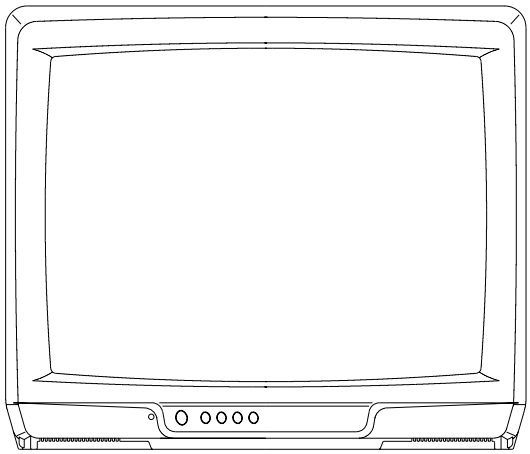
Memorex®

MT1196A

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

19 inch(480.0mmV):Measured diagonally

Color CRT 90 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 Channel

Tuner : Contactless Electric Tuner

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

channel coverage

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)	45.75MHz	_____ 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: 80 W at AC 120 V 60 Hz

-- W at DC --- V

Stand by: 6 W at AC 120 V 60 Hz

Per Year: -- kWh / Year

G-14.Dimensions(Approx.)

488 mm(W) 465 mm(D) 416 mm(H)

G-15.Weight(Approx.) Net: 17.5 kg (38.6 lbs)

Gross: 20.0 kg (44.1 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	

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

GENERAL SPECIFICATIONS

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)
☐Front Audio Input (RCA ø8.3)
☐Rear Video Input (RCA ø8.3)
☐Rear Audio Input (RCA ø8.3)
☐Rear Video Output (RCA ø8.3)
☐Rear Audio Output (RCA ø8.3)
☐21 Pin ☐S Input(Rear) ☐Ear Phone Jack(ø3.5)

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

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 3 inches
Imp 8 ohm x 1 pcs
Power Max 1.5 W
10% 1.0 W (Typical)

G-28.EXT Speaker

☐Yes -- W Imp -- ohm

GENERAL SPECIFICATIONS

G-29.Carton

Master Carton: ☐Need ☒No Need

Content: ____ Set

Material: ____ / ____ Corrugated Carton

Dimensions: ____mm(L) ____mm(W) ____mm(D)

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: 546 mm(L) 526 mm(W) 472 mm(D)

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: 436 Sets / 40' container

G-30.Accessories

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

☐AC Plug Adapter
☐Battery (UM- 4 x 2)
☐Safety Tip
☐Guarantee Card ☐Audio-Video Cord (RCA)
☐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
☐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

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

GENERAL SPECIFICATIONS

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	☒Mute	☒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	

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

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

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

REMOVAL

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

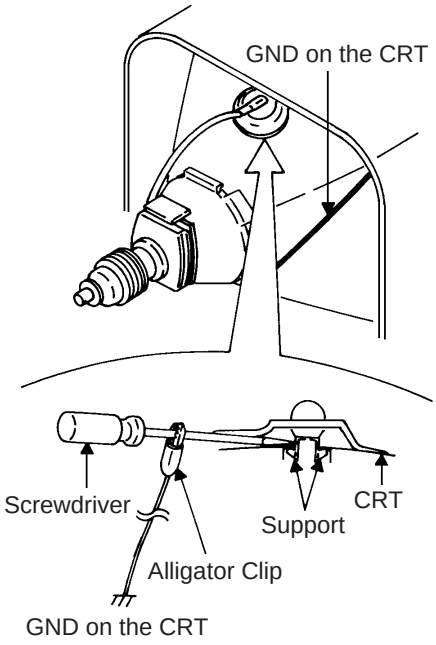


Fig. 1-1

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

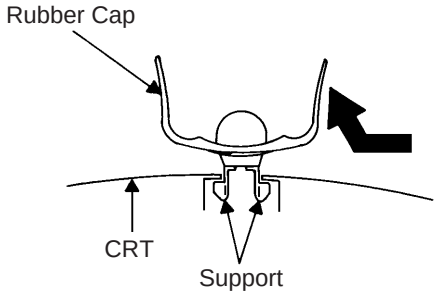


Fig. 1-2

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

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

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

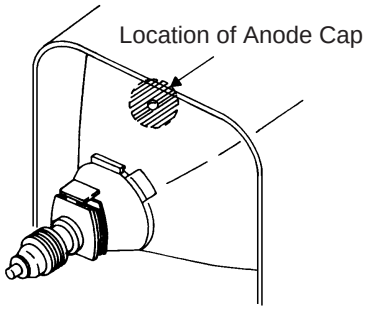


Fig. 1-3

NOTE

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

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

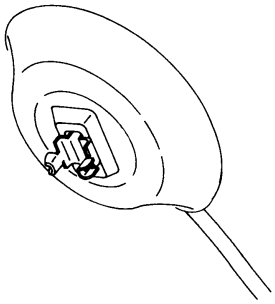


Fig. 1-4

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

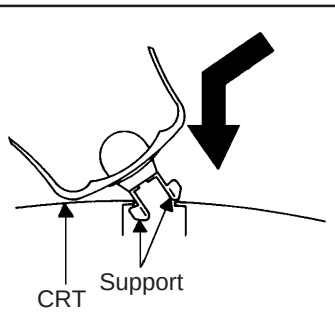


Fig. 1-5

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

SERVICE MODE LIST

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

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

CONFIRMATION OF USING HOURS

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

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

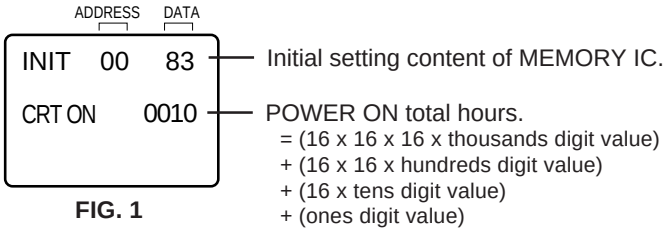


FIG. 1

NOTE FOR THE REPLACING OF MEMORY IC

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

ADDRESS	INI 00	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A
DATA	28	09	A0	01	02	B3	24	18	01	24	F4

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**.

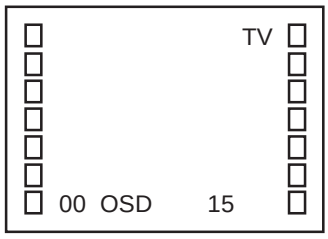


Fig. 1-1

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 80dB monoscope pattern.
2. Connect the digital voltmeter between the **TP001** and the **GND**.
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 1.95 ± 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=98
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 adjustments.

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

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 ± 10% of the white level. **(Refer to Fig. 2-2)**

ELECTRICAL ADJUSTMENTS

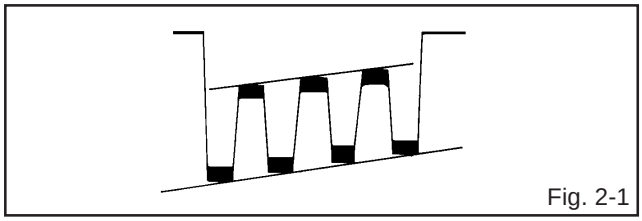


Fig. 2-1

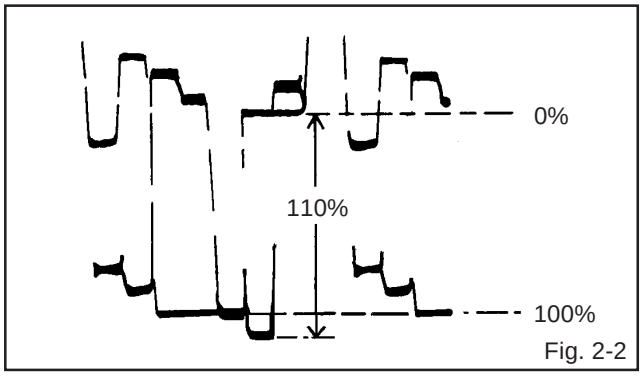


Fig. 2-2

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)**

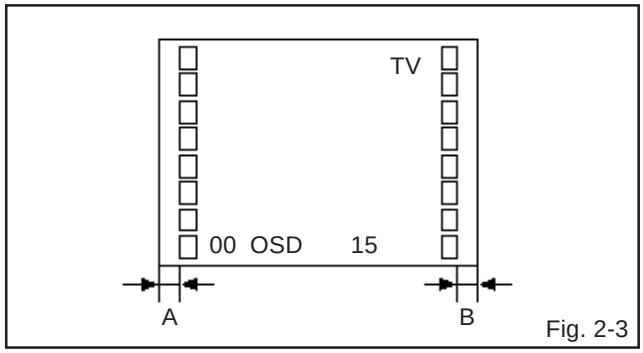


Fig. 2-3

2-10: VERTICAL VCO

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

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

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

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

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

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

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

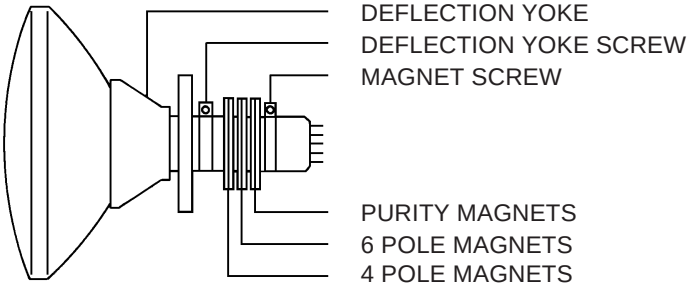


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

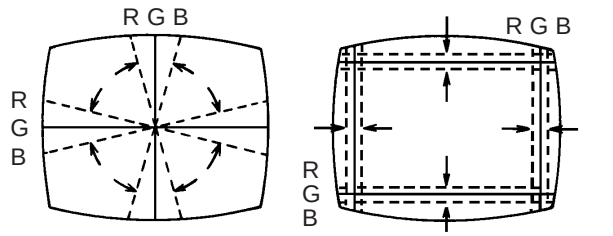
1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

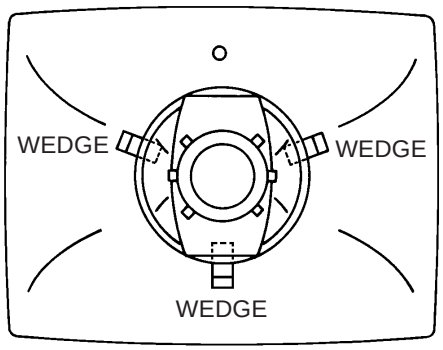
Adjust after performing adjustments in section 3-3.

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



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

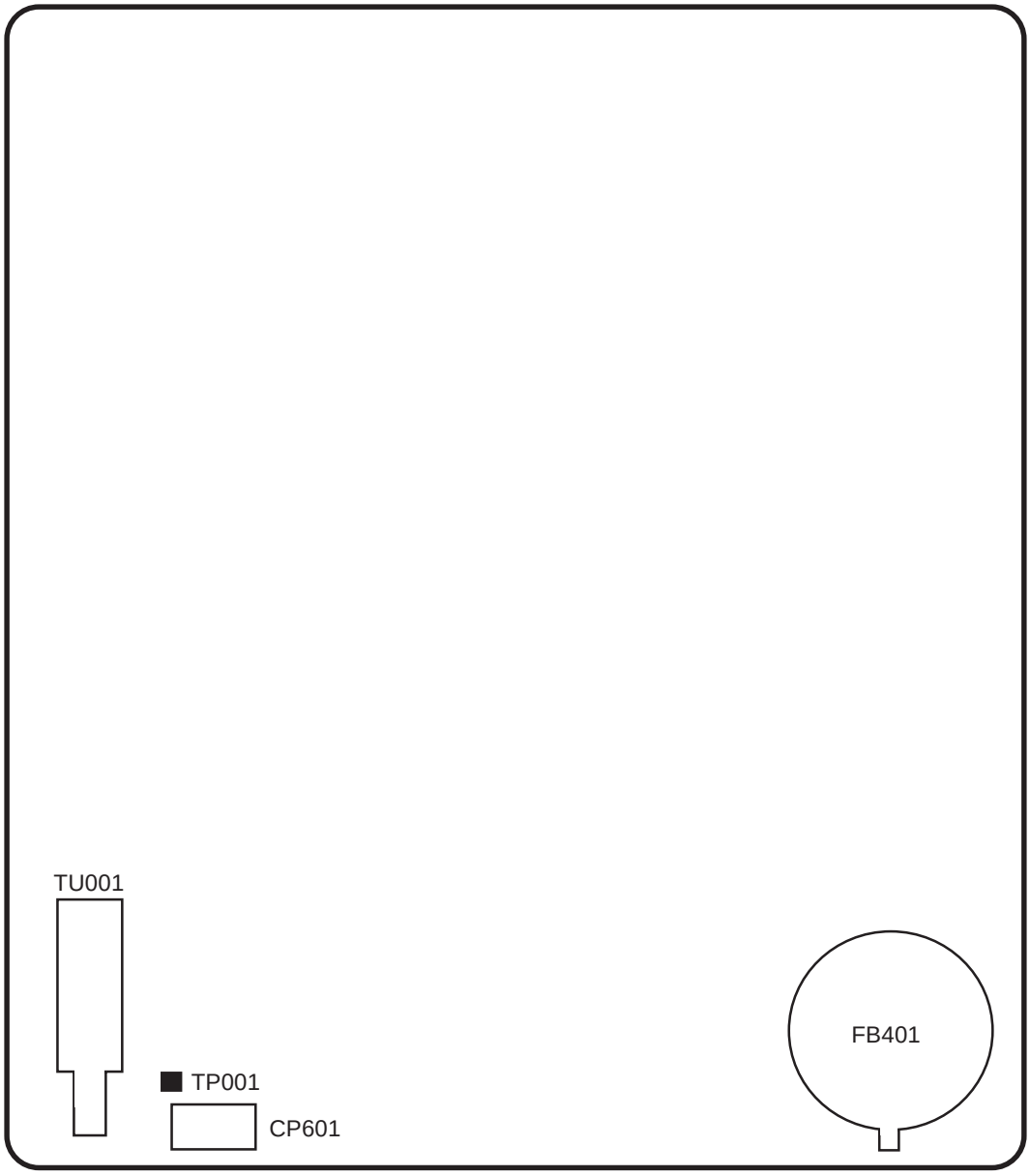
Fig. 3-2-a



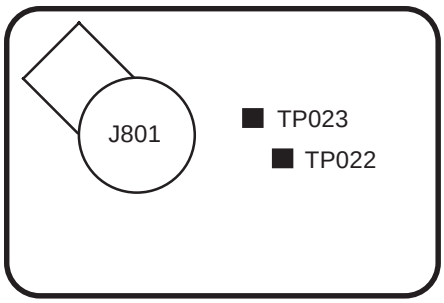
WEDGE POSITION

Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE

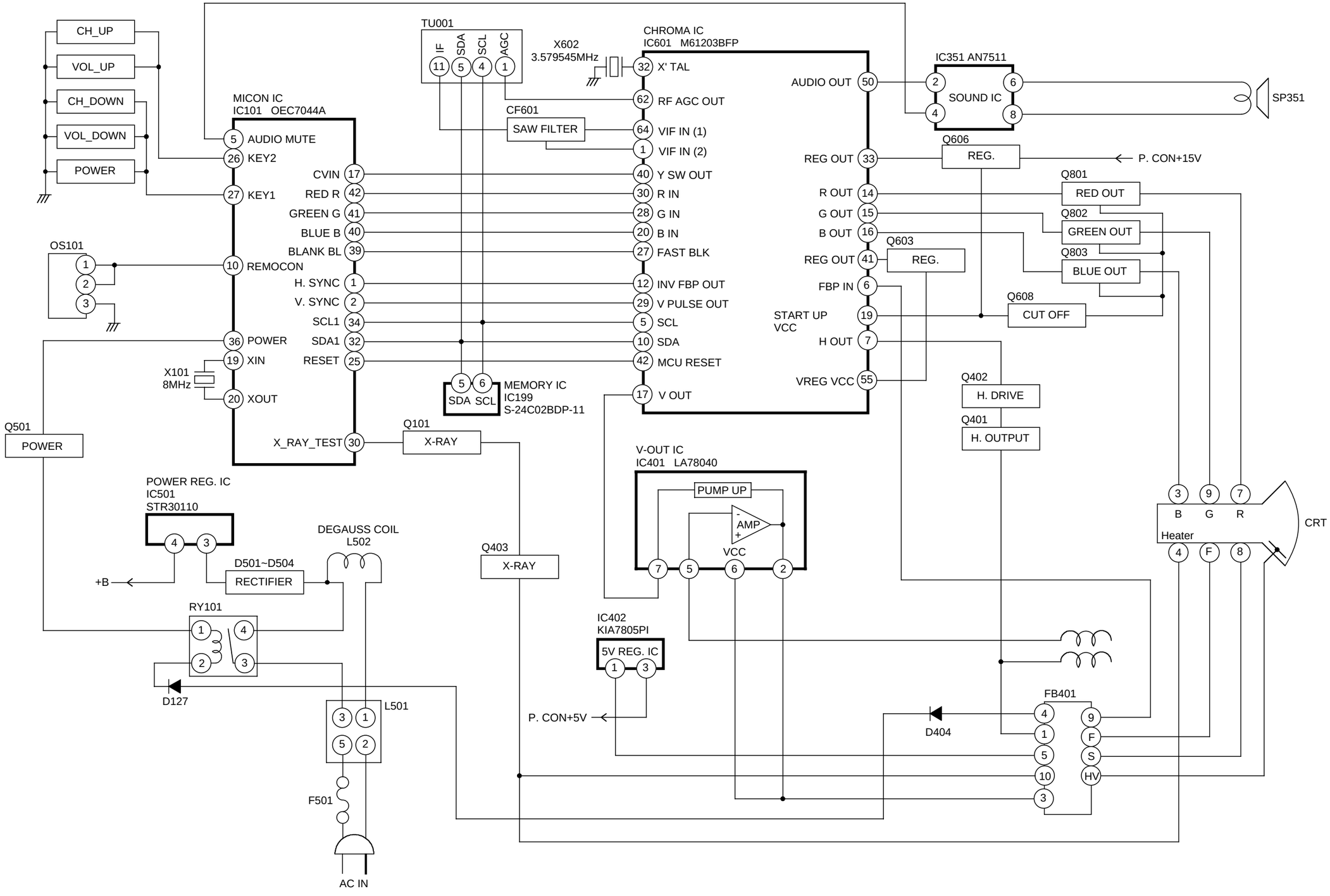


MAIN

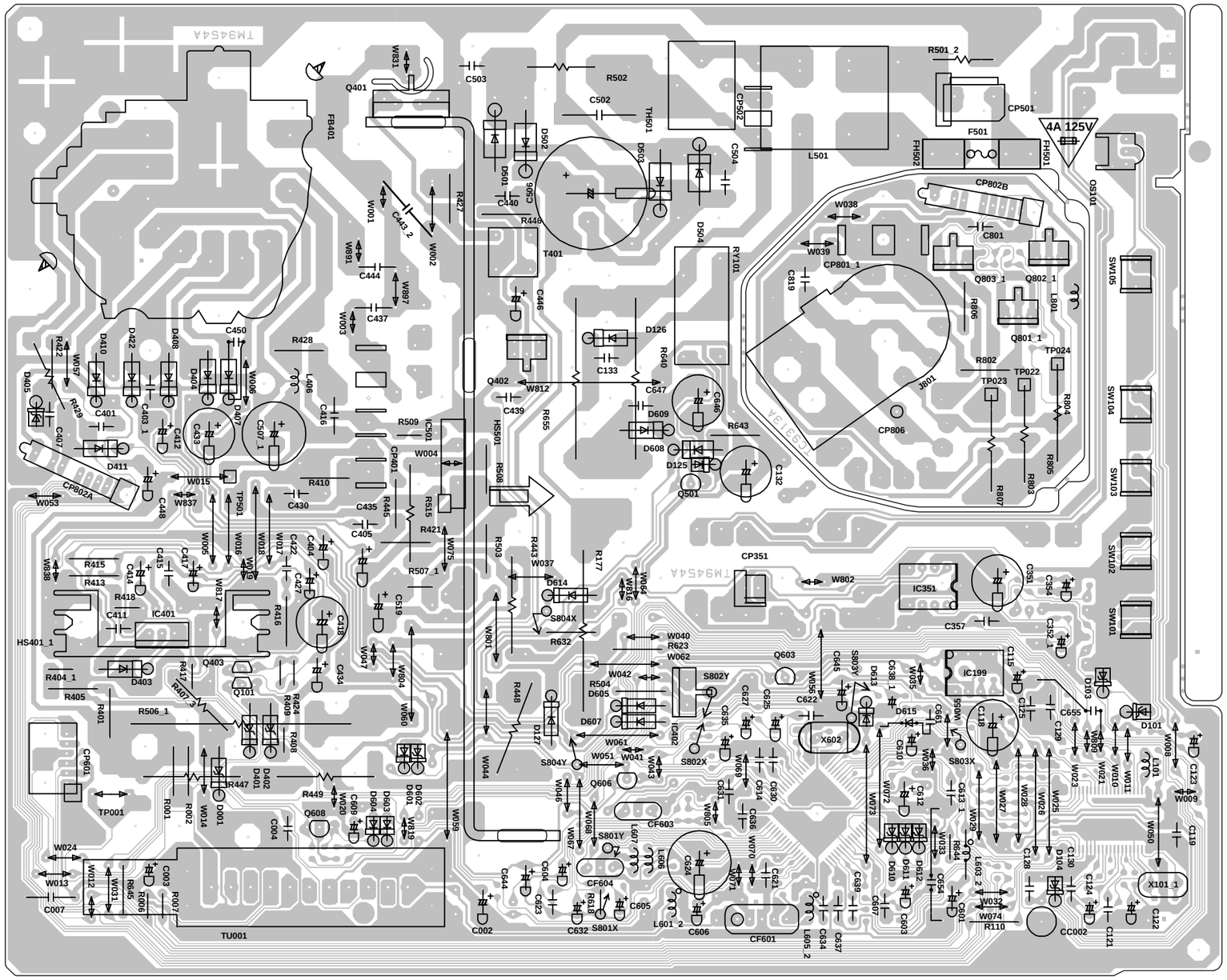


CRT

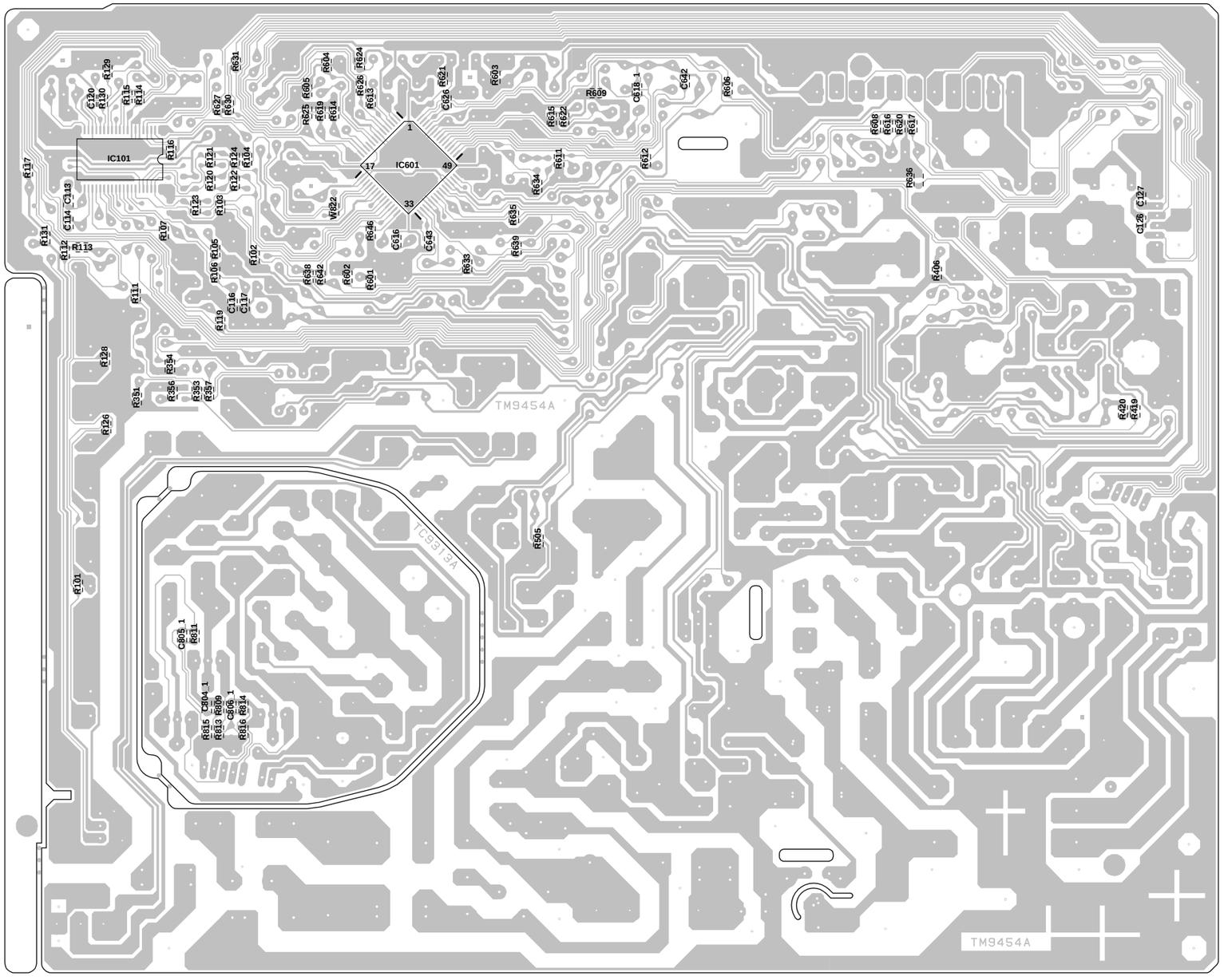
BLOCK DIAGRAM



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



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



MICON/TUNER SCHEMATIC DIAGRAM
(MAIN PCB)

ACCESSORY
TM101
R25-1127

ATC001
NXC0032-010010

TU001 ENV56D67G3
IF BTL BPL V.S SDA SCL ADRES AGC
TP001

C007 100P B
C004 0.022 M
D001 HZ30-3L
C002 6.3V 470 YK
C003 50V 4.7 KA

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

R001 68K 1/2W
R002 68K 1/2W
R006 270 1/4W
R007 270 1/4W

MICON IC
IC101 OEC7044A

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 1/4W
R116 47K
R117 47K
R111 10K
R114 10K
R115 47K
D104 MTZJ6.8B
C128 0.01 Y
C122 50V 0.1 KA
R130 1K
C121 200P CH
C120 0.001 Y
C124 50V 0.1 KA
R129 1M
C130 0.01 Y
X101_1 8MHz
C117 270P B
R105 4.7K
C116 270P B
R106 4.7K
R107 10K
W809
C655 220P B
R112 2.2K
R113 2.2K
C115 50V 0.1 KA
C125 0.01 Y
L101 30 3.3uH
C114 10P CH
C113 10P CH
C129 0.68 TF
C119 0.68 TF
C118 25V 470 YK
CC002 TP-1S-05

D101 MTZJ6.8B
D103 MTZJ6.8B
R119 1K

MEMORY IC
IC199
S-24C02BDP-11
SDA SCL MODE VCC VSS E2 E1 E0

R123 4.7K
R122 4.7K
R121 4.7K
R120 4.7K
R102 2.2K
R103 2.2K
R104 2.2K
R124 4.7K
C126 220P B
C127 220P B

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

X-RAY Q101 DTC114TS

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

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

CAUTION: DIGITAL TRANSISTOR

PCB010
TM9454

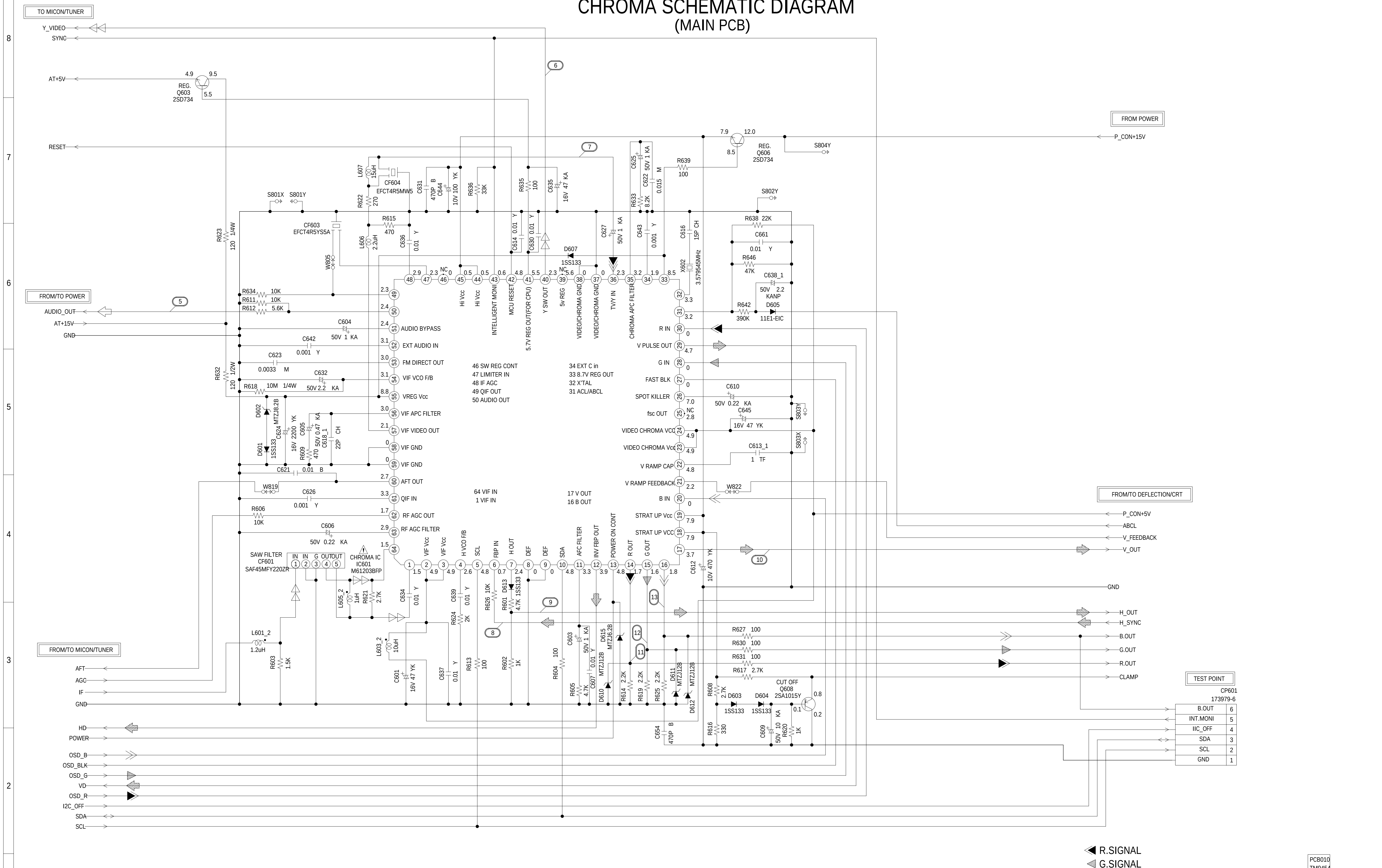
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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

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

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

CHROMA SCHEMATIC DIAGRAM
(MAIN PCB)



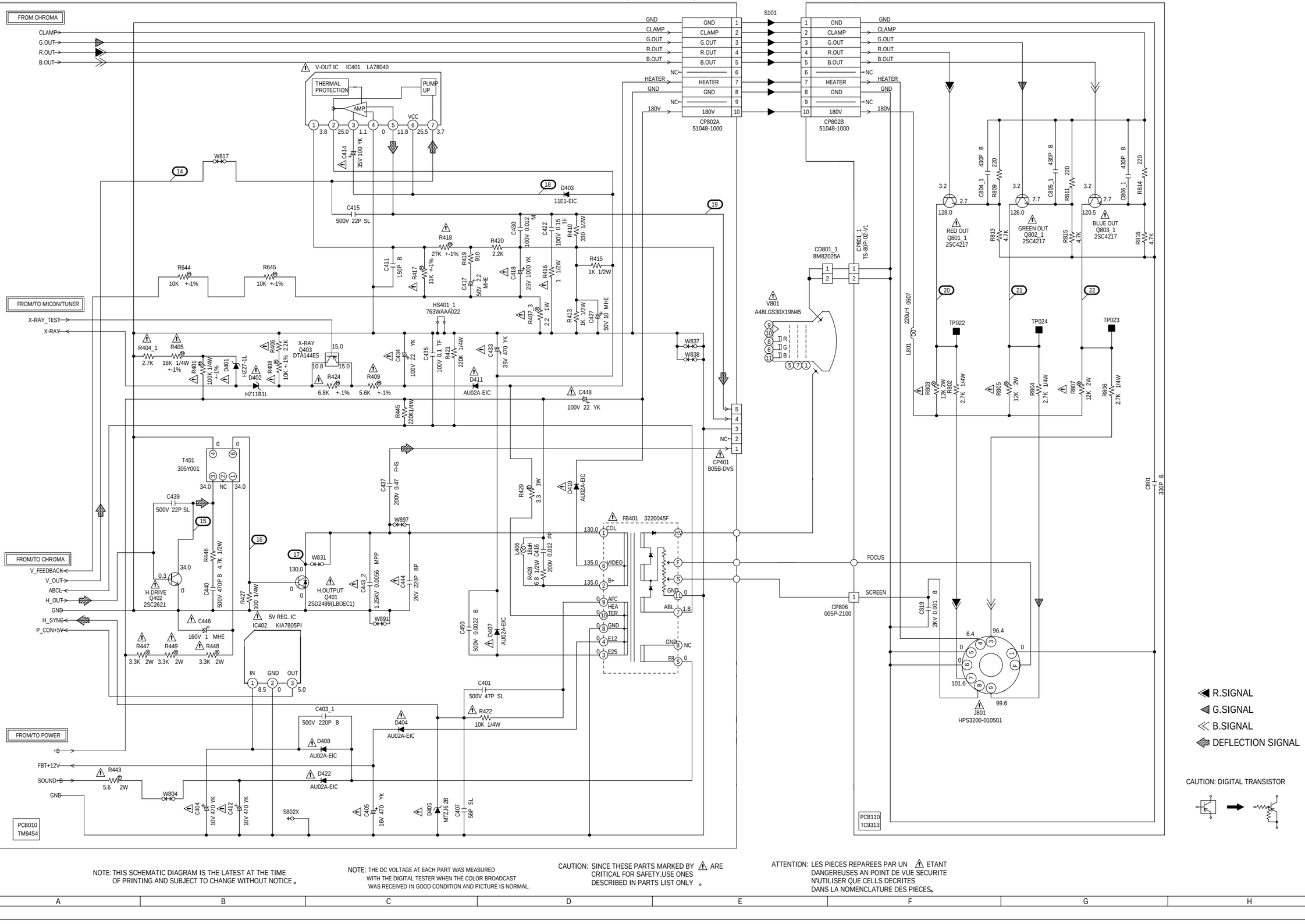
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

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。

DEFLECTION/CRT SCHEMATIC DIAGRAM
(MAIN PCB)



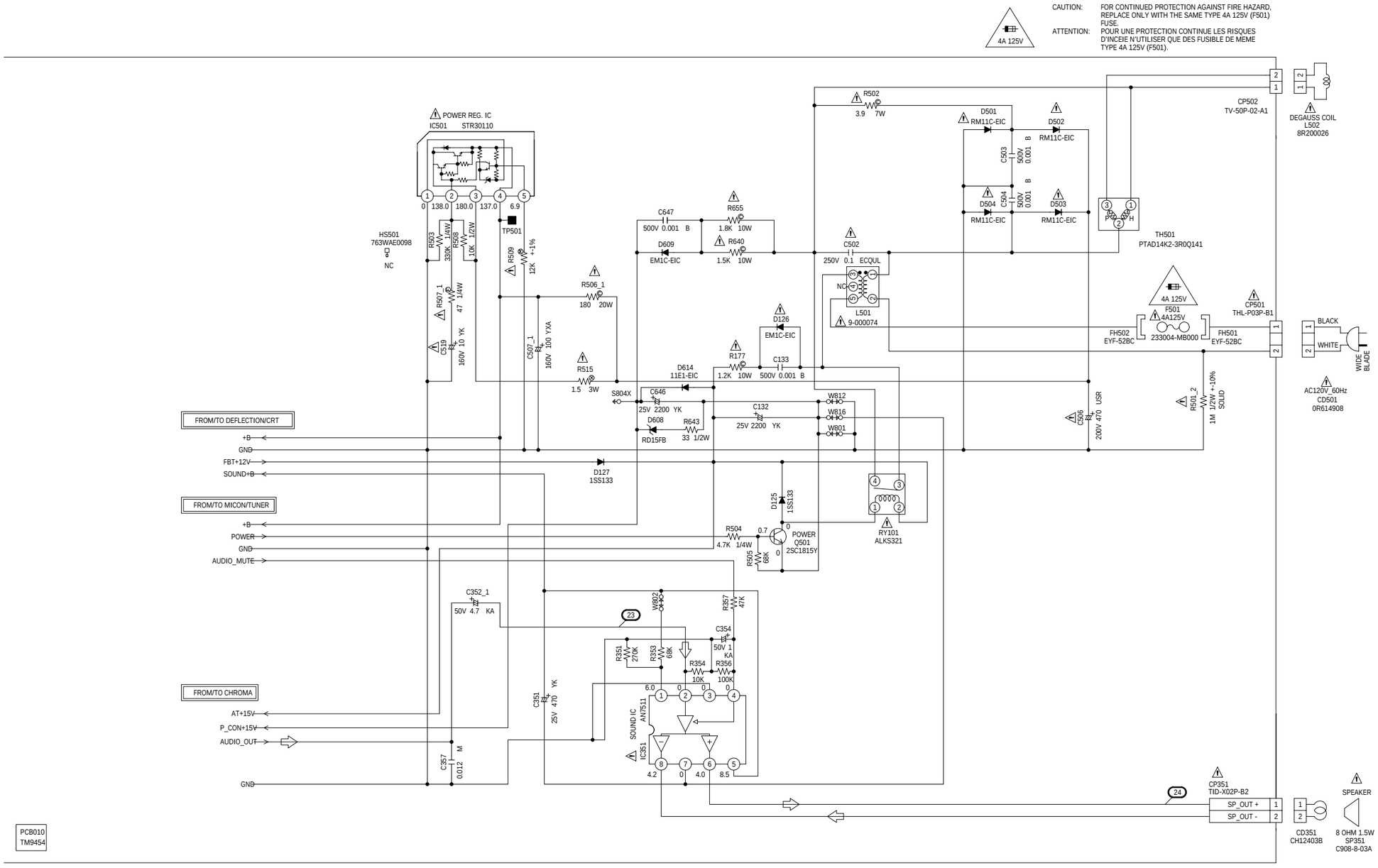
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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。

POWER SCHEMATIC DIAGRAM
(MAIN PCB)



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

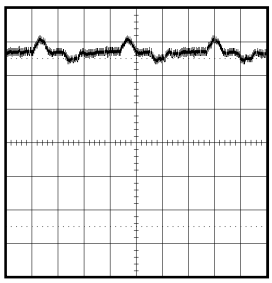
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

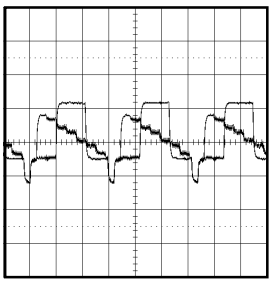
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

WAVEFORMS

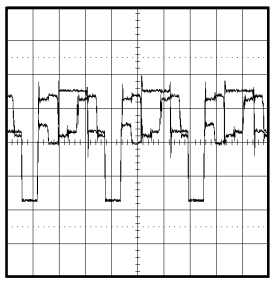
MICON/TUNER



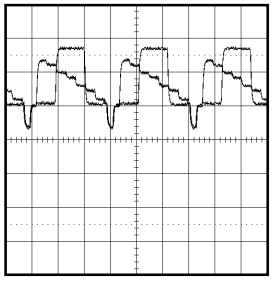
① 200mV 5ms/div



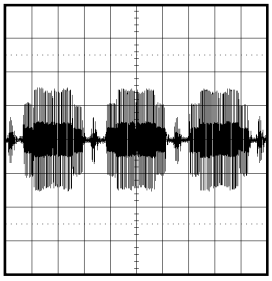
⑥ 0.5V 20µs/div



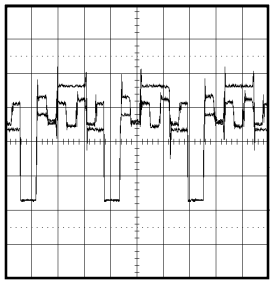
⑪ 1V 20µs/div



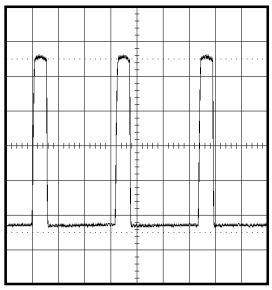
② 0.5V 20µs/div



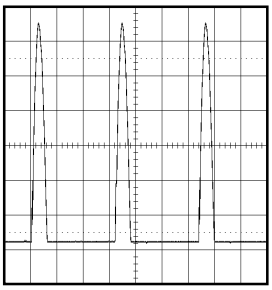
⑦ 200mV 20µs/div



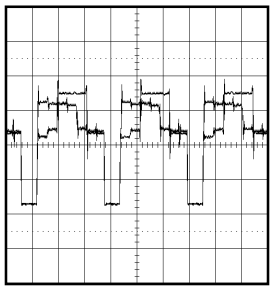
⑫ 1V 20µs/div



③ 200mV 20µs/div

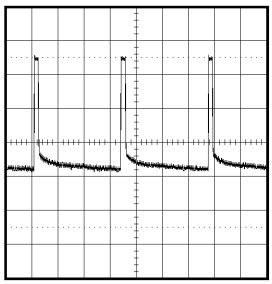


⑧ 20V 20µs/div

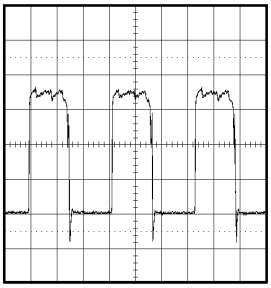


⑬ 1V 20µs/div

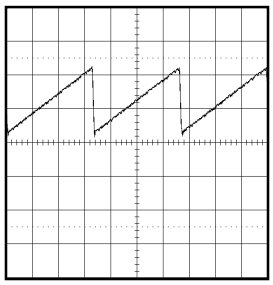
DEFLECTION/CRT



④ 200mV 5ms/div

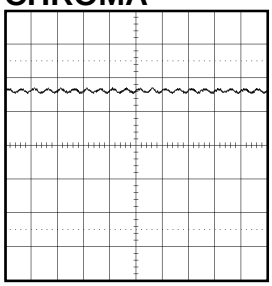


⑨ 200mV 20µs/div

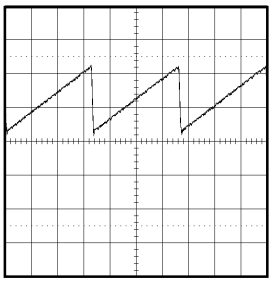


⑭ 0.5V 5ms/div

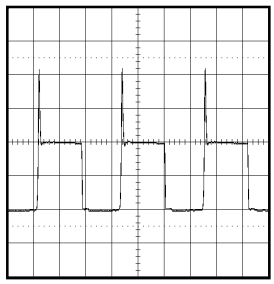
CHROMA



⑤ 0.5V 2ms/div



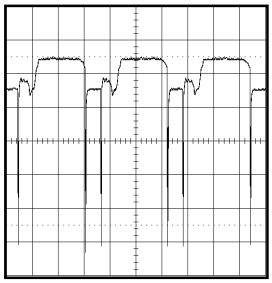
⑩ 0.5V 5ms/div



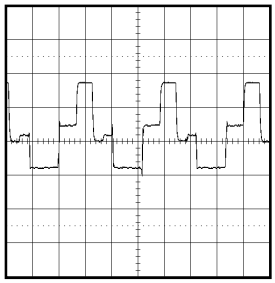
⑮ 20V 20µs/div

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

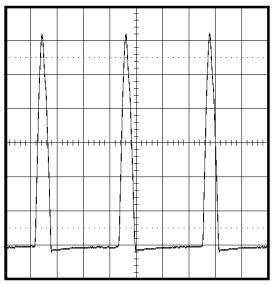
WAVEFORMS



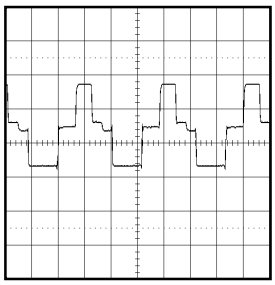
⑯ 2V 20µs/div



㉑ 50V 20µs/div

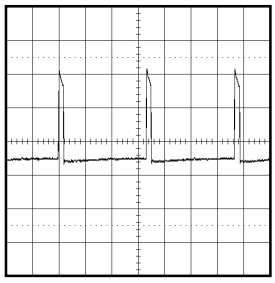


⑰ 200V 20µs/div

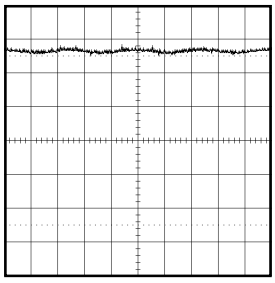


㉒ 50V 20µs/div

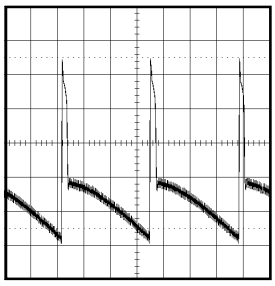
POWER



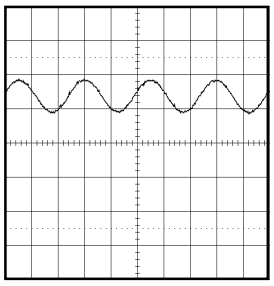
⑱ 10V 5ms/div



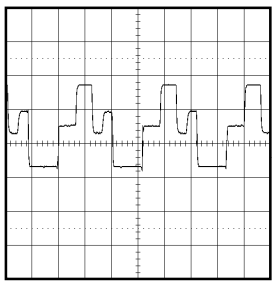
㉓ 0.5V 1ms/div



⑲ 10V 5ms/div



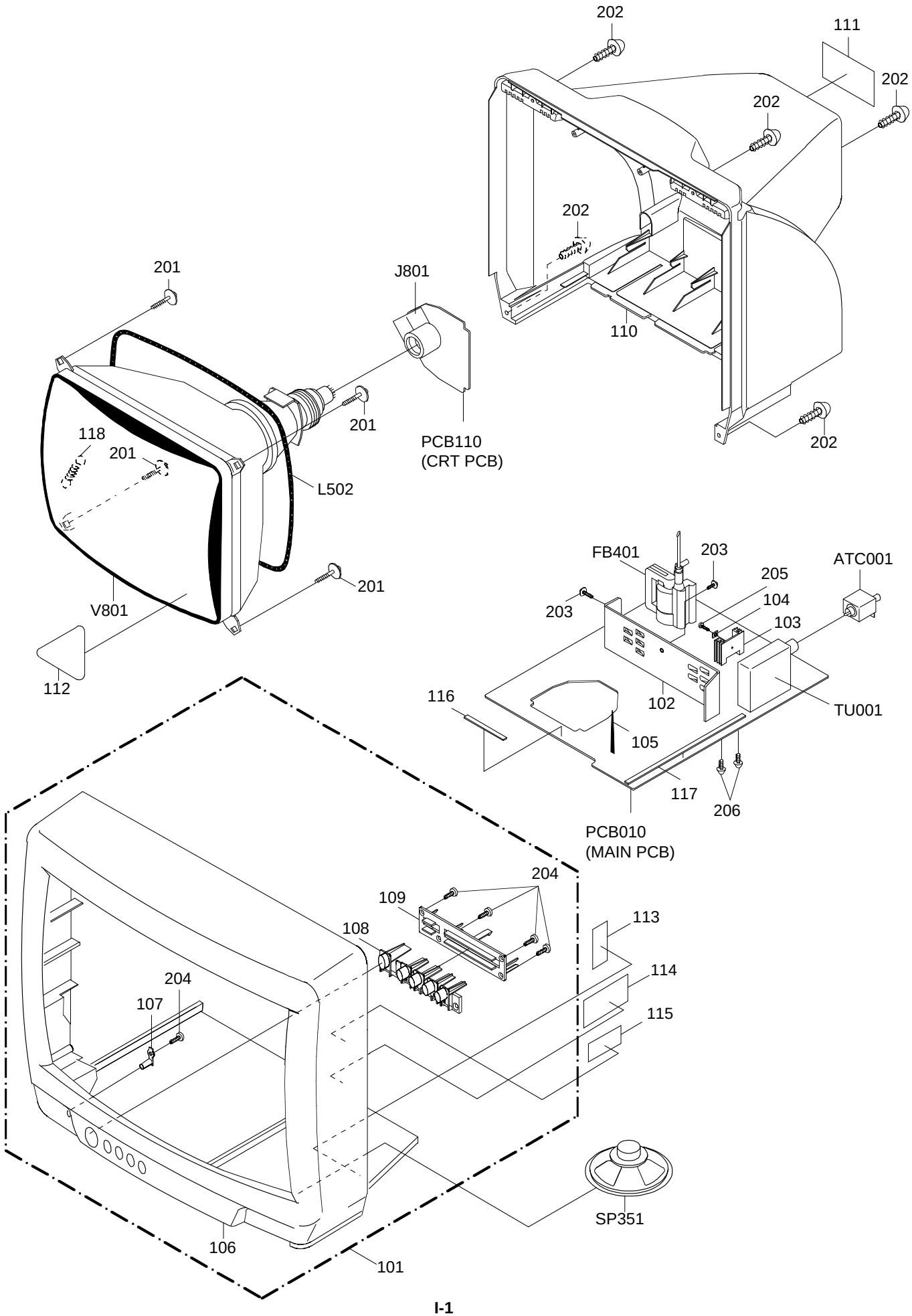
㉔ 1V 1ms/div



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	A3H654C720	CABINET,FRONT ASS'Y		
102	---	HEAT SINK		
103	---	HEAT SINK		
104	---	METAL SPACER		
105	---	COATING CLIP		
106	701WPJA862	CABINET,FRONT		
107	713WPA0090	GUIDE,REMOCON		
108	735WPA0381	BUTTON,FRAME		
109	735WPA0382	BUTTON,HOLDER		
110	702WPA0557	CABINET,BACK		
111	722A08A059	SHEET,RATING		
112	723000A932	FILM,DECORATION		
113	7230006818	SHEET,CAUTION		
114	7220001119	SHEET,CSA WARNING		
115	7220001107	SHEET,HWC		
116	800WQ00044	FELT SHEET		5x50xT0.5
117	800WQ00045	FELT SHEET		5x150xT0.5
118	741WUA0019	SPRING,EARTH		
201	8121F50B84	SCREW,TAPPING (B0)	GW20	5x28
202	8117540A64	SCREW,TAPPING (B0)	TRUSS	4x16
203	8117D30A04	SCREW,TAPPING (B0)	WH8 BRAZIER	3x10
204	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
205	810A130804	SCREW/WASHER (A)		M3x8
206	8109630802	SCREW,TAP TITE (B)	BRAZIER	3x8
---	JB5K0100	POLYBAG		
---	J3H65401	INSTRUCTION BOOK		
---	791WHAA017	LAMIFILM BAG		
---	792WHA0244	PACKAGE,BOTTOM		
---	792WHA0245	PACKAGE,TOP		
---	793WCDA705	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
RESISTORS			
⚠ R177	R5W2CF122J	R, CEMENT	1.2K OHM 10W
⚠ R401	R4X5T4104F	R, METAL	100K OHM 1/4W
⚠ R404	R001T6272J	RC	2.7K OHM 1/6W
⚠ R405	R4X5T4183F	R, METAL	18K OHM 1/4W
⚠ R406	R903N8222J	RC	2.2K OHM 1/8W
⚠ R407	R3X1812R2J	R, METAL OXIDE	2.2 OHM 1W
⚠ R408	R4X5T6103F	R, METAL	10K OHM 1/6W
⚠ R409	R4X5T6562F	R, METAL	5.6K OHM 1/6W
⚠ R416	R002T2010J	RC	1 OHM 1/2W
⚠ R417	R4X5T6113F	R, METAL	11K OHM 1/6W
⚠ R418	R4X5T6273F	R, METAL	27K OHM 1/6W
⚠ R422	R002T4103J	RC	10K OHM 1/4W
⚠ R424	R4X5T6682F	R, METAL	6.8K OHM 1/6W
R429	R655813R3J	R, FUSE	3.3 OHM 1W
⚠ R443	R6558A5R6J	R, FUSE	5.6 OHM 2W or
	R6358A5R6J	R, FUSE	5.6 OHM 2W
⚠ R447	R3X18A332J	R, METAL OXIDE	3.3K OHM 2W
⚠ R448	R3X18A332J	R, METAL OXIDE	3.3K OHM 2W
⚠ R449	R3X18A332J	R, METAL OXIDE	3.3K OHM 2W
⚠ R501	R21202105K	R, SOLID	1M OHM 1/2W
⚠ R502	R5X2CE3R9J	R, CEMENT	3.9 OHM 7W
⚠ R506	R5W2CH181J	R, CEMENT	180 OHM 20W
⚠ R507	R655U4470J	R, FUSE	47 OHM 1/4W
⚠ R509	R4X5T6123F	R, METAL	12K OHM 1/6W
⚠ R515	R3X28B1R5J	R, METAL	1.5 OHM 3W
R629	R001T6182J	RC	1.8K OHM 1/6W
⚠ R640	R5W2CF152J	R, CEMENT	1.5K OHM 10W
⚠ R655	R5X2CF182J	R, CEMENT	1.8K 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	E02L03222M	CE	2200 UF 25V
⚠ C404	E02LT1471M	CE	470 UF 10V
⚠ C405	E02LT2471M	CE	470 UF 16V
⚠ C412	E02LT1471M	CE	470 UF 10V
⚠ C414	E02LT4101M	CE	100 UF 35V
C416	P3N1F2123J	CPP	0.012 UF 200V
⚠ C418	E02LF3102M	CE	1000 UF 25V
⚠ C433	E02LT4471M	CE	470 UF 35V
⚠ C434	E02LT8220M	CE	22 UF 100V
C437	P447F2474J	CMPP	0.47 UF 200V FHS
⚠ C443	P4N8FJ562H	CMPP	0.0056UF 1.25KV
⚠ C444	C01BBP7H2K	CC	220 PF 2KV BP
⚠ C446	E5EZTB010M	CE	1UF 160V
⚠ C448	E02LT8220M	CE	22 UF 100V
C450	C0J0B05H3K	CC	0.0022UF 500V B or
	C0JTB05H3K	CC	0.0022UF 500V B
⚠ C502	P2122B104M	CMP	0.1 UF 250V ECQUL
⚠ C506	E52DGC471M	CE	470 UF 200V
C507	E02YFB101M	CE	100 UF 160V
⚠ C519	E02LTB100M	CE	10UF 160V
C624	E02LF2222M	CE	2200 UF 16V
C646	E02L03222M	CE	2200 UF 25V
C653	CHGTY0214M	CC	0.01 UF 16V Y
C654	CHGTB04Q2K	CC	470 PF 50V B
C655	CHGTB04H2J	CC	220 PF 50V B
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	D1VT001330	DIODE, SILICON	1SS133T-77
⚠ 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	DOIDE, SILICON	RM11C-EIC
⚠ D502	D2WTRM11C0	DOIDE, SILICON	RM11C-EIC

REF. NO.	PART NO.	DESCRIPTION	
DIODES			
⚠ D503	D2WTRM11C0	DOIDE, SILICON	RM11C-EIC
⚠ D504	D2WTRM11C0	DOIDE, 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
D607	D1VT001330	DIODE, SILICON	1SS133T-77
D608	D9201150B1	DIODE, ZENER	RD15FB
D609	D2WT0EM1C0	DIODE, SILICON	EM1C-EIC
D610	D97U01201B	DIODE, ZENER	MTZJ12B T-77 or
	D94TA12B12	DIODE, ZENER	HZ12B2L TD or
	D94TA12A11	DIODE, ZENER	HZ12A1L TD
D611	D97U01201B	DIODE, ZENER	MTZJ12B T-77 or
	D94TA12B12	DIODE, ZENER	HZ12B2L TD or
	D94TA12A11	DIODE, ZENER	HZ12A1L TD
D612	D97U01201B	DIODE, ZENER	MTZJ12B T-77 or
	D94TA12B12	DIODE, ZENER	HZ12B2L TD or
	D94TA12A11	DIODE, ZENER	HZ12A1L TD
D613	D1VT001330	DIODE, SILICON	1SS133T-77
D614	D2WT011E10	DIODE, SILICON	11E1-EIC
D615	D97U06R21B	DIODE, ZENER	MTZJ6.2B T-77
ICS			
IC101	I56F07044A	IC	OEC7044A
IC199	A3H651C015	IC	S-24C02BDP-11
⚠ IC351	I01DP75110	IC	AN7511
⚠ IC401	I03TD80400	IC	LA78040
⚠ IC402	I1KA978050	IC	KIA7805PI
⚠ IC501	I2B4901100	IC	STR30110
⚠ IC601	I06FC12030	IC	M61203BFP
TRANSISTORS			
Q101	TNYTJ03001	COMPOUND TRANSISTOR	DTC114TSTP
⚠ 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	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	021LA63R3K	COIL	3.3 UH
L406	02186G180M	COIL	18 UH
⚠ L501	029K000074	COIL, LINE FILTER	9-000074
⚠ L502	028R200026	COIL, DEGAUSS	8R200026
L601	0216731R2K	COIL	1.2 UH
L603	021673100K	COIL	10 UH
L605	0216731R0J	COIL	1 UH
L606	021LA62R2K	COIL	2.2 UH
L607	021LA6150K	COIL	15 UH
L801	02167D221K	COIL	220 UH
T401	03305Y0018	TRANS, HORIZONTAL DRIVE	305Y001
JACK			
⚠ J801	066X120014	SOCKET, CRT	HPS3200-010501
SWITCHES			
SW101	0504201T31	SWITCH, TACT	SKHVBED010
SW102	0504201T31	SWITCH, TACT	SKHVBED010
SW103	0504201T31	SWITCH, TACT	SKHVBED010
SW104	0504201T31	SWITCH, TACT	SKHVBED010
SW105	0504201T31	SWITCH, TACT	SKHVBED010
P.C.BOARD ASSEMBLIES			
PCB010	A3H654C01A	PCB ASS'Y	TM9454A
PCB110	A3H654C11A	PCB ASS'Y	TC9313A
MISCELLANEOUS			
⚠ ATC001	0632400008	ANT, UNIT	NXC0032-010010
CD351	06CH12403B	CORD CONNECTOR	CH12403B
⚠ CD501	120R614908	CORD, AC	0R614908 or
	1207614908	CORD, AC	7614908
CD801	068M82025A	CORD, CONNECTOR	8M82025A
CF601	1022T45R72	FILTER, SAW	SAF45MFY220ZR
CF603	1011T4R504	FILTER, CERAMIC	EFCT4R5YS5A
CF604	1011T4R517	FILTER, CERAMIC	EFCT4R5MW5
⚠ CP351	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
⚠ CP401	069X450029	CONNECTOR PCB SIDE	B05B-DVS
⚠ CP501	0697320039	CORD, UX CONNECTOR	THL-P03P-B1

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
		MISCELLANEOUS		
	CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1	
	CP601	0694260139	CONNECTOR PCB SIDE	173979-6	
	CP801	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	
	CUS001	800WF00004	CUSHION-A		
⚠	F501	081PA04003	FUSE	233004-MB000	
⚠	FB401	043220045F	TRANSFORMER, FLYBACK	3220045F	
	FH501	06710T0006	HOLDER, FUSE	EYF-52BC	
	FH502	06710T0006	HOLDER, FUSE	EYF-52BC	
	OS101	077Q014003	REMOTE, RECEIVER	PIC-28143SY-2	
⚠	RY101	0560V20115	RELAY	ALKS321	
⚠	SP351	070C732001	SPEAKER	C908-8-03A	or
		070C132014	SPEAKER	811-08-194	
	TH501	DF40A3R0Q0	DEGAUSS ELEMENT	PTAD14K2-3R0Q141	
	TM101	076R074180	TRANSMITTER	R25-1127	
⚠	TU001	0145S00049	TUNER UHF-VHF	ENV56D67G3	
⚠	V801	098Y200480	COLOR PICTURE TUBE W/DY	A48LGS30X19N45	
	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.	M3H6-54C
O/R NO.	W033021