

MATSUI 2107 NS

General Information

Also Covers
Matsui 2107R & 2107T.

Safety Precautions

PERFORM A SAFETY CHECK AFTER SERVICING

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

(INSULATION CHECK PROCEDURE)

- 1. Unplug the plug from the AC outlet.
- 2. Remove the antenna terminal on TV and turn on the TV.

- 3. Insulation resistance between the cord plug terminals and the eternal exposure metal [Note 2] should be more than 1M ohm by using the 500V insulation resistance meter [Note 1].
- 4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

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

[Note 2]

External exposure metal:Antenna terminal

Recommended Safety Parts

Item	Part No.	Description
R401	R3K181102J	R,METAL
R408	R6558A4R7J	R,FUSE
R423	R65582680J	R,FUSE
R424	R5X2CE5R6J	R,CEMENT
R426	R6358A010J	R,FUSE
R429	R655811R8J	R,FUSE
R503	R5Y4AE5R6J	R,CEMENT
R512	R61584470J	R,FUSE
R513	R3X28B683J	R,METAL
R516	R3X28B150J	R,METAL OXIDE
R524	R5X2CD010J	R,CEMENT
R804	R3U18A153J	R,METAL
R806	R3U18A153J	R,METAL
R808	R3U18A153J	R,METAL
C501	P2222B224K	CMP
C502	CB3930MH3M	CC
C525	CB3930M12K	CC
C526	P2222B224K	CMP
C527	CB3930M12K	CC
D404	D28T10ELS6	DIODE,RECTIFIER
D407	D28T10ELS6	DIODE,RECTIFIER
D501	D2BTRM11C0	DIODE,RECTIFIER
D502	D2BTRM11C0	DIODE,RECTIFIER
D503	D2BTRM11C0	DIODE,RECTIFIER
D504	D2BTRM11C0	DIODE,RECTIFIER
D510	D28I15DF60	DIODE,SILICON
D511	D28T10ELS6	DIODE,RECTIFIER
D515	D28F30DF60	DIODE,RECTIFIER
IC201	I03DE68120	IC
IC401	I03SD78400	IC
IC402	I07B9805T0	IC
IC403	I07B9809T0	IC
IC501	IDED016846	IC
IC502	I07B9805T0	IC
Q401	TC4Q052500	TRANSISTOR,SILICON
Q501	T41F026510	TRANSISTOR FIELD EFFECT
Q503	TA3T1371A0	TRANSISTOR,SILICON
Q504	TC30041600	TRANSISTOR,SILICON
L502	029K000001	COIL,LINE FILTER
T501	048140049W	TRANSFORMER SWITCHING
J801	066C130015	SOCKET,CATHODE RAY TUBE
SW501	0530205002	SWITCH
CD501	1206635821	CORD,AC
F501	0808T04002	FUSE
F502	0808T01002	FUSE
FB401	043221010F	TRANSFORMER,FLYBACK
ICP501	083PC02002	MICRO FUSE
RY501	0560Q10114	RELAY
V801	098A210405	CRT

(2107R & 2107T Only)

R429	R655811R5J	R, FUSE
R448	R5Y4CD472J	R, CEMENT
R514	R3X28B683J	R, METAL
R518	R3X18A220J	R, METAL OXIDE
R524	R5X2CD1R8J	R, CEMENT
L501	029X000073	COIL, LINE FILTER
T501	048140051W	TRANSFORMER, SWITCHING

Disassembly Instructions

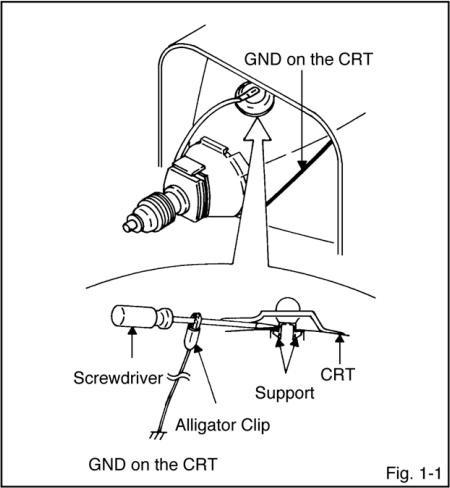
1. REMOVAL OF ANODE CAP

Read the following NOTED items before starting work.

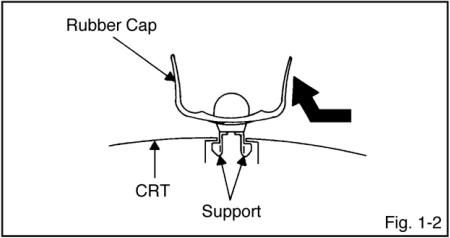
- * After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
- * Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

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.



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.)



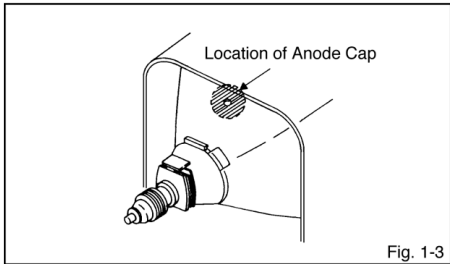
3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

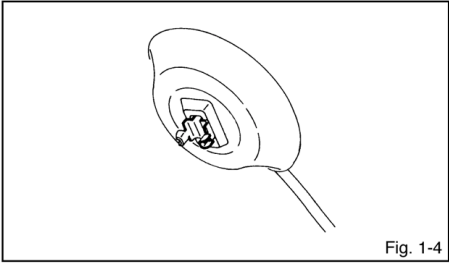
1. Clean the spot where the cap was located with a small amount of alcohol. (Refer to Fig. 1-3.)



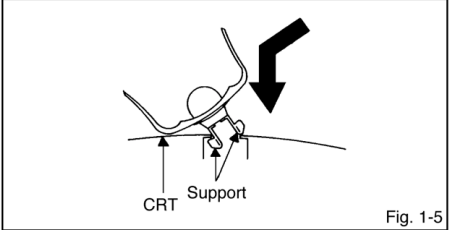
NOTE

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.)



4. Insert one end of the Anode Support into the anode button, then the other as shown in 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 2 seconds.

Set Key	Remocon Key	Operations
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	7	Releasing of PROTECTION PASSWORD.
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 2 seconds.
3. After the confirmation of using hours, turn off the power.

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.

Table 1 (2107 NS Only)

ADDRESS	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A	INI 0B	INI 0C	INI 0D	INI 0E	INI 0F	INI 10
DATA	0A	00	00	00	D0	30	A0	38	18	02	00	00	00	00	00	00

NOTE: No need for the setting after INI 10.

Table 1 (2107 R Only)

ADDRESS	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A	INI 0B
DATA	0A	00	00	00	D0	30	A0	30	10	02	00
ADDRESS	INI 0C	INI 0D	INI 0E	INI 0F	INI 10	INI 11	INI 12	INI 13	INI 14	INI 15	INI 16
DATA	00	00	00	00	00	00	11	04	88	04	3A

NOTE: No need for the setting after INI 16

Table 1 (2107 T Only)

ADDRESS	INI 01	INI 02	INI 03	INI 04	INI 05	INI 06	INI 07	INI 08	INI 09	INI 0A	INI 0B	INI 0C	INI 0D	INI 0E	INI 0F	INI 10
DATA	0A	00	00	00	D0	30	A0	30	10	02	00	00	00	00	00	00

NOTE: No need for the setting after INI 10

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 2 seconds.
 3. ADDRESS and DATA should appear as Fig 1.
 4. 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.
 5. Press ENTER to select DATA. When DATA is selected, it will "blink".
 6. Again, step through the DATA using SET + or - until required DATA value has been selected.
 7. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
 8. Repeat steps 4 to 7 until all data has been checked.
 9. 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

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

1. Synchro Scope
2. Digital Voltmeter
3. Color Bar Generator

2. BASIC ADJUSTMENTS

On-Screen Display Adjustment

In the condition of NO indication on the screen. Press both VOL. DOWN button on the set and the Channel button (9) on the remote control for more than 2 seconds 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.
8. (VOL TEST) 0. END

Fig. 2-1

- 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.

2-1: RF AGC DELAY

1. Receive an 80dB monoscope pattern.
2. Connect the digital voltmeter between the pin 5 of CP101 and the pin 1 (GND) of CP101.
3. Activate the adjustment mode display of Fig. 2-1 and press the channel button (5) on the remote control.
4. Press the channel button (2) on the remote control. The Fig. 2-2 appears on the display.
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is $2.20 \pm 0.05V$.

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

Fig. 2-2

MATSUI 2107 NS

Electrical Adjustments
Cont'd

2-2: VCO

- 1. Receive the color bar pattern.
- 2. Connect the digital voltmeter to pin 47 of IC201.
- 3. Adjust the L204 until the digital voltmeter is 3.5 ± 0.05V.

2-3: CUT OFF

- 1. Place the set with Aging Test for more than 15 minutes.
- 2. Set condition is AV MODE without signal.
- 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 (5) on the remote control. The Fig. 2-2 appears on the display.
- 5. Press the channel button (6) on the remote control.
- 6. Adjust the Screen Volume until a dim raster is obtained.

2-4: 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.

2-5: WHITE BALANCE

NOTE:
Adjust after performing adjustments in section 2-3.

- 1. Receive the color bar pattern.
- 2. 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.
- 3. Adjust the adjustment mode display of Fig. 2-3 until the white color is obtained.

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

Fig. 2-3

2-6: BRIGHTNESS (TV)

- 1. Receive the monoscope pattern. (RF Input)
- 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 (4) 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 white 0% is starting to be visible.

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

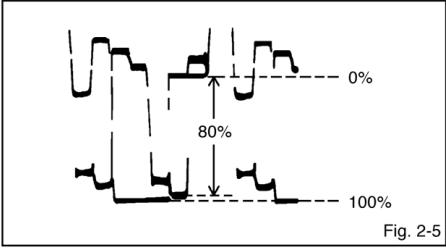
Fig. 2-4

2-7: BRIGHTNESS (AV)

- 1. Receive the monoscope pattern. (Audio Video Input)
- 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 (4) 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 white 0% is starting to be visible.

2-8: COLOR (TV)

- 1. Receive the monoscope pattern. (RF Input)
- 2. Connect the synchro scope to TP802.
- 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. 2-4 appears on the display.
- 5. Press the channel button (3) on the remote control.
- 6. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
- 7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 80% of the white level. (Refer to Fig. 2-5)



2-9: COLOR (AV)

- 1. Receive the monoscope pattern. (Audio Video Input)
- 2. Connect the synchro scope to TP802.
- 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. 2-4 appears on the display.
- 5. Press the channel button (3) on the remote control.
- 6. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
- 7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 80% of the white level. (Refer to Fig. 2-5)

2-10: CONTRAST

- 1. Receive the monoscope pattern.
- 2. Activate the adjustment mode display of Fig. 2-1 and press the channel button (4) on the remote control. The Fig. 2-4 appears on the display.
- 3. Press the channel button (2) on the remote control.
- 4. Press the VOL. UP/DOWN button on the remote control until the bar step is set to the "20".

2-11: SHARPNESS

- 1. Receive the monoscope pattern.
- 2. Activate the adjustment mode display of Fig. 2-1 and press the channel button (4) on the remote control. The Fig. 2-4 appears on the display.
- 3. Press the channel button (5) on the remote control.
- 4. Press the VOL. UP/DOWN button on the remote control until the bar step is set to the "7".

2-12: 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. 2-6 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 50/60
6. V. SC 50/60
7. V. COMP
8. (H. FREQ)
0. RETURN

Fig. 2-6

2-13: VERTICAL POSITION

- 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. 2-6 appears on the display.
- 4. Press the channel button (4) on the remote control.
- 5. Press the VOL. UP/DOWN button on the remote control until the horizontal line of the monoscope comes to approximate center of the CRT.

2-14: VERTICAL SIZE

- 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. 2-6 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.

2-15: VERTICAL LINEARITY 50

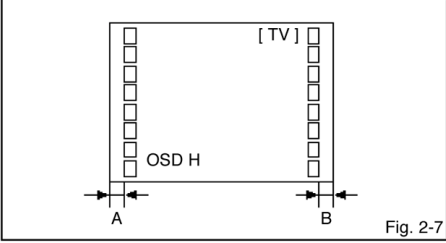
- 1. Receive the monoscope pattern.
- 2. Using the remote control, set the brightness and contrast to normal position.
- 3. Activate the adjustment mode display of Fig. 2-1 and press the channel button (1) on the remote control. The Fig. 2-6 appears on the display.
- 4. Press the channel button (5) on the remote control.
- 5. Press the VOL. UP/DOWN button on the remote control until the bar step is set to the "18".

2-16: VERTICAL LINEARITY 60

- 1. Receive the monoscope pattern (NTSC Signal).
- 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. 2-6 appears on the display.
- 4. Press the channel button (5) on the remote control.
- 5. Press the VOL. UP/DOWN button on the remote control until the bar step is set to the "18".

2-17: OSD HORIZONTAL

- 1. Using the remote control, set the brightness and contrast to normal position.
- 2. 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.
- 3. Press the channel button (5) on the remote control.
- 4. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum.



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.

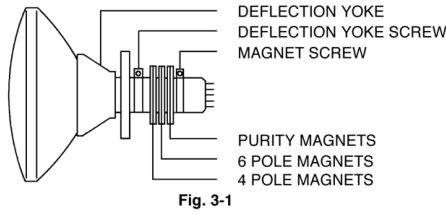
3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

- 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 cross-hatch 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.



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 cross-hatch 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.

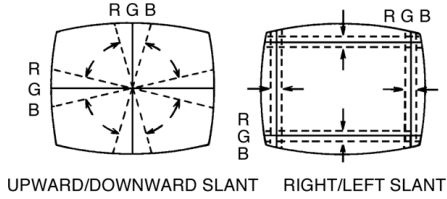


Fig. 3-2-a

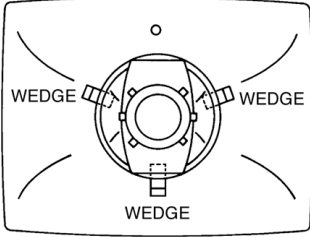
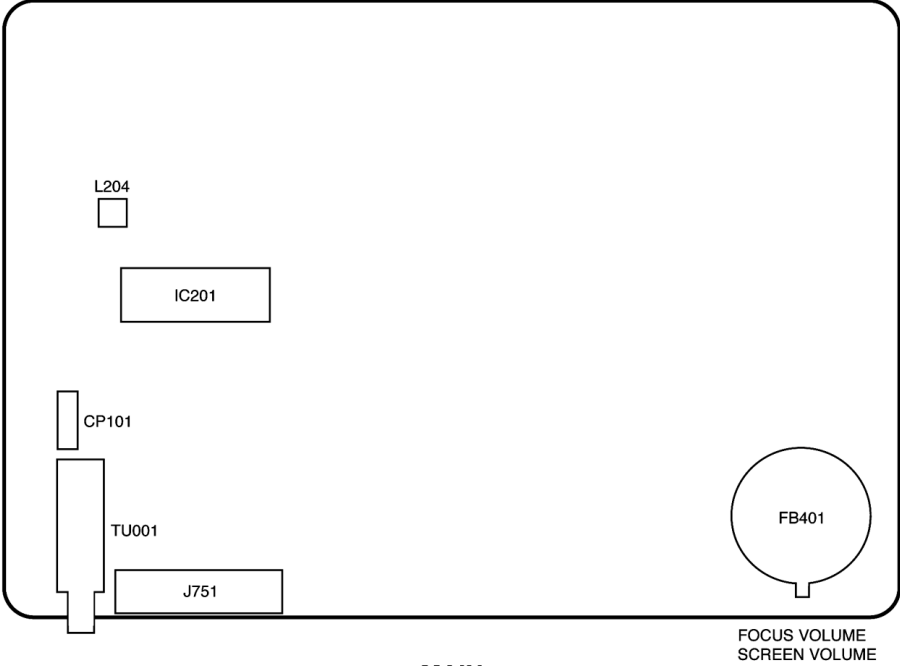


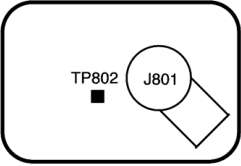
Fig. 3-2-b

- 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)

Component Location Guide

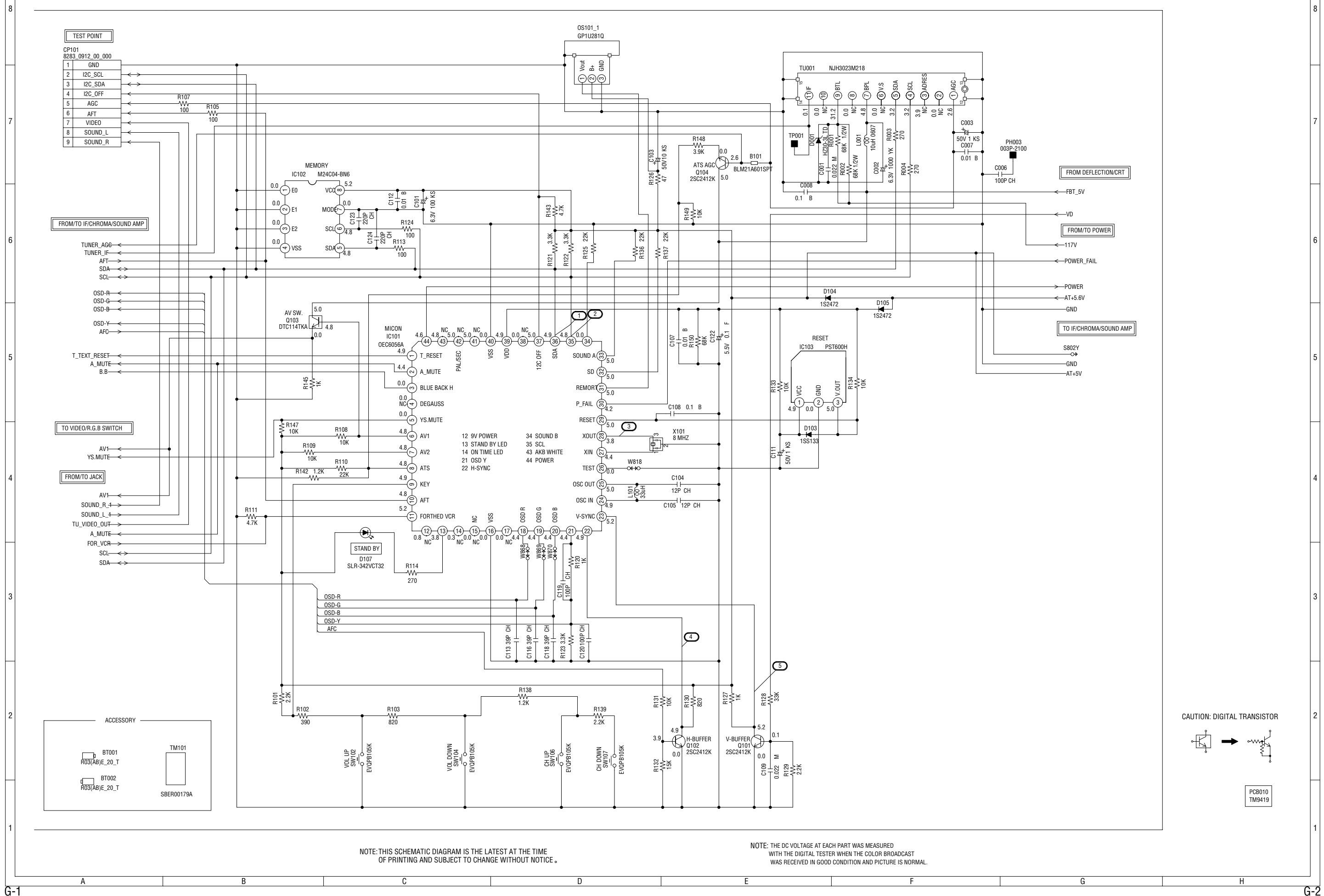


MAIN

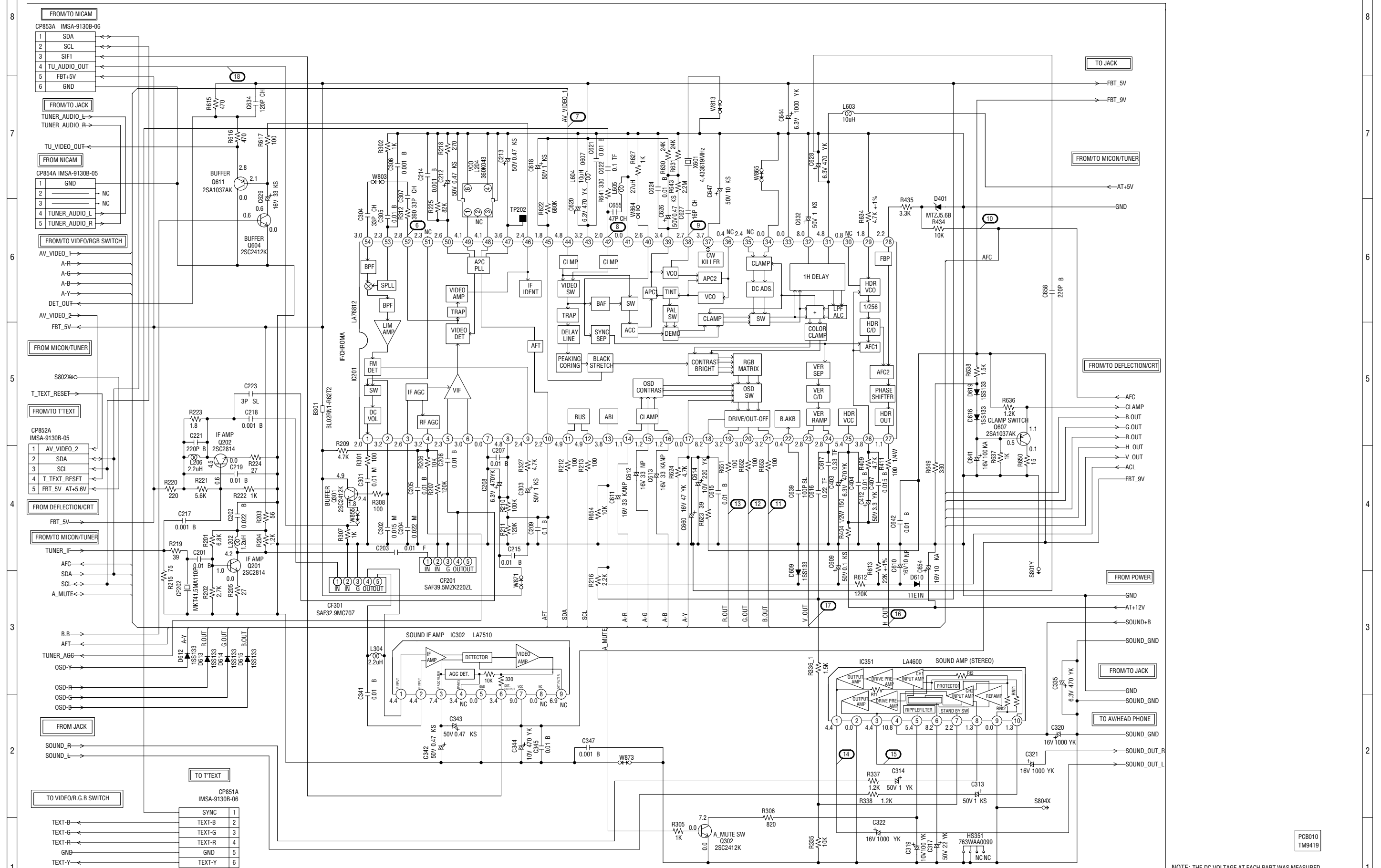


CRT

MICON/TUNER SCHEMATIC DIAGRAM



IF/CHROMA/SOUND AMP SCHEMATIC DIAGRAM



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

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

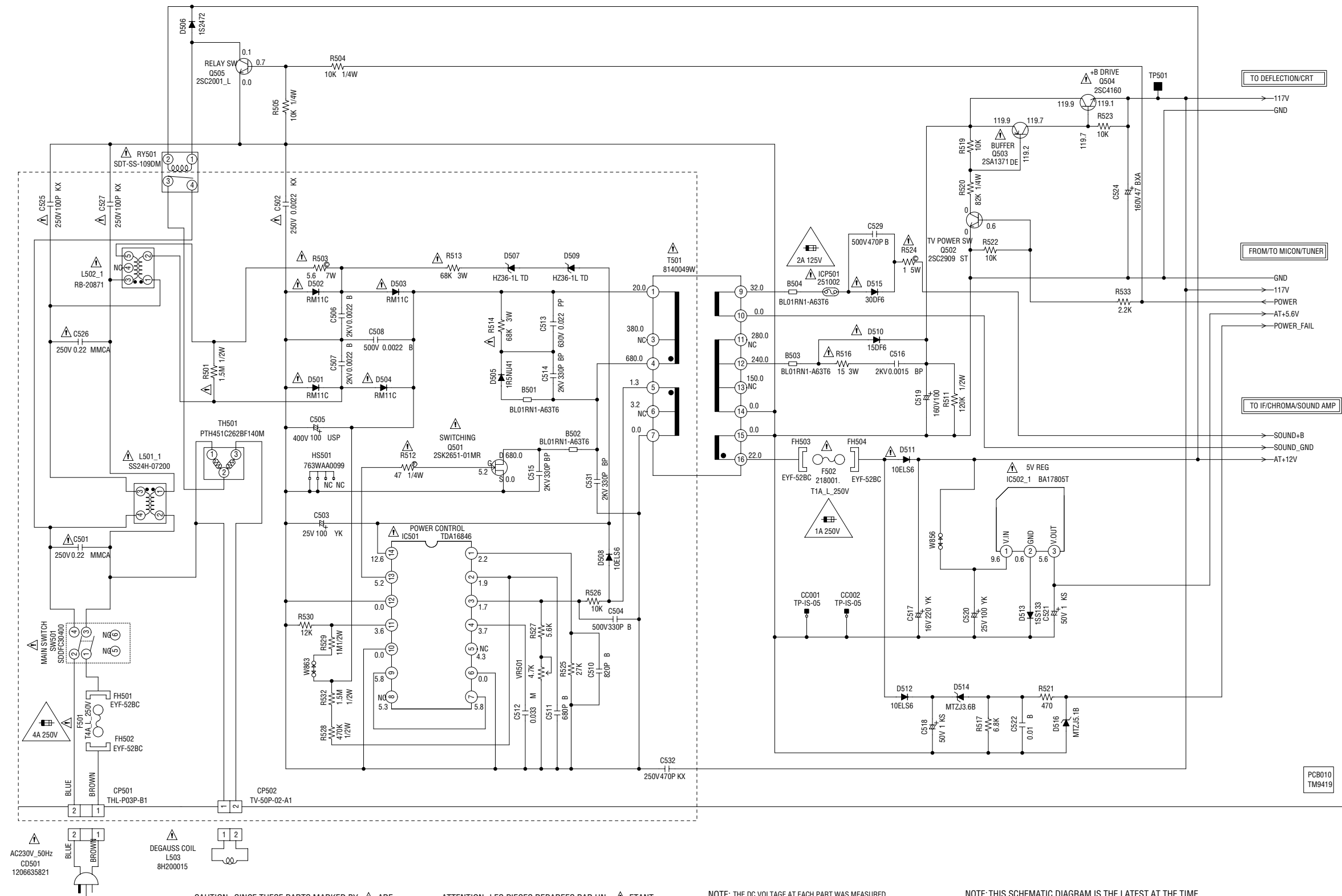
AV/HEAD PHONE SCHEMATIC DIAGRAM

The diagram illustrates the internal wiring of an AV/HEAD PHONE. It includes the following components and connections:

- Speakers:** Two 4 OHM 5W speakers are shown, labeled R (Right) and L (Left). The R speaker is model SP351 (808-512-137) and the L speaker is model SP352 (808-512-137).
- Connectors:** A 4-pin connector labeled CH24059A is used to connect the speakers to the main unit. The pins are numbered 1, 2, 3, and 4.
- Wiring:** The wiring is as follows:
 - Pin 4 of the connector connects to W819.
 - Pin 3 of the connector connects to W820.
 - Pin 2 of the connector connects to W833.
 - Pin 1 of the connector connects to W823.
- Other Components:** A component labeled CP351 TID-X04P-Z1BK is connected to the wiring. A component labeled S804Y is also shown.
- Notes:**
 - 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.

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.

POWER SCHEMATIC DIAGRAM



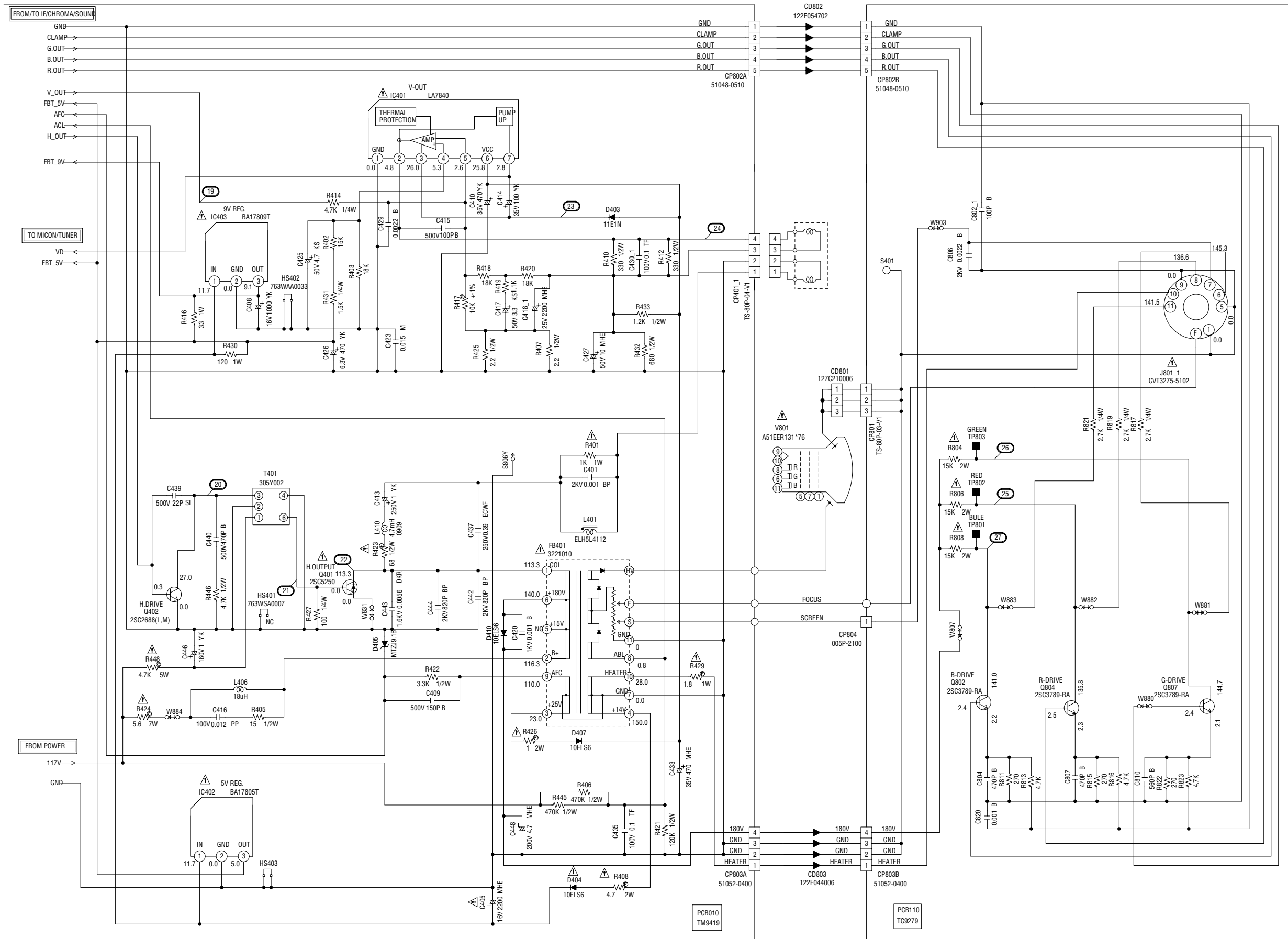
CAUTION: SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

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

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

DEFLECTION/CRT SCHEMATIC DIAGRAM



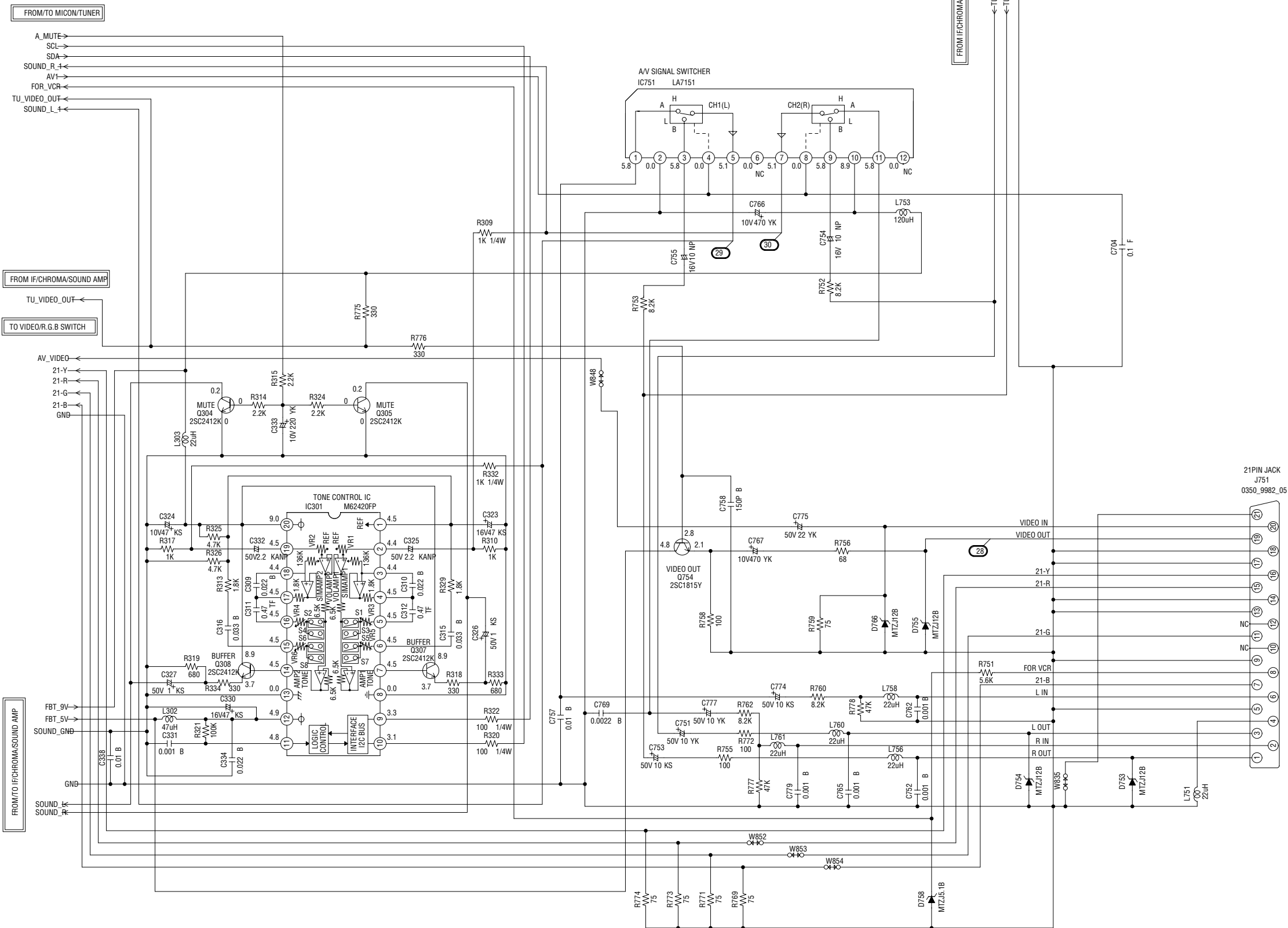
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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 REPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

JACK SCHEMATIC DIAGRAM

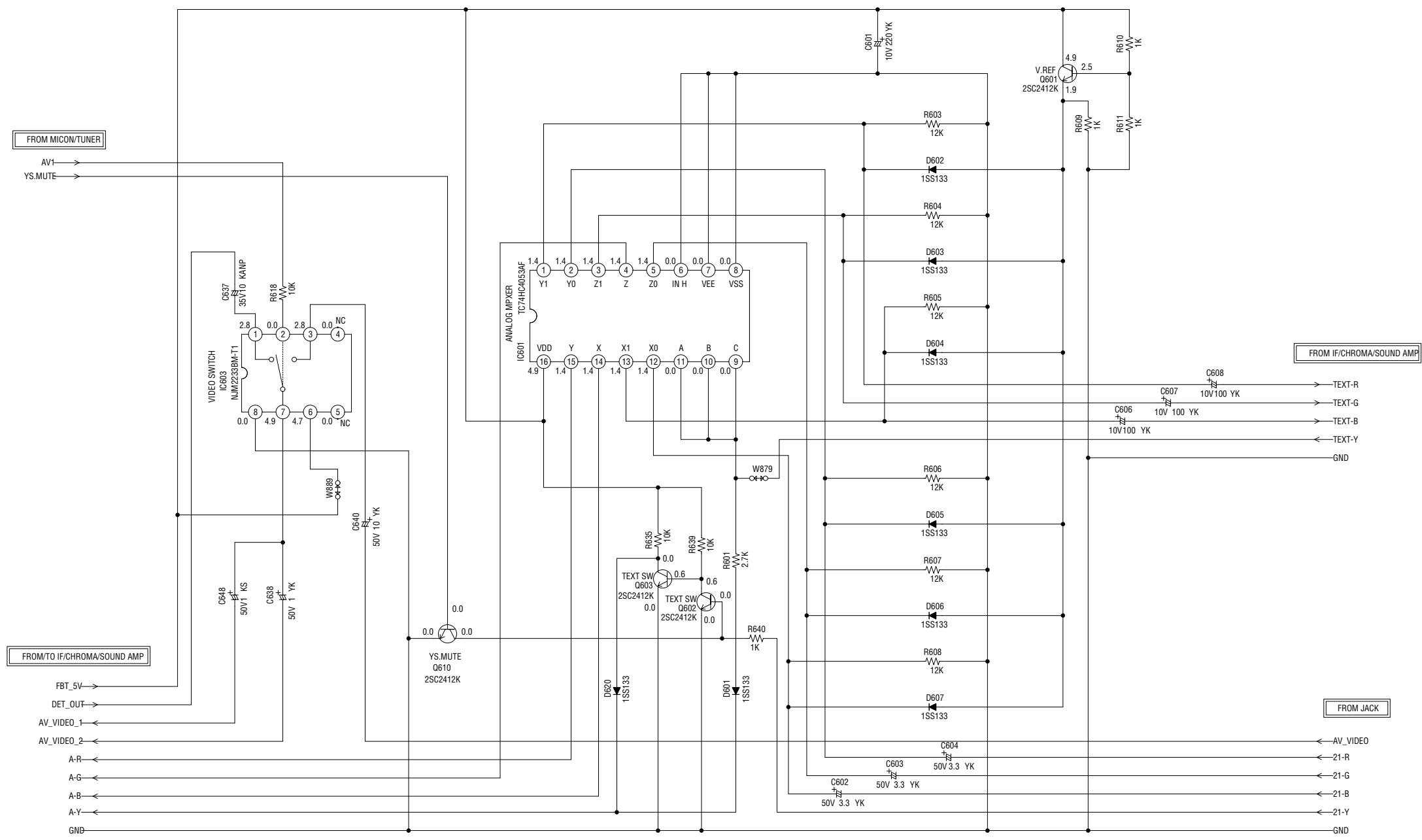


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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
TM9419

VIDEO/R.G.B SWITCH SCHEMATIC DIAGRAM



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
TM9419

T' TEXT SCHEMATIC DIAGRAM

TO IF/CHROMA/SOUND AMP

CP851B	
IMSA-9130S-06L	
1	SYNC
2	TEXT-B
3	TEXT-G
4	TEXT-R
5	GND
6	TEXT-Y

FROM/TO IF/CHROMA/SOUND AMP

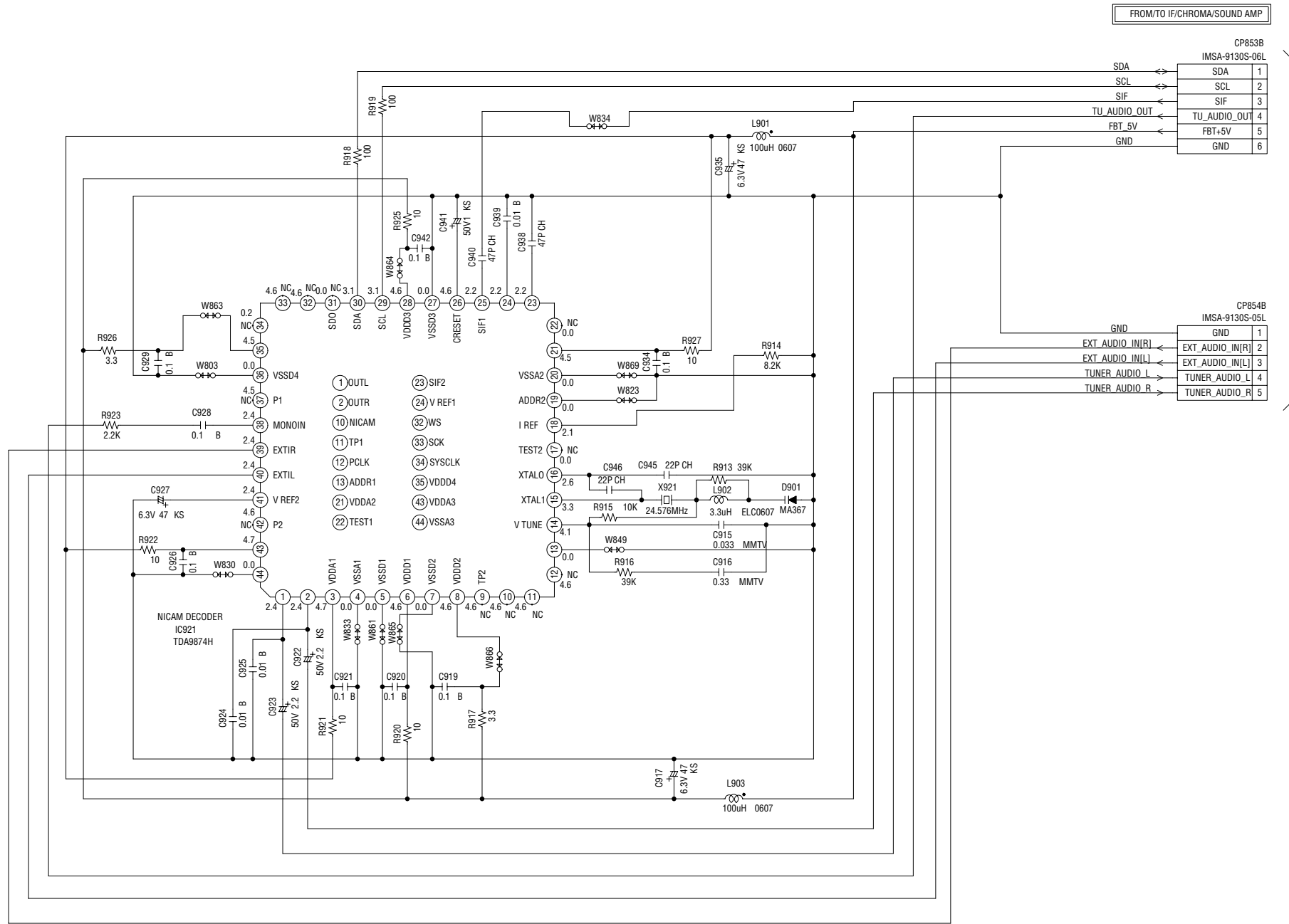
CP852B_1	
IMSA-9130S-05L	
1	AV_VIDEO_2
2	SDA
3	SCL
4	T_TEXT_RESET
5	FBT_5V AT+5.6V

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.

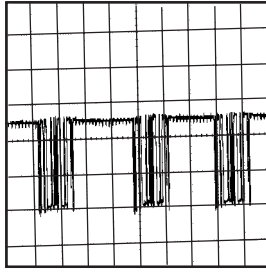
PCB 150
TE 9969

NICAM SCHEMATIC DIAGRAM

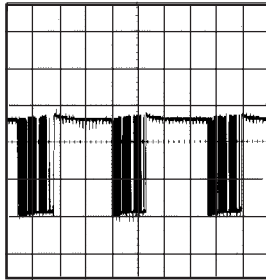


WAVEFORMS

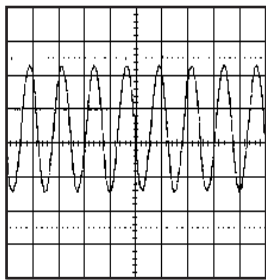
MICON/TUNER



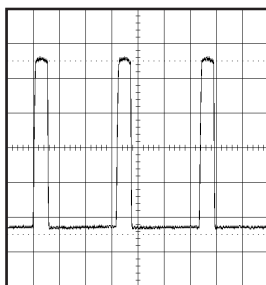
① 2V. 500 μ s/div



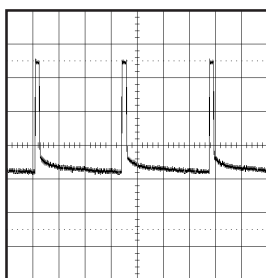
② 2V. 500 μ s/div



③ 1V 0.1 μ s/div

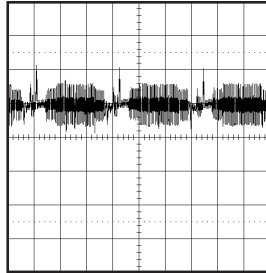


④ 200mV. 20 μ s/div

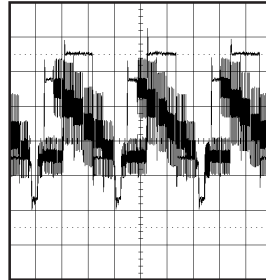


⑤ 200mV. 5ms/div

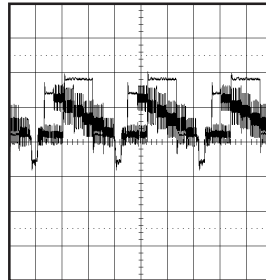
IF/CHROMA/SOUND AMP



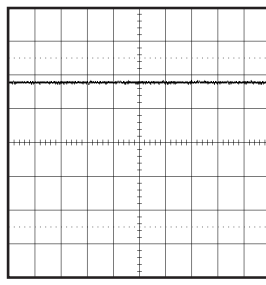
⑥ 0.5V. 20 μ s/div



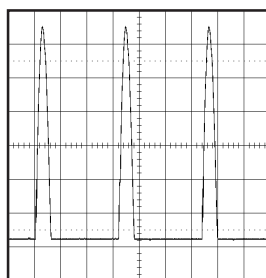
⑦ 0.5V. 20 μ s/div



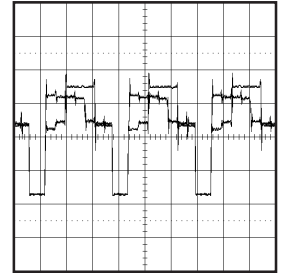
⑧ 0.5V. 20 μ s/div



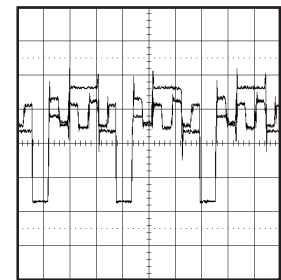
⑨ 1V. 0.5ms/div



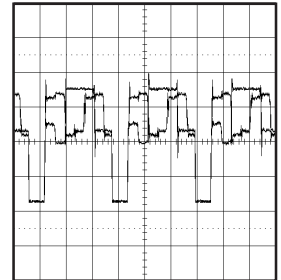
⑩ 20V. 20 μ s/div



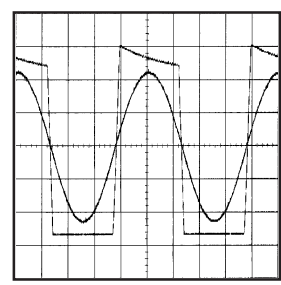
⑪ 1V. 20 μ s/div



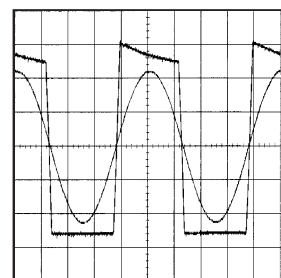
⑫ 1V. 20 μ s/div



⑬ 1V. 20 μ s/div



⑭ 2V 200 μ s/div

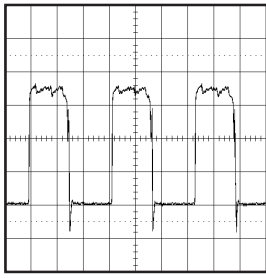


⑮ 2V 200 μ s/div

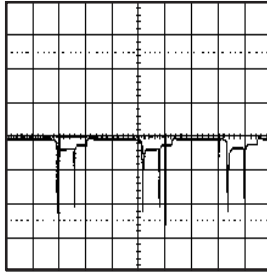
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

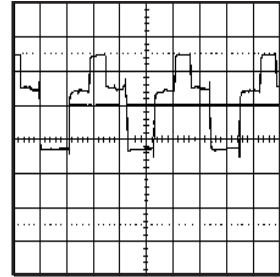
IF/CHROMA/SOUND AMP



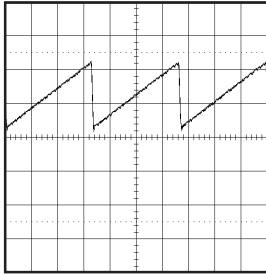
①⑥ 200mV. 20 μ s/div



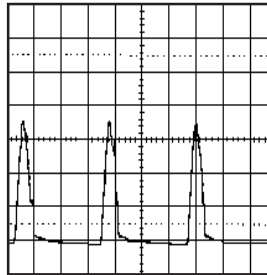
②① 10V 20 μ s/div



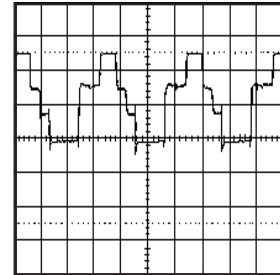
②⑥ 50KV 20 μ s/div



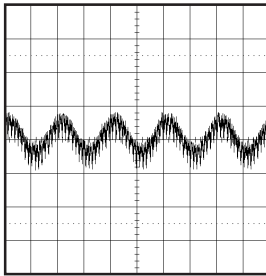
①⑦ 0.5V. 5ms/div



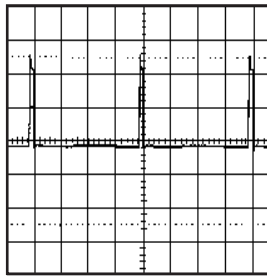
②② 200V 20 μ s/div



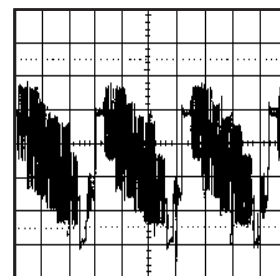
②⑦ 50KV 20 μ s/div



①⑧ 50mV. 0.5ms/div

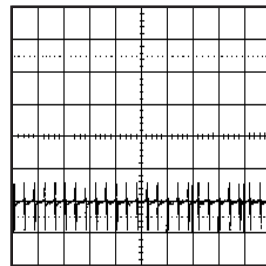


②③ 10V 5ms/div

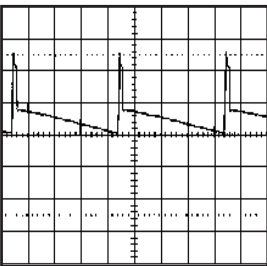


②⑧ 200mV 20 μ s/div

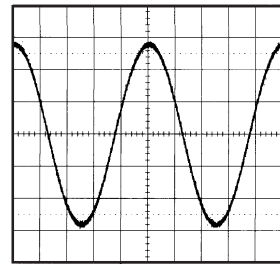
DEFLECTION/CRT



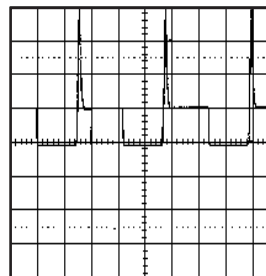
①⑨ 20V 5ms/div



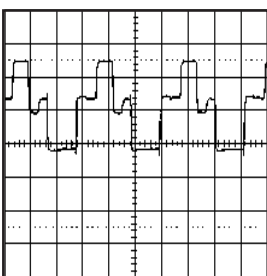
②④ 20V 5ms/div



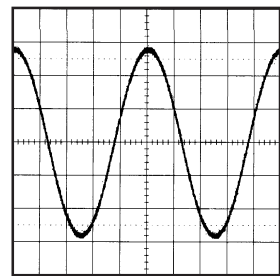
②⑨ 0.2V 0.2ms/div



②⑩ 50V 20 μ s/div



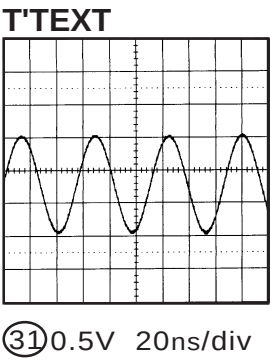
②⑤ 50KV 20 μ s/div



③⑩ 0.2V 0.2ms/div

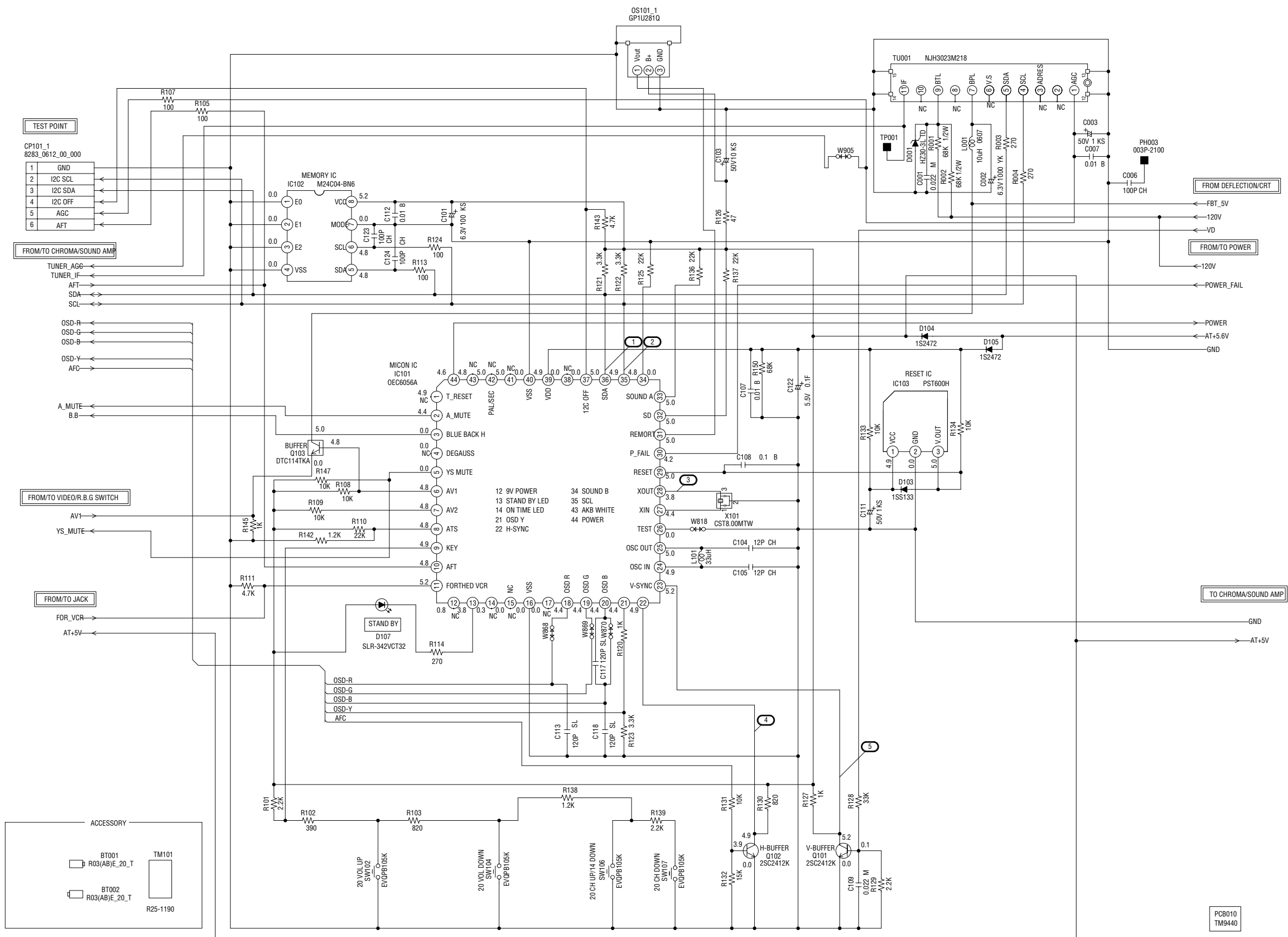
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS



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

MICON/TUNER SCHEMATIC DIAGRAM

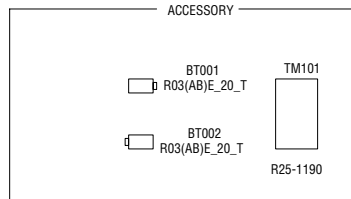


TEST POINT

FROM/TO CHROMA/SOUND AMP

FROM/TO VIDEO/R.B.G SWITCH

FROM/TO JACK



FROM DEFLECTION/CRT

FROM/TO POWER

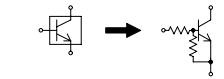
TO CHROMA/SOUND AMP

PCB010
TM9440

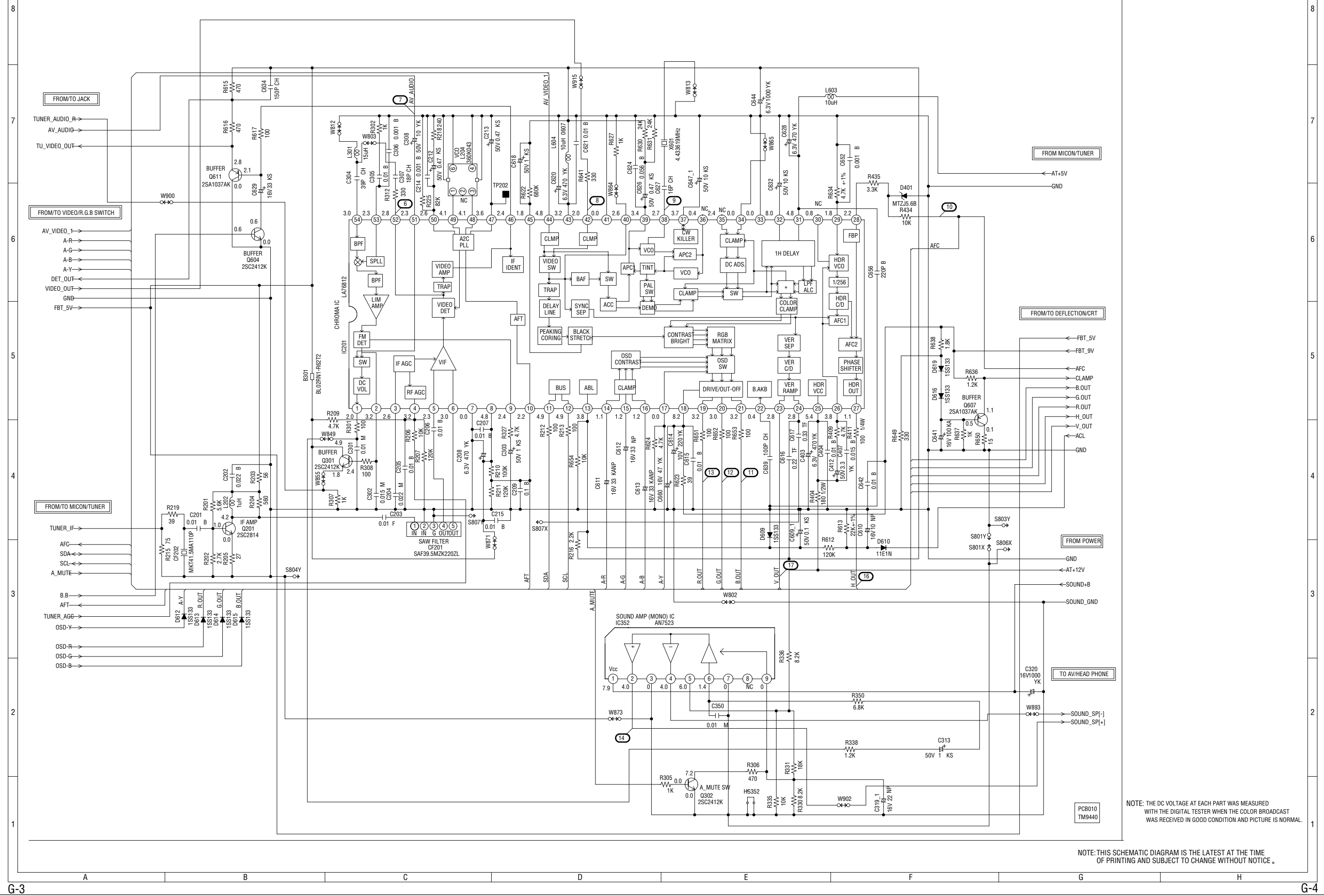
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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: DIGITAL TRANSISTOR



CHROMA/SOUND AMP SCHEMATIC DIAGRAM



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

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

AV/HEAD PHONE SCHEMATIC DIAGRAM

The schematic diagram illustrates the AV/HEAD PHONE circuit. It shows two 4 OHM 5W speakers (SP351_1 and SP352_1) connected to a common terminal block. The circuit includes capacitors CD351_1 (CH22060A) and CP351_1 (TID-X02P-B2). The speakers are connected to a terminal block labeled W819 and W877. The circuit is powered by a source labeled 'FROM CHOMA/SOUND AMP' which provides SOUND_SP[-] and SOUND_SP[+] signals. The diagram is divided into two sections, G-5 and G-6, with a grid system (A-H, 1-8) for reference.

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

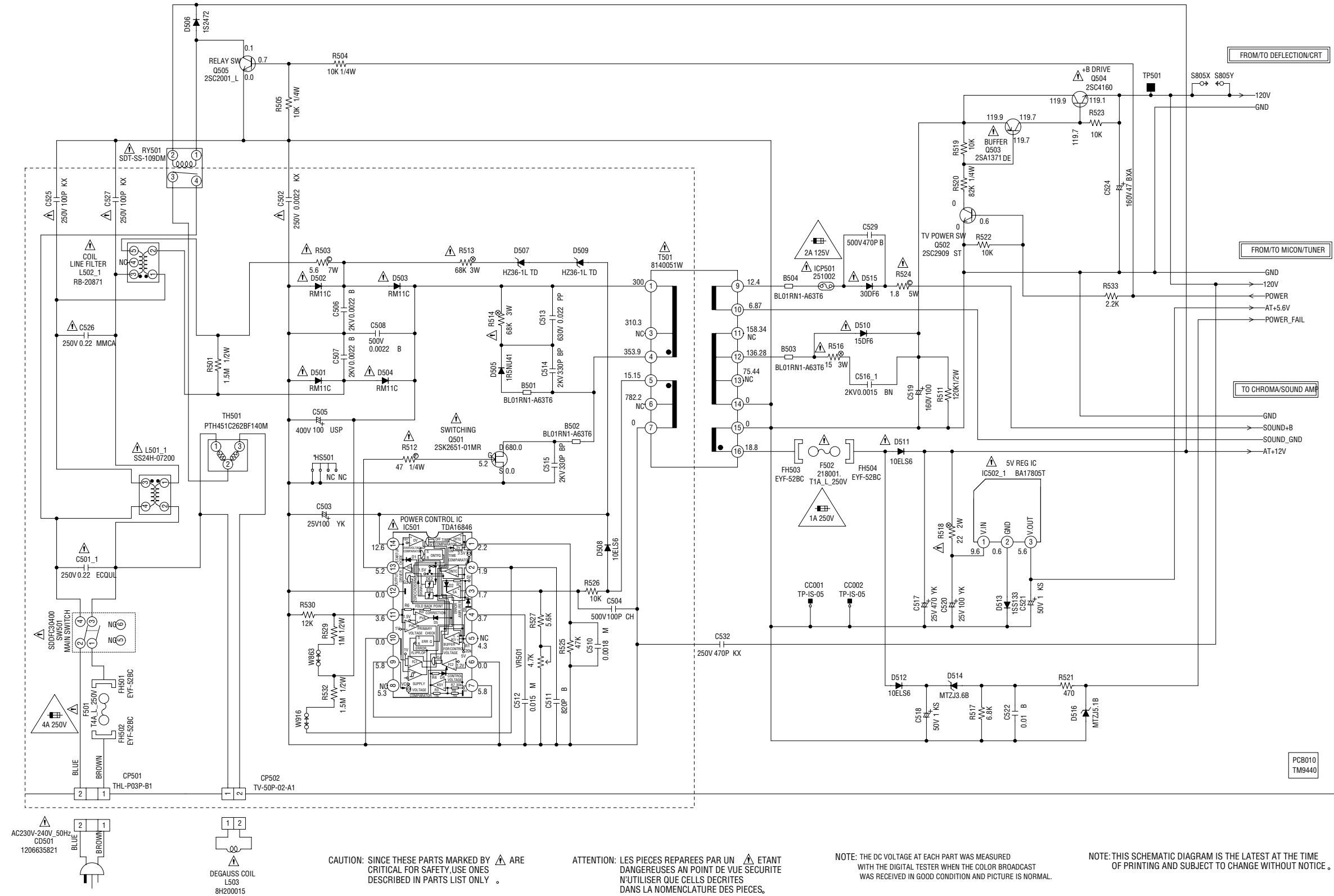
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PC8010
TM9440

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

NOTE: 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.

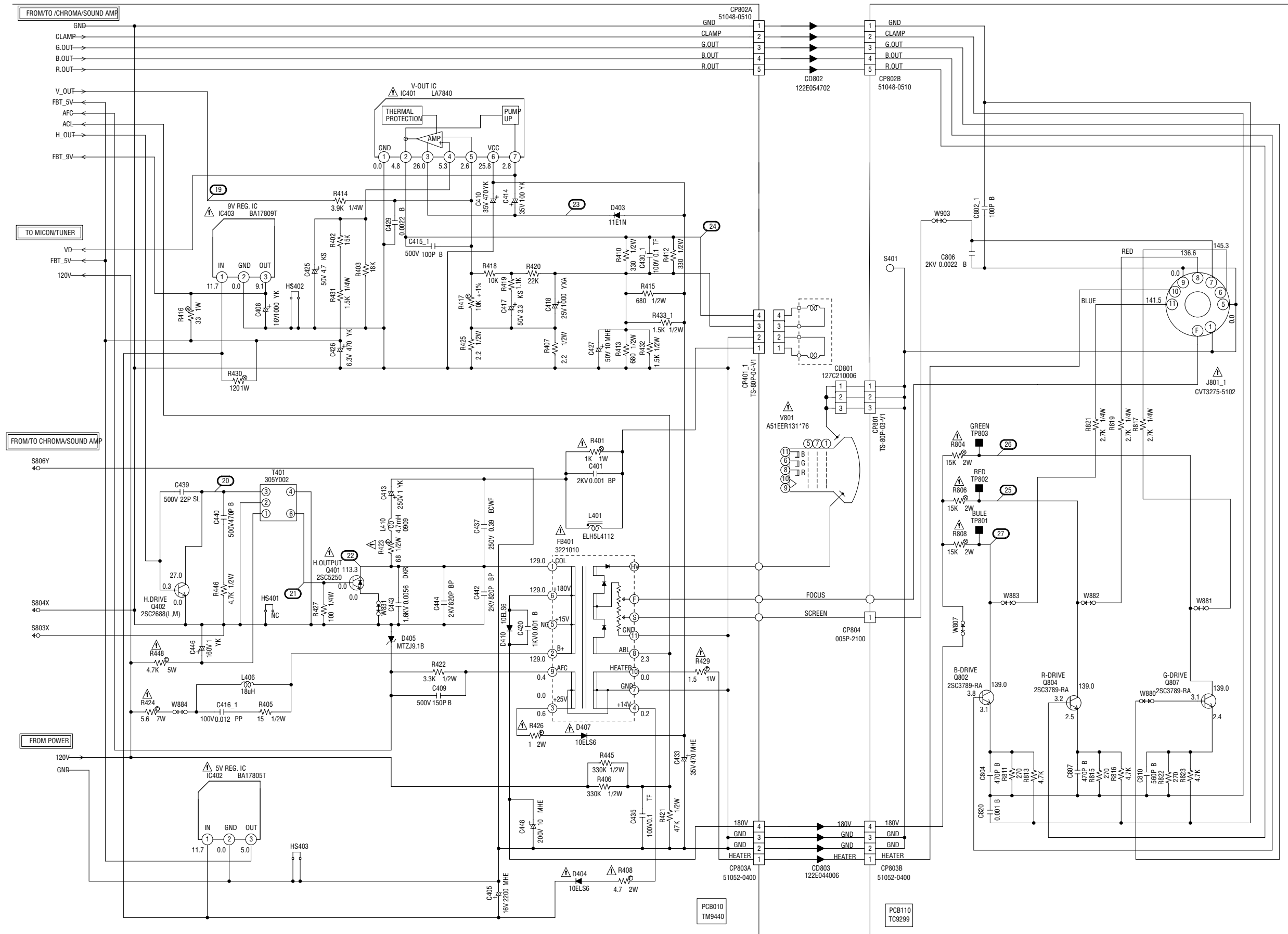
POWER SCHEMATIC DIAGRAM



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

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

DEFLECTION/CRT SCHEMATIC DIAGRAM



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 REPARÉES PAR UN ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

JACK SCHEMATIC DIAGRAM

FROM/TO MICON/TUNER

FOR_VCR ←

AT+5V →

FROM CHROMA/SOUND AMP

AV_AUDIO ←

TU_VIDEO_OUT →

TUNER_AUDIO_R ←

TO VIDEO R.G.B SWITCH

AV_VIDEO ←

21-Y ←

21-R ←

21-G ←

21-B ←

GND ←

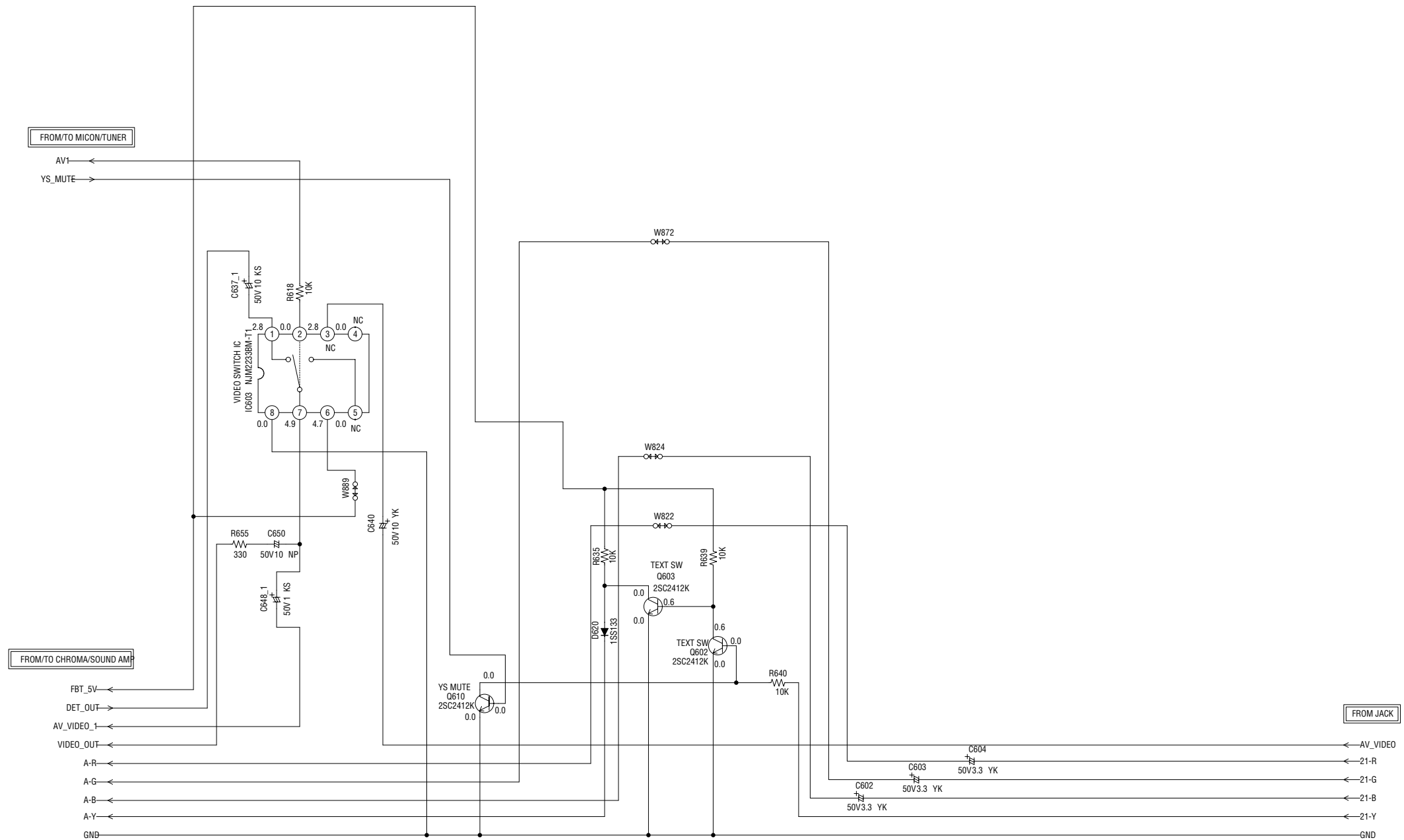
21PIN JACK
J751
0350_9982_05

PCB010
TM9440

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.

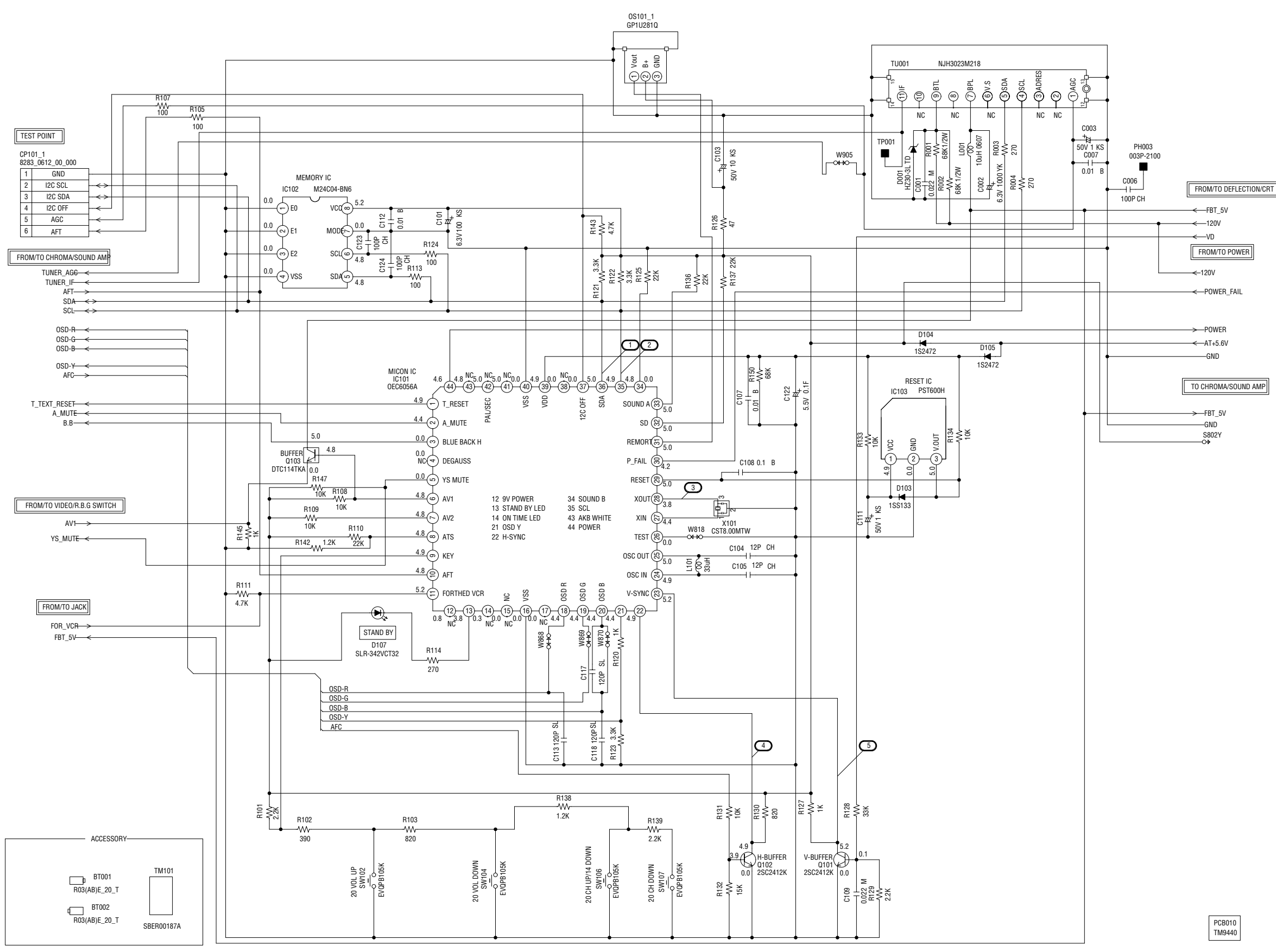
VIDEO/R.G.B SWITCH SCHEMATIC DIAGRAM



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.

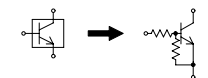
MICON/TUNER SCHEMATIC DIAGRAM



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

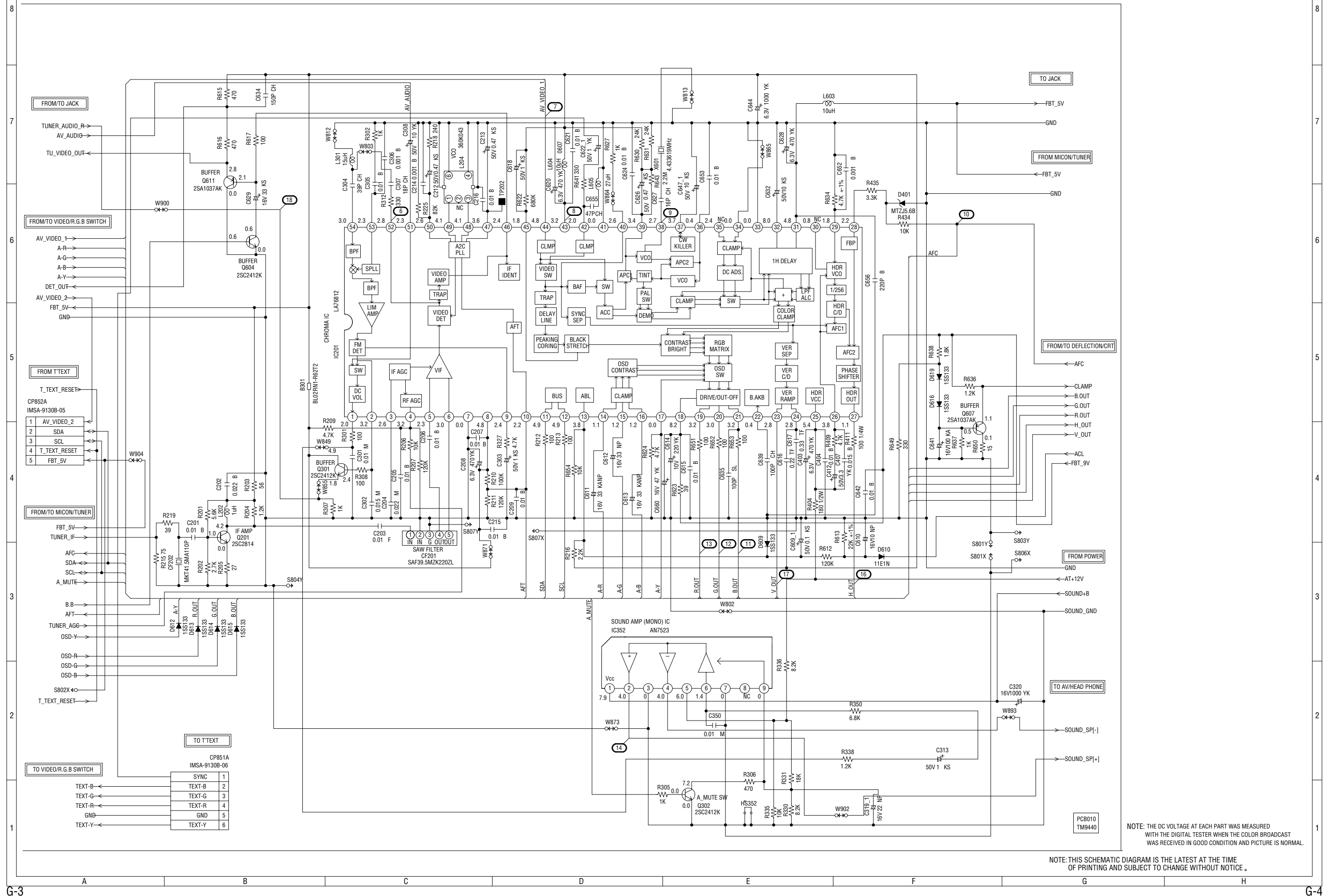
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR



PCB010
TM9440

CHROMA/SOUND AMP SCHEMATIC DIAGRAM



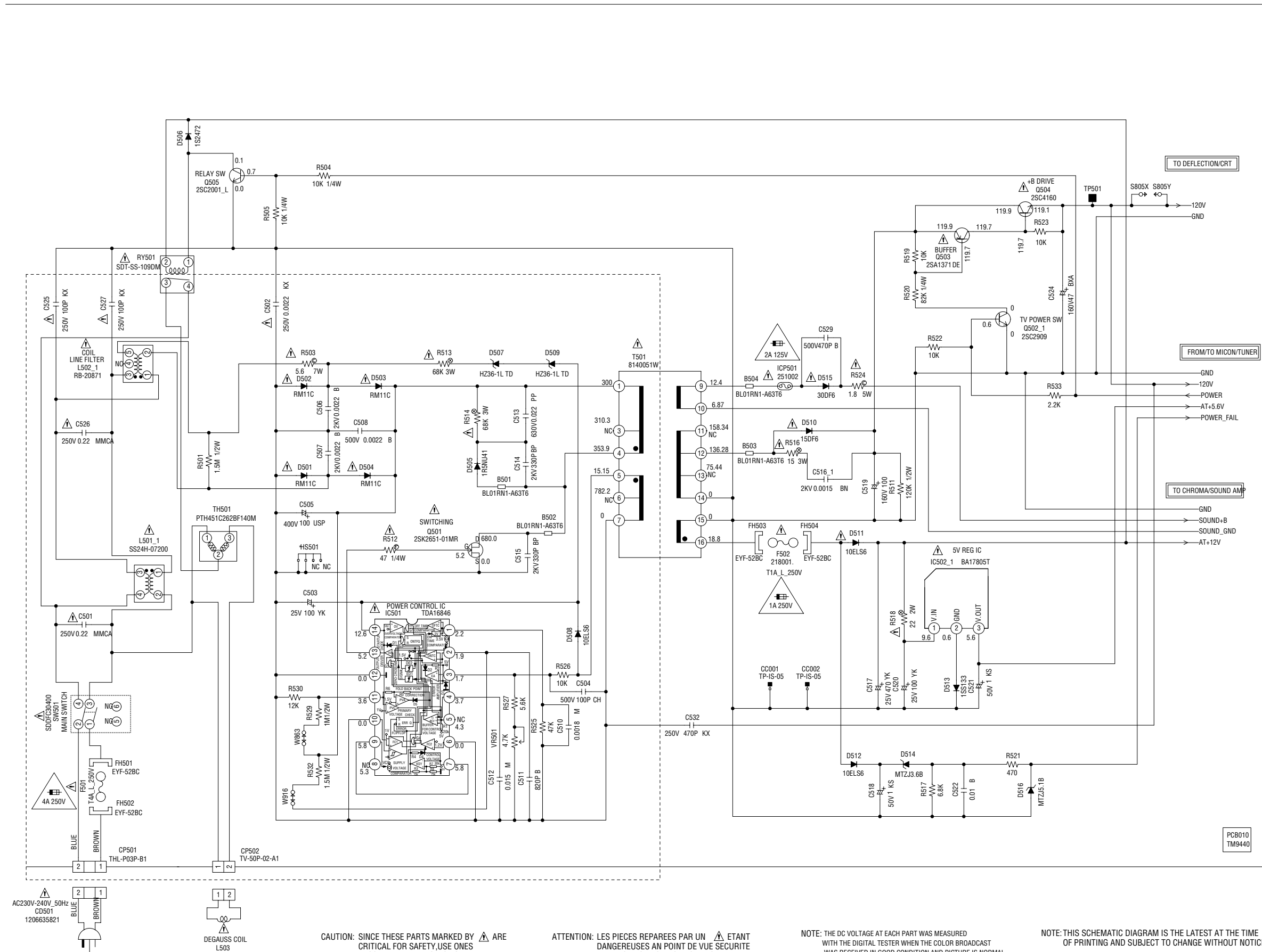
AV/HEAD PHONE SCHEMATIC DIAGRAM



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

NOTE: 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.

POWER SCHEMATIC DIAGRAM



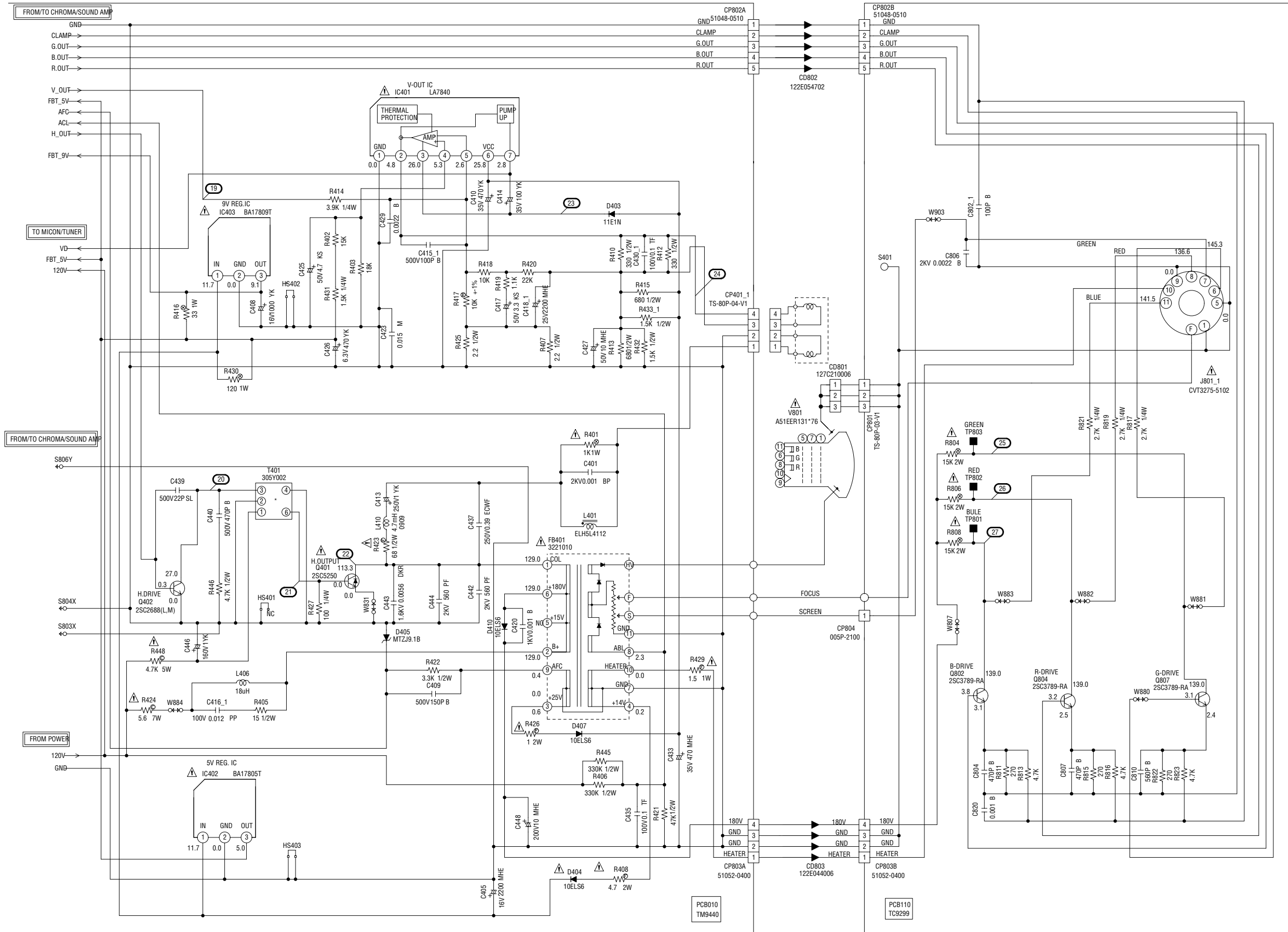
CAUTION: SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIÉCES RÉPARÉES PAR UN ÉTANT DANGEREUSES À UN POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÉCES.

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

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

DEFLECTION/CRT SCHEMATIC DIAGRAM



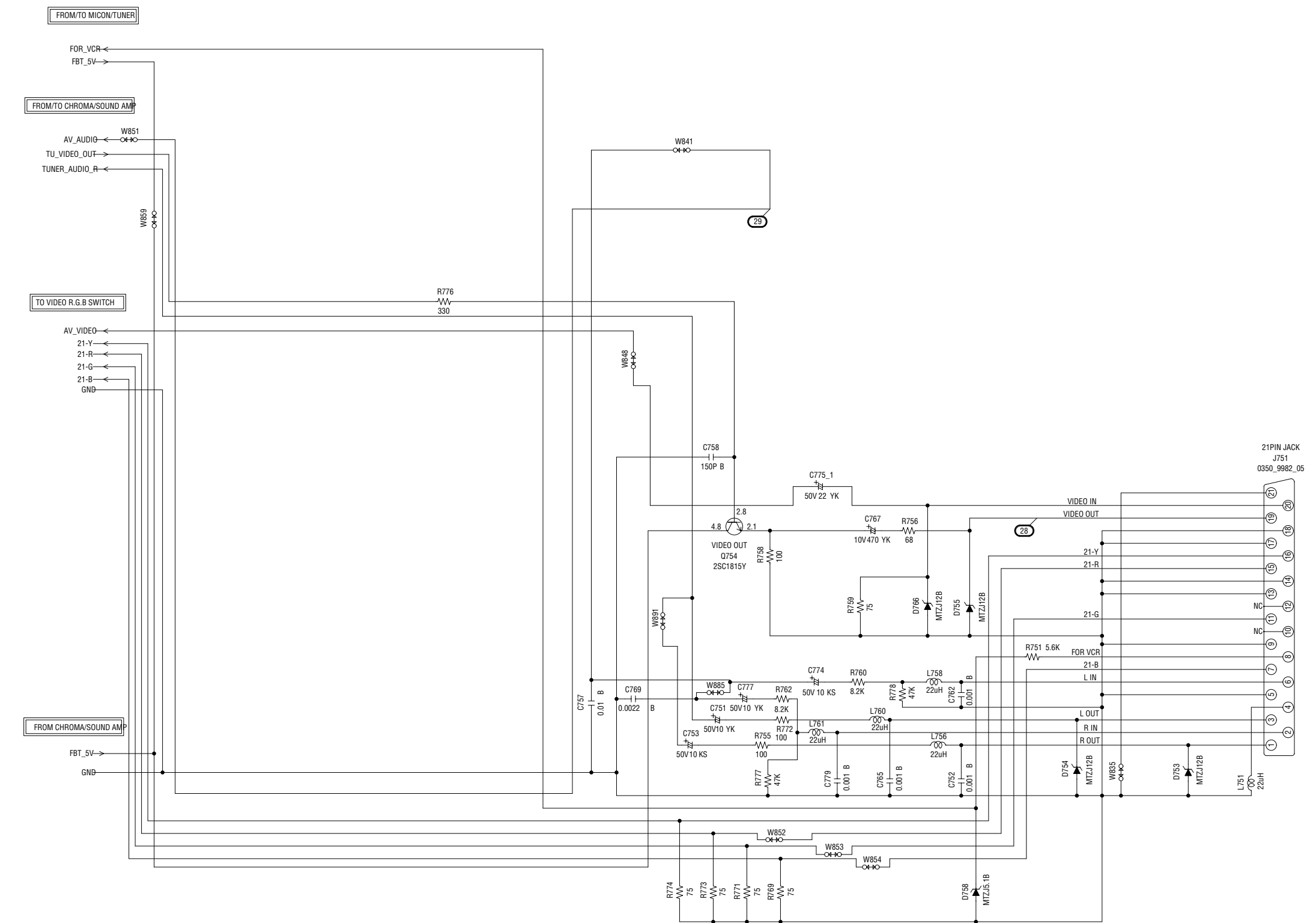
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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 PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

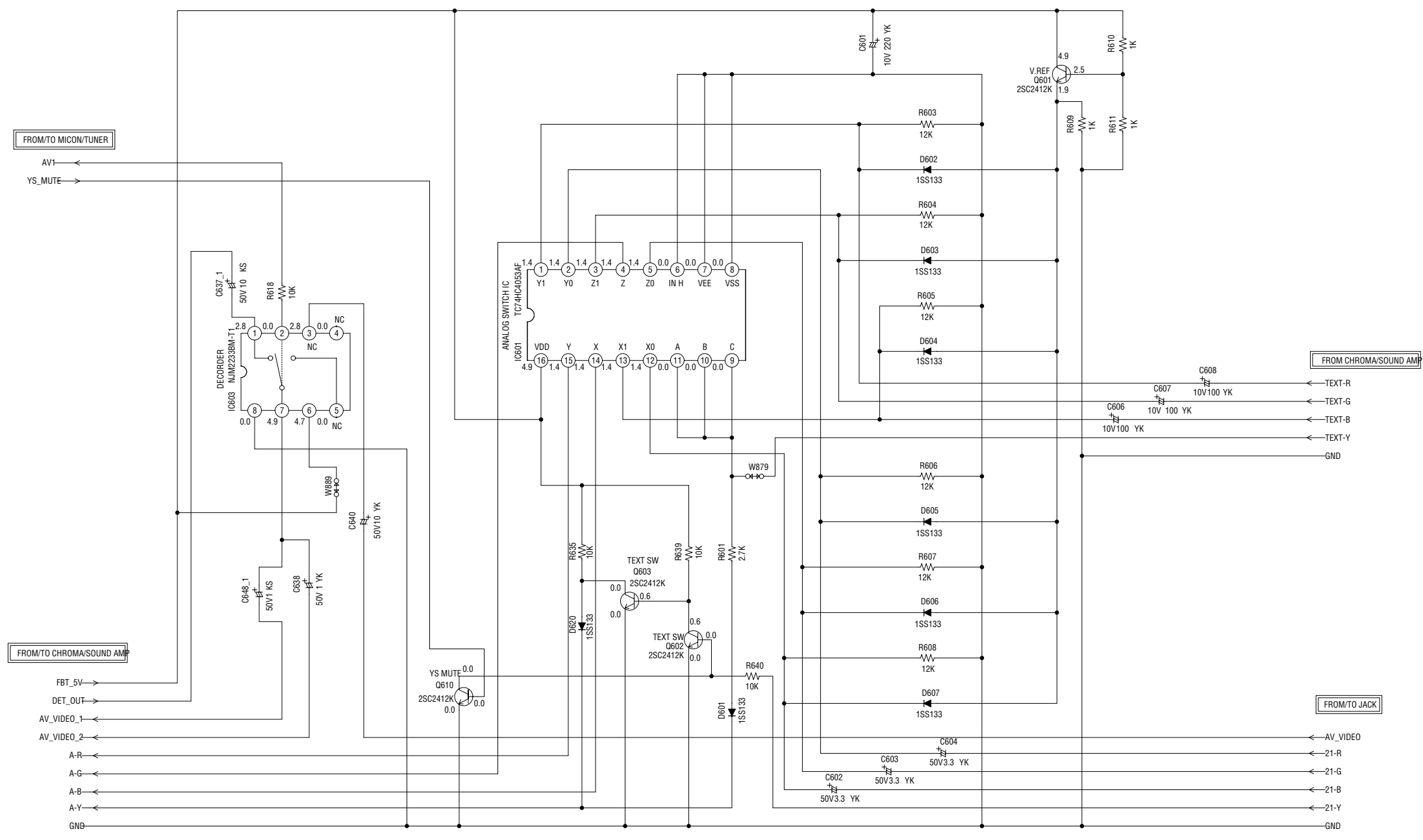
JACK SCHEMATIC DIAGRAM



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.

VIDEO/R.G.B SWITCH SCHEMATIC DIAGRAM



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
TM9440

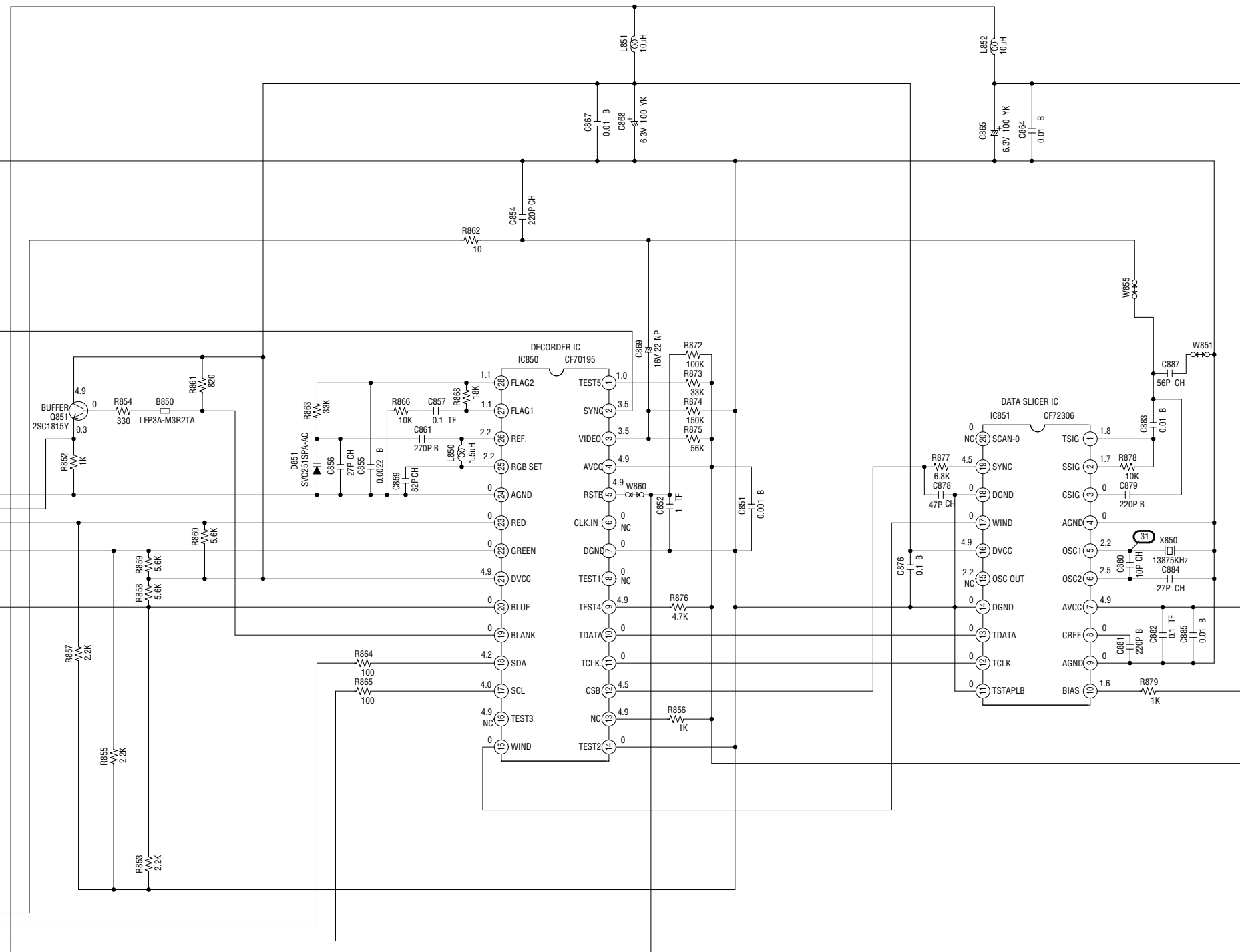
T'TEXT SCHEMATIC DIAGRAM

TO CHROMA/SOUND AMR

1	SYNC
2	TEXT-B
3	TEXT-G
4	TEXT-R
5	GND
6	TEXT-Y

FROM/TO CHROMA/SOUND AMP

1	AV_VIDEO_2
2	SDA
3	SCL
4	T_TEXT_RESET
5	FBT_5V



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.

PCB150
TE9969