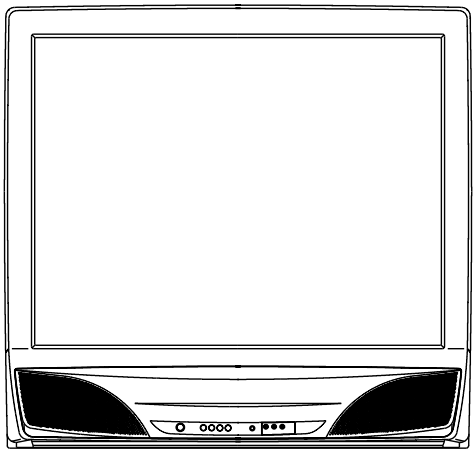
Memorex®

MT2365

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 **[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

36 inch(902.0 mmV):Measured diagonally

Color CRT 110 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)	45.75 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: 160 W at AC 120 V 60 Hz

(Approx) _____W at DC _____V

Stand by(Approx): 8 W at AC 120 V 60 Hz

Per Year: _____kWh / Year

G-14.Dimensions(Approx.)

850 mm(W) 608 mm(D) 806 mm(H)

G-15.Weight(Approx.) Net : 70 kg (-- lbs)

Gross: 73 kg (-- 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

GENERAL SPECIFICATIONS

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 ø 8.3)

☒Front Audio Input (RCA ø 8.3)

☒Rear Video Input (RCA ø 8.3)

☒Rear Audio Input (RCA ø 8.3)

☒Rear Video Output (RCA ø 8.3)

☒Rear Audio Output (RCA ø 8.3)

☐21 Pin ☒S Input(Rear)

G-24.Indicator

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

G-25.Display

On Screen Display

☒Menu	☐Clock Set(☐12H ☐24H)	☐System Select	☐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	☒Volume	☒Brightness	☒Contrast
	☒Color	☒Tint	☒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 4 inches

Imp 4 ohm x 2 pcs

Power Max 5.0 + 5.0 W

10% 4.5 + 4.5 W (Typical)

Position ☐Center

Size -- inches

Imp -- ohm x -- pcs

Power Max -- W

10% -- 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: 956 mm(W) 717 mm(D) 938 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: 80 Sets / U.S. Trailer

G-30.Accessories

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

☐AC Plug Adapter
☐Battery (UM-3 x2)
☐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
☒Closed Caption	☐Center Woofer	
☐Picture Menu	☐Mid Night Theater	☒V-Chip
☐P-in-P(1TUNER)	☐Univalsal Remcon	☐BSVM
☒BBE Sound		

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-CS

Glow in Dark Remocon ☐Yes ☒No

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

Total 42 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
	☐Preset	☐Rotate
	☐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

Multi Brand Key

☒VCR Power	☒CH Enter	☒TV
☒Cable Power	☒Rec	☒VCR
☒Pause/Still	☒Stop	☒Cable
☒TV/VCR(VCR)	☒Rew	☒Play
☒FF	☒MBR Set	

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.

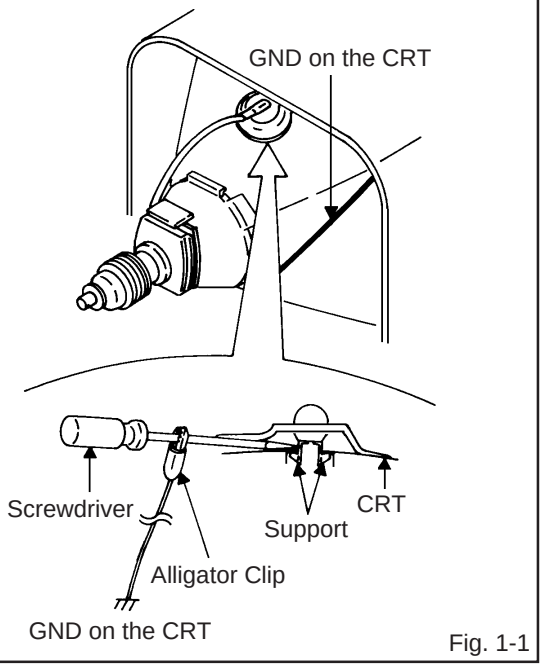


Fig. 1-1

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.)**

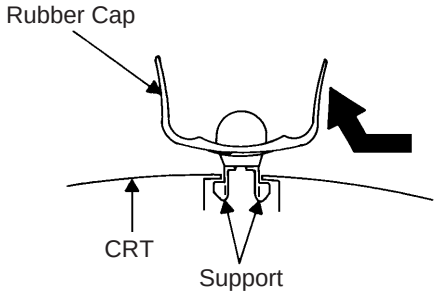


Fig. 1-2

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.)**

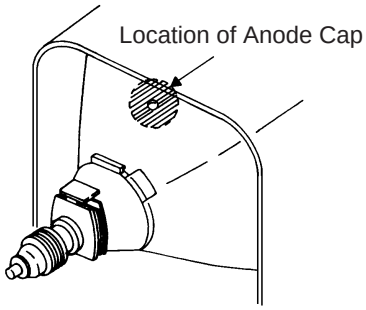


Fig. 1-3

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.)**

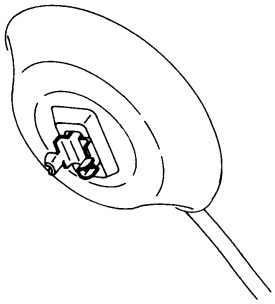


Fig. 1-4

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

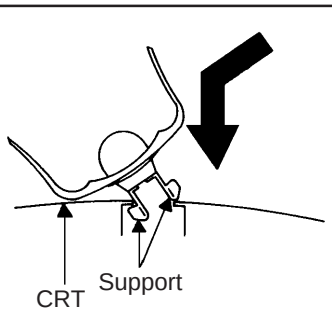


Fig. 1-5

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.

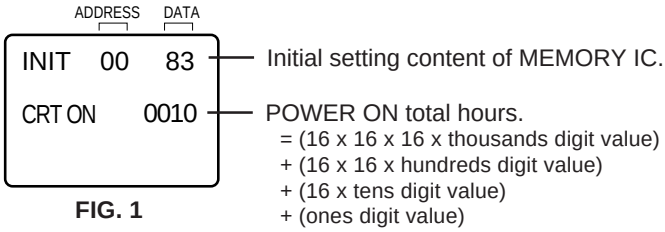


FIG. 1

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.

NOTE: No need the setting for after INI 09.

ADDRESS	INI 00	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09
DATA	80	27	80	00	00	00	80	1B	26	0A

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.

1-1: Prepare the following measurement tools for electrical adjustments.

1. Synchro Scope
2. Digital Voltmeter

2. BASIC ADJUSTMENTS

On-Screen Display Adjustment

Press both 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. 2-1**.

NOTE

Use the Channel buttons **(1-8)** on the remote control to select the options shown in **Fig. 2-1**.
Press the Channel button **(0)** on the remote control to end the adjustments.

1. H/V
2. AKB
3. COLOR TEMP
4. PICTURE
5. OTHERS
6. TEST PATTERN
7. STEREO/SAP
8. (VOL TEST) 0. END

Fig. 2-1

2-1: RF AGC DELAY

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the a 70dB monoscope pattern.
3. Connect the digital voltmeter between the **pin 2 of CP101** and the **pin 6 (GND) of CP101**.
4. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(5)** on the remote control. The **Fig. 2-2** appears on the display.
5. Press the channel button **(1)** on the remote control.
6. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.3 ± 0.05V.

1. RF AGC DELAY
2. VIDEO LEVEL
3. FM LEVEL
4. OSD H
5. CUT OFF
6. X-RAY
7.
8. 0. RETURN

Fig. 2-2

2-2: CUT OFF

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(5)** on the remote control. The **Fig. 2-2** appears on the display.
4. Press the channel button **(5)** on the remote control.
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-3: WHITE BALANCE

NOTE:

Adjust after performing adjustments in section 2-2.

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the color bar pattern.
3. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(2)** on the remote control. The **Fig. 2-3** appears on the display.
4. Adjust the adjustment mode display of **Fig. 2-3** until the white color is looked like a white.

1. AKB AUTO
2. R. BIAS
3. G. BIAS
4. B. BIAS
5. R. DRIVE
6. G. DRIVE
7. B. DRIVE
8. AGC AUTO 0. RETURN

Fig. 2-3

2-4: HORIZONTAL PHASE

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(1)** on the remote control. The **Fig. 2-4** appears on the display.
4. Press the channel button **(1)** on the remote control.
5. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

1. H. PHASE
2. H. BLK
3. V. SIZE
4. V. POSI
5. V. LIN
6. V. SC
7. V. COMP
8. (H FREQ) 0. RETURN

Fig. 2-4

ELECTRICAL ADJUSTMENTS

2-5: HORIZONTAL SIZE

NOTE:

Adjust after performing adjustments in section 2-4.

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR402** until the left and right OVER SCAN becomes 11 ± 1%.

2-6: VERTICAL SIZE

NOTE:

Adjust after performing adjustments in section 2-5.

1. Receive the crosshatch pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(1)** on the remote control. The **Fig. 2-4** appears on the display.
4. Press the channel button **(3)** on the remote control.
5. Press the VOL. UP/DOWN button on the remote control until the center of crosshatch is square.

2-7: VERTICAL POSITION

NOTE:

Adjust after performing adjustments in section 2-6.

1. Receive the center cross pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR401** until the horizontal line of the color bar comes to approximate center of the CRT.

2-8: FOCUS

1. Using the remote control, set the brightness and contrast to normal position.
2. Receive the monoscope pattern.
3. Turn the Focus Volume fully counterclockwise once.
4. Adjust the **Focus Volume** until picture is distinct.

2-9: BRIGHT

2. Receive the black pattern*. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(4)** on the remote control. The **Fig. 2-5** appears on the display.
5. Press the channel button **(1)** on the remote control.
6. Press the VOL. UP/DOWN button on the remote control to adjust the screen brightness from bright to dim. Then set to the completely dim point.
7. Receive the black pattern*. (Audio Video Input)
8. Press the TV/VCR button on the remote control to set to the AV mode. Then perform the above adjustments 4~6.

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

1. BRIGHT
2. CONTRAST
3. COLOR
4. TINT
5. SHARPNESS
6. OSD CONT
7.
8. 0. RETURN

Fig. 2-5

2-10: SUB TINT/SUB COLOR

1. Receive the color bar pattern. (RF Input)
2. Connect the synchro scope to **pin 1 of CP101** and the **pin 6 (GND) of CP101**.
3. Using the remote control, set the brightness, contrast, color and tint to normal position.
4. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(4)** on the remote control. The **Fig. 2-5** appears on the display.
5. Press the channel button **(4)** on the remote control.
6. Press the VOL. UP/DOWN button on the remote control until the waveform becomes as shown in **Fig. 2-6**.
7. Press the CH DOWN button once to set to "COLOR" mode.
8. Adjust the LEVEL "A" section of Blue to the LEVEL "D" section of White by pressing the VOL. UP/DOWN button on the remote control. **(Refer to Fig. 2-7)**
9. If the LEVEL "A" section through "C" section are not the same compared with "D" section, adjust the LEVEL again.
10. Receive the color bar pattern. (Audio Video Input)
11. Press the TV/VCR button on the remote control to set to the AV mode. Then perform the above adjustments 3~9.

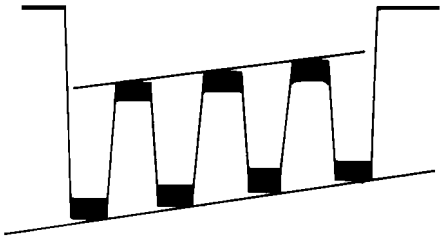


Fig. 2-6

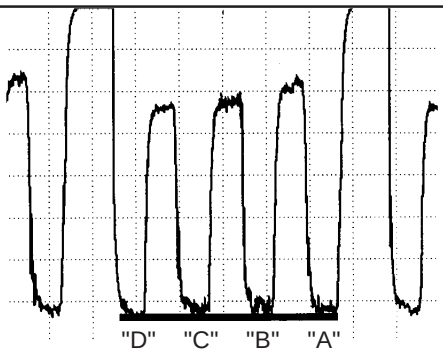


Fig. 2-7

ELECTRICAL ADJUSTMENTS

2-11: PIN CUSHION

1. Receive the color bar pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR403** until the vertical line becomes straight.

2-12: VCO FREERUN

1. Receive the UHF.
2. Connect the digital voltmeter to **TP201**.
3. Adjust the **L205** until the digital voltmeter is 3.1 ± 0.05V.

2-13: SEPARATION 1, 2

1. Receive the stereo signal (L=2KHz, R=400Hz).
2. Connect the AC voltmeter to **AUDIO OUT JACK** through stereo filter (L=400Hz, R=2KHz).
3. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(7)** on the remote control. The **Fig. 2-8** appears on the display.
4. Press the channel button **(2)** on the remote control.
5. Press the VOL. UP/DOWN button on the remote control until the output of L-CH and R-CH become minimum.
6. Press the CH UP button once to set to "SEPARATION 2" mode.
7. Press the VOL. UP/DOWN button on the remote control until the output of L-CH and R-CH become minimum.
8. Press the CH DOWN button once to set to "SEPARATION 1" mode.
9. Repeat step 5 to step 8 several times. The output difference of the between with Filter and without Filter should be more than 25dB for both L and R.

1. LEVEL ADJ
2. SEPARATION 1
3. SEPARATION 2
4.
5.
6.
7.
8. 0. RETURN

Fig. 2-8

2-14: CONSTANT VOLTAGE

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Connect the digital voltmeter to **TP401**.
4. Set condition is AV MODE without signal.
5. Adjust the **VR502** until the digital voltmeter is 127 ± 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.

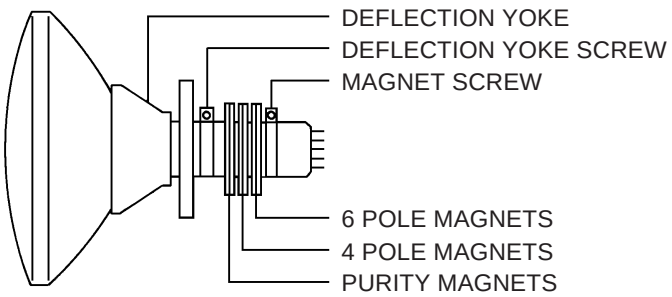


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

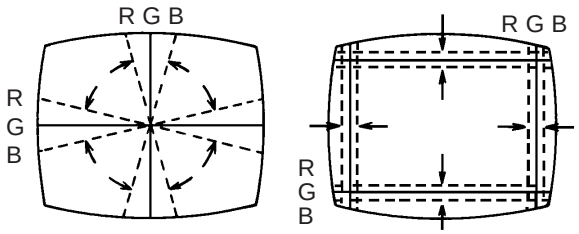
1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

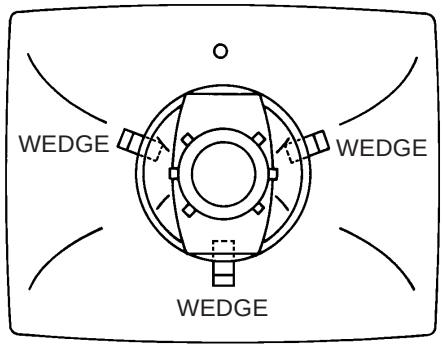
Adjust after performing adjustments in section 3-3.

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)**



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

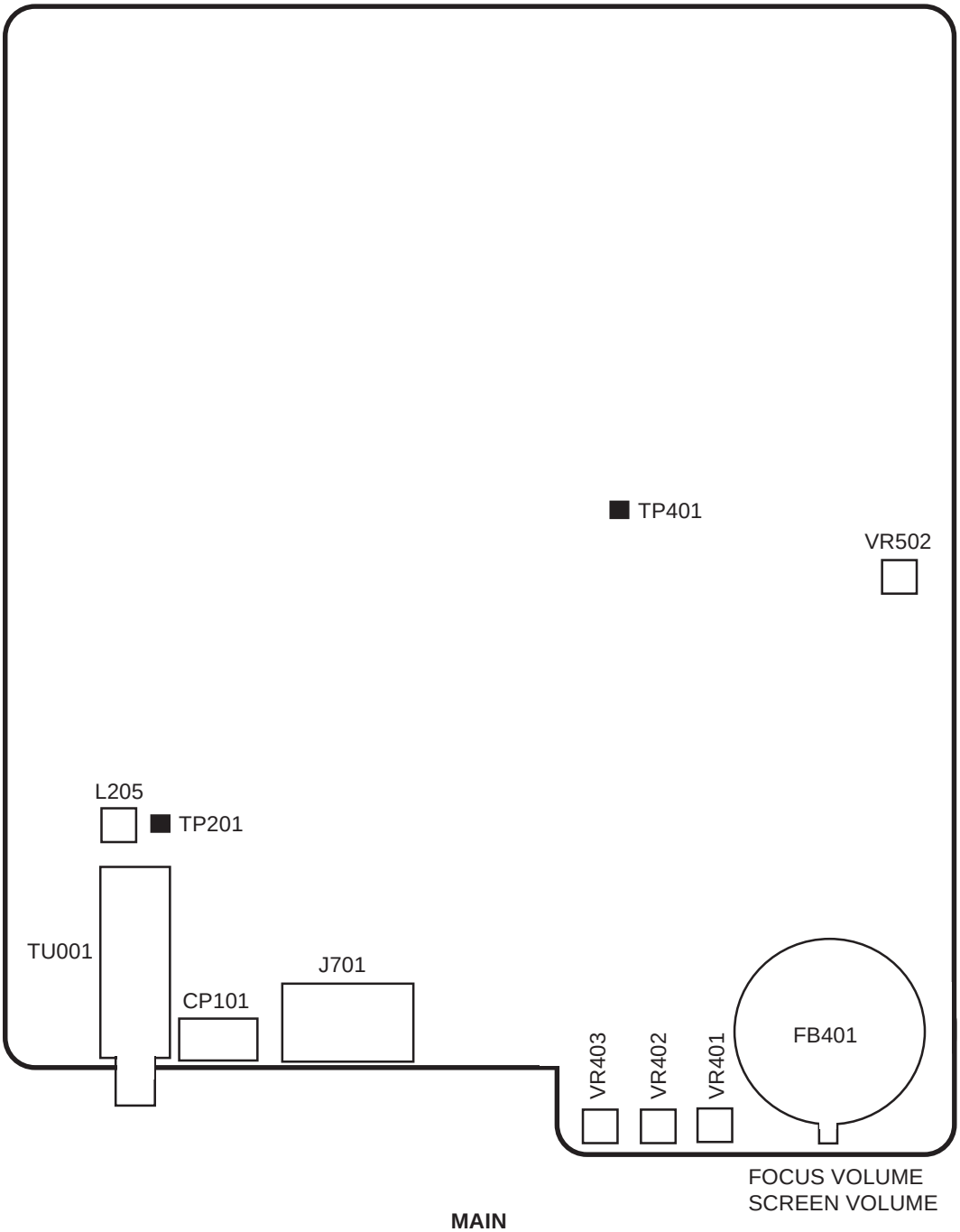
Fig. 3-2-a



WEDGE POSITION

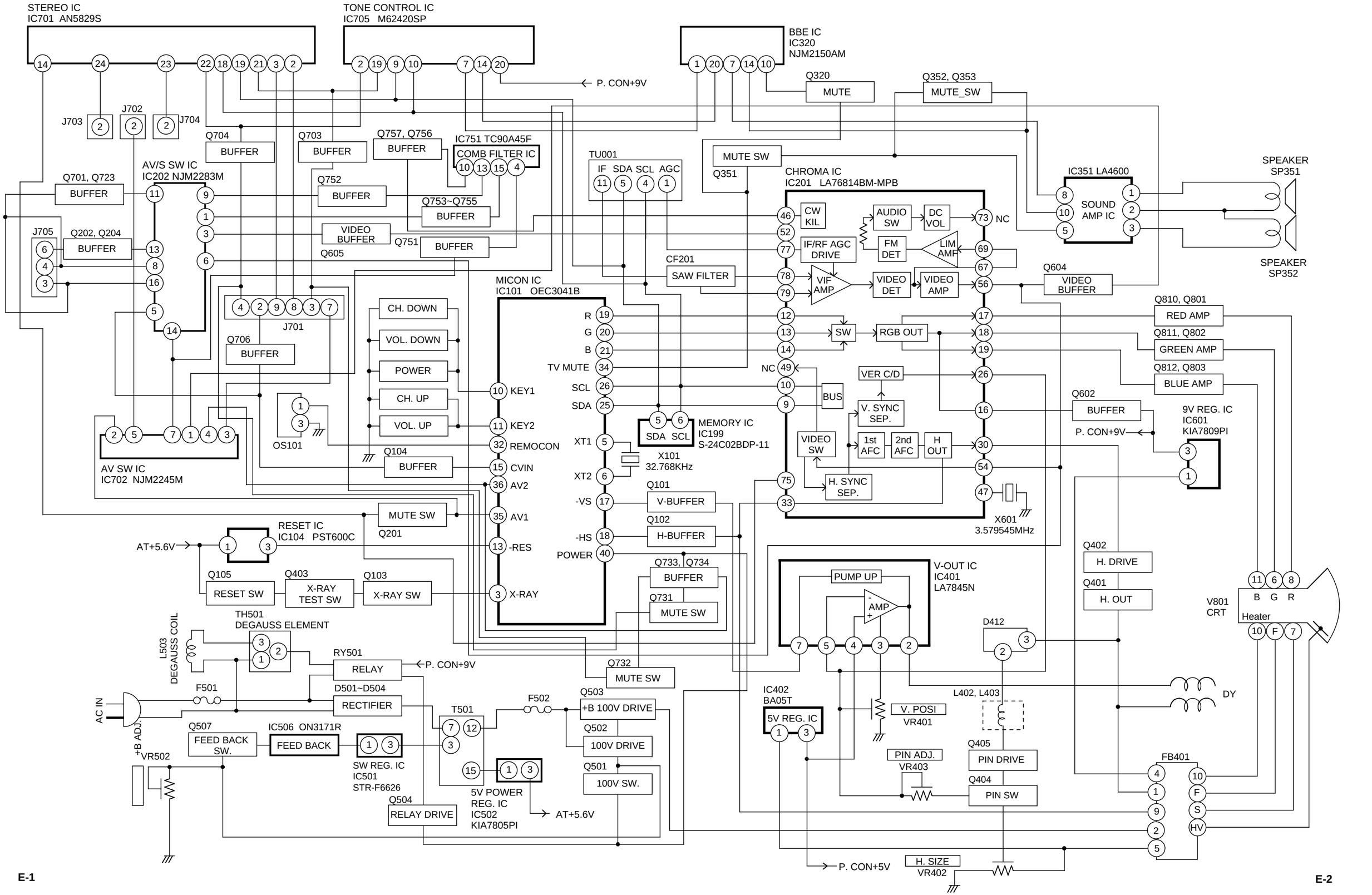
Fig. 3-2-b

MAJOR COMPONENTS LOCATION GUIDE



MAIN

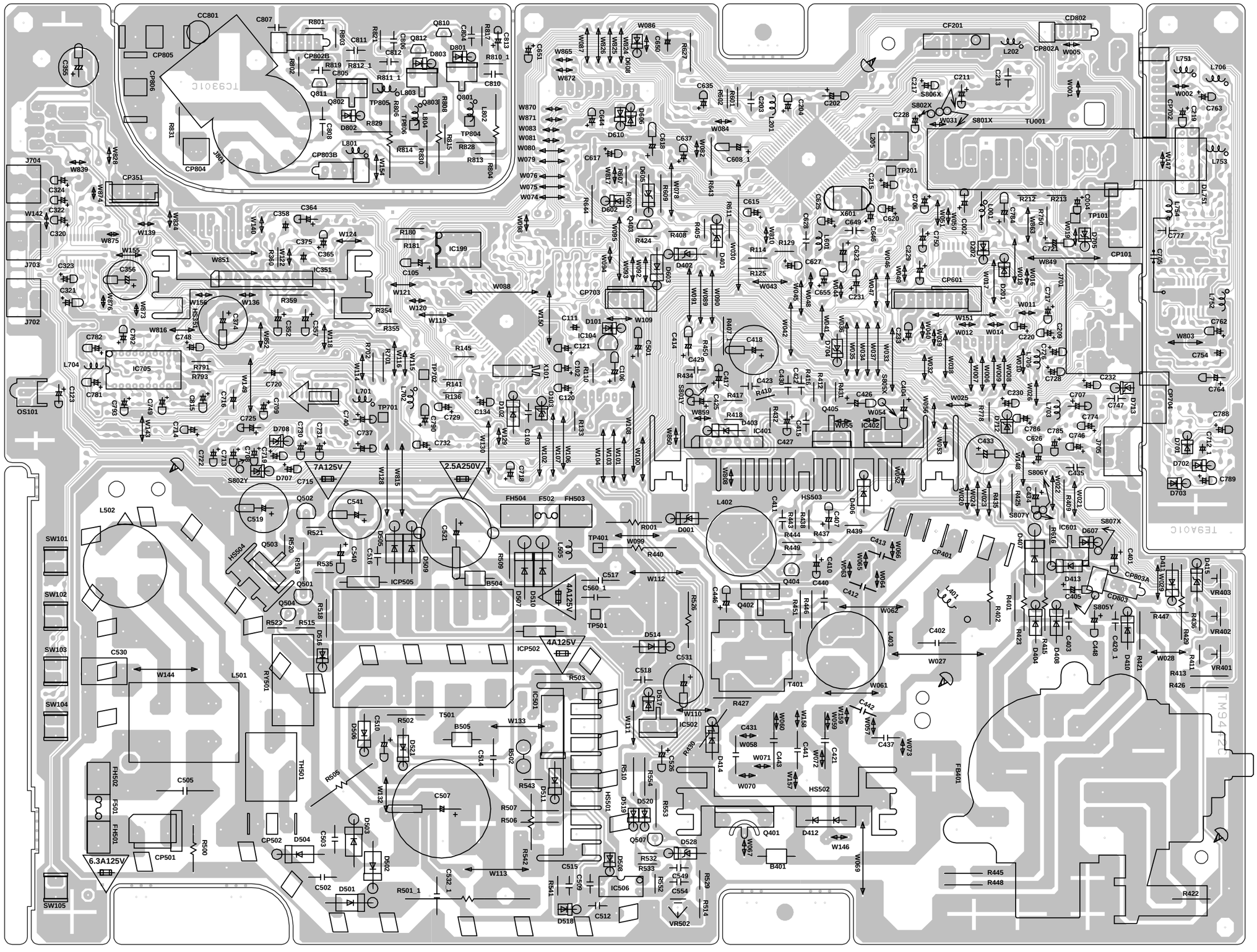
BLOCK DIAGRAM



E-1

E-2

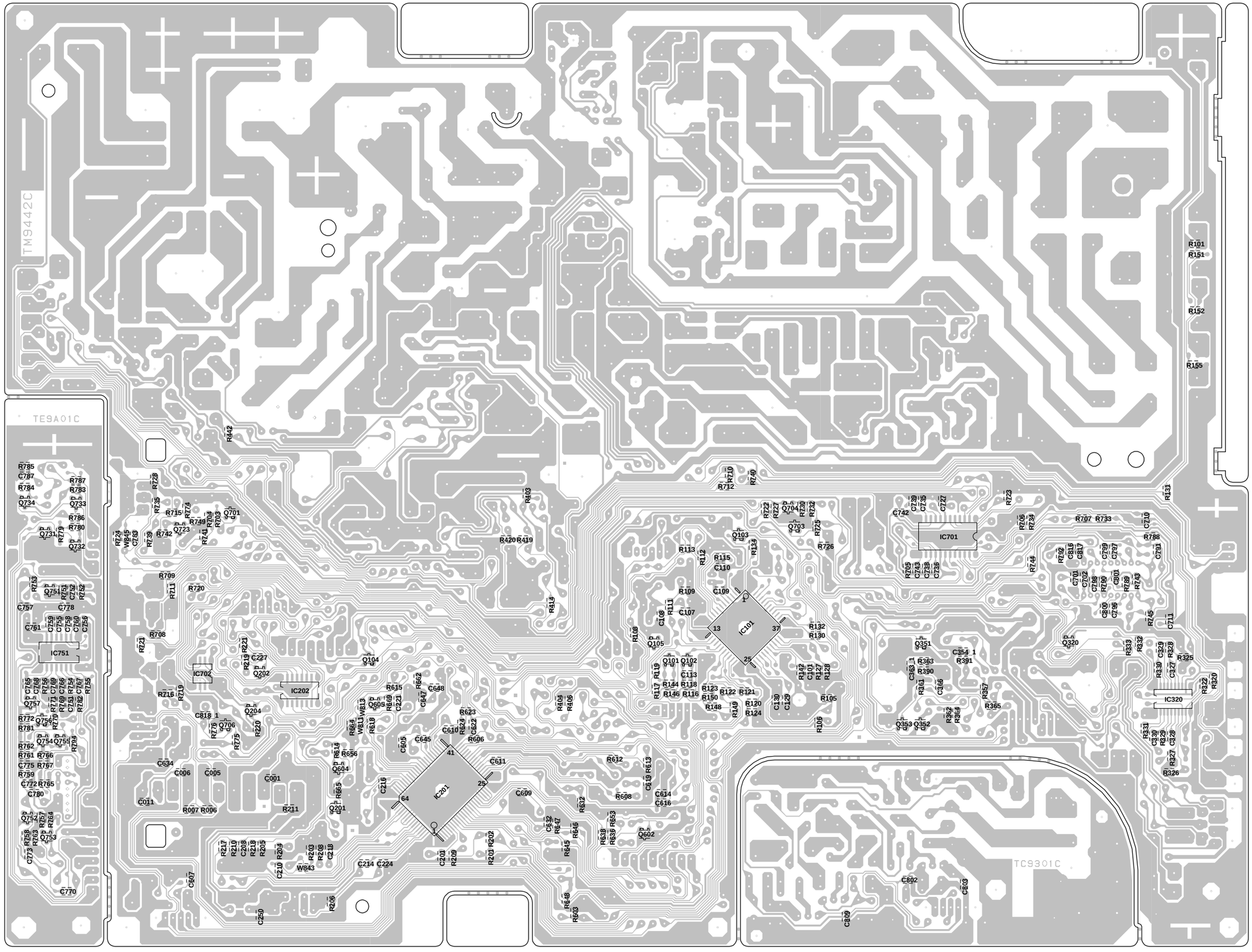
PRINTED CIRCUIT BOARDS
MAIN/CRT/COMB (INSERTED PARTS)
SOLDER SIDE



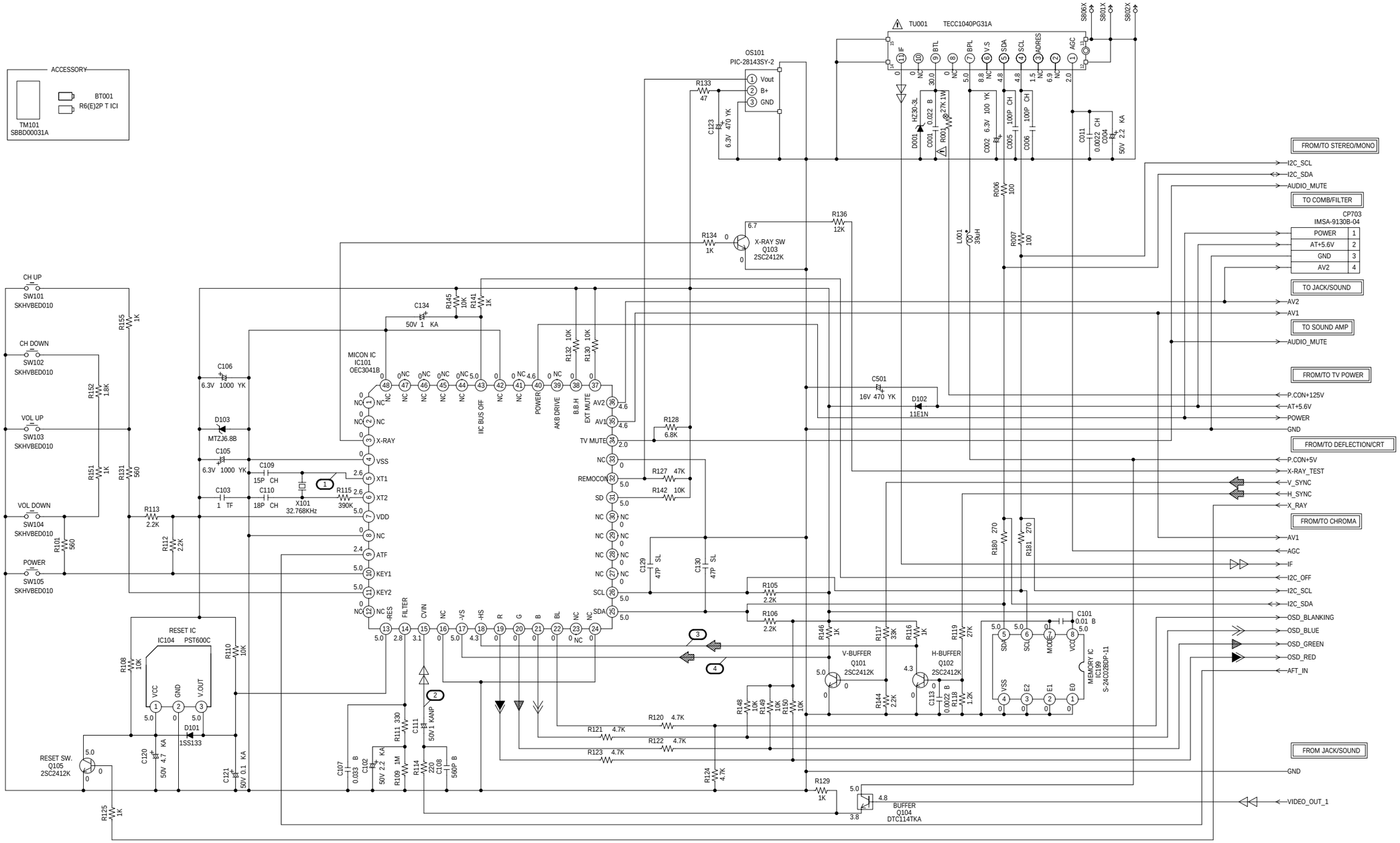
F-1

F-2

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



MICON/TUNER 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 。

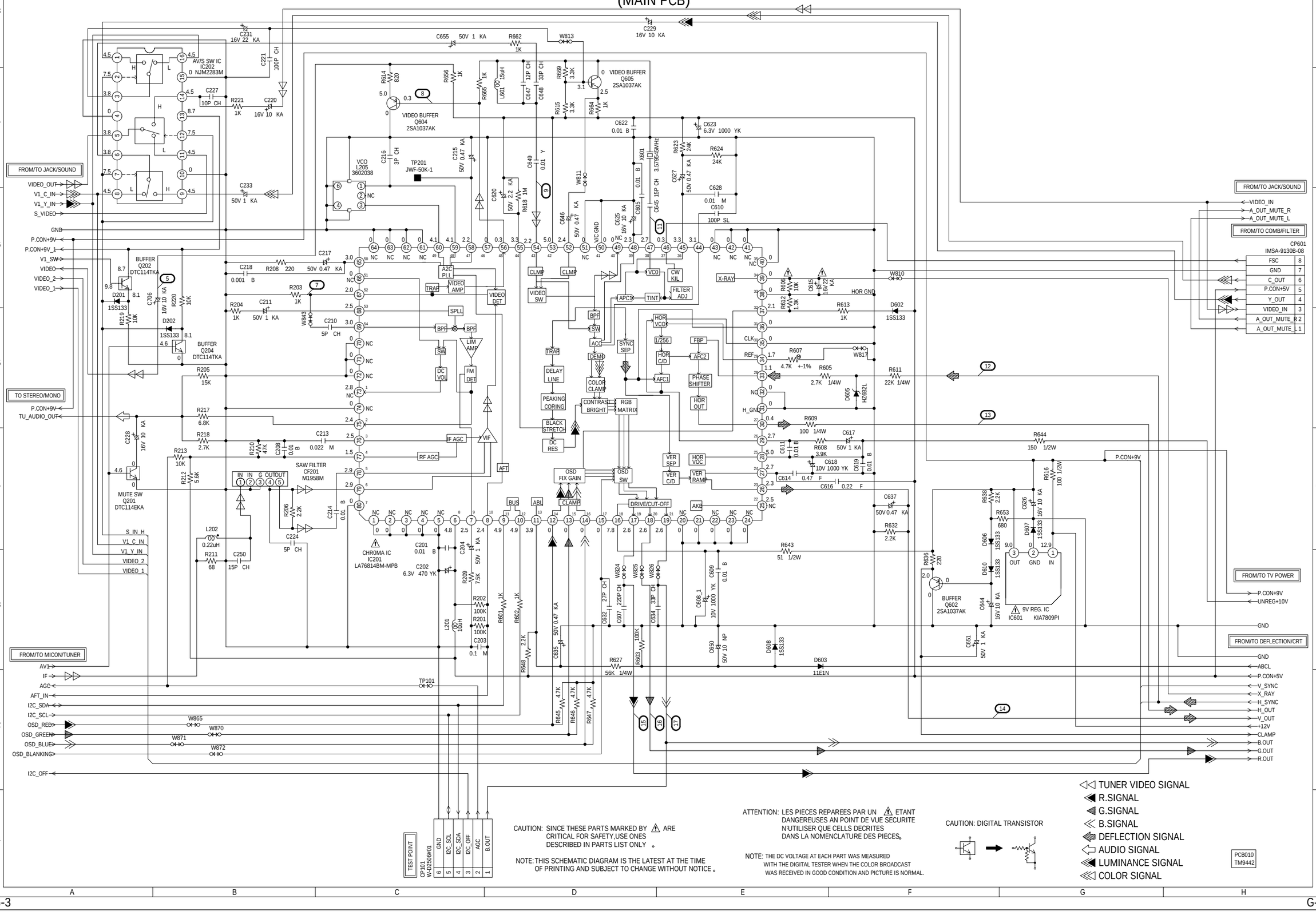
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: DIGITAL TRANSISTOR

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

PCB010
TM9442

CHROMA SCHEMATIC DIAGRAM
(MAIN PCB)



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

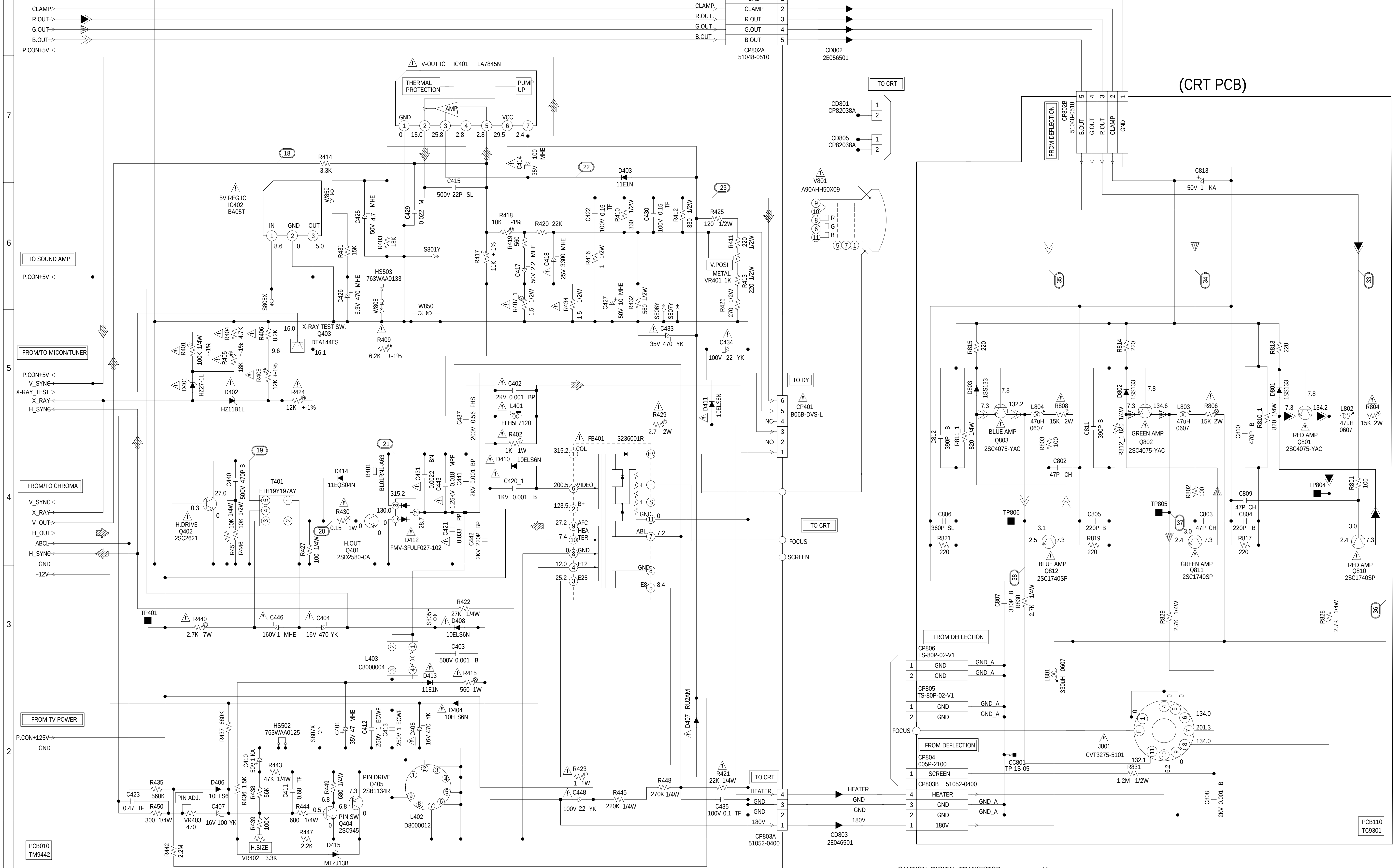
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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

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: DIGITAL TRANSISTOR

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



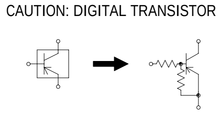
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

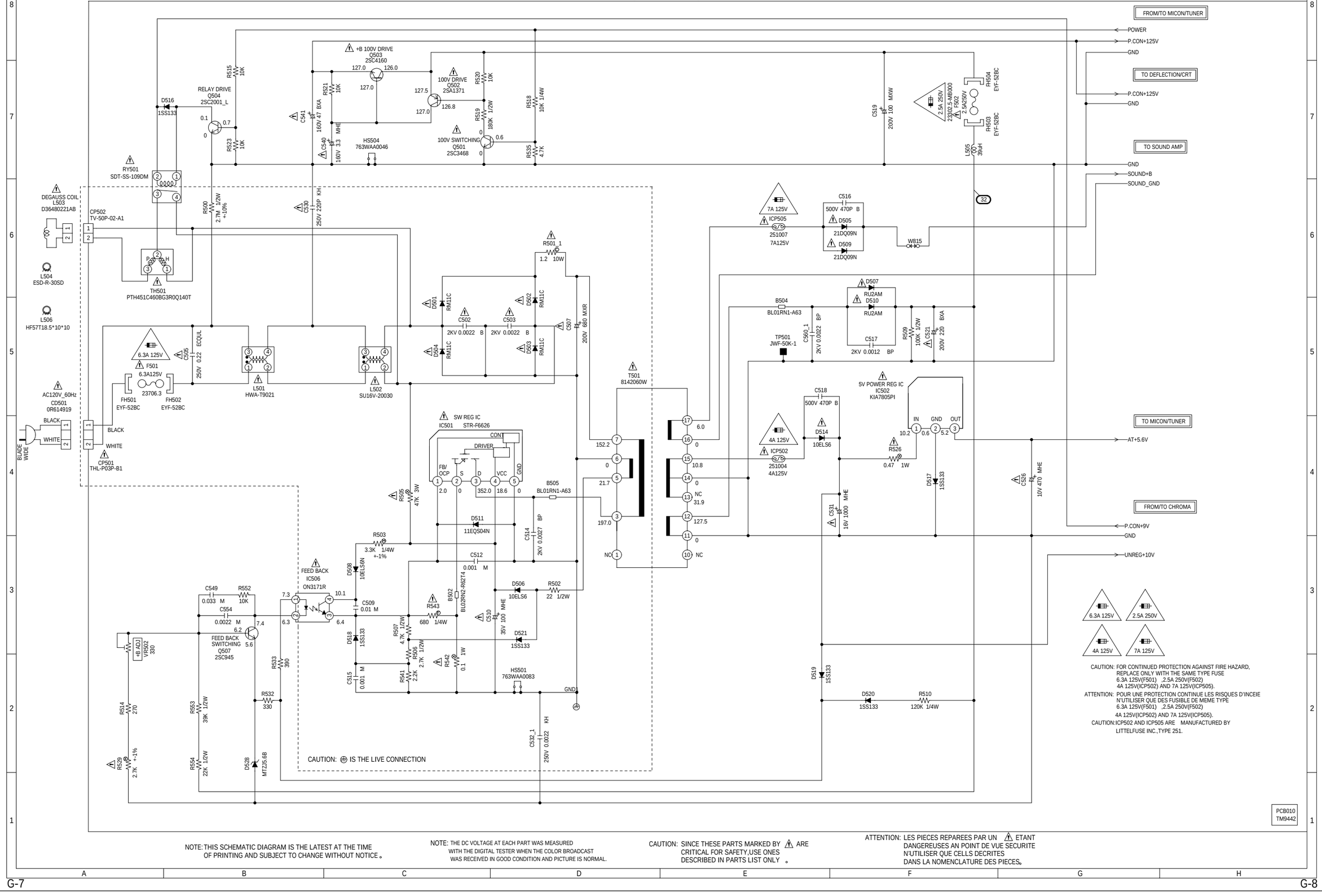
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: DIGITAL TRANSISTOR



- R.SIGNAL
- G.SIGNAL
- B.SIGNAL
- DEFLECTION SIGNAL

TV POWER SCHEMATIC DIAGRAM
(MAIN PCB)



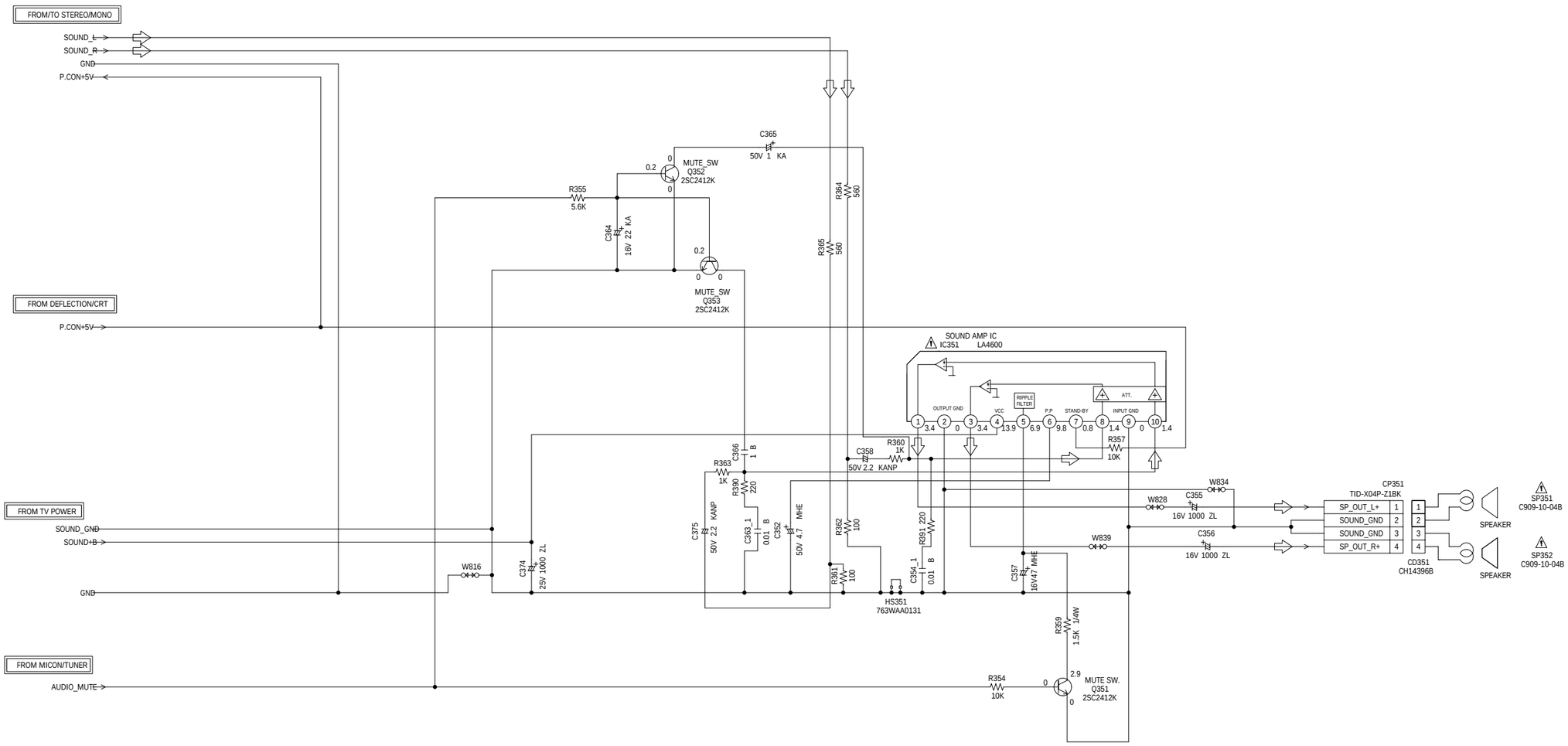
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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。

SOUND 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 。

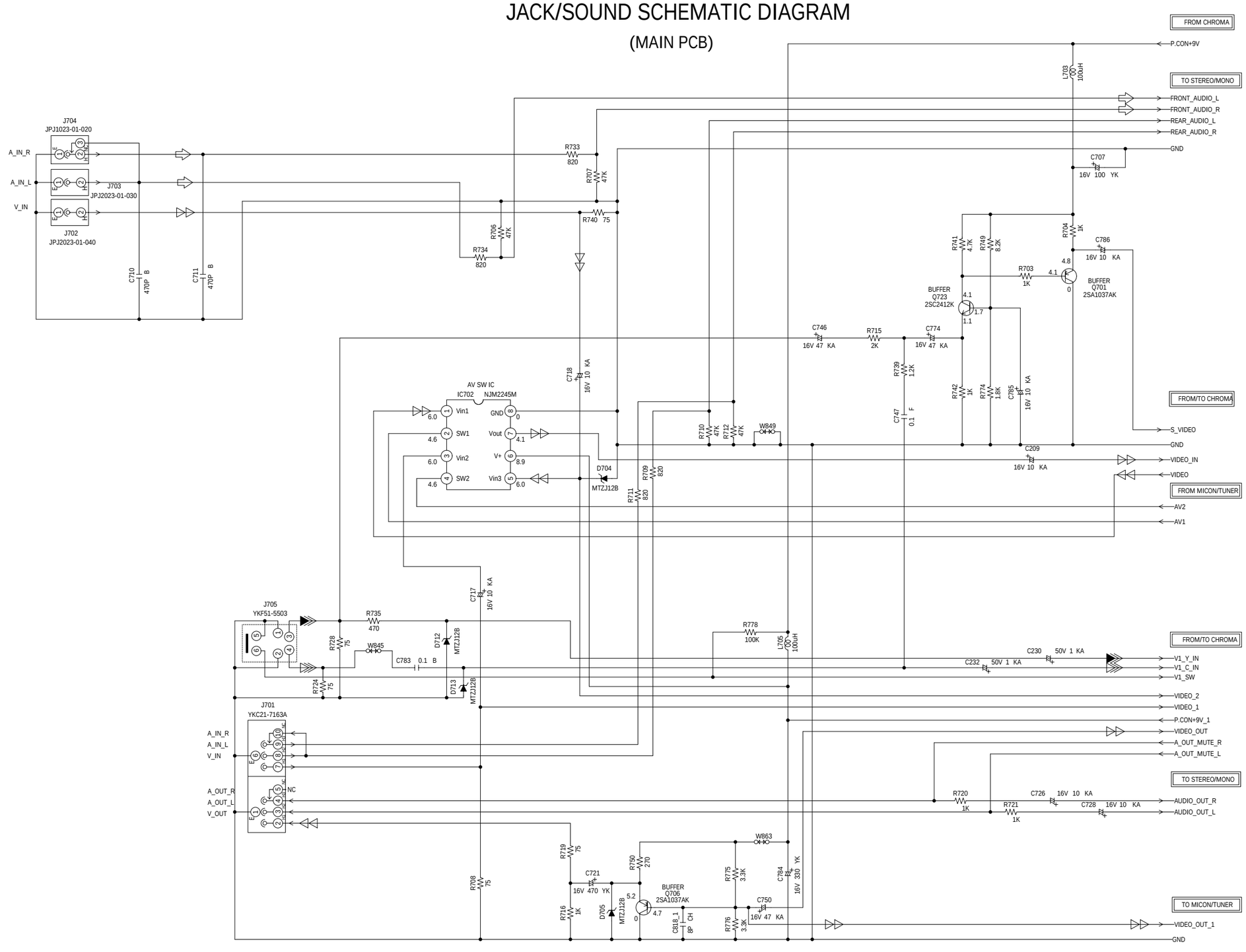
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

⇦ AUDIO SIGNAL

PCB010
TM9442

JACK/SOUND SCHEMATIC DIAGRAM

(MAIN PCB)



AUDIO SIGNAL

TUNER VIDEO SIGNAL

LUMINANCE SIGNAL

COLOR SIGNAL

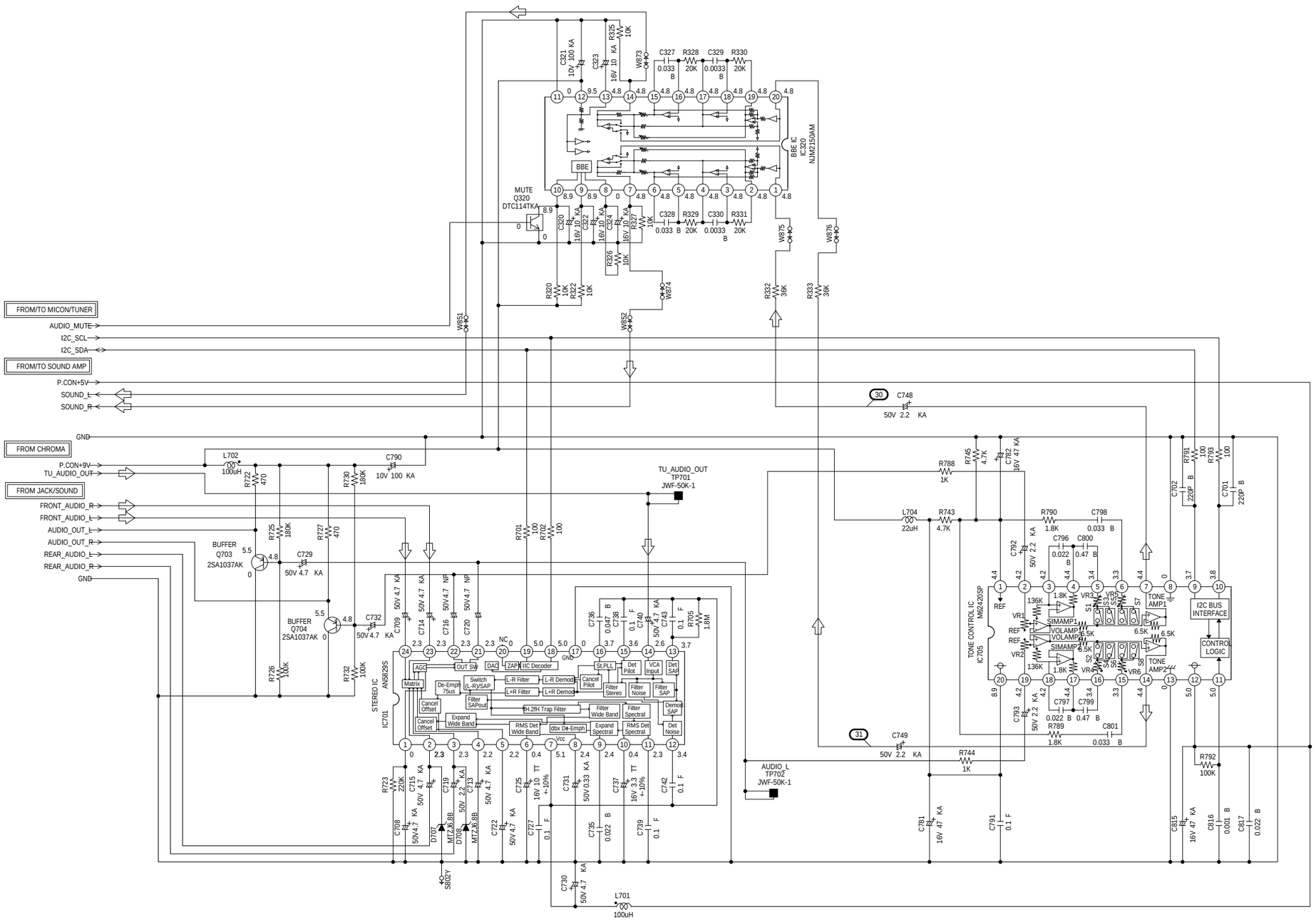
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

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
TM9442

STEREO/MONO SCHEMATIC DIAGRAM

(MAIN PCB)



CAUTION: DIGITAL TRANSISTOR

AUDIO SIGNAL

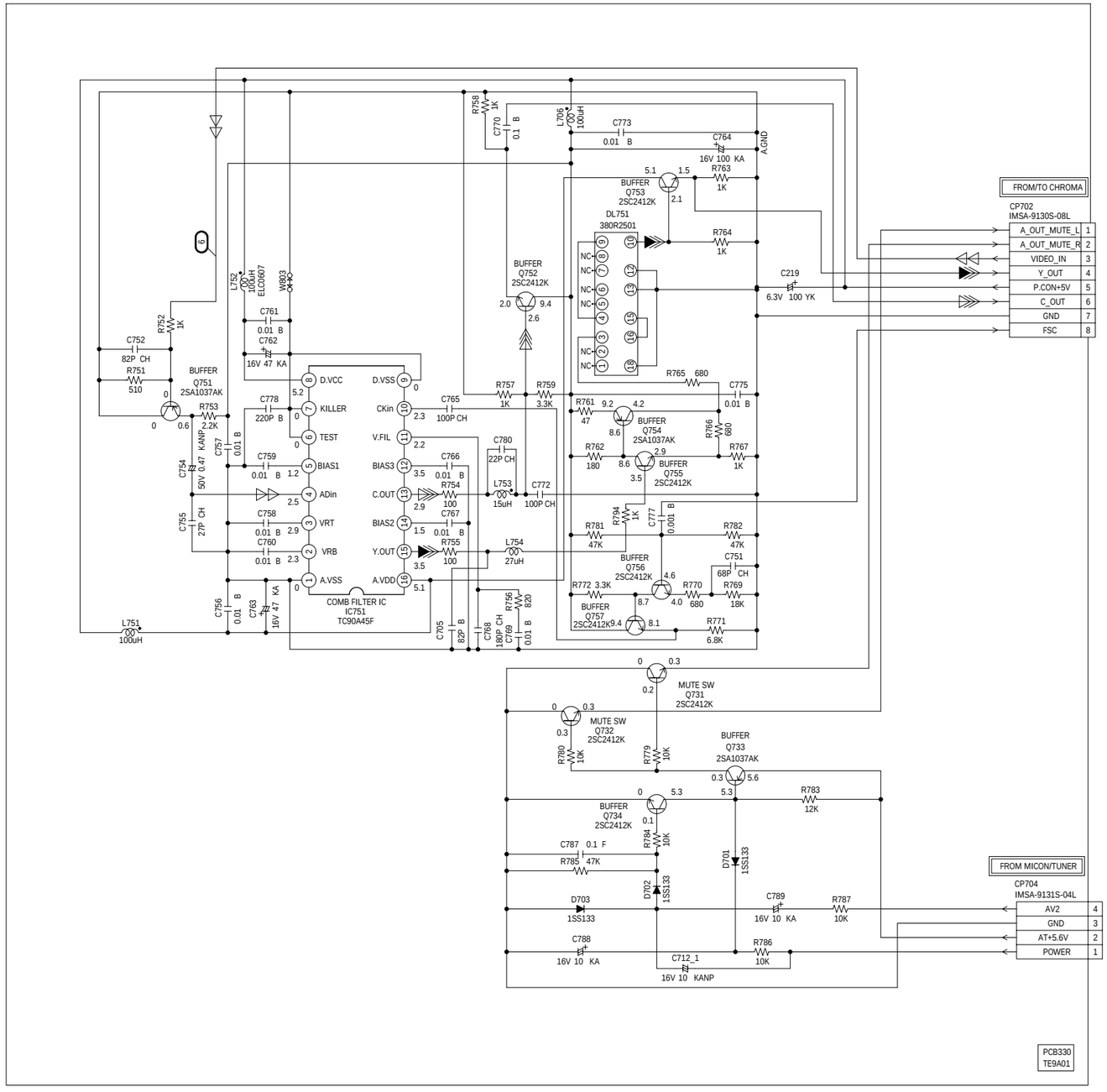
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

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
TM9442

COMB/FILTER SCHEMATIC DIAGRAM

(COMB PCB)



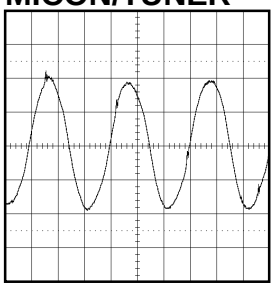
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

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.

TUNER VIDEO SIGNAL
LUMINANCE SIGNAL
COLOR SIGNAL

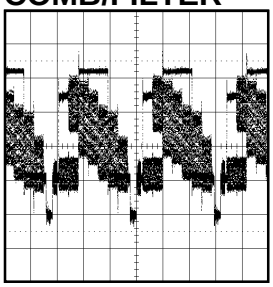
WAVEFORMS

MICON/TUNER

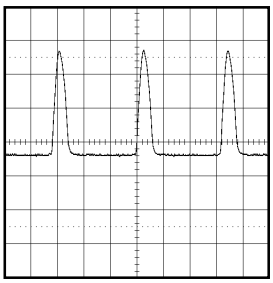


① 0.5V 10µs/div

COMB/FILTER

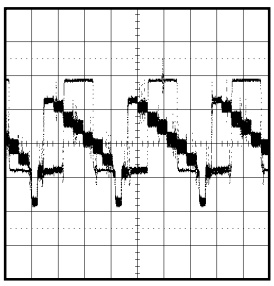


⑥ 0.5V 20µs/div

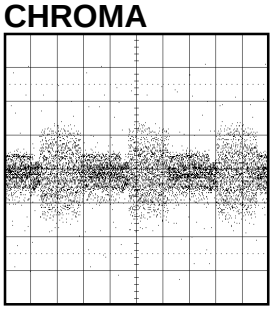


⑫ 10V 20µs/div

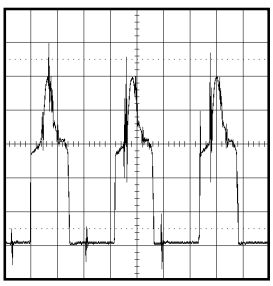
CHROMA



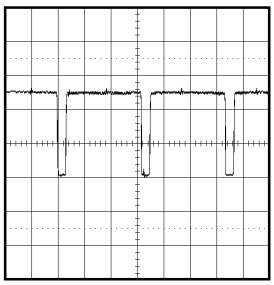
② 0.5V 20µs/div



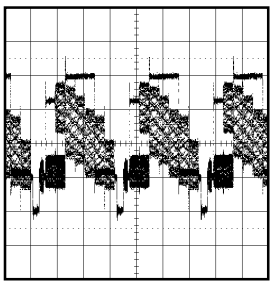
⑦ 200mV 5ms/div



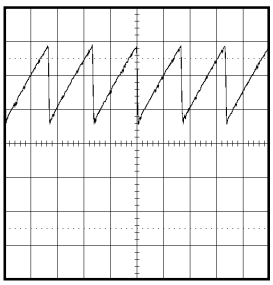
⑬ 200mV 20µs/div



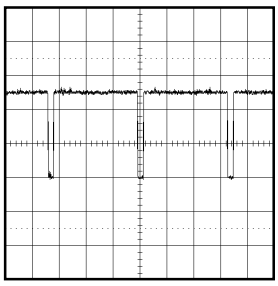
③ 2V 20µs/div



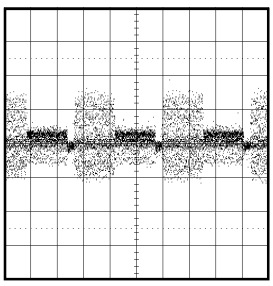
⑧ 0.5V 20µs/div



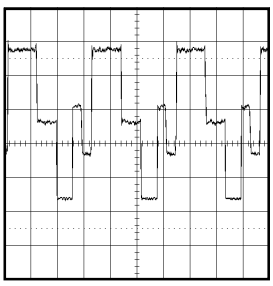
⑭ 0.5V 10ms/div



④ 2V 5ms/div

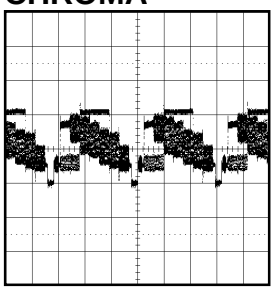


⑨ 50mV 5ms/div

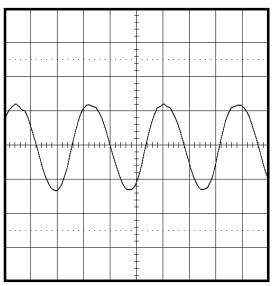


⑮ 1V 20µs/div

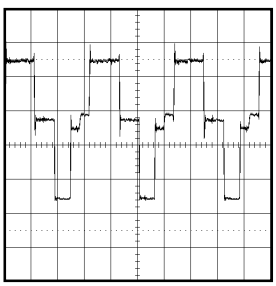
CHROMA



⑤ 0.5V 20µs/div



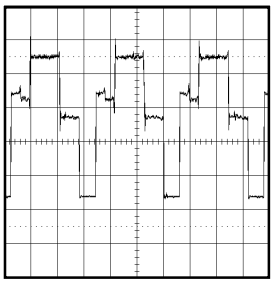
⑪ 100mV 0.1µs/div



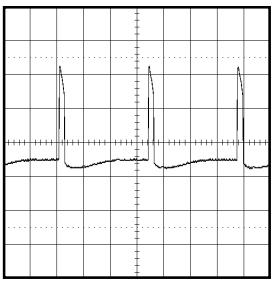
⑯ 1V 20µs/div

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

WAVEFORMS

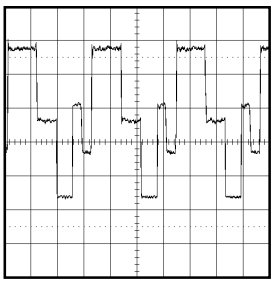


17 1V 20µs/div



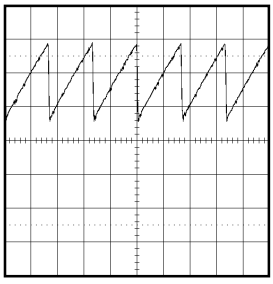
22 10V 5ms/div

DEFLECTION/CRT

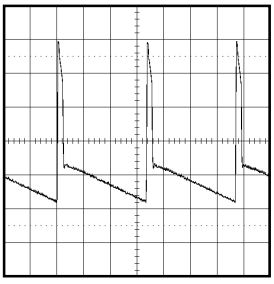


33 1V 20µs/div

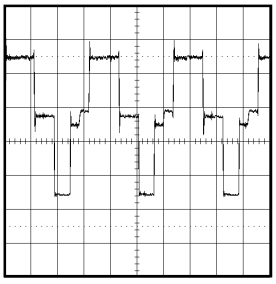
DEFLECTION/CRT



18 0.5V 10ms/div

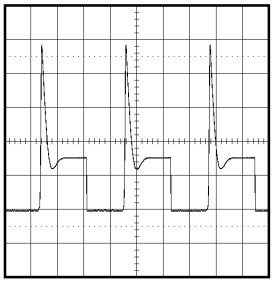


23 10V 5ms/div

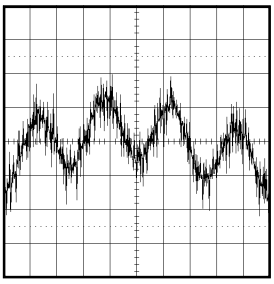


34 1V 20µs/div

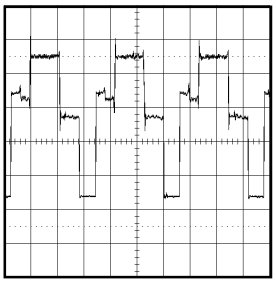
STEREO/MONO



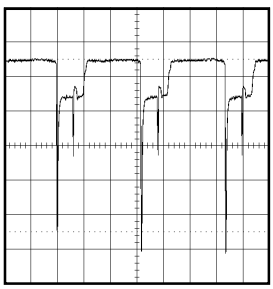
19 50V 20µs/div



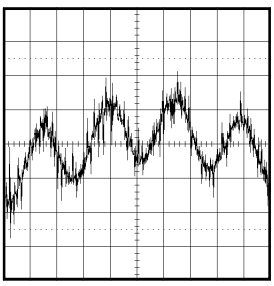
30 50mV 0.2ms/div



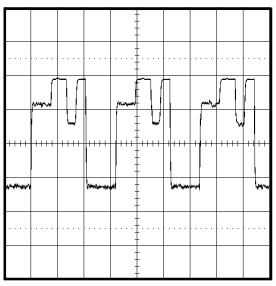
35 1V 20µs/div



20 2V 20µs/div

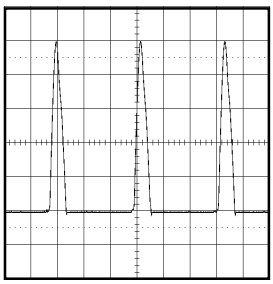


31 50mV 0.2ms/div

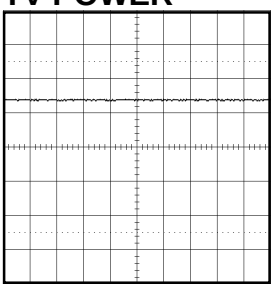


36 50V 20µs/div

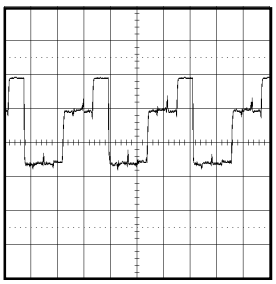
TV POWER



21 200V 20µs/div



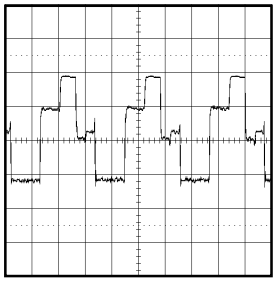
32 50V 0.2ms/div



37 50V 20µs/div

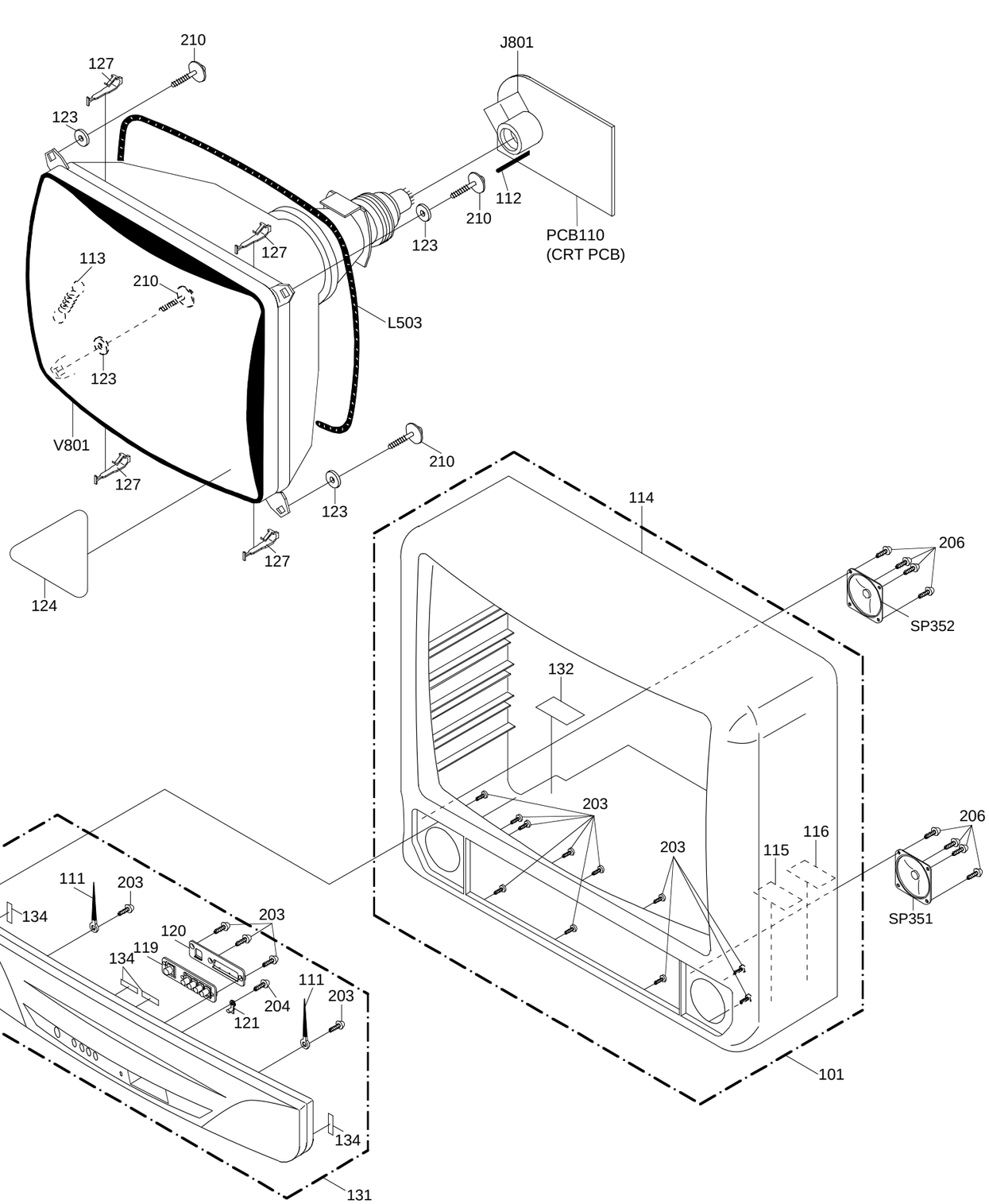
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

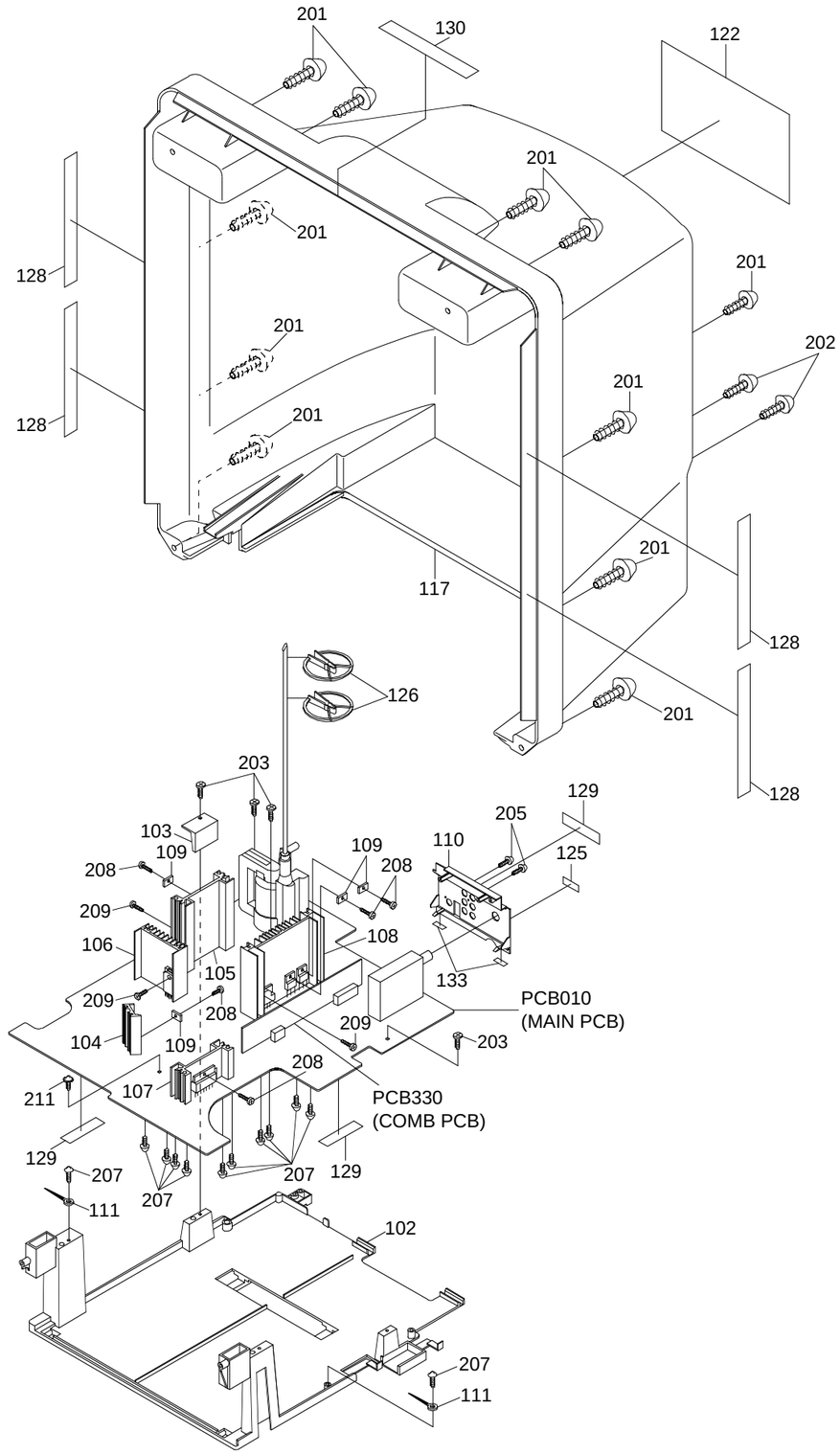
WAVEFORMS



(38) 50V 20µs/div

MECHANICAL EXPLODED VIEW





MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
101	A3I602B720	CABINET,FRONT ASS'Y		
102	761WPA0184	HOLDER,DECK		
103	761WPAA022	HOLDER,M/PCB		
104	---	HEAT SINK		
105	---	HEAT SINK		
106	---	HEAT SINK		
107	---	HEAT SINK		
108	---	HEAT SINK		
109	---	METAL SPACER		
110	771WPA0238	PLATE,JACK		
111	8995034000	CORD CLIP UL CO.		
112	---	COATING CLIP		
113	741WUA0021	SPRING,EARTH		
114	701APJA030	CABINET,FRONT		
115	7220001109	SHEET,HWC		
116	7230006856	SHEET,CAUTION		
117	702APA0111	CABINET,BACK		
118	711WPJA015	PANEL,FRONT		
119	735WPA0484	BUTTON,FRAME		
120	735WPA0485	BUTTON,BASE		
121	713WPA0082	GUIDE,REMOCON		
122	722A08A050	SHEET,RATING		
123	769WSAA002	WASHER		9.1x22xT1
124	723000B097	FILM,DECORATION		
125	724WNA0007	SHEET,PVC		
126	899HV3T001	HOLDER,ANODE WIRE		
127	762WPA0010	HOLDER,CRT WIRE		
128	800WQ00038	FELT SHEET		18x270xT0.5
129	800WQ00044	FELT SHEET		5x50xT0.5
130	800WQ00058	FELT SHEET		18x100xT0.5
131	A3I602B890	PANEL ASS'Y		
132	7240001041	SHEET,CSA WARNING		
133	800WQ00030	FELT SHEET		12x20xT0.5
134	800WQ00045	FELT SHEET		5x150xT0.5
201	8117540B04	SCREW,TAPPING (B0)	TRUSS	4x20
202	8110630A24	SCREW,TAP TITE (P)	BRAZIER	3x12
203	8110630A04	SCREW,TAP TITE (P)	BRAZIER	3x10
204	8110630804	SCREW,TAP TITE (P)	BRAZIER	3x8
205	8110230A02	SCREW,TAP TITE (P)	BIND	3x10
206	8116340B04	SCREW,TAPPING (A)	FLAT	4x20
207	8109630802	SCREW,TAP TITE (B)	BRAZIER	3x8
208	810A130804	SCREW/WASHER (A)		M3x8
209	810B130A04	SCREW/WASHER (B)		M3x10
210	8111H60C54	SCREW,TAPPING (A)	GW18	6x35
211	8117D30A04	SCREW,TAPPING (B0)	WH8 BRAZIER	3x10
---	JB5U0200	POLY & BAG		
---	J3I60201	INSTRUCTION BOOK		
---	J3I60229	INFORMATION SHEET		
---	791AHA0020	LAMIFILM,BAG		
---	792AHA0081	PACKAGE,TOP		
---	792AHA0082	PACKAGE,BOTTOM		
---	793ACDA079	GIFT BOX		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		RESISTORS	
⚠ R001	R3X181273J	R, METAL OXIDE	27K OHM 1W
⚠ R401	R4X5T4104F	R, METAL	100K OHM 1/4W
⚠ R402	R3K181102J	R, METAL	1K OHM 1W
⚠ R404	R801R7472J	RC	4.7K OHM 1/10W
⚠ R405	R4X5T6183F	R, METAL	18K OHM 1/6W
⚠ R406	R801R7822J	RC	8.2K OHM 1/10W
⚠ R407	R615021R5J	R, FUSE	1.5 OHM 1/2W
⚠ R408	R4X5T6123F	R, METAL	12K OHM 1/6W
⚠ R409	R4X5T6622F	R, METAL	6.2K OHM 1/6W
R410	R0L2U2331J	RC	330 OHM 1/2W
⚠ R415	R3X181561J	R, METAL	560 OHM 1W
⚠ R421	R001T4223J	RC	22K OHM 1/4W
⚠ R423	R65581010J	R, FUSE	1 OHM 1W
⚠ R424	R4X5T6123F	R, METAL	12K OHM 1/6W
⚠ R429	R6558A2R7J	R, FUSE	2.7 OHM 2W
⚠ R430	R3X281R15J	R, METAL	0.15 OHM 1W
⚠ R434	R0L2U21R5J	RC	1.5 OHM 1/2W
⚠ R440	R5X2CE272J	R, CEMENT	2.7K OHM 7W
R500	R21202275K	R, SOLID	2.7M OHM 1/2W
⚠ R501	R5X2CF1R2J	R, CEMENT	1.2 OHM 10W
⚠ R505	R3X28B473J	R, METAL OXIDE	47K OHM 3W
⚠ R526	R3X181R47J	R, METAL	0.47 OHM 1W
⚠ R529	R4X5T6272F	R, METAL	2.7K OHM 1/6W
⚠ R542	R336810R1J	R, METAL	0.1 OHM 1W
⚠ R543	R615U4681J	R, FUSE	680 OHM 1/4W
⚠ R606	R801R7103J	RC	10K OHM 1/10W
⚠ R804	R3X18A153J	R, METAL OXIDE	15K OHM 2W
⚠ R806	R3X18A153J	R, METAL OXIDE	15K OHM 2W
⚠ R808	R3X18A153J	R, METAL OXIDE	15K OHM 2W
		CAPACITORS	
C355	E62FF2102M	CE	1000 UF 16V
C356	E62FF2102M	CE	1000 UF 16V
C374	E62FF3102M	CE	1000 UF 25V
⚠ C402	C01BBP713K	CC	0.001 UF 2KV BP
⚠ C404	E02LT2471M	CE	470 UF 16V
⚠ C405	E02LT2471M	CE	470 UF 16V
C412	P411F3105J	CMPP	1 UF 250V ECWF
C413	P411F3105J	CMPP	1 UF 250V ECWF
⚠ C414	E5EZT4101M	CE	100 UF 35V
⚠ C418	E5EZ03332M	CE	3300 UF 25V
⚠ C420	C0JTB0613K	CC	0.001 UF 1KV B
⚠ C421	P3N1F5333J	CPP	0.033 UF 630V
⚠ C431	C034BN7H3K	CC	0.0022UF 2KV BN
⚠ C433	E02LF4471M	CE	470 UF 35V
⚠ C434	E02LT8220M	CE	22 UF 100V
C437	P447F2564J	CMPP	0.56 UF 200V FHS
C441	C01BBP713K	CC	0.001 UF 2KV BP
C442	C01BBP7H2K	CC	220 PF 2KV BP
⚠ C443	P4N8FJ183H	CMPP	0.018 UF 1.25KV
⚠ C446	E5EZTB010M	CE	1 UF 160V
⚠ C448	E02LT8220M	CE	22 UF 100V
⚠ C502	C13HB07H3K	CC	0.0022UF 2KV B
⚠ C503	C13HB07H3K	CC	0.0022UF 2KV B
⚠ C505	P2122B224M	CMP	0.22 UF 250V ECQUL
⚠ C507	E52SFC681M	CE	680 UF 200V
⚠ C510	E5EZT4101M	CE	100 UF 35V
C514	C01BBP7K3K	CC	0.0027UF 2KV BP
C517	C01BBP7B3K	CC	0.0012UF 2KV BP
C519	E52E0C101M	CE	100 UF 200V
⚠ C521	E62D0C221M	CE	220 UF 200V
⚠ C526	E5EZT1471M	CE	470 UF 10V
⚠ C530	CB3LB0MH2K	CC	220 PF 250V
⚠ C531	E5EZT2102M	CE	1000 UF 16V
C532	CB3LE0MH3M	CC	0.0022UF 250V
⚠ C540	E5EZTB3R3M	CE	3.3 UF 160V
⚠ C541	E62DFB470M	CE	47 UF 160V
C560	C01BBP7H3K	CC	0.0022UF 2KV BP
⚠ C615	E50HU2220M	CE	22 UF 16V
C705	CHG0B04W1K	CC	82 PF 50V B
C808	C130B0713K	CC	0.001 UF 2KV B
		DIODES	
D001	D94TA30013	DIODE, ZENER	HZ30-3L TD
D101	D1VT001330	DIODE, SILICON	1SS133T-77
D102	D28T11E1N1	DIODE, SILICON	11E1N-TA1B2
D103	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D201	D1VT001330	DIODE, SILICON	1SS133T-77
D202	D1VT001330	DIODE, SILICON	1SS133T-77

REF. NO.	PART NO.	DESCRIPTION	
		DIODES	
⚠ D401	D94TA27011	DIODE, ZENER	HZ27-1L TD
⚠ D402	D94TA11B11	DIODE, ZENER	HZ11B1L TD
D403	D28T11E1N1	DIODE, SILICON	11E1N-TA1B2
⚠ D404	D28TELS6N6	DIODE, RECTIFIER	10ELS6N-TA1B2
D406	D28T10ELS6	DIODE, RECTIFIER	10ELS6TA1B2
⚠ D407	D2BTRU2AM0	DIODE, SILICON	RU2AM V1
⚠ D408	D28TELS6N6	DIODE, RECTIFIER	10ELS6N-TA1B2
⚠ D410	D28TELS6N6	DIODE, RECTIFIER	10ELS6N-TA1B2
⚠ D411	D28TELS6N6	DIODE, RECTIFIER	10ELS6N-TA1B2
⚠ D412	DCBFMV3FU0	DIODE	FMV-3FULF027-102
⚠ D413	D28T11E1N1	DIODE, SILICON	11E1N-TA1B2
D414	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
D415	D97U01301B	DIODE, ZENER	MTZJ13B T-77
⚠ D501	D2BTRM11C0	DIODE, RECTIFIER	RM11C
⚠ D502	D2BTRM11C0	DIODE, RECTIFIER	RM11C
⚠ D503	D2BTRM11C0	DIODE, RECTIFIER	RM11C
⚠ D504	D2BTRM11C0	DIODE, RECTIFIER	RM11C
⚠ D505	D28F21DQN9	DIODE, SCHOTTKY	21DQ09N-FC4
D506	D28T10ELS6	DIODE, RECTIFIER	10ELS6TA1B2
⚠ D507	D2BTRU2AM0	DIODE, SILICON	RU2AM V1
D508	D28TELS6N6	DIODE, RECTIFIER	10ELS6N-TA1B2
⚠ D509	D28F21DQN9	DIODE, SCHOTTKY	21DQ09N-FC4
⚠ D510	D2BTRU2AM0	DIODE, SILICON	RU2AM V1
D511	D28TQS04N0	DIODE, SCHOTTKY	11EQS04N-TA1B2
⚠ D514	D28X10ELS6	DIODE, RECTIFIER	10ELS6-TA2B5
D516	D1VT001330	DIODE, SILICON	1SS133T-77
D517	D1VT001330	DIODE, SILICON	1SS133T-77
D518	D1VT001330	DIODE, SILICON	1SS133T-77
D519	D1VT001330	DIODE, SILICON	1SS133T-77
D520	D1VT001330	DIODE, SILICON	1SS133T-77
D521	D1VT001330	DIODE, SILICON	1SS133T-77
D528	D97U05R61B	DIODE, ZENER	MTZJ5.6B T-77
D602	D1VT001330	DIODE, SILICON	1SS133T-77
D603	D28T11E1N1	DIODE, SILICON	11E1N-TA1B2
D605	D94TA6RB12	DIODE, ZENER	HZ6B2L TD
D606	D1VT001330	DIODE, SILICON	1SS133T-77
D607	D1VT001330	DIODE, SILICON	1SS133T-77
D608	D1VT001330	DIODE, SILICON	1SS133T-77
D610	D1VT001330	DIODE, SILICON	1SS133T-77
D701	D1VT001330	DIODE, SILICON	1SS133T-77
D702	D1VT001330	DIODE, SILICON	1SS133T-77
D703	D1VT001330	DIODE, SILICON	1SS133T-77
D704	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D705	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D707	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D708	D97U06R81B	DIODE, ZENER	MTZJ6.8B T-77
D712	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D713	D97U01201B	DIODE, ZENER	MTZJ12B T-77
D801	D1VT001330	DIODE, SILICON	1SS133T-77
D802	D1VT001330	DIODE, SILICON	1SS133T-77
D803	D1VT001330	DIODE, SILICON	1SS133T-77
		ICS	
IC101	I53F53041B	IC	OEC3041B
IC104	I9UJ0T600C	IC	PST600C
IC199	A3I601B015	IC	S-24C02BDP-11
⚠ IC201	I03FE814B0	IC	LA76814BM-MPB
IC202	I0QF022830	IC	NJM2283M
IC320	I0QF021500	IC	NJM2150AM
⚠ IC351	I03SP46000	IC	LA4600
⚠ IC401	I03SD78450	IC	LA7845N
⚠ IC402	I07K9A05T0	IC	BA05T
⚠ IC501	I2BT066260	IC	STR-F6626
⚠ IC502	I1KA978050	IC	KIA7805PI
⚠ IC506	000210001R	PHOTO COUPLER	ON3171R
⚠ IC601	I1KA978090	IC	KIA7809PI
IC701	I01FF58290	IC	AN5829S
IC702	I0QF02245M	IC	NJM2245M
IC705	I06DF62420	IC	M62420SP
IC751	I05FE90A45	IC	TC90A45F
		TRANSISTORS	
Q101	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q102	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q103	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q104	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146
Q105	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q201	TNYJB05001	COMPOUND TRANSISTOR	DTC114EKAT146
Q202	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		TRANSISTORS	
Q204	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146
Q320	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146
Q351	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q352	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q353	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q401	TD3U025800	TRANSISTOR, SILICON	2SD2580-CA
⚠ Q402	TC3Q026210	TRANSISTOR, SILICON	2SC2621(D,E)-RAC
Q403	TPYTD03001	COMPOUND TRANSISTOR	DTA144ESTP
Q404	TCST009450	TRANSISTOR, SILICON	2SC945(C)-T(P,Q)
Q405	TB3001134R	TRANSISTOR, SILICON	2SB1134R
⚠ Q501	TC3T034680	TRANSISTOR, SILICON	2SC3468(D,E)-AE
⚠ Q502	TA3T1371A0	TRANSISTOR, SILICON	2SA1371(D,E)-AE
⚠ Q503	TC304160E0	TRANSISTOR, SILICON	2SC4160
Q504	TCST02001L	TRANSISTOR, SILICON	2SC2001(C)-T_L
Q507	TCST009450	TRANSISTOR, SILICON	2SC945(C)-T(P,Q)
Q602	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q604	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q605	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q701	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q703	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q704	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q706	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q723	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q731	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q732	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q733	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q734	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q751	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q752	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q753	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q754	T6YJ1037K0	TRANSISTOR, SILICON	2SA1037AKT146(R,S)
Q755	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q756	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
Q757	T8YJ2412K0	TRANSISTOR, SILICON	2SC2412KT146(R,S)
⚠ Q801	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q802	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q803	TC3Q040750	TRANSISTOR, SILICON	2SC4075-YAC
⚠ Q810	TCYT1740S0	TRANSISTOR, SILICON	2SC1740SP TP
⚠ Q811	TCYT1740S0	TRANSISTOR, SILICON	2SC1740SP TP
⚠ Q812	TCYT1740S0	TRANSISTOR, SILICON	2SC1740SP TP
		COILS &TRANSFORMERS	
L001	021673390K	COIL	39 UH
L201	021LA6100K	COIL	10 UH
L202	021673R22M	COIL	0.22 UH
L205	0336020388	COIL, VIDEO IFT	3602038
⚠ L401	022100031A	COIL, LINEARITY	ELH5L7120
L402	02D8000012	TIB PIN PHASE COIL	D8000012
L403	02C8000004	SIDE PIN MODURATOR COIL	C8000004
⚠ L501	029F000065	COIL, LINE FILTER	HWA-T9021
⚠ L502	029X000065	COIL, LINE FILTER	SU16V-20030
⚠ L503	028H360001	COIL, DEGAUSS	D36480221AB
L504	02AXB9A971	CORE, FERRITE	ESD-R-30SD or
	02A1281872	CORE, TRIDAL	KR16TT281807D
L505	021U6D390K	COIL	39 UH
L506	02A6A8A0A1	CORE, FERRITE	HF57T18.5*10*10
L601	021LA6150K	COIL	15 UH
L701	021673101K	COIL	100 UH
L702	021673101K	COIL	100 UH
L703	021LA6101K	COIL	100 UH
L704	021LA6220K	COIL	22 UH
L705	021LA6101K	COIL	100 UH
L706	021673101K	COIL	100 UH
L751	021673101K	COIL	100 UH
L752	02167H101K	COIL	100 UH
L753	021673150K	COIL	15 UH
L754	021LA6270K	COIL	27 UH
L801	02167D331K	COIL	330 UH
L802	02167D470K	COIL	47 UH
L803	02167D470K	COIL	47 UH
L804	02167D470K	COIL	47 UH
T401	0450190141	TRANS, HORIZONTAL DRIVE	ETH19Y197AY
⚠ T501	048142060W	TRANSFORMER, SWITCHING	8142060W
		JACKS	
J701	060Q471003	RCA, JACK	YKC21-7163A
J702	0602401031	RCA, JACK	JPJ2023-01-040
J703	0602401032	RCA, JACK	JPJ2023-01-030
J704	0602421013	RCA, JACK	JPJ1023-01-020

REF. NO.	PART NO.	DESCRIPTION	
		JACKS	
J705	063Q700002	JACK	YKF51-5503
⚠ J801	066C130017	SOCKET, CRT	CVT3275-5101
		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 RESISTORS	
VR401	V126213BT2	VOLUME, SEMI FIXED	RH0684C13R
VR402	V1262L3BT6	VOLUME, SEMI FIXED	RH063LCN3R
VR403	V1262Q2BT6	VOLUME, SEMI FIXED	RH063LCS2R
VR502	V1263L2BTC	VOLUME, SEMI FIXED	RH063MCN2R
		P.C.BOARD ASSEMBLIES	
PCB010	A3I602B01A	PCB ASS'Y	TM9442C
PCB110	A3I601B11A	PCB ASS'Y	TC9301C
PCB330	A3I601B33A	PCB ASS'Y	TE9A01C
		MISCELLANEOUS	
B401	024AT03655	CORE, BEADS	BL01RN1-A63T6
B502	024AT03482	CORE, BEADS	BL02RN2-R62T4
B504	024AT03655	CORE, BEADS	BL01RN1-A63T6
B505	024AT03655	CORE, BEADS	BL01RN1-A63T6
BT001	1412003013	BATTERY, MANGAN	R6(E)2P T ICI
CD351	06CH14396B	CORD, CONNECTOR	CH14396B
⚠ CD501	120R614919	CORD, AC	0R614919
CD801	06CP82038A	CORD, CONNECTOR	CP82038A
CD802	122E056501	CORD, JUMPER	2E056501
CD803	122E046501	CORD, JUMPER	2E046501
CD805	06CP82038A	CORD, CONNECTOR	CP82038A
CF201	102E245R71	FILTER, SAW	M1958M
CP101	069Q160058	CONNECTOR PCB SIDE	W-D2506#01
CP351	069W14T290	CONNECTOR PCB SIDE	TID-X04P-Z1BK
⚠ CP401	069X460029	CONNECTOR PCB SIDE	B06B-DVS-L
⚠ CP501	0697320039	CORD, UX CONNECTOR	THL-P03P-B1
CP502	069W420029	CONNECTOR PCB SIDE	TV-50P-02-A1
CP601	069J180038	CONNECTOR PCB SIDE	IMSA-9130B-08
CP702	069J180048	CONNECTOR PCB SIDE	IMSA-9130S-08L
CP703	069J140038	CONNECTOR PCB SIDE	IMSA-9130B-04
CP704	069J140028	CONNECTOR PCB SIDE	IMSA-9131S-04L
CP804	069W010010	CONNECTOR PCB SIDE	005P-2100
CP805	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1
CP806	069W320018	CONNECTOR PCB SIDE	TS-80P-02-V1
CP802A	067R005019	WIRE HOLDER	51048-0510
CP802B	067R005019	WIRE HOLDER	51048-0510
CP803A	067R104019	WIRE HOLDER	51052-0400
CP803B	067R104019	WIRE HOLDER	51052-0400
CUS001	800WFAA006	CUSHION A	
DL751	10380R2501	DELAY EQ	380R2501
⚠ F501	081PA6R302	FUSE	23706.3
⚠ F502	080PA2R501	FUSE	23302.5-MB000
⚠ FB401	043236001R	TRANSFORMER, FLYBACK	3236001R
FH501	06710T0006	HOLDER, FUSE	EYF-52BC
FH502	06710T0006	HOLDER, FUSE	EYF-52BC
FH503	06710T0006	HOLDER, FUSE	EYF-52BC
FH504	06710T0006	HOLDER, FUSE	EYF-52BC
⚠ ICP502	083PC04002	MICRO FUSE	251004
⚠ ICP505	083PC07002	MICRO FUSE	251007
OS101	077Q014003	REMOTE RECEIVER	PIC-28143SY-2
⚠ RY501	0560Q10114	RELAY	SDT-SS-109DM
⚠ SP351	070C046001	SPEAKER	C909-10-04B
⚠ SP352	070C046001	SPEAKER	C909-10-04B
⚠ TH501	DF20G3R0Q0	DEGAUSS ELEMENT	PTH451C460BG3R0Q
TM101	07660CS010	TRANSMITTER	SBBD00031A
⚠ TU001	0145K00050	TUNER, UHF-VHF	TECC1040PG31A
⚠ V801	0985360601	CRT W/DY	A90AHH50X09
X101	100DA32R01	CRYSTAL DT-26	32.768KHz
X601	100CT3R505	CRYSTAL HC-49/C	3.579545MHz

ELECTRICAL REPLACEMENT PARTS LIST

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.	M3I6-02B
O/R NO.	A033524