

The LCD panel made from AUO is used for this product.

Caution

Be sure to read this manual before servicing. To ensure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Plasma Monitor.

Be sure to read cautionary items described in the manual before servicing.

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that described in the operating instructions unless you are qualified to do so.

Service Warning

1. Since the Panel Module and the front Filter are made of glass, handling the broken Module and Filter carefully and with caution in order not to receive injury.
2. Replacement work should be started after the Panel Module and the AC/DC Power supply have become sufficiently cool.
3. Special care should be taken when working near the display area in order not to damage its surface.
4. The Panel Module should not be touched with bare hands in order to protect its surface from blemishes and damage.
5. It is recommended that you use clean soft gloves during the replacement work in order to protect not only the display area of the Panel Module but also yourself.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

LCD Display



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CAUTION FOR SAFETY





Please read this page before repair the monitor.









This page explains to following items for keep the safety of set and prevent to accident during repair work.

- We explain by symbol at happen the damage or injury when took wrong repair.

	Warning	This symbol means "possible to die or heavy damage"
	Caution	This symbol means "possible to damage or something will break"

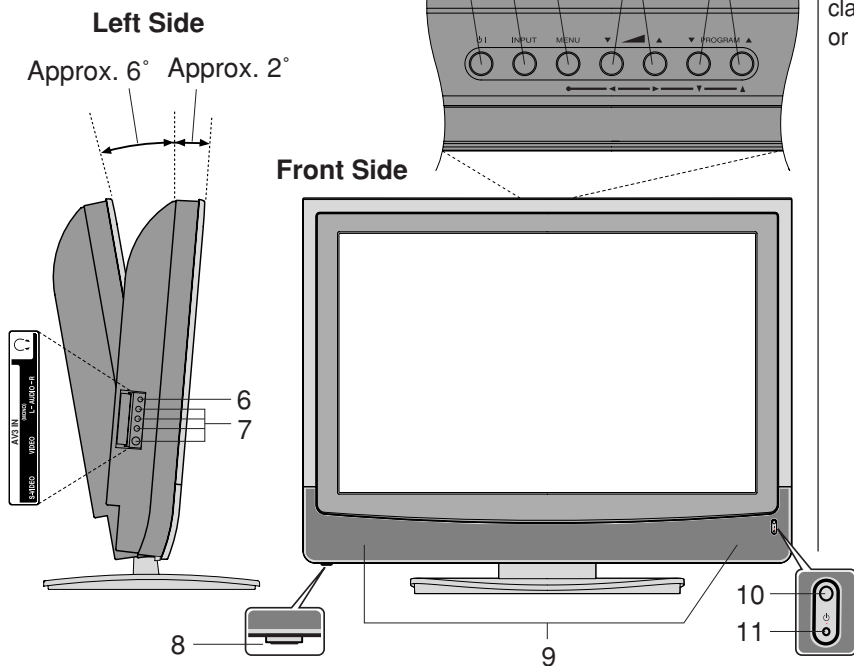
- We made the symbol as below, which are kind of following items.

	This symbol means "CAUTION"		This symbol means "MUST"
	This symbol means "POSSIBLE to ELECTRIC SHOCK"		This symbol means "DO NOT"

 WARNING	
<p>■ Should be follows to instructions.</p> <p style="text-align: center;"></p> <p>We indicates to cabinet, chassis and parts by label, which are special attention part. Please follow to note and [Safety Instructions] of User's Manual.</p>	<p>■ Should be kept same style of wiring or component.</p> <p style="text-align: center;"></p> <p>Monitor uses tubes or tapes, which made by insulator, and some components are keep distance from surface of PWB for safety. Internal leads kept from hot part or high voltage part by clammer or styling, so please return to original condition for prevent to electric shock or fire.</p>
<p>■ Prevent the electric shock.</p> <p style="text-align: center;"></p> <p>Please take care during working because monitor has high voltage part and power supply part. Possible to die if you touch to these place by miss take. Please disconnect power plug during overhaul, reassemble or change parts. You will die or take damage by electric shock if you touch to live part.</p>	<p>■ Should be done safety check after finished.</p> <p style="text-align: center;"></p> <p>Every part (removed screws, component and wiring) should be returned to previous condition. Check around repair position for make damage by miss take and measure the insulated impedance by meg-ohm meter. Confirm the value of impedance, that value is more than 4M ohm. It is reason for electric shock or fire if that value is less than 4M ohm.</p>
<p>■ Use recommended components.</p> <p style="text-align: center;"></p> <p>Please use to same characteristic component, which is same as previous for your safety and keep reliability especially marked by  in parts list and circuit diagram. It is reason of electric shock or fire if you use non-recommended component.</p>	<p>■ Nobody can check and repair to the code and combination circuit of HDCP.</p> <p style="text-align: center;"></p> <p>Never remove the shield case, which is assembled to the code and combination circuit of HDCP.</p>

Location of controls

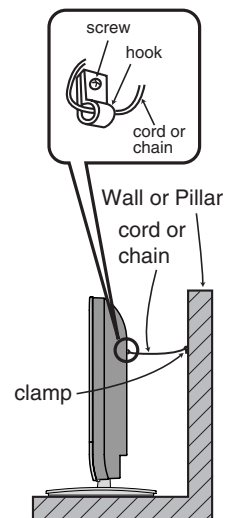
You can adjust the angle of the TV-screen for 2° forward or for 6° backward from vertical angle.



Anti-Tumble Measure

Securing to a wall or pillar

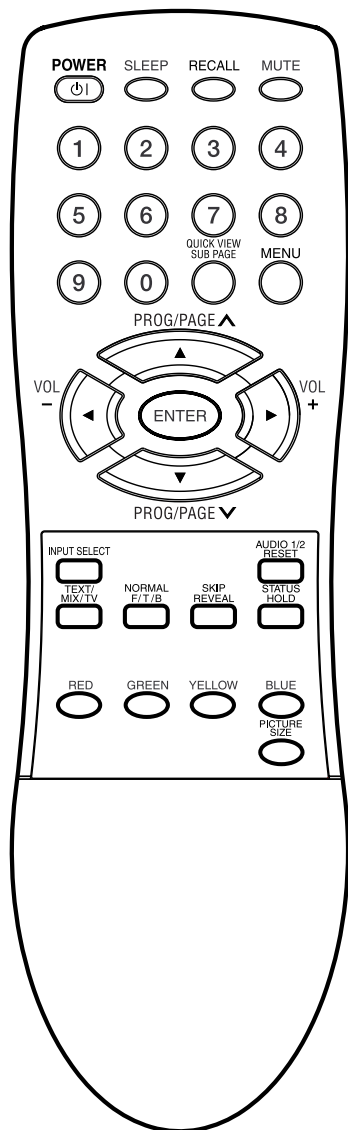
Using a commercially available cord, chain, and clamp, secure the set to a wall or pillar.



Description of Indicators and Controls

1. **⏻ I (SUB-POWER) button:** To turn the unit standby mode on and off.
2. **INPUT-button:** Select input mode for TV/AV/COMPONENT/HDMI/PC.
3. **MENU-button:** To display the menu-screen.
4. **VOLUME ▲/▼ buttons :** To adjust the volume. In Menu : Setting.
5. **PROGRAM ▲/▼ buttons:** Press ▲ to change to a higher numbered channel set into memory. Press ▼ to change to a lower numbered channel set into memory. In Menu : Setting. In Standby : Turning on the unit.
6. **HEADPHONES jack:** Plug headphones with a mini plug (3.5 mm) into this jack.
7. **AV3-Input:** Input for analogue A/V-Signal (Composite). If your equipment has an S-video connector, use an S-video cable instead of a standard yellow video cable (You still must connect the standard red and white audio cables for full system connection, but do not connect a standard yellow video cable at the same time or the picture performance will be unacceptable.)
8. **Main Power Switch:** To turn the unit on or off completely.
9. **Loudspeakers**
10. **Remote sensor**
11. **STANDBY/ON mode indicator:** It lights up in red at STANDBY, and in green at POWER ON.

Remote Control



	Function
	Turn the unit on or off
	Sleep-Timer
	Display program position number
	Turn the sound on/off
	Select channel Select Teletext page Enter Password
	Switches between the present channel and the last selected channel Sub Page selection
	Call Menu
	Select TV-channel or Teletext page step by step In Menu: Setting
	In Standby: Turning on the unit
	Volume In Menu: Setting
	Memorize
	Select input source
	Two Channel-Sound AUDIO 1/2 selector Teletext page 100
	Teletext ON/ Mix/ OFF
	Reset Sound/Picture Teletext enlargement
	Program position-skipping Answer a Quiz
	Teletext-Timer display Hold the text page
	Fasttext/TOptext buttons
	Select picture format

GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size	31.5 inch / 800.4mmV	
			LCD Type	Color TFT LCD	
			Number of Pixels(H x V)	1366(H) x 768(V)	
			View Range	85/85 degree	
			Left/Right Up/Down	85/85 degree	
			Color System	PAL/SECAM/NTSC	
G-2	Tuning System	Speaker	Position	2 Speaker	
			Size	Front	
			Impedance	2.2 x 5.0 inch	
				4 ohm	
			Sound Output	MAX	10W + 10W
				10%(Typical)	---
		NTSC3.58+4.43 /PAL60Hz		Yes	
G-3	Power	Broadcasting System		U.K., CCIR, US System	
		Tuner and Receive CH	System	B/G, D/K, I/I, M	
			Destination	1Tuner	
			CH Coverage	UK, CCIR Hyper, USA	
				1~S6, S7~S36, S37~E69	
		Intermediate Frequency	Picture(FP)	PAL/SECAM(U&VH)/NTSC	
			Sound(FS)	38.9/38.9/38.9/38.9MHz	
			FP-FS	33.4/32.9/32.4/34.4MHz	
				5.5/6.0/6.5/4.5MHz	
G-4	Regulation	Auto Tuning Method		ALL Band (Not C.C.I.R. CH Plan)	
		Preset CH		110	
		Stereo/Dual TV Sound		NICAM/A2 Dual	
		Tuner Sound Muting		Yes	
		Power Source	AC	100-240V AC 50/60Hz	
			DC	---	
		Power Consumption	at AC	150 W at AC 100-240 V 50/60 Hz	
	at DC	--			
G-5	Temperature	Stand by (at AC)		1 W at AC 100-240 V 50/60 Hz	
		Per Year		-- kWh/Year	
		Energy Star		Yes	
		Protector	Power Fuse	Yes	
			Safety Circuit	Yes	
G-6	Operating Humidity		IC Protector(Micro Fuse)	Yes	
			Safety	IEC60065,GOST, CB, AS/NZS, PSB	
			Radiation	CISPR, GOST, AS/NZS	
	X-Radiation	---			
	Operation		+5oC ~ +40oC		
	Storage		-20oC ~ +60oC		
			Less than 80% RH		

GENERAL SPECIFICATIONS

G-7	On Screen Display	Menu (TV)	
		Menu Type	Yes
		Icon	Yes
		Picture	Yes
		Brightness	Yes
		Contrast	Yes
		Color	Yes
		Tint (NTSC Only)	Yes
		Sharpness	Yes
		DNR On/Off	Yes
		Color Temperature	Yes
		Blue Back	No
		Film Mode	Yes
		Audio	Yes
		NICAM Auto/Off	Yes
		Bass	Yes
		Treble	Yes
		Balance	Yes
		Perfect Volume	Yes
		Surround On/Off	No
		Speakers On/Off	Yes
		HDMI	Yes
		BBE	No
		WOW SRS 3D	Yes
		WOW Focus	Yes
		WOW Trubass	Yes
		Setup	Yes
		Auto Tuning	Yes
		Manual Tuning	Yes
		Sort(CH Allocation)	Yes
		Backlight	Yes
		Text Language	Yes
		Language	Yes
		Position (Vertical Position)	Yes
		Auto 4:3 Default	No
		AV2 Output	No
		AV2 Input	No
		Color System(AV Color)	Yes
		Inversion	No
		Screen Wipe(Full White)	No
		Screen Saver	No
		Static Image	No
		Option	Yes
		On Timer	Yes
		Off Timer	Yes
		Panel Lock	Yes
		Menu (PC)	
		Picture	Yes
		Brightness	Yes
		Contrast	Yes
		HOR Position	Yes
		VER Position	Yes
Clock Phase	Yes		
Horizontal Clock	Yes		
AUTO ADJUST	No		
Amplitude Red	Yes		
Amplitude Green	Yes		
Amplitude Blue	Yes		
WXGA Mode	Yes		
WVGA Mode	Yes		
Audio	Yes		
NICAM Auto/Off	No		
Bass	Yes		
Treble	Yes		
Balance	Yes		
Perfect Volume	Yes		
Surround On/Off	No		
Speakers On/Off	Yes		
HDMI	Yes		
BBE	No		
WOW SRS 3D	Yes		
WOW Focus	Yes		
WOW Trubass	Yes		

GENERAL SPECIFICATIONS

	Control Level		Yes
		Volume	Yes
		Brightness	Yes
		Contrast	Yes
		Color	Yes
		Tint (NTSC Only)	Yes
		Sharpness	Yes
		Tuning	Yes
		Bass	Yes
		Treble	Yes
		Balance	Yes
		HOR Position	Yes
		VER Position	Yes
		Clock Phase	Yes
		Horizontal Clock	Yes
		Amplitude Red	Yes
		Amplitude Green	Yes
		Amplitude Blue	Yes
		Backlight	Yes
		Nicam ST	Yes
		Tone 1/2	Yes
		Pin Code	No
		Freeze	No
		CH/AV/PC	Yes
		Hotel Lock	No
		Wide Mode	Yes
		Sleep Timer	Yes
		Sound Mute	Yes
		Input Select	Yes
		NOT AVAILABLE	Yes
G-8	OSD Language		English / Chinese(Simplified) / Chinese(Traditional) / Russia
G-9	Clock and Timer	Sleep Timer	Max Time Step 120 Min <u> 10 </u> Min
		On/Off Timer	Program(On Timer / Off Timer) <u> 1 </u> Program
		Wake Up Timer	No
		Timer Back-up (at Power Off Mode)	more than -- Min Sec

GENERAL SPECIFICATIONS

G-10	Remote Control	Unit	RC-MA	
		Glow in Dark Remocon	No	
		Remocon Format	HITACHI	
		Format	HITACHI	
		Custom Code	<u>50-AF.h</u>	
		Power Source	Voltage(D.C) UM size x pcs	3V UM-4 x 2 pcs
		Total Keys		32
		Keys	Power (Stand By)	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			Volume Up / Right	Yes
			Volume Down / Left	Yes
			Sleep	Yes
			Recall (CH Call)	Yes
			Menu	Yes
			Enter	Yes
			Mute	Yes
			Picture Size	Yes
			Fine Tuning +	No
			Fine Tuning -	No
			Input Select	Yes
			Multi Picture	No
			Picture Position	No
			Picture Main/Sub	No
			T*TEXT Keys	Yes
			TEXT / MIX / TV	Yes
			CH Up / Page Up / Up	Yes
			CH Down / Page Down / Down	Yes
			Red	Yes
			Green	Yes
			Yellow	Yes
			Blue	Yes
			F/T/B(Expand) / Normal	Yes
			Reveal / Skip	Yes
			Reset / Audio 1/2	Yes
			Hold / Status	Yes
			Sub Page / Quick View	Yes

GENERAL SPECIFICATIONS

G-11	Features	Auto Shut Off	Yes		
		BBE	No		
		SRS WOW(SRS 3D/Focus/Tru Bass)	Yes		
		Variable Audio Out	Yes		
		Auto Search	Yes		
		CH Sort(CH Allocation)	Yes		
		Channel Lock	No		
		Just Clock Function	No		
		Game Position	No		
		CH Label	No		
		T'Text	Yes		
			Text type	Fastext / Toptext	
			Text Language	English , French, Swedish, Hungarian Finnish, Turkish, German, Dutch Portuguese, Spanish, Italian, Greek Polish, Russian, Bulgarian, Serbian, Croatian, Slovene, Czech, Slovakian, Rumanian.	
		Wide Mode	Yes		
		Picture Scroll	Yes		
		DNR	Yes 3D		
		Comb Filter	Yes 5 Lines		
		Surround	No		
		Backlight	Yes		
		Perfect Volume(Stable Sound)	Yes		
		PFC(Power Factor circuit)	Yes		
		Auto Set Up	No		
		Power On Memory	Yes		
		Hotel Lock	No		
		PC Monitor Input	Yes		
		Freeze frame	No		
		G-12	Accessories	Owner's Manual	Language English / Chinese(Simplified) / Chinese(Traditional) / Russia
					w/Guarantee Card No
				Remote Control Unit	Yes
				Rod Antenna	No
	Poles Terminal - -				
Loop Antenna (W/ Antenna Change Plug)	No				
	Terminal -				
U/V Mixer	No				
DC Car Cord (Center+)	No				
Guarantee Card	No				
Warning Sheet	No				
Circuit Diagram	No				
Antenna Change Plug	No				
Service Facility List	No				
Important Safeguard	No				
Dew/AHC Caution Sheet	No				
Quick Set-up Sheet	No				
Battery	Yes				
	UM size x pcs UM-4 x 2 pcs				
	OEM Brand Yes(Maxell)				
AC Adapter	No				
AC Cord (for AC Adapter)	No				
AC Cord	Yes				
AV Cord (2Pin-1Pin)	No				
HDMI-DVI Cable	No				
Registration Card	No				
300 ohm to 75 ohm Antenna Adapter	No				

GENERAL SPECIFICATIONS

G-13	Interface	Switch	Front	Sub Power (Tact)	Yes		
				System Select	No		
				Main Power SW	Yes		
				Channel Up/Menu Up	Yes		
				Channel Down/Menu Down	Yes		
				Volume Up/Menu >	Yes		
				Volume Down/Menu <	Yes		
				Input Select	Yes		
				Menu	Yes		
				Indicator	Power / Stand-by	Yes(GREEN / RED)	
					On Timer	No	
				Terminals	Rear	Video Input 1	RCA x 1
						Audio Input	RCA x 2(L/MONO, R)
		S- Input	Yes				
		Video Input 2	RCA x 1				
		Audio Input	RCA x 2(L/MONO, R)				
		S- Input	Yes				
		Video Output	RCA x 1				
		Audio Output	RCA x 2(Variable L, R)				
		Component In 1	RCA x 3				
		Audio Input (Component In use)	RCA x 2(L/MONO, R)				
		Component In 2	RCA x 3				
		Audio Input (Component In use)	RCA x 2(L/MONO, R)				
		Other Terminal	No				
		Euro Scart (21Pin)	No				
		HDMI Input(w/ Analog Audio L/R)	Yes				
		Sub Woofer Out	Yes				
		PC Monitor Input (D-Sub)	Yes				
		Audio Input	Mini Pin Jack(3.5), STEREO				
		Diversity	No				
		Ext Speaker	No				
		DC Jack 12V(Center +)	No				
		VHF/UHF Antenna Input	DIN Type				
AC Inlet	Yes						
Side	Video Input 3	RCA x 1					
	Audio Input	RCA x2(L/MONO,R)					
	S- Input	Yes					
	Other Terminal	Headphone					
G-14	Set Size	Approx. W x D x H (mm)	822 x 332.5 x 604				
		w/o Stand,Handle Approx. W x D x H (mm)	822 x 115 x 556.5				
G-15	Weight	Net Approx.	19.0kg (41.9 lbs)				
		Net w/o Stand,Handle Approx.	16.5kg (36.4 lbs)				
		Gross Approx.	23.0kg (50.7 lbs)				
G-16	Carton	Master Carton	No				
		Content	--- Sets				
		Material	--- / ---				
		Dimensions W x D x H(mm)	---				
		Description of Origin	---				
		Gift Box	Material	Double/Brown			
		Dimensions W x D x H(mm)	917 x 441 x 720				
		Design	As per Buyer's				
		Description of Origin	No				
		Drop Test	Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces				
Height (cm)	46						
Container Stuffing	201 Sets/40' container						
G-17	Material	Cabinet	Cabinet Front	PS 94V0 Non-Halogen			
		Cabinet Rear	PS 94V0 Non-Halogen				
		PCB	Non-Halogen	No			
		Eyelet	Yes				
G-18	Environment	Environmental standard requirement	Green procurement of HITACHI				
		Pb-free	Phase3(Phase3A)				
		WEEE	No				

DISASSEMBLY INSTRUCTIONS

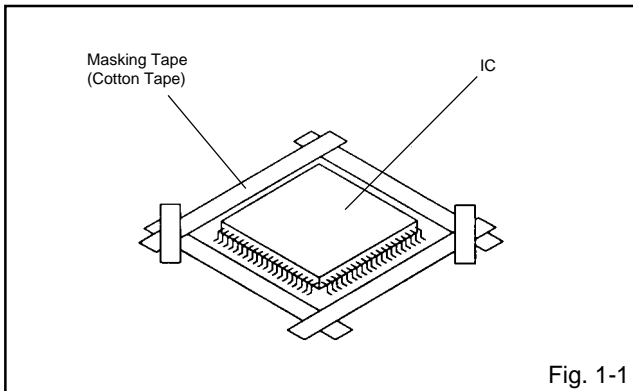
1. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

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

NOTE

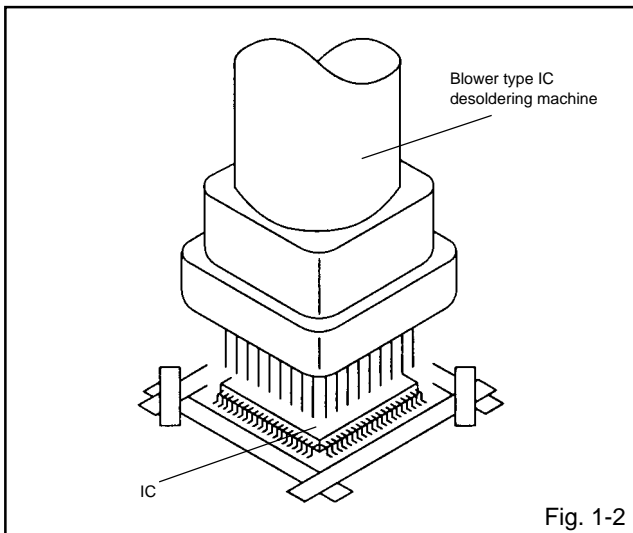
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. (Refer to Fig. 1-2.)

NOTE

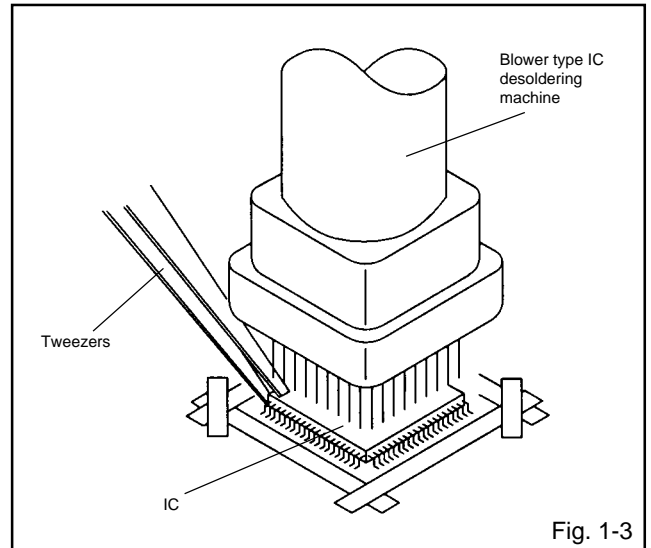
Do not rotate or move the IC back and forth, until IC can move back and forth easily after desoldering the leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 1-3.)

NOTE

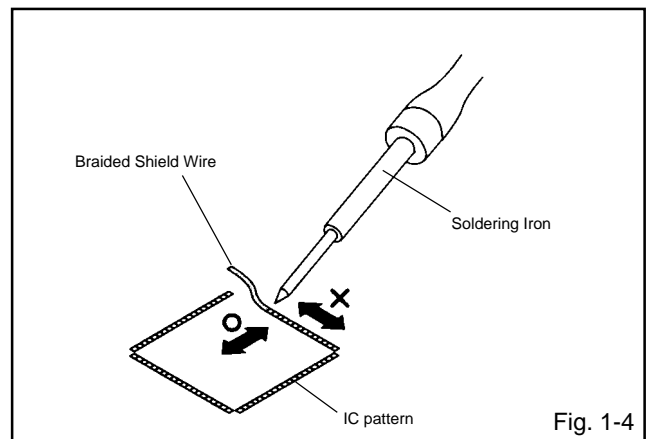
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. (Refer to Fig. 1-4.)

NOTE

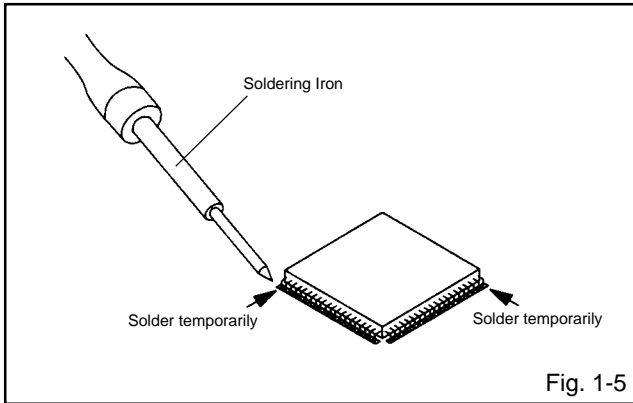
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



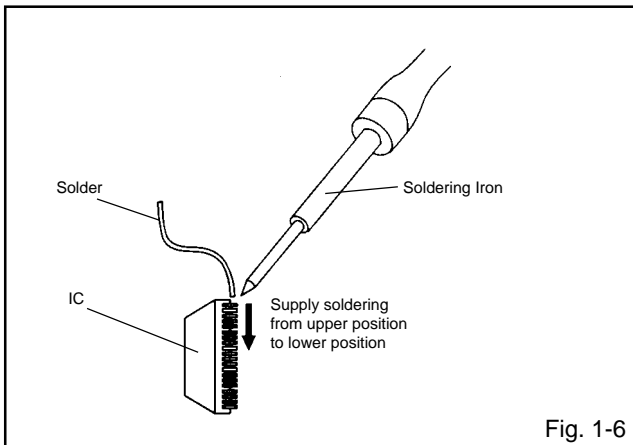
DISASSEMBLY INSTRUCTIONS

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. 1-5.)**



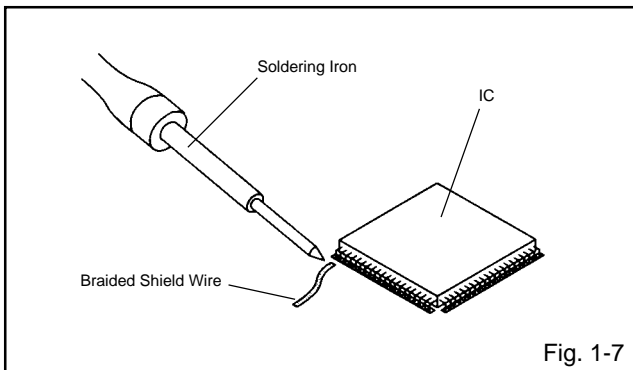
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 1-6.)**



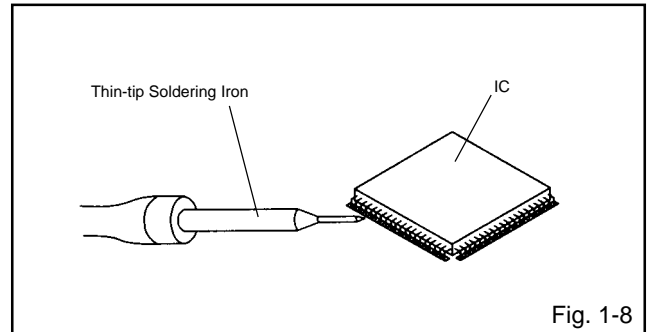
3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 1-7.)**

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. 1-8.)**



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, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Reset the user setting items (PICTURE, VOLUME and LANGUAGE) to the initial state for delivery. Password is released.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
TV mode	VOL. DOWN (Minimum)	2	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION".
TV mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Refer to the "CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION" Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSION 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".

Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
Press both VOL. DOWN button on the set and Channel button (8) on the remote control for more than 2 seconds.
3. button (8) on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

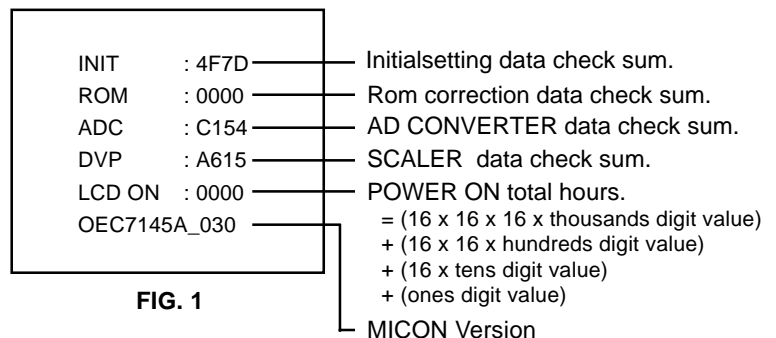


FIG. 1

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.
- 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 with a heat sink, apply silicon grease (**YG6260M**) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

2. BASIC ADJUSTMENTS

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button (9) on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in Fig. 2-1.

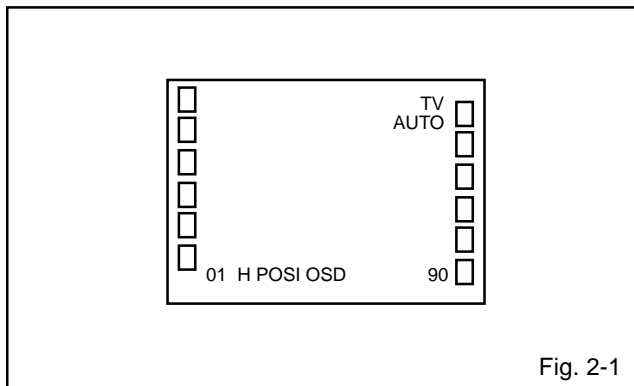


Fig. 2-1

3. Use the Channel UP/DOWN button or Channel button (0-9) on the remote control to select the options shown in Fig. 2-2.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV, HDMI and COMPONENT mode, press the INPUT SELECT button on the remote control to set to the AV, HDMI and COMPONENT mode. Press the VOL.DOWN button on the set and the channel (9) on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
01	H POSI OSD	22	H POSI 60Hz
02	V POSI OSD	23	V POSI 50Hz
03	R DRIVE (N)	24	V POSI 60Hz
04	R CUT OFF (N)	25	BAK LIGHT CENT
05	G DRIVE (N)	26	BAK LIGHT MAX
06	G CUT OFF (N)	27	BAK LIGHT MIN
07	B DRIVE (N)	28	BRIGHT CENT
08	B CUT OFF (N)	29	BRIGHT MAX
09	R DRIVE (C)	30	BRIGHT MIN
10	R CUT OFF (C)	31	TINT
11	G DRIVE (C)	35	CONTRAST CENTER
12	G CUT OFF (C)	36	CONTRAST MAX
13	B DRIVE (C)	37	CONTRAST MIN
14	B CUT OFF (C)	38	COLOR CENT
15	R DRIVE (W)	39	COLOR MAX
16	R CUT OFF (W)	40	COLOR MIN
17	G DRIVE (W)	41	H POSI TEXT
18	G CUT OFF (W)	42	V POSI TEXT
19	B DRIVE (W)	43	NT COLOR CENT
20	B CUT OFF (W)	44	NT COLOR MAX
21	H POSI 50Hz	45	NT COLOR MIN

Fig. 2-2

2-1: CONTRAST

1. Receive the monoscope pattern.(RF Input)
2. Activate the adjustment mode display of Fig. 1-1 and press the channel button (35) on the remote control to select "CONTRAST CENTER".
3. Check if the step No. CONTRAST CENTER is "147".
4. Receive a broadcast and check if the picture is normal.
5. Press the INPUT SELECT button on the remote control to set to the AV mode.
6. Activate the adjustment mode display of Fig. 1-1 and press the channel button (35) on the remote control to select "CONTRAST CENTER".
7. Check if the step No. CONTRAST CENTER is "147".
8. Receive a broadcast and check if the picture is normal.
9. Receive a Color Bar Pattern.
10. Press the INPUT SELECT button on the remote control to set to the COMPONENT mode.
11. Activate the adjustment mode display of Fig. 1-1 and press the channel button (35) on the remote control to select "CONTRAST CENTER".
12. Check if the step No. CONTRAST CENTER is "147".
13. Receive a broadcast and check if the picture is normal.
14. Playback the DVD disc. (480i input)
15. Press the INPUT SELECT button on the remote control to set to the HDMI mode.
16. Activate the adjustment mode display of Fig. 1-1 and press the channel button (35) on the remote control to select "CONTRAST CENTER".
17. Check if the step No. CONTRAST CENTER is "147".
Receive a broadcast and check if the picture is normal.

ELECTRICAL ADJUSTMENTS

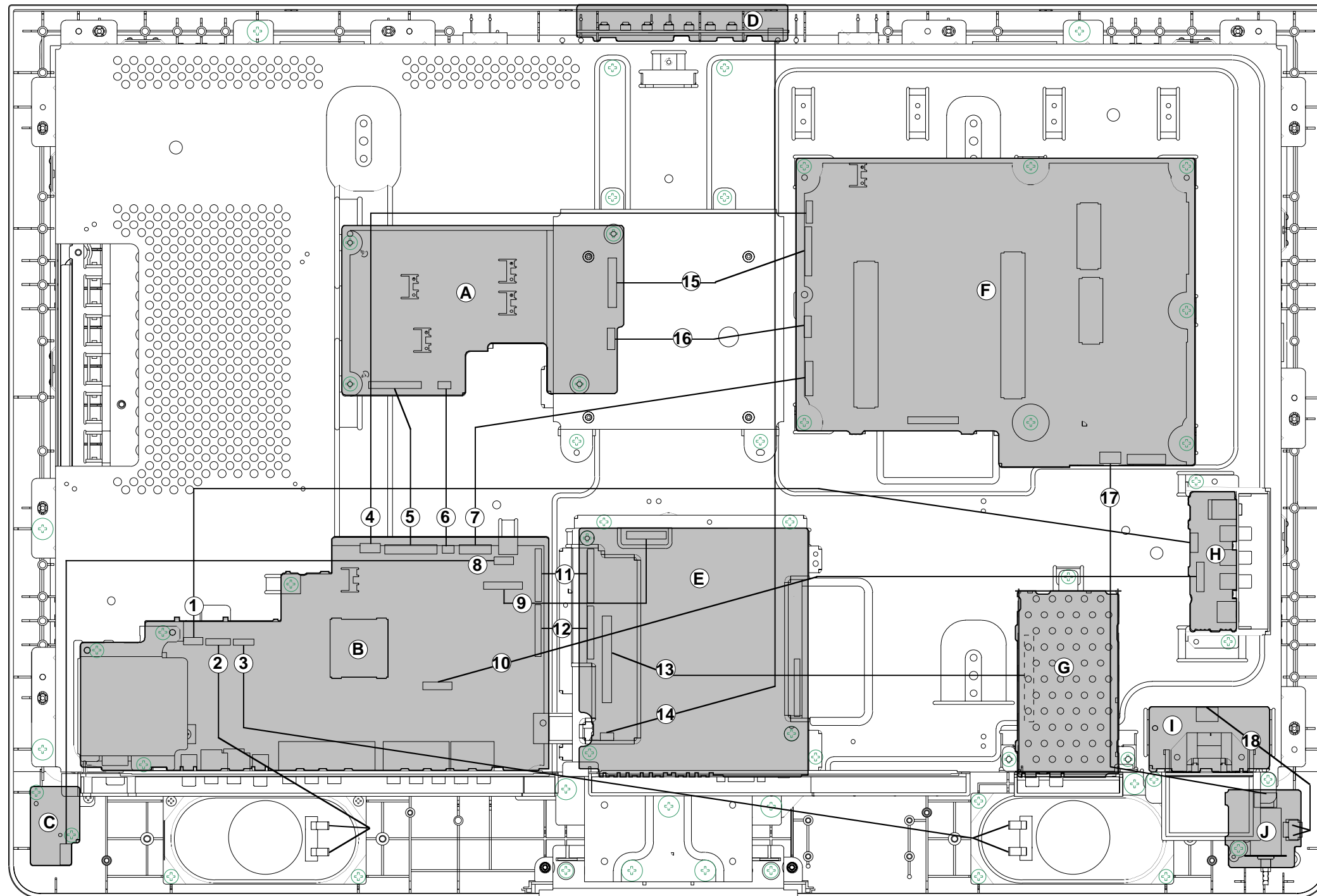
2-2: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each the adjustment items are set correctly referring below. (TV/AV/COMPONENT/HD-MI)

NO.	FUNCTION	TV						COMPONENT								HD-MI										
		PAL			SECAM			NTSC			60Hz				50Hz				60Hz				50Hz			
		Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.		
1	H POSI OSD	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
2	V POSI OSD	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85			
3	R DRIVE (N)	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127			
4	R CUT OFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
5	G DRIVE (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
6	G CUT OFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
7	B DRIVE (N)	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121			
8	B CUT OFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
9	R DRIVE (C)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120			
10	R CUT OFF (C)	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121			
11	G DRIVE (C)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120			
12	G CUT OFF (C)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120			
13	B DRIVE (C)	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130			
14	B CUT OFF (C)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120			
15	R DRIVE (W)	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133			
16	R CUT OFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
17	G DRIVE (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
18	G CUT OFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
19	B DRIVE (W)	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118			
20	B CUT OFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
21	H POSI 50Hz	325	325	325	325	325	325	..	..	..	..	322	158	336	290	..	..	..	..	320	158	292	244
22	H POSI 60Hz	294	294	294	294	294	294	292	142	336	294	..	..	..	..	279	152	296	250	..	..	..	..
23	V POSI 50Hz	87	87	87	87	87	87	..	..	..	..	89	88	54	49	..	..	..	..	79	83	50	45
24	V POSI 60Hz	79	79	79	79	79	79	77	82	55	46	..	..	..	..	79	75	47	42	..	..	..	..
25	BAK LIGHT CENT	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128			
26	BAK LIGHT MAX	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255			
27	BAK LIGHT MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
28	BRIGHT CENT	127	127	127	127	127	127	127	128	130	128	129	129	130	128	125	125	125	125	125	125	125	125			
29	BRIGHT MAX	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156			
30	BRIGHT MIN	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96			
31	TINT	116	116	116	116	116	116	119	123	129	129	119	119	129	129	129	129	123	123	129	129	123	123			
35	CONTRAST CENTER	116	116	116	173	173	173	149	186	186	188	163	188	186	188	182	182	173	153	178	178	173	153			
36	CONTRAST MAX	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190			
37	CONTRAST MIN	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85			
38	COLOR CENT	80	80	80	68	68	68	..	..	..	..	76	76	76	76	..	..	..	..	71	71	78	78
39	COLOR MAX	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127			
40	COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
41	H POSI TEXT	181	181	181	181	181	181	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42	V POSI TEXT	82	82	82	82	82	82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43	NT COLOR CENT	74	74	74	65	65	65	81	78	78	78	..	..	..	..	78	78	78	78	..	..	..	..
44	NT COLOR MAX	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127			
45	NT COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

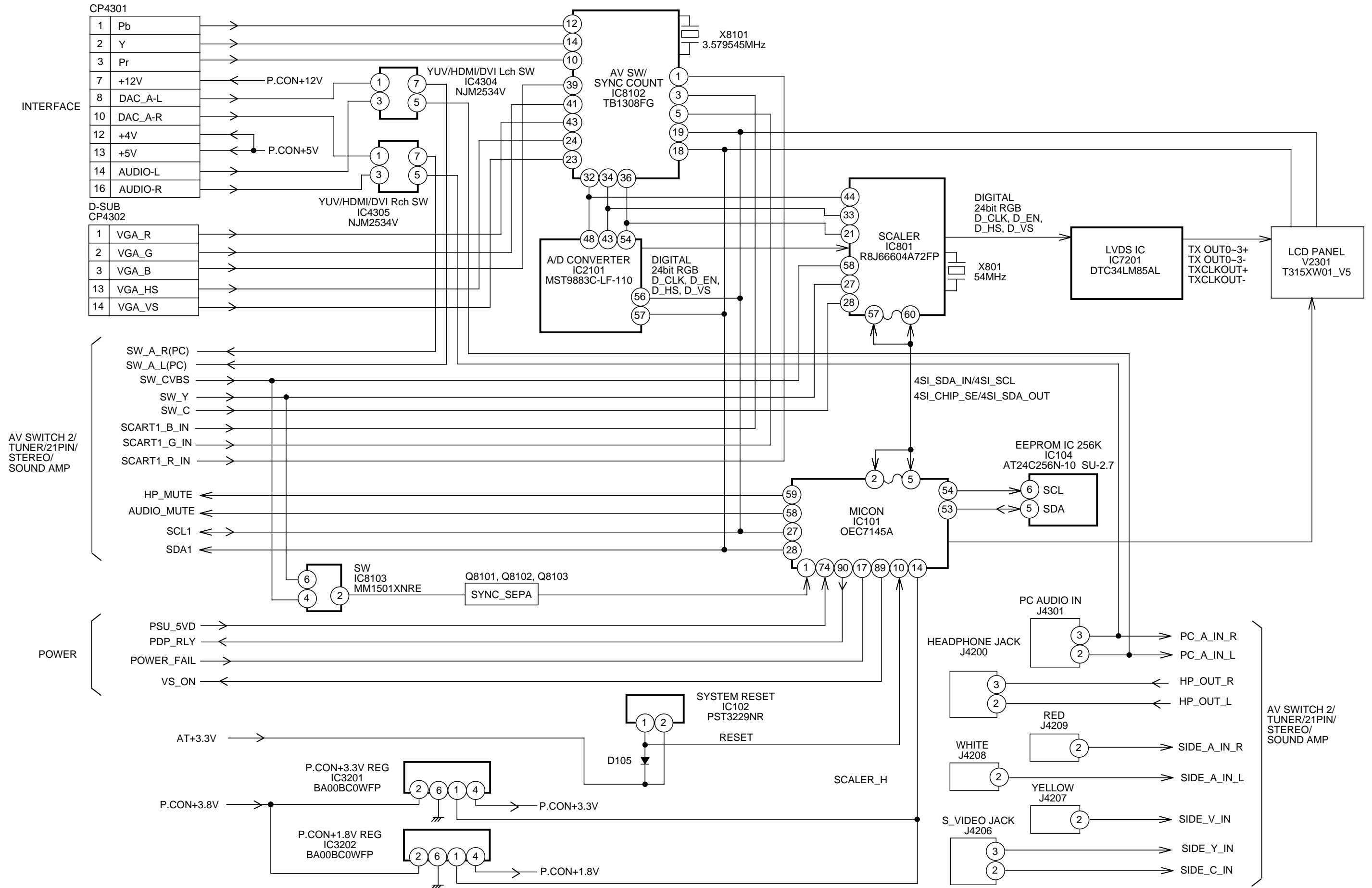
ELECTRICAL ADJUSTMENTS

3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

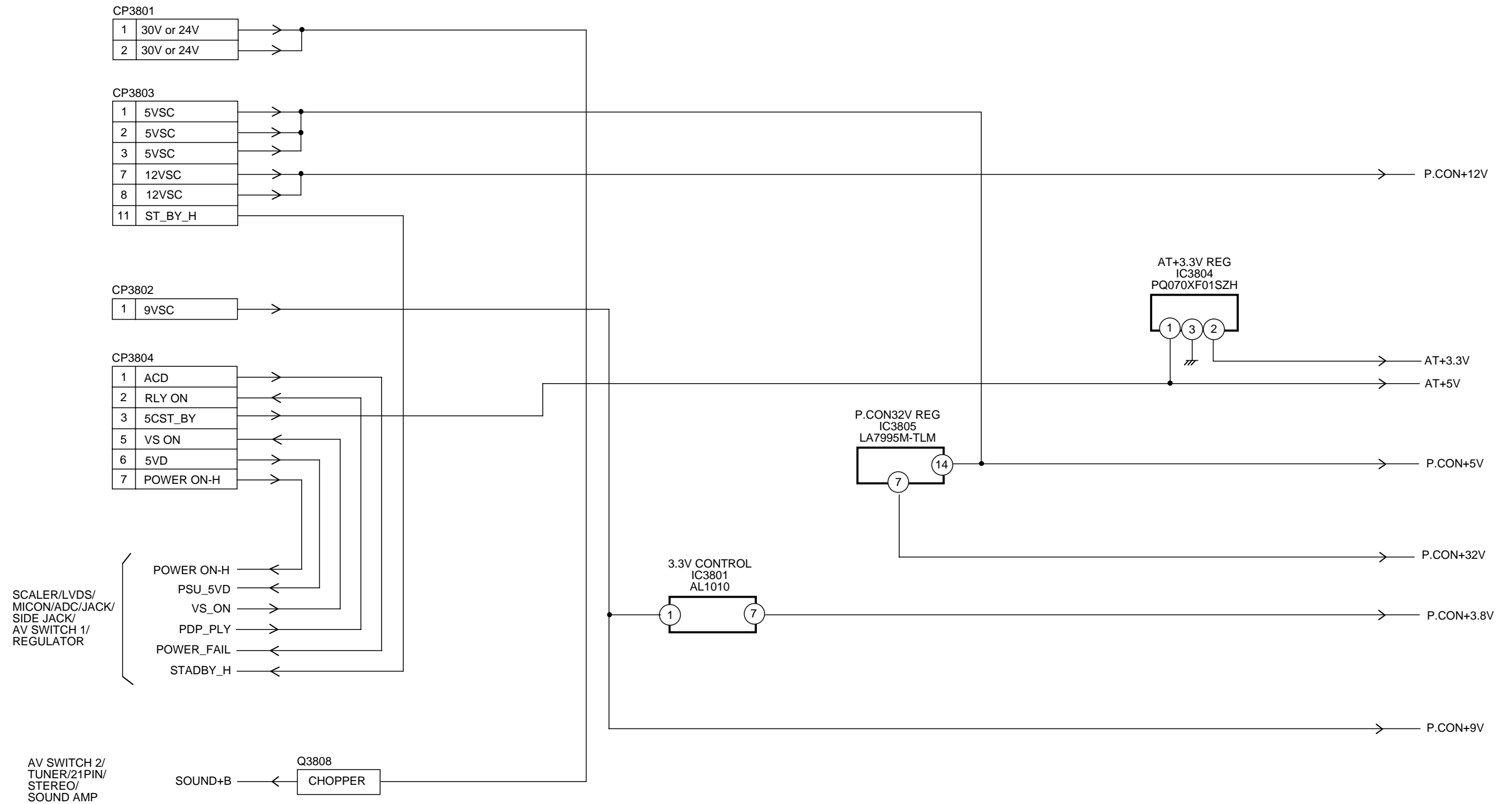


Item	No.	Wire	Part No.	HITACHI Part No.	Item	REF.NO.	DESCRIPTION	PART NO.	HITACHI PART NO.	Item	REF.NO.	DESCRIPTION	PART NO.	HITACHI PART NO.	Board	PART NO.	HITACHI PART NO.
1	CD4205	CORD.CONNECTOR CU257501	06CU257501	TE03835	11	CD4204	CORD_JUMPER 2H0U0803	122H0U0802	TE03415	A		REGULATOR PCB ASS'Y(PCBF10)	A3V904CF10	TE03821			
2	CD301	CORD.CONNECTOR CU125503	06CU125503	TE03703	12	CD4203	CORD_JUMPER 2H0U0802	122H0T0801	TE03416	B		AV PCB ASS'Y(PCBD20)	A3V904CD20	TE03761			
3	CD303	CORD.CONNECTOR CU127502	06CU127502	TE03704	13	CD3601	CORD.CONNECTOR CU1K6001	06CU1K6001	---	C		REMOCON PCB ASS'Y(PCBDA0)	A3V904CDA0	TE03781			
4	CD3806	CORD.CONNECTOR CU145003	06CU145003	TE03831	14	CD2201	CORD.CONNECTOR CU235501	06CU235501	TE03707	D		OPERATION PCB ASS'Y(PCB270)	A3V904C270	TE03741			
5	CD517	CORD.CONNECTOR CU1C2002	06CU1C2002	---	15	CD518	CORD.CONNECTOR CU1B2002	06CU1B2002	---	E		SCALER PCB ASS'Y(PCBDS0)	A3V904CDS0	TE03801			
6	CD520	CORD.CONNECTOR CU122002	06CU122002	---	16	CD519	CORD.CONNECTOR CU252001	06CU252001	---	F		POWER PCB ASS'Y(PCB240)	A3V904C240	TE03731			
7	CD3804	CORD.CONNECTOR CU174001	06CU174001	TE03708	17	CD516	CORD.CONNECTOR CUU25102	06CUU25102	---	G		HD-MI PCB ASS'Y(PCBDJ0)	A3V904CDJ0	TE03791			
8	CD4202	CORD.CONNECTOR CU255502	06CU255502	TE03834	18	CD509	CORD.CONNECTOR CUU23501	06CUU23501	---	H		SIDE JACK PCB ASS'Y(PCBD90)	A3V904CD90	TE03771			
9	CD3807	CORD.CONNECTOR CU2B1501	06CU2B1501	TE03832						I		AC LET PCB ASS'Y(PCBDY0)	A3V904CDY0	TE03811			
10	CD4201	CORD.CONNECTOR CU287001	06CU287001	TE03833						J		POWER SW PCB ASS'Y(PCB320)	A3V904C320	TE03751			

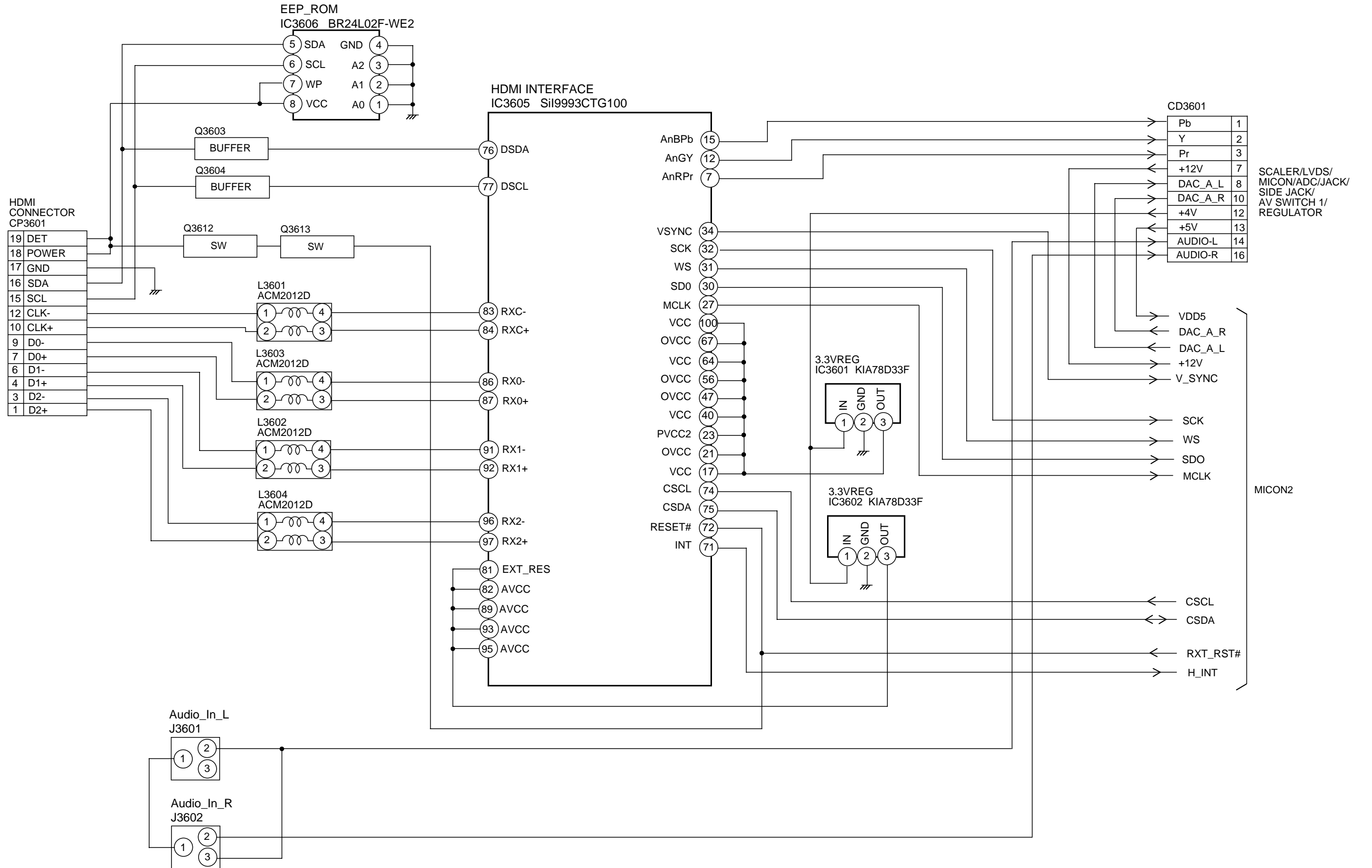
SCALER/LVDS/MICON/ADC/JACK/SIDE JACK/AV SWITCH 1/REGULATOR BLOCK DIAGRAM



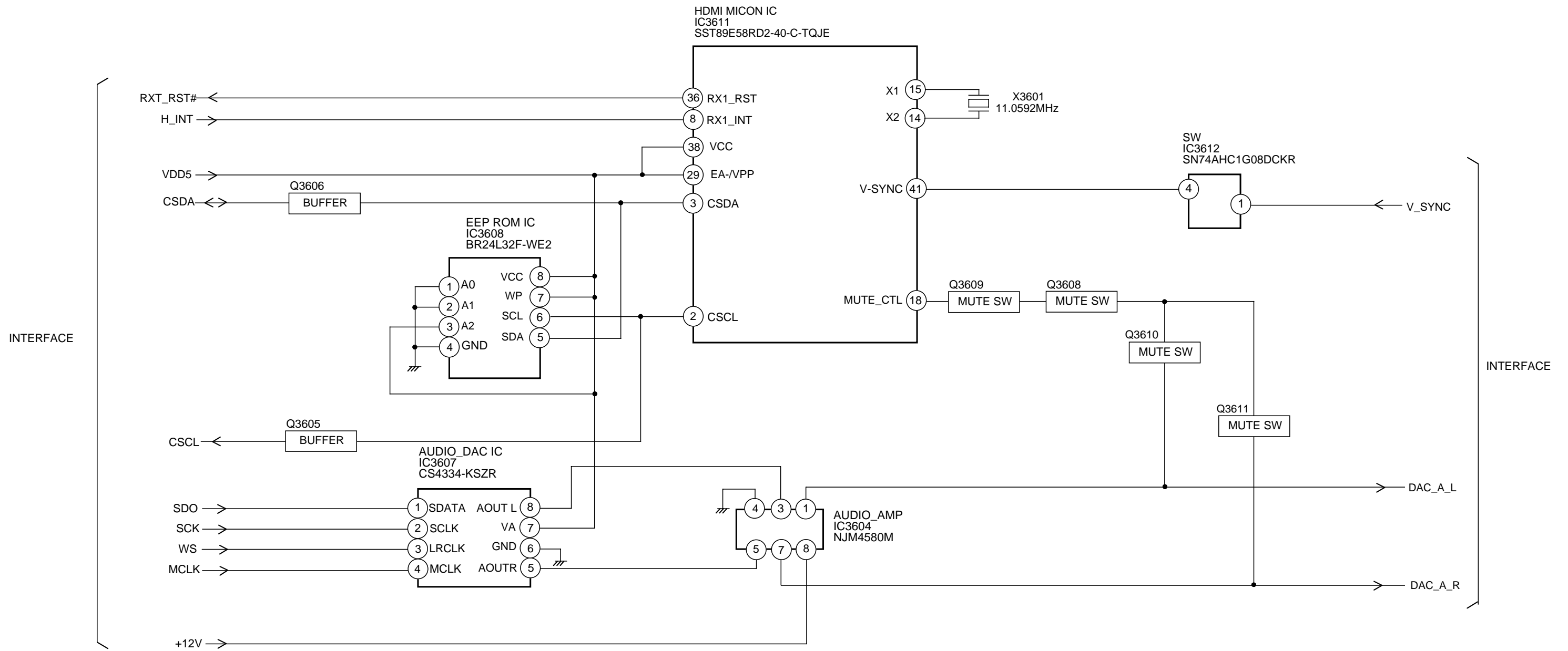
POWER/SIDE JACK BLOCK DIAGRAM



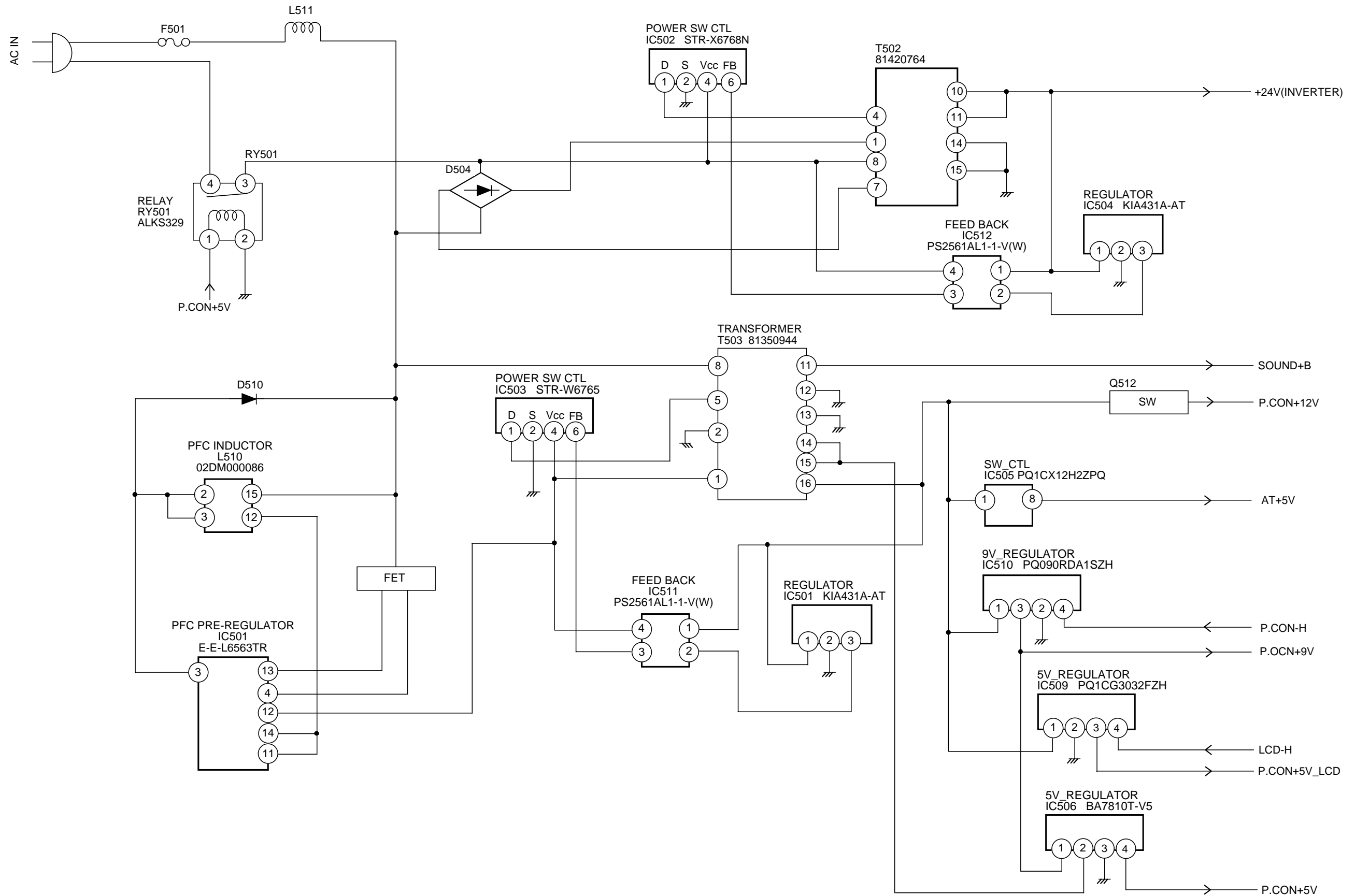
INTERFACE BLOCK DIAGRAM



MICON2 BLOCK DIAGRAM

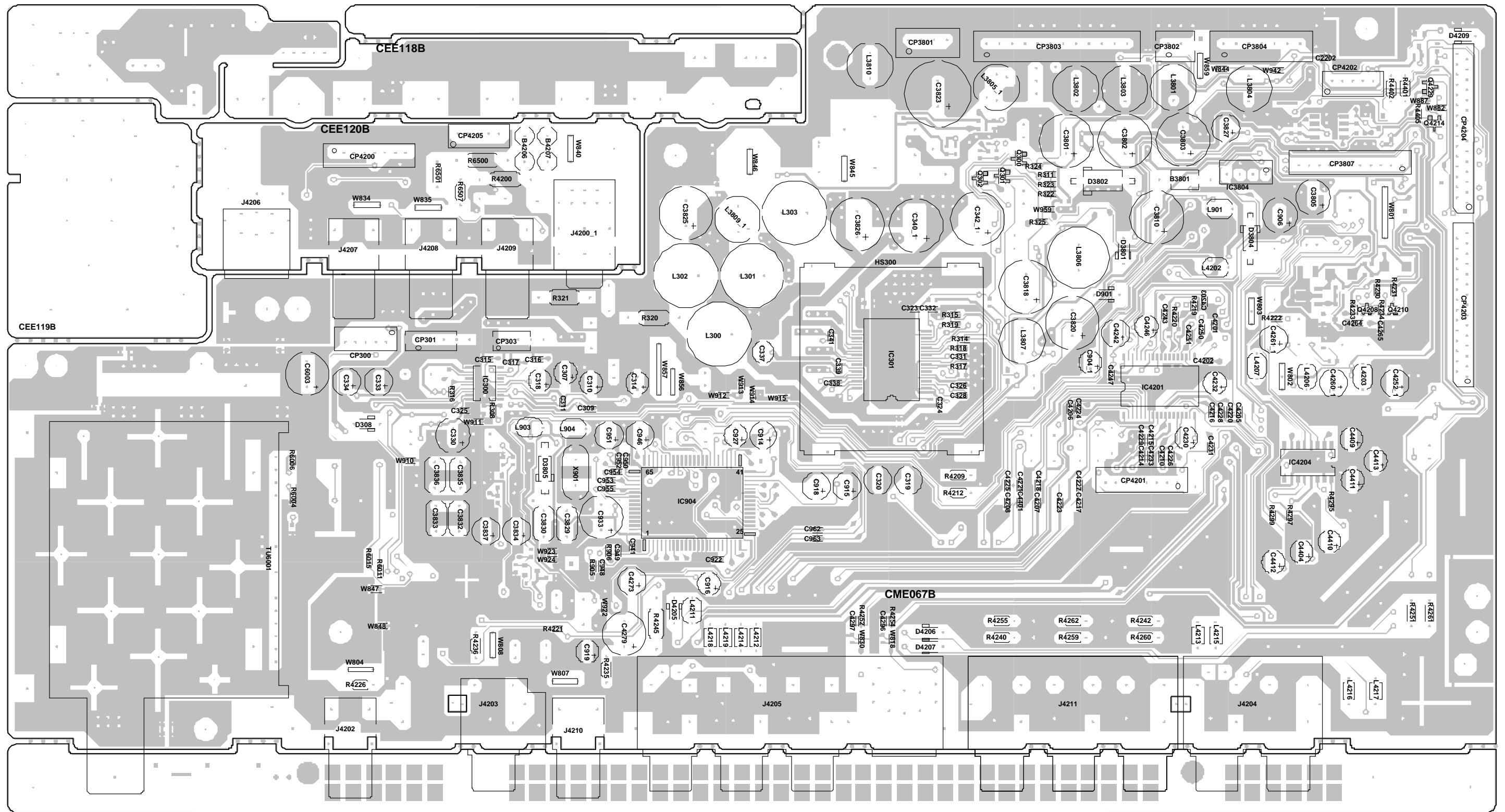


POWER BLOCK DIAGRAM



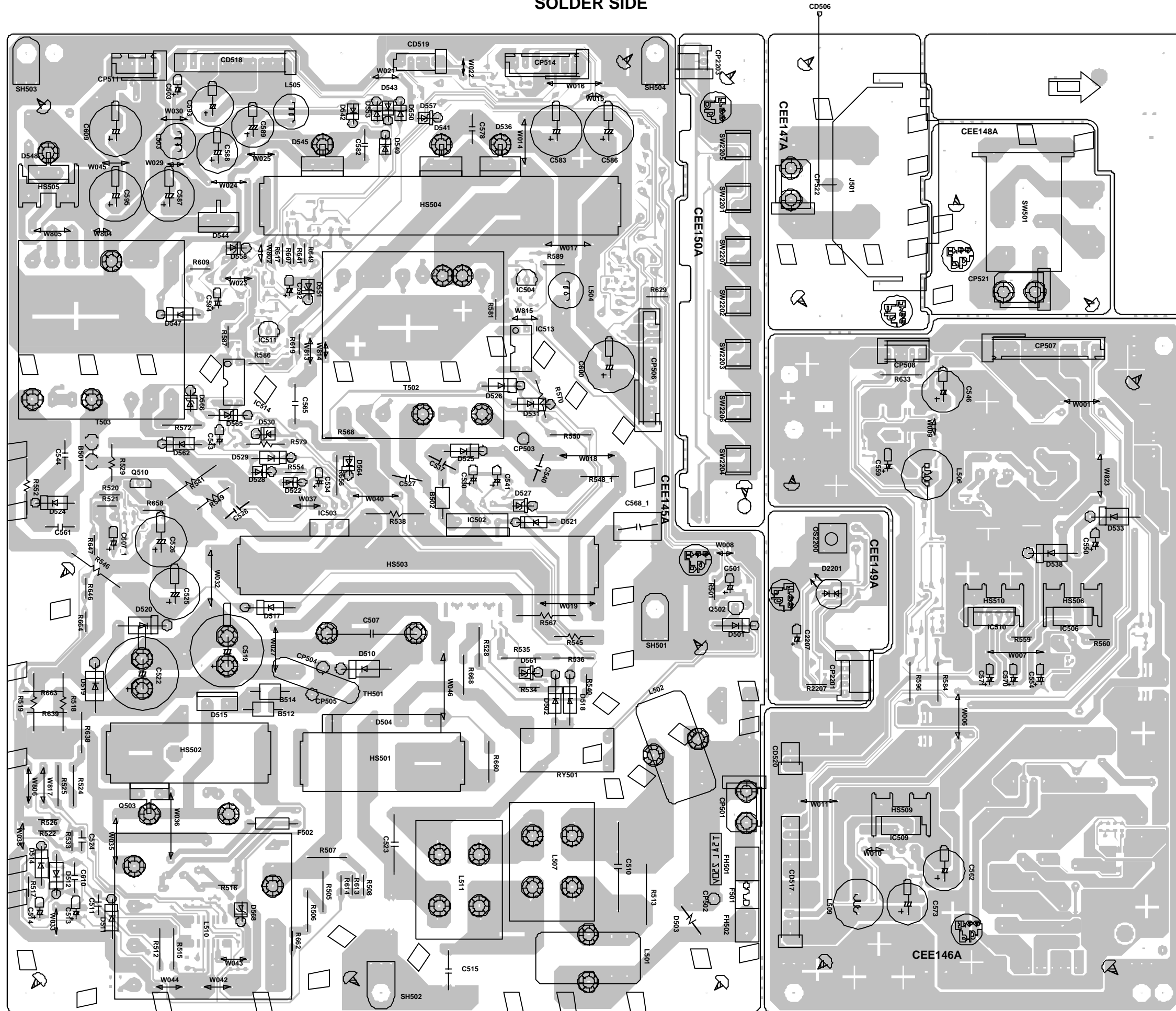
PRINTED CIRCUIT BOARDS

AV/SIDE JACK (TOP SIDE)

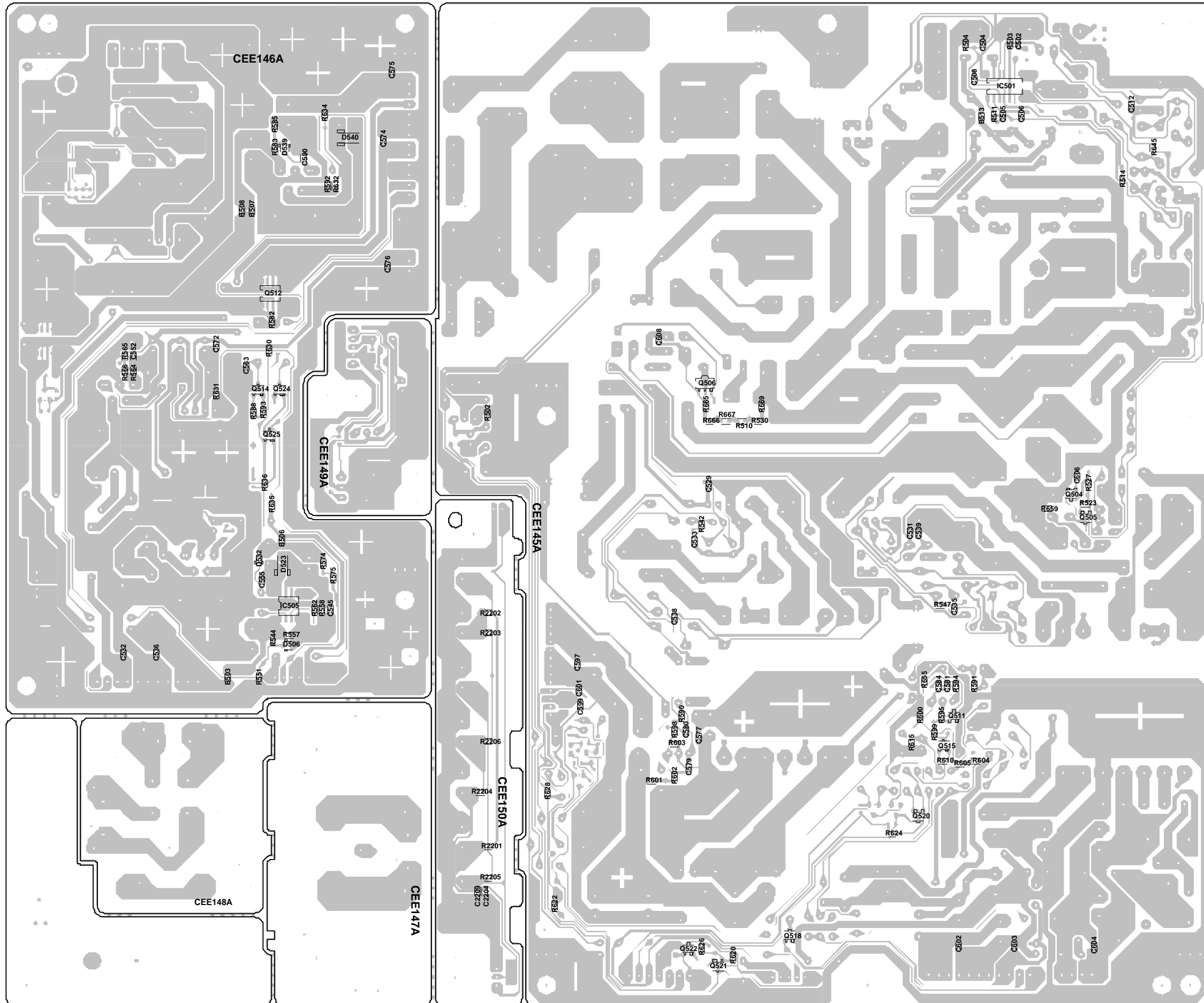


PRINTED CIRCUIT BOARDS

POWER/OPERATION/REGULATOR/AC INLET/POWER SW/REMOCON (INSERTED PARTS) SOLDER SIDE

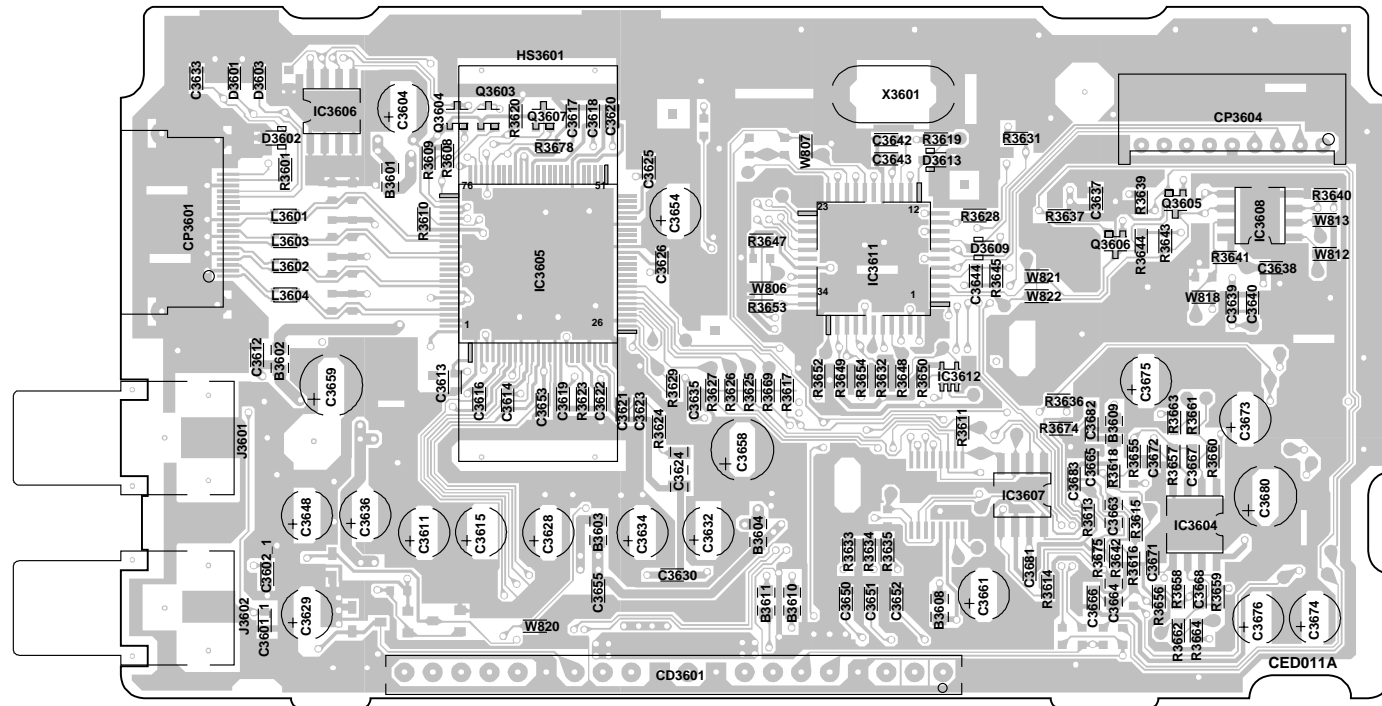


PRINTED CIRCUIT BOARDS
POWER/OPERATION/REGULATOR (CHIP MOUNTED PARTS)
SOLDER SIDE

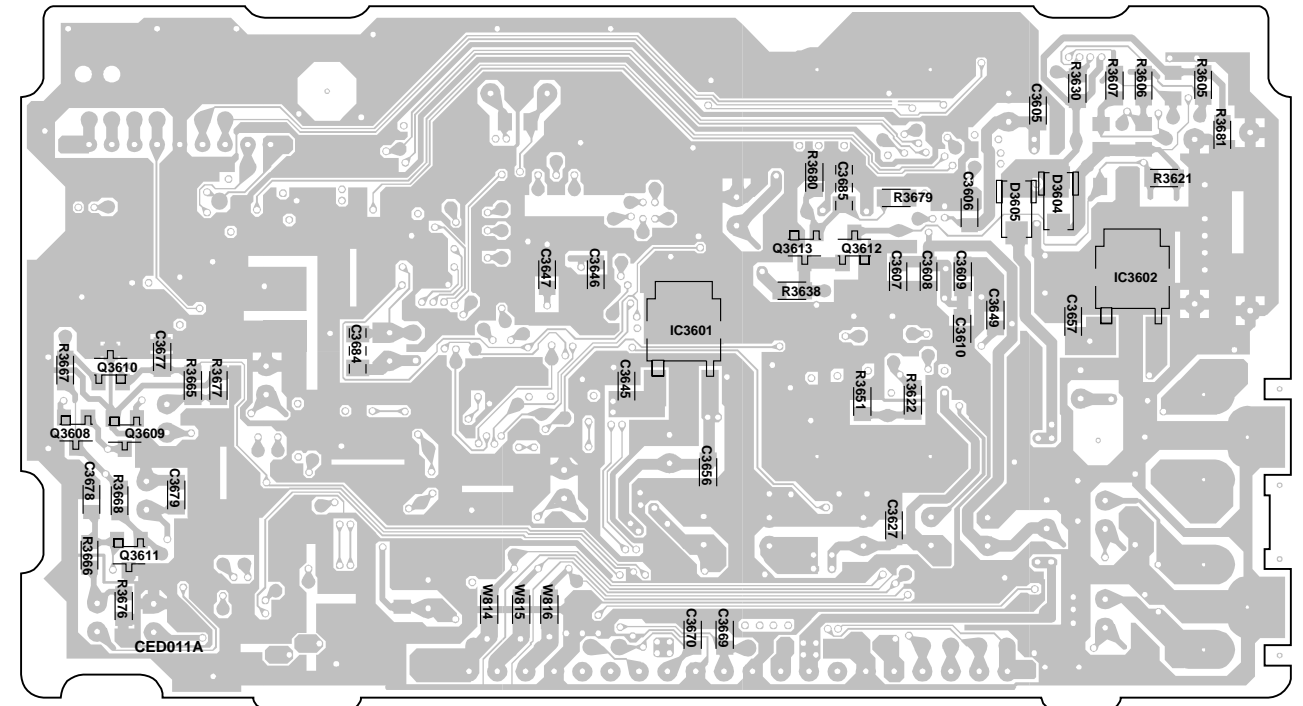


PRINTED CIRCUIT BOARDS

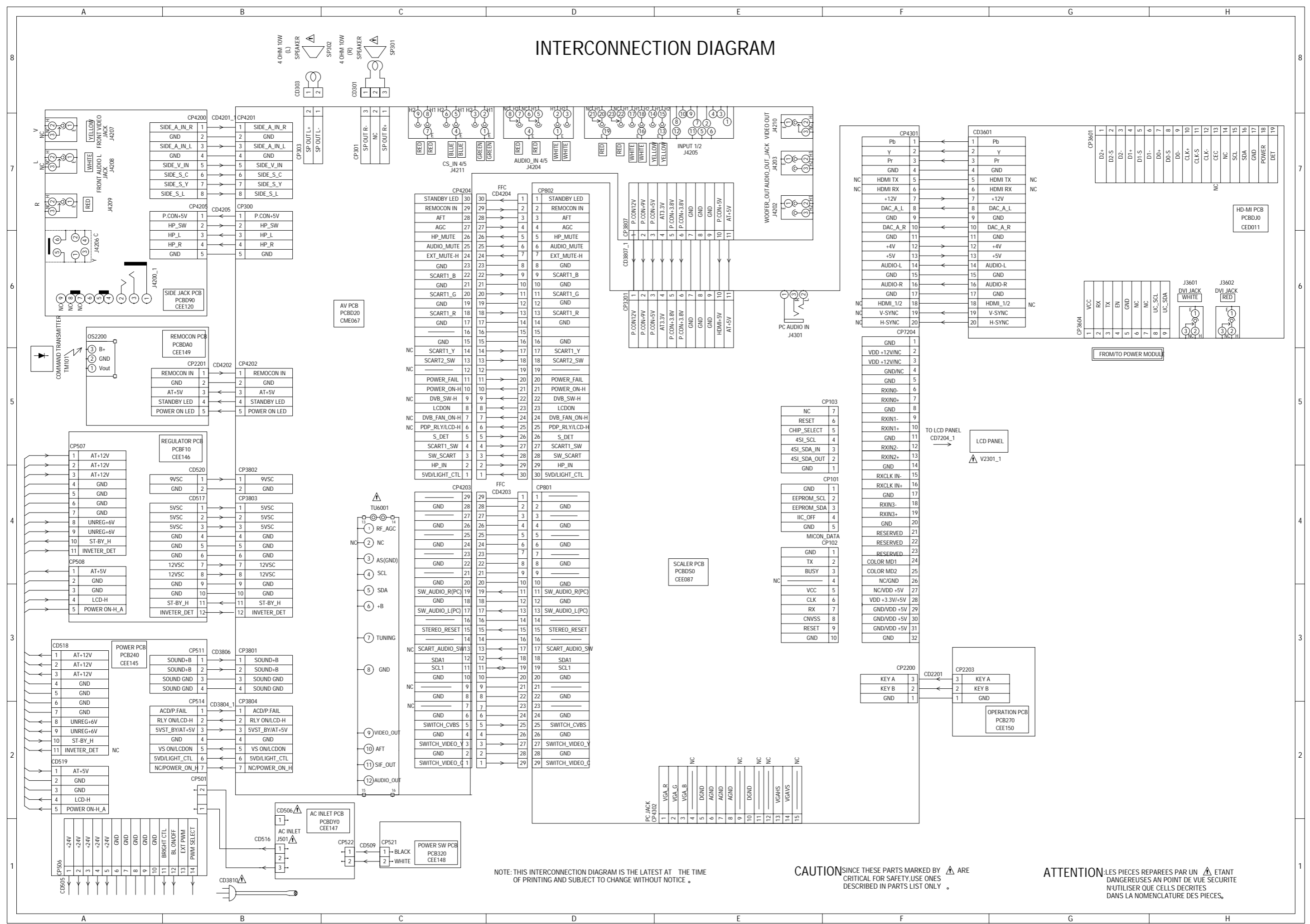
HD-MI (TOP SIDE)



HD-MI (BOTTOM SIDE)



INTERCONNECTION DIAGRAM

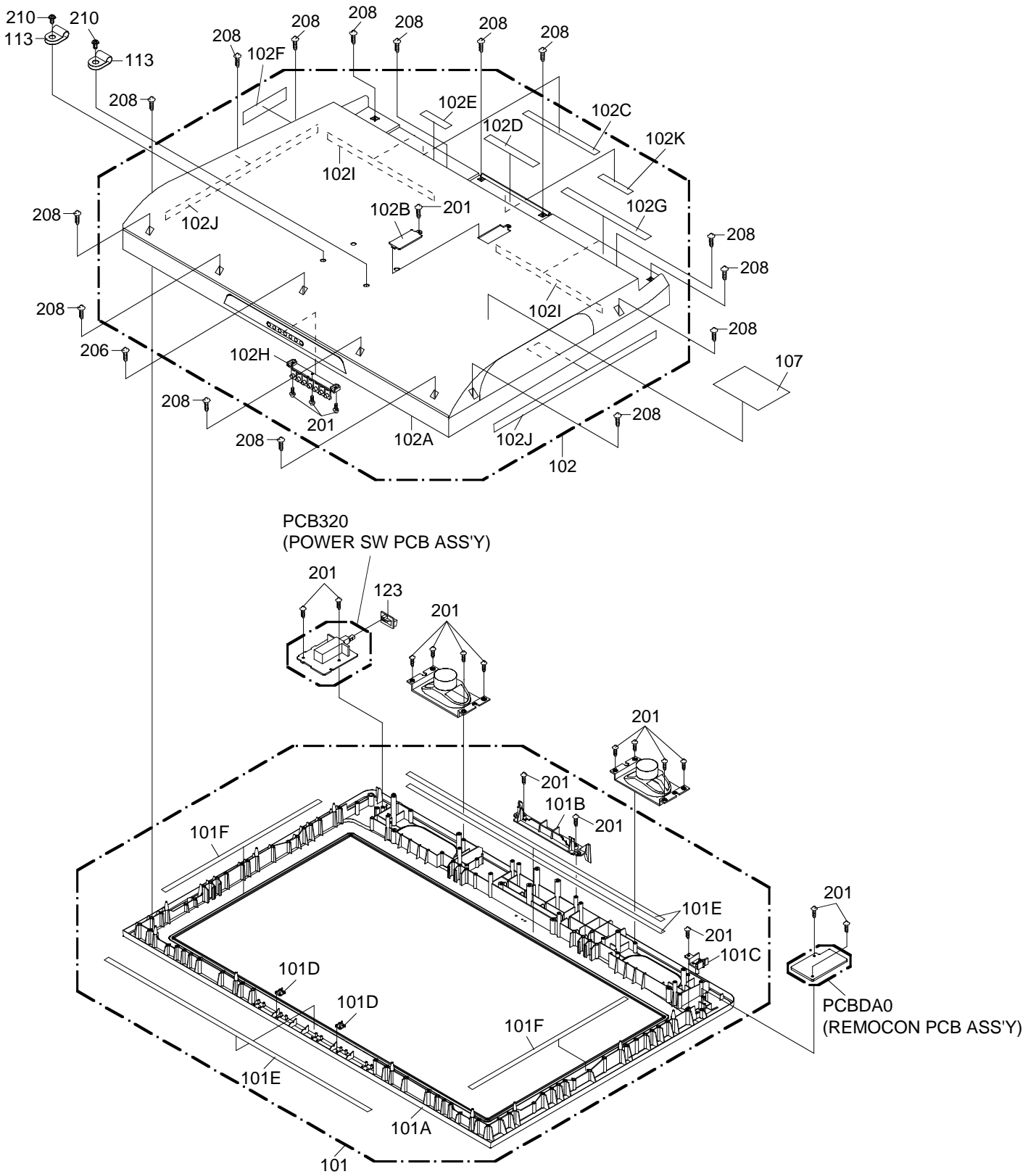


NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

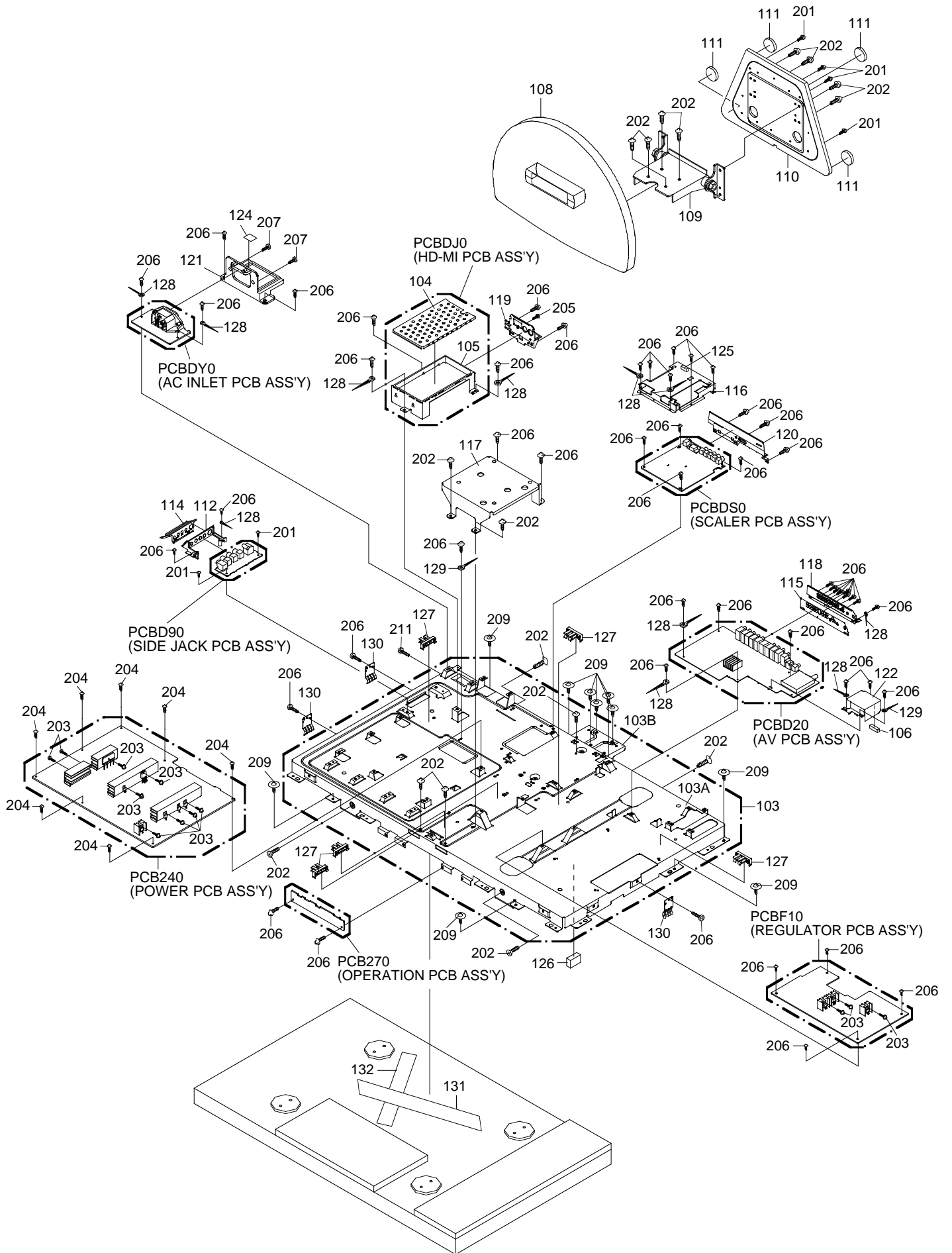
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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

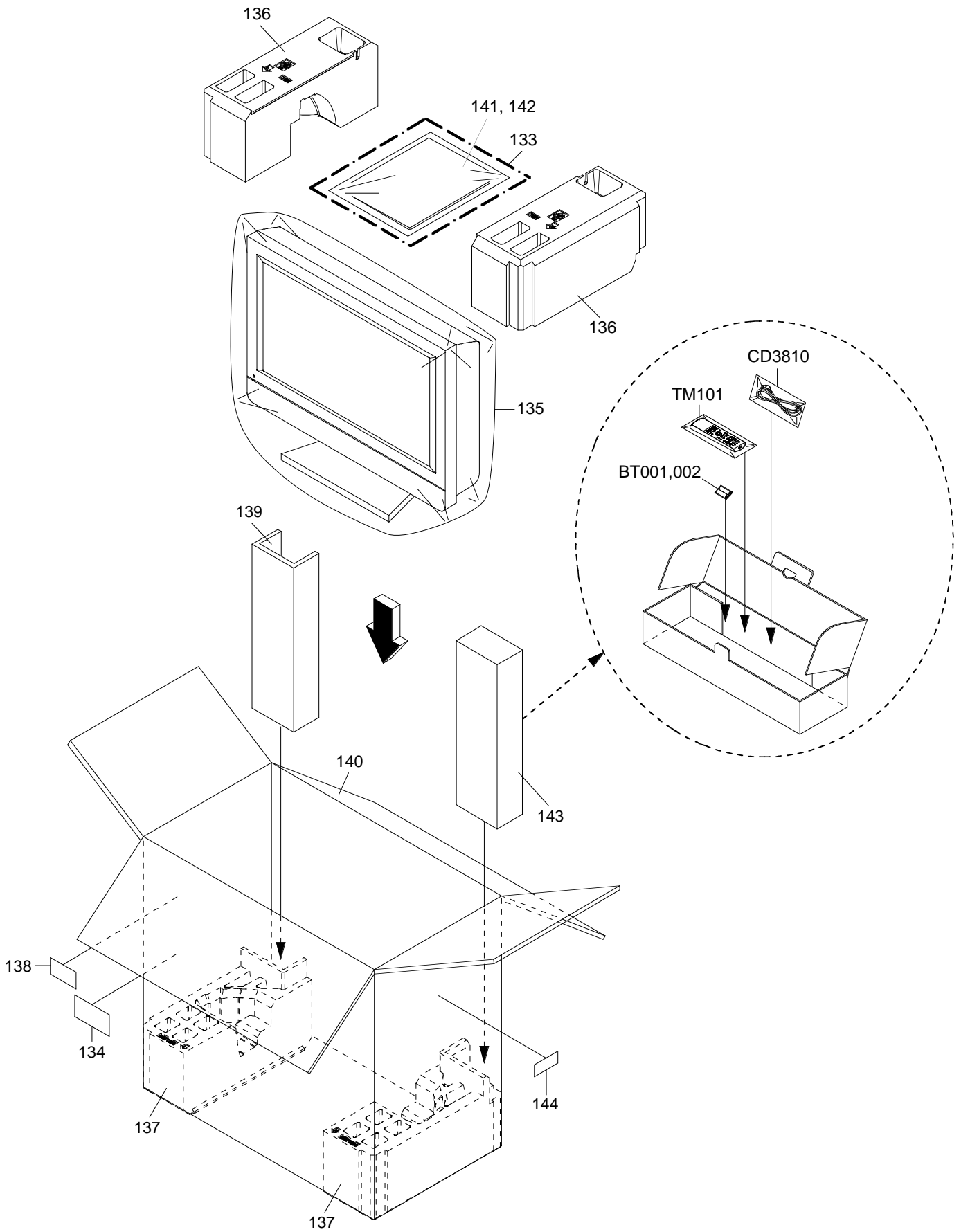
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



MECHANICAL REPLACEMENT PARTS LIST

*Synchronous arrangements parts

REF. NO.	PARTS NAME	QTY/set	PART NO.	DESCRIPTION
FRONT CABI ASS'Y				
101	FRONT,CABI ASS'Y	1	TS07171	101A~101F, 201 ASS'Y
101A	CABINET,FRONT	1	—	
101B	COVER,HINGE	1	—	
101C	GLASS,LED	1	—	
101D	HOLDER,CHASS-1	2	—	
101E	FELT SHEET 9*730*T0.5	3	—	
101F	FELT SHEET	2	—	
201	SCREW TAP TITE(P) BRAZIER 3*10 CH	3	—	
REAR CABI ASS'Y				
102	BACK CABI ASS'Y	1	TS07181	102A~102K, 201 ASS'Y
102A	CABINET,BACK	1	—	
102B	COVER,CONNECTOR	1	—	
102C	FELT SHEET	1	—	
102D	SHEET,JACK-2	1	—	
102E	SHEET,JACK-3	1	—	
102F	SHEET,JACK-SIDE	1	—	
102G	SHEET,JACK-1	1	—	
102H	BUTTON,FRAME(TV)	1	—	
102I	FELT,SHEET 9*250*T0.3	2	—	
102J	FELT,SHEET 9*500*T0.3	2	—	
102K	FELT SHEET	1	—	
201	SCREW TAP TITE(P) BRAZIER 3*10 CH	4	—	
COVER LCD				
103	COVER,LCD ASS'Y	1	TS07191	103A~103B, 202 ASS'Y
103A	COVER,LCD	1	—	
103B	ANGLE,HINGE	1	—	
202	SCREW,WASHER(A) M4*8 CH	3	—	
126	CUSHION 65TS20-20(20*15*12)	1	TS07201	*Synchronous arrangements parts
127	HOLDER,WIRE	5	TS07211	*Synchronous arrangements parts
129	CORD CLIP UL CO.	1	TS07031	*Synchronous arrangements parts
130	SPRING,EARTH	3	TS07054	*Synchronous arrangements parts
206	SCREW TAP TITE(B) BIND 3*8 CH	4	TS07063	*Synchronous arrangements parts
LCD PANEL				
V2301	LCD	1	TE03851	
131	SHEET,CU	1	TS07221	*Synchronous arrangements parts
132	SHEET,CU	1	TS07222	*Synchronous arrangements parts
SHIELD,SCALER				
116	SHIELD,SCALER	1	TS07046	
125	CUSHION 65TS4-2(15*50*16)	1	TS07202	*Synchronous arrangements parts
SHIELD,TUNER				
122	SHIELD,TUNER	1	TS07047	
106	CUSHION W20/H10/L20	1	TS07203	*Synchronous arrangements parts
PLATE,JACK(AC-INLET)				
121	PLATE,JACK(AC-INLET)	1	TS07231	
124	SHEET,AC INLET	1	TS07223	*Synchronous arrangements parts

MECHANICAL REPLACEMENT PARTS LIST

PLATE,JACK-SIDE				
112	PLATE,JACK-SIDE	1	TS07232	
114	SHIELD,JACK-SIDE	1	TS07048	

ACCESSORY				
143	ADAPTER,BOX	1	TS07241	

STAND				
110	ANGLE,STAND	1	TS07251	
111	CUSHION,LEG	4	TS07204	*Synchronous arrangements parts
108	STAND	1	TS07261	
109	HINGE ASS'Y	1	TS07271	
201	SCREW TAP TITE(P) BRAZIER 3*10 CH	4	TS07062	
202	SCREW,WASHER(A) M4*8 CH	4	TS06923	

INST				
133	INSTRUCTION BOOK KIT	1	TE03861	141~142 ASS'Y
141	POLYBAG INSTRUCTION(RED CAUTION)	1	—	
142	INSTRUCTION BOOK	1	—	

OTHER PART				
113	CABLE,CLAMP	2	TS07033	
115	SHIELD,JACK	1	TS07049	
117	ANGLE,BACK	1	TS07281	
118	PLATE,JACK-1	1	TS07233	
119	PLATE,JACK-3	1	TS07234	
120	PLATE,JACK-2	1	TS07235	
123	BUTTON,POWER	1	TS07291	
128	WIRING-CLIP	11	TS06911	
129	CORD CLIP UL CO.	1	TS07031	

SMALL PART				
201	SCREW TAP TITE(P) BRAZIER 3*10 CH	14	TS07062	
202	SCREW,WASHER(A) M4*8 CH	10	TS06923	
203	SCREW TAP TITE(B) WH7 3*10 CH	12	TS07301	
204	SCREW,TAP TITE(B) WH8 3*10 CH	7	TS07302	
205	SCREW,PAN M3*8	1	TS07065	
206	SCREW TAP TITE(B) BIND 3*8 CH	49	TS07063	
207	SCREW,TAPPING(B0) PAN 4*12 CH	2	TS07303	
208	SCREW TAP TITE(P) BIND 3*14 CH	15	TS07304	
209	SCREW,TAPPING(B0) TRUSS 4*12 CH	10	TS07305	
210	SCREW,SEMS(B) 4*10 BK	2	TS07068	
211	SCREW WASHER C 4*8 CH TOOTHED	1	TS06922	

LABEL				
107	SHEET,RATING	1	TS07311	
134	SHEET,BARCODE	1	TS07026	
138	SHEET,BARCODE	1	TS07027	
144	SHEET,ORIGIN	1	TS07161	

PACKING PARTS				
135	LAMIFLIM BAG	1	TJ05401	
136	PACKAGE, TOP	1	TJ05411	
137	PACKAGE,BOTTOM	1	TJ05421	
139	PAD,ACCESSORY	1	TJ05431	
140	GIFT,BOX	1	TJ05441	

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PARTS NAME	QTY/set	PART NO.	DESCRIPTION
P.C. BOARDS ASS'Y				
PCB240	POWER PCB ASS'Y CEE145A	1	TE03731	
PCB270	OPERATION PCB ASS'Y CEE150A	1	TE03741	
PCB320	POWER SW PCB ASS'Y CEE148A	1	TE03751	
PCBD20	AV PCB ASS'Y CME067B	1	TE03761	
PCBD90	SIDE JACK PCB ASS'Y CEE120B	1	TE03771	
PCBDA0	REMOCON PCB ASS'Y CEE149A	1	TE03781	
PCBDJ0	HD-MI PCB ASS'Y CED011A	1	TE03791	
PCBDS0	SCALER PCB ASS'Y CED011A	1	TE03801	
PCBDY0	AC INLET PCB ASS'Y CEE147A	1	TE03811	
PCBF10	REGULATOR PCB ASS'Y CEE146A	1	TE03821	
OTHER PART				
CD301	CORD,CONNECTOR CU125503	1	TE03703	
CD303	CORD,CONNECTOR CU127502	1	TE03704	
CD503	CORD,CONNECTOR CUU23501	1	TE03705	
CD505	CORD,CONNECTOR CU2E6601	1	TE03706	
CD2201	CORD,CONNECTOR CU235501	1	TE03707	
CD3804	CORD,CONNECTOR CU174001	1	TE03708	
CD3806	CORD,CONNECTOR CU145003	1	TE03831	
CD3807	CORD,CONNECTOR CU2B1501	1	TE03832	
CD3810	CORD,AC P320-0275-1	1	TE03402	
CD4201	CORD,CONNECTOR CU287001	1	TE03833	
CD4202	CORD,CONNECTOR CU255502	1	TE03834	
CD4203	CORD,JUMPER 2H0T0801	1	TE03416	
	CORD,JUMPER 2H0T0802	1	TE03411	
CD4204	CORD,JUMPER 2H0U0802	1	TE03415	
	CORD,JUMPER 2H0U0803	1	TE03412	
CD4205	CORD,CONNECTOR CU257501	1	TE03835	
CD7204	CORD,CONNECTOR CHRU3701	1	TE03836	
SP301	SPEAKER EAS12D175B	1	TE03421	
SP302	SPEAKER EAS12D175B	1	TE03421	
TM101	TRANSMITTER R56-0980	1	TE03451	
TR301	CORE,FERRITE HF70T22*10*14	1	TE03841	
TR501	CORE,FERRITE W5T29X7.5X19	1	TE03461	
TR503	CORE,FERRITE W5T29X7.5X19	1	TE03461	
TR506	CORE,FERRITE HF70T22*10*14	1	TE03841	
TU6001	RF UNIT TAFM-Z122D	1	TE03441	
V2301	LCD T315XW01_V5	1	TE03851	

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