

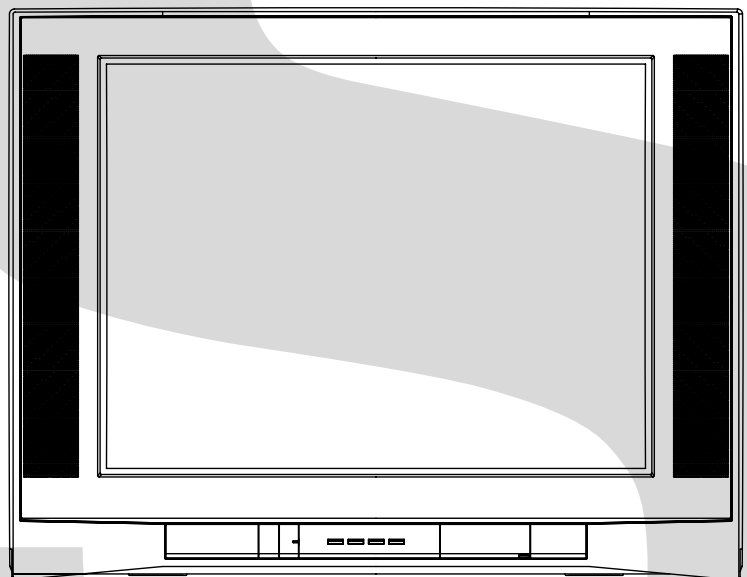
TOSHIBA

FILE NO. 050-200315

SERVICE MANUAL

COLOR TELEVISION

27AF43



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 external 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
Earphone jack

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.

TABLE OF CONTENTS

SERVICING NOTICES ON CHECKING	A1-1
HOW TO ORDER PARTS	A1-1
IMPORTANT	A1-1
TABLE OF CONTENTS	A2-1
GENERAL SPECIFICATIONS	A3-1~A3-10
DISASSEMBLY INSTRUCTIONS	
1. REMOVAL OF ANODE CAP	B1-1
2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC	B2-1, B2-2
SERVICE MODE LIST	C1-1
CONFIRMATION OF HOURS USED	C1-1
WHEN REPLACING EEPROM (MEMORY) IC	C1-1
ELECTRICAL ADJUSTMENTS	D-1~D-5
BLOCK DIAGRAMS	E-1, E-2
PRINTED CIRCUIT BOARDS	
MAIN	F-1~F-4
CRT/VM COIL	F-5
SCHEMATIC DIAGRAMS	
MICON	G-1, G-2
CHROMA	G-3, G-4
DEFLECTION/CRT	G-5, G-6
POWER	G-7, G-8
SOUND	G-9, G-10
TUNER/STEREO	G-11, G-12
AV	G-13, G-14
COMB FILTER	G-15, G-16
CRT/SVM	G-17, G-18
WAVEFORMS	H-1, H-2
MECHANICAL EXPLODED VIEWS	I-1
MECHANICAL REPLACEMENT PARTS LIST	J1-1
ELECTRICAL REPLACEMENT PARTS LIST	J2-1~J2-5

GENERAL SPECIFICATIONS (FOR USA)

G-1	TV System	CRT	CRT Size / Visual Size	27 inch / 676.6mmV
			CRT Type	Flat
			Deflection	104 degree
			Magnetic Field BV/BH	+0.45G/0.18G
			Color System	NTSC
			Speaker	2 Speaker
			Position	Front Side
			Size	1.8 x 3.9 Inch
			Impedance	8 ohm
			Sound Output	MAX 5.0+5.0 W 10%(Typical) 4.0+4.0 W
			NTSC3.58+4.43 /PAL60Hz	No
G-2	Tuning System	Broadcasting System	US System M	
		Tuner and Receive CH	1Tuner	
			Destination	USA(W/ CATV)
			Tuning System	F-Synth
			Input Impedance	VHF/UHF 75 ohm
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate Frequency	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
			Preset CH	No
	Stereo/Dual TV Sound	Yes		
	Tuner Sound Muting	Yes		
G-3	Power	Power Source	AC DC	120V AC 60Hz
		Power Consumption	at AC	135 W at AC 120 V 60 Hz 3 W at AC 120 V 60 Hz -- kWh/Year
			Stand by (at AC) Per Year	
		Protector	Power Fuse	Yes
G-4	Regulation	Safety	UL/CSA	
		Radiation	FCC/IC	
		X-Radiation	DHHS/HWC	
G-5	Temperature	Operation	+5oC ~ +40oC	
		Storage	-20oC ~ +60oC	
G-6	Operating Humidity		Less than 80% RH	

GENERAL SPECIFICATIONS (FOR USA)

G-7	On Screen Display	Menu		Yes	
		Menu Type		Icon	
		Picture		Yes	
			Contrast		Yes
			Brightness		Yes
			Color		Yes
			Tint		Yes
			Sharpness		Yes
			Sound		Yes
			Bass		Yes
			Treble		Yes
			Balance		Yes
			BBE On/Off		Yes
			Stable Sound On/Off		Yes
			Surround On/Off		Yes
			Set Up		Yes
			TV/CATV		Yes
			Auto CH Memory		Yes
			Add/ Delete		Yes
			Option		Yes
			Language		Yes
			CH Label		Yes
			Favorite CH		Yes
			V-Chip		Yes
			Lock		Yes
			On/Off Timer		Yes
			Color Stream DVD/DTV		Yes
			Control Level		Yes
			Volume		Yes
			Brightness		Yes
			Contrast		Yes
			Color		Yes
			Tint		Yes
	Sharpness		Yes		
	Tuning		No		
	Bass		Yes		
	Treble		Yes		
	Balance		Yes		
	Back Light		No		
	Stereo,Audio Output,SAP		Yes		
	Video		Yes		
	Color Stream		Yes		
	Channel(TV/Cable)		Yes		
	CH Label		Yes		
	Game Timer		Yes		
	Sleep Timer		Yes		
	Sound Mute		Yes		
	V-chip Rating		Yes		
	16: 9		Yes		
G-8	OSD Language		English French Spanish		
G-9	Clock and Timer	Sleep Timer	Max Time	120 Min	
			Step	10 Min	
		On/Off Timer	Program(On Timer / Off Timer)	Yes	
		Wake Up Timer		No	
	Timer Back-up (at Power Off Mode)	more than	-- Min Sec		

GENERAL SPECIFICATIONS (FOR USA)

G-10	Remote Control	Unit	RC-GF	
		Glow in Dark Remocon	Yes	
		Format	Toshiba	
		Custom Code	TV:40-BFh	
		Power Source	Voltage(D.C) UM size x pcs	3V UM-4 x 2 pcs
		Total Keys		49 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100	Yes
			CH Up/+	Yes
			CH Down/-	Yes
			Volume Up/+	Yes
			Volume Down/-	Yes
			C.C.(TV/Caption/Text)	Yes
			CH1/CH2	Yes
			TV/Video(Input Select)	Yes
			CH RTN(Quick View)	Yes
			SLEEP	Yes
			RECALL(Call)	Yes
			Reset	Yes
			Menu/Enter	Yes
			Mute	Yes
			Exit	Yes
			MTS(Audio Select)	Yes
			Fav. Up	Yes
			Fav. Down	Yes
			16: 9	Yes
			Multi Brand Keys	
			CH Up(VCR)	Yes
			CH Down(VCR)	Yes
			Pause/Still	Yes
			TV/VCR(VCR)	Yes
			FF	Yes
			Rew	Yes
			Rec	Yes
			Play	Yes
			Stop	Yes
			TV	Yes
			VCR	Yes
			Cable	Yes
			DVD	Yes
			CODE	Yes
			DVD MENU <	Yes
			DVD MENU >	Yes
			DVD CLEAR	Yes
			TOP MENU	Yes
	DVD MENU	Yes		

GENERAL SPECIFICATIONS (FOR USA)

G-11	Features	Auto Degauss	Yes			
		Auto Shut Off	Yes			
		Canal+	No			
		CATV	Yes			
		Anti-theft	No			
		Rental	No			
		Memory(Last CH)	Yes			
		Memory(Last Volume)	Yes			
		V-Chip	Yes			
		Type	USA, Toshiba Type			
		BBE	Yes			
		Auto Search	No			
		CH Allocation	No			
		SAP	Yes			
		Just Clock Function	No			
		CH Label	Yes			
		VM Circuit	Yes			
		Full OSD	No			
		Premiere	No			
		Comb Filter	Yes 3 Lines			
		Auto CH Memory	Yes			
		Hotel Lock	No			
		Closed Caption	Yes			
		Stable Sound	Yes			
		FBT Leak Test Protect	Yes			
		CH Lock	Yes			
		Video Lock	Yes			
		Game Timer (Max Time:120 Min)	Yes			
		Energy Star	Yes			
		Favorite CH	Yes			
		Surround	Yes			
		16:9 Mode	Yes			
		G-12	Accessories	Owner's Manual	Language W/ Warranty	English / French Yes
				Remote Control Unit		Yes
Rod Antenna				No		
	Poles Terminal					
Loop Antenna				No		
	Terminal			-		
U/V Mixer				No		
DC Car Cord (Center+)				No		
Guarantee Card				No		
Warning Sheet				No		
Circuit Diagram				No		
Antenna Change Plug				No		
Service Station List				No		
Important Safety Instruction				No		
Dew/AHC Caution Sheet				No		
AC Plug Adapter				No		
Quick Set-up Sheet				No		
Battery				Yes UM-4 x 2		
	UM size x pcs OEM Brand			No		
AC Cord				No		
AV Cord (2Pin-1Pin)				No		
Registration Card (NDL Card)				Yes		
PTB Sheet				No		
ESP Card		Yes				
300 ohm to 75 ohm Antenna Adapter		No				

GENERAL SPECIFICATIONS (FOR USA)

G-13	Interface	Switch	Front	Power	Yes	
				System Select	No	
				Main Power SW	No	
				Sub Power	No	
				Channel Up	Yes	
				Channel Down	Yes	
				Volume Up	Yes	
				Volume Down	Yes	
				Rear	AC/DC	No
					TV/CATV Selector	No
		Degauss	No			
		Main Power SW	No			
		Indicator		Power	Yes(RED)	
				Stand-by	No	
				On Timer	No	
		Terminals	Front	Video Input = VIDEO3	RCA	
				Audio Input = VIDEO3	RCA x 2	
				Other Terminal	Head Phone	
			Rear	Video Input(Rear1) = VIDEO1	RCA	
				Video Input(Rear2) = VIDEO2	RCA	
				Audio Input(Rear1) = VIDEO1	RCA x 2	
				Audio Input(Rear2) = VIDEO2	RCA x 2	
				Video Output	RCA	
				Audio Output	RCA x 2	
				Euro Scart	No	
				Color Stream	RCA x 3	
				S Input	Yes	
				Diversity	No	
				Ext Speaker	No	
				DC Jack 12V(Center +)	No	
VHF/UHF Antenna Input	F Type					
AC Outlet	No					
G-14	Set Size	Approx. W x D x H (mm)		<u>740 x 495 x 574.5</u>		
G-15	Weight	Net (Approx.)	<u>40.0 kg</u> (<u>88.2lbs</u>)			
		Gross (Approx.)	<u>46.5 kg</u> (<u>102.5lbs</u>)			
G-16	Carton	Master Carton		No		
			Content	<u>---</u> Sets		
			Material	<u>--</u> /--		
			Dimensions W x D x H(mm)	<u>-- x -- x --</u>		
			Description of Origin	No		
		Gift Box		Yes		
			Material	Double/Brown		
			Dimensions W x D x H(mm)	<u>850 x 620 x 665</u>		
			Design	As per Buyer's		
			Description of Origin	Yes		
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces		
			Height (cm)	31		
			Container Stuffing	<u>156</u> Sets/40' container		
G-17	Cabinet Material	Cabinet	Cabinet Front	PS 94V0 DECABROM		
			Cabinet Rear	PS 94V0 DECABROM		
		PCB	Non-Halogen Demand	No		
			Eyelet Demand	Yes		

GENERAL SPECIFICATIONS (FOR CANADA)

G-1	TV System	CRT	CRT Size / Visual Size	27 inch / 676.6mmV
			CRT Type	Flat
			Deflection	104 degree
			Magnetic Field BV/BH	+0.45G/0.18G
			Color System	NTSC
			Speaker	2 Speaker
			Position	Front Side
			Size	1.8 x 3.9 Inch
			Impedance	8 ohm
			Sound Output	MAX 5.0+5.0 W 10%(Typical) 4.0+4.0 W
			NTSC3.58+4.43 /PAL60Hz	No
G-2	Tuning System	Broadcasting System	System	US System M
		Tuner and Receive CH	Destination	1Tuner USA(W/ CATV)
			Tuning System	F-Synth
			Input Impedance	VHF/UHF 75 ohm
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate Frequency	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
			Preset CH	No
			Stereo/Dual TV Sound	Yes
G-3	Power	Power Source	AC DC	120V AC 60Hz
		Power Consumption	at AC	135 W at AC 120 V 60 Hz 3 W at AC 120 V 60 Hz -- kWh/Year
			Stand by (at AC) Per Year	
		Protector	Power Fuse	Yes
G-4	Regulation	Safety		UL/CSA
		Radiation		FCC/IC
		X-Radiation		DHHS/HWC
G-5	Temperature	Operation		+5oC ~ +40oC
		Storage		-20oC ~ +60oC
G-6	Operating Humidity			Less than 80% RH

GENERAL SPECIFICATIONS (FOR CANADA)

G-7	On Screen Display	Menu		Yes	
		Menu Type		Icon	
		Picture		Yes	
			Contrast		Yes
			Brightness		Yes
			Color		Yes
			Tint		Yes
			Sharpness		Yes
			Sound		Yes
			Bass		Yes
			Treble		Yes
			Balance		Yes
			BBE On/Off		Yes
			Stable Sound On/Off		Yes
			Surround On/Off		Yes
			Set Up		Yes
			TV/CATV		Yes
			Auto CH Memory		Yes
			Add/ Delete		Yes
			Option		Yes
			Language		Yes
			CH Label		Yes
			Favorite CH		Yes
			V-Chip		Yes
			Lock		Yes
			On/Off Timer		Yes
			Color Stream DVD/DTV		Yes
			Control Level		Yes
			Volume		Yes
			Brightness		Yes
			Contrast		Yes
			Color		Yes
			Tint		Yes
	Sharpness		Yes		
	Tuning		No		
	Bass	Yes			
	Treble	Yes			
	Balance	Yes			
	Back Light		No		
	Stereo,Audio Output,SAP		Yes		
	Video		Yes		
	Color Stream		Yes		
	Channel(TV/Cable)		Yes		
	CH Label		Yes		
	Game Timer		Yes		
	Sleep Timer		Yes		
	Sound Mute		Yes		
	V-chip Rating		Yes		
	16: 9		Yes		
G-8	OSD Language		English French Spanish		
G-9	Clock and Timer	Sleep Timer	Max Time	120 Min	
			Step	10 Min	
		On/Off Timer	Program(On Timer / Off Timer)	Yes	
		Wake Up Timer		No	
	Timer Back-up (at Power Off Mode)	more than	-- Min Sec		

GENERAL SPECIFICATIONS (FOR CANADA)

G-10	Remote Control	Unit	RC-GF	
		Glow in Dark Remocon	Yes	
		Format	Toshiba	
		Custom Code	TV:40-BFh	
		Power Source	Voltage(D.C) UM size x pcs	3V UM-4 x 2 pcs
		Total Keys		49 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100	Yes
			CH Up/+	Yes
			CH Down/-	Yes
			Volume Up/+	Yes
			Volume Down/-	Yes
			C.C.(TV/Caption/Text)	Yes
			CH1/CH2	Yes
			TV/Video(Input Select)	Yes
			CH RTN(Quick View)	Yes
			SLEEP	Yes
			RECALL(Call)	Yes
			Reset	Yes
			Menu/Enter	Yes
			Mute	Yes
			Exit	Yes
			MTS(Audio Select)	Yes
			Fav. Up	Yes
			Fav. Down	Yes
			16: 9	Yes
			Multi Brand Keys	
			CH Up(VCR)	Yes
			CH Down(VCR)	Yes
			Pause/Still	Yes
			TV/VCR(VCR)	Yes
			FF	Yes
			Rew	Yes
			Rec	Yes
			Play	Yes
			Stop	Yes
			TV	Yes
			VCR	Yes
			Cable	Yes
			DVD	Yes
			CODE	Yes
			DVD MENU <	Yes
			DVD MENU >	Yes
			DVD CLEAR	Yes
			TOP MENU	Yes
			DVD MENU	Yes

GENERAL SPECIFICATIONS (FOR CANADA)

G-11	Features	Auto Degauss	Yes	
		Auto Shut Off	Yes	
		Canal+	No	
		CATV	Yes	
		Anti-theft	No	
		Rental	No	
		Memory(Last CH)	Yes	
		Memory(Last Volume)	Yes	
		V-Chip	Yes	
		Type	USA, Toshiba Type	
		BBE	Yes	
		Auto Search	No	
		CH Allocation	No	
		SAP	Yes	
		Just Clock Function	No	
		CH Label	Yes	
		VM Circuit	Yes	
		Full OSD	No	
		Premiere	No	
		Comb Filter	Yes 3 Lines	
		Auto CH Memory	Yes	
		Hotel Lock	No	
		Closed Caption	Yes	
		Stable Sound	Yes	
		FBT Leak Test Protect	Yes	
		CH Lock	Yes	
		Video Lock	Yes	
		Game Timer (Max Time:120 Min)	Yes	
		Energy Star	Yes	
		Favorite CH	Yes	
Surround	Yes			
16:9 Mode	Yes			
G-12	Accessories	Owner's Manual	Language W/ Warranty	English / French Yes
		Remote Control Unit		Yes
		Rod Antenna	Poles Terminal	No
		Loop Antenna	Terminal	No
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Station List		No
		Important Safety Instruction		No
		Dew/AHC Caution Sheet		No
		AC Plug Adapter		No
		Quick Set-up Sheet		No
		Battery	UM size x pcs OEM Brand	Yes UM-4 x 2 No
		AC Cord		No
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		PTB Sheet		No
		ESP Card		Yes
		300 ohm to 75 ohm Antenna Adapter		No

GENERAL SPECIFICATIONS (FOR CANADA)

G-13	Interface	Switch	Front	Power	Yes	
				System Select	No	
				Main Power SW	No	
				Sub Power	No	
				Channel Up	Yes	
				Channel Down	Yes	
				Volume Up	Yes	
				Volume Down	Yes	
				Rear	AC/DC	No
					TV/CATV Selector	No
		Degauss	No			
		Main Power SW	No			
		Indicator	Power	Yes(RED)		
			Stand-by	No		
			On Timer	No		
		Terminals	Front	Video Input = VIDEO3	RCA	
				Audio Input = VIDEO3	RCA x 2	
				Other Terminal	Head Phone	
			Rear	Video Input(Rear1) = VIDEO1	RCA	
				Video Input(Rear2) = VIDEO2	RCA	
				Audio Input(Rear1) = VIDEO1	RCA x 2	
				Audio Input(Rear2) = VIDEO2	RCA x 2	
				Video Output	RCA	
				Audio Output	RCA x 2	
				Euro Scart	No	
				Color Stream	RCA x 3	
				S Input	Yes	
				Diversity	No	
Ext Speaker	No					
DC Jack 12V(Center +)	No					
VHF/UHF Antenna Input	F Type					
AC Outlet	No					
G-14	Set Size			Approx. W x D x H (mm)		<u>740 x 495 x 574.5</u>
G-15	Weight	Net (Approx.)		<u>40.0 kg (88.2lbs)</u>		
		Gross (Approx.)		<u>46.5 kg (102.5lbs)</u>		
G-16	Carton	Master Carton	No			
			Content	--- Sets		
			Material	-- /--		
			Dimensions W x D x H(mm)	-- x -- x --		
			Description of Origin	No		
			Gift Box	Yes		
		Material		Double/Brown		
		Dimensions W x D x H(mm)		<u>850 x 580 x 665</u>		
		Design		As per Buyer's		
		Description of Origin		Yes		
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces		
			Height (cm)	31		
Container Stuffing		<u>162</u> Sets/40' container				
G-17	Cabinet Material	Cabinet	Cabinet Front	PS 94V0 DECABROM		
			Cabinet Rear	PS 94V0 DECABROM		
		PCB	Non-Halogen Demand	No		
			Eyelet Demand	Yes		

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

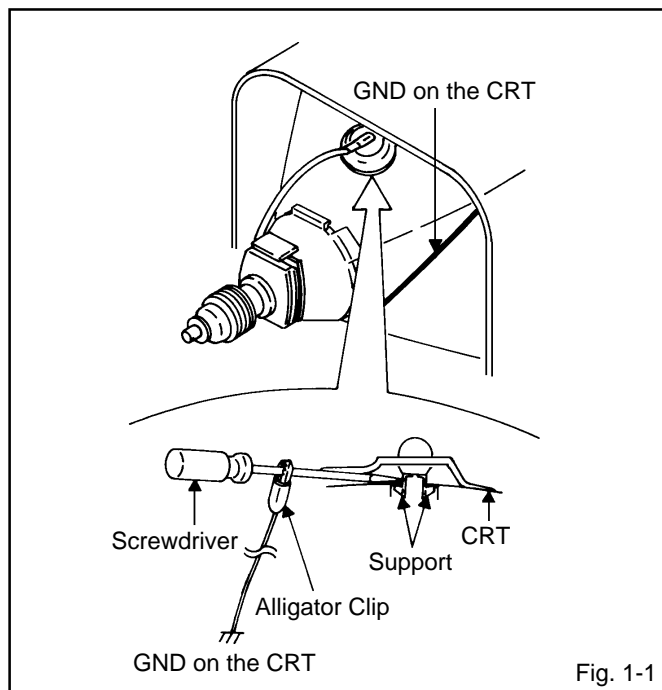
Read the following **NOTED** items before starting work.

- * 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.

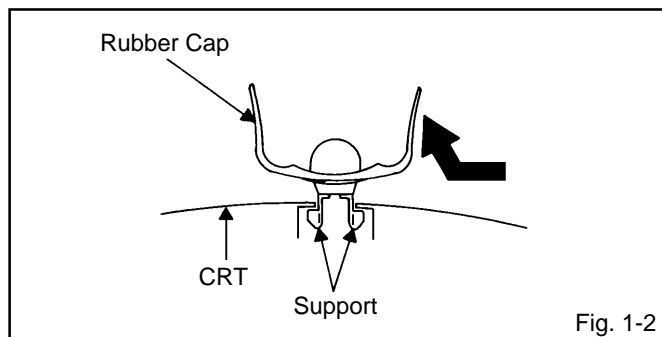
REMOVAL

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.)



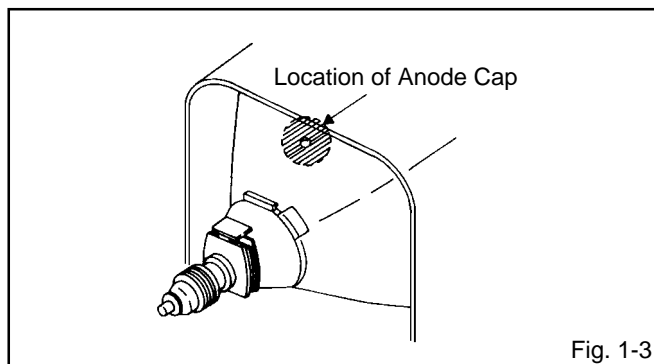
3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

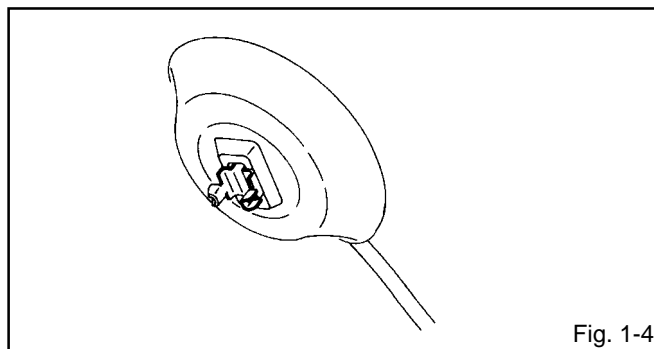
1. Clean the spot where the cap was located with a small amount of alcohol. (Refer to Fig. 1-3.)



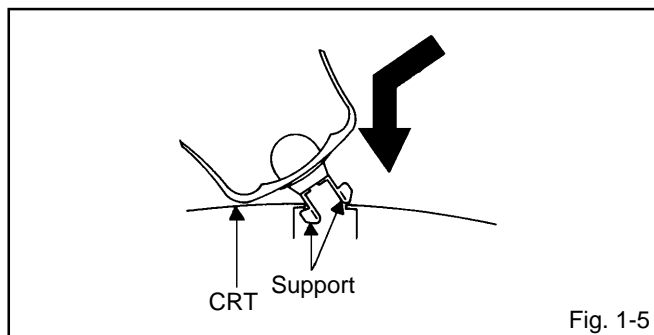
NOTE

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.

DISASSEMBLY INSTRUCTIONS

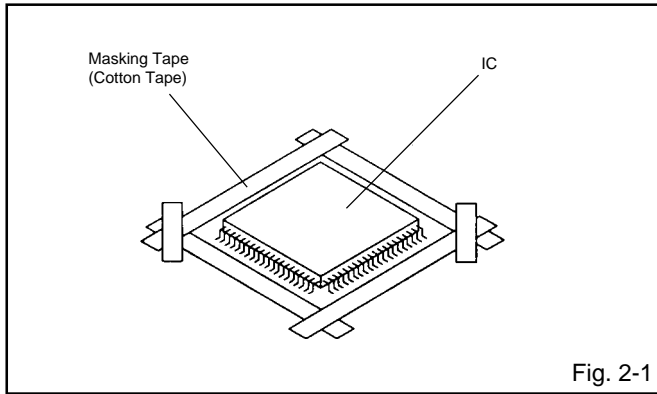
2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. (Refer to Fig. 2-1.)

NOTE

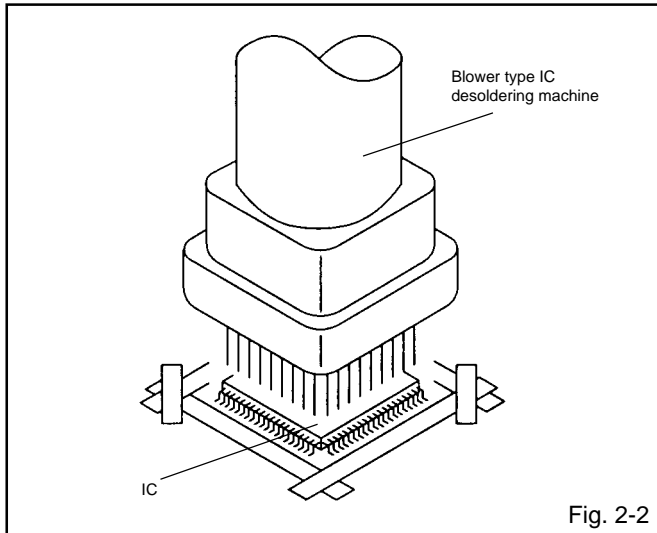
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. (Refer to Fig. 2-2.)

NOTE

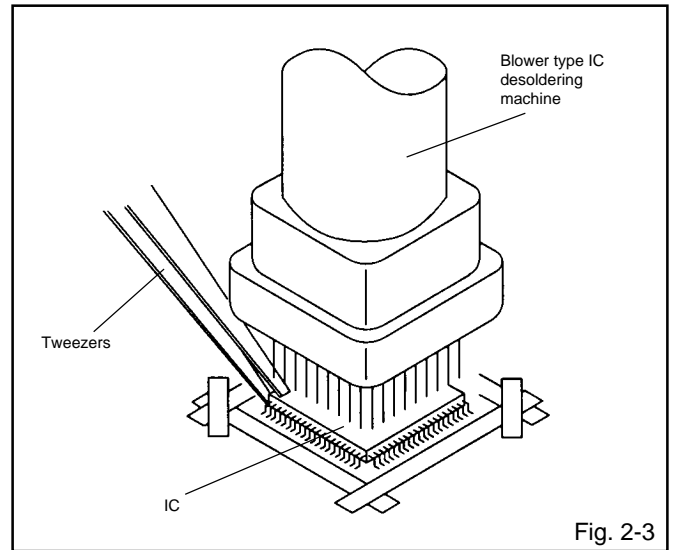
Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 2-3.)

NOTE

Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

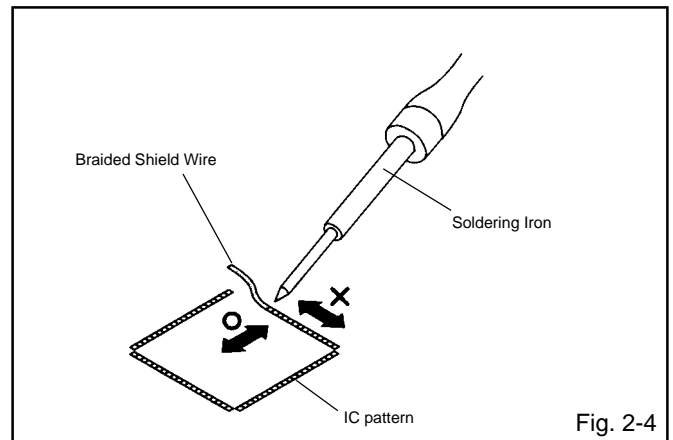


4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. (Refer to Fig. 2-4.)

NOTE

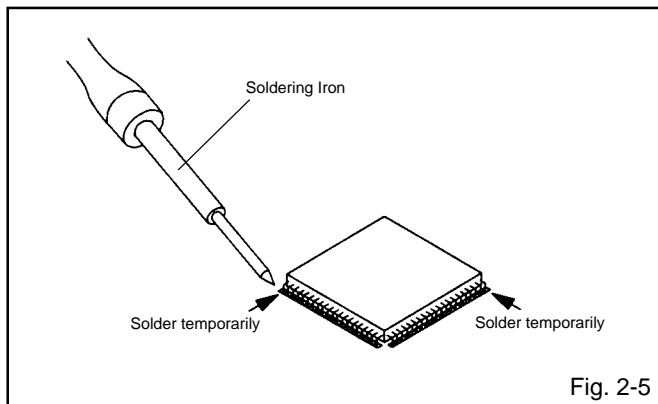
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



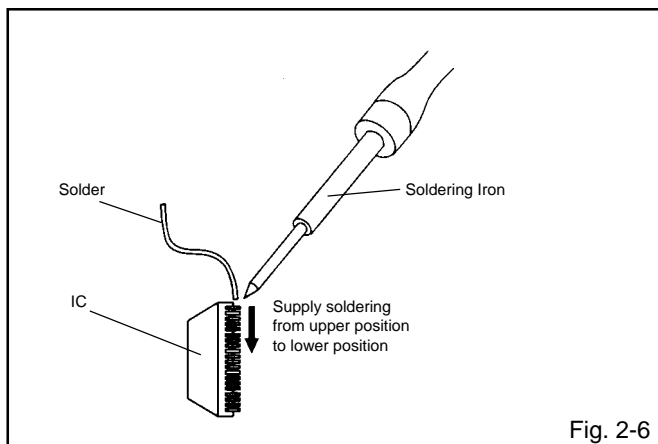
DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. (Refer to Fig. 2-5.)



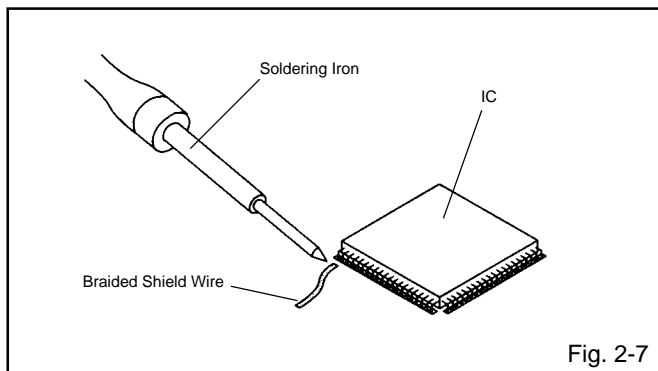
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. (Refer to Fig. 2-6.)



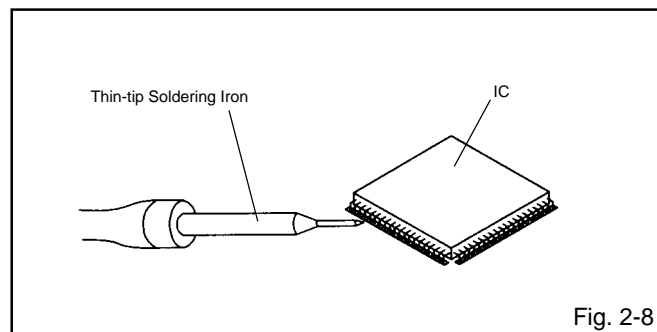
3. Absorb the solder left on the lead using the Braided Shield Wire. (Refer to Fig. 2-7.)

NOTE

Do not absorb the solder to excess.



4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. (Refer to Fig. 2-8.)



5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, be always sure to replace the IC in this case.

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 and LOCK PASSWORD.
VOL. (-) MIN	1	Initialization of the factory. NOTE: Do not use this for the normal servicing. If you set a factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (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 HOURS USED

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

NOTE: If you set a factory initialization, the total hours is reset to "0".

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.

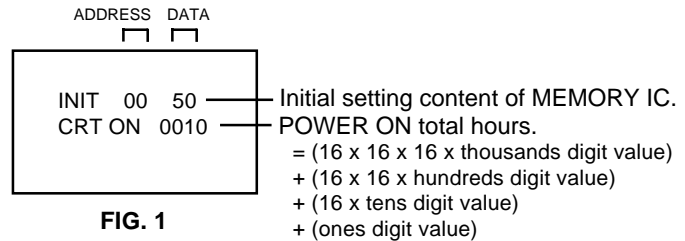


FIG. 1

WHEN REPLACING EEPROM (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 setting for after INI 1F due to the adjustment value.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	50	E8	0A	64	5E	B3	24	B7	3D	AC	AA	04	40	40	40	7F
10	50	00	00	00	00	00	06	00	3F	0F	0D	C1	A8	21	43	00

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 VOL. UP/DOWN button 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 VOL. UP/DOWN button 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.
After the data input, set to the initializing of shipping.
 9. Turn POWER on.
 10. Press both VOL. DOWN button on the set and Channel button (1) on the remote control for more than 1 second.
 11. After the finishing of the initializing of shipping, the unit will turn off automatically.
- The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

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.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator

On-Screen Display Adjustment

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

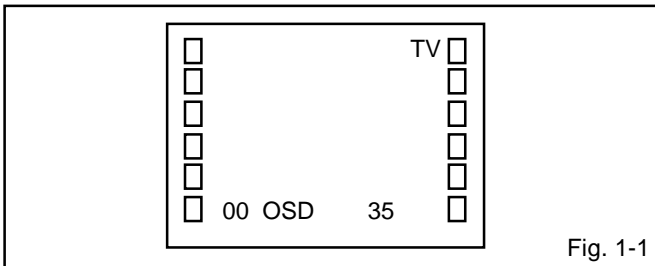


Fig. 1-1

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

NO.	FUNCTION	NO.	FUNCTION
00	OSD H	19	CONTRAST CENT
01	CUT OFF	20	CONTRAST MIN
02	H. VCO	21	COLOR MAX
03	H. PHASE	22	COLOR CENTER
04	AFC GAIN	23	COLOR MIN
05	V. SHIFT	24	TINT
06	H. SIZE	25	SHARPNESS
07	V. SIZE	26	Cb DELAY FINE
08	V. LINEARITY	27	Cr DELAY FINE
09	VS CORRECTION	28	Cb PEDESTAL ADJ
10	DRIVE R	29	Cr PEDESTAL ADJ
11	DRIVE B	30	E/W PARABOLA
12	R CUT OFF	31	E/W CORNER
13	G CUT OFF	32	E/W TRAPEZIUM
14	B CUT OFF	33	LEVEL
15	BRIGHT MAX	34	SEPARATION1
16	BRIGHT CENT	35	SEPARATION2
17	BRIGHT MIN	88	READ DATA
18	CONTRAST MAX		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONSTANT VOLTAGE

1. Place the set with Aging Test for more than 5 minutes.
2. Set condition is AV MODE without signal.
3. Connect the digital voltmeter to the TP003.
4. Adjust the VR502 until the digital voltmeter is $135 \pm 0.5V$.

2-2: CUT OFF

1. Place the set with Aging Test for more than 15 minutes.
2. Activate the adjustment mode display of Fig. 1-1 and press the channel button (01) on the remote control to select "CUT OFF".
3. Adjust the Screen Volume until a dim raster is obtained.

2-3: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of Fig. 1-1 and press the channel button (12) on the remote control to select "R. BIAS".
5. Press the CH. UP/DOWN button on the remote control to select the "R. BIAS", "G. BIAS", "B. BIAS", "B. DRIVE" or "G. DRIVE".
6. Adjust the VOL. UP/DOWN button on the remote control to whiten the R. BIAS, G. BIAS, B. BIAS, B. DRIVE, and G. DRIVE at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white color is looked like a white.

2-4: FOCUS

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

2-5: 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. 1-1 and press the channel button (03) on the remote control to select "H. PHAS".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

ELECTRICAL ADJUSTMENTS

2-6: HORIZONTAL SIZE

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. 1-1** and press the channel button **(06)** on the remote control to select "H. SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes 10%.

2-7: VERTICAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR401** until the horizontal line becomes fit to the notch of the shadow mask.

2-8: VERTICAL SIZE

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. 1-1** and press the channel button **(07)** on the remote control to select "V. SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes $9 \pm 2\%$.

2-9: VERTICAL LINEARITY

NOTE: Adjust after performing adjustments in section 2-8. After the adjustment of Vertical Linearity, reconfirm the Vertical Position and Vertical Size adjustments.

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. 1-1** and press the channel button **(08)** on the remote control to select "V. LIN".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

2-10: LEVEL

1. Receive the VHF HIGH (70dB).
2. Connect the AC voltmeter to **pin 6 of CP101**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(33)** on the remote control to select "LEVEL".
4. Press the VOL. UP/DOWN button on the remote control until the AC voltmeter is $75 \pm 2\text{mV}$.

2-11: PARABOLA

1. Receive the crosshatch signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(30)** on the remote control to select "PARABOLA".
4. Press the VOL. UP/DOWN button on the remote control until the right and left vertical lines are straight.

2-12: TRAPEZIUM

1. Receive the crosshatch signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "TRAPEZIUM".
4. Press the VOL. UP/DOWN button on the remote control until the both vertical lines of the screen become parallel.

2-13: SEPARATION 1, 2

Please do the method (1) or method (2) adjustment.

Method (1)

1. Set the multi-sound signal generator for each different L-ch and R-ch frequency (Ex. L-ch=2KHz, R-ch=400Hz) and receive the RF.
2. Connect the oscilloscope to the **Audio Out Jack**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "SEP 1".
4. Press the VOL. UP/DOWN button on the remote control to adjust it until the audio output wave becomes a fine sine wave.
5. Press the CH UP button once the set to "SEP 2" mode. Then perform the above adjustment 4.

Method (2)

1. Set the multi-sound signal generator L-ch=1KHz, R-ch=Non input and receive the RF.
2. Connect the oscilloscope to the **Audio Out Jack (R-ch)**.
3. Press the AUDIO SELECT button on the remote control to set to the stereo mode.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "SEP 1".
5. Press the VOL. UP/DOWN button on the remote control to adjust it until the R-ch output becomes minimum.
6. Set the multi-sound signal generator L-ch=Non input, R-ch=1KHz and receive the RF.
7. Connect the oscilloscope to the **Audio Out Jack (L-ch)**.
8. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(35)** on the remote control to select "SEP 2".
9. Press the VOL. UP/DOWN button on the remote control to adjust it until the L-ch output becomes minimum.

ELECTRICAL ADJUSTMENTS

2-14: BRIGHT CENT

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. 1-1** and press the channel button **(16)** on the remote control to select "BRI CENT".
4. Press the VOL. UP/DOWN button on the remote control until the white 0% is starting to be visible
5. Receive the monoscope pattern. (Audio Video Input)
6. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~4.
7. Press the TV/VIDEO button on the remote control to set to the CS mode.
8. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select "BRI CENT".
9. Press the VOL. UP/DOWN button on the remote control until the brightness step No. becomes "90".

2-15: TINT/COLOR CENT

1. Receive the color bar pattern.
2. Connect the oscilloscope to **TP806**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(24)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line **(Refer to Fig. 2-1)**
5. Connect the oscilloscope to **TP804**.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to select "COL.CENT".
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to $125 \pm 10\%$ of the white level. **(Refer to Fig. 2-2)**
8. Receive the color bar pattern. (Audio Video Input)
9. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~7.
10. Press the TV/VIDEO button on the remote control to set to the CS mode.
11. Press the VOL. UP/DOWN button on the remote control to set the same step numbers as the AV mode.

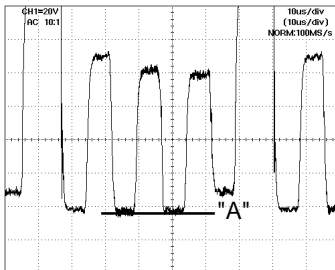


Fig. 2-1

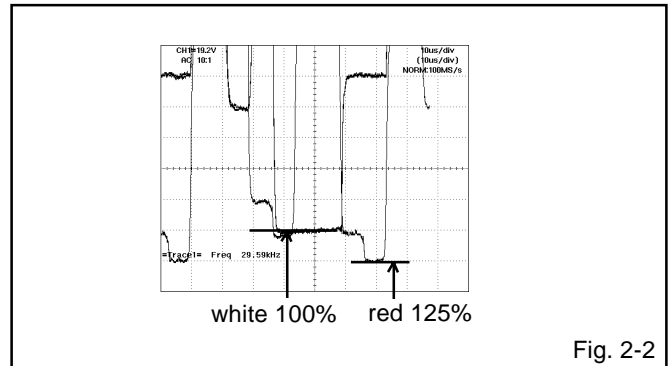


Fig. 2-2

2-16: CONTRAST MAX MANUAL

1. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(18)** on the remote control to select "CONT. MAX".
2. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "100".
3. Receive a broadcast and check if the picture is normal.
4. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 1~3. Press the TV/VIDEO button on the remote control to set to the CS mode. Then perform the above adjustments 1~3.

2-17: OSD HORIZONTAL

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

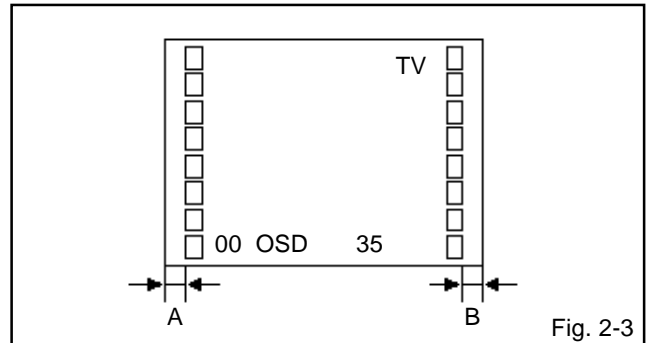


Fig. 2-3

2-18: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below. (RF/AV/CS)

NO.	FUNCTION	STEP NO.	NO.	FUNCTION	STEP NO.
02	H.VCO	03	21	COL.MAX	90
04	AFC GAIN	06	23	COL.MIN	00
05	V.SHIFT	02	25	SHARPNESS	40
09	VS.CORRECTION	38	26	CB DL	00
15	BRI.MAX	150	27	CR DL	00
17	BRI.MIN	50	28	CB PED	08
19	CONT.CENT	64	29	CR PED	08
20	CONT.MIN	16	31	CORNER	33

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 color.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

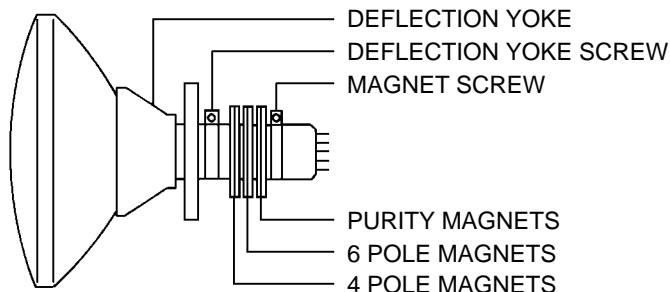


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

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

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

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

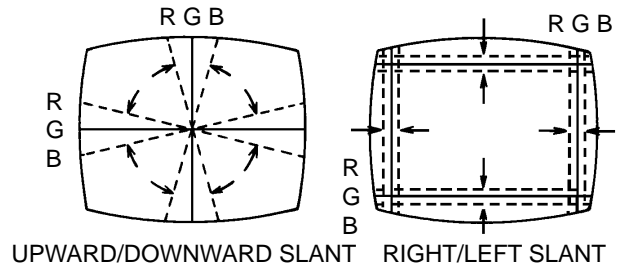


Fig. 3-2-a

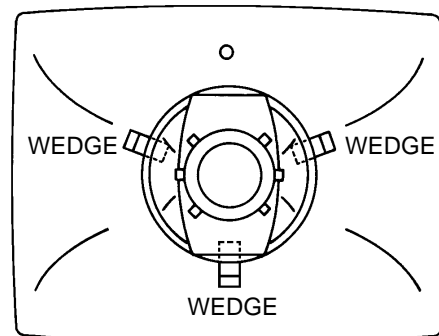
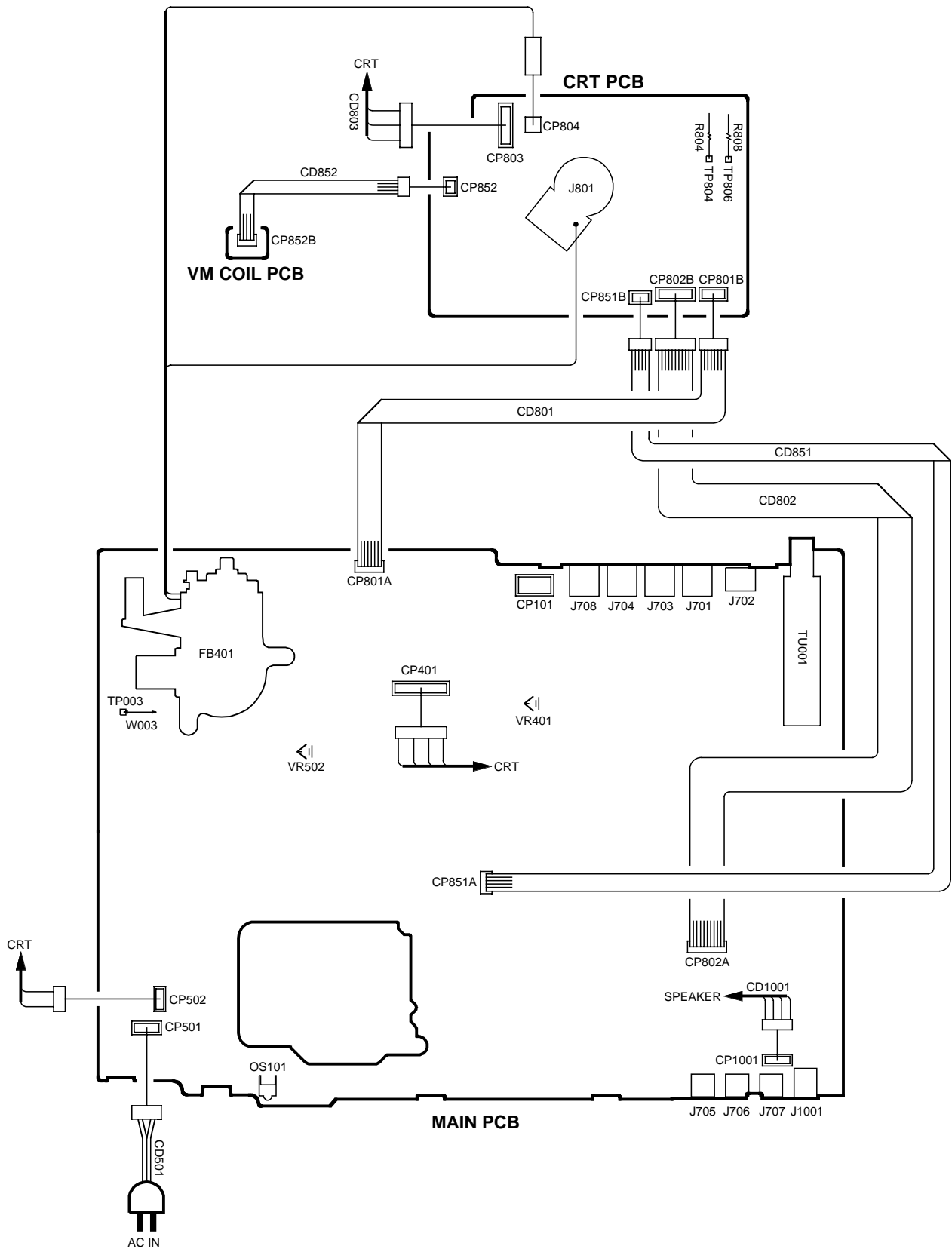


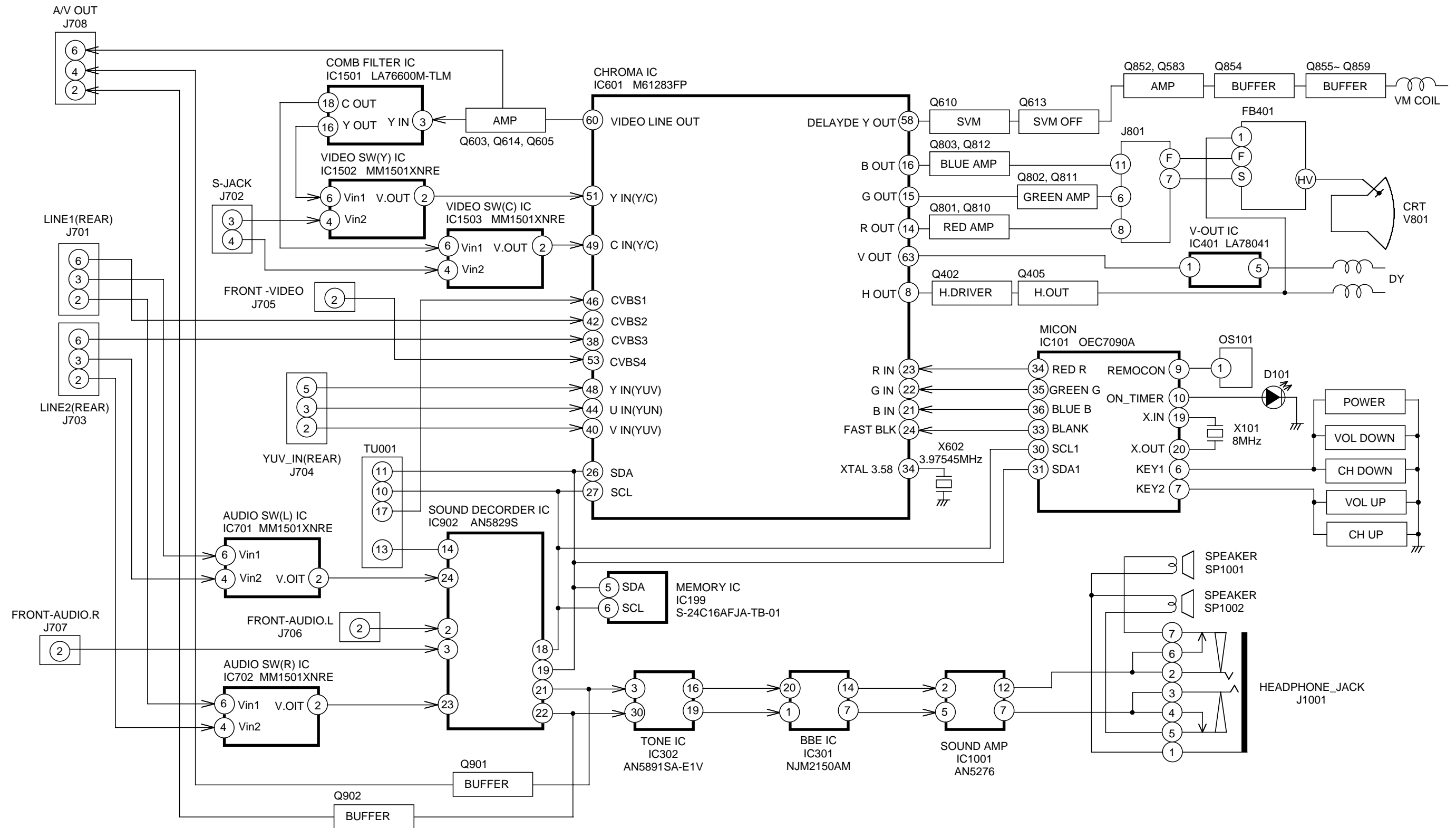
Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

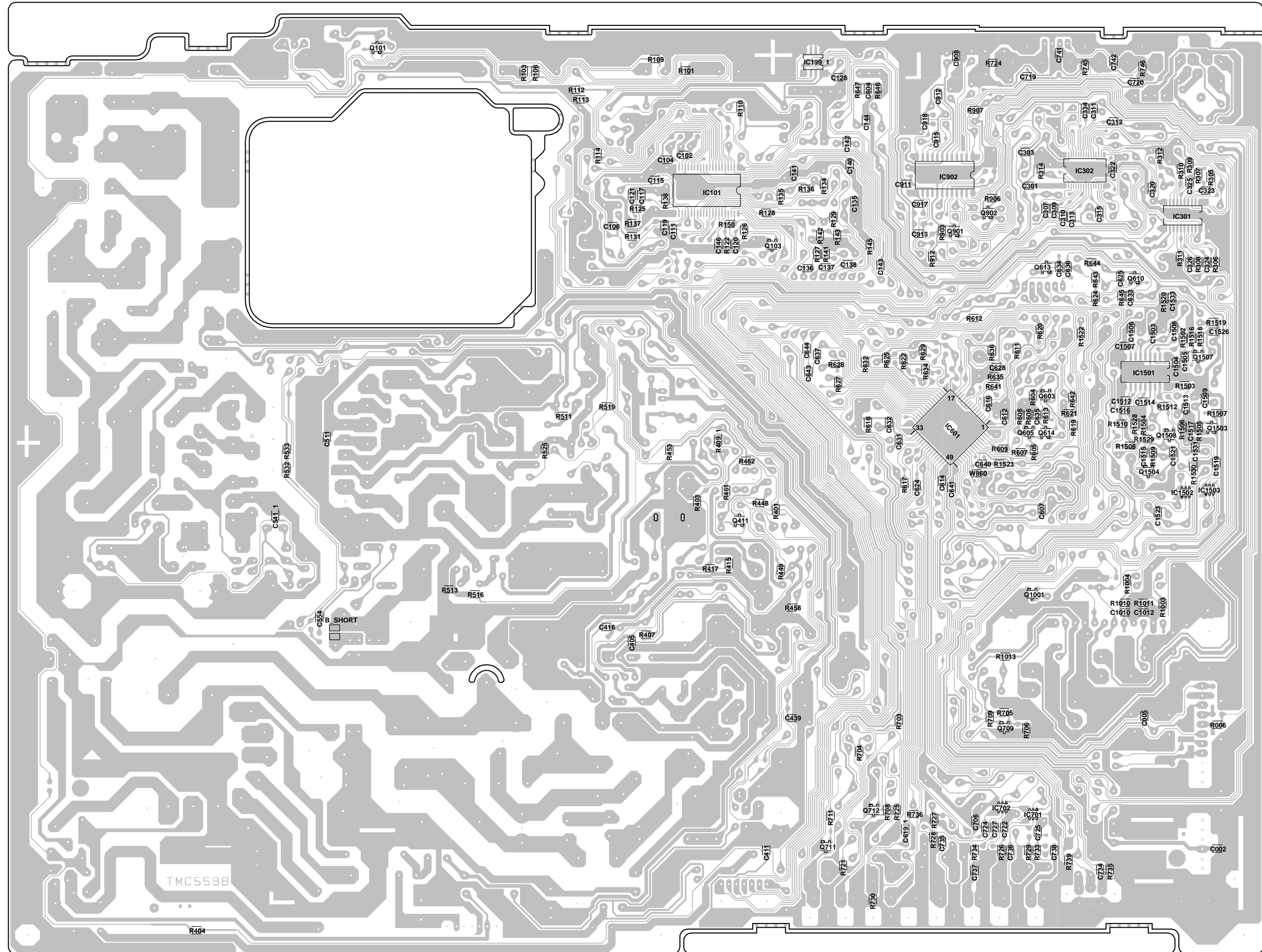
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



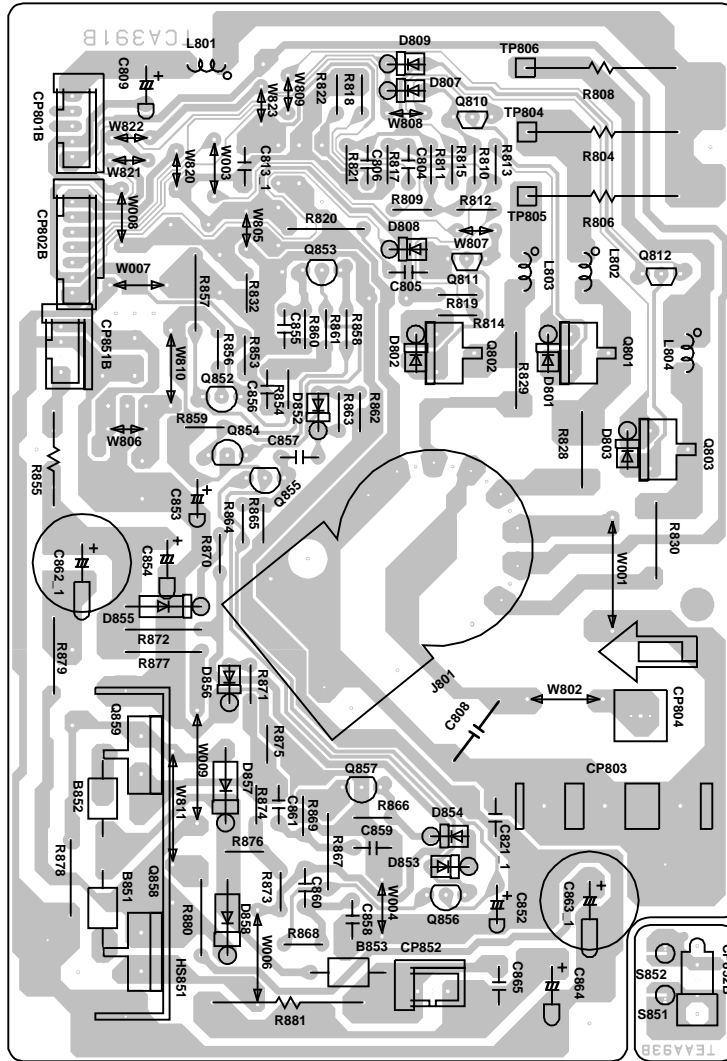
BLOCK DIAGRAM



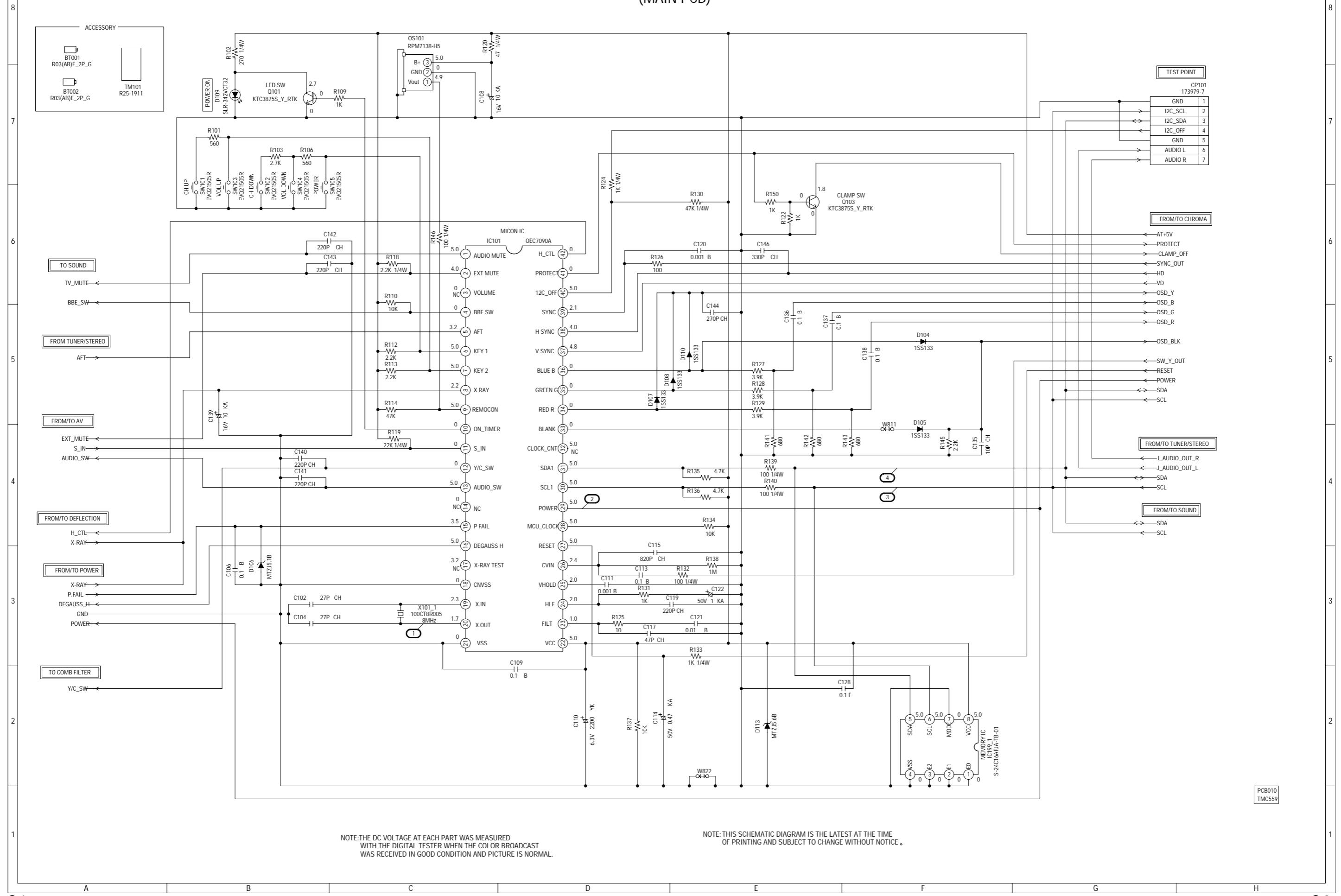
PRINTED CIRCUIT BOARDS
MAIN (CHIP MOUNTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS CRT/VM COIL SOLDER SIDE



MICON SCHEMATIC DIAGRAM (MAIN PCB)



TEST POINT

CP101	173979-7
GND	1
I2C_SCL	2
I2C_SDA	3
I2C_OFF	4
GND	5
AUDIO L	6
AUDIO R	7

FROM/TO CHROMA

- ← AT+5V
- ← PROTECT
- ← CLAMP_OFF
- ← SYNC_OUT
- ← HD
- ← VD
- ← OSD_Y
- ← OSD_B
- ← OSD_G
- ← OSD_R
- ← OSD_BLK
- ← SW_Y_OUT
- ← RESET
- ← POWER
- ← SDA
- ← SCL

FROM/TO TUNER/STEREO

- ← J_AUDIO_OUT_R
- ← J_AUDIO_OUT_L
- ← SDA
- ← SCL

FROM/TO SOUND

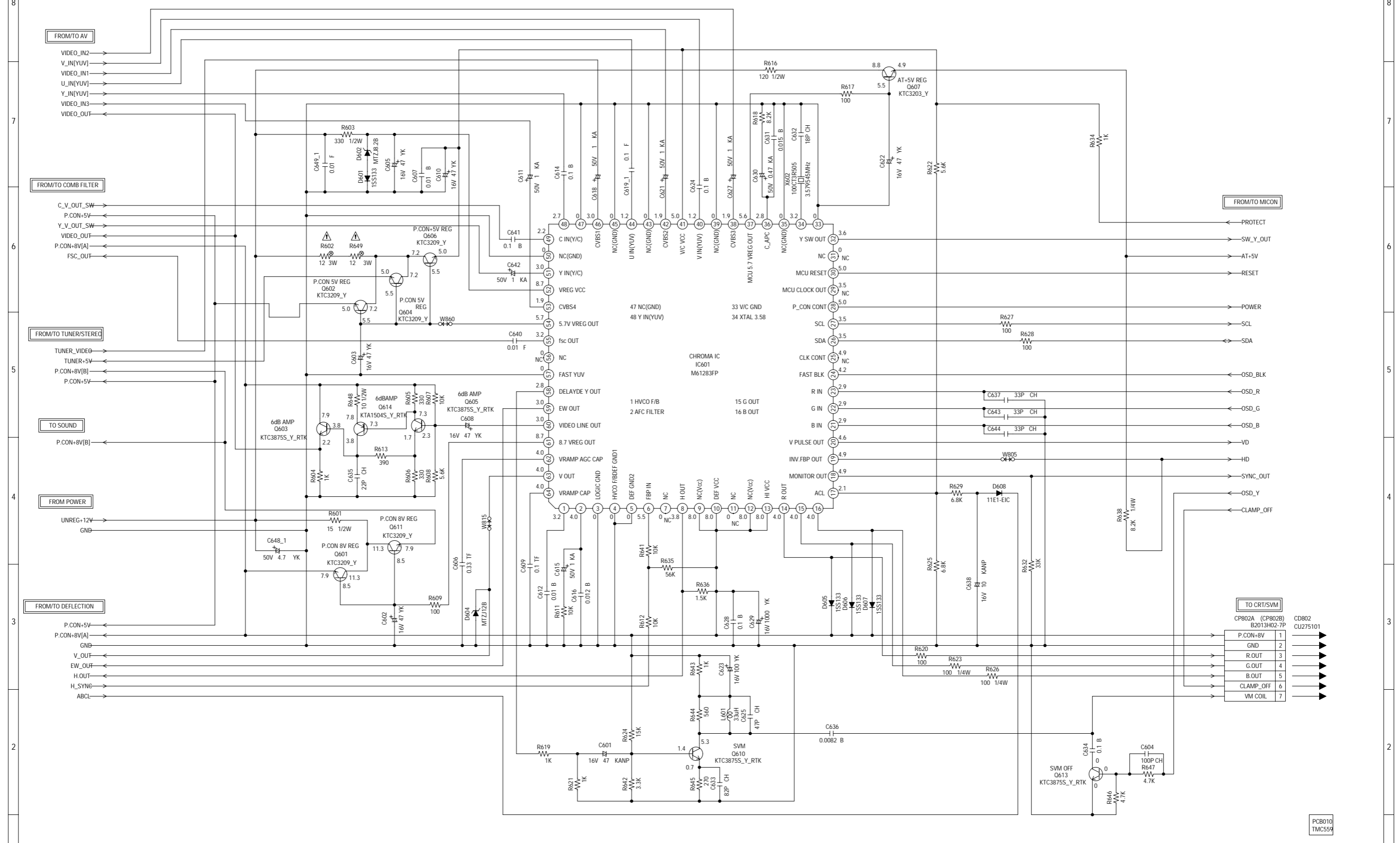
- ← SDA
- ← SCL

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.

PCB010
TMC559

CHROMA SCHEMATIC DIAGRAM (MAIN PCB)



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.

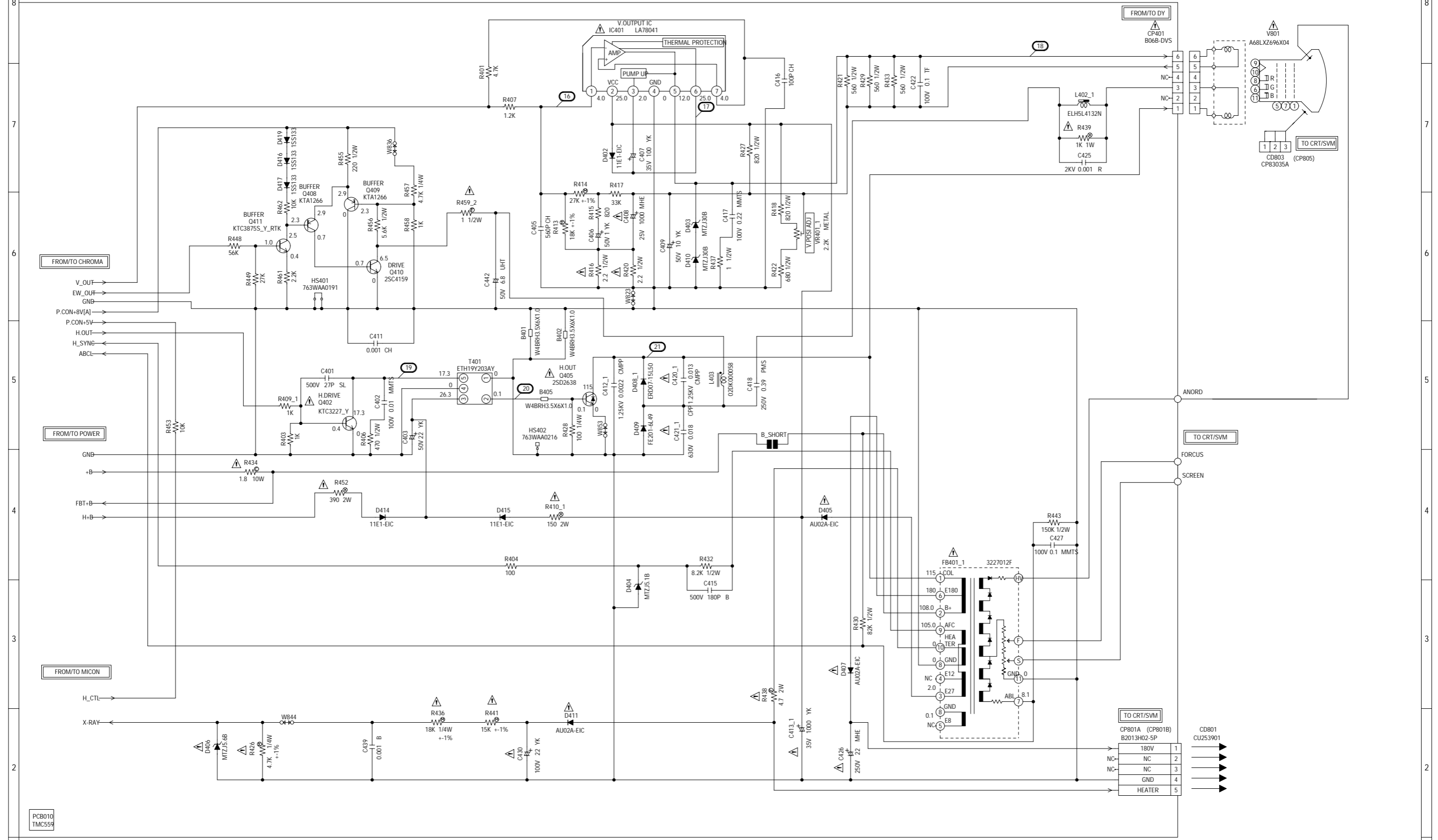
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

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

PCB010
TMC559

DEFLECTION SCHEMATIC DIAGRAM (MAIN PCB)



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

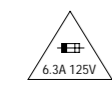
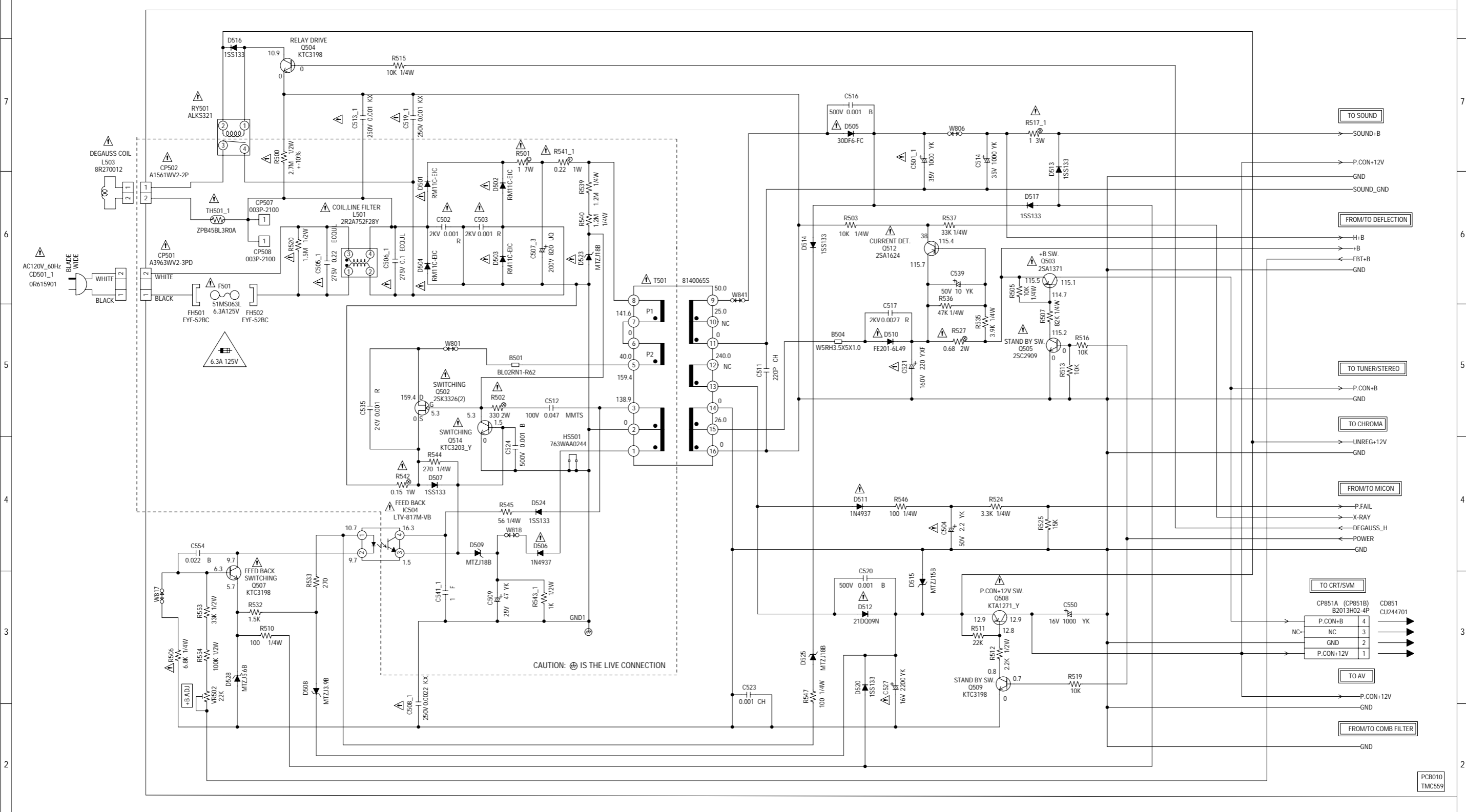
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED WITH 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 CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

POWER SCHEMATIC DIAGRAM (MAIN PCB)



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

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

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

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

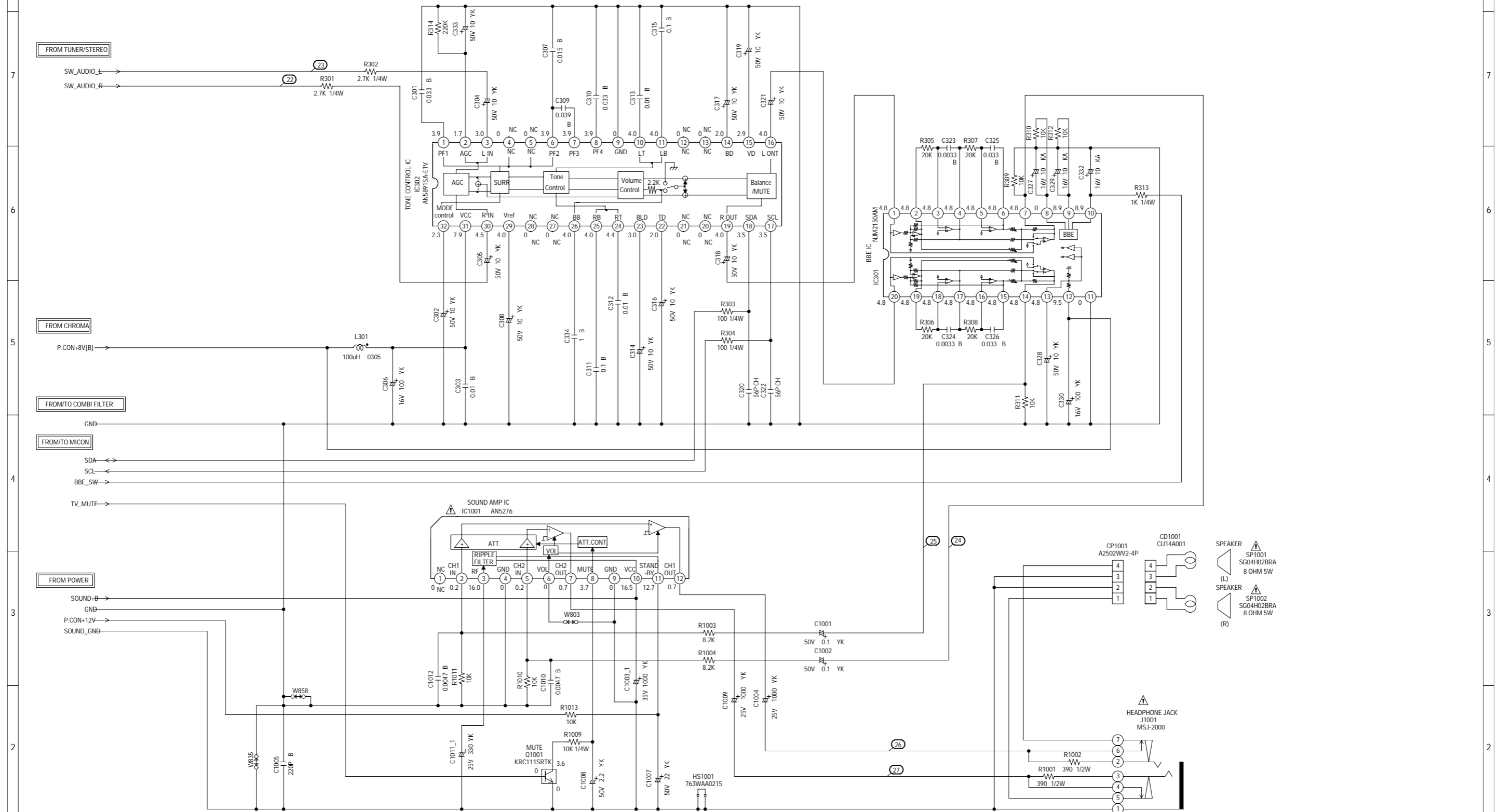
CAUTION: SINCE THESE PARTS MARKED BY ⊕ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPARÉES PAR UN ⊕ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

PCB010
TMC559

SOUND SCHEMATIC DIAGRAM (MAIN PCB)



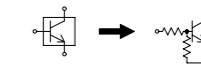
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

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

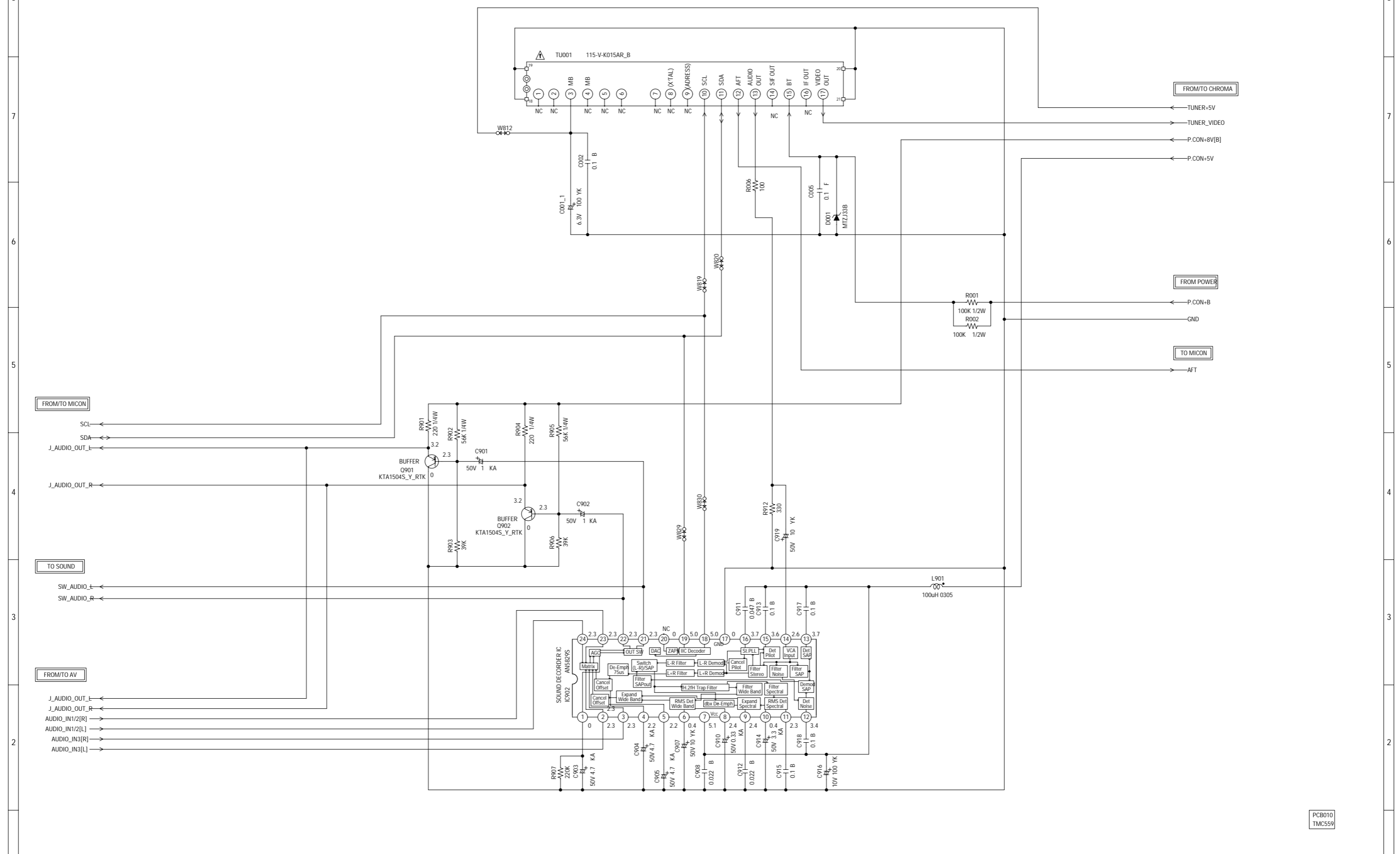
ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR



PCB010
TMC559

TUNER/STEREO SCHEMATIC DIAGRAM (MAIN PCB)



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

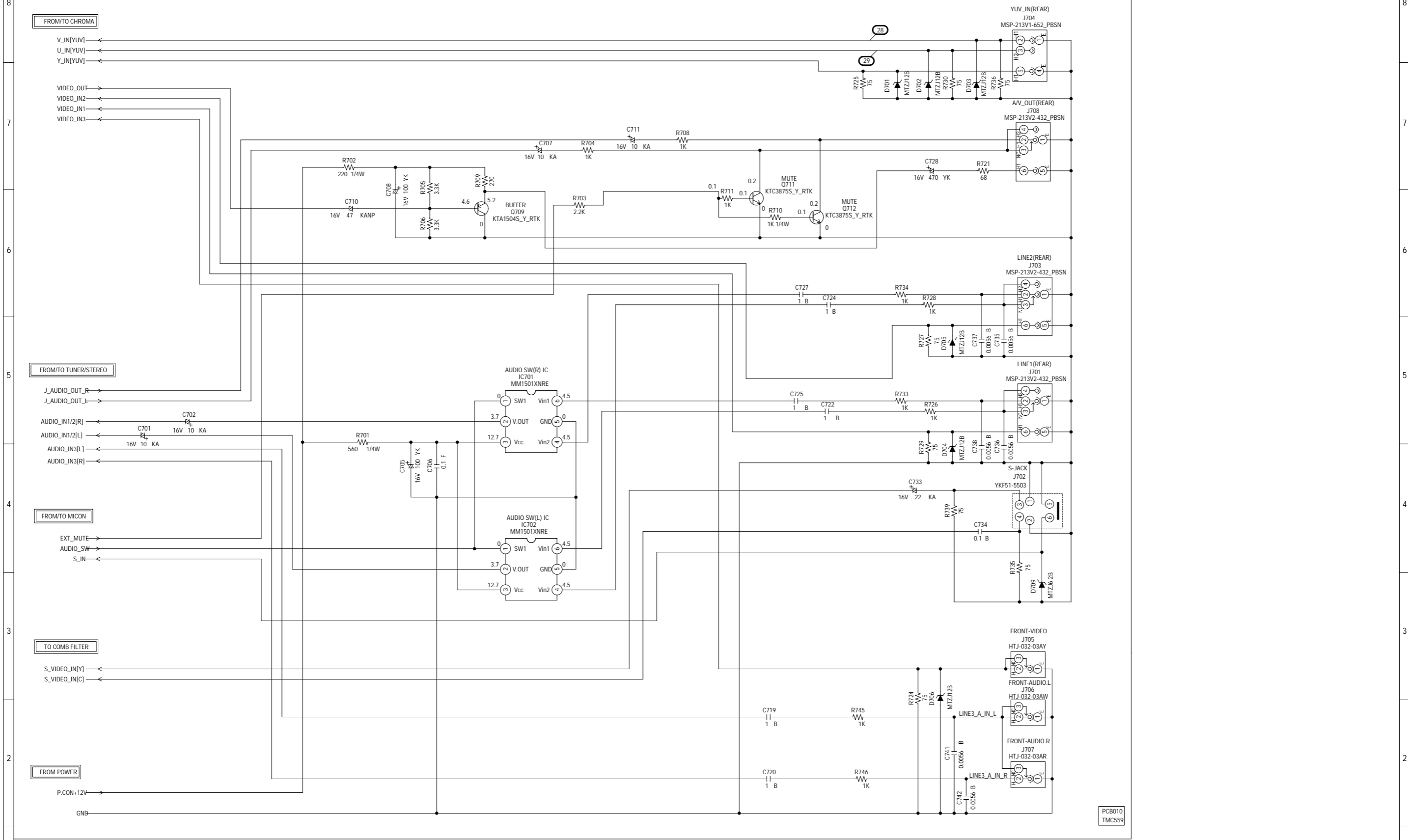
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

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

PCB010
TMC559

AV SCHEMATIC DIAGRAM (MAIN PCB)

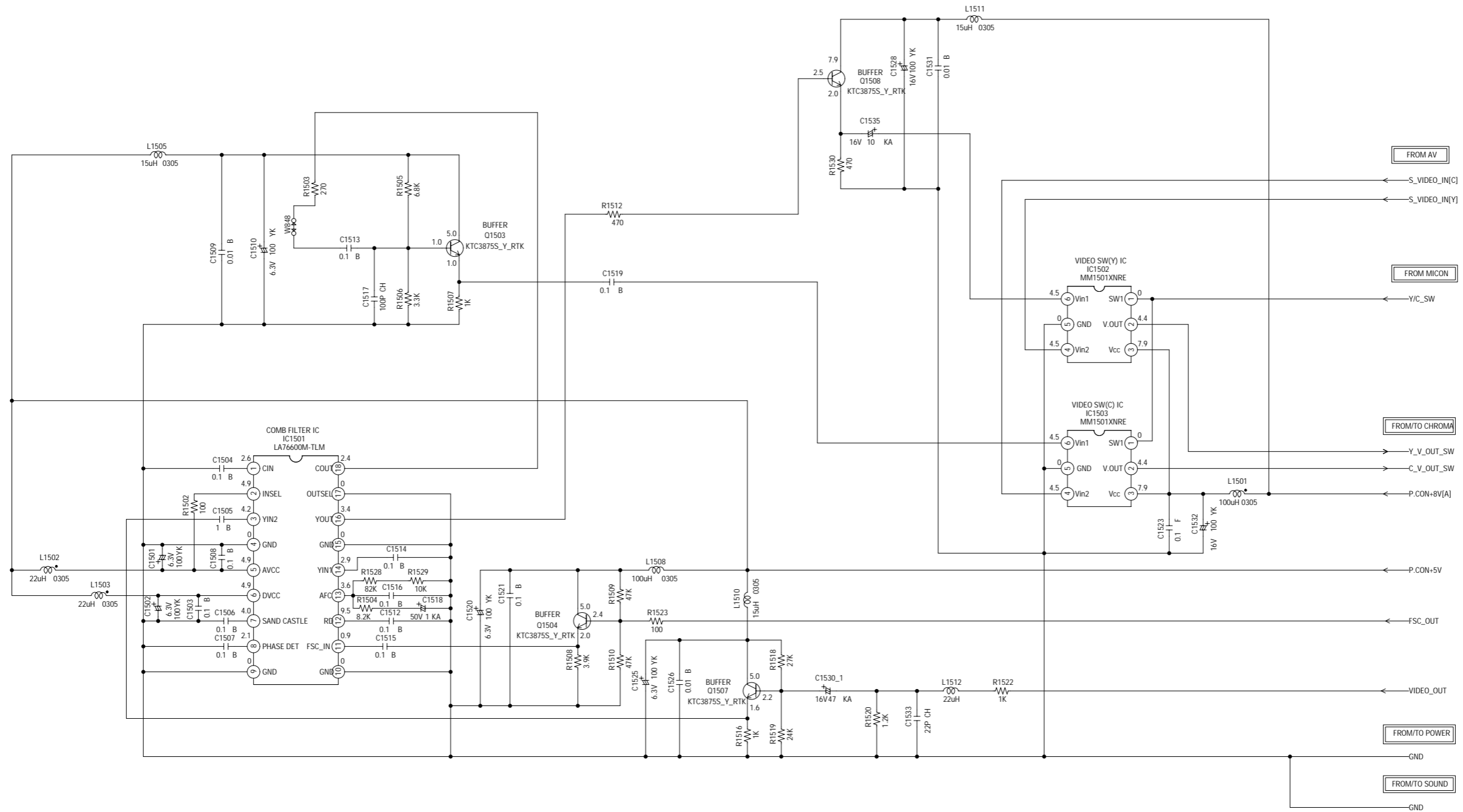


PCB010
TMC559

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.

COMB FILTER SCHEMATIC DIAGRAM (MAIN PCB)



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

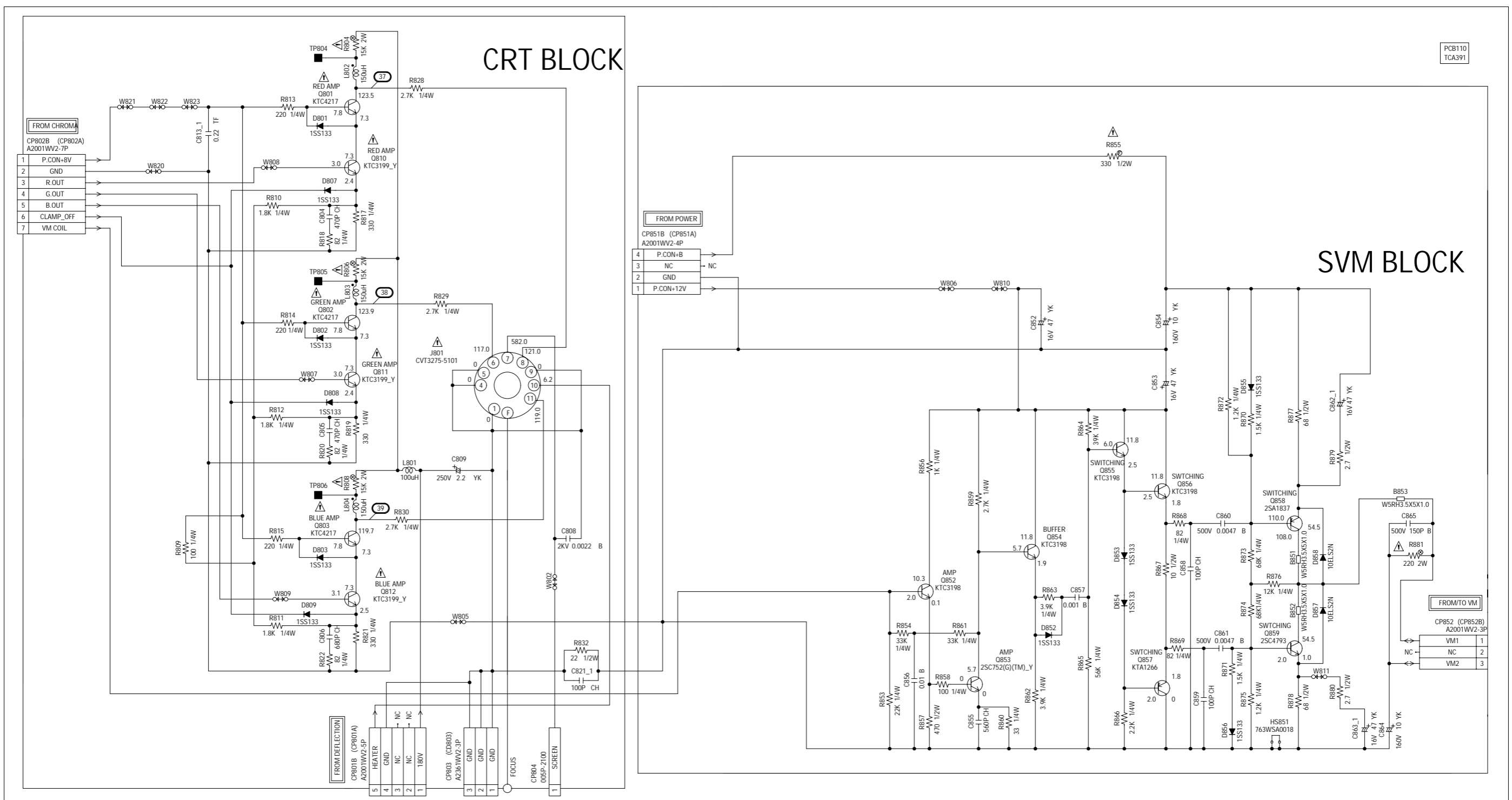
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCB010
TMC559

CRT/SVM SCHEMATIC DIAGRAM (CRT PCB)

CRT BLOCK

SVM BLOCK



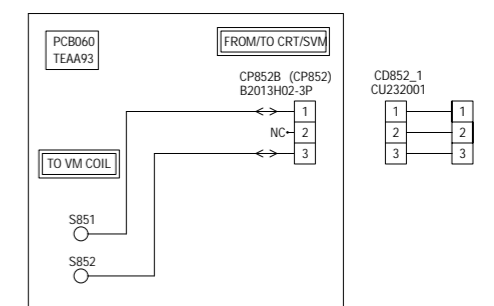
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

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

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

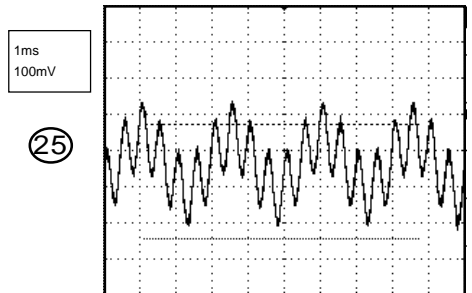
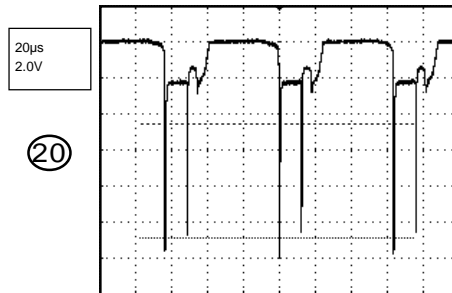
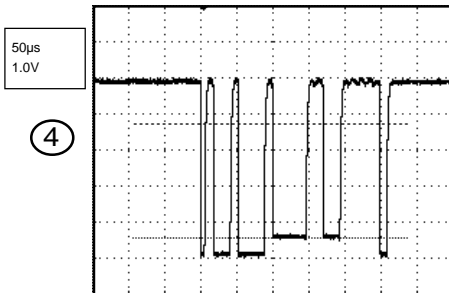
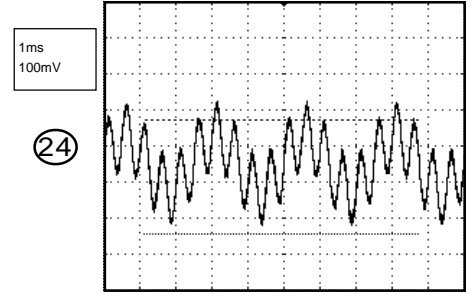
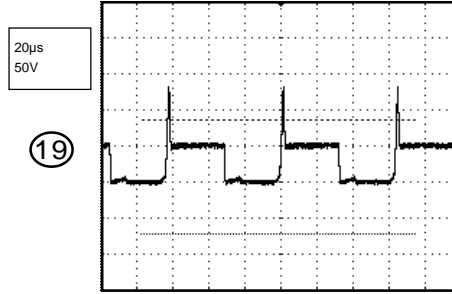
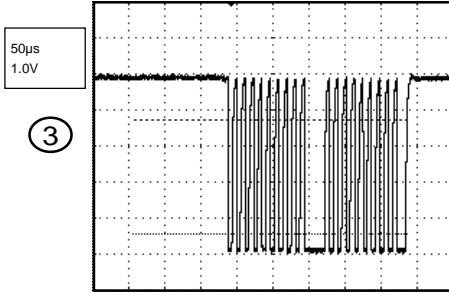
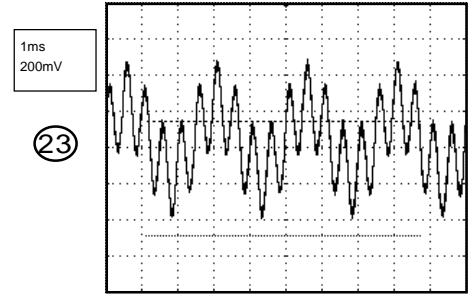
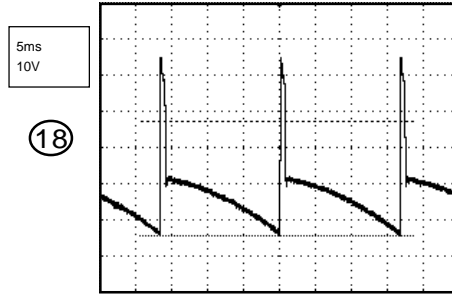
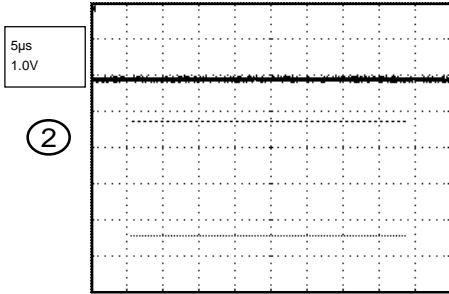
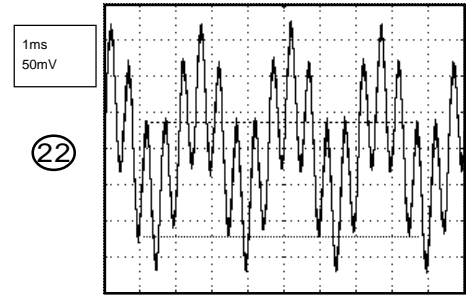
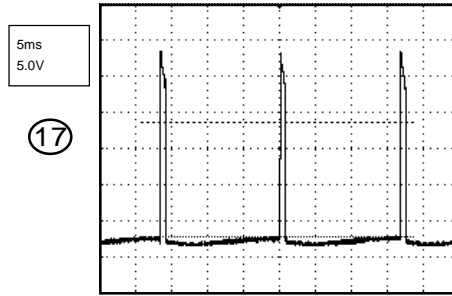
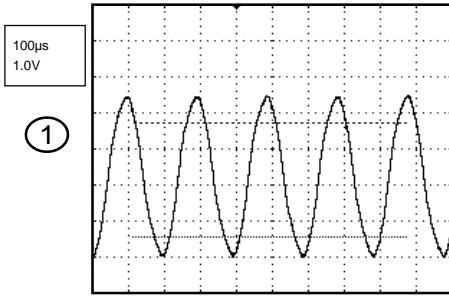
(VM COIL PCB)



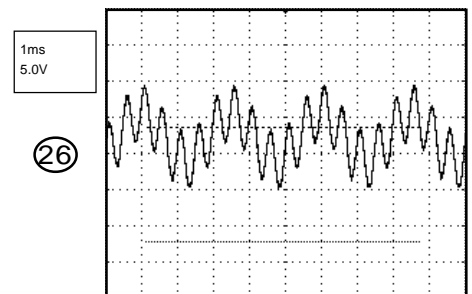
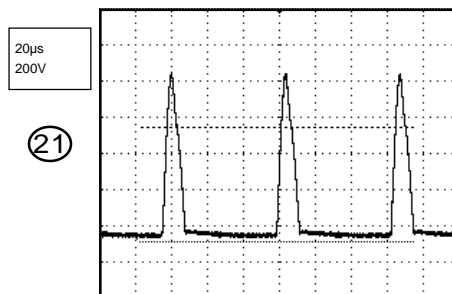
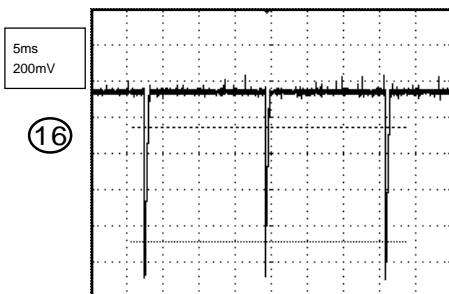
WAVEFORMS

MICON

SOUND



DEFLECTION

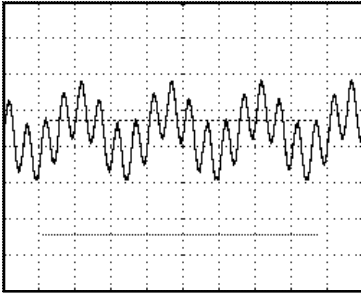


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

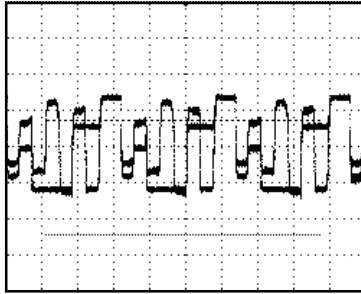
1ms
5.0V

27



20μs
50V

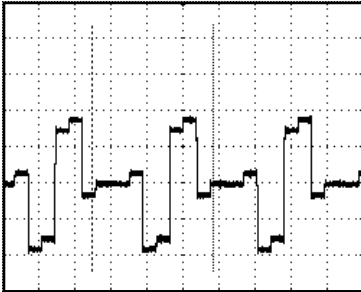
39



AV

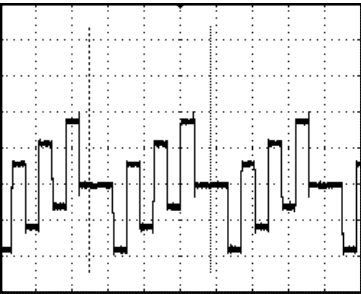
20μs
200mV

28



20μs
200mV

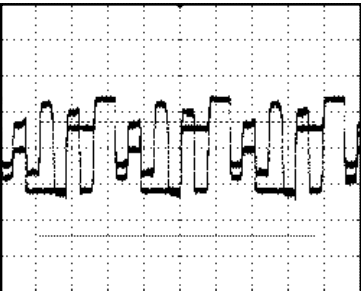
29



CRT/SVM

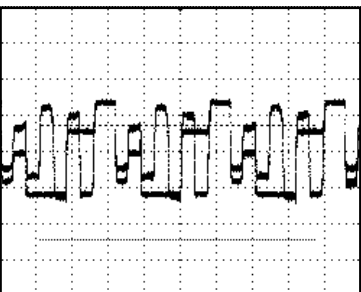
20μs
50V

37



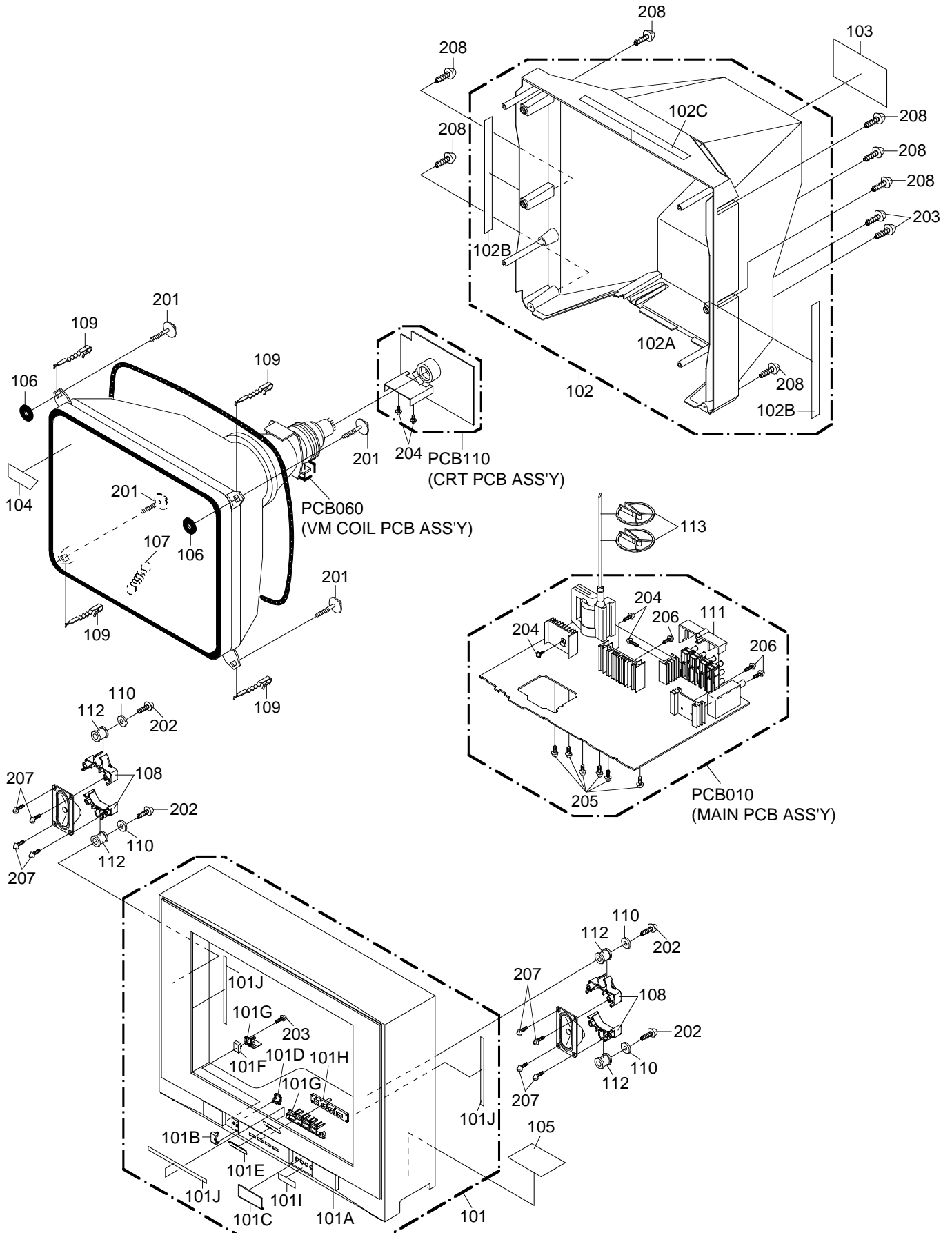
20μs
50V

38



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

MECHANICAL EXPLODED VIEW



MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
101	AD302316	A3N101A720	CABINET,FRONT ASSY	
101A	AD302317	701WPJC130	CABINET,FRONT	
101B	AD302318	711WPA0189	PLATE,FRONT	
101C	AE001102	712WPBA050	DOOR	
101D	AD302320	713WPA0279	GLASS,LED	
101E	AD302321	7235490037	BADGE,BRAND	
101F	AE001103	735WPJA774	BUTTON,POWER	
101G	AE001104	735WPBA673	BUTTON,FRAME	
101H	AD302324	735WPA0755	STOPPER,BUTTON	
101I	AE001105	723549A015	AV LABEL	
101J	AE000723	800WQ0A008	FELT SHEET	
102	AD302325	A3N101A740	CABINET,BACK ASSY	
102A	AE001106	702WPA0994	CABINET,BACK	
102B	AD301894	800WQ0A020	FELT SHEET	
102C	AD301895	800WQ00055	FELT SHEET	
103	AD302326	722549A171	SHEET,RATING	
104	AD302327	723000C171	POP LABEL	
105	AD301624	724000A002	SHEET,CSA	
106	AE001107	800WR0A026	SHEET,CRT SUPPORT (D) (FOR USA ONLY)	
107	AD300759	741WUA0021	SPRING,EARTH	
108	AD302310	761WPA0279	HOLDER,SPEAKER	
109	BZ710259	762WPA0011	HOLDER,CRT WIRE	
110	AD300519	82A40B0104	FLAT WASHER	
111	AD301616	761WPA0263	HOLDER,JACK	
112	AD300518	801WR00001	DAMPER,SPEAKER	
113	BZ710260	899HV3T000	HOLDER,ANODE WIRE	
201	AD302384	8141H60D54	SCREW,TAP TITE(P) GW22	6x45
202	BZ710035	8117540A64	SCREW,TAPPING(B0) TRUSS	4x16
203	BZ710031	8110630A04	SCREW,TAP TITE(P) BRAZIER	3x10
204	BZ710239	8109I30A04	SCREW,TAP TITE(B) WH7	3x10
205	BZ710019	8109630802	SCREW,TAP TITE(B) BRAZIER	3x8
206	BZ710018	8107630804	SCREW,TAP TITE(S) BRAZIER	3x8
207	BZ710030	8110630804	SCREW,TAP TITE(P) BRAZIER	3x8
208	BZ710036	8117540B04	SCREW,TAPPING(B0) TRUSS	4x20
---	AE001108	723000C200	SHEET,BAR CODE (FOR USA ONLY)	
---	AD300432	791WHA0092	LAMIFILM,BAG	
---	AD302385	792WHA0460	PACKAGE,TOP	
---	AD302386	792WHA0461	PACKAGE,BOTTOM	
---	AD302330	793WCDB659	GIFT BOX	
---	AD302331	A3N101N975	INSTRUCTION BOOK KIT	
---	AD300022	J3I70417	REGISTRATION CARD	
---	AD300023	J3I70436	ESP CARD	
---	AD302332	J3N10101A	INSTRUCTION BOOK	
---	AD301213	JA4UD300	POLYBAG,INSTRUCTION(REDCAUTION)	

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
RESISTORS			
△R410	AD301344	R3X18A151J	R,METAL OXIDE 150 OHM 2W
△R426	BZ210030	R4X5T4472F	R,METAL 4.7K OHM 1/4W
△R434	BZ210259	R5Y2CF1R8J	R,CEMENT 1.8 OHM 10W
△R436	BZ210023	R4X5T4183F	R,METAL 18K OHM 1/4W
△R438	BZ210169	R6358A4R7J	R,FUSE 4.7 OHM 2W
△R439	AE000676	R3K181102J	R,METAL 1K OHM 1W
△R441	AD300037	R4X5T6153F	R,METAL 15K OHM 1/6W
△R452	AD301385	R3X18A391J	R,METAL OXIDE 390 OHM 2W
△R459	AD301595	R65582010J	R,FUSE 1 OHM 1/2W
△R500	BZ210080	R0G3K2275K	RC 2.7M OHM 1/2W
△R501	AD301596	R5X2AE010J	R,CEMENT 1 OHM 7W
△R502	AD301016	R3X28A331J	R,METAL OXIDE 330 OHM 2W
△R506	BZ210162	R002T4682J	RC 6.8K OHM 1/4W
△R517	BZ210191	R3X28B010J	R,METAL 1 OHM 3W
△R527	BZ210149	R3X18AR68J	R,METAL OXIDE 0.68 OHM 2W
△R541	BZ210190	R63581R22J	R,FUSE 0.22 OHM 1W
R542	AD301017	R3X181R15J	R,METAL OXIDE 0.15 OHM 1W
△R602	AD301975	R3X28B120J	R,METAL OXIDE 12 OHM 3W
△R649	AD301975	R3X28B120J	R,METAL OXIDE 12 OHM 3W
△R804	BZ210026	R3X18A153J	R,METAL OXIDE 15K OHM 2W
△R806	BZ210026	R3X18A153J	R,METAL OXIDE 15K OHM 2W
△R808	BZ210026	R3X18A153J	R,METAL OXIDE 15K OHM 2W
R832	AE000901	R00202220J	RC 22 OHM 1/2W
△R855	AD301019	R65582331J	R,FUSE 330 OHM 1/2W
△R881	BZ210087	R3X18A221J	R,METAL OXIDE 220 OHM 2W
CAPACITORS			
C408	BZ110032	E5EZF3102M	CE 1000 UF 25V
C412	BZ110060	P4N8FJ222H	CMPP 0.0022UF 1.25KV
C413	AD301977	E0ELF4102M	CE 1000 UF 35V
C418	BZ110136	P4J7F3394J	CMPP 0.39 UF 250V PMS
△C420	AD301978	P4N8FJ133H	CMPP 0.013 UF 1.25KV
C421	AD300048	P3N1F5183J	CPP 0.018 UF 630V
C425	BZ110202	C0PLRR713K	CC 0.001 UF 2KV R
C426	AD300061	E5EZF2220M	CE 22 UF 250V
△C430	BZ110195	E02LU8220M	CE 22 UF 100V
C442	AD301601	E53FF56R8M	CE 6.8 UF 50V NP
C501	AD300067	E02LF4102M	CE 1000 UF 35V
	BZ110055	E5EZF4102M	CE 1000 UF 35V
C502	BZ110202	C0PLRR713K	CC 0.001 UF 2KV R
C503	BZ110202	C0PLRR713K	CC 0.001 UF 2KV R
△C505	BZ110025	P2122B224M	CMP 0.22 UF 275V ECQUL
△C506	BZ110035	P2122B104M	CMP 0.1 UF 275V ECQUL
C507	AE000417	E51DFC821M	CE 820 UF 200V
△C508	AD301108	CD39E0MH3M	CC 0.0022UF 250V
△C513	AD301026	CD39E0M13M	CC 0.001 UF 250V
C514	AD300067	E02LF4102M	CE 1000 UF 35V
	BZ110055	E5EZF4102M	CE 1000 UF 35V
C517	BZ110213	C03L0R7K3K	CC 0.0027UF 2KV R
△C519	AD301026	CD39E0M13M	CC 0.001 UF 250V
C521	AD301025	E62NFB221M	CE 220 UF 160V
C527	BZ110119	E02LF2222M	CE 2200 UF 16V
C535	BZ110202	C0PLRR713K	CC 0.001 UF 2KV R
C808	BZ110226	C0JBB07H3K	CC 0.0022UF 2KV B
C1003	AD300067	E02LF4102M	CE 1000 UF 35V
	BZ110055	E5EZF4102M	CE 1000 UF 35V
C1004	BZ110053	E02LF3102M	CE 1000 UF 25V
C1009	BZ110053	E02LF3102M	CE 1000 UF 25V
DIODES			
D001	BZ410037	D97U03301B	DIODE,ZENER MTZJ33B T-77
D104	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D105	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D106	BZ410020	D97U05R11B	DIODE,ZENER MTZJ5.1B T-77
D107	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D108	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D109	BZ410054	0021721150	LED SLR-342VCT32
D110	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D113	BZ410021	D97U05R61B	DIODE,ZENER MTZJ5.6B T-77
D402	BZ410043	D2WT011E10	DIODE,SILICON 11E1-EIC
D403	BZ410019	D97U03001B	DIODE,ZENER MTZJ30B T-77
D404	BZ410020	D97U05R11B	DIODE,ZENER MTZJ5.1B T-77
D405	BZ410063	D2WTAU02A0	DIODE,SILICON AU02A-EIC

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
DIODES			
△D406	BZ410021	D97U05R61B	DIODE,ZENER MTZJ5.6B T-77
D407	BZ410063	D2WTAU02A0	DIODE,SILICON AU02A-EIC
D408	AD302110	D2CF0715L0	DIODE,SILICON ERD07-15L50
D409	AD301980	D2CF2016L0	DIODE,SILICON FE201-6L49
D410	BZ410019	D97U03001B	DIODE,ZENER MTZJ30B T-77
△D411	BZ410063	D2WTAU02A0	DIODE,SILICON AU02A-EIC
D414	BZ410043	D2WT011E10	DIODE,SILICON 11E1-EIC
D415	BZ410043	D2WT011E10	DIODE,SILICON 11E1-EIC
D416	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D417	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D419	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
△D501	BZ410062	D2WTRM11C0	DIODE,SILICON RM11C-EIC
△D502	BZ410062	D2WTRM11C0	DIODE,SILICON RM11C-EIC
△D503	BZ410062	D2WTRM11C0	DIODE,SILICON RM11C-EIC
△D504	BZ410062	D2WTRM11C0	DIODE,SILICON RM11C-EIC
D505	AD300076	D28F30DF60	DIODE,RECTIFIER 30DF6-FC
D506	AD300731	D2WXN49370	DIODE,SILICON 1N4937
D507	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D508	BZ410064	D97U03R91B	DIODE,ZENER MTZJ3.9B T-77
D509	AD300671	D97U01801B	DIODE,ZENER MTZJ18B T-77
D510	AD301980	D2CF2016L0	DIODE,SILICON FE201-6L49
D511	AD300731	D2WXN49370	DIODE,SILICON 1N4937
D512	BZ410010	D28T21DQN9	DIODE,SCHOTTKY 21DQ09N-TA2B1
D513	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D514	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D515	AD300670	D97U01501B	DIODE,ZENER MTZJ15B T-77
D516	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D517	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D520	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D523	AD300671	D97U01801B	DIODE,ZENER MTZJ18B T-77
D524	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D525	AD300671	D97U01801B	DIODE,ZENER MTZJ18B T-77
D528	BZ410021	D97U05R61B	DIODE,ZENER MTZJ5.6B T-77
D601	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D602	BZ410058	D97U08R21B	DIODE,ZENER MTZJ8.2B T-77
D604	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D605	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D606	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D607	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D608	BZ410043	D2WT011E10	DIODE,SILICON 11E1-EIC
D701	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D702	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D703	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D704	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D705	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D706	AD300070	D97U01201B	DIODE,ZENER MTZJ12B T-77
D709	BZ410066	D97U06R21B	DIODE,ZENER MTZJ6.2B T-77
D801	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D802	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D803	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D807	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D808	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D809	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D852	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D853	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D854	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D855	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D856	BZ410006	D1VT001330	DIODE,SILICON 1SS133T-77
D857	BZ410011	D28TELS2N2	DIODE,RECTIFIER 10ELS2N-TA1B2
D858	BZ410011	D28TELS2N2	DIODE,RECTIFIER 10ELS2N-TA1B2
ICS			
IC101	AD301981	I56F07090A	IC OEC7090A
IC199	AE000902	A3N101A015	IC S-24C16AFJA-TB-01
IC301	AD300055	I0QF021500	IC NJM2150AM
IC302	AD301983	I01FF58910	IC AN5891SA-E1V
IC401	AD300414	I03TD80410	IC LA78041
△IC504	BZ410088	0002E00610	PHOTO COUPLER LTV-817M-VB
IC601	AD301984	I06FC12830	IC M61283FP
IC701	AD301988	I0UF015010	IC MM1501XNRE
IC702	AD301988	I0UF015010	IC MM1501XNRE
IC902	AD300059	I01FF58290	IC AN5829S

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
			ICS
IC1001	AD300056	I0FSP52760	AN5276
IC1501	AD301029	I03FE76600	LA76600M-TLM
IC1502	AD301988	I0UF015010	MM1501XNRE
IC1503	AD301988	I0UF015010	MM1501XNRE
			TRANSISTORS
Q101	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q103	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q402	BZ510097	TCAT03227Y	TRANSISTOR,SILICON
Q405	AD302136	TD50026380	TRANSISTOR,SILICON
Q408	BZ510073	TAATA12660	TRANSISTOR,SILICON
Q409	BZ510073	TAATA12660	TRANSISTOR,SILICON
Q410	AD300027	TC30041590	TRANSISTOR,SILICON
Q411	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q502	BZ510098	T220033260	FET
Q503	BZ510005	TA3T1371A0	TRANSISTOR,SILICON
Q504	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q505	BZ510011	TC3T029090	TRANSISTOR,SILICON
Q507	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q508	BZ510077	TAAT012714	TRANSISTOR,SILICON
Q509	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q512	BZ510004	TA3T016240	TRANSISTOR,SILICON
Q514	BZ510070	TCAT032034	TRANSISTOR,SILICON
Q601	BZ510105	TCAT03209Y	TRANSISTOR,SILICON
Q602	BZ510105	TCAT03209Y	TRANSISTOR,SILICON
Q603	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q604	BZ510105	TCAT03209Y	TRANSISTOR,SILICON
Q605	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q606	BZ510105	TCAT03209Y	TRANSISTOR,SILICON
Q607	BZ510070	TCAT032034	TRANSISTOR,SILICON
Q610	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q611	BZ510105	TCAT03209Y	TRANSISTOR,SILICON
Q613	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q614	BZ510108	TAAA1504SY	TRANSISTOR,SILICON
Q709	BZ510108	TAAA1504SY	TRANSISTOR,SILICON
Q711	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q712	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
△Q801	BZ510091	TCA0042170	TRANSISTOR,SILICON
△Q802	BZ510091	TCA0042170	TRANSISTOR,SILICON
△Q803	BZ510091	TCA0042170	TRANSISTOR,SILICON
△Q810	AD301032	TCATC3199Y	TRANSISTOR,SILICON
△Q811	AD301032	TCATC3199Y	TRANSISTOR,SILICON
△Q812	AD301032	TCATC3199Y	TRANSISTOR,SILICON
Q852	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q853	AD300024	TCUT00752Y	TRANSISTOR,SILICON
Q854	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q855	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q856	BZ510069	TCATC31980	TRANSISTOR,SILICON
Q857	BZ510073	TAATA12660	TRANSISTOR,SILICON
Q858	AD300029	TAU0018370	TRANSISTOR,SILICON
Q859	AD300025	TCU0047930	TRANSISTOR,SILICON
Q901	BZ510108	TAAA1504SY	TRANSISTOR,SILICON
Q902	BZ510108	TAAA1504SY	TRANSISTOR,SILICON
Q1001	BZ510068	TNAAJ05003	COMPOUND TRANSISTOR
Q1503	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q1504	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q1507	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
Q1508	BZ510109	TCAA3875SY	TRANSISTOR,SILICON
			COILS & TRANSFORMERS
L301	BZ310041	02167F101J	COIL
L402	AD300400	022100034A	COIL,LINEARITY
L403	AD301606	02DK000058	COIL,CHOKE
△L501	AD301124	029T000101	COIL,LINE FILTER
△L503	AD302360	028R270012	COIL,DEGAUSS
L601	AD301989	0216A6330J	COIL
L801	BZ310002	021673101K	COIL
L802	AD300123	021673151K	COIL
L803	AD300123	021673151K	COIL
L804	AD300123	021673151K	COIL
L901	BZ310041	02167F101J	COIL
L1501	BZ310041	02167F101J	COIL
L1502	BZ310039	02167F220J	COIL

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
COILS & TRANSFORMERS			
L1503	BZ310039	02167F220J	COIL 22 UH
L1505	AD300613	02167F150J	COIL 15 UH
L1508	BZ310041	02167F101J	COIL 100 UH
L1510	AD300613	02167F150J	COIL 15 UH
L1511	AD300613	02167F150J	COIL 15 UH
L1512	AD301608	0216A6220J	COIL 22 UH
T401	AD301125	0450190161	TRANS,HORIZONTAL DRIVE ETH19Y203AY
△ T501	AD301355	048140065S	TRANSFORMER,SWITCHING 8140065S
JACKS			
J701	AD301038	060J431019	RCA JACK MSP-213V2-432 PBSN
J702	AD300108	063Q700002	JACK YKF51-5503
J703	AD301038	060J431019	RCA JACK MSP-213V2-432 PBSN
J704	AD301037	060J411024	RCA JACK MSP-213V1-652 PBSN
J705	AD300110	060G401047	RCA JACK HTJ-032-03AY
J706	AD300111	060G401046	RCA JACK HTJ-032-03AW
J707	AD300112	060G401039	RCA JACK HTJ-032-03AR
J708	AD301038	060J431019	RCA JACK MSP-213V2-432 PBSN
△ J801	BZ614115	066C130017	SOCKET,CATHODE RAY TUBE CVT3275-5101
J1001	BZ614361	060J131015	HEADPHONE JACK MSJ-2000
SWITCHES			
SW101	BZ612010	0504101T34	SWITCH,TACT EVQ21505R
SW102	BZ612010	0504101T34	SWITCH,TACT EVQ21505R
SW103	BZ612010	0504101T34	SWITCH,TACT EVQ21505R
SW104	BZ612010	0504101T34	SWITCH,TACT EVQ21505R
SW105	BZ612010	0504101T34	SWITCH,TACT EVQ21505R
VARIABLE RESISTORS			
VR401	BZ210218	V1K63H3BTE	VOLUME,SEMI FIXED NVG6TLTAB222
VR502	BZ210101	V1163H4BTC	VOLUME,SEMI FIXED EVNCYAA03BE4
P.C.BOARD ASSEMBLIES			
PCB010	AE000903	A3N101A010	PCB ASS'Y (FOR USA) TMC559B
PCB010	AE000906	A3N105A010	PCB ASS'Y (FOR CANADA) TMC559B
PCB060	AE000904	A3N101A060	PCB ASS'Y TEAA93B
PCB110	AE000905	A3N101A110	PCB ASS'Y TCA391B
MISCELLANEOUS			
B401	BZ310129	024HT03564	CORE,BEADS W4BRH3.5X6X1.0
B402	BZ310129	024HT03564	CORE,BEADS W4BRH3.5X6X1.0
B405	BZ310129	024HT03564	CORE,BEADS W4BRH3.5X6X1.0
B501	BZ310045	024AT03481	CORE,BEADS BL02RN1-R62T2
B504	BZ310121	024HT03553	CORE,BEADS W5RH3.5X5X1.0
B851	BZ310121	024HT03553	CORE,BEADS W5RH3.5X5X1.0
B852	BZ310121	024HT03553	CORE,BEADS W5RH3.5X5X1.0
B853	BZ310121	024HT03553	CORE,BEADS W5RH3.5X5X1.0
BT001	AE000012	1412004008	BATTERY,MANGAN R03(AB)E_2P_G
BT002	AE000012	1412004008	BATTERY,MANGAN R03(AB)E_2P_G
CD501	AD300746	120R615901	CORD,AC BUSH 0R615901
CD801	BZ614457	06CU253901	CORD,CONNECTOR CU253901
CD802	AD302370	06CU275101	CORD,CONNECTOR CU275101
CD803	AD300094	06CP83035A	CORD,CONNECTOR CP83035A
CD851	AD302371	06CU244701	CORD,CONNECTOR CU244701
CD852	AD301043	06CU232001	CORD,CONNECTOR CU232001
CP101	BZ614102	0694270139	CONNECTOR PCB SIDE 173979-7
CP401	AD300095	069X460029	CONNECTOR PCB SIDE B06B-DVS
CP501	BZ614176	069S320419	CONNECTOR PCB SIDE A3963WV2-3PD
CP502	AD300687	069S420110	CONNECTOR PCB SIDE A1561WV2-2P
CP507	BZ614444	069D01001A	CONNECTOR PCB SIDE 003P-2100
CP508	BZ614444	069D01001A	CONNECTOR PCB SIDE 003P-2100
CP803	AD301996	069S330010	CONNECTOR PCB SIDE A2361WV2-3P
CP804	BZ614058	069W010010	CONNECTOR PCB SIDE 005P-2100
CP852	BZ614350	069S230629	CONNECTOR PCB SIDE A2001WV2-3P
CD1001	AD302372	06CU14A001	CORD CONNECTOR CU14A001
CP1001	AD301045	069S140419	CONNECTOR PCB SIDE A2502WV2-4P
CP801A	BZ614276	067U005049	WIRE HOLDER B2013H02-5P
CP801B	AD300752	069S250629	CONNECTOR PCB SIDE A2001WV2-5P
CP802A	AD301997	067U007029	WIRE HOLDER B2013H02-7P
CP802B	BZ614485	069S270629	CONNECTOR PCB SIDE A2001WV2-7P
CP851A	BZ614334	067U004029	WIRE HOLDER B2013H02-4P
CP851B	AD301998	069S240629	CONNECTOR PCB SIDE A2001WV2-4P
CP852B	BZ614349	067U003029	WIRE HOLDER B2013H02-3P
EL001	BZ614044	124120301A	EYE LET XRY20X30BD
EL002	BZ614043	124116281A	EYE LET XRY16X28BD
△ F501	AD301046	081PC6R305	FUSE 51MS063L

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
MISCELLANEOUS			
△FB401	AD302315	043227012F	TRANSFORMER,FLYBACK 3227012F
FH501	BZ614005	06710T0006	HOLDER,FUSE EYF-52BC
FH502	BZ614005	06710T0006	HOLDER,FUSE EYF-52BC
OS101	AD301048	0773071001	REMOTE RECEIVER RPM7138-H5
△RY501	AD300114	0560V20115	RELAY ALKS321
SP1001	BZ614381	070C546004	SPEAKER SG04H02BRA
SP1002	BZ614381	070C546004	SPEAKER SG04H02BRA
△TH501	BZ410079	DF5EL3R0A0	DEGAUSS ELEMENT ZPB45BL3R0A
TM101	AD302001	076R0GF010	TRANSMITTER R25-1911
TU001	AE000273	0163300005	RF UNIT 115-V-K015AR_B
V801	AD302375	0985270901	CRT W/DY A68LXZ696X04
X101	AD302002	100CT8R005	CRYSTAL HC-49/U-S
X602	AD302003	100CT3R505	CRYSTAL HC-49/C
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	

TOSHIBA CORPORATION

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