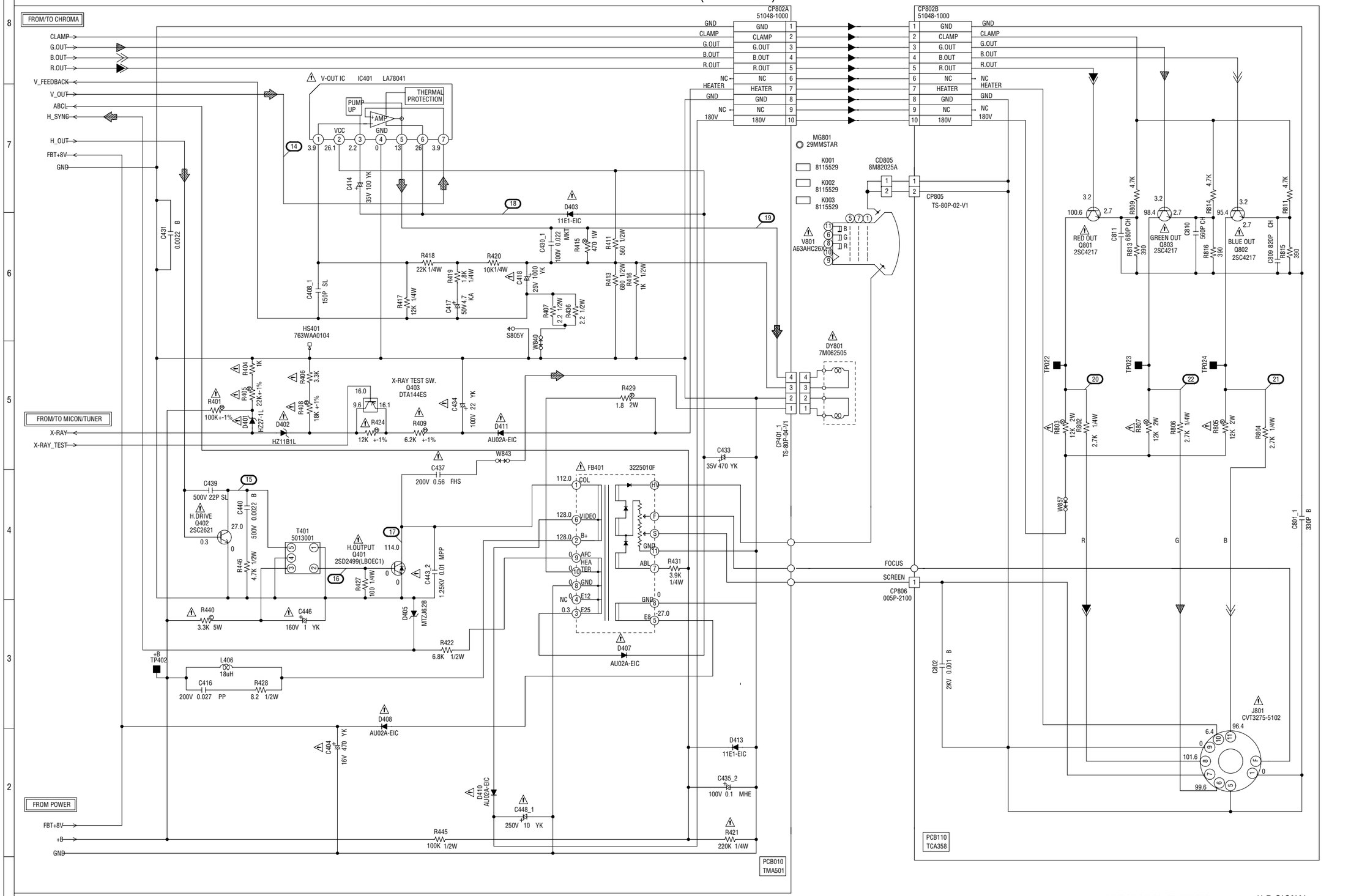


A
B
C
D
E
F
G
H
FROM POWER
AT+10V
GND
TO SOUND
STEREO+5V
AUDIO_OUT
FROM/TO MICON/TUNER
IF
Y_VIDEO
AT+5V
SYNC
TUNER+5V
RESET
AFT
AGC
GND
HD
POWER
OSD_B
OSD_BLK
OSD_G
VD
OSD_R
I2C_OFF
SDA
SCL
5V REG
Q601
KTC3203_Y
5V REG
Q604
2SD734(E,F)-AA
5V REG
Q605
KTC3203_Y
C627
50V 1 KA
REG
Q606
KTC3203_Y
5V REG
Q603
KTC3203_Y
R623
120 1/4W
CF604
TPSRA4M50C00-A0
L607
15uH
R622
68
R615
470
CF603
SFSH4.5MCB
C656_1 100P SL
L606 2.2uH
C636_1 0.01 F
W801
W802
C635 16V47 KA
R635 100
C640 16V 47 KA
R629 27
C625 50V 1 KA
C622 0.015 M
R633 8.2K
R639 100
C616 15P CH
X602 3.579545MHz
C647 50V 1 KA
R638 10K
R646 27K
C638_2 16V 33 KA
R642 6.8K
D605 11E1-EIC
R647 220
C651_1 33P SL
L608 6.8uH
C650_1 220P B
R650 1K
R645 10
R634 10K
R612 5.6K 1/4W
R611 10K
C604 50V 1 KA
C658_2 0.001 B
C623_1 0.0033 B
C632 50V 2.2 KA
R618 10M
R632 100 1/2W
D602 MTZJ8.28
C624_1 16V 47 KA
C605 50V 0.47 KA
C618 22P CH
R609 330
D601 1SS133
W817
C621 0.01 F
C626 0.001 B
R606 10K
C659_2 470P B
C606 50V 0.22 KA
SAW FILTER
CF601
SAFGP45M7VHCZR
OUTOUT G IN IN
R604 2.2K
L601 1.2uH
HI Vcc
INTELLIGENT MONI
MCU RESET
5.7V REG OUT(FOR CPU)
Y SW OUT
5v REG
VIDEO/CHROMA GND
TV/Y IN
CHROMA APC FILTER
AUDIO OUT
AUDIO BYPASS
EXT AUDIO IN
FM DIRECT OUT
VIF VCO F/B
VREG Vcc
VIF APC FILTER
VIF VIDEO OUT
VIF GND
AFT OUT
QIF IN
RF AGC OUT
RF AGC FILTER
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
CHROMA IC
IC601
M61206FP
64 VIF IN (1)
1 VIF IN (2)
17 V OUT
16 B OUT
ACL/ABCL
R IN
V PULSE OUT
G IN
FAST BLK
SPOT KILLER
fsc OUT
VIDEO CHROMA Vcc
V RAMP CAP
V RAMP FEEDBACK
B IN
STRAT UP Vcc
VIF Vcc
H VCO F/B
SCL
FBP IN
H OUT
DEF
SDA
AFC FILTER
INV FBP OUT
POWER ON CONT
R OUT
G OUT
C645_2 16V 47 KA
C613 50V 1 KA
R641_1 22K 1/4W
R648 100 1/4W
D610 MTZJ6.8B
C612 10V 1000 YK
C634 0.01 F
C639_1 0.01 F
C628 0.001 B
C601 6.3V 1000 YK
W810
R624 2K
R601 2.2K
R626 10K
R602 1K
C603 50V 1 KA
C607 0.01 F
R605 5.6K
W844
R614 2.2K
R619 2.2K
R625 2.2K 1/4W
R627 100
R630 100
R631 100 1/4W
W838
FROM/TO DEFLECTION/CRT
FBT+8V
V_OUT
ABCL
V_FEEDBACK
GND
H_OUT
H_SYNC
B.OUT
G.OUT
R.OUT
CLAMP
TEST POINT
CP601
TKC-M06X-A1
VIDEO
INT.MONI
IIC_OFF
SDA
SCL
GND
D604 1SS133
D607 1SS133
D611 1SS133
D609 MTZJ9.1B
D608 MTZJ9.1B
D606 MTZJ9.1B
R653 560 1/2W
SWITCHING
Q608
DTC114ES
PCB010
TMA501
CAUTION: DIGITAL TRANSISTOR
R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL
AUDIO 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.

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



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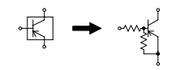
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

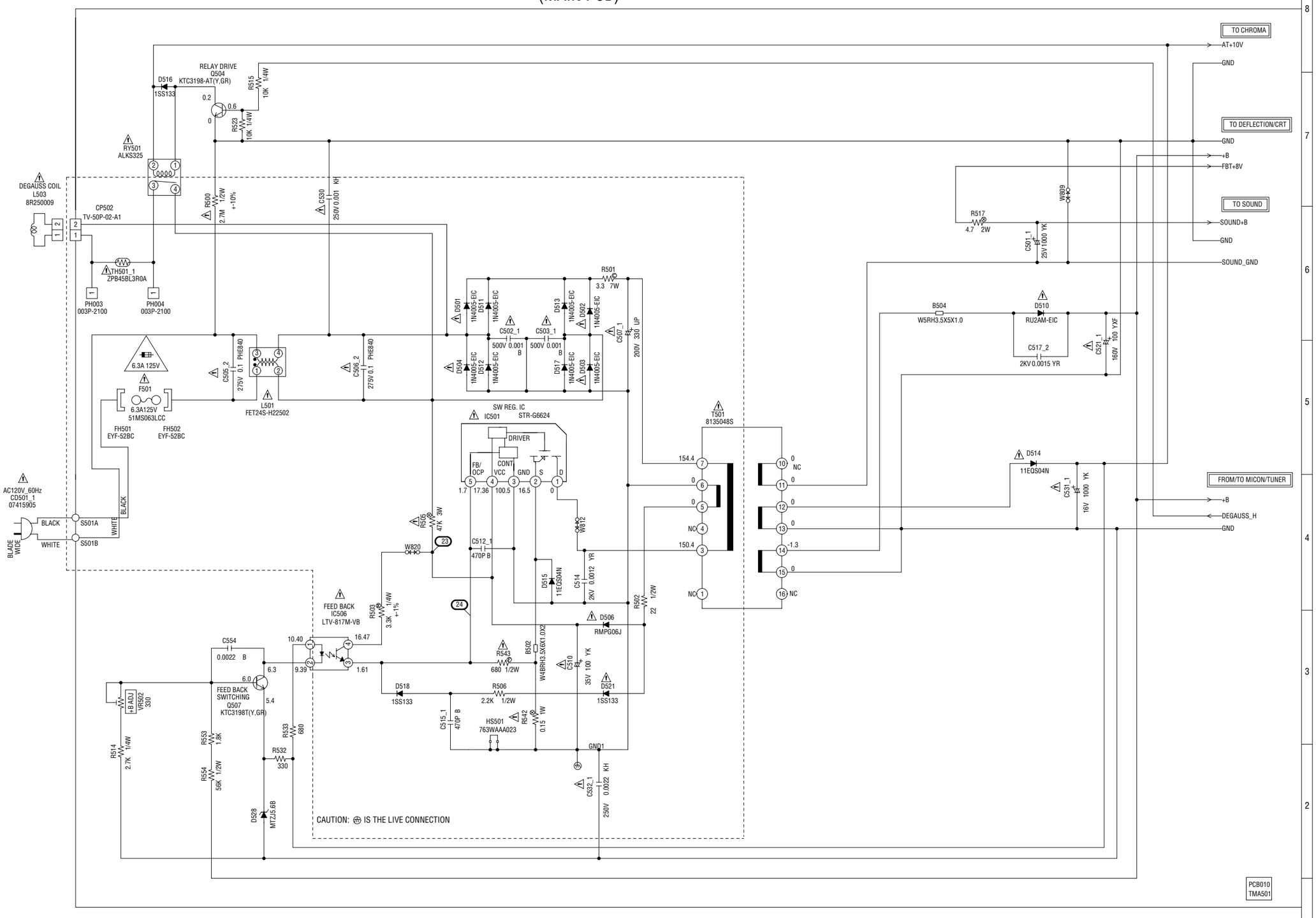
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: DIGITAL TRANSISTOR



R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL

POWER SCHEMATIC DIAGRAM
(MAIN PCB)



6.3A 125V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F501)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F501)

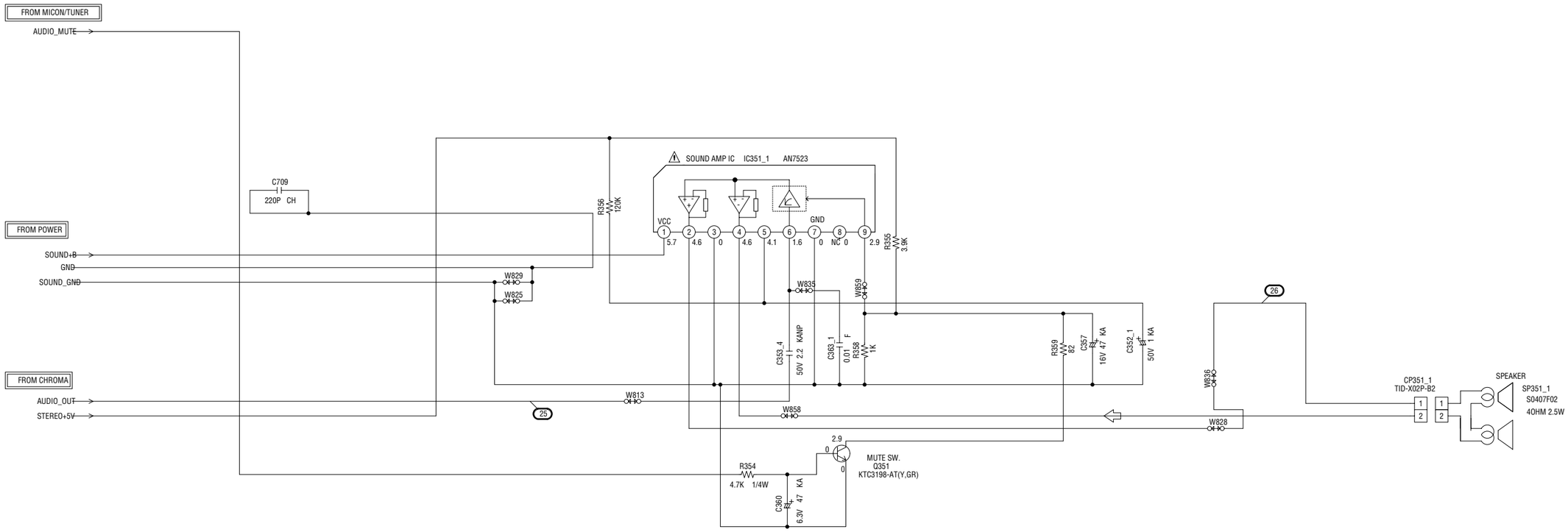
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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.

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 。

SOUND SCHEMATIC DIAGRAM
(MAIN PCB)



⇦ AUDIO SIGNAL

PCB010
TMA501

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

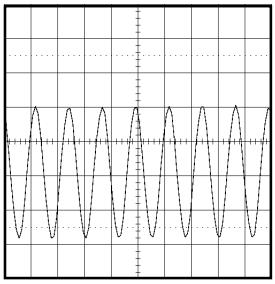
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

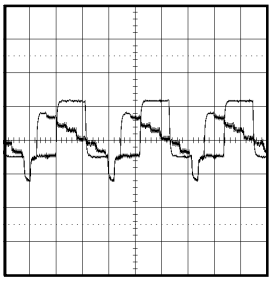
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

WAVEFORMS

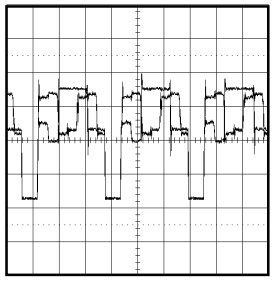
MICON/TUNER



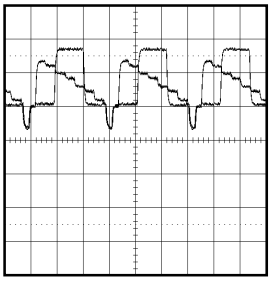
① 1V 0.1µs/div



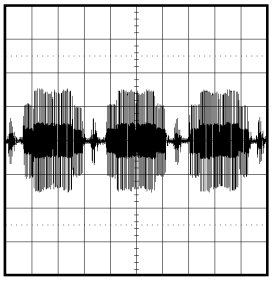
⑥ 0.5V 20µs/div



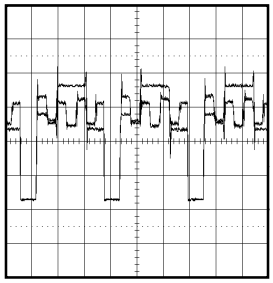
⑪ 1V 20µs/div



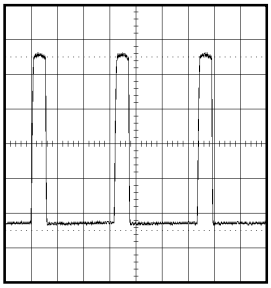
② 0.5V 20µs/div



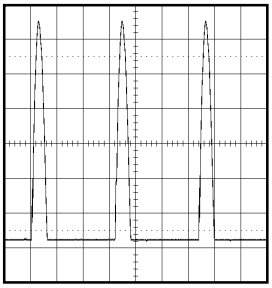
⑦ 200mV 20µs/div



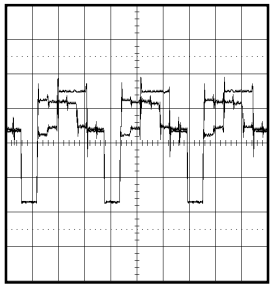
⑫ 1V 20µs/div



③ 200mV 20µs/div

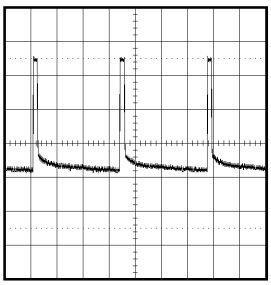


⑧ 20V 20µs/div

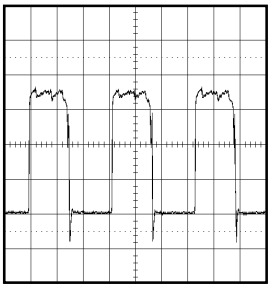


⑬ 1V 20µs/div

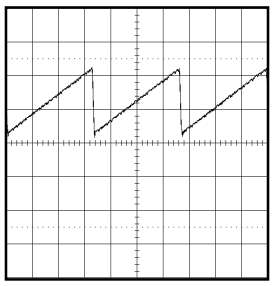
DEFLECTION/CRT



④ 200mV 5ms/div

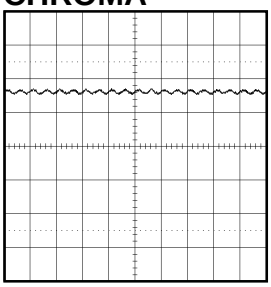


⑨ 200mV 20µs/div

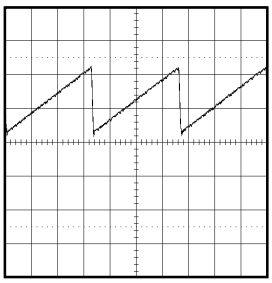


⑭ 0.5V 5ms/div

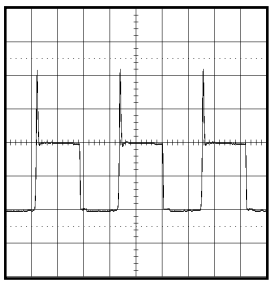
CHROMA



⑤ 0.5V 2ms/div



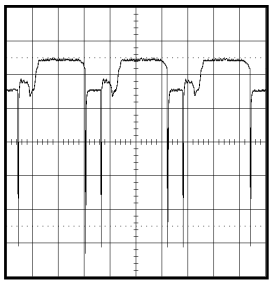
⑩ 0.5V 5ms/div



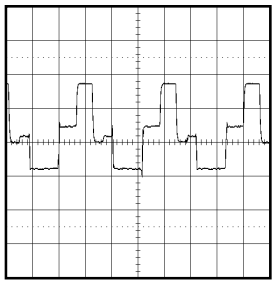
⑮ 20V 20µs/div

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

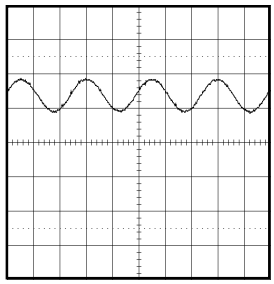
WAVEFORMS



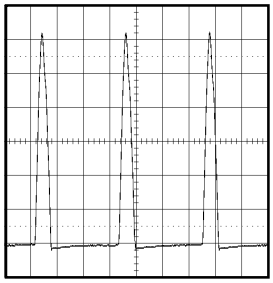
⑯ 2V 20µs/div



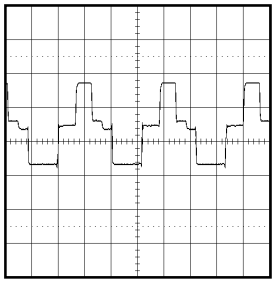
㉑ 50V 20µs/div



㉖ 1V 1ms/div

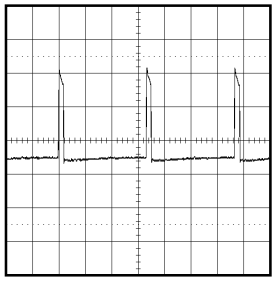


⑰ 200V 20µs/div

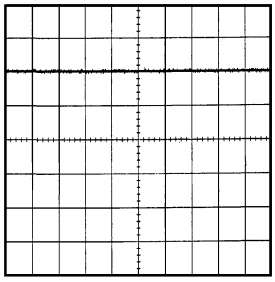


㉒ 50V 20µs/div

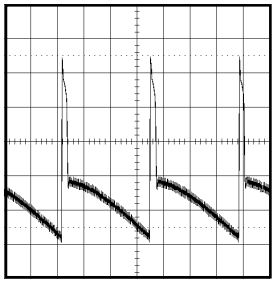
POWER



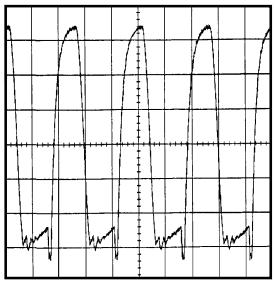
⑱ 10V 5ms/div



㉓ 5.0V 20ms/div

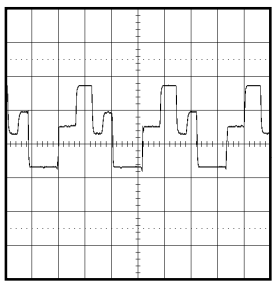


⑲ 10V 5ms/div

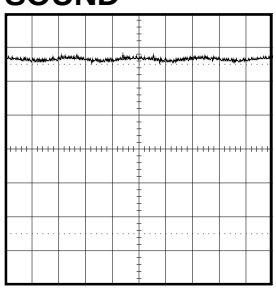


㉔ 500mV 5µs/div

SOUND



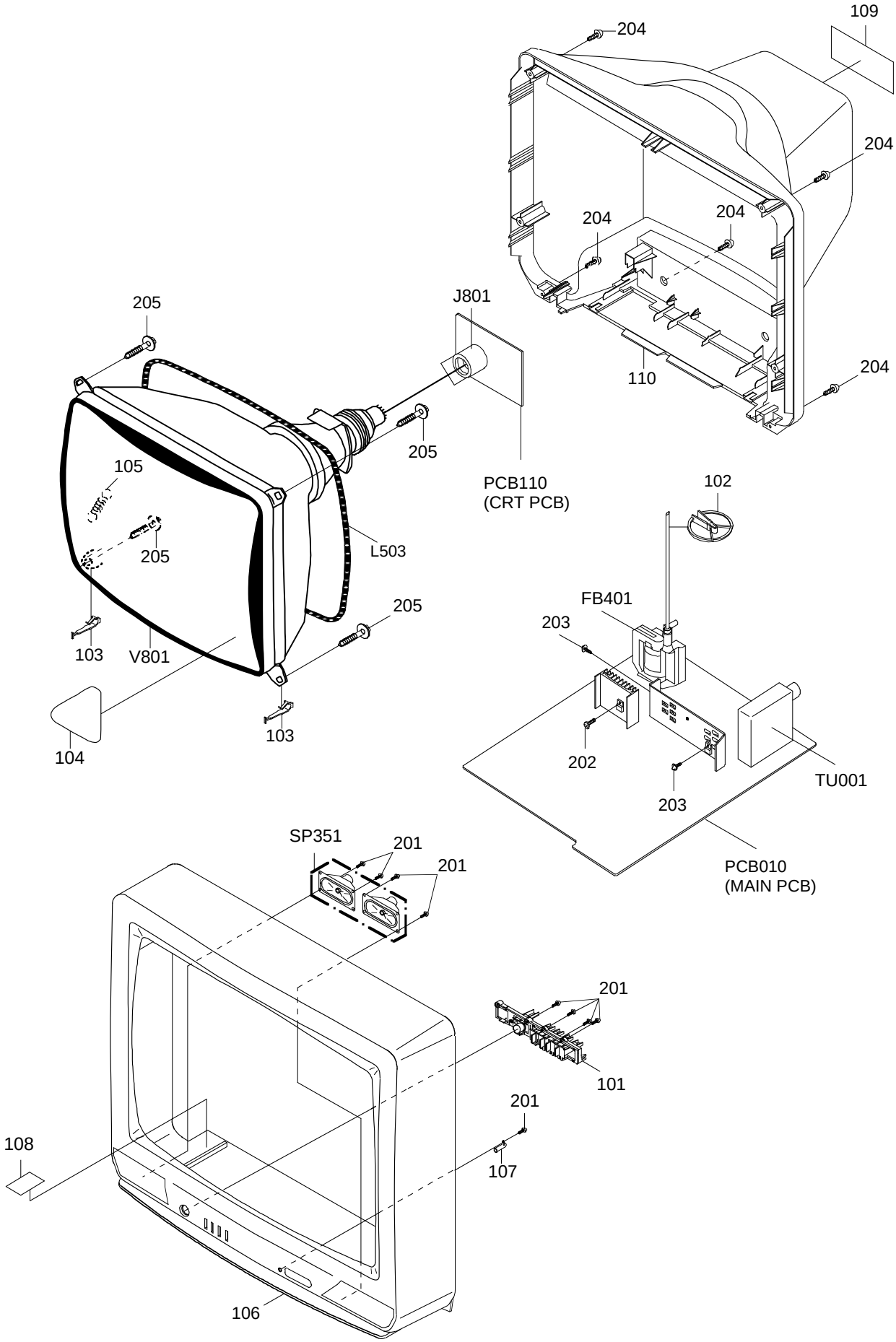
⑳ 50V 20µs/div



㉕ 0.5V 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	735WPA0426	BUTTON ASS'Y		
102	899HV3T000	HOLDER,ANODE WIRE		
103	762WPA0009	HOLDER,CRT WIRE		
104	723000B114	FILM,DECORATION		
105	741WUA0021	SPRING,EARTH		
106	701APJA034	CABINET,FRONT		
107	713WPA0096	GUIDE,REMOCON		
108	7260000306	SHEET,CAUTION		
109	722A08A075	SHEET,RATING		
110	702APA0121	CABINET,BACK		
201	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
202	810B130A04	SCREW/WASHER (B)		M3x10
203	8109I30A04	SCREW,TAP TITE (B)	WH7	3x10
204	8117540B04	SCREW,TAPPING (B0)	TRUSS	4x20
205	8111J50D05	SCREW,TAPPING (A)	GW22	5x35
---	JB5L0200	POLY BAG		
---	J3I0B017	REGISTRATION CARD		
---	J3K00501	INSTRUCTION BOOK		
---	A3K005E975	INSTRUCTION BOOK KIT		
---	791AHA0021	FILM,BAG		
---	792AHA0073	PACKAGE,TOP		
---	792AHA0074	PACKAGE,BOTTOM		
---	793ACDA112	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
RESISTORS			
⚠ R401	R4X5T6104F	R, METAL	100K OHM 1/6W
⚠ R404	R801R7102J	RC	1K OHM 1/10W
⚠ R405	R4X5T6223F	R, METAL	22K OHM 1/6W
⚠ R406	R801R7332J	RC	3.3K OHM 1/10W
R407	R002T22R2J	RC	2.2 OHM 1/2W
⚠ R408	R4X5T6183F	R, METAL	18K OHM 1/6W
⚠ R409	R4X5T6622F	R, METAL	6.2K OHM 1/6W
R415	R3X181471J	R, METAL	470 OHM 1W
⚠ R421	R001T4224J	RC	220K OHM 1/4W
⚠ R424	R4X5T6123F	R, METAL	12K OHM 1/6W
R429	R6558A1R8J	R, FUSE	1.8 OHM 2W
⚠ R440	R5X2CD332J	R, CEMENT	3.3K OHM 5W
⚠ R500	R0G3K2275K	RC	2.7M OHM 1/2W
R501	R5Y2CE3R3J	R, CEMENT	3.3 OHM 7W
R502	R002T2220J	RC	22 OHM 1/2W
R503	R4X5T4332F	R, METAL	3.3K OHM 1/4W
⚠ R505	R3X28B473J	R, METAL OXIDE	47K OHM 3W
R506	R002T2222J	RC	2.2K OHM 1/2W
R514	R002T4272J	RC	2.7K OHM 1/4W
R515	R002T4103J	RC	10K OHM 1/4W
R517	R3X18A4R7J	R, METAL OXIDE	4.7 OHM 2W
⚠ R542	R33681R15J	R, METAL	0.15OHM 1W
⚠ R543	R635U2681J	R, FUSE	680 OHM 1/2W
R604	R001T6222J	RC	2.2K 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			
⚠ C404	E02LT2471M	CE	470 UF 16V
C414	E02LT4101M	CE	100 UF 35V
C416	P3N1F2273J	CPP	0.027 UF 200V
⚠ C418	E02LT3102M	CE	1000 UF 25V
C433	E02LT4471M	CE	470 UF 35V
⚠ C434	E02LT8220M	CE	22 UF 100V
⚠ C437	P447F2564J	CMPP	0.56 UF 200V FHS
⚠ C443	P4N8FJ103H	CMPP	0.01 UF 1.25KV
⚠ C446	E02LTB010M	CE	1 UF 160V
⚠ C448	E0ELTD100M	CE	10 UF 250V
C501	E02LT3102M	CE	1000 UF 25V
⚠ C502	C0JTB0513K	CC	0.001 UF 500V
⚠ C503	C0JTB0513K	CC	0.001 UF 500V
⚠ C505	P2472B104M	CMP	0.1 UF 275V
⚠ C506	P2472B104M	CMP	0.1 UF 275V
⚠ C507	E51CGC331M	CE	330 UF 200V
⚠ C510	E02LT4101M	CE	100UF 35V
C514	C0JLYR7B3K	CC	0.0012UF 2KV YR
C517	C0JLYR7E3K	CC	0.0015UF 2KV YR
⚠ C521	E62NFB101M	CE	100 UF 160V
⚠ C530	CB3LE0M13M	CC	0.001 UF 250V
⚠ C531	E02LT2102M	CE	1000UF 16V
⚠ C532	CB3LE0MH3M	CC	0.0022UF 250V
C628	CHG0B0413K	CC	0.001 UF 50V B
C802	C13VB0713K	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
D405	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
⚠ D407	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D408	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D410	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D411	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
D413	D2WT011E10	DIODE, SILICON	11E1-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
⚠ D506	D2LTPG06J0	DIODE, SILICON	RMPG06J-G3
⚠ D510	D2WXRU2AM0	DIODE, SILICON	RU2AM-EIC
D511	D2WXN40050	DIODE, SILICON	1N4005-EIC
D512	D2WXN40050	DIODE, SILICON	1N4005-EIC
D513	D2WXN40050	DIODE, SILICON	1N4005-EIC
⚠ D514	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
D515	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
D516	D1VT001330	DIODE, SILICON	1SS133T-77
D517	D2WXN40050	DIODE, SILICON	1N4005-EIC

REF. NO.	PART NO.	DESCRIPTION	
DIODES			
D518	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D521	D1VT001330	DIODE, SILICON	1SS133T-77
D528	D97U05R61B	DIODE, ZENER	MTZJ5.6B T-77
D601	D1VT001330	DIODE, SILICON	1SS133T-77
D602	D97U08R21B	DIODE, ZENER	MTZJ8.2B T-77
D604	D1VT001330	DIODE, SILICON	1SS133T-77
D605	D2WT011E10	DIODE, SILICON	11E1-EIC
D606	D97U09R11B	DIODE, ZENER	MTZJ9.1B T-77
D607	D1VT001330	DIODE, SILICON	1SS133T-77
D608	D97U09R11B	DIODE, ZENER	MTZJ9.1B T-77
D609	D97U09R11B	DIODE, ZENER	MTZJ9.1B T-77
D610	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D611	D1VT001330	DIODE, SILICON	1SS133T-77
ICS			
IC101	I56F07045B	IC	OEC7045B
IC199	A3K005E015	IC	S-24C02BDP-1A
⚠ IC351	I0FSP75230	IC	AN7523
⚠ IC401	I03TD80410	IC	LA78041
⚠ IC501	I2BT06624G	IC	STR-G6624
⚠ IC506	0002E00610	PHOTO COUPLER	LTV-817M-VB
IC601	I06FC61206	IC	M61206FP
TRANSISTORS			
Q101	TNYTJ03001	COMPOUND TRANSISTOR	DTC114TSTP
Q351	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
⚠ Q401	TDUU024990	TRANSISTOR, SILICON	2SD2499(LB0EC1)
⚠ Q402	TC3Q026210	TRANSISTOR, SILICON	2SC2621(D,E)-RAC
Q403	TPYTD03001	COMPOUND TRANSISTOR	DTA144ESTP
Q504	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
Q507	TCATC31980	TRANSISTOR, SILICON	KTC3198-AT(Y,GR)
Q601	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT or
	TC5T021204	TRANSISTOR, SILICON	2SC2120Y(TPE2)
Q603	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT or
	TC5T021204	TRANSISTOR, SILICON	2SC2120Y(TPE2)
Q604	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q605	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT or
	TC5T021204	TRANSISTOR, SILICON	2SC2120Y(TPE2)
Q606	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT or
	TC5T021204	TRANSISTOR, SILICON	2SC2120Y(TPE2)
Q608	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 & TRANSFORMERS			
L101	021LA62R7K	COIL	2.7 UH
L406	021U6D180K	COIL	18 UH
⚠ L501	029F000074	COIL, LINE FILTER	FET24S-H22502
⚠ L503	028R250009	COIL, DEGAUSS	8R250009
L601	021LA61R2K	COIL	1.2 UH
L606	021LA62R2K	COIL	2.2 UH
L607	021LA6150K	COIL	15 UH
L608	021LA66R8K	COIL	6.8 UH
T401	045013001J	TRANS, HORIZONTAL DRIVE	5013001
⚠ T501	048135048S	TRANSFORMER, SWITCHING	8135048S
JACK			
⚠ 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
VARIABLE RESISTOR			
VR502	V1163L2BTC	VOLUME, SEMI FIXED	EVNCYAA03BY2
P.C.BOARD ASSEMBLIES			
PCB010	A3K005H01A	PCB ASS'Y	TMA501A
PCB110	A3K005H11A	PCB ASS'Y	TCA358A
MISCELLANEOUS			
B502	024HT03563	CORE, BEADS	W4BRH3.5X6X1.0X2
B504	024HT03553	CORE, BEADS	W5RH3.5X5X1.0
⚠ CD501	1207415905	CORD, AC	7415905
CD805	068M82025A	CORD, CONNECTOR	8M82025A
CF601	1022T45R73	FILTER, SAW	SAFGP45M7VHCZR
CF603	1012T4R509	FILTER, CERAMIC	SFSH4.5MCB-TF21
CF604	1012T4R519	FILTER, CERAMIC TRAP	TPSRA4M50C00-A0
CP351	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
CP401	069W340018	CONNECTOR PCB SIDE	TS-80P-04-V1
CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		MISCELLANEOUS	
CP601	0697260650	CONNECTOR PCB SIDE	TKC-M06X-A1
CP805	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1
CP806	069W010010	CONNECTOR PCB SIDE	005P-2100
CP802A	067R010019	WIRE HOLDER	51048-1000
CP802B	067R010019	WIRE HOLDER	51048-1000
⚠ DY801	027M062505	DY	7M062505
⚠ F501	081PC6R304	FUSE	51MS063LCC
⚠ FB401	043225010F	TRANSFORMER, FLYBACK	3225010F
FH501	06710T0006	HOLDER, FUSE	EYF-52BC
FH502	06710T0006	HOLDER, FUSE	EYF-52BC
K001	129A000010	WEDGE	8115529
K002	129A000010	WEDGE	8115529
K003	129A000010	WEDGE	8115529
MG801	026A062704	MAGNET, CONVERGENCE	29MMSTAR
OS101	077Q014003	REMOTE RECEIVER	PIC-28143SY-2
PH003	069W01001A	CONNECTOR PCB SIDE	003P-2100
PH004	069W01001A	CONNECTOR PCB SIDE	003P-2100
⚠ RY501	0560V10118	RELAY	ALKS325
SP351	070Y533002	SPEAKER	S0407F02
⚠ TH501	DF5EL3R0A0	DEGAUSS, ELEMENT	ZPB45BL3R0A
TM101	076N0DW020	TRANSMITTER	RC-DW020
⚠ TU001	0145S00052	TUNER, VHF-UHF	ENV56D66G3
⚠ V801	0984250502	COLOR PICTURE TUBE	A63AHC26X
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.	M3K0-05H
O/R NO.	A143505

Memorex®

MT2251 SERIES D

SERVICE MANUAL

COLOR TELEVISION RECEIVER

REVISION 1
MFR'S VERSION B

MFR'S VERSION	CRT
A	A63AHC26X
B	A63ADT15*08

ELECTRICAL REPLACEMENT PARTS LIST

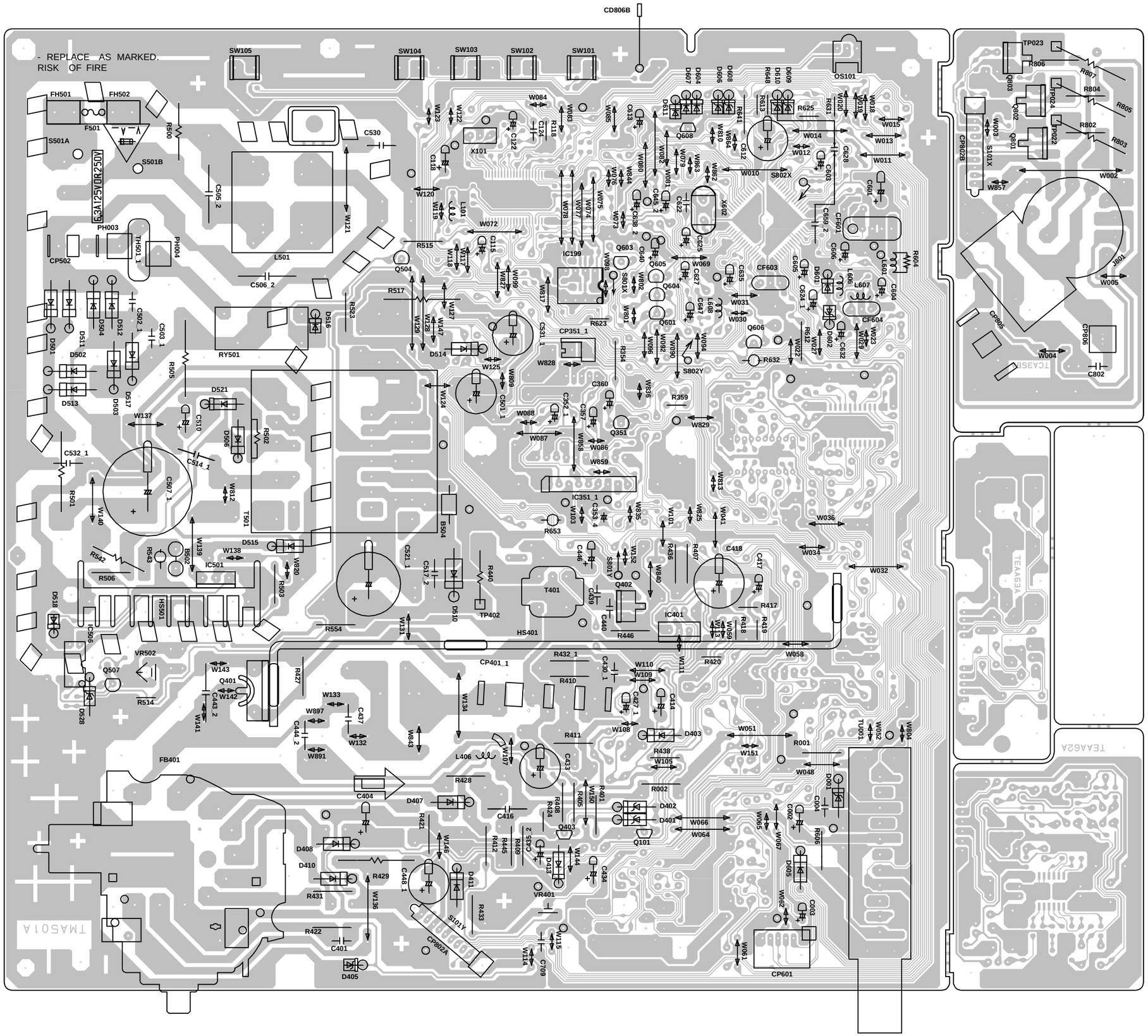
Change of CRT

REF. NO.	MFR'S VERSION A		MFR'S VERSION B	
	PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
⚠ R406	R801R7332J	RC 3.3K OHM 1/10W	R903N8100J	RC 10 OHM 1/8W
⚠ R408	R4X5T6183F	R,METAL 18K OHM 1/6W	R4X5T6273F	R,METAL 27K OHM 1/6W
R410			R002T2821J	RC 820 OHM 1/2W
R411	R002T2561J	RC 560 OHM 1/2W	R002T2102J	RC 1K OHM 1/2W
R412			R002T2271J	RC 270 OHM 1/2W
R413	R002T2681J	RC 680 OHM 1/2W		DEL
⚠ R415	R3X181471J	R,METAL OXIDE 470 OHM 1W		DEL
R416	R0L2U2102J	RC 1K OHM 1/2W		DEL
R418	R002T4223J	RC 22K OHM 1/4W	R002T4273J	RC 27K OHM 1/4W
R419	R002T4182J	RC 1.8K OHM 1/4W	R002T4122J	RC 1.2K OHM 1/4W
R420	R002T4103J	RC 10K OHM 1/4W	R002T4682J	RC 6.8K OHM 1/4W
⚠ R429	R6558A1R8J	R,FUSE 1.8 OHM 2W	R6558A2R7J	R,FUSE 2.7 OHM 2W
R432			R002T2821J	RC 820 OHM 1/2W
R433			R002T2271J	RC 270 OHM 1/2W
R438			R002T2151J	RC 150 OHM 1/2W
R553	R801R7182J	RC 1.8K OHM 1/10W	R903N8472J	RC 4.7K OHM 1/8W
R613			R002T4473J	RC 47K OHM 1/4W
R638	R801R7103J	RC 10K OHM 1/10W	R903N8822J	RC 8.2K OHM 1/8W
C119	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C120	CS0RB0413K	CC 0.001 UF 50V B	CS0KY0313M	CC 0.001 UF 25V Y
C125	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C363	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C401			C0JTB0512K	CC 100 PF 500V B
C427			E50HU5100M	CE 10 UF 50V
C444			C0JLYR713K	CC 0.001 UF 2KV YR
C554	CS0RB04H3K	CC 0.0022UF 50V B	CS0KY03H3M	CC 0.0022UF 25V Y
C607	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C621	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C623	CS0RB04L3K	CC 0.0033UF 50V B	CS0KY03L3M	CC 0.0033UF 25V Y
C626	CS0RB0413K	CC 0.001 UF 50V B	CS0KY0313M	CC 0.001 UF 25V Y
C634	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C636	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C639	CS0RF0414Z	CC 0.01 UF 50V F	CS0KF0214Z	CC 0.01 UF 16V F
C658	CS0RB0413K	CC 0.001 UF 50V B	CS0KY0313M	CC 0.001 UF 25V Y
⚠ D506	D2LTPG06J0	DIODE SILICON RMPG06J-G3	D2WXN49370	DIODE SILICON 1N4937
Q101	TNYTJ03001	COMPOUND TRANSISTOR DTC114TSTP	TNATJ03003	COMPOUND TRANSISTOR KRC111MAT
Q403	TPYTD03001	COMPOUND TRANSISTOR DTA144ESTP	TPATD03003	COMPOUND KRA104MAT
⚠ CP502	069W420029	CONNECTOR PCB SIDE TV-50P-02-A1	069S420110	CONNECTOR PCB SIDE A1561WV2-2P

CP802A	067R010019	WIRE HOLDER 51048-1010	067U010049	WIRE HOLDER B2013H02-10P
VR401			V1163H3BTC	VOLUME,SEMI FIXED EVNCYAA03BE3
PCB010	A3K005H01A	MAIN PCB ASS'Y (VERSION A) TMA501A	A3K013I010K	MAIN PCB ASS'Y (VERSION B) TMA501A
C809	CS0RCH4W2J	CC 820 PF 50V CH	CS0KW04U2M	CC 680 PF 50V W
C810	CS0RCH4S2J	CC 560 PF 50V CH	CS0KB04Q2K	CC 470 PF 50V B
C811	CS0RCH4U2J	CC 680 PF 50V CH	CS0KW04S2M	CC 560 PF 50V W
CP802B	067R010019	WIRE HOLDER 51048-1010	067U010049	WIRE HOLDER B2013H02-10P
CP805	069W320018	CONNECTOR PCB SIDE TS-80P-02-V1	069S320010	CONNECTOR PCB SIDE A2361WV2-2P
PCB110	A3K005H11A	CRT PCB ASS'Y (VERSION A) TCA358A	A3K013I110K	CRT PCB ASS'Y (VERSION B) TCA358A
CD804			06CU34002A	CORD CONNECTOR SM1198-002-1A
CD805	068M82025A	CORD CONNECTOR 8M82025A	06CU82039A	CORD CONNECTOR SM1098-009-1A
⚠ DY801	027M062505	DY 7M062505		DEL
⚠ K001	129A000010	WEDGE 8115529		DEL
⚠ K002	129A000010	WEDGE 8115529		DEL
⚠ K003	129A000010	WEDGE 8115529		DEL
MG801	026A062704	MAGNET,CONVERGENCE 29MMSTAR		DEL
⚠ V801	0984250502	COLOR PICTURE TUBE A63AHC26X	0984250503	CRT W/DY A63ADT15*08

MAIN PCB's and CRT PCB's are not interchangeable.

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



CHROMA SCHEMATIC DIAGRAM (MAIN PCB)

FROM POWER
AT+10V
GND
TO SOUND
STEREO+5V
AUDIO_OUT
FROM/TO MICON/TUNER
IF
Y_VIDEO
AT+5V
SYNC
TUNER+5V
RESET
AFT
AGC
GND
HD
POWER
OSD_B
OSD_BLK
OSD_G
VD
OSD_R
I2C_OFF
SDA
SCL
FROM/TO DEFLECTION/CRT
FBT+8V
V_OUT
ABCL
V_FEEDBACK
GND
H_OUT
H_SYNC
B.OUT
G.OUT
R.OUT
CLAMP
TEST POINT
CP601
TKC-M06X-A1
VIDEO 6
INT.MONI 5
IIC_OFF 4
SDA 3
SCL 2
GND 1

5V REG Q601 KTC3203_Y-AT
5V REG Q605 KTC3203_Y-AT
5V REG Q604 2SD734
5V REG Q603 KTC3203_Y-AT
REG Q606 KTC3203_Y-AT
SWITCHING Q608 DTC114ES
CF604 TPSRA4M50C00-A0
CF603 SFSH4.5MCB
CF601 SAFGP45M7VHCZR
SAW FILTER
X602 3.579545MHz
D602 MTZ8.2B
D601 1SS133
D605 11E1-EIC
D604 1SS133
D607 1SS133
D611 1SS133
D609 MTZJ9.1B
D608 MTZJ9.1B
D606 MTZJ9.1B
D610 MTZJ6.8B

CHROMA IC
IC601
M61206FP

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

Add: R613

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

PCB010
TMA501

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。

CAUTION: DIGITAL TRANSISTOR

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)

FROM/TO CHROMA
CLAMP
G.OUT
B.OUT
R.OUT
V_FEEDBACK
V_OUT
ABCL
H_SYNC
H_OUT
FBT+8V
GND
V-OUT IC IC401 LA78041
THERMAL PROTECTION
PUMP UP
AMP
VCC
GND
3.9 26.1 2.2 0 13 26 3.9
C414 35V 100 YK
D403 11E1-EIC
R418 27K 1/4W
R420 6.8K 1/4W
R432_1 820 1/2W
R410 820 1/2W
C430_1 100V 0.022 MKT
R411 1K 1/2W
C408_1 150P SL
R417 12K 1/4W
R419 1.2K 1/4W
C418 25V 1000 YK
C427_1 50V 10 KA
R438 150 1/2W (W106)
R412 270 1/2W
C417 50V 4.7 KA
R407 2.2 1/2W
R434 2.2 1/2W
VR401 EVNCYAA03BE3
R433 270 1/2W
S801Y
V840
HS401 763WAA0104
CD806B CH012102
R404 1K
R405 22K +-1%
R406 10
R401 100K +-1%
D401 HZ27-1L
D402 HZ11B1L
R408 27K +-1%
16.0 9.6 16.1
X-RAY TEST SW. Q403 KRA104MAT
R424 12K +-1%
R409 6.2K +-1%
C434 100V 22 YK
D411 AU02A-EIC
R429 2.7 2W
FROM/TO MICON/TUNER
X-RAY
X-RAY_TEST
C437 200V 0.56 FHS
W843
FB401 3225010F
C433 35V 470 YK
CP802A B2013H02-10P
GND 1
CLAMP 2
G.OUT 3
B.OUT 4
R.OUT 5
NC 6
HEATER 7
GND 8
NC 9
180V 10
S101
CP802B B2013H02-10P
CD805 SM1098-009-1A
CD806A CH012102
CP805 A2361WV2-2P
V801 A63ADT15*08
CD804 SM1198-002-1A
CP401_1 TS-80P-04-V1
C439 500V 22P SL
C440 500V 0.0022 B
H.DRIVE Q402 2SC2621
27.0 0.3 0
R446 4.7K 1/2W
T401 5013001
H.OUTPUT Q401 2SD2499(LBOEC1) 114.0 0 0
C443_2 1.25KV 0.01 MPP
C444_2 2KV 0.001 R
W891
W897
R427 100 1/4W
D405 MTZJ6.2B
R440 3.3K 5W
C446 160V 1 YK
C401 500V 100P B
R422 6.8K 1/2W
112.0 COL
128.0 VIDEO
128.0 B+
AFC
HEA
TER
GND
E12
E25
HV
F
S
GND
ABL
R431 3.9K 1/4W
GND
E8 -27.0
D407 AU02A-EIC
FOCUS
SCREEN
CP806 005P-2100
C802 2KV 0.001 B
PCB110 TCA358
R809 4.7K
R814 4.7K
R811 4.7K
3.2 100.6 2.7 RED OUT Q801 2SC4217
C811_1 560P W
R813 390
3.2 98.4 2.7 GREEN OUT Q803 2SC4217
C810_2 470P B
R812 390
3.2 95.4 2.7 BLUE OUT Q802 2SC4217
C809_1 680P W
R815 390
TP022 TP023 TP024
20 22 21
R808 12K 2W
R802 2.7K 1/4W
R807 12K 2W
R806 2.7K 1/4W
R805 12K 2W
R804 2.7K 1/4W
W857
R G B
J801 CVT3275-5102
6.4 96.4 0 101.6 99.6 0
TP402 +B
L406 18uH
C416 200V 0.027 PP
R428 8.2 1/2W
D408 AU02A-EIC
C404 16V 470 YK
D410 AU02A-EIC
C448_1 250V 10 YK
R445 100K 1/2W
D413 11E1-EIC
C435_2 100V 0.1 MHE
R421 220K 1/4W
FROM POWER
FBT+8V
+B
GND
PCB010 TMA501

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CAUTION: DIGITAL TRANSISTOR

R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL

Add: R410, R412, R432, R433, R438, C401, C427, C444, VR401, CD804

SPEC.NO.	M3K0-05I
O/R NO.	A163505

Memorex®

MT2251

SERVICE MANUAL

COLOR TELEVISION RECEIVER

REVISION 1
MFR'S VERSION F

MFR'S VERSION	IC601	PRODUCT IMPROVEMENT
D	M61203BFP	ORIGINAL
F	M61203CFP	Add the data of ROM CORRECTION

Please file this revision with the original version.

Add the data of ROM CORRECTION

NOTE FOR THE REPLACING OF MEMORY IC

	MFR'S VERSION D	MFR'S VERSION F
ADDRESS	DATA	DATA
0A	FF	44

Change of IC601

DIFFERENCES

	MFR'S VERSION D			MFR'S VERSION F		
REF. NO.	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION	
IC601	I06FC12030	IC	M61203BFP	I06FC1203C	IC	M61203CFP
PCB010	A3I052G01A	MAIN PCB ASS'Y	TMX456A	A3I052G01B	MAIN PCB ASS'Y	TMX456A

NOTE FOR THE REPLACING OF MEMORY IC

	MFR'S VERSION D	MFR'S VERSION F
ADDRESS	DATA	DATA
00	20	A0
03	01	09

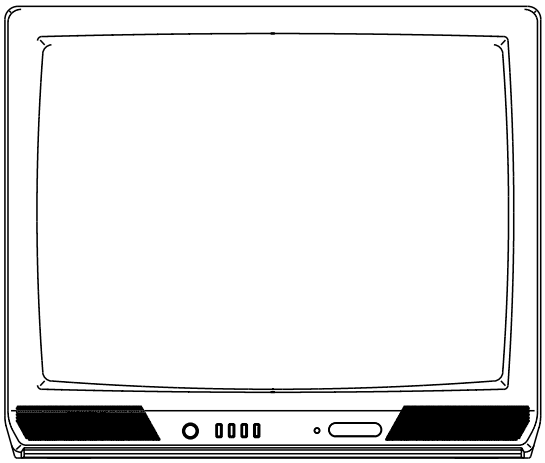
SPEC.NO.	M3I0-56G
O/R NO.	A083521

Memorex®

MT2251

SERVICE MANUAL

COLOR TELEVISION RECEIVER



ORIGINAL
MFR'S VERSION D

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 **[Note1]** .
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.Outline of the Product
25 inch(626 mmV):Measured diagonally
Color CRT 100 degree deflection

G-2.Broadcasting System
US System M

G-3.Color System ☒NTSC ☐PAL ☐SECAM or Monochrome signal

G-4.NTSC Playback(PAL 60Hz) ☐Yes ☒No

G-5.NTSC 3.58+4.43/PAL60Hz ☐Yes ☒No

G-6.Antenna Input Impedance
VHF/UHF 75 ohm unbalanced

G-7.Tuner and Receiving Contactless Electric tuner ☒1Tuner System ☐2Tuner System

channel Tuner ☐Oscar(W/O HYPER) ☐Oscar(W/ HYPER) ☐France CATV) ☒Others

Receiving channel
(USA) 2-69 , 4A , A-5~A-1 , A~I , J~W , W+1~W+84

Tuning System
☒Frequency syn. ☐Voltage syn. ☐Others

G-8.Preset Channel
-- channels

G-9.Intermediate Frequency

Picture(fP)	45.75 MHz	_____ MHz	_____ MHz
Sound (fS)	41.25 MHz	_____ MHz	_____ MHz
fP-fS	4.50 MHz	_____ MHz	_____ MHz

G-10.Stereo/Dual TV Sound
☐ Yes(☐NICAM ☐GERMAN ☐USA ☐JAPAN) ☒No

G-11.Tuner Sound Muting ☒Yes ☐No

G-12.Power Source 120 V ☐AC 50Hz ☒AC 60Hz

G-13.Power Consumption: 115 W at AC 120 V 60 Hz
_____W at DC _____V
Stand by: 8 W at AC 120 V 60 Hz
Per Year: - kWh / Year

G-14.Dimensions(Approx.)
618 mm(W) 504 mm(D) 525 mm(H)

G-15.Weight(Approx.) Net : 27 kg (59.9 lbs)
Gross: 29 kg (64.3 lbs)

G-16.Cabinet Material

Cabinet Front:	☒PS	☐94HB	☒DECABROM
	☐ABS	☐94V2	☐NON-DECA
		☒94V0	
Back Panel:	☒PS	☐94HB	☒DECABROM
	☐ABS	☐94V2	☐NON-DECA
		☒94V0	

GENERAL SPECIFICATIONS

G-17.Protector: ☒Power Fuse

G-18.Regulation

Safety

☒UL	☐CSA	☐SAA	☐SI	☐CE	☐SEV
☐BS	☐NF	☐NEMKO	☐FEMKO	☐DEMKO	☐IEC65
☐SEMKO	☐NZ	☐HOMOLO	☐SABS	☐CNS	☐SISIR
☐NOM	☐AS3159	☐DENTORI	☐UNE	☐GOST	☐NONE

Radiation

☒FCC	☐DOC	☐FTZ	☐PTT	☐CE	☐SEV
☐SABA	☐SI	☐NF	☐NZ	☐HOMOLO	☐UNE
☐CNS	☐CISPR13	☐DENTORI	☐AS/NZS	☐NONE	

X-Radiation

☐PTB	☒DHHS	☐HWC	☐DENTORI	☐NONE

G-19.Temperature

Operation 5 ˚C~ 40 ˚C

Storage -20 ˚C~ 60 ˚C

G-20.Operating Humidity Less than 80 %RH

G-21.Clock and Timer

Sleep Timer	☒Yes Max 120 Min.(10 Min. Step)	☐No
On/Off Timer	☐Yes _____ Programs	☒No
Wake Up Timer	☐Yes _____ Programs	☒No

G-22.Timer back up Time

More than -- Minutes (at Power Off Mode)

G-23.Terminals

☒VHF/UHF Antenna Input ☐ Din Type ☒ F-Type ☐ France Type

☐Front Video Input (RCA ø8.3)

☐Rear Video Input (RCA ø8.3)

☐Rear Video Output (RCA ø8.3)

☐Front Audio Input (RCA ø8.3)

☐Rear Audio Input (RCA ø8.3)

☐Rear Audio Output (RCA ø8.3)

☐21 Pin	☐DC Jack(Center +)	☐Ear Phone Jack(ø3.5)
☐Head Phone Jack(ø3.5)	☐AC Outlet	☐Ext Speaker
☐Diversity	☐S Input(Front)	☐S Input(Rear)

G-24.Indicator

☐Power (____)	☐Stand By (____)	☐On Timer (____)	☒NONE

G-25.Display

On Screen Display

☒Menu	☐Clock Set(☐12H ☐24H)	☐System Selec	☐On/Off Timer
	☐Hotel Lock	☐Area Code	☒CH Tuning
	☐Sound 1/2	☐NICAM Auto Off	☒Picture
	☐Guide CH Set	☐Audio	☒Language
	☐CATV	☐Pin Code Registration	☒V-Chip
☒Control Level	☒Sound	☒Brightness	☒Contrast
	☒Color	☒Tint(NTSC Only)	☒Sharpness
	☐Tuning	☐Bass	☐Treble
	☐Balance	☐Back Light	
☐Stereo,Audio Output,Bilingual		☐Picture Menu	
☐Stereo,Audio Output, SAP		☐Mid Night Theater	
☐Stereo,Audio Output		☐GAME	
☐AV	☒Channel	☐Clock	☐Hotel Lock
☒Sleep Timer	☒Sound Mute	☐Pin Code	

GENERAL SPECIFICATIONS

G-26.OSD Language

☒Eng ☐Ger ☒Fre ☒Spa ☐Ita ☐Por ☐Jpn

OSD Language Setting

☒Eng ☐Ger ☐Fre ☐Spa ☐Ita ☐Por ☐Jpn

☐Not Applicable

G-27.Speaker

Position ☒Front ☐Side ☐Bottom

Size 1.5 x 2.7 inches

Imp. 4 ohm x 2 pcs

Power Max 075 + 0.75 W

10% 0.5 + 0.5 W (Typical)

G-28.EXT Speaker

☐Yes --- W Imp --- ohm

G-29.Carton

Master Carton: ☐Need ☒No Need

Content: ---- Set

Material: ---- / ---- Corrugated Carton

Dimensions: ----mm(W) ----mm(D) ----mm(H)

Description of Origin ☐Yes ☐No

Gift Box

Material ☐ Double/Brown Corrugated Carton (☐with Photo Label)

☒ Double/White Corrugated Carton (☐with Photo Label)

☐ Double Full Color Carton W/Photo

Dimensions: 689 mm(W) 577 mm(D) 620 mm(H)

Design: As Per BUYER 's

Description of Origin: ☒Yes ☐No

Drop Test Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces

Height ☐25cm ☒31cm ☐46cm ☐62cm ☐80cm

Container Stuffing: 204 Sets / 40' container

G-30.Accessories

☒Owner's Manual (☐W/Guarantee Card) [English / Spanish]

☐AC Plug Adapter

☐Battery (UM- 4 x 2)

☐Safety Tip

☒Guarantee Card

☐Registration Card

☐Quick Set-Up Sheet

☐Information Sheet

☐75 ohm Coaxial Cable (☐Single Shield ☐Double Shield)

☐300 ohm to 75 ohm VHF Antenna Adaptor

☐21pin Cable

☐Rod Antenna

☐One Pole ☐Two Pole (☐F-Type ☐Din Type ☐France Type)

☐Loop Antenna (☐F-Type ☐Din Type ☐France Type)

☐Channel Film

☒Remote Control Unit

☐Toll Free Insert Sheet

☐Audio-Video Cord (RCA)

☐Warning Sheet

☐Schematic Diagram

☐U/V Mixer

☐Car Cord

G-31.Other Features

☒Auto Degauss	☐Auto Search	☐Full OSD
☒Auto Shut Off	☐CH Allocation	☐Premiere
☐Canal+	☐SAP	☐Comb Filter
☒CATV(181CH)	☐Channel Lock	☒Auto CH Memory
☐Anti-Theft	☐Just Clock Function	☐Hotel Lock
☐Rental	☐Game Position	☐Fastext
☐Unitext	☐TopText	☒Closed Caption
☐Picture Menu	☐Mid Night Theater	☒V-Chip

GENERAL SPECIFICATIONS

G-32.Switch

Front

☒Power(Tact)	☒Channel Up/Reset	☒Volume Up/Set Up
☐System Select	☒Channel Down/Enter	☒Volume Down/Set Down
☐Main Power SW	☐Sub Power	☒Menu:Vol UP + Vol Down

Rear

☐AC/DC	☐TV/CATV Selector
☐Degauss	☐Main Power SW

G-33.Magnetic Field

☒BV : +0.45G BH : 0.18G	☐BV : +0.35G BH : 0.30G	☐BV : +0.25G BH : 0.30G
☐BV : -0.15G BH : 0.15G	☐BV : -0.25G BH : 0.15G	☐BV : -0.50G BH : 0.30G

G-34.Remote Control Unit: RC- 74

Glow in Dark Remocon ☐Yes ☒No

Power Source: D.C 3 V Battery UM - 4 x 2

Total 26 Key

☒ Power	☒Quick View	☐TV/AV
☐ Stand By	☐Status	☐Bar Select
☒ 0	☐Time Select	☐PAL/SECAM
☒ 1	☐Time Set	☒Volume Up
☒ 2	☒Muting	☒Volume Down
☒ 3	☐CH Skip	☐CH Call
☒ 4	☒CH1/CH2	☒CH Down
☒ 5	☐Channel	☒CH Up
☒ 6	☐Text/Mix/TV	☐CH Down/Page Down
☒ 7	☐Display Cancel	☐CH Up/Page Up
☒ 8	☐Initial	☐Page +/-
☒ 9	☐Store	☐Program
☐10	☐Reveal	☐F/T/B
☐11	☒Sleep	☐Hold
☐12	☐Aft/Skip	☐List
☐1	☐Preset	☐Rotate
☐2	☐5.5/6.5MHz	☐Browse
☐0/10	☐Auto Memory	☐Std/Auto
☐Tone 1/2	☐Auto	☐Memory
☐Info	☒Call	☐Band Select
☐Mono/Auto	☒Reset	☐Search
☒TV/Caption/Text	☒Menu	☐Clock/Program
☐Expand	☒Enter	☐Clock/Set
☐Red	☐Add	☐Ch Set
☐Cyan	☐Delete	☒Set +
☐Normal	☐Yellow	☒Set -
☐Color System	☐Random	☐Green
☐Wide Selecy	☐Tuning Up/Time Text	☐Nicam/Mono
☐Auto Wide On/Off	☐Tuning Down/Reset	☐Tone A/B
☐Picture Position	☐Navi	☐FM Transmitter
☐Direct Change/Auto Search		☐Back Light
☐Picture Menu	☐Mid Night Theater	☐Audio Select

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.

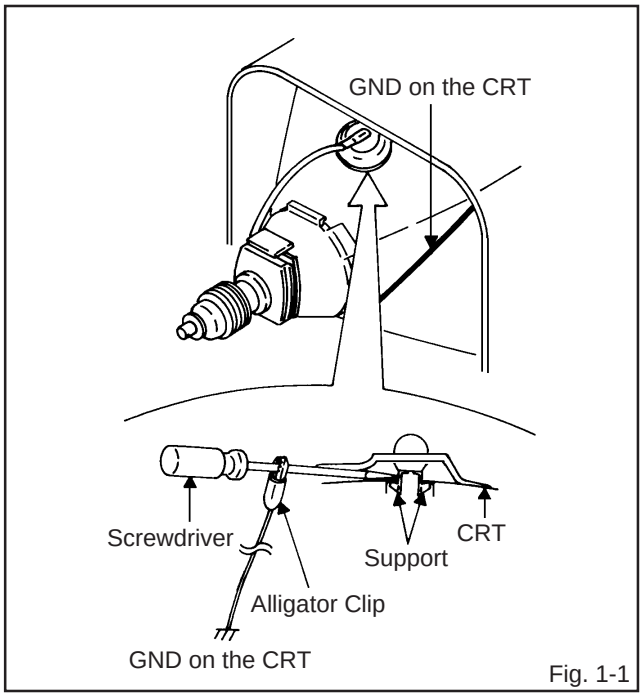


Fig. 1-1

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.)**

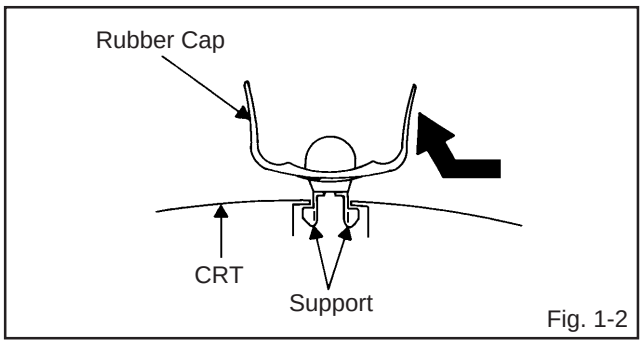


Fig. 1-2

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.)**

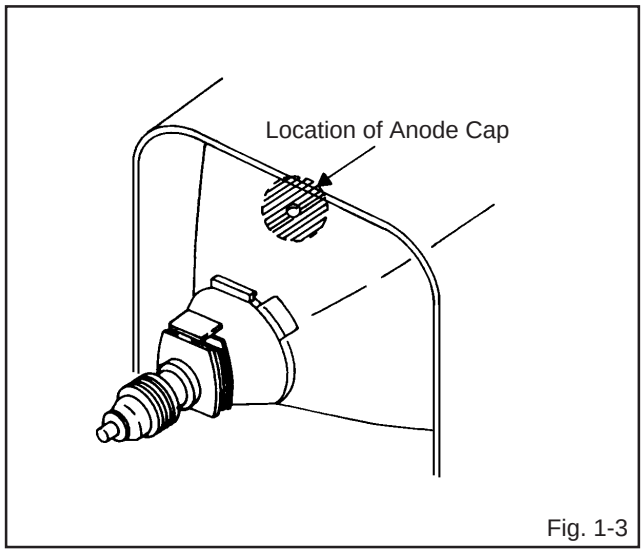


Fig. 1-3

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.)**

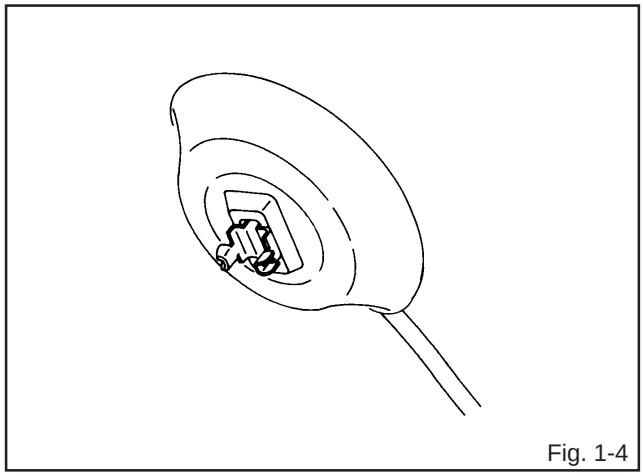


Fig. 1-4

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

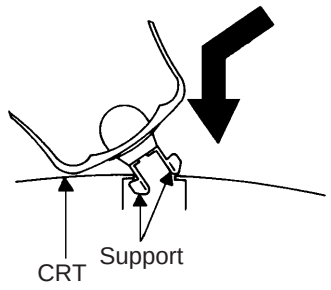


Fig. 1-5

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

2. REMOVAL OF DEFLECTION YOKE

(Refer to Fig. 2-1)

1. Loosen the screw ①.
2. Remove the Convergence • Purity Magnet in the direction of arrow (A).
3. Loosen the screw ②.
4. Remove the 3 Wedges.
5. Remove the Deflection Yoke in the direction of arrow (B).

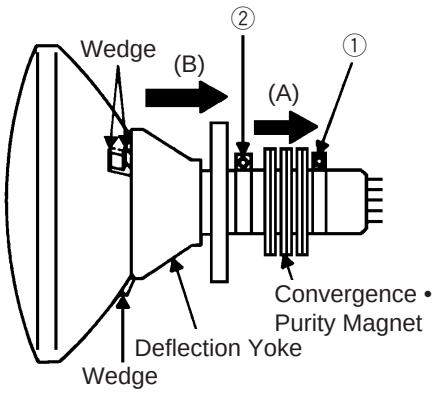


Fig. 2-1

INSTALLATION

Install new Deflection Yoke in reverse steps of REMOVAL.

NOTE

After adjusting the purity and the convergence, fix the screw ② and lock the wedges.

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.

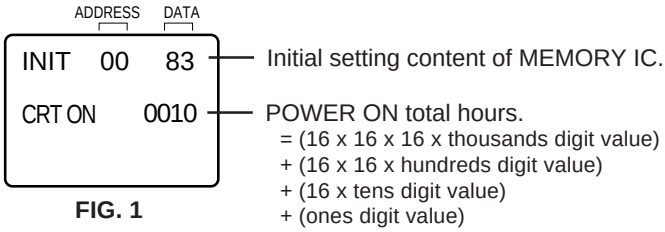


FIG. 1

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.

ADDRESS	INI 00	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A
DATA	A0	01	A2	09	02	63	24	18	A1	21	44

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**.

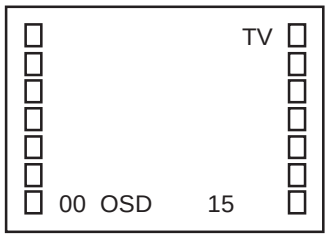


Fig. 1-1

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 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. Receive an 80dB monoscope pattern.
2. Connect the digital voltmeter to **TP001**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "RF DELAY".
4. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 1.80 ± 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=126, 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: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the with 100% signal from the pattern generator.
3. Using the remote 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.

2-4: FOCUS

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

2-5: SUB TINT/SUB COLOR

1. Receive the color bar pattern.
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 110% of the white level. **(Refer to Fig. 2-2)**

ELECTRICAL ADJUSTMENTS

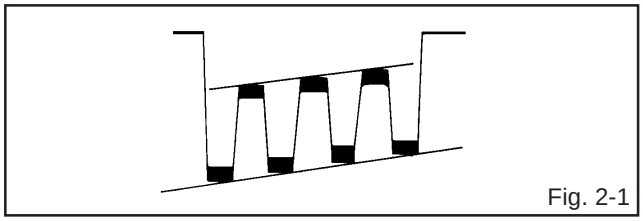


Fig. 2-1

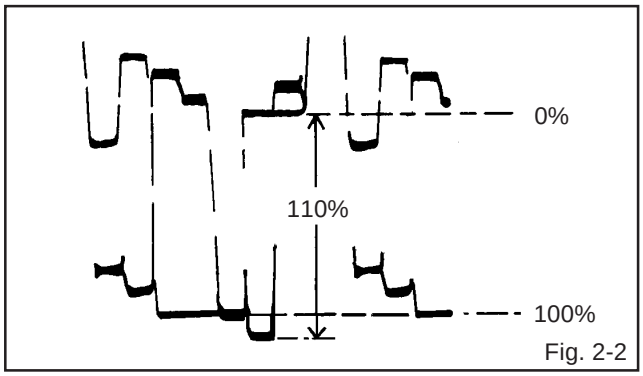


Fig. 2-2

2-6: HORIZONTAL PHASE

1. Receive the center cross signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select "H.PHASE".
4. 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. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V.SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the rectangle on the center of the screen becomes square.
5. 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. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(07)** on the remote control to select "V.SHIFT".
4. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask.

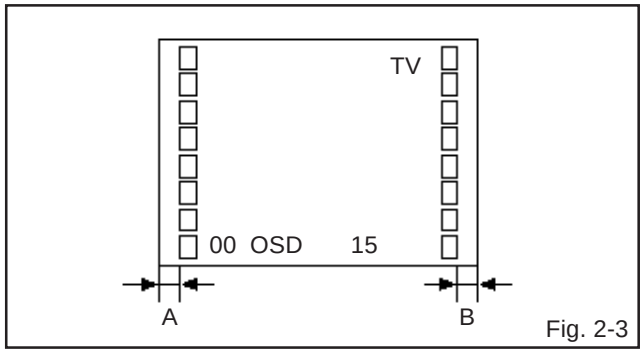


Fig. 2-3

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)**

2-10: VERTICAL VCO

1. Place the set with Aging Test for more than 15 minutes.
2. Receive an 80dB monoscope pattern.
3. Connect the digital voltmeter between the **pin 5 of CP601**.
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 BRIGHTNESS

1. Receive 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.

2-12: SUB CONTRAST

1. Receive the color bar pattern.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(14)** on the remote control to select "CONTRAST".
3. Press the VOL. UP/DOWN button on the remote control unit the nit for more than 200 nit.

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.

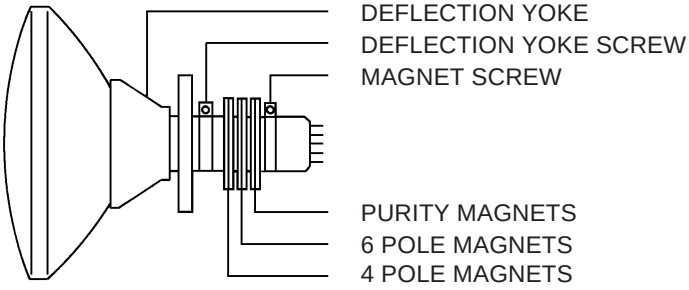


Fig. 3-1

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)**

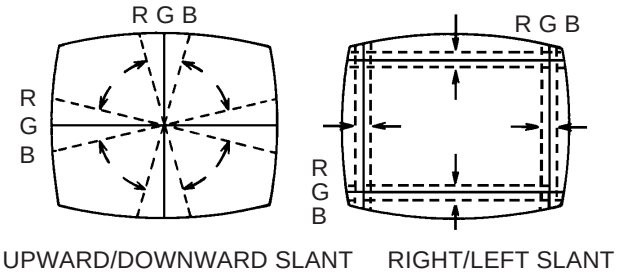


Fig. 3-2-a

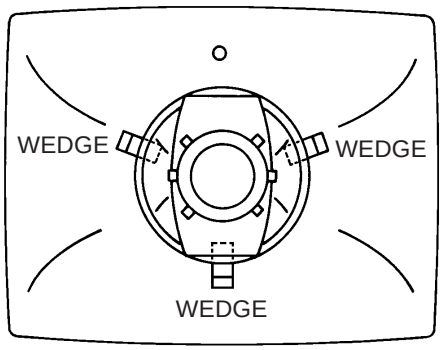
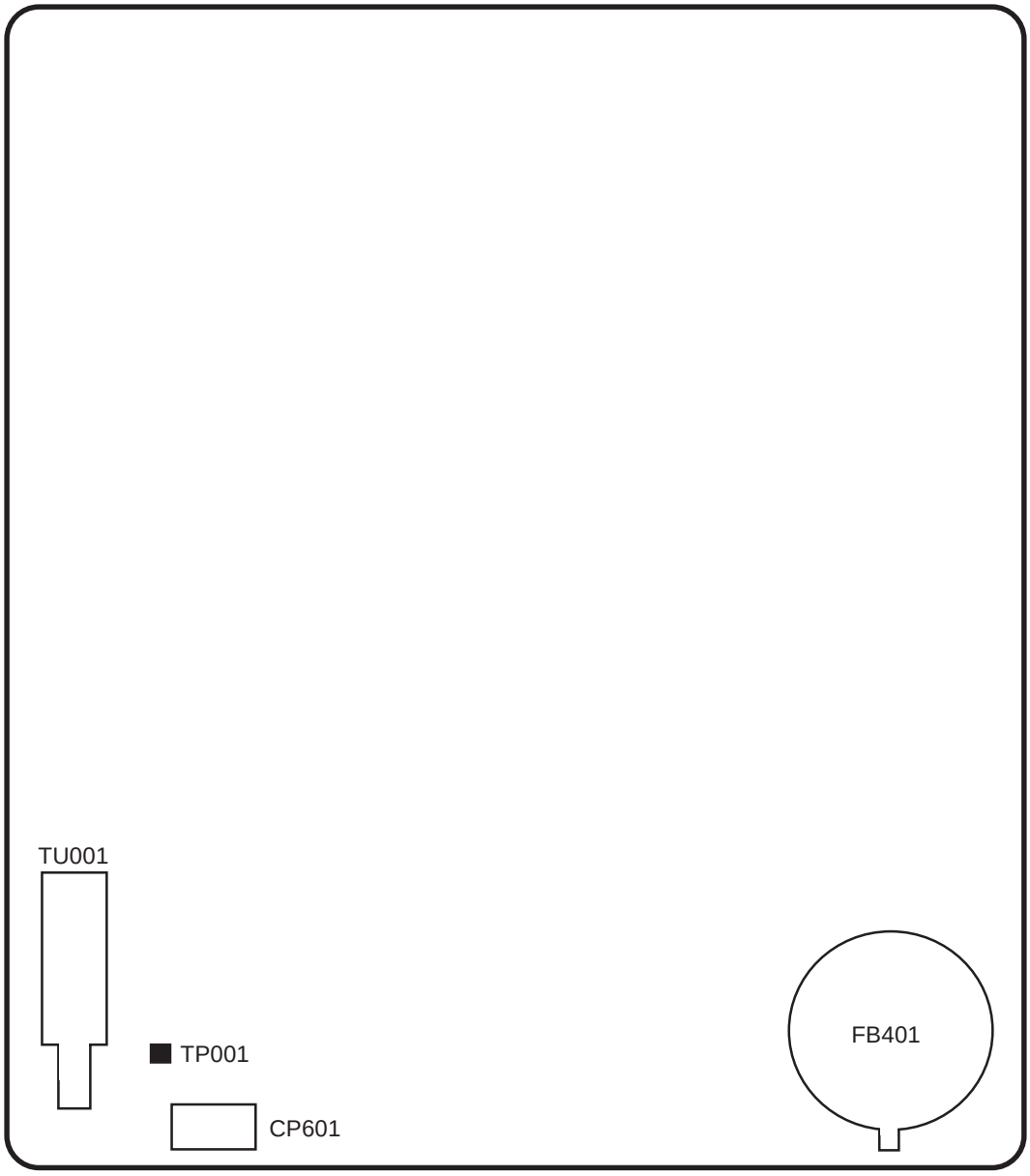
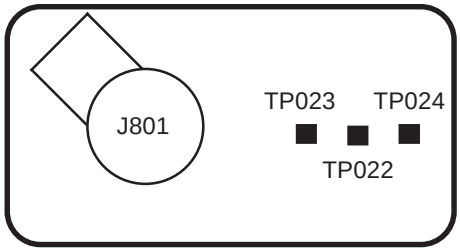


Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE

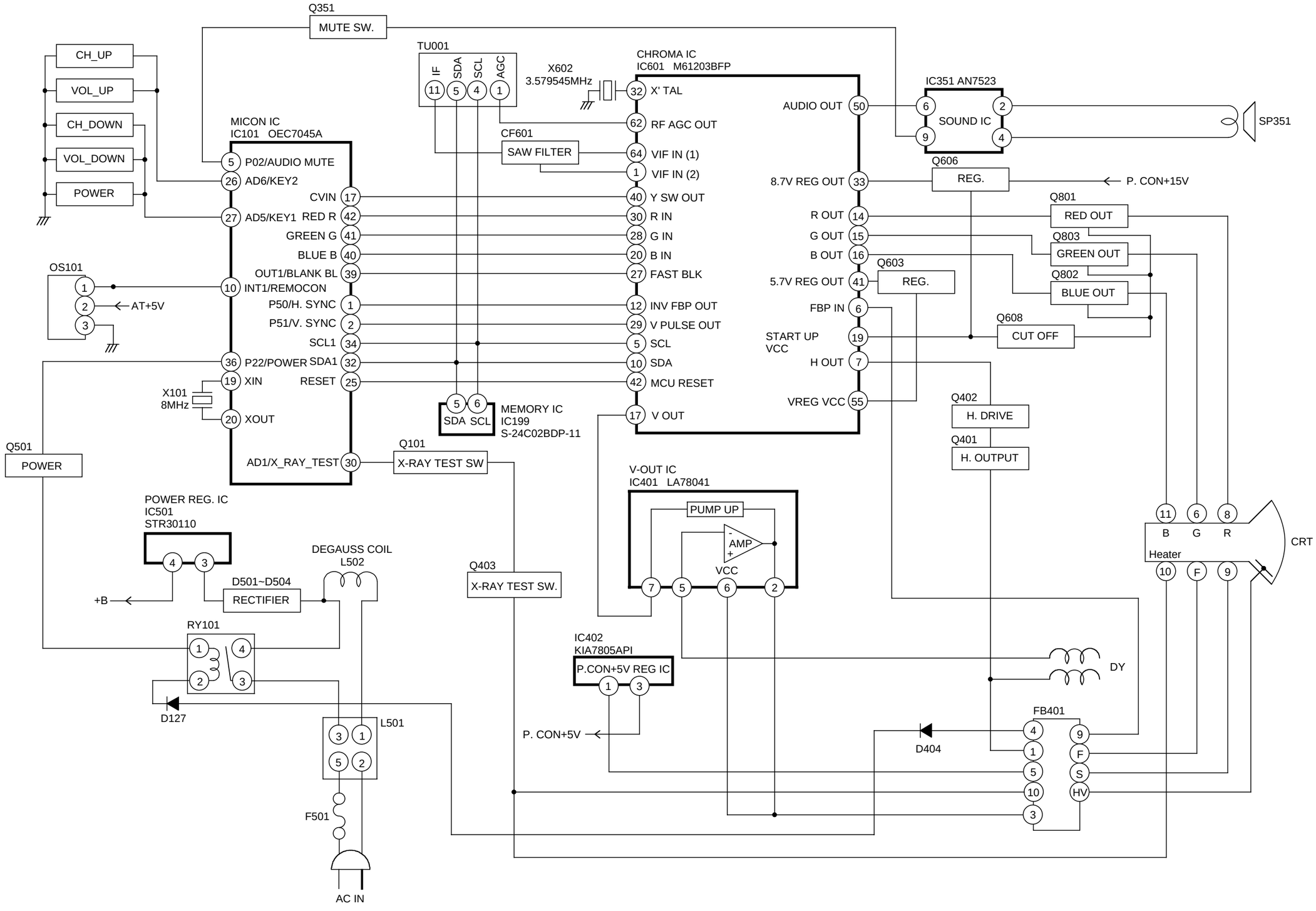


MAIN PCB

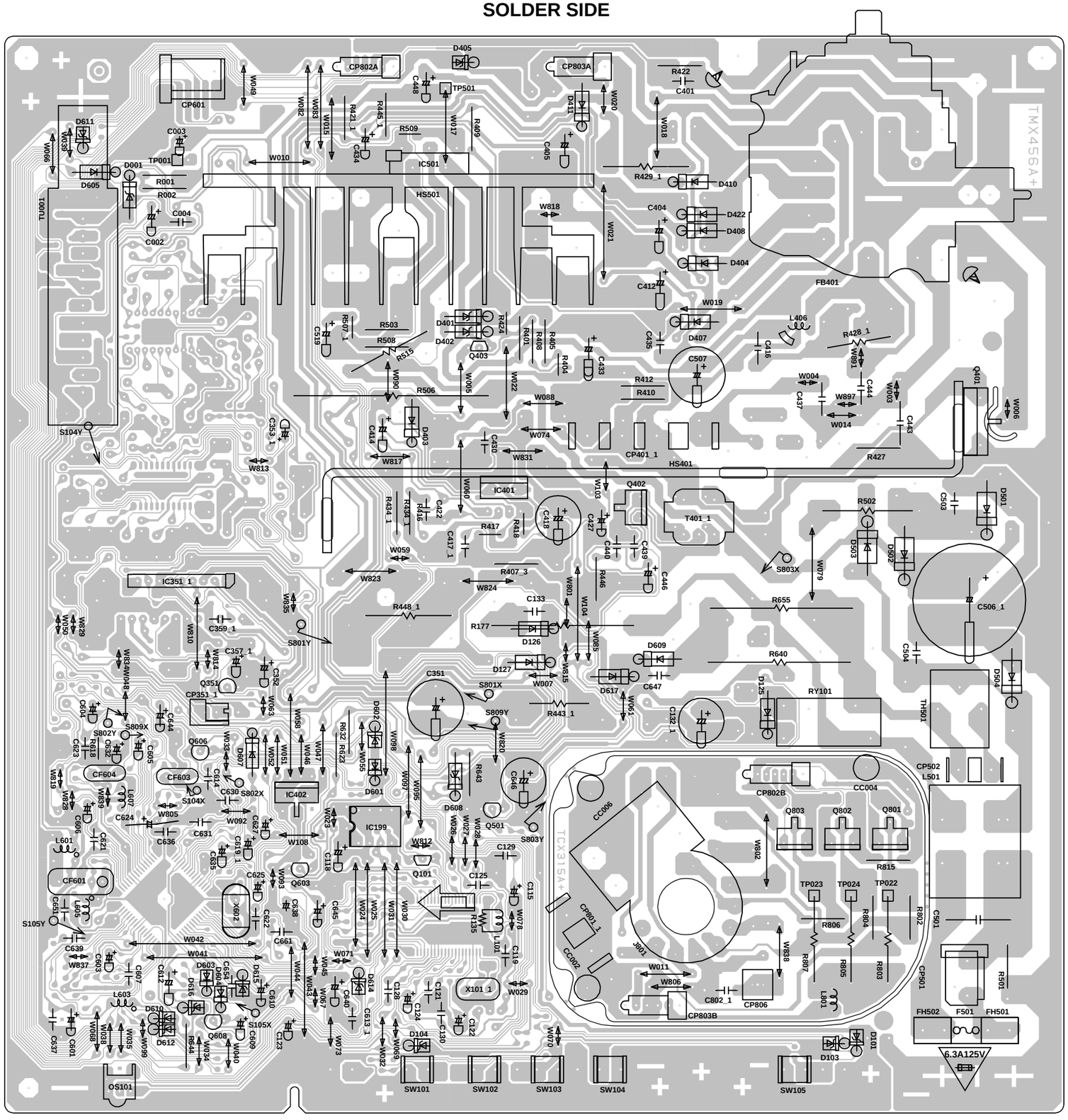


CRT PCB

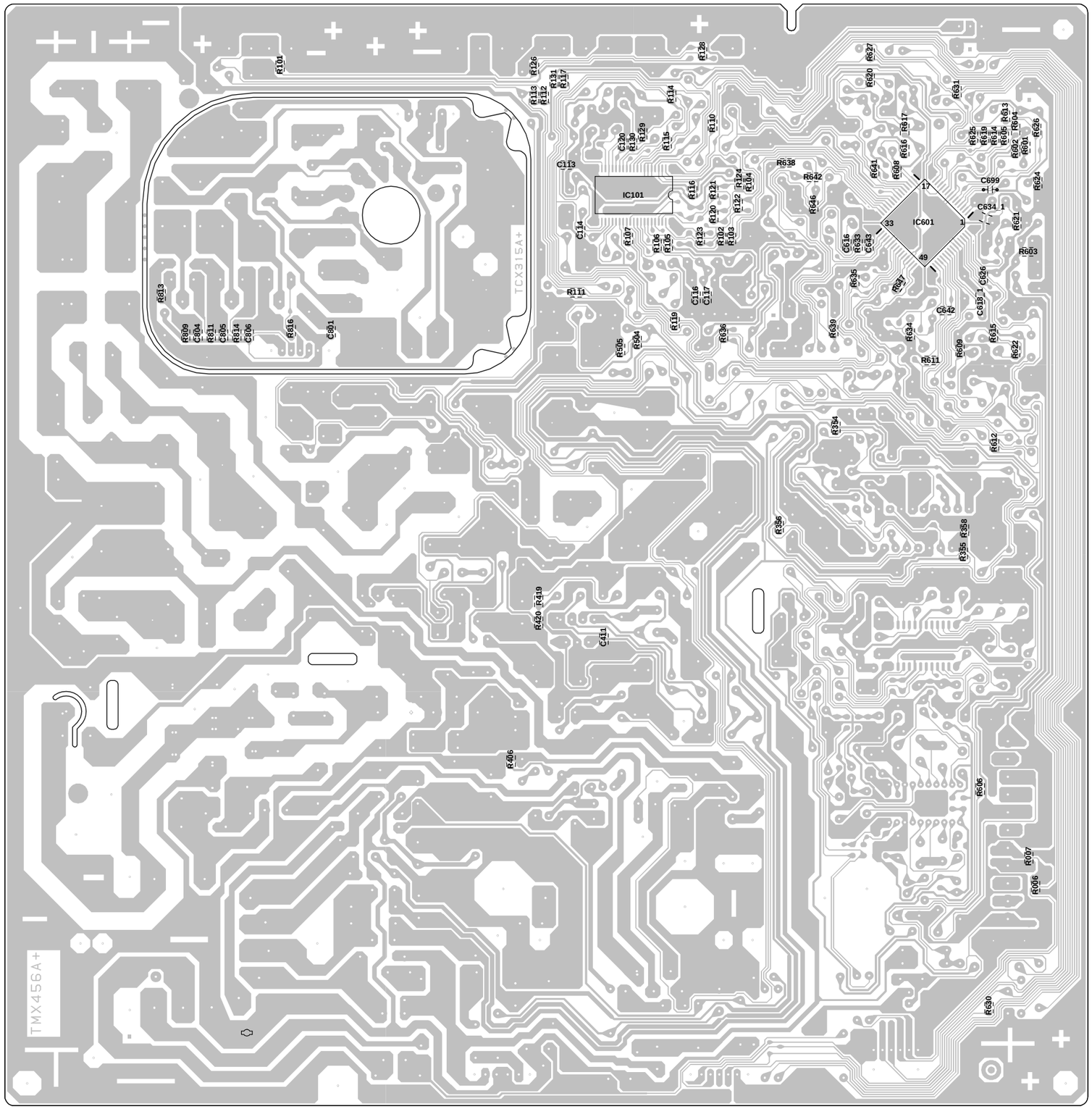
BLOCK DIAGRAM



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)

ACCESORRY
TM101
R25-1127

ATC001
NXC0032-010010

TU001 NJH3021U268
IF 0 | NC 0 | BTL 30.0 | NC 0 | BPL 5.0 | V.S NC | SDA 5.0 | SCL 5.0 | ADRES 1.3 | NC 6.2 | AGC 4.6
TP001
JWF-50K-1
C003
50V 4.7 KA
C004 0.022 M
D001 HZ30-3L
C002 6.3V 470 YK
R001 68K 1/2W
R002 68K 1/2W
R006 270
R007 270

OS101
PIC-28143SY-2
Vout 4.7 | B+ 4.7 | GND 0
C123 16V 10 KA
R131 47

S809X

MICON IC
IC101 OEC7045A

4.9	P50/H.SYNC	RED R	0
4.9	P51/V.SYNC	GREEN G	0
0	P00/EXT MUTE	BLUE B	0
4.9	P01/I2C_OFF	OUT1/BLANK BL	0
0	P02/AUDIO MUTE	P20/AV2	0 NC
0	P03/(Surround)	P21/AV1	0 NC
0	P04	P22/POWER	4.9
0	P05/(Center_SP)	P10/DEGAUSS_M	0 NC
4.8	INT2/P.FAIL	SCL1	4.9
4.8	INT1/REMOCON	SCL2	0 NC
3.9	P23/SYNC	SDA1	5.0
0 NC	P24	SDA2	0 NC
0 NC	P25/ON_TIMER	AD1/X_RAY_TEST	0
4.9	AVCC	X-RAY	0
3.0	HLF	AD4/AFT	3.2
0.8	V.HOLD	AD5/KEY1	4.9
3.4	CVIN	AD6/KEY2	4.9
0	CNVSS	RESET	4.9
3.7	Xin	OSC1	3.6
4.2	Xout	OSC2	4.1
0	VSS	VCC	4.9

R110 1K
R116 47K
R117 47K
R111 10K
R114 10K
R115 47K
D104 MTZJ6.8B
C128 0.01 Y
C122 50V 1 KA
C121 200P CH
R130 1K
C120 0.001 Y
C124 50V 0.1 KA
R129 1M
C130 0.001 B
X101_1 CST8.00MTW
C119 0.68 TF
C118 6.3V 470 YK
R107 10K
W812
R112 2.2K
R113 2.2K
C114 10P CH
C115 50V 0.1 KA
C135 0.01 Y
R135 2.7K
C001
L101 3.3uH
C113 10P CH
C129 0.68 TF
C117 270P B
R105 4.7K
C116 270P B
R106 4.7K

16.0
X-RAY TEST SW
Q101
DTC114TS

D101 MTZJ6.8B
D103 MTZJ6.8B

R123 4.7K
R122 4.7K
R121 4.7K
R120 4.7K
R102 2.2K
R103 2.2K
R104 2.2K
R124 4.7K
R119 1K

MEMORY I/C
IC199 S-24C02BDP-11
SDA 5.0 | SCL 5.0 | MODE 0 | VCC 5.0
VSS 0 | E2 0 | E1 0 | E0 0

R101 560
R126 2.7K
R128 560

POWER SW105 SKHVBED010 25°
VOL DOWN SW104 SKHVBED010 25°
VOL UP SW103 SKHVBED010 25°
CH DOWN SW102 SKHVBED010 25°
CH UP SW101 SKHVBED010 25°

FROM DEFLECTION/CRT
P_CON+5V
FROM POWER
GND
+B
FROM/TO CHROMA
AGC
IF
I2C_OFF
VD
HD
OSD_R
OSD_G
OSD_B
OSD_BLK
GND
SCL
SDA
POWER
TO SOUND AMP
AUDIO_MUTE
TO POWER
POWER
FROM/TO DEFLECTION/CRT
X-RAY_TEST
X-RAY
FROM CHROMA
AFT
AT+5V
RESET
FROM CHROMA
SYNG
Y_VIDEO

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.

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

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。

CAUTION: DIGITAL TRANSISTOR

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

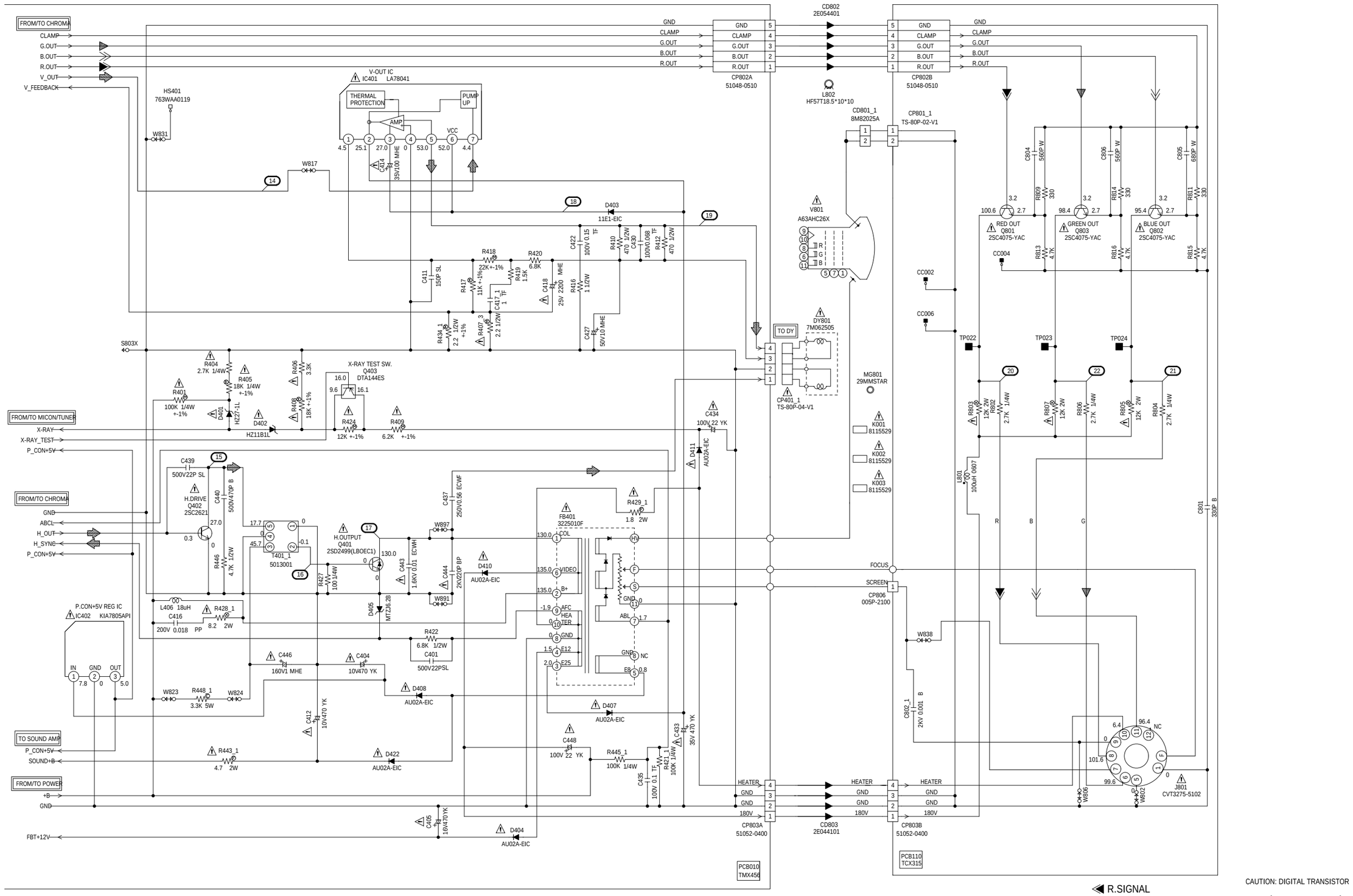
PCB010
TMX456

CHROMA SCHEMATIC DIAGRAM

(MAIN PCB)

TO MICON/TUNER
SYNC
Y_VIDEO
AT+5V
RESET
FROM POWER
AT+15V
TO SOUND AMP
GND
AUDIO_OUT
FROM POWER
P_CON+15V
FROM/TO DEFLECTION/CRT
ABCL
P_CON+5V
V_FEEDBACK
V_OUT
GND
H_OUT
H_SYNC
B.OUT
G.OUT
R.OUT
CLAMP
FROM/TO MICON/TUNER
AFT
AGC
IF
GND
HD
POWER
OSD_B
OSD_BLK
OSD_G
VD
OSD_R
I2C_OFF
SDA
SCL
TEST POINT
CP601
TKC-M06X-A1
B.OUT 6
INT.MONI 5
IIC_OFF 4
SDA 3
SCL 2
GND 1
AUDIO BYPASS
EXT AUDIO IN
FM DIRECT OUT
VIF VCO F/B
VREG Vcc
VIF APC FILTER
VIF VIDEO OUT
VIF GND
AFT OUT
QIF IN
RF AGC OUT
RF AGC FILTER
SAW FILTER CF601 SAF45MFY220ZR
CHROMA IC IC601 M61203BFP
VIF Vcc
H VCO F/B
SCL
FBP IN
H OUT
DEF
SDA
AFC FILTER
INV FBP OUT
POWER ON CONT
R OUT
G OUT
Hi Vcc
INTELLIGENT MONI
MCU RESET
5.7V REG OUT(FOR CPU)
Y SW OUT
5v REG
VIDEO/CHROMA GND
TV/Y IN
CHROMA APC FILTER
R IN
V PULSE OUT
G IN
FAST BLK
SPOT KILLER
fsc OUT
VIDEO CHROMA Vcc
V RAMP CAP
V RAMP FEEDBACK
B IN
STRAT UP Vcc
46 SW REG CONT
47 LIMITER IN
48 IF AGC
49 QIF OUT
50 AUDIO OUT
64 VIF IN (1)
1 VIF IN (2)
34 EXT C in
33 8.7V REG OUT
32 X'TAL
31 ACL/ABCL
17 V OUT
16 B OUT
R.SIGNAL
G.SIGNAL
B.SIGNAL
DEFLECTION SIGNAL
AUDIO SIGNAL
LUMINANCE 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.
PCB010
TMX456

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



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.

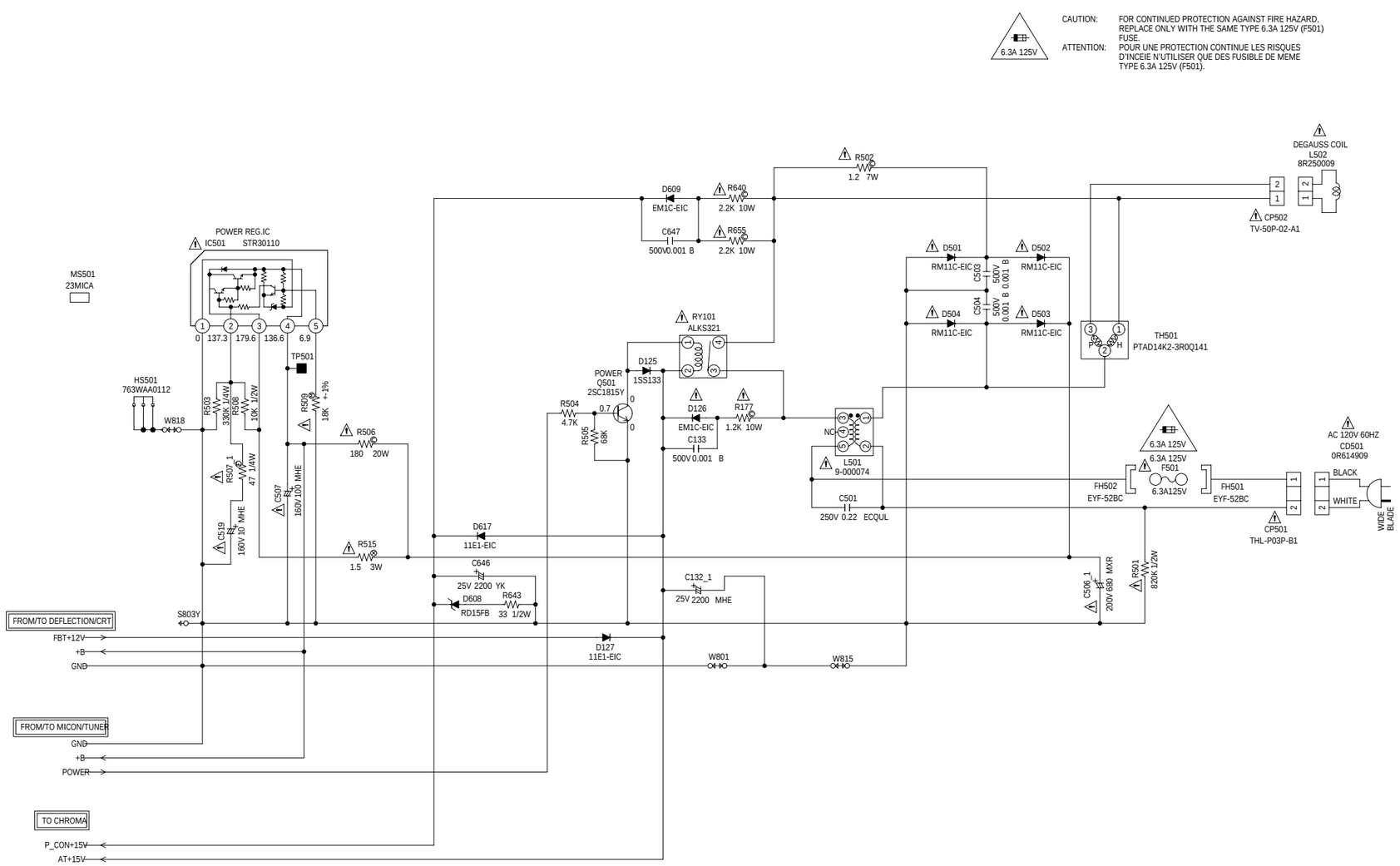
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

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

◀ R.SIGNAL
◀ G.SIGNAL
≪ B.SIGNAL
DEFLECTION SIGNAL

CAUTION: DIGITAL TRANSISTOR

POWER SCHEMATIC DIAGRAM
(MAIN PCB)



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.

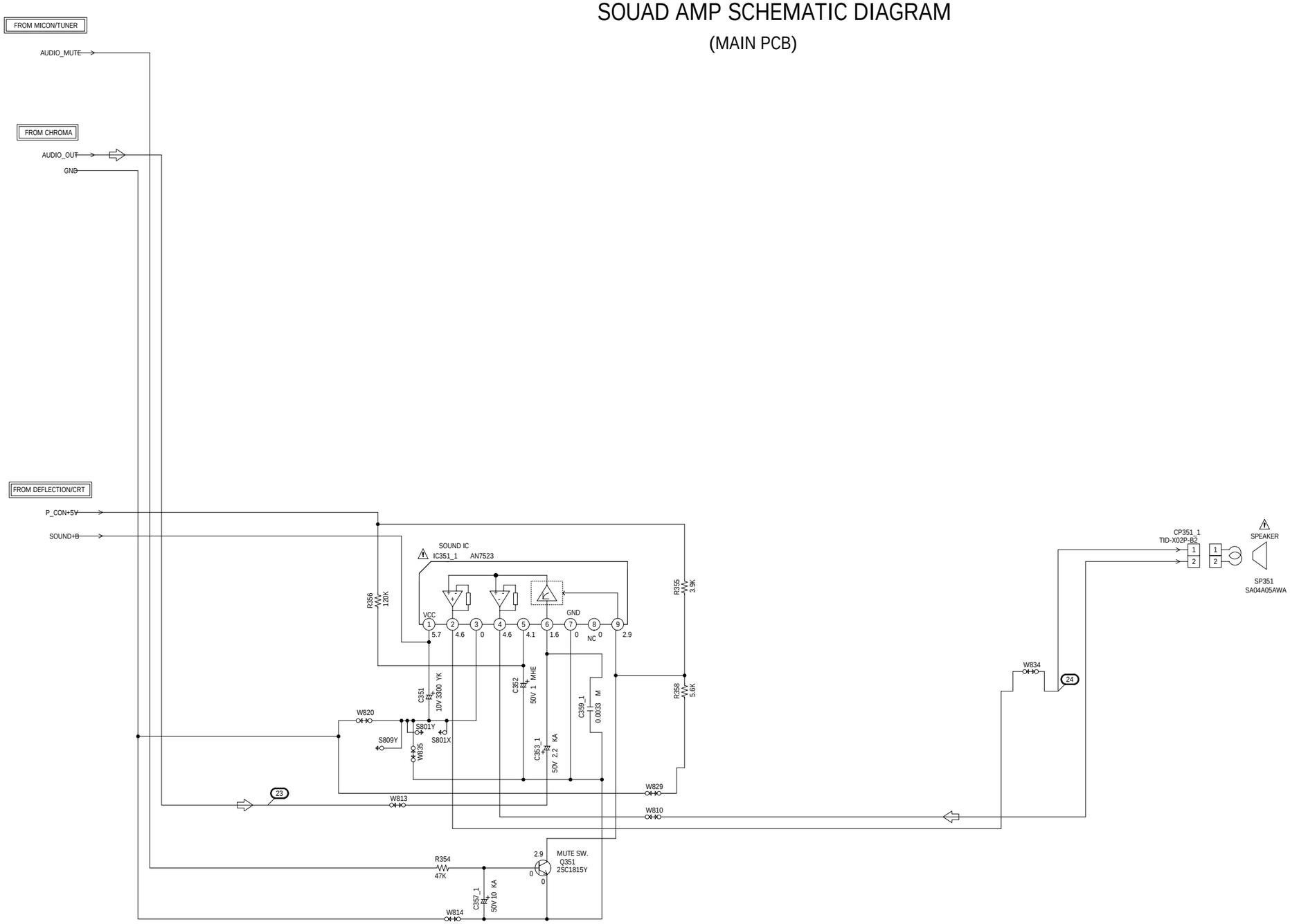
CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

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

PCB010
TMX456

SOUAD AMP SCHEMATIC DIAGRAM

(MAIN PCB)



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 。

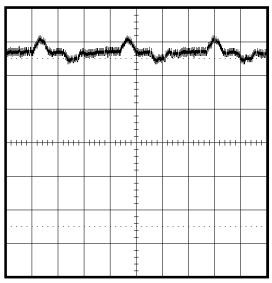
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

⇦ AUDIO SIGNAL

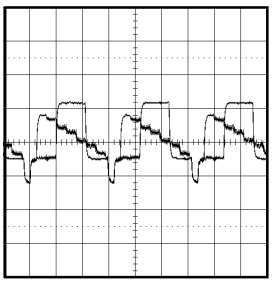
PCB010
TMX456

WAVEFORMS

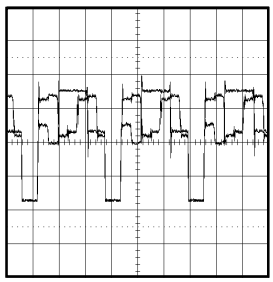
MICON/TUNER



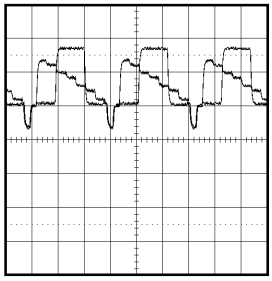
① 200mV 5ms/div



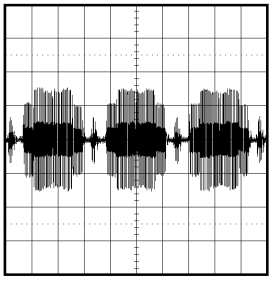
⑥ 0.5V 20µs/div



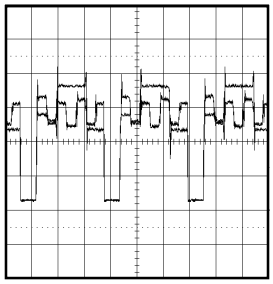
⑪ 1V 20µs/div



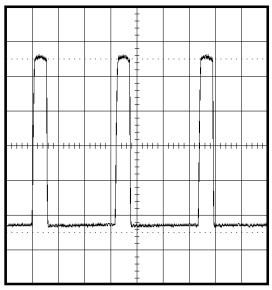
② 0.5V 20µs/div



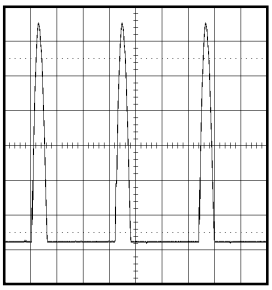
⑦ 200mV 20µs/div



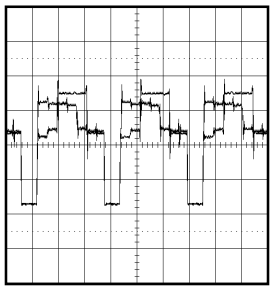
⑫ 1V 20µs/div



③ 200mV 20µs/div

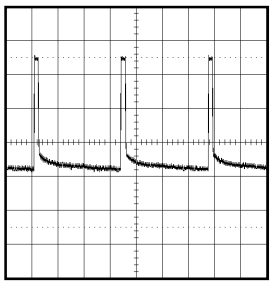


⑧ 20V 20µs/div

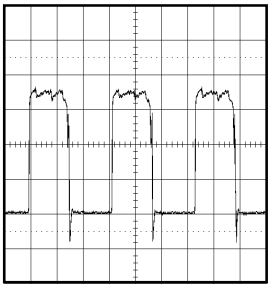


⑬ 1V 20µs/div

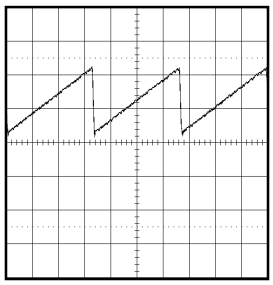
DEFLECTION/CRT



④ 200mV 5ms/div

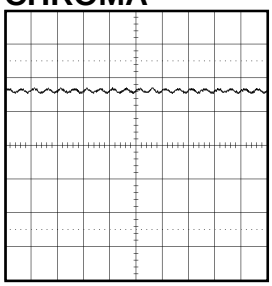


⑨ 200mV 20µs/div

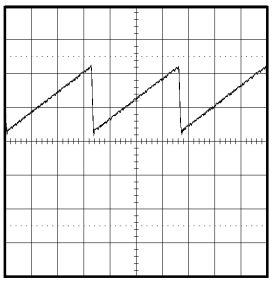


⑭ 0.5V 5ms/div

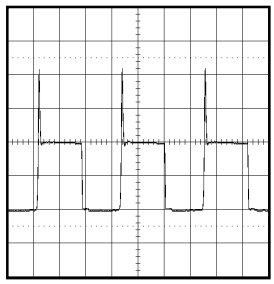
CHROMA



⑤ 0.5V 2ms/div



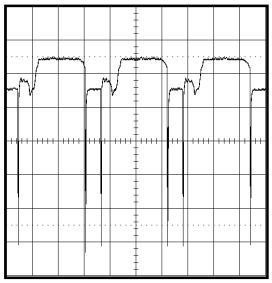
⑩ 0.5V 5ms/div



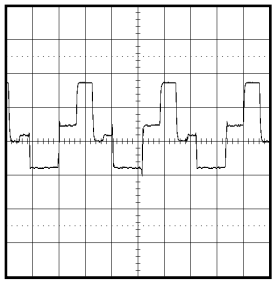
⑮ 20V 20µs/div

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

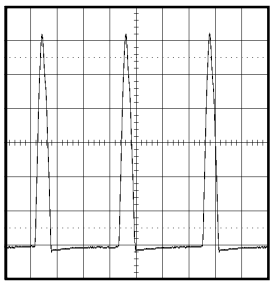
WAVEFORMS



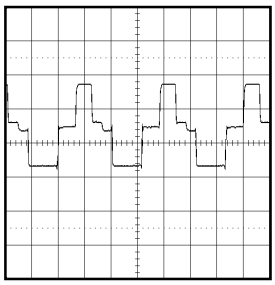
⑯ 2V 20µs/div



㉑ 50V 20µs/div

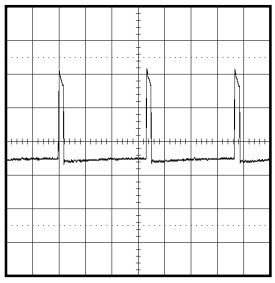


⑰ 200V 20µs/div

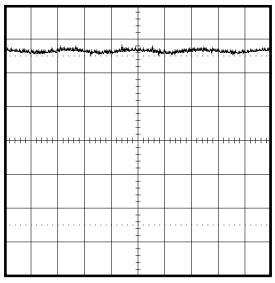


㉒ 50V 20µs/div

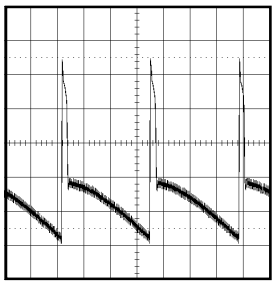
SOUND AMP



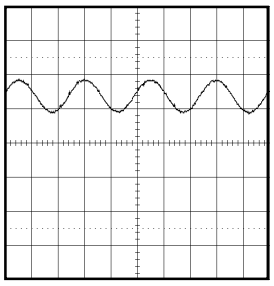
⑱ 10V 5ms/div



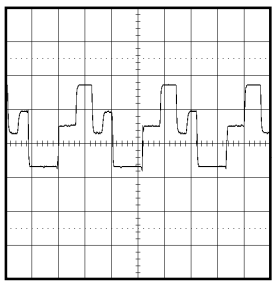
㉓ 0.5V 1ms/div



⑲ 10V 5ms/div



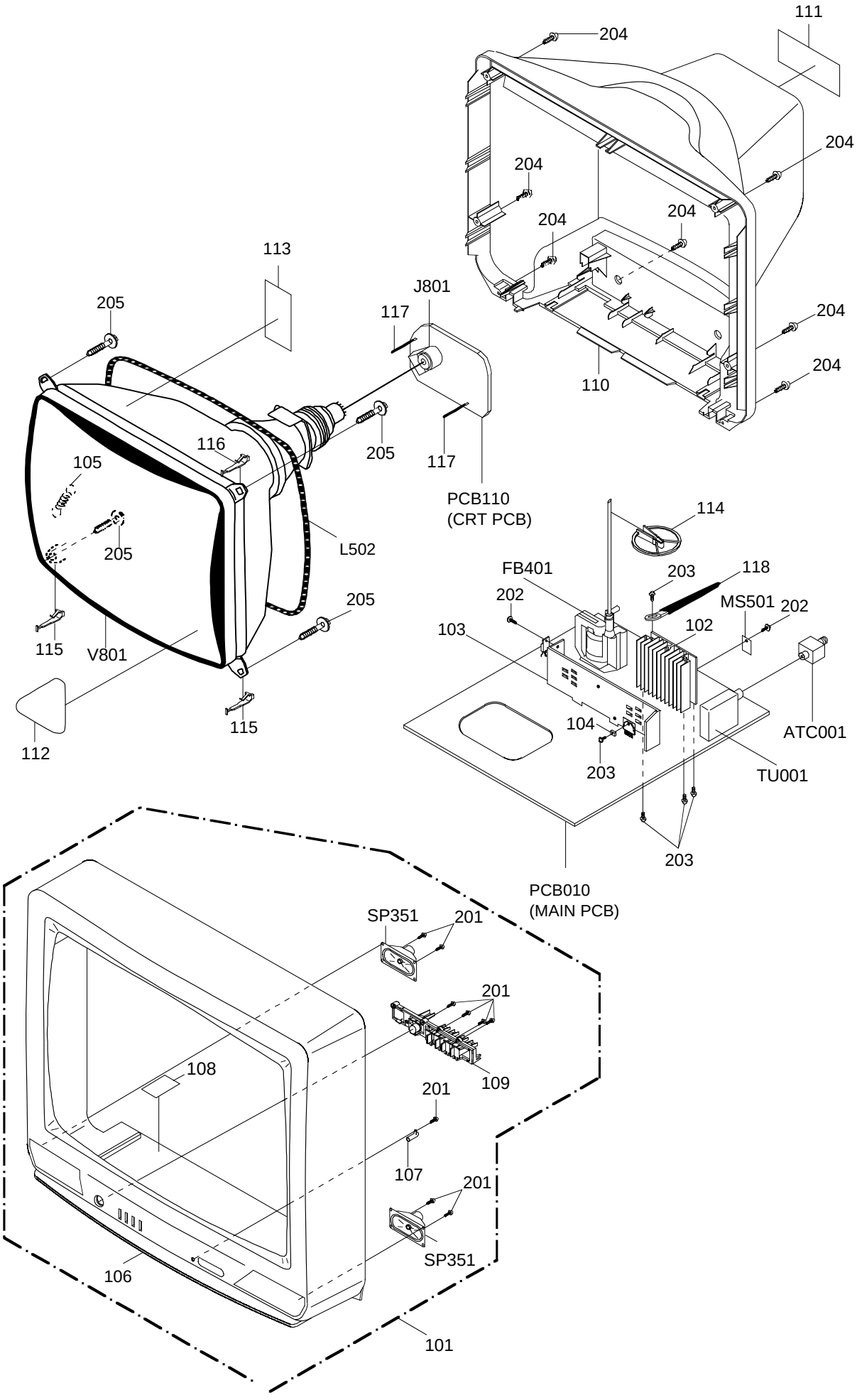
㉔ 1V 1ms/div



⑳ 50V 20µs/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	8995034000	CORD CLIP UL CO.		
102	---	HEAT SINK		
103	---	HEAT SINK		
104	---	METAL SPACER		
105	741WUA0021	SPRING,EARTH		
106	701APJA036	CABINET,FRONT		
107	713WPA0096	GUIDE,REMOCON		
108	7230006856	SHEET,CAUTION		
109	735WPA0426	BUTTON ASS'Y		
110	702APA0086	CABINET,BACK		
111	722552A004	SHEET,RATING		
112	723000B179	FILM,DECORATION		
113	7232020733	SHEET,BRAND		
114	899HV3T001	HOLDER,ANODE WIRE		
115	762WPA0009	HOLDER,CRT WIRE		
116	8994201000	HOLDER,CRT WIRE		
117	7220001109	SHEET,HWC		
118	7240001041	SHEET,CSA WARNING		
119	---	COATING CLIP		
201	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
202	8117D30A04	SCREW,TAPPING (B0)	WH8 BRAZIER	3x10
203	8109630802	SCREW,TAP TITE (B)	BRAZIER	3x8
204	8117540B04	SCREW,TAPPING (B0)	TRUSS	4x20
205	8111J50D04	SCREW,TAPPING (A)	GW22	5x40
---	J3I06201	INSTRUCTION BOOK		
---	JB5U0100	POLYBAG		
---	792AHA0073	PACKAGE,TOP		
---	792AHA0074	PACKAGE,BOTTOM		
---	791AHA0021	FILM BAG		
---	793ACDA087	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO	PART NO.	DESCRIPTION	
RESISTORS			
R135	R001T6272J	RC	2.7K OHM 1/6W
⚠ R177	R5W2CF122J	R, CEMENT	1.2K OHM 10W
⚠ R401	R4X5T4104F	R, METAL	100K OHM 1/4W
⚠ R404	R002T4272J	RC	2.7K OHM 1/4W
⚠ R405	R4X5T4183F	R, METAL	18K OHM 1/4W
⚠ R406	R903N9332J	RC	3.3K OHM 1/8W
⚠ R407	R426T22R2F	R, METAL	2.2 OHM 1/2W
⚠ R408	R4X5T6183F	R, METAL	18K OHM 1/6W
⚠ R409	R4X5T6622F	R, METAL	6.2K OHM 1/6W
⚠ R417	R4X5T6113F	R, METAL	11K OHM 1/6W
R418	R4X5T6223F	R, METAL	22K OHM 1/6W
⚠ R424	R4X5T6123F	R, METAL	12K OHM 1/6W
⚠ R428	R3X28A8R2J	R, METAL	8.2 OHM 2W
⚠ R429	R6558A1R8J	R, FUSE	1.8 OHM 2W
⚠ R443	R6558A4R7J	R, FUSE	4.7 OHM 2W
R448	R5X2CD332J	R, CEMENT	3.3K OHM 5W
⚠ R501	R002T2824J	RC	820K OHM 1/2W
⚠ R502	R5X2CE1R2J	R, CEMENT	1.2 OHM 7W
⚠ R506	R5W2CH181J	R, CEMENT	180 OHM 20W
⚠ R507	R655U4470J	R, FUSE	47 OHM 1/4W
⚠ R509	R4X5T6183F	R, METAL	18K OHM 1/6W
⚠ R515	R3X28B1R5J	R, METAL	1.5 OHM 3W
⚠ R640	R5X2CF222J	R, CEMENT	2.2K OHM 10W
⚠ R655	R5X2CF222J	R, CEMENT	2.2K OHM 10W
⚠ 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			
C132	E5EZF3222M	CE	2200 UF 25V
C351	E02LF1332M	CE	3300 UF 10V
⚠ C404	E02LT1471M	CE	470 UF 10V
⚠ C405	E02LT2471M	CE	470 UF 16V
⚠ C412	E02LT1471M	CE	470 UF 10V
⚠ C414	E5EZT4101M	CE	100 UF 35V
C416	P3N1F2183J	CPP	0.018 UF 200V
⚠ C418	E5EZF3222M	CE	2200 UF 25V
⚠ C433	E02LT4471M	CE	470 UF 35V
⚠ C434	E02LT8220M	CE	22 UF 100V
C437	P411F3564J	CMPP	0.56 UF 250V ECWF
⚠ C443	P414F9103H	CMPP	0.01 UF 1.6KV ECWH
⚠ C444	C01BBP7H2K	CC	220 UF 2KV BP
⚠ C446	E5EZTB010M	CE	1 UF 160V
⚠ C448	E02LT8220M	CE	22 UF 100V
C501	P2122B224M	CMP	0.22 UF 250V ECQUL
⚠ C506	E52SFC681M	CE	680 UF 200V
⚠ C507	E5EZFB101M	CE	100 UF 160V
⚠ C519	E5EZTB100M	CE	10 UF 160V
C624	E02L01222M	CE	2200 UF 10V
C646	E02LF3222M	CE	2200 UF 25V
C699	CHGTY0214M	CC	0.01 UF 16V Y
DIODES			
D001	D94TA30013	DIODE, ZENER	HZ30-3L TD
D101	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D103	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D104	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D125	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ D126	D2WT0EM1C0	DIODE, SILICON	EM1C-EIC
D127	D2WT011E10	DIODE, SILICON	11E1-EIC
⚠ D401	D94TA27011	DIODE, ZENER	HZ27-1L TD
⚠ D402	D94TA11B11	DIODE, ZENER	HZ11B1L TD
D403	D2WT011E10	DIODE, SILICON	11E1-EIC
⚠ D404	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
D405	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
⚠ D407	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D408	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D410	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D411	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D422	D2WTAU02A0	DIODE, SILICON	AU02A-EIC
⚠ D501	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D502	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D503	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
⚠ D504	D2WTRM11C0	DIODE, SILICON	RM11C-EIC
D601	D1VT001330	DIODE, SILICON	1SS133T-77
D602	D97U08R21B	DIODE, ZENER	MTZJ8.2B T-77
D603	D1VT001330	DIODE, SILICON	1SS133T-77
D604	D1VT001330	DIODE, SILICON	1SS133T-77
D605	D2WT011E10	DIODE, SILICON	11E1-EIC

REF. NO	PART NO.	DESCRIPTION	
DIODES			
D607	D1VT001330	DIODE, SILICON	1SS133T-77
D608	D9201150B1	DIODE, ZENER	RD15FB
D609	D2WT0EM1C0	DIODE, SILICON	EM1C-EIC
D610	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D611	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D612	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D614	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
D615	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
D616	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
D617	D2WT011E10	DIODE, SILICON	11E1-EIC
ICS			
IC101	I56F07045A	IC	OEC7045A
IC199	A3I051G015	IC	S-24C02BDP-11
⚠ IC351	I0FSP75230	IC	AN7523
⚠ IC401	I03TD80410	IC	LA78041
⚠ IC402	I1KA97805A	IC	KIA7805API
⚠ IC501	I2B4901100	IC	STR30110
IC601	I06FC12030	IC	M61203BFP
TRANSISTORS			
Q101	TNYTJ03001	COMPOUND TRANSISTOR	DTC114TSTP
Q351	TC5T018154	TRANSISTOR, SILICON	2SC1815Y(TPE2)
⚠ Q401	TDUU024990	TRANSISTOR, SILICON	2SD2499(LBOEC1)
⚠ Q402	TC3Q026210	TRANSISTOR, SILICON	2SC2621(D,E)-RAC
Q403	TPYTD03001	COMPOUND TRANSISTOR	DTA144ESTP
Q501	TC5T018154	TRANSISTOR, SILICON	2SC1815Y(TPE2)
Q603	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q606	TD3T007340	TRANSISTOR, SILICON	2SD734(E,F)-AA
Q608	TA5T010154	TRANSISTOR, SILICON	2SA1015Y(TPE2)
⚠ Q801	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q802	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q803	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
COILS &TRANSFORMER			
L101	021LA63R3K	COIL	3.3 UH
L406	021U6D180K	COIL	18 UH
⚠ L501	029K000074	COIL, LINE FILTER	9-000074
⚠ L502	028R250009	COIL, DEGAUSS	8R250009
L601	0216731R2K	COIL	1.2 UH
L603	021673100K	COIL	10 UH
L605	0216731R0J	COIL	1 UH
L607	021LA6150K	COIL	15 UH
L801	02167D101K	COIL	100 UH
L802	02A6A8A0A1	CORE, FERRITE	HF57T18.5x10x10
T401	045013001J	TRANS, HORIZONTAL DRIVE	5013001
JACK			
⚠ J801	066C130015	SOCKET, CATHODE RAY TUBE	CVT3275-5102
SWITCHES			
SW101	0504201T31	SWITCH, TACT	SKHVBED010 or
	0504101T34	SWITCH, TACT	EVQ21505R
SW102	0504201T31	SWITCH, TACT	SKHVBED010 or
	0504101T34	SWITCH, TACT	EVQ21505R
SW103	0504201T31	SWITCH, TACT	SKHVBED010 or
	0504101T34	SWITCH, TACT	EVQ21505R
SW104	0504201T31	SWITCH, TACT	SKHVBED010 or
	0504101T34	SWITCH, TACT	EVQ21505R
SW105	0504201T31	SWITCH, TACT	SKHVBED010 or
	0504101T34	SWITCH, TACT	EVQ21505R
P.C.BOARD ASSEMBLIES			
PCB010	A3I052G01A	PCB ASS'Y	TMX456A
PCB110	A3I057G11A	PCB ASS'Y	TCX315A
MISCELLANEOUS			
⚠ ATC001	0632400008	ANT UNIT	NXC0032-010010
⚠ CD501	120R614909	CORD, AC	0R614909 or
	1207614909	CORD, AC	07614909
CD801	068M82025A	CORD, CONNECTOR	8M82025A
CD802	122E054401	CORD, JUMPER	2E054401
CD803	122E044101	CORD, JUMPER	2E044101
CF601	1022T45R72	FILTER, SAW	SAF45MFY220ZR
CF603	1011T4R504	FILTER, CERAMIC	EFCT4R5YS5A
CF604	1011T4R517	FILTER, CERAMIC	EFCT4R5MW5
CP351	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
⚠ CP401	069W340018	CONNECTOR PCB SIDE	TS-80P-04-V1
⚠ CP501	0697320039	CORD, UX CONNECTOR	THL-P03P-B1
⚠ CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1
CP601	0697260650	CONNECTOR PCB SIDE	TKC-M06X-A1
CP801	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1
CP806	069W010010	CONNECTOR PCB SIDE	005P-2100
CP802A	067R005019	WIRE HOLDER	51048-0510

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO	PART NO.	DESCRIPTION	
		MISCELLANEOUS	
	CP802E	067R005019	WIRE HOLDER	51048-0510
	CP803A	067R104019	WIRE HOLDER	51052-0400
	CP803E	067R104019	WIRE HOLDER	51052-0400
⚠	DY801	027M062505	DY	7M062505
⚠	F501	081PA6R302	FUSE	23706.3
⚠	FB401	043225010F	TRANSFORMER, FLYBACK	3225010F
	FH501	06710T0006	HOLDER, FUSE	EYF-52BC
	FH502	06710T0006	HOLDER, FUSE	EYF-52BC
⚠	K001	129A000010	WEDGE	8115529
⚠	K002	129A000010	WEDGE	8115529
⚠	K003	129A000010	WEDGE	8115529
	MG801	026A062704	MAGNET, CONVERGENCE	29MMSTAR
	MS501	128B000018	SHEET	23MICA
	OS101	077Q014003	REMOTE RECEIVER	PIC-28143SY-2
⚠	RY101	0560V20115	RELAY	ALKS321
⚠	SP351	070C533016	SPEAKER	SA04A05AWA
	TH501	DF40A3R0Q0	DEGAUSS ELEMENT	PTAD14K2-3R0Q141
	TM101	076R074180	TRANSMITTER	R25-1127
⚠	TU001	0145W00049	TUNER, VHF-UHF	NJH3021U268
⚠	V801	0984250502	COLOR PICTURE TUBE	A63AHC26X
	X101	1002T00801	CERAMIC OSILLATOR	8MHz
	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.	M3I0-56G
O/R NO.	A053515

Memorex®

MT2251

SERVICE MANUAL

COLOR TELEVISION RECEIVER

REVISION 1
MFR'S VERSION F

MFR'S VERSION	IC601	PRODUCT IMPROVEMENT
D	M61203BFP	ORIGINAL
F	M61203CFP	Add the data of ROM CORRECTION

Please file this revision with the original version.

Add the data of ROM CORRECTION

NOTE FOR THE REPLACING OF MEMORY IC

	MFR'S VERSION D	MFR'S VERSION F
ADDRESS	DATA	DATA
0A	FF	44

Change of IC601

DIFFERENCES

	MFR'S VERSION D			MFR'S VERSION F		
REF. NO.	PART NO.	DESCRIPTION		PART NO.	DESCRIPTION	
IC601	I06FC12030	IC	M61203BFP	I06FC1203C	IC	M61203CFP
PCB010	A3I052G01A	MAIN PCB ASS'Y	TMX456A	A3I052G01B	MAIN PCB ASS'Y	TMX456A

NOTE FOR THE REPLACING OF MEMORY IC

	MFR'S VERSION D	MFR'S VERSION F
ADDRESS	DATA	DATA
00	20	A0
03	01	09

SPEC.NO.	M3I0-56G
O/R NO.	A083521