

## LCD COLOR TELEVISION

MODEL **LC-26AD5E-BK**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

### CONTENTS

	Page
● SERVICING NOTICES ON CHECKING .....	A1-1
● HOW TO ORDER PARTS .....	A1-1
● IMPORTANT .....	A1-1
● HOTEL MODE FUNCTION .....	A1-2
● ABOUT LEAD FREE SOLDER (PbF) .....	A1-3
● PARENTAL CONTROL - RATING LEVEL .....	A1-3
● GENERAL SPECIFICATIONS .....	A2-1~A2-5
● DISASSEMBLY INSTRUCTIONS .....	B1-1~B2-2
● SERVICE MODE LIST .....	C-1
● WHEN REPLACING EEPROM (MEMORY) IC .....	C-2
● SERVICING FIXTURES AND TOOLS .....	C-3
● INSTALL FOR WRITING TOOLS .....	C-3
● RE-WRITE FOR DIGITAL SOFT FIRMWARE .....	C-4~C-7
● UPDATE FOR VCTP SOFTWARE .....	C-8~C-11
● UPDATE FOR EEPROM DATA .....	C-12, C-13
● ELECTRICAL ADJUSTMENTS .....	D-1~D-7
● TROUBLESHOOTING GUIDE .....	E-1~E-7
● BLOCK DIAGRAM .....	F-1~F-14
● PRINTED CIRCUIT BOARDS .....	G-1~G-10
● SCHEMATIC DIAGRAMS .....	H-1~H-40
● WAVEFORMS .....	I-1, I-2
● MECHANICAL EXPLODED VIEWS .....	J-1~J-3
● REPLACEMENT PARTS LIST .....	K1-1~K2-12

## 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. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

### 5. 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.

### 6. 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

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).

# HOTEL MODE FUNCTION

The following can be set by the Hotel mode function.

Setting item	FUNCTION
Hotel mode	ON/OFF setting for Hotel mode function.
Power on fixed	Effective/invalid setting of POWER button on the set and remote control. (*Note 1)
Maximum volume	Setting of the maximum volume value (0~50).
Volume fixed	Effective/invalid setting of volume fix level function. (*Note 2)
Volume fix level	Setting of output volume value.
RC button	Effective/invalid setting of remote control key operation. (*Note 3)
Panel button	Effective/invalid setting of main key operation. (*Note 4)
Menu button	Effective/invalid setting of Menu key operation of set and remote control. (*Note 4)
On screen display	Display/non-display setting of analog menu, Call, Audio, Program table(CH List) and volume level. (*Note 5)
Input mode start	Setting of input source at power supply On.
Input mode fixed	During the power on, effective/invalid setting of tuning the channel and input change operation. (*Note 6)
Reset	Various settings of the Hotel mode function return initial State. (*Note 7)

Note 1) When setting it to "Fixed", the sleep timer setting will turn off.

Note 2) When setting it to "Fixed", the VOL+/- key operation of a main/ remote control and the MUTE key operation of a remote control become invalid.

Note 3) When setting it to "No Respond", the remote control key operation and service mode function in Hotel mode are effective.

Note 4) When setting it to "No Respond", the service mode function in Hotel mode are effective.

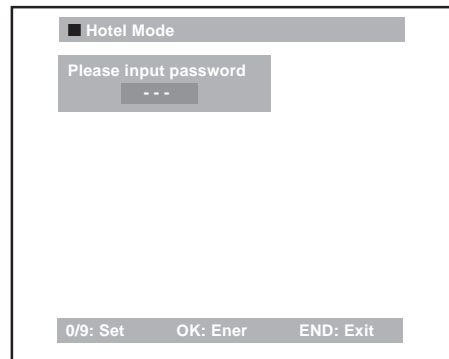
Note 5) The sleep timer setting will turn off when setting it to "No", and the audio change using the AUDIO key is invalid.

Note 6) The Input mode fixed setting becomes effective when the Input mode start setting except for " Normal" setting.

Note 7) Except the Hotel mode function return initial State.

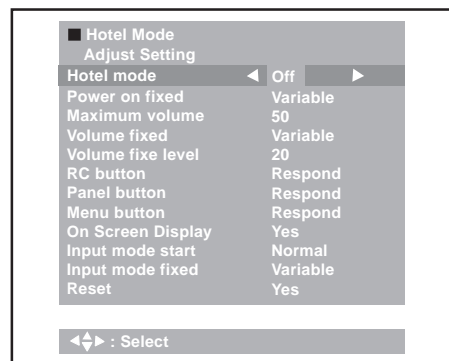
## To set the Hotel mode, please follow the steps below.

1. In power off mode, press and hold the 'VOLUME +' button on the front panel.
2. Simultaneously press and hold the '↵' button on the front panel.
3. Hold both keys for 3 seconds, press the POWER button on the front panel.
4. The password screen is displayed.
5. Press it in order of '0', '2' and '7' key of a remote control unit.  
Then press the ENTER button.
6. The Hotel mode setting menu will appear.
7. Using the LEFT/RIGHT on the remote control, set the Hotel mode to on.
8. Turn off the power.  
The Hotel mode has now been set up.



## To release the Hotel mode, please follow the steps below.

1. In power off mode, press and hold the 'VOLUME+' button on the front panel.
2. Simultaneously press and hold the '↵' button on the front panel.
3. Hold both keys for 3 seconds, press the POWER button on the front panel.
4. The password screen is displayed.
5. Press it in order of '0', '2' and '7' key of a remote control unit.  
Then press the ENTER button.
6. The Hotel mode setting menu will appear.
7. Using the LEFT/RIGHT on the remote control, set the Hotel mode to off.
8. Turn off the power.  
The Hotel mode has now been cleared.



## ABOUT LEAD FREE SOLDER (PbF)

### Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.  
(Please refer to figures.)



### Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 86°F~104°F(30°C~40°C) higher. Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder. When soldering or unsoldering, completely remove all of the solder from the pins or solder area, and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

### Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

## PARENTAL CONTROL - RATING LEVEL 4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn on the power.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(3)** on the remote control for more than 2 seconds.
4. The 4 digit password has now been cancelled.

**NOTE:** No indications on the screen when the Parental Lock is setting.  
Initializing password is 0000.

## GENERAL SPECIFICATIONS

<b>G-1</b>	<b>TV System</b>	LCD	LCD Size / Visual Size	25.5 inch / 647.7mmV	
			LCD Type	Color TFT LCD	
			Number of Pixels	1366(H) x 768(V)	
			View Range	88/88 degree	
			Left/Right Up/Down	88/88 degree	
	Color System			PAL / SECAM	
	Speaker			2 Speaker	
		Position		Front	
		Size		1.6 x 4.8 inch	
		Impedance		4 ohm	
	Sound Output	MAX		10W + 10W	
		10%(Typical)		---	
	NTSC3.58+4.43 / PAL60Hz			Yes	
<b>G-2</b>	<b>Tuning System</b>	Broadcasting System	Analog	U.K., I.R., CCIR, FRENCH System	
			Digital	B/G, D/K, I/I, L	
				DVB-T (OFDM 2k/8k 16QAM/64QAM)	
		Tuner and Receive CH	System	1Tuner (Analog+Digital)	
		CH Coverage	Destination	UK, I.R., CCIR Hyper+France CATV	
			Analog	IreE2~E4, X~Z+2, S1~S10, E5~E12, S11~S41, E21~E69	
			Digital	E5~E12, ItaE~G, F1~F6, Rus6~12, E21~E69	
		Intermediate Frequency	Analog	BG / II / DK, L / L' (SECAM VL)	
			Picture(FP)	38.9 / 38.9 / 38.9 / 33.9MHz	
			Sound(FS)	33.4 / 32.9 / 32.4 / 40.4MHz	
			FP-FS	5.5 / 6.0 / 6.5 / 6.5MHz	
		Digital	36.167MHz		
	Auto Tuning Method			ALL Band (Not C.C.I.R. CH Plan)	
	Preset CH	Analog		99	
		Digital		Carrier 200 / Service 1000	
	Stereo/Dual TV Sound			Nicam/A2 Dual	
	Tuner Sound Muting			Yes	
<b>G-3</b>	<b>Power</b>	Power Source	AC	220-240V AC 50Hz	
			DC	---	
		Power Consumption		at AC	155 W at AC 230 V 50 Hz
			Stand by (at w/ EPG Timer w/o EPG Timer Per Year	at DC	-- 9 W at 230V 50Hz 1 W at 230V 50Hz -- kWh/Year
	Protector	Power Fuse		Yes	
<b>G-4</b>	<b>Regulation</b>	Safety		'CE(EN60065:2002), SEMKO HOMOLO	
		Radiation		CE	
		X-Radiation		---	
<b>G-5</b>	<b>Temperature</b>	Operation		0°C ~ +40°C	
		Storage		-20°C ~ +60°C	
<b>G-6</b>	<b>Operating Humidity</b>			35%RH ~ 75% RH	
<b>G-7</b>	<b>OSD Language</b>			English, Spanish, German, French, Italian, Swedish, Dutch, Russian, Portuguese, Turkish, Greek, Finnish, Polish	
<b>G-8</b>	<b>Clock and Timer</b>	Sleep Timer	Max Time	120 Min	
			Step	30 Min	
		On/Off Timer	Program(On Timer / Off Timer)	-- Program	
		Wake Up Timer		No	
	Timer Back-up (at Power Off Mode)	more than		-- Min Sec	

## GENERAL SPECIFICATIONS

G-9	Remote Control	Unit	RC-MU	
		Glow in Dark Remocon	No	
		Remocon Format	SHARP	
		Format	SHARP	
		Custom Code	10000 / 10001 / 01111	
		Power Source	Voltage(D.C) UM size x pcs	3V UM-3 x 2 pcs
		Total Keys		43 Keys
		Keys	Power (Stand By)	Yes
			TV/Radio	Yes
			DTV/TV	Yes
			Backlight	No
			Mute	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			Flashback (Quick View)	Yes
			0	Yes
			Input Select	Yes
			Volume Up	Yes
			Volume Down	Yes
			CH Up	Yes
			CH Down	Yes
			Screen size	Yes
			Audio 1/2	Yes
			Information	Yes
			Sleep	Yes
			Guide	Yes
			Digital Menu	Yes
			TEXT / TV	Yes
			Menu	Yes
			End	Yes
			TOP/BOTTOM/FULL	Yes
			UP	Yes
			DOWN	Yes
			LEFT	Yes
			RIGHT	Yes
			OK / Channel list / Index	Yes
	Reveal	Yes		
	HOLD/Freeze	Yes		
	Subtitle	Yes		
	Sub Page	Yes		
	Red	Yes		
	Green	Yes		
	Yellow	Yes		
	Cyan	Yes		
G-10	Features	Power On Memory	Yes	
		Auto Shut Off	Yes	
		No Operation Off	Yes	
		Just Clock Function	No	
		Game Position	No	
		DNR	Yes	
			3D	
		Comb Filter	Yes	
			3D	
		Auto Set Up (Fast installation)	Auto tuning (Analog tuner)	Yes
			CH sort	Yes
			ATS	Yes
			Auto clock (Analog tuner)	No
			Plug in start	Yes
		Picture Setting(TV)	Picture Preference (AV Mode)	Yes
			Brightness , Contrast , Color	Yes
			Tint	Yes
			Sharpness	Yes
			Black Stretch	Yes
			DNR	Yes
			Color Temperature	Yes
			Blue Back	Yes
			Backlight	Yes
	Film Mode	Yes		

## GENERAL SPECIFICATIONS

Picture Setting(PC)	BRIGHTNESS , CONTRAST		Yes	
	Color Temperature		Yes	
	HOR POSITION , VER POSITION		Yes	
	PHASE , CLOCK		Yes	
	AUTO ADJUST		No	
	RED , GREEN , BLUE		Yes	
	Backlight		Yes	
	Power Management		Yes	
	XGA Mode		Yes	
	WXGA INPUT		No	
	WVGA INPUT		No	
	Audio	Nicam		No
		Tone Control (Bass/Treble/Balance)		Yes
Loudsp. Sound		Yes		
Auto Vol		Yes		
Clear Voice		Yes		
Surround (Sound wide)		Yes		
BBE		No		
SRS WOW (SRS 3D/Focus/Tru Bass)		No		
Variable Audio Out		No		
Tuning		Auto Tuning		Yes
	Manual Tuning		Yes	
	CH Allocation		Yes	
Lock	Child Lock		Yes	
	Hotel Lock		Yes	
Screen Saver	Inversion		No	
	Full White		No	
	Screen Saver		No	
	Static Image		No	
Black Side Panel			No	
CH Label			Yes	
T'Text			Yes	
Text type			Fastext / Toptext	
Text Language			English , French, Swedish, Hungarian Turkish, German, Portuguese, Spanish, Italian, Greek, Slovakian, Russian, Polish, Czech, Rumanian, Estonian, Lettish, Lithuanian, Ukrainian, Croatian, Slovenian, Latvian	
Wide Mode (AUTO/4:3/FULL SCREEN/16:9/CINEMA/14:9)			Yes	
HD Zoom			No	
Picture Scroll (Vertical Position)			No	
PFC(Power Factor circuit)			Yes	
Freeze frame			Yes (w/o720p, 1080i)	
HD-Ready			Yes	
Plug and Play			Yes	
Reset TV Setting			Yes	
Scart Spec	Scart1	AV in	Yes	
		AV out	Yes (A.Tuner/D.Tuner)	
		S-Video in	Yes	
	Scart2	RGB in	Yes	
		AV in	Yes	
		AV out	Yes (Monitor)	
		S-Video in	Yes	
		RGB in	Yes	
				Yes
Digital Text (VBI teletext)			Yes	
MHEG-5			Yes	
MHP			No	
EPG (BBC type 8Days Digital tuner only)			Yes	
OAD (Over Air Download)			Yes	
Common Interface (Digital tuner only)			Yes	
Rec Screen Status			Yes	
Ch sorting based on Ch List (Digital/Germany only)			Yes	
Rename Carrier (Digital)			Yes	
Edit Event Timer			Yes	
Software Update via CI Slot			Yes	
Preference Language (Audio/Subtitle/Digital Service)(Digital)			Yes	
Ch Organizer (Fav, Lock, Skip, Go To, Delete, Rename, Move, Move to)			Yes	
Parental Lock (Digital)			Yes	
DVB Subtitle (Digital)			Yes	

## GENERAL SPECIFICATIONS

	PC Monitor Input	VGA (640x480)	Yes
		VGA (720x400)	Yes (60Hz)
		WVGA (848x480)	No
		SVGA (800x600)	No
		XGA (1024x768)	Yes (60Hz)
		WXGA (1280x768)	Yes (60Hz)
		WXGA (1280x720)	Yes (60Hz)
		WXGA (1360x768)	No
		SXGA (1280x1024)	Yes (60Hz)
	HDMI Input		No
		VGA (640x480)	Yes
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	Yes (60Hz)
		720x576i (16:9)	Yes (50Hz)
		720x576p (4:3)	Yes (50Hz)
		720x576p (16:9)	Yes (50Hz)
		1280x720p	Yes (50/60Hz)
		1920x1080i	Yes (50/60Hz)
	Component Input		Yes
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	Yes (60Hz)
		720x576i (16:9)	Yes (50Hz)
		720x576p (4:3)	Yes (50Hz)
		720x576p (16:9)	Yes (50Hz)
		1280x720p	Yes (50/60Hz)
		1920x1080i	Yes (50/60Hz)
<b>G-11</b>	<b>Accessories</b>	Owner's Manual	Language
			English, German, French, Italian, Dutch, Spanish Greek, Portuguese, Swedish, Finnish, Danish Norwegian, Polish, Hungarian, Czech, Slovak, Ukrainian Estonia, Latvia, Lithuania
			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
		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-3 x 2 pcs
		OEM Brand	No
		AC Adapter	No
		AC Cord (for AC Adapter)	No
		AC Cord x 2	Yes
		AV Cord (2Pin-1Pin)	No
		AQUOS CARE PLAN	Yes
		HDMI-DVI Cable	No
		Registration Card	No
		300 ohm to 75 ohm Antenna Adapter	No
		Stand Unit	Yes
		Cable Clamp (x1)	Yes
		Information Sheet(Protection Sheet)	No
		Information Sheet(Eco Sheet)	Yes(From '07.AUG O/R)
		Information Sheet(for G-card and AQUOS CARE PLAN)	Yes(Only '07.MAY/JUN oder)
		Cleaning Cloth	Yes
		Guarantee Card	Yes





# DISASSEMBLY INSTRUCTIONS

## 1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

### 1-1: BACK CABINET (Refer to Fig. 1-1)

1. Remove the Cover Back in the direction of arrow (A).
2. Remove the 14 screws ①.
3. Remove the 7 screws ②.
4. Remove the Back Cabinet in the direction of arrow (B).

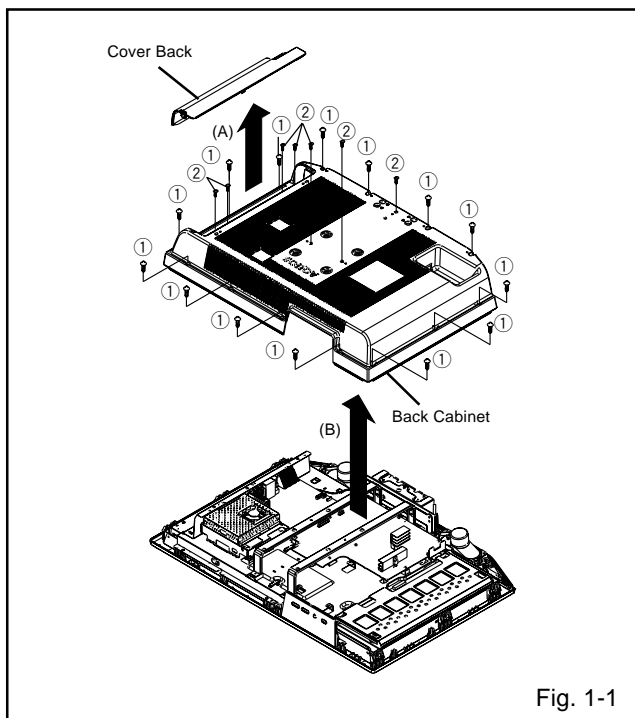


Fig. 1-1

### 1-2: OPERATION PCB (Refer to Fig. 1-2)

1. Disconnect the following connector:  
(CP2203).
2. Remove the Plate Button Ass'y in the direction of arrow (A).
3. Remove the 3 screws ①.
4. Remove the Operation PCB in the direction of arrow (B).
5. Remove the 7 screws ②.
6. Remove the 2 screws ③.
7. Remove the Angle Hinge in the direction of arrow (C).

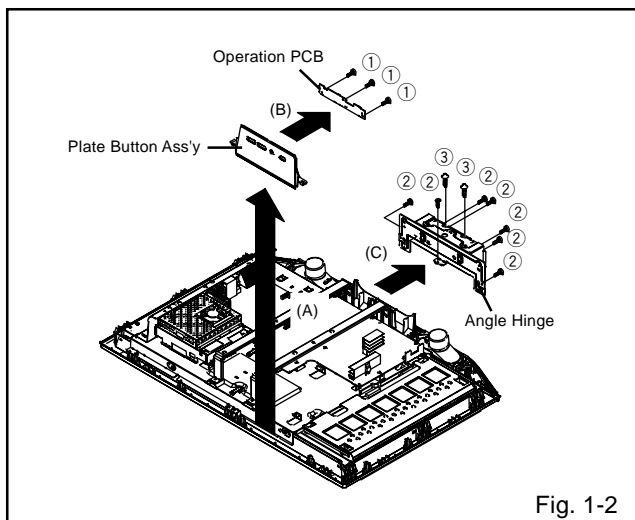


Fig. 1-2

### 1-3: REMOCON PCB (Refer to Fig. 1-3)

1. Disconnect the following connector:  
(CP2201).
2. Remove the 2 screws ①.
3. Remove the Remocon PCB in the direction of arrow.

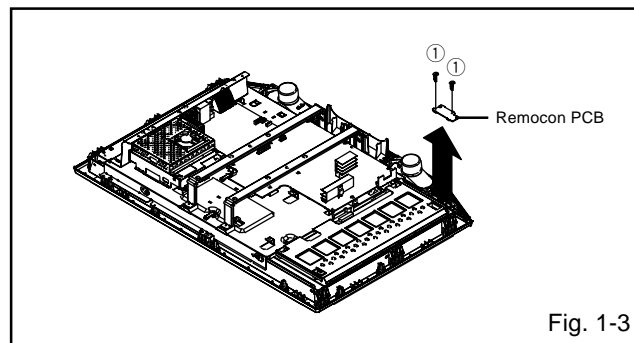


Fig. 1-3

### 1-4: LCD BLOCK (Refer to Fig. 1-4)

1. Disconnect the following connectors:  
(CP406 and CP301).
2. Remove the Speaker Ass'y.
3. Remove the Holder Panel.
4. Remove the 4 screws ①.
5. Remove the LCD Block in the direction of arrow (A).
6. Remove the 4 screws ②.
7. Remove the Angle Main.

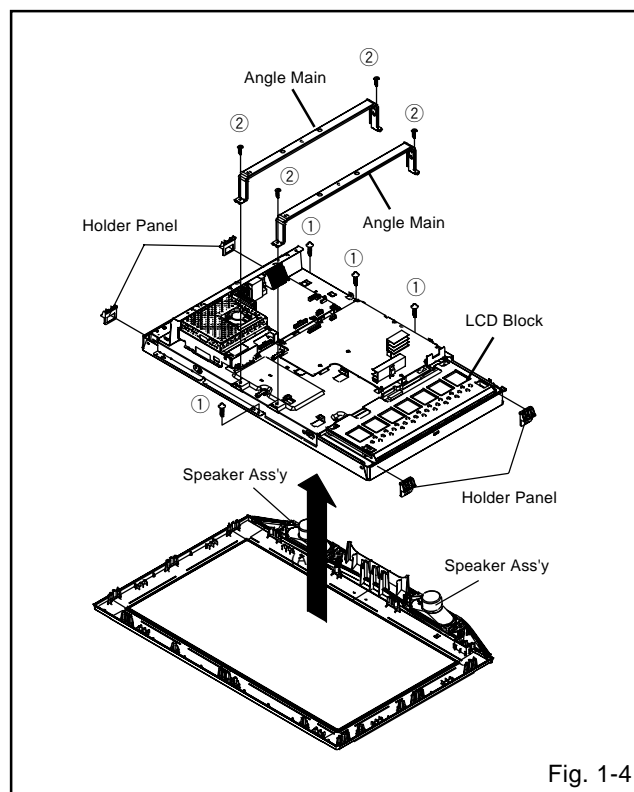
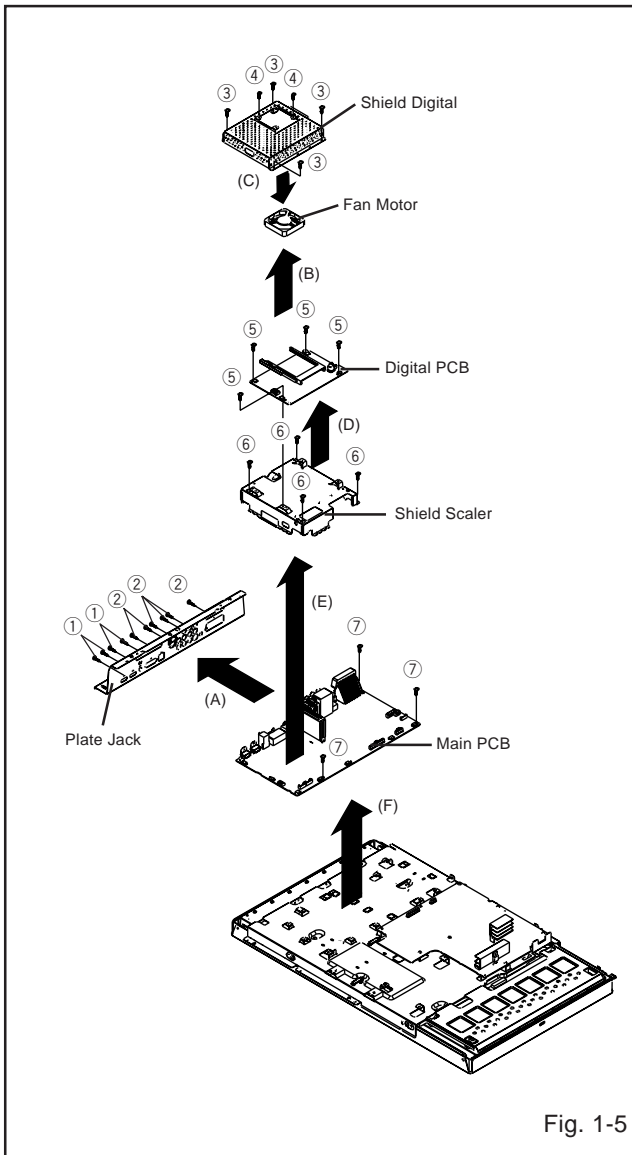


Fig. 1-4

## DISASSEMBLY INSTRUCTIONS

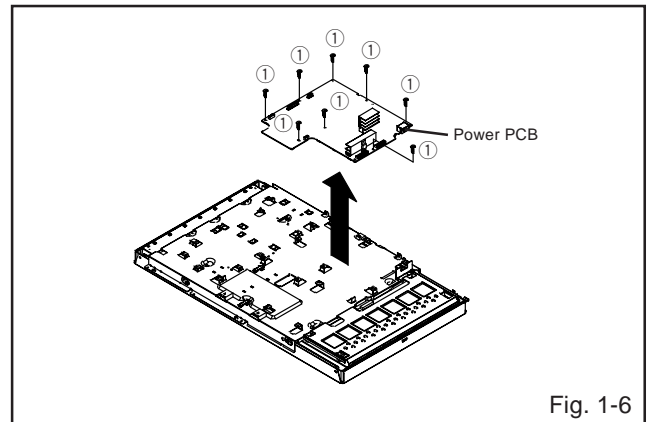
### 1-5: DIGITAL PCB/ MAIN PCB (Refer to Fig. 1-5)

1. Remove the 4 screws ①.
2. Remove the 6 screws ②.
3. Remove the Plate Jack in the direction of arrow (A).
4. Disconnect the following connector:  
**(CP3400).**
5. Remove the 4 screws ③.
6. Remove the 2 screws ④.
7. Remove the Shield Digital and Fan Motor in the direction of arrow (B) and (C).
8. Disconnect the following connector:  
**(CP6401).**
9. Remove the 4 screws ⑤.
10. Remove the Digital PCB in the direction of arrow (D).
11. Remove the 4 screws ⑥.
12. Remove the Shield Scaler in the direction of arrow (E).
13. Disconnect the following connector:  
**(CP3801, CP3802, CP4301, CP4305 and CP7201).**
14. Remove the 3 screws ⑦.
15. Remove the Main PCB in the direction of arrow (F).



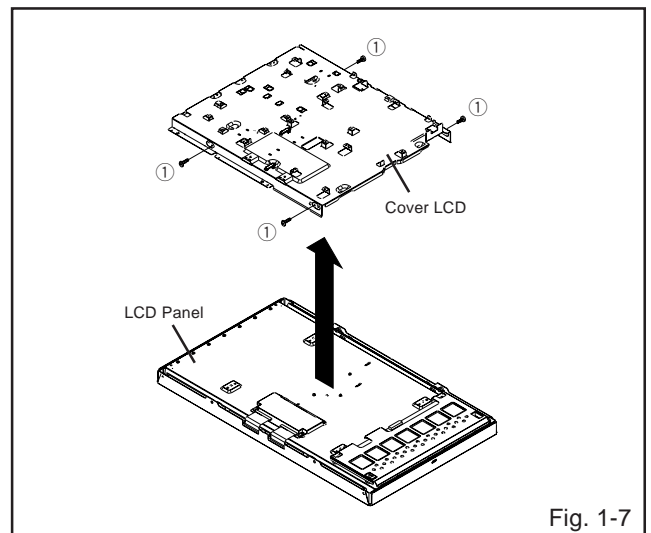
### 1-6: POWER PCB (Refer to Fig. 1-6)

1. Remove the 8 screws ①.
2. Remove the Power PCB in the direction of arrow.



### 1-7: COVER LCD (Refer to Fig. 1-7)

1. Remove the 4 screws ①.
2. Remove the Cover LCD in the direction of arrow.



# DISASSEMBLY INSTRUCTIONS

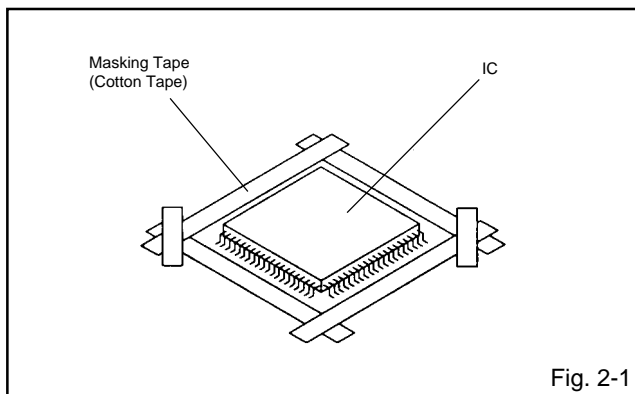
## 2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

### REMOVAL

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

#### NOTE

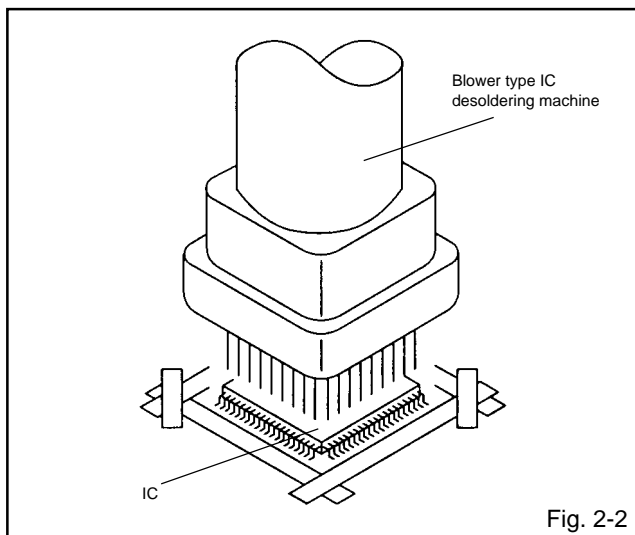
Masking is carried out on all the parts located within 10 mm distance from IC leads.



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

#### NOTE

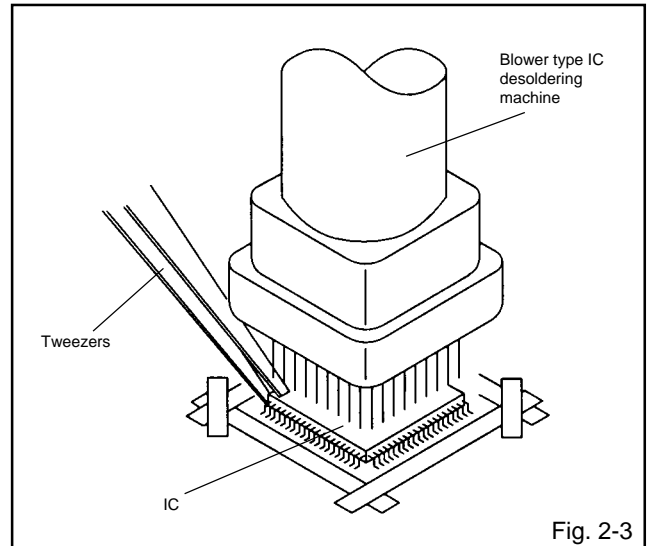
Do not rotate or move the IC back and forth unit IC can move back and forth easily after desoldering the leads completely.



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

#### NOTE

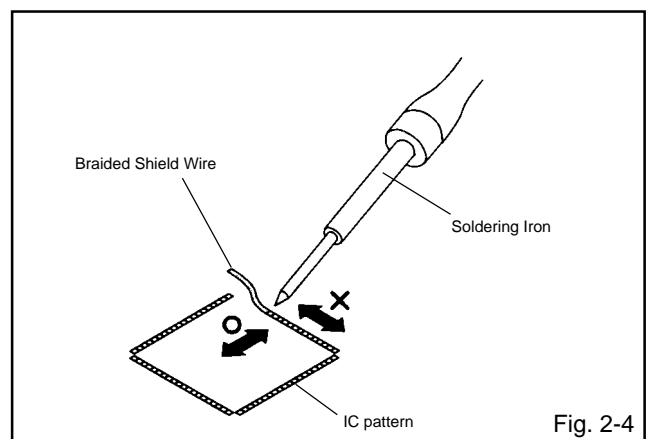
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



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

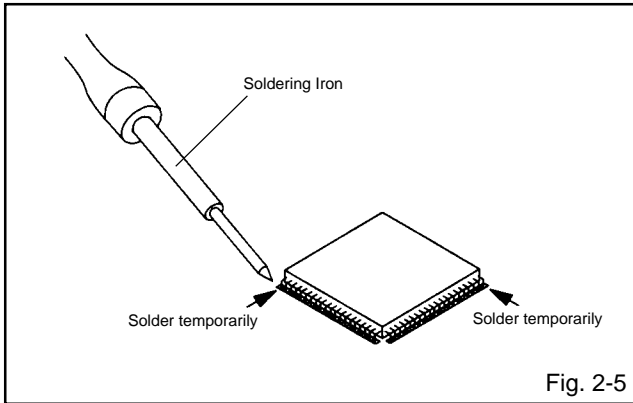
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



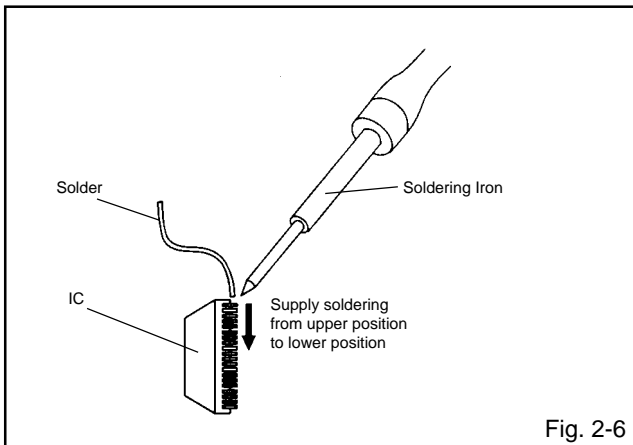
# DISASSEMBLY INSTRUCTIONS

## 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.)**



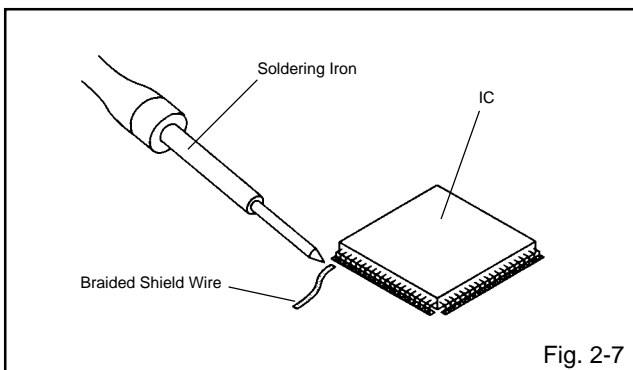
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**



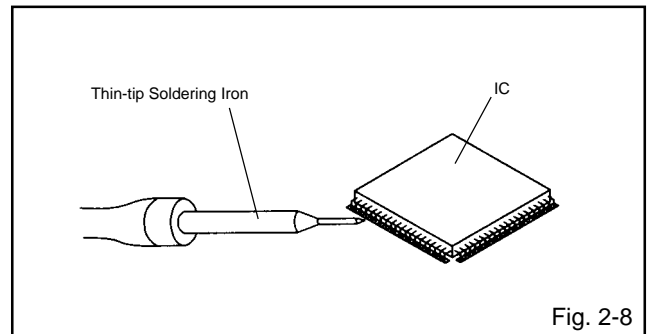
3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

### 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 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
POWER ON	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.
POWER ON	VOL. DOWN (Minimum)	2	2 sec.	Check of the SUM DATA, POWER ON total hours, MICON VERSION and DIGITAL TV MICON FIRMWARE on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
DTV mode	VOL. DOWN (Minimum)	3	2 sec.	Releasing of PARENTAL LOCK (DIGITAL). Refer to the "PARENTAL CONTROL - RATING LEVEL".
POWER ON	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
POWER ON	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

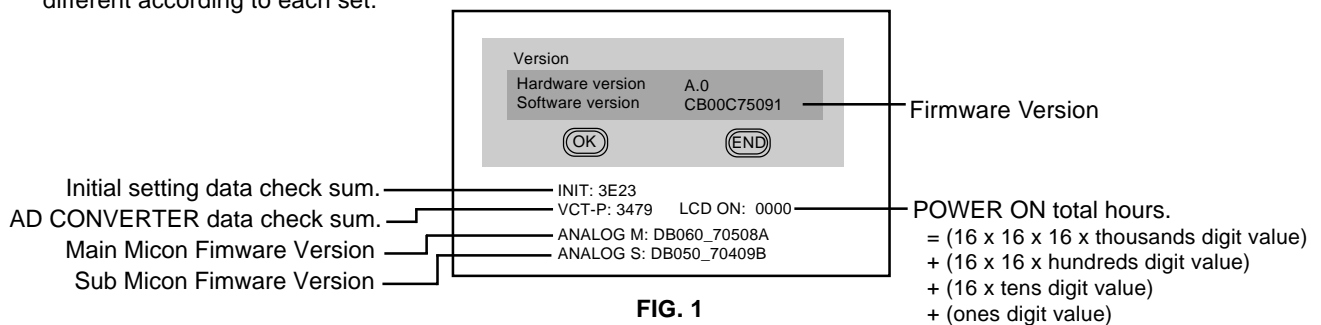
### CONFIRMATION OF CHECK SUM, MICON VERSION AND DIGITAL TV MICON FIRMWARE AND POWER ON TOTAL HOURS

Initial total of MEMORY IC, MICON VERSION, Digital TV MICON Firmware and 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".**  
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.
3. Press both VOL. DOWN button on the set and Channel button (2) on the remote control for more than 2 seconds.
4. After the confirmation of MICON VERSION and Digital TV MICON Firmware, turn off the power.  
ADDRESS and DATA should appear as FIG 1.

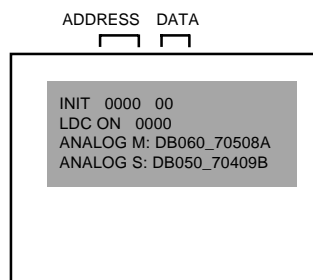
NOTE: The each item value might be different according to each set.



### CONFIRMATION OF INITIAL DATA

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 INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button (6) on the remote control for more than 2 seconds.  
ADDRESS and DATA should appear as FIG 2.



4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

**After the data input, set to the initializing of shipping.**

10. Turn POWER on.
11. Press both VOL. DOWN button on the set and Channel button (1) on the remote control for more than 2 seconds.
12. 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.

## SERVICING FIXTURES AND TOOLS

<p>JG201 Serial Communication Change JIG</p> 	<p>JG203 MICON PROGRAM JIG KIT 25-4</p> 	<p>JG176 EU LCD MICON VER UP ROM DISC DTV ROM DISC JG212 EEPROM DISC JG204 MICON UPDATE TOOL DISC</p> 
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Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176133	EU LCD MICON VER UP ROM DISC	Up-Date of the VCTP DATA.
JG176	APJG176130	DTV ROM DISC	Up-Date of the Digital Soft Firmware.
JG212	APJG212001	EEP ROM DISC	Up-Date of the EEPROM DATA.
JG201	APJG201000	Serial Communication Change JIG	Connect the set to personal computer.
JG203	APJG203000	MICON PROGRAM JIG KIT 25-4	Connect the set to personal computer.
JG204	APJG204000	MICON UPDATE TOOL DISC	There is WRITING TOOLS in Disc.

## INSTALL FOR WRITING TOOLS

1. Set the MICON UPDATE TOOL DISC (JG204) to PC.

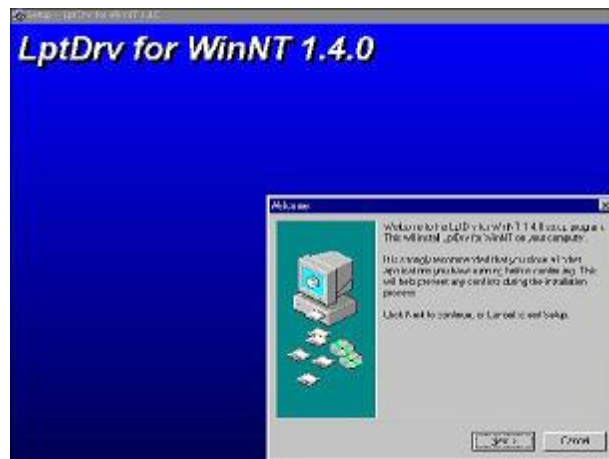
2. Install the LPT driver.

**NOTE : It is necessary to install according to the PC.**

Windows 95/98 : Setup\_LptDrv\_v0104\_9x.exe

Windows 2000/XP : Setup\_LptDrvDev\_v020201\_XP\_2000.exe

Windows NT : Setup\_LptDrv\_v0104\_NT.exe



3. Re-boot the PC.

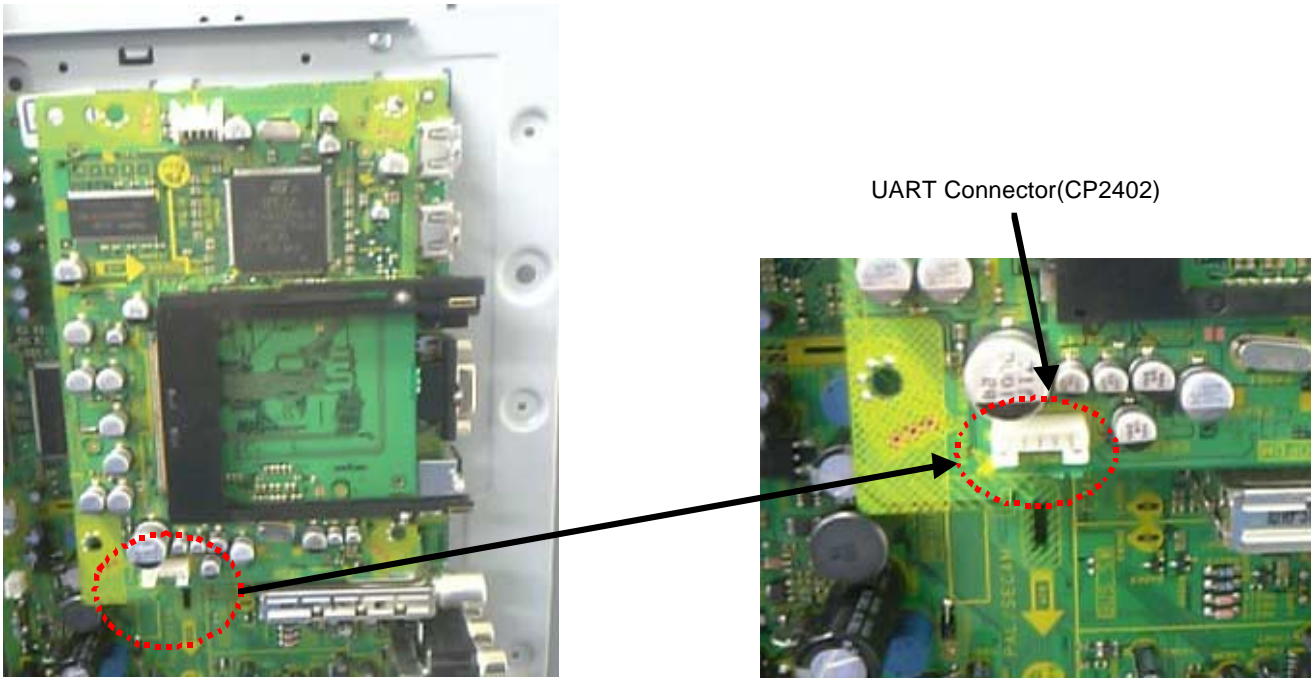
4. Install the "Setup\_Visual\_I2C\_v3-2-3b8h.exe", "Setup\_VI2C\_for\_VCT\_Pro\_v0101.exe" and "Winupload 4.4.3.exe".



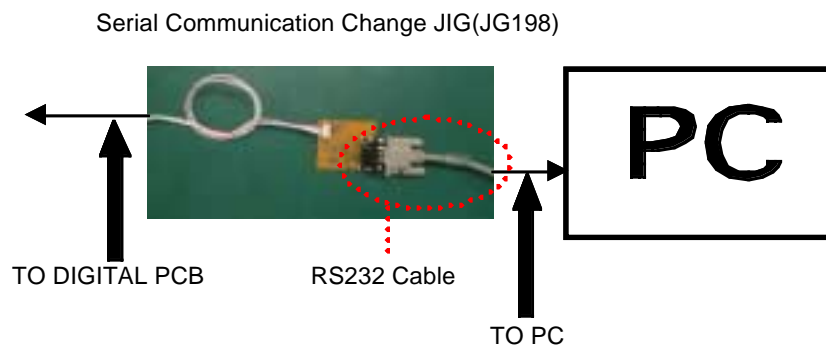
## RE-WRITE FOR DIGITAL SOFT FIRMWARE

Before UPDATE the Digital Soft Firmware, it is necessary to install the WRITING TOOLS into the PC.  
For the installation of WRITING TOOL, refer to the "INSTALLING FOR WRITING TOOLS".

1. Unplug the AC cord, and remove the back cabinet.
2. Using the Serial Communication Change JIG (JG198) and RS232 Cable, connect the PC terminal and UART Connector(CP2402) on the DIGITAL PCB Ass'y.



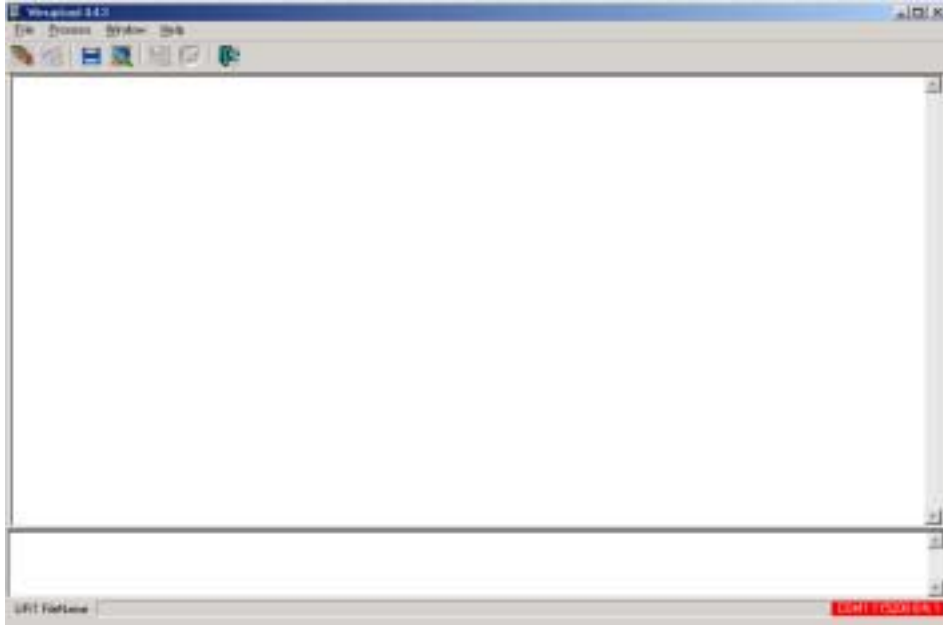
Connect it in order of Digital Pcb → Serial Communication Change JIG(JG198) → RS232 Cable → PC.



3. Insert the AC cord, turn on the power.
4. Press both VOLUME DOWN button on the set and Channel button (2) on the remote control for 2 seconds.  
Confirm that displayed software version.
5. Set the Standby mode.
6. Set the DTV ROM DISC(JG176) to PC.

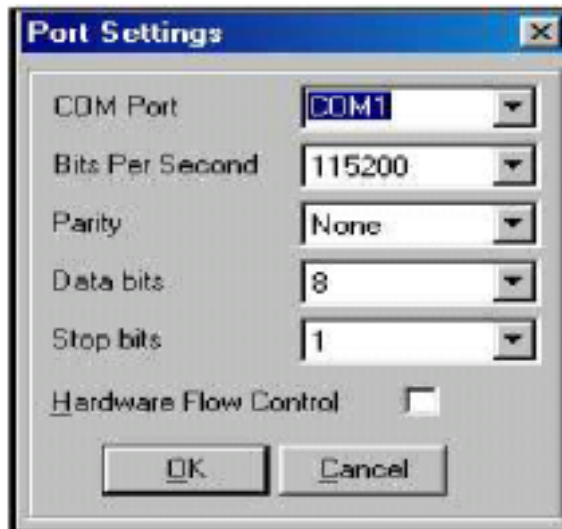
## RE-WRITE FOR DIGITAL SOFT FIRMWARE

7. Start the "Winupload"(Writing tool).



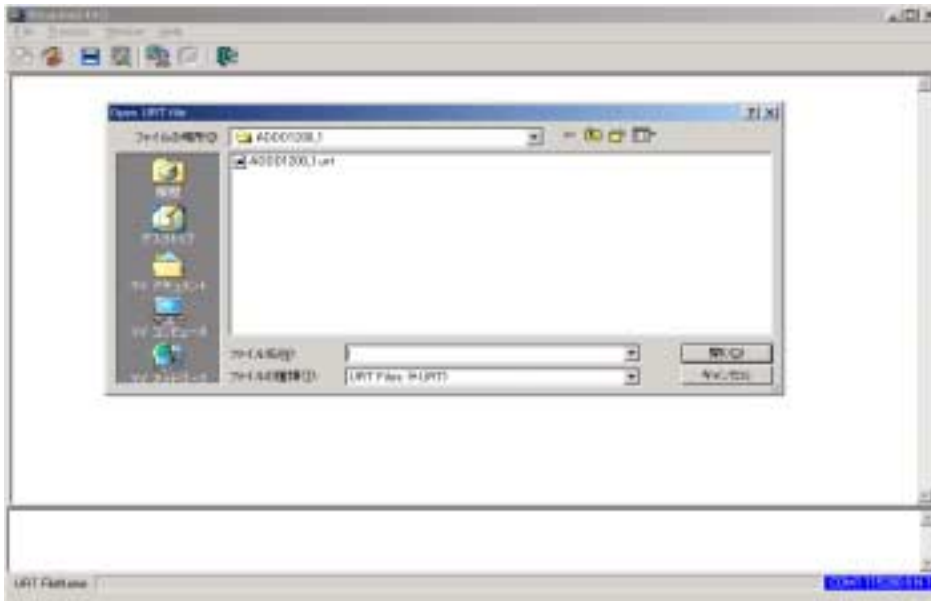
8. Select the "Port Setting" from Process menu, then please set it as follows.

**NOTE:** This step is not necessary from next time.

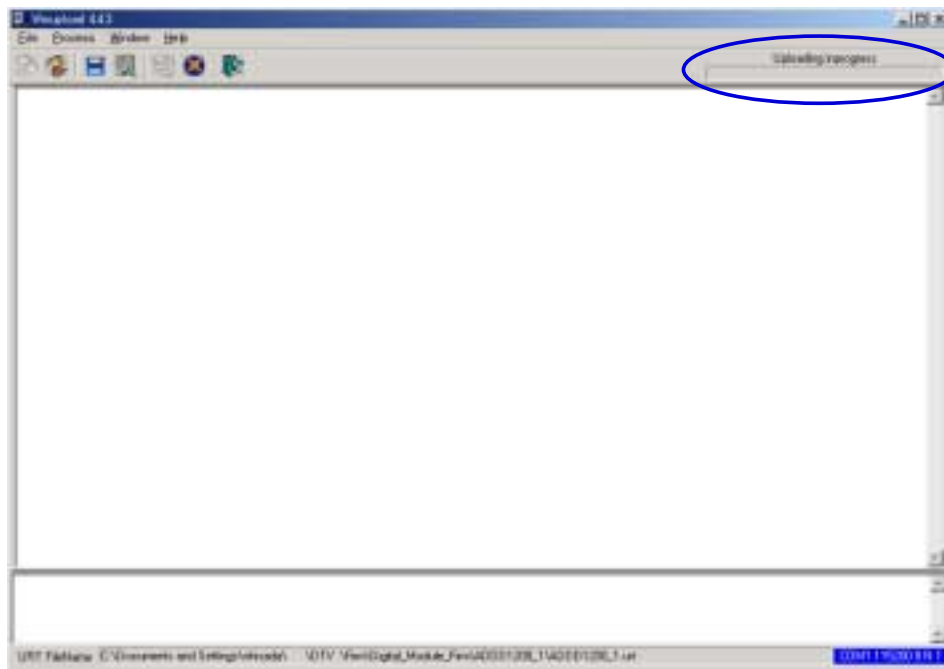


## RE-WRITE FOR DIGITAL SOFT FIRMWARE

9. Select the "Connect" from File menu.
10. Select the "Upload" from Process menu, and select the Software(CB00C75091.urt) in DTV ROM DISC(JG176).



11. Unplug the AC cord on the set, then plug it in again.
12. Turn on the power.  
The following window will appear, Up-date for Software will start.  
"Uploading in progress" bar will begin to move.



## RE-WRITE FOR DIGITAL SOFT FIRMWARE

13. When the "Uploading inprogress" bar reaches a right edge, the Writing for Digital Soft Firmware will start. During the writing for Digital Soft Firmware, writing message will appear on the screen. Finish the writing for Digital Soft Firmware, writing message will disappear.

14. Unplug the AC cord, and remove the Serial Communication Change JIG(JG198).

15. Insert the AC cord again.

### **After the write, set to the initializing of shipping.**

16. Turn on the power.

17. Press both VOLUME DOWN button on the set and Channel button (1) on the remote control for 2 seconds. The set will turn into the standby mode.

### **Check for the Firmware Version**

18. Turn on the power.

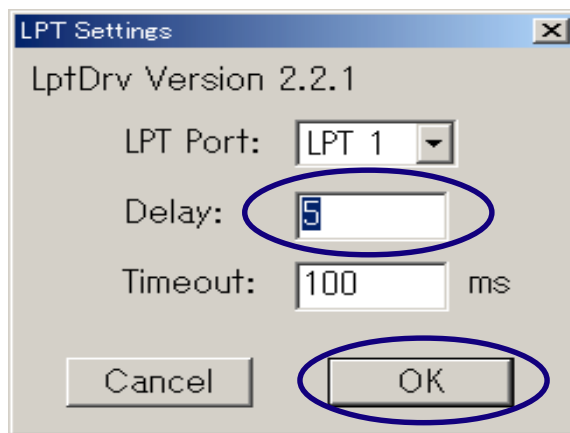
19. Press both VOLUME DOWN button on the set and Channel button (2) on the remote control for 2 seconds. When the changed version displays, the Re-write will be completed.

20. Select the "Disconnect" from File menu.

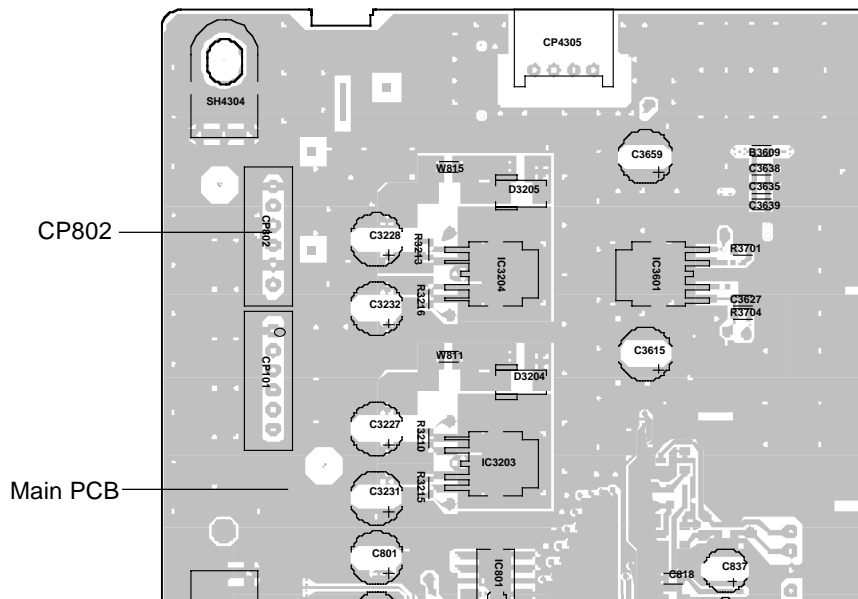
## UPDATE FOR VCTP SOFTWARE

Before Update the VCTP Software, it is necessary to install the WRITING TOOLS into the PC. For the installation of WRITING TOOLS, refer to the "INSTALL FOR WRITING TOOLS".

1. Unplug the AC cord, and remove the back cabinet.
2. Short circuit the 1 pin and 2 pin of CP802 on the Main PCB.
3. Insert the AC cord.
4. Remove the short circuit 1 pin and 2 pin of CP802 on the Main PCB.
5. Set the EU LCD MICON VER UP ROM DISC (JG176) to PC.
6. Start the "VCTP" (Writing Tools).
7. Select the "LPT Preferences" from File/Preferences menu, then input "5" to the value of "Delay", and press "OK".  
**NOTE: This step is not necessary from next time.**

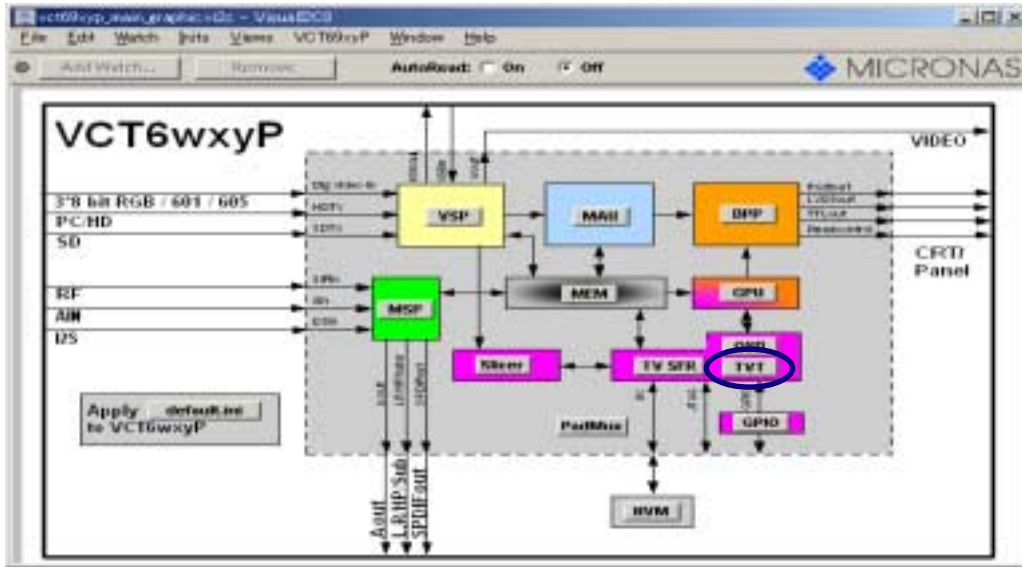


8. Using the MICON PROGRAM JIG KIT 25-4 (JG203), connect the PC Terminal and 1~4 pin of CP802 on the Main PCB (JG203(Red line) =1 pin of CP802).



## UPDATE FOR VCTP SOFTWARE

9. Press the "TVT".



10. Remove the check of "Bootloader Version", and check it again.


**NOTE :** When the number of the side of the check box becomes 40, you can proceed to next step. If the number doesn't become 40, check the connection and try again from step 1.

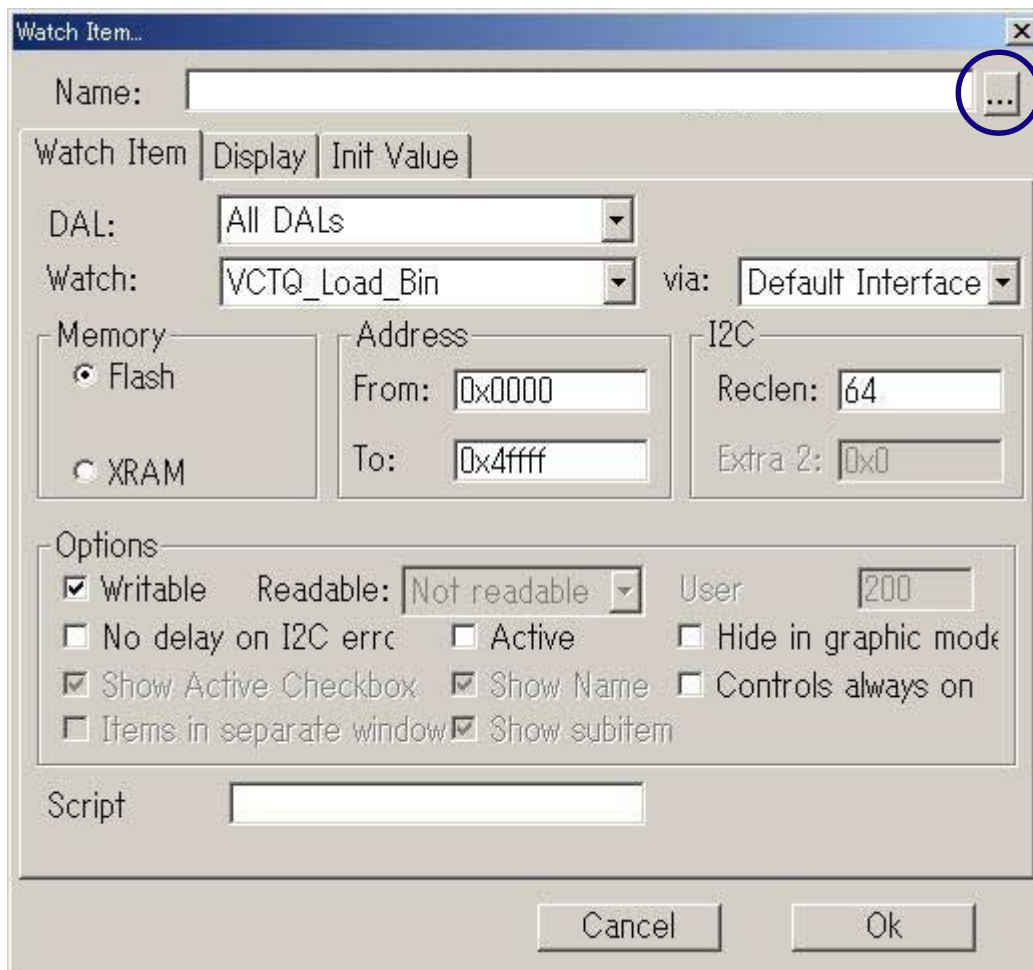
ini	<input type="checkbox"/>	
bootloader.bat	<input type="checkbox"/>	Go
bootloader_B1.bat	<input type="checkbox"/>	GO B1
Bootloader Version	<input checked="" type="checkbox"/>	40
Erase Flash	<input type="checkbox"/>	Erase Flash
download\flash.hex	<input type="checkbox"/>	Load Hex -> Flash
C:\TV\MINTS8\Output\VCTP\Obj\Mints.bin	<input type="checkbox"/>	Load Bin -> Flash
Start software in flash	<input type="checkbox"/>	Jump Flash
Set JTAG options ...	<input type="checkbox"/>	JTAG
Flash database	<input type="checkbox"/>	
download\yourfile1.hex	<input type="checkbox"/>	Load Hex -> Flash
download\yourfile2.hex	<input type="checkbox"/>	Load Hex -> Flash
C:\TV\TvTest\VCTPTEST\output\VCTp\obj\VctpTest_pasl_lvds_adc_vin9.b	<input type="checkbox"/>	Load Bin -> Flash
download\yourfile2.bin	<input type="checkbox"/>	Load Bin -> Flash
Expert Bootloader	<input type="checkbox"/>	
Expert XRAM	<input type="checkbox"/>	
Expert IRAM	<input type="checkbox"/>	
C:\W12C\ic\vct6wxyP\init\B1\init\vctp_lvds_ntsc.ini	<input type="checkbox"/>	INIT

## UPDATE FOR VCTP SOFTWARE

- Press the “Erase Flash”.  
Then, press the “Load Bin -> Flash” twice.



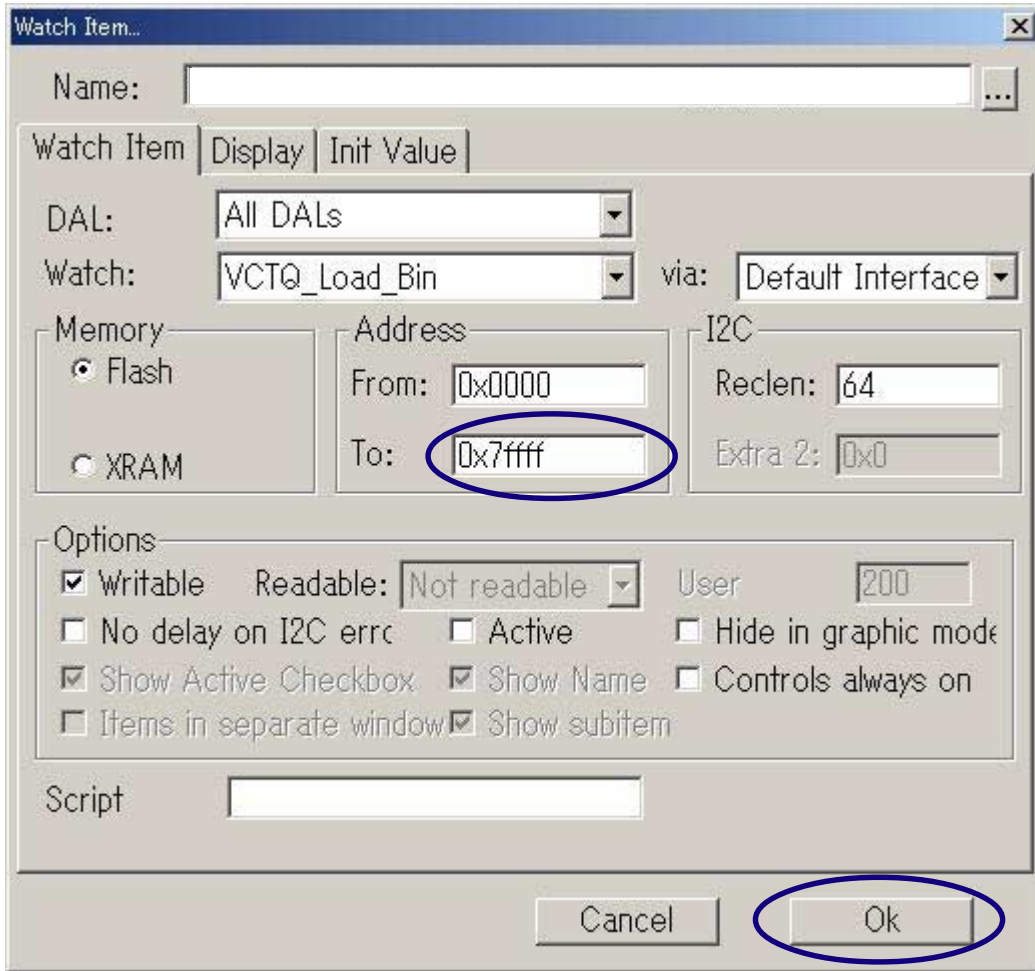
- Press the , and select the writing Firmware.





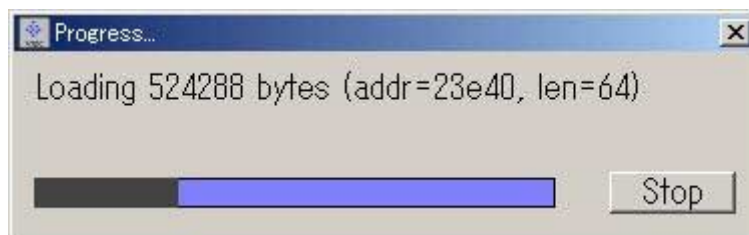
## UPDATE FOR VCTP SOFTWARE

13. Select the "Address", then input the "0x7ffff", and press the "OK".



14. Press the "Load Bin -> Flash".

The following window will appear, then writing will start. After the finishing of the writing, window will close.



15. Finish the writing, unplug the AC cord, and remove the MICON PROGRAM JIG KIT 25-4 (JG203).

16. Insert the AC cord again, turn on the power.

17. Press both VOL. DOWN button on the set and Channel button (2) on the remote control for 2 seconds.

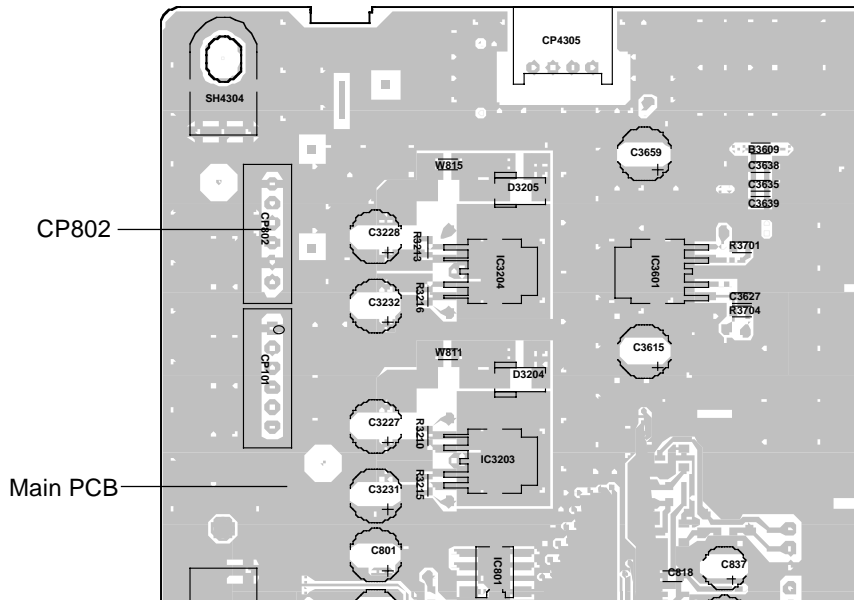
18. Confirm that displayed version agreement with writing.



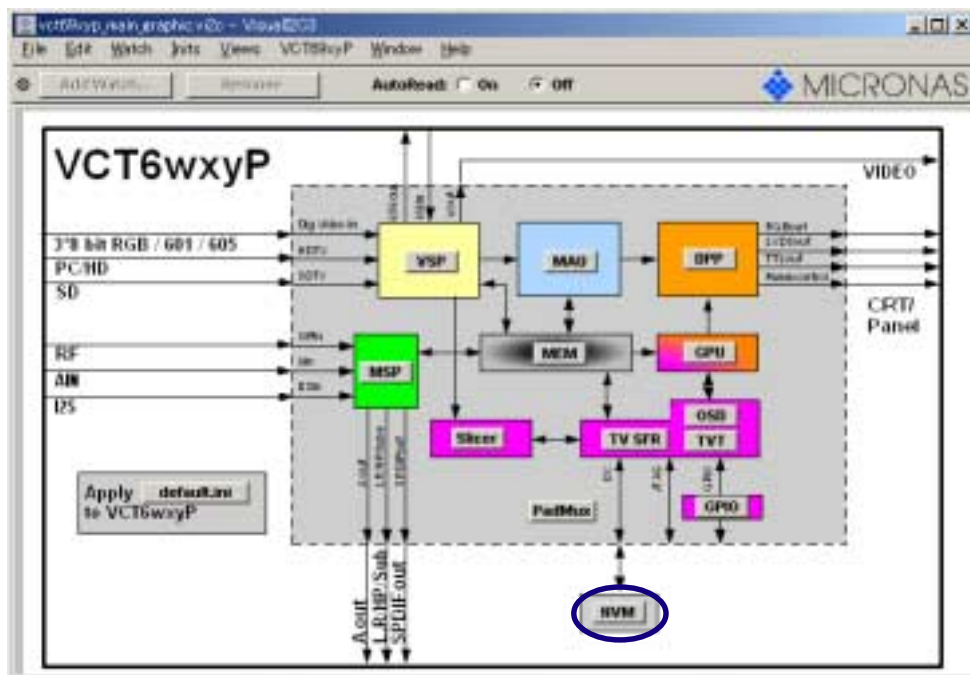
## UPDATE FOR EEPROM DATA

Before Update the EEPROM data, it is necessary to install the WRITING TOOLS into the PC. For the installation of WRITING TOOLS, refer to the "INSTALL FOR WRITING TOOLS".

1. Set to the standby mode, and remove the back cabinet.
2. Using the MICON PROGRAM JIG KIT 25-4 (JG203), connect the PC Terminal and Pin 1-4 of CP802 on the Main PCB (JG203(Red line) =1 pin of CP802).

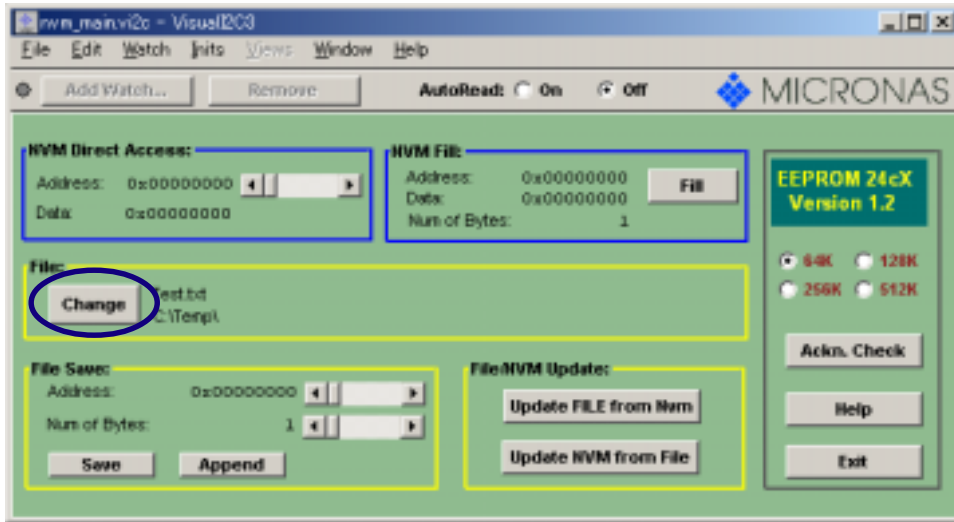


3. Set the EU LCD MICON VER UP ROM DISC (JG176) to PC.
4. Start the "VCTP" (Writing Tools).
5. Press the "NVM".

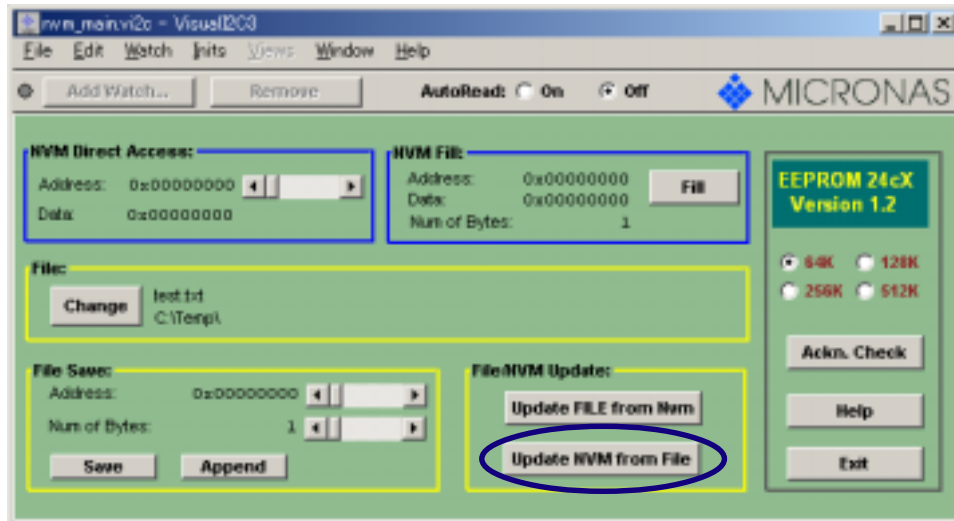


## UPDATE FOR EEPROM DATA

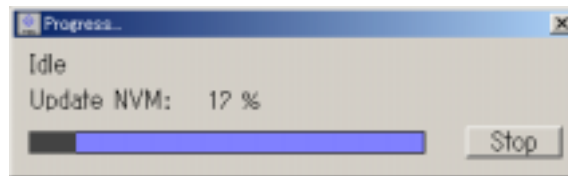
- Press the "Change", and select the writing EEPROM data file (TEXT file).



- Press the "Update NVM from File".



- The following window will appear, writing will start. After the finishing of the writing, the window will close.



- Finish the writing, unplug the AC cord, and remove the MICON PROGRAM JIG KIT 25-4 (JG203).
- Insert the AC cord again, turn on the power.
- Press both VOL. DOWN button on the set and Channel button (2) on the remote control for 2 seconds.
- Confirm that displayed version agreement with writing.

# ELECTRICAL ADJUSTMENTS

## 1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

### CAUTION

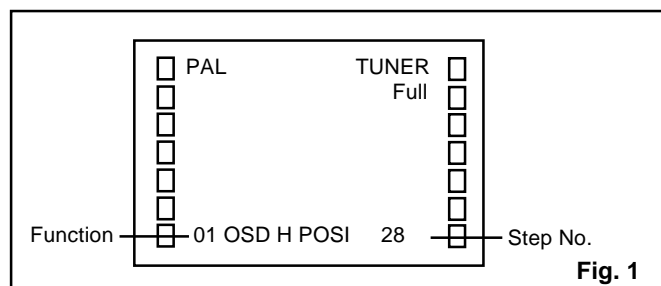
- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease (**YG6260M**) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

### 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. 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.
5. To display the adjustment screen for TUNER, EXT1, EXT2, EXT3, Component, HDMI1, HDMI2 and PC mode, press the button on the remote control. 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	23	H POSI MIN
02	V POSI OSD	24	V POSI
03	R DRIVE(M)	25	V POSI MAX
04	R CUT OFF(M)	26	V POSI MIN
05	G DRIVE(M)	27	BAKLIGHT CENT
06	G CUT OFF(M)	28	BAKLIGHT MAX
07	B DRIVE(M)	29	BAKLIGHT MIN
08	B CUT OFF(M)	30	BRIGHT CENTER
09	R DRIVE(H)	31	BRIGHT MAX
10	R CUT OFF(H)	32	BRIGHT MIN
11	G DRIVE(H)	33	TINT CENTER
12	G CUT OFF(H)	34	CONTRAST CENTER
13	B DRIVE(H)	35	CONTRAST MAX
14	B CUT OFF(H)	36	CONTRAST MIN
15	R DRIVE(L)	37	CONTRAST 50
16	R CUT OFF(L)	38	COLOR CENTER
17	G DRIVE(L)	39	COLOR MAX
18	G CUT OFF(L)	40	COLOR MIN
19	B DRIVE(L)	41	TEXT H POSI
20	B CUT OFF(L)	42	TEXT V POSI
21	H POSI	43	DAC VCOM
22	H POSI MAX		

Fig. 1-2






## 2. BASIC ADJUSTMENTS

### 2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of Fig. 1-2 and press the channel button (03) on the remote control to select "R DRIVE (N)".
6. Press the UP/DOWN button on the remote control to select the "R CUTOFF (N)", "B DRIVE (N)", "B CUTOFF (N)", "R DRIVE (C)", "R CUTOFF (C)", "B DRIVE (C)", "B CUTOFF (C)", "R DRIVE (W)", "R CUTOFF (W)", "B DRIVE (W)" and "B CUTOFF (W)".
7. Adjust the RIGHT/LEFT button on the remote control to whiten the R CUTOFF (N), B DRIVE (N), B CUTOFF (N), R DRIVE (C), R CUTOFF (C), B DRIVE (C), B CUTOFF (C), R DRIVE (W), R CUTOFF (W), B DRIVE (W) and B CUTOFF (W) at each step tone sections equally.
8. Perform the above adjustments 5 and 6 until the white color is looked like a white.

# ELECTRICAL ADJUSTMENTS

## 2-2: CONTRAST

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the color bar pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "50"
5. Check if the picture is normal.
6. Receive the color bar pattern. (VIDEO1 Input)
7. Using the remote control, set the brightness and contrast to normal position.
8. Press the  button on the remote control to set to the EXT1 mode.
9. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "38".
10. Check if the picture is normal.
11. Receive the color bar pattern. (VIDEO2 Input)
12. Using the remote control, set the brightness and contrast to normal position.
13. Press the  button on the remote control to set to the EXT2 mode.
14. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "38".
15. Receive the color bar pattern. (VIDEO3 Input)
16. Using the remote control, set the brightness and contrast to normal position.
17. Press the  button on the remote control to set to the EXT3 mode.
18. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "38".
19. Receive the color bar pattern. (AV RGB Input)
20. Using the remote control, set the brightness and contrast to normal position.
21. Press the  button on the remote control to set to the Component mode.
22. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "38".
23. Receive the color bar pattern. (S-VIDEO Input)
24. Using the remote control, set the brightness and contrast to normal position.
25. Press the  button on the remote control to set to the HDMI mode.
26. Press the LEFT/RIGTH button on the remote control until the contrast step No. becomes "38".
27. Check if the picture is normal.

# ELECTRICAL ADJUSTMENTS

## 2-3: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each of the adjustment item is set correctly referring below. (TUNER/AV/CS/HDMI/PC)

NO.	FUNCTION	TUNER Step No.	AV				CS (NTSC)				CS (PAL)				HDMI (NTSC)				HDMI (PAL)				PC					DTV Step No.
			CVBS Step No.	S(Y/C) Step No.	RGB Step No.	480i Step No.	480p Step No.	720p Step No.	1080i Step No.	576i Step No.	576p Step No.	720p Step No.	1080i Step No.	480i Step No.	480p Step No.	VGA Step No.	720p Step No.	1080i Step No.	576i Step No.	576p Step No.	720p Step No.	1080i Step No.	640x480 Step No.	800x600 Step No.	1024x768 Step No.	1280x768 Step No.	1360x768 Step No.	
1	OSD H POSI	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
2	OSD V POSI	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
3	R DRIVE (M)	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	
4	R CUTOFF(M)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	
5	G DRIVE(M)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	
6	G CUTOFF (M)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
7	B DRIVE (M)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	
8	B CUTOFF (M)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
9	R DRIVE (H)	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	-	-	-	-	850	
10	R CUTOFF (H)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	
11	G DRIVE (H)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
12	G CUTOFF (H)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
13	B DRIVE (H)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
14	B CUTOFF (H)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
15	R DRIVE (L)	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	-	-	-	-	850	
16	R CUTOFF (L)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	0	
17	G DRIVE (L)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
18	G CUTOFF (L)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
19	B DRIVE (L)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
20	B CUTOFF (L)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	-	-	-	-	ADJ	
21	H POSI 50 Hz (4:3)	642	642	642	642	-	-	-	-	608	284	-	-	-	-	-	-	76	5	-	-	-	-	-	-	-	578	
	H POSI 50 Hz (4:3) OTHER	640	640	640	642	-	-	-	-	608	284	307	256	-	-	-	-	76	5	138	38	-	-	-	-	-	578	
	H POSI 60 Hz (4:3)	584	584	584	582	560	266	-	-	-	-	-	52	5	5	-	-	-	-	-	-	129	191	279	258	344	554	
	H POSI CENTER (PC)	586	586	586	582	560	266	306	256	-	-	-	52	5	5	92	33	-	-	-	-	129	191	279	358	444	-	
	H POSI 60 Hz (4:3) OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	299	291	379	358	444	-	
22	H POSI MAX (PC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	91	179	158	244	-	
23	H POSI MIN (PC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	V POSI 50Hz FULL SCREEN/Cinema OTHER	25	25	25	23	-	-	-	-	25	50	22	19	-	-	-	-	13	37	23	19	-	-	-	-	-	25	
	V POSI 50Hz FULL SCREEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	V POSI 50Hz Cinema	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	V POSI 60Hz FULL SCREEN/Cinema OTHER	19	19	19	17	19	41	21	18	-	-	-	-	8	27	27	21	18	-	-	-	26	26	26	23	23	-	
	V POSI CENTER (PC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	V POSI 60Hz FULL SCREEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	
	V POSI 60Hz Cinema	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	
25	V POSI MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	51	51	51	51	-	
26	V POSI MIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	
27	BAKLIGHT CENTER	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	
28	BAKLIGHT MAX	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	223	
29	BAKLIGHT MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30	BRIGHT CENTER	#	#	#	#	8	8	8	8	8	8	8	8	15	15	15	15	15	15	15	15	15	15	15	15	15	2	
31	BRIGHT MAX	#	#	#	#	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
32	BRIGHT MIN	#	#	#	#	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	
33	TINT CENTER	#	#	#	#	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
34	CONTRAST CENTER	#	#	#	#	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	
35	CONTRAST MAX	#	#	#	#	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	
36	CONTRAST MIN	#	#	#	#	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
37	CONTRAST 50	#	#	#	#	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	
38	COLOR CENTER	#	#	#	#	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	36	36	36	36	32	
39	COLOR MAX	#	#	#	#	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
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	TEXT H POSI	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	
42	TEXT V POSI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43	DAC VCOM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

NOTE: For the step no. with # mark, please adjust it according to the 2-4.

# ELECTRICAL ADJUSTMENTS

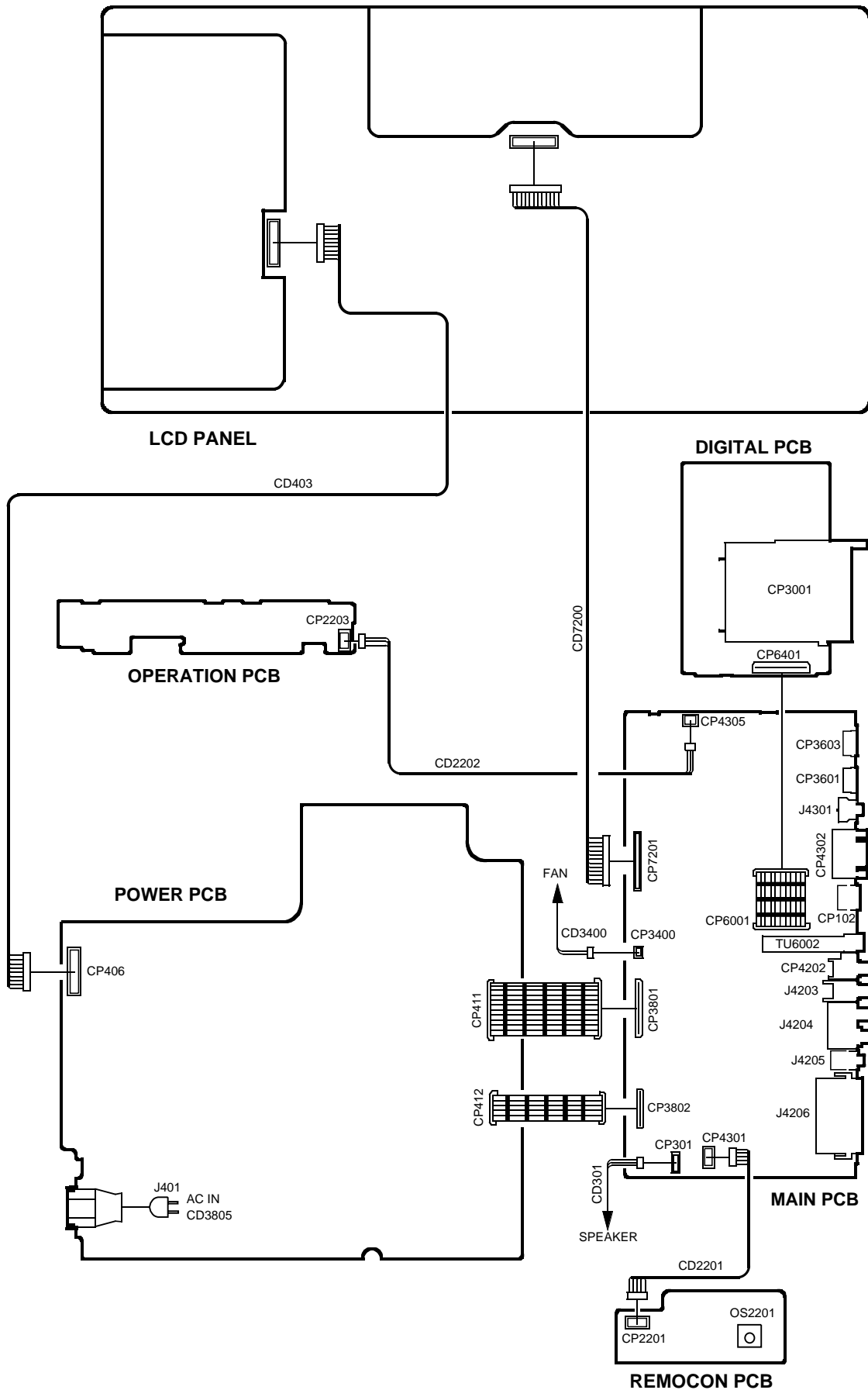
**2-4: Confirmation of Fixed Value (Step No.)**

Please check if the fixed values of each of the adjustment item is set correctly referring below.(A-TU/AV1, AV2(CVBS)/AV3(CVBS)/AV2 S(Y/C)/AV3 S(Y/C)/AV1(RGB))

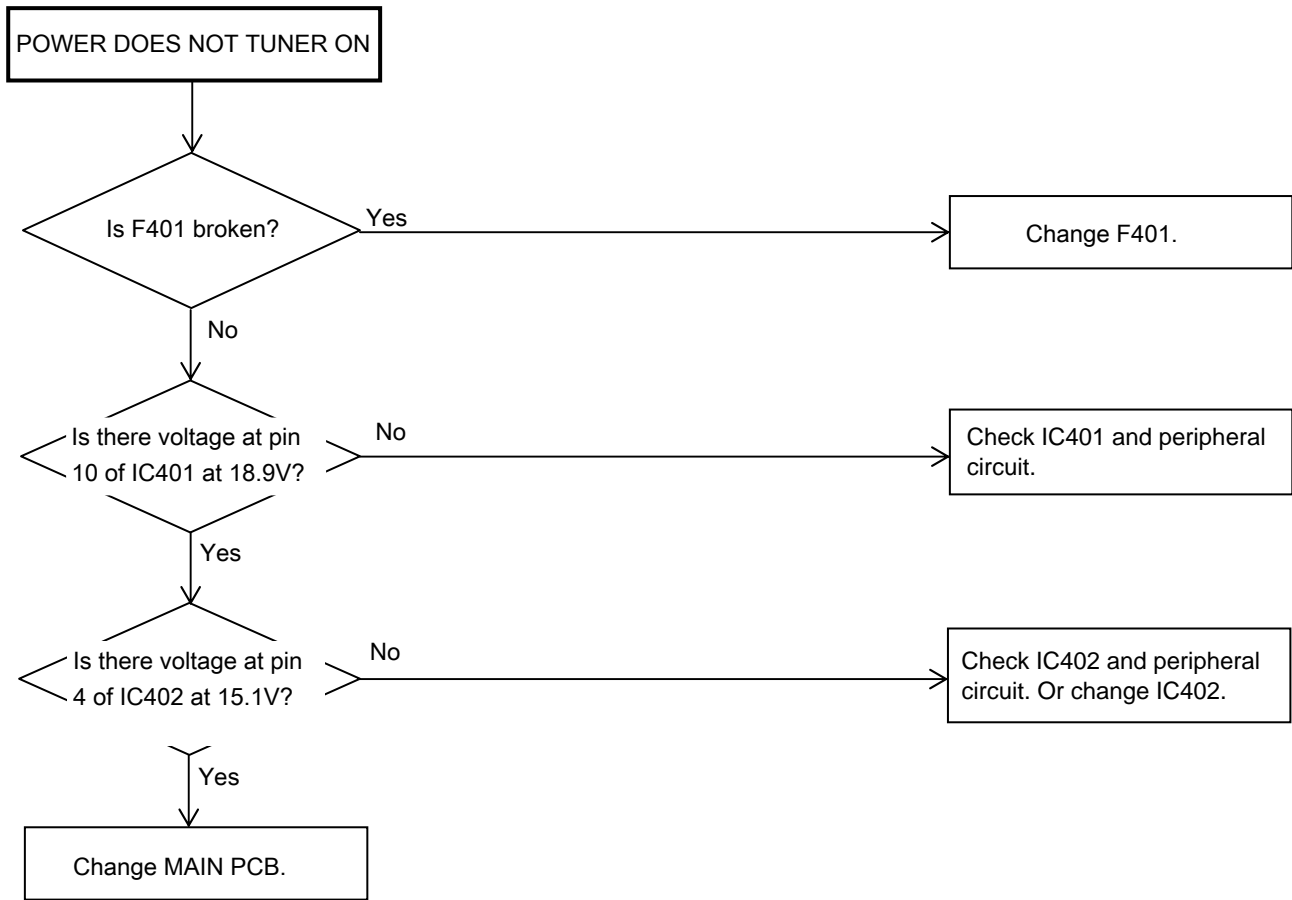
NO.	FUNCTION	A-TU			AV1(SCART1), AV2(SCART2) CVBS						AV3(RCA) CVBS						AV2(SCART2) S(Y/C)						AV3(RCA) S(Y/C)						AV1(SCART1) RGB					
					576i			480i			576i			480i			576i			480i			576i			480i			576i			480i		
		PAL50	PAL60	SECAM	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43	PAL50	PAL60	SECAM	NTSC3.58	NTSC4.43
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.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.		
30	BRIGHT CENTER	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
31	BRIGHT MAX	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
32	BRIGHT MIN	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64	-64		
33	TINT CENTER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
34	CONTRAST CENTER	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ			
35	CONTRAST MAX	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ			
36	CONTRAST MIN	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18			
37	CONTRAST 40	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ			
38	COLOR CENTER	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40			
39	COLOR MAX	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60			
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	0	0	0	0	0	0	0	0			

# ELECTRICAL ADJUSTMENTS

## 3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

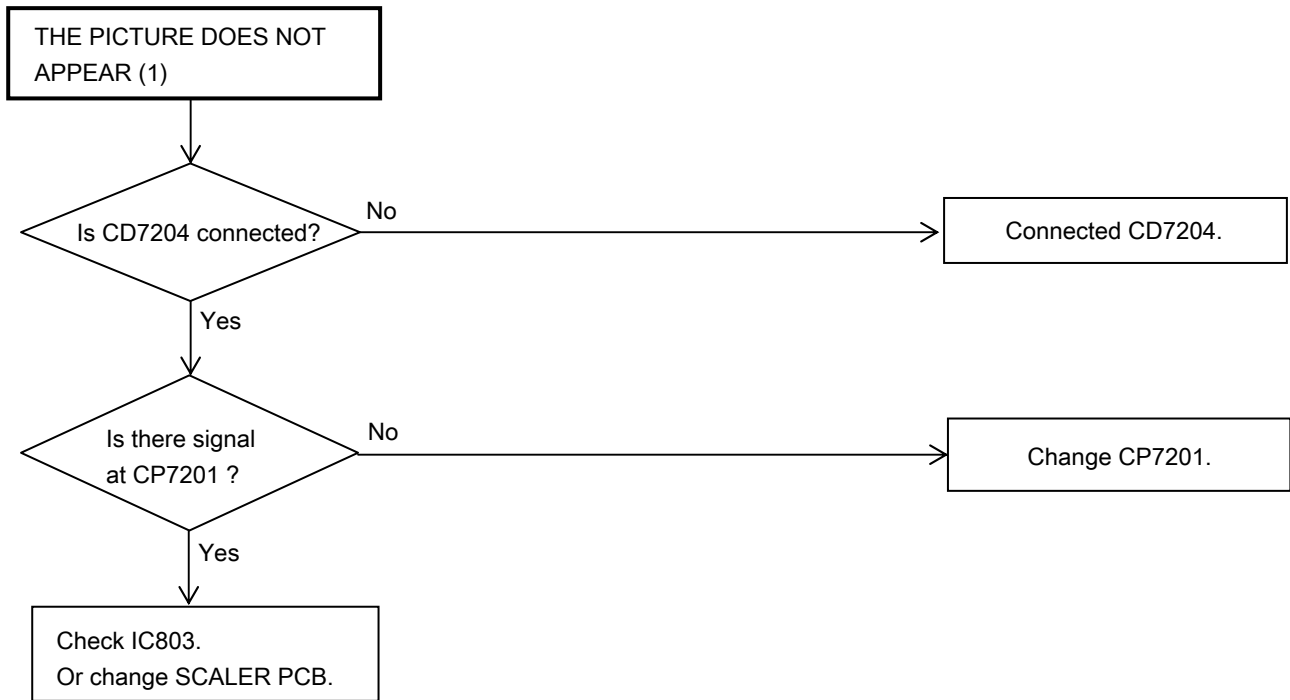


# TROUBLESHOOTING GUIDE





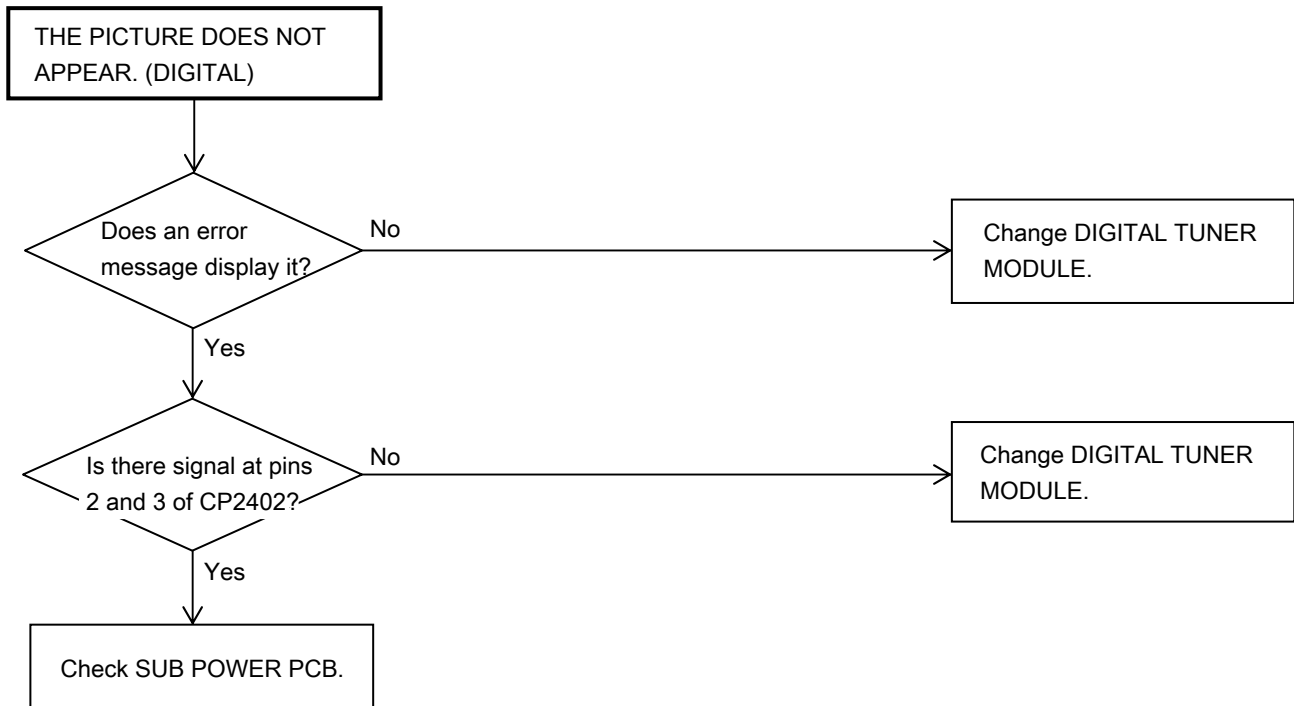
# TROUBLESHOOTING GUIDE



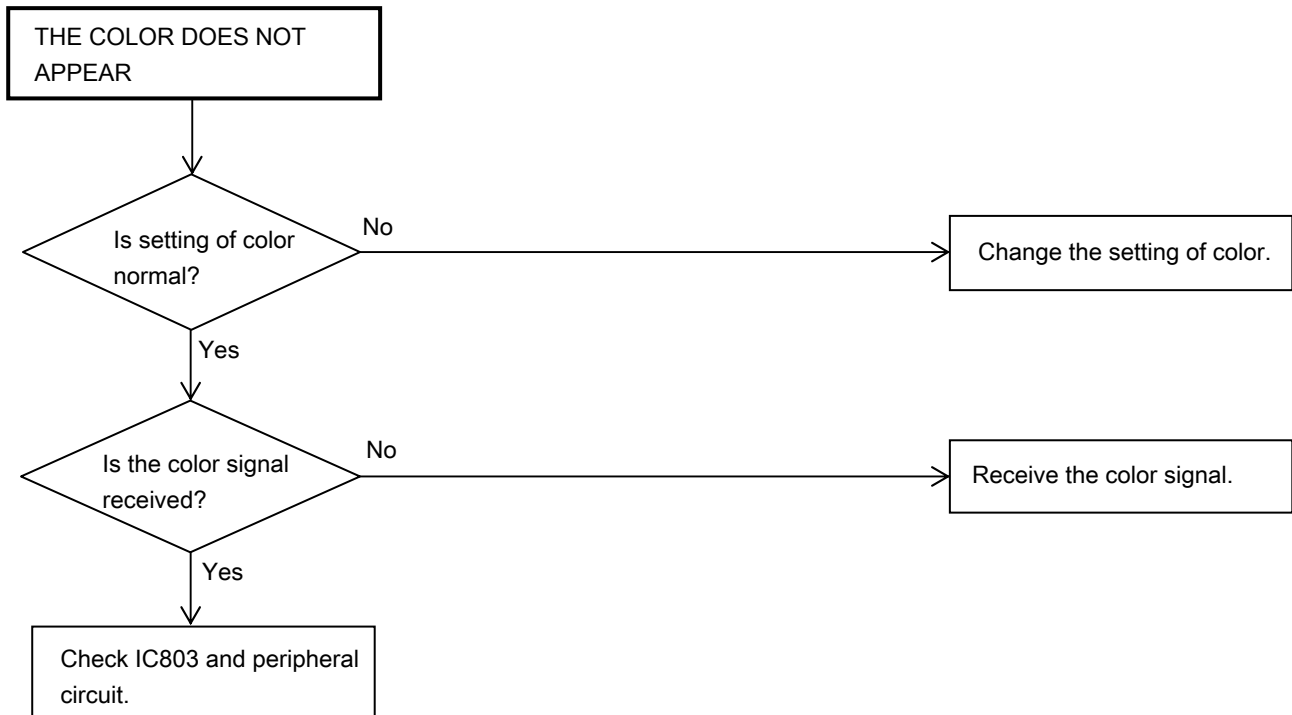
# TROUBLESHOOTING GUIDE



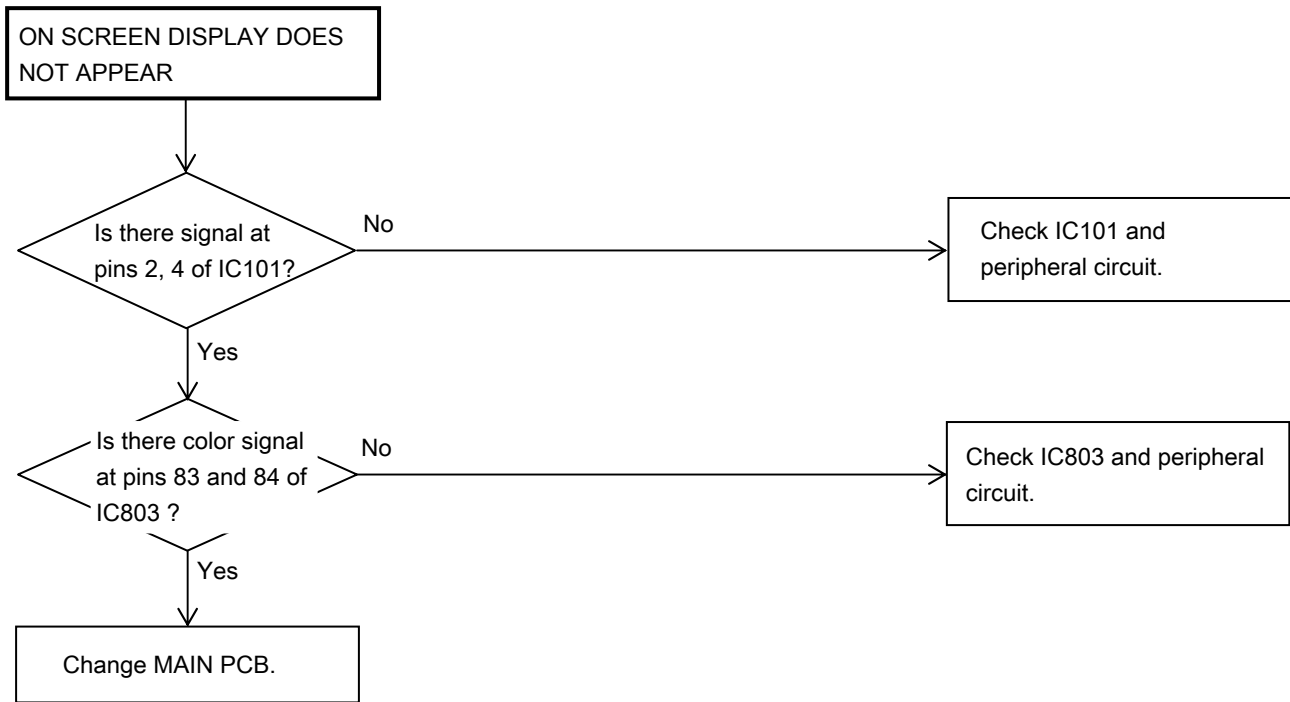
# TROUBLESHOOTING GUIDE



# TROUBLESHOOTING GUIDE



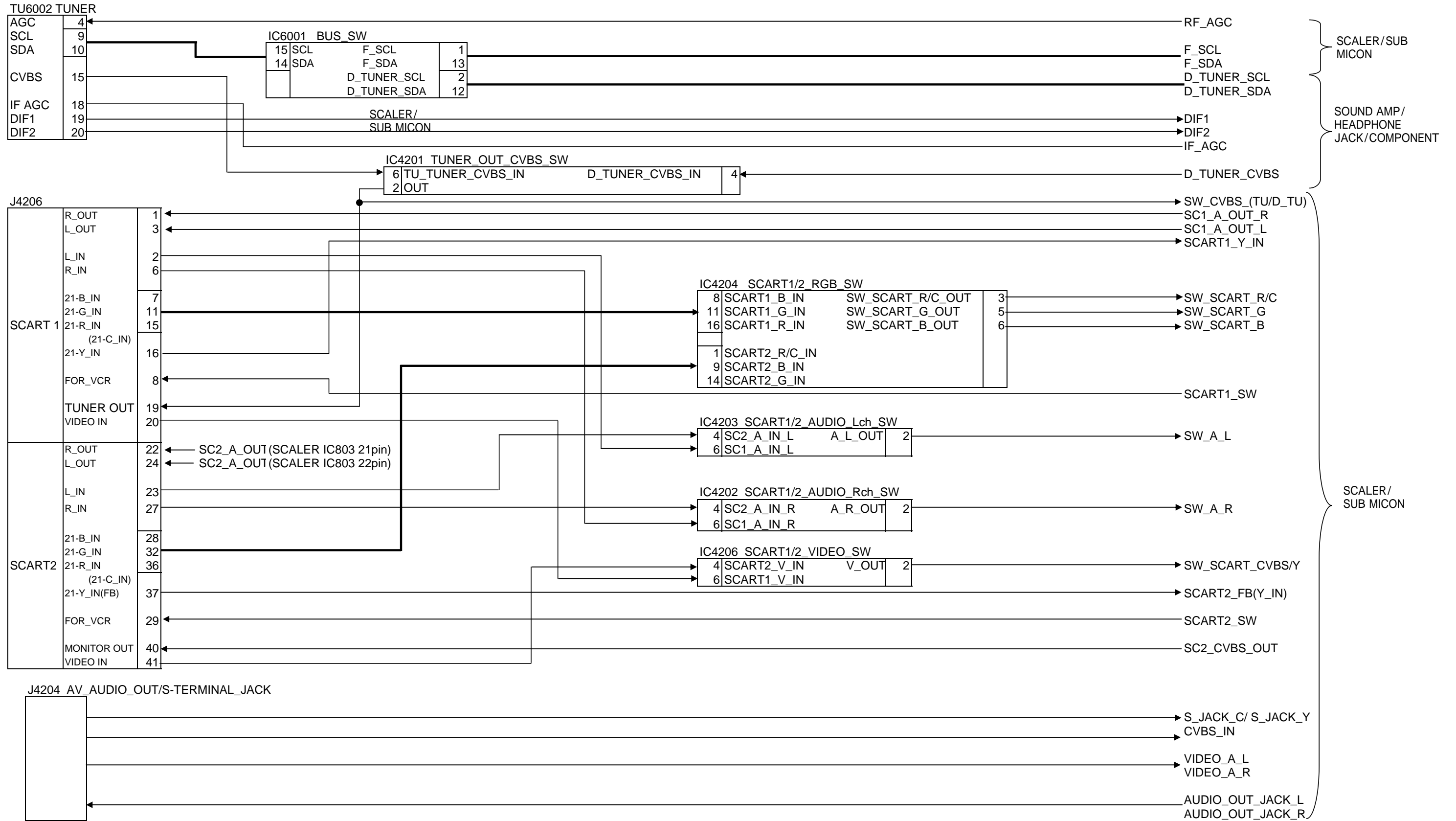
# TROUBLESHOOTING GUIDE



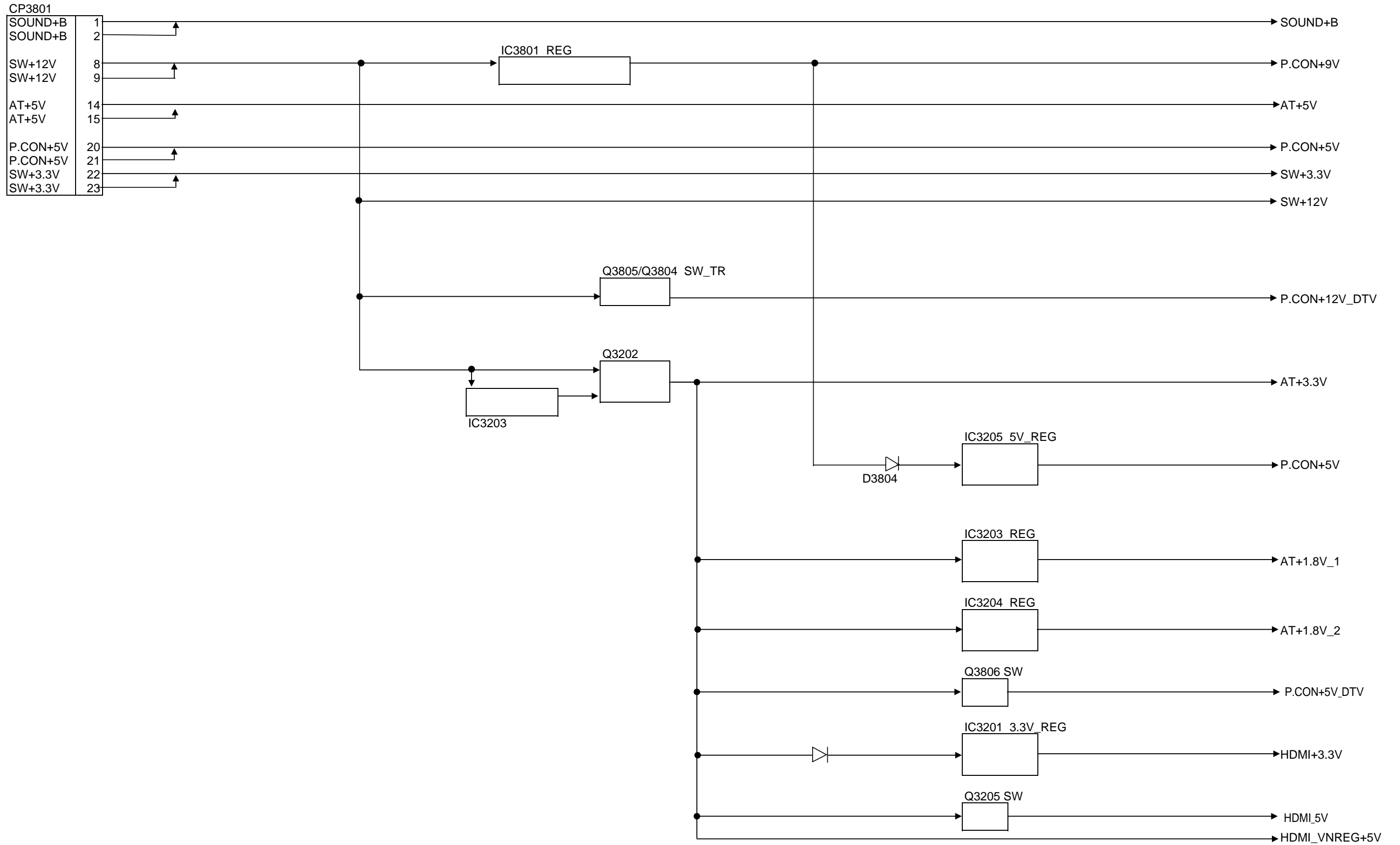
# TROUBLESHOOTING GUIDE



# TUNER/SCART1/SCART2/RCA AUDIO OUT BLOCK DIAGRAM

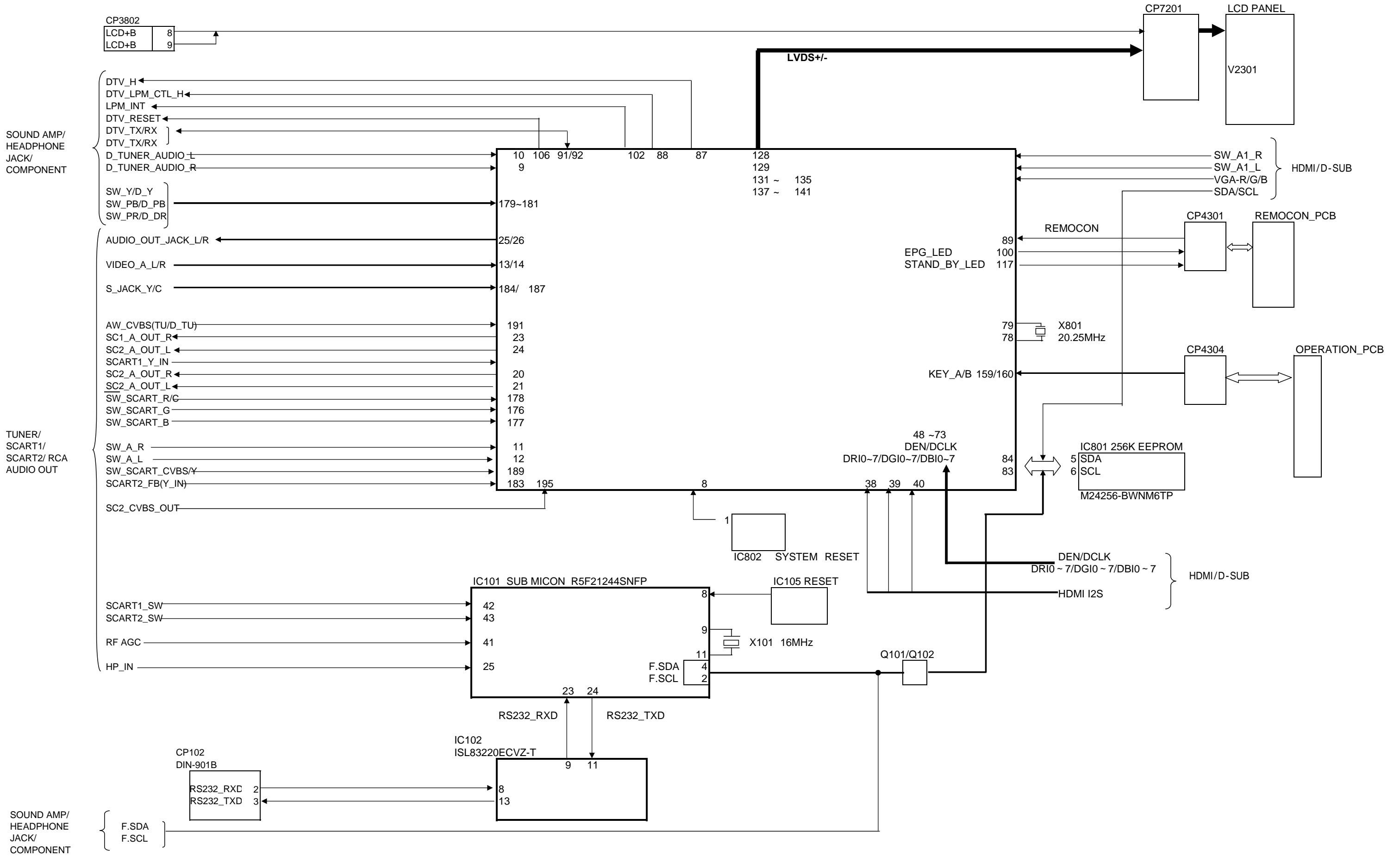


# POWER/REGULATOR BLOCK DIAGRAM

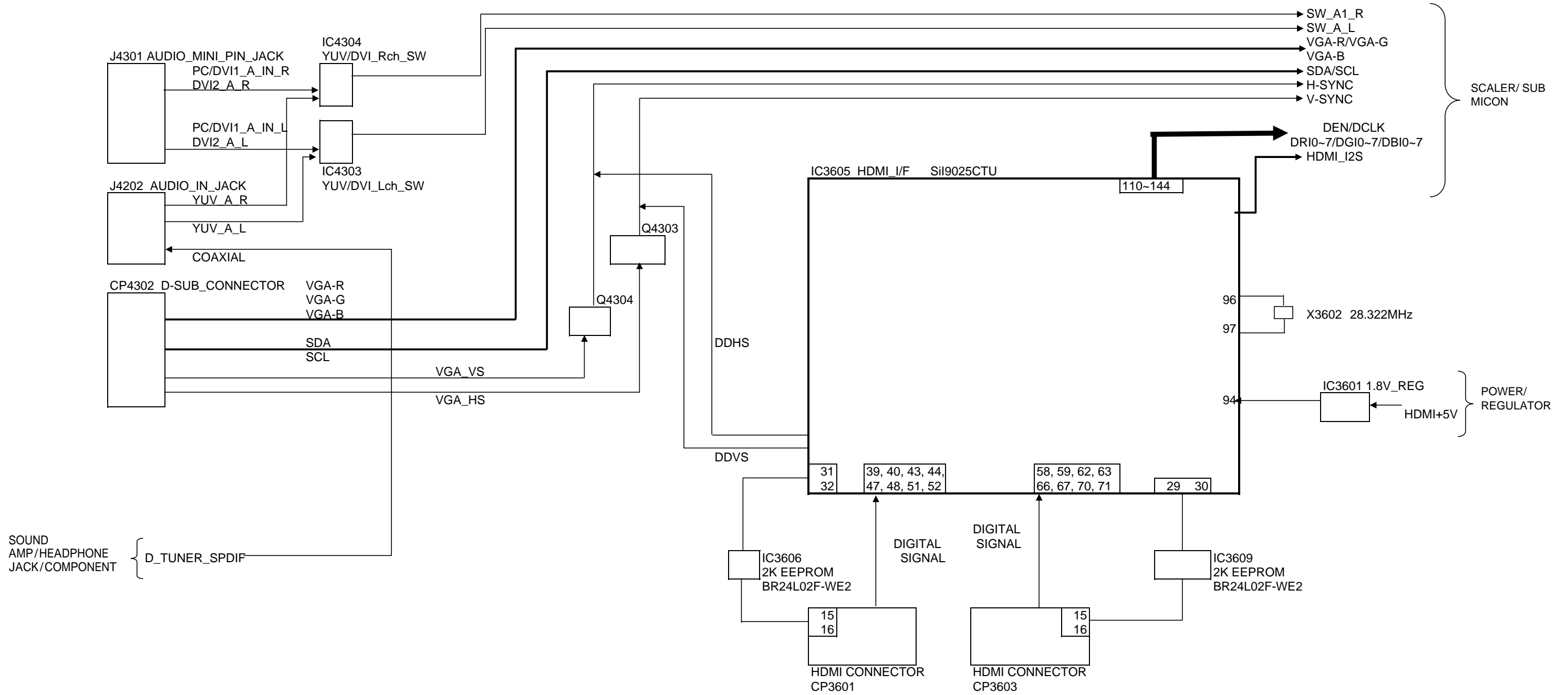




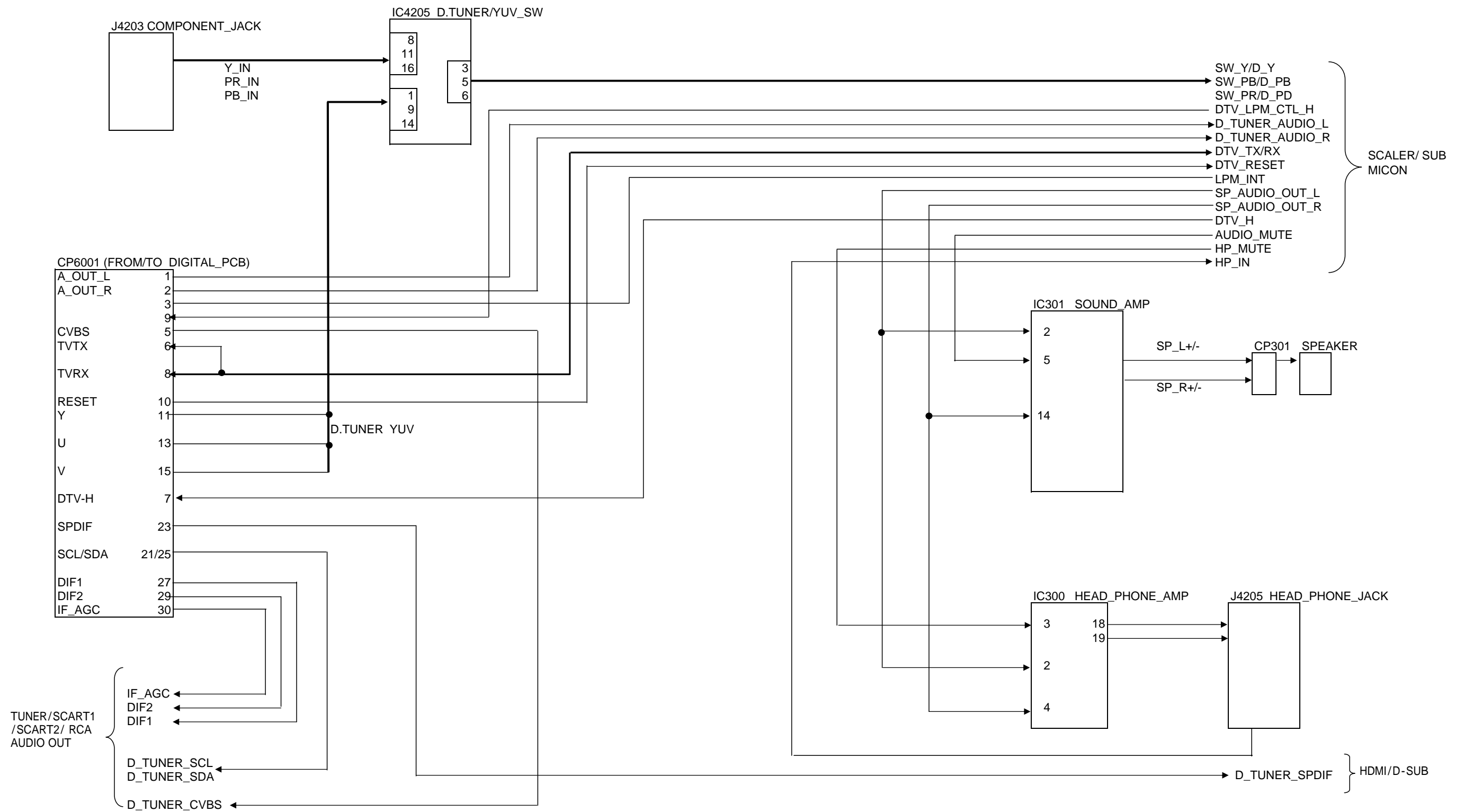
# SCALER/SUB MICON BLOCK DIAGRAM



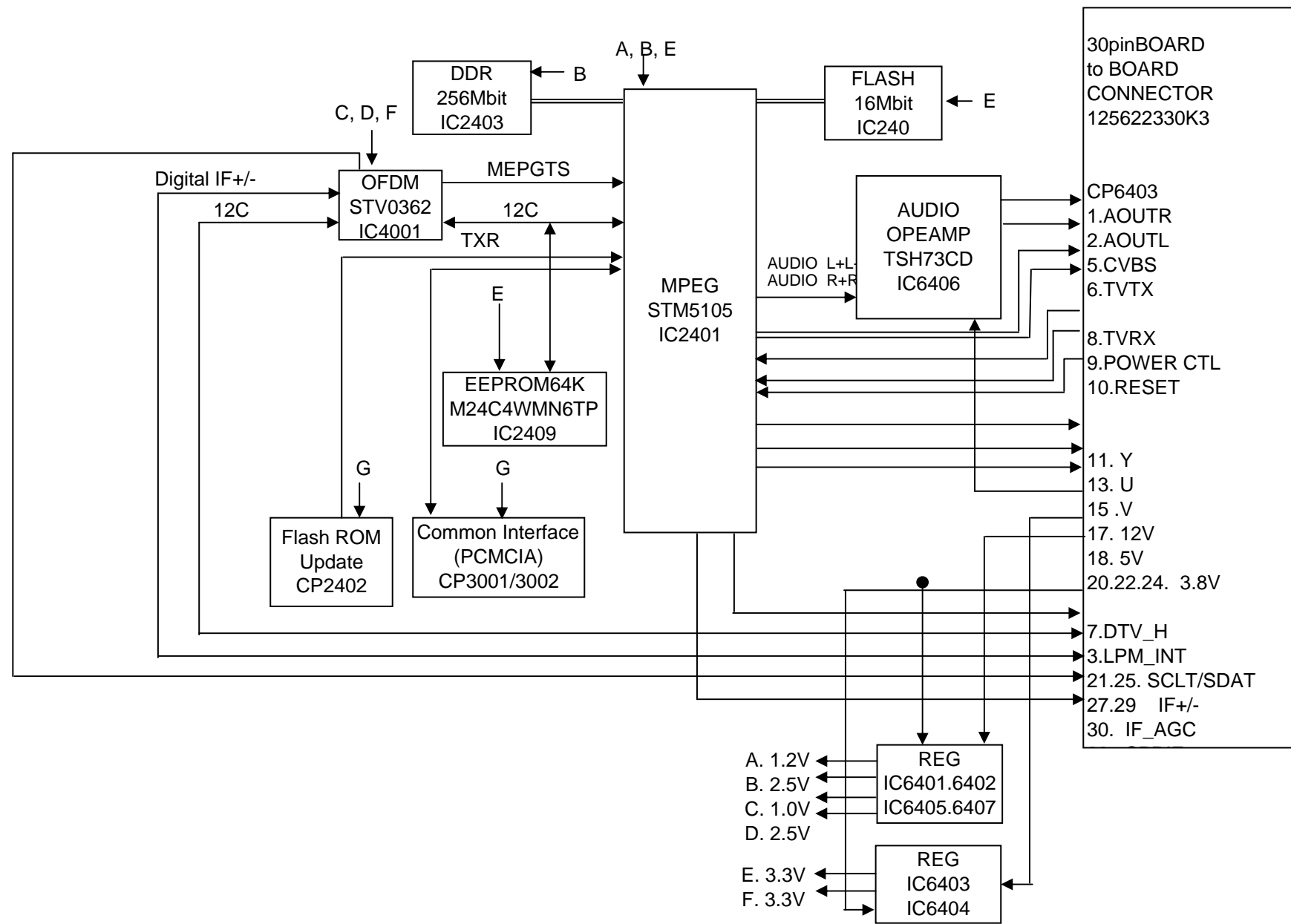
# HDMI/D-SUB BLOCK DIAGRAM



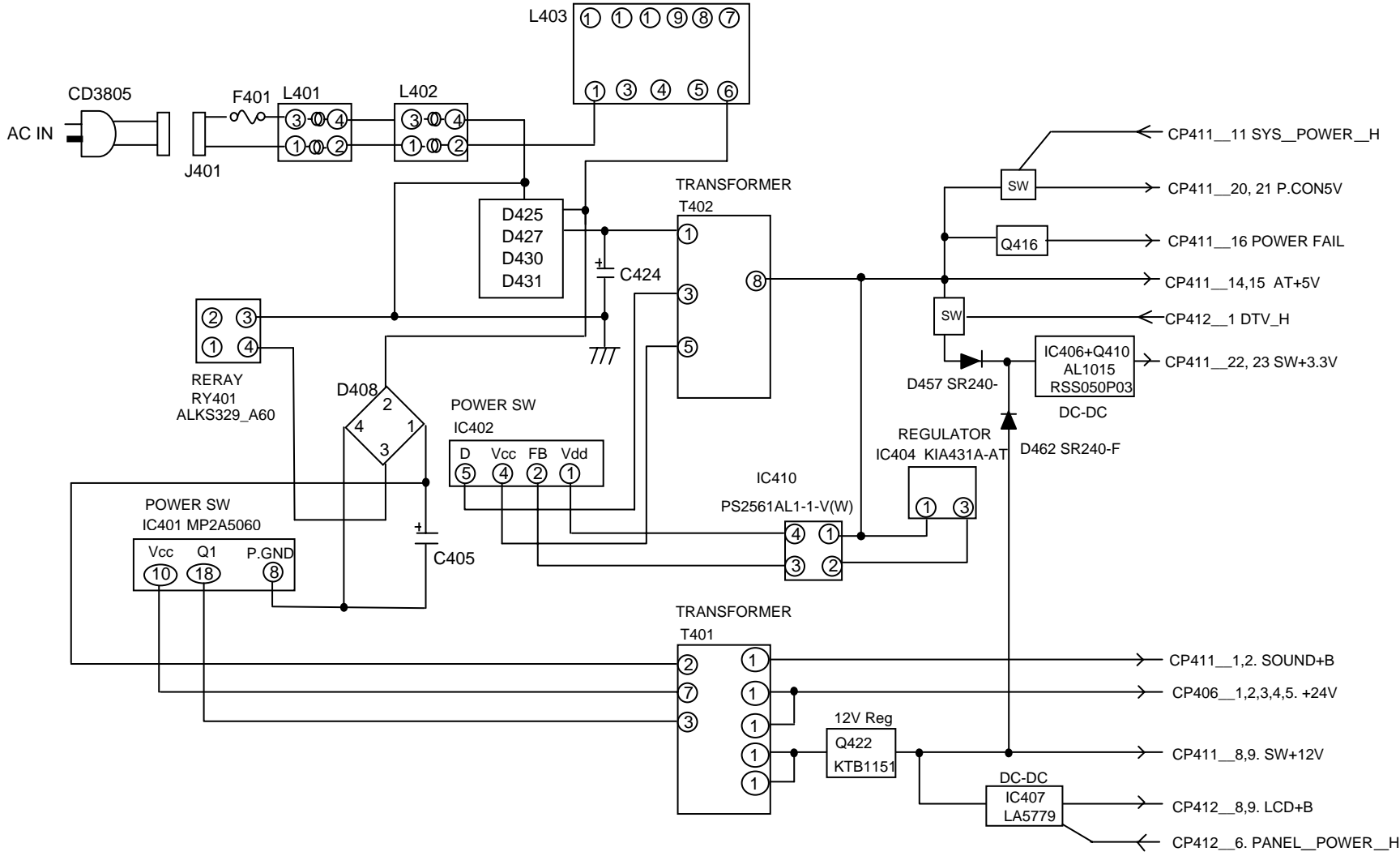
# SOUND AMP/HEADPHONE JACK/COMPONENT JACK BLOCK DIAGRAM



# DIGITAL BLOCK DIAGRAM

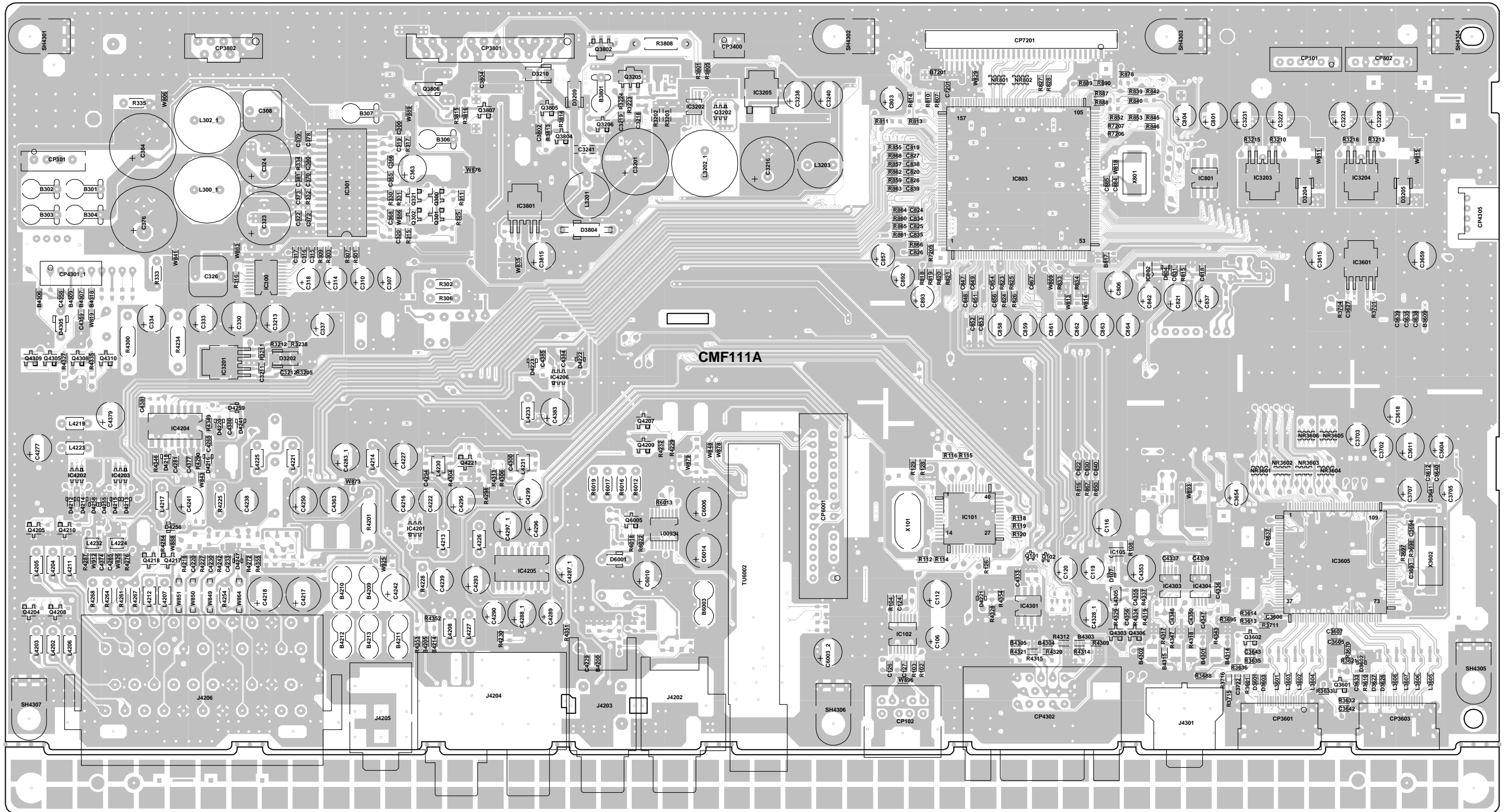


# POWER BLOCK DIAGRAM



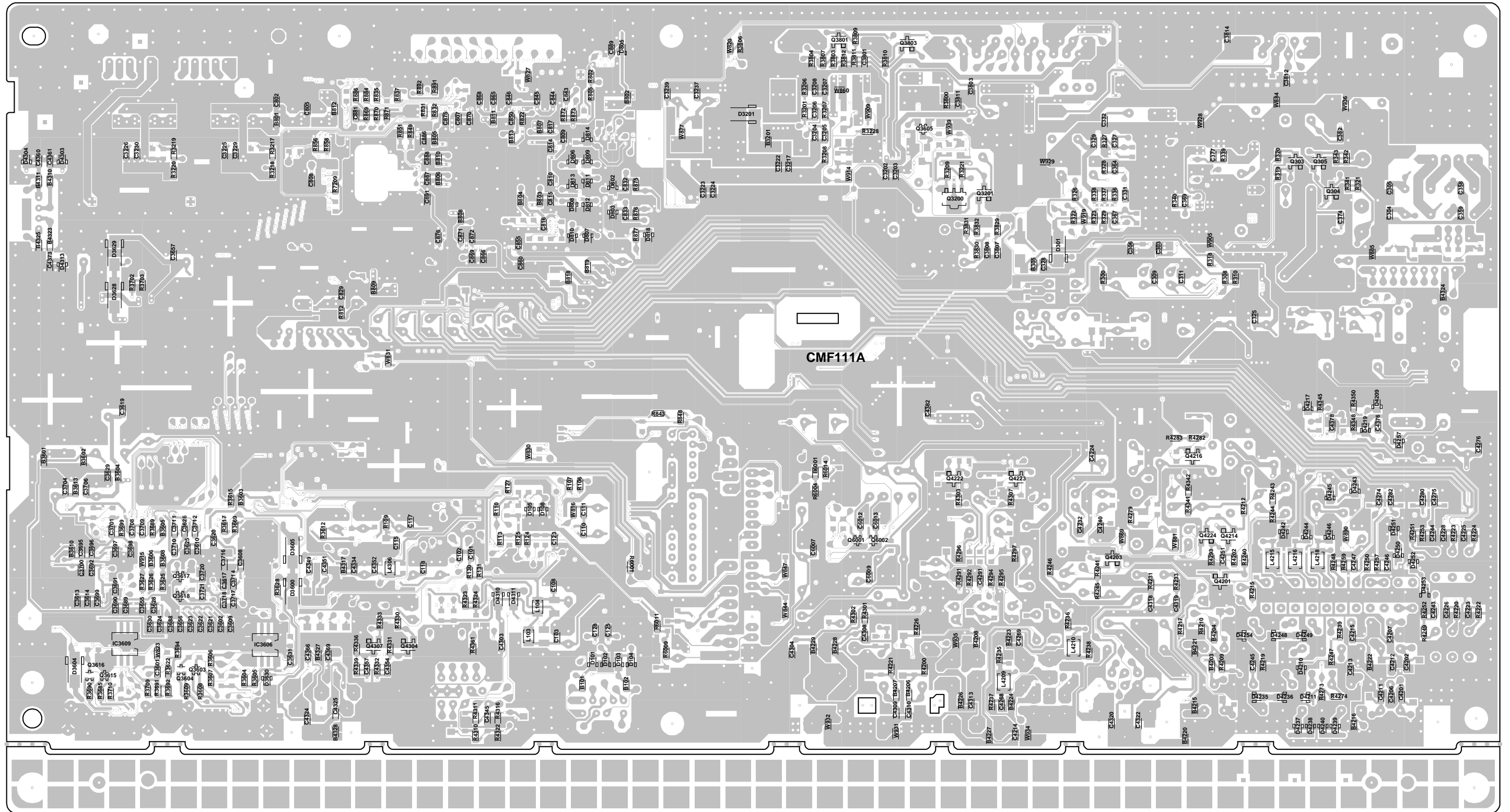
# PRINTED CIRCUIT BOARDS

## MAIN (TOP SIDE)

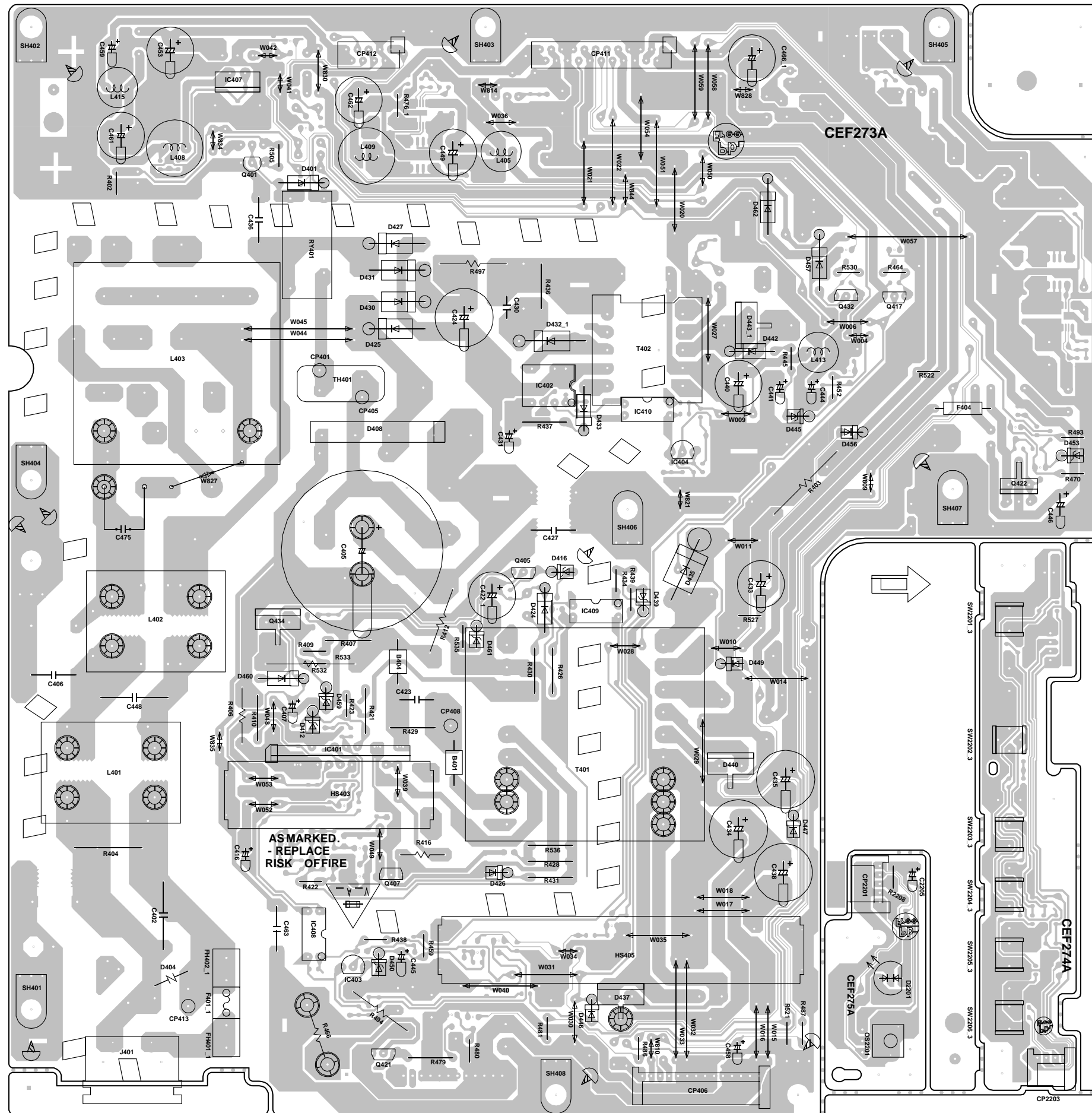


# PRINTED CIRCUIT BOARDS

## MAIN (BOTTOM SIDE)



**PRINTED CIRCUIT BOARDS  
POWER/REMOCON/OPERATION (INSERTED PARTS)  
SOLDER SIDE**

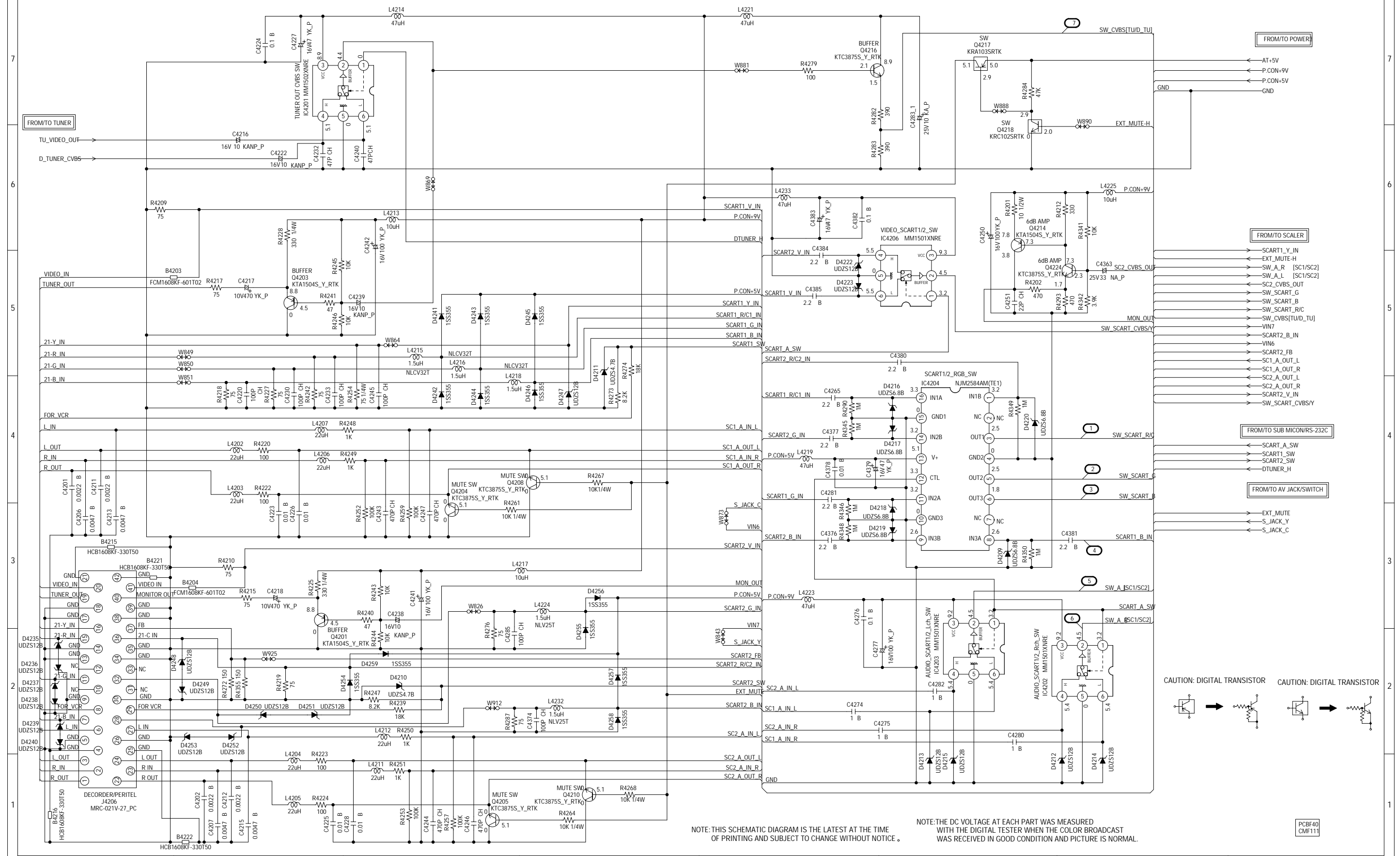






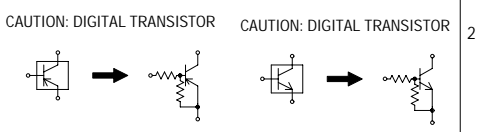


# 21PIN SCHEMATIC DIAGRAM (MAIN PCB)



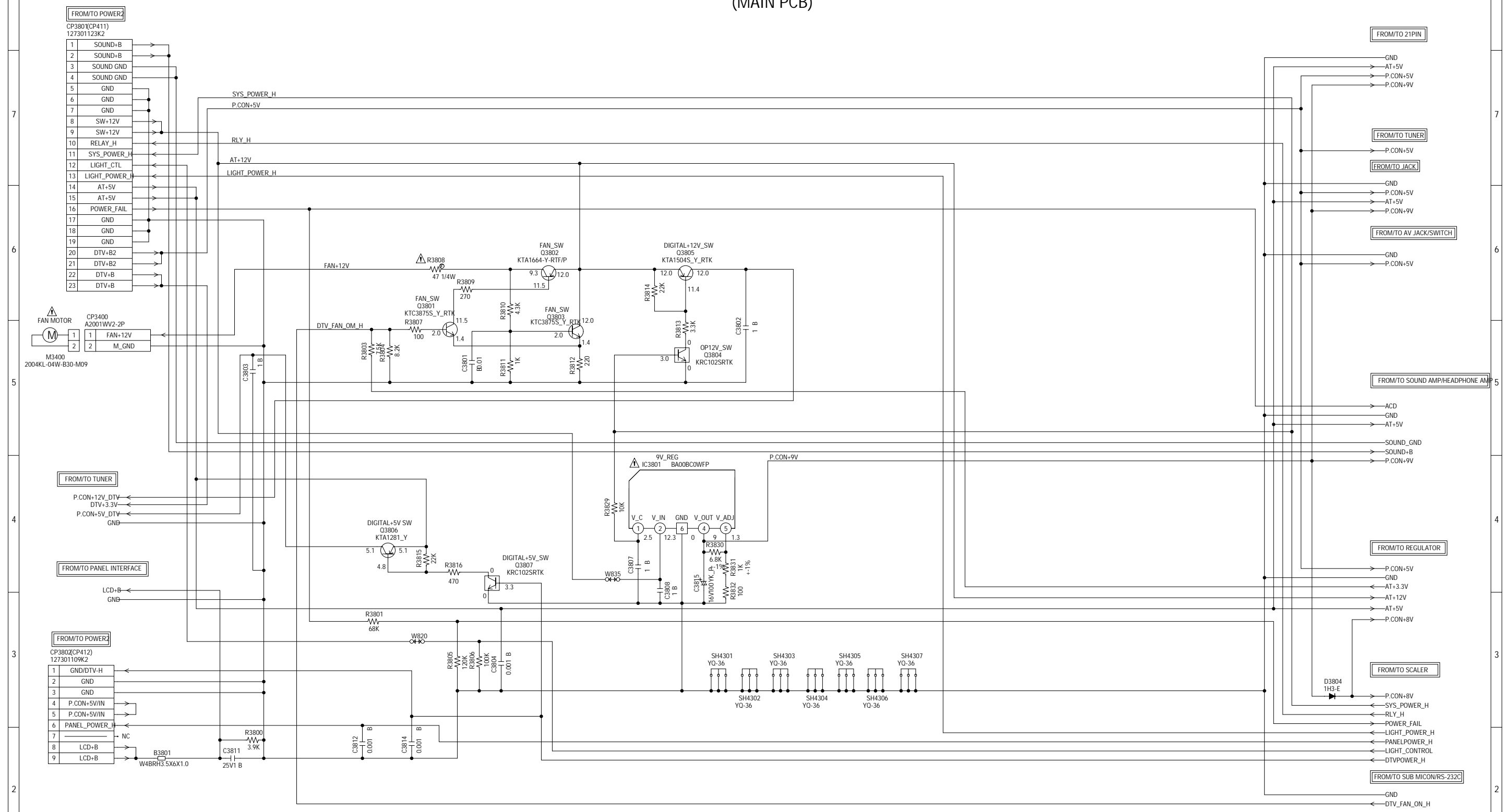
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.



PCBF40  
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# POWER3 SCHEMATIC DIAGRAM (MAIN PCB)



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

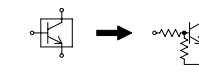
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

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

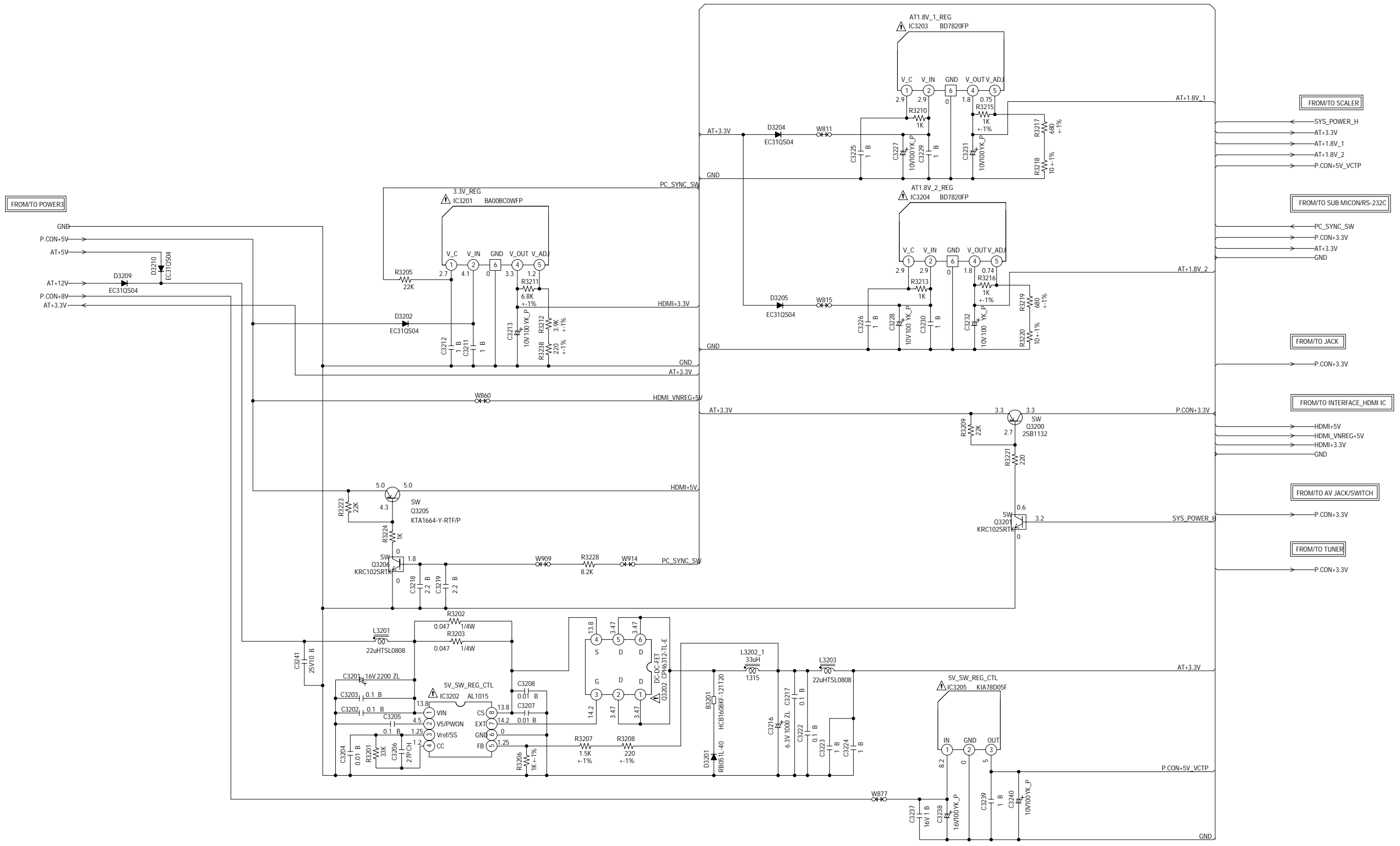
**ATTENTION** LES PIECES REPARÉES PAR UN  $\Delta$  ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: DIGITAL TRANSISTOR



PCBF40  
CMF111

# REGULATOR SCHEMATIC DIAGRAM (MAIN PCB)



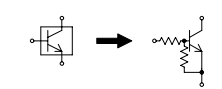
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

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

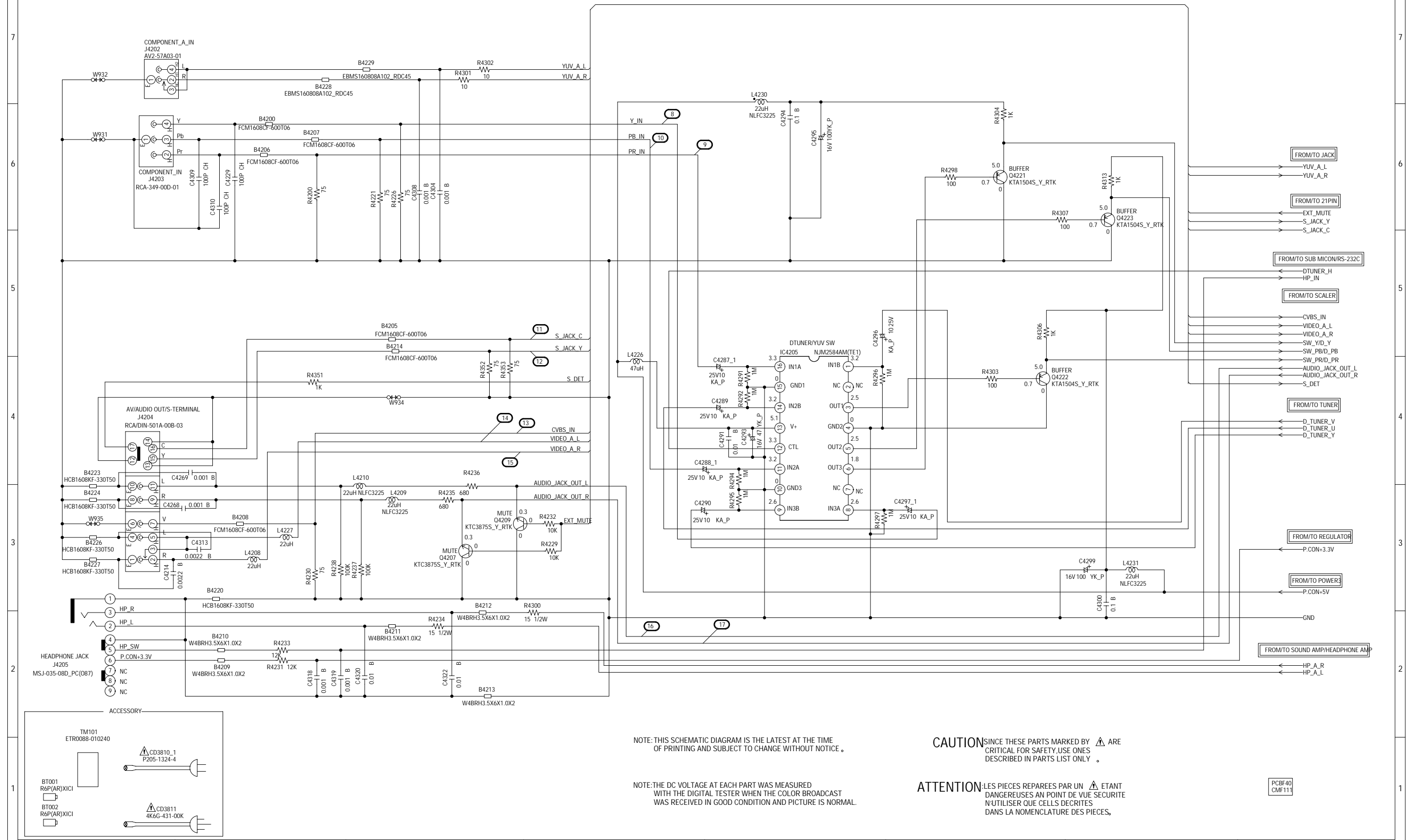
**ATTENTION** LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRIRES DANS LA NOMENCLATURE DES PIECES.

CAUTION: DIGITAL TRANSISTOR



PCBF40  
CMF111

# AV JACK/SWITCH SCHEMATIC DIAGRAM (MAIN PCB)



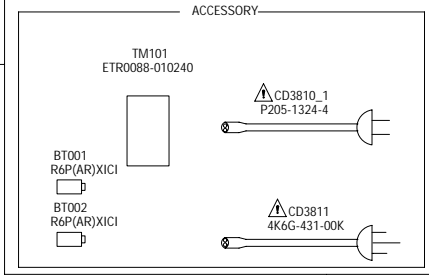
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

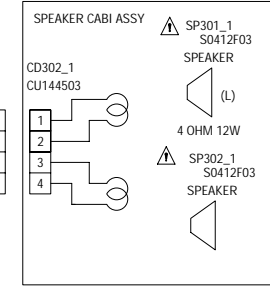
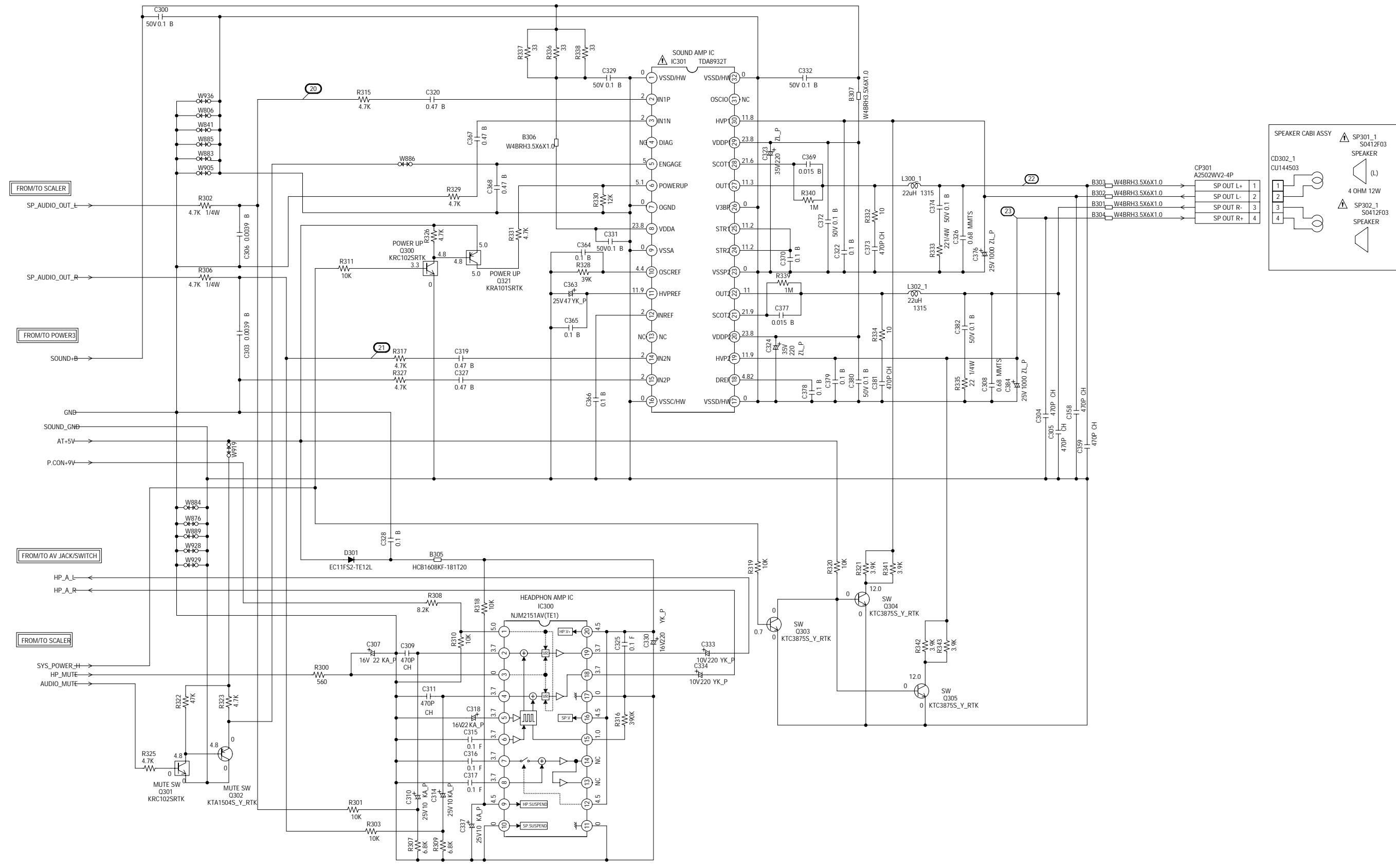
**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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

PCBF40  
CMF111



# SOUND AMP/HEADPHONE AMP SCHEMATIC DIAGRAM (MAIN PCB)

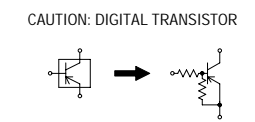
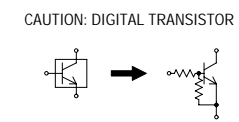


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

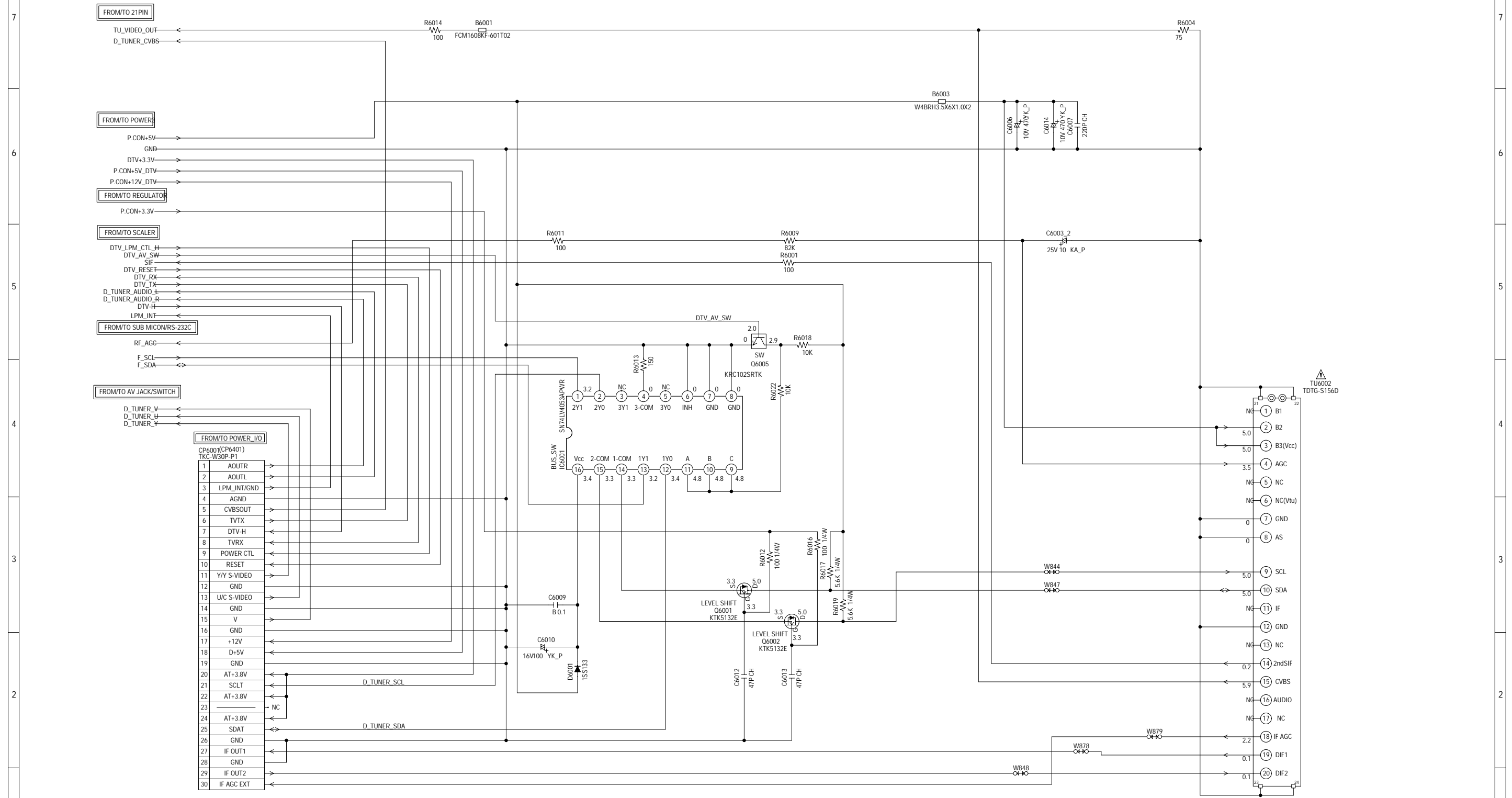
**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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



PCBF40  
CMF111

# TUNER 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 AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIÈCES.

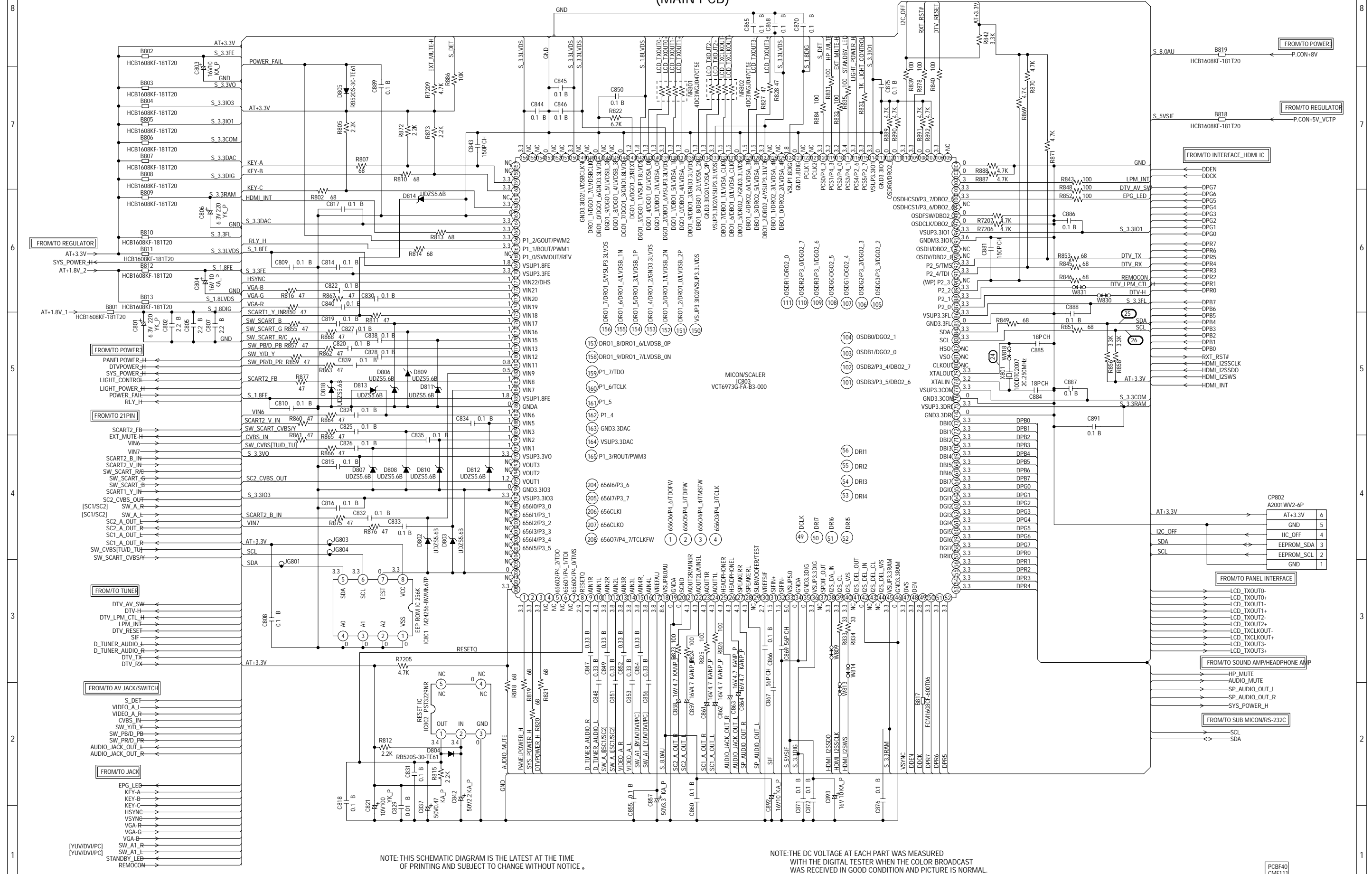
CAUTION: DIGITAL TRANSISTOR



PCBF40 CMF111



# SCALER SCHEMATIC DIAGRAM (MAIN PCB)

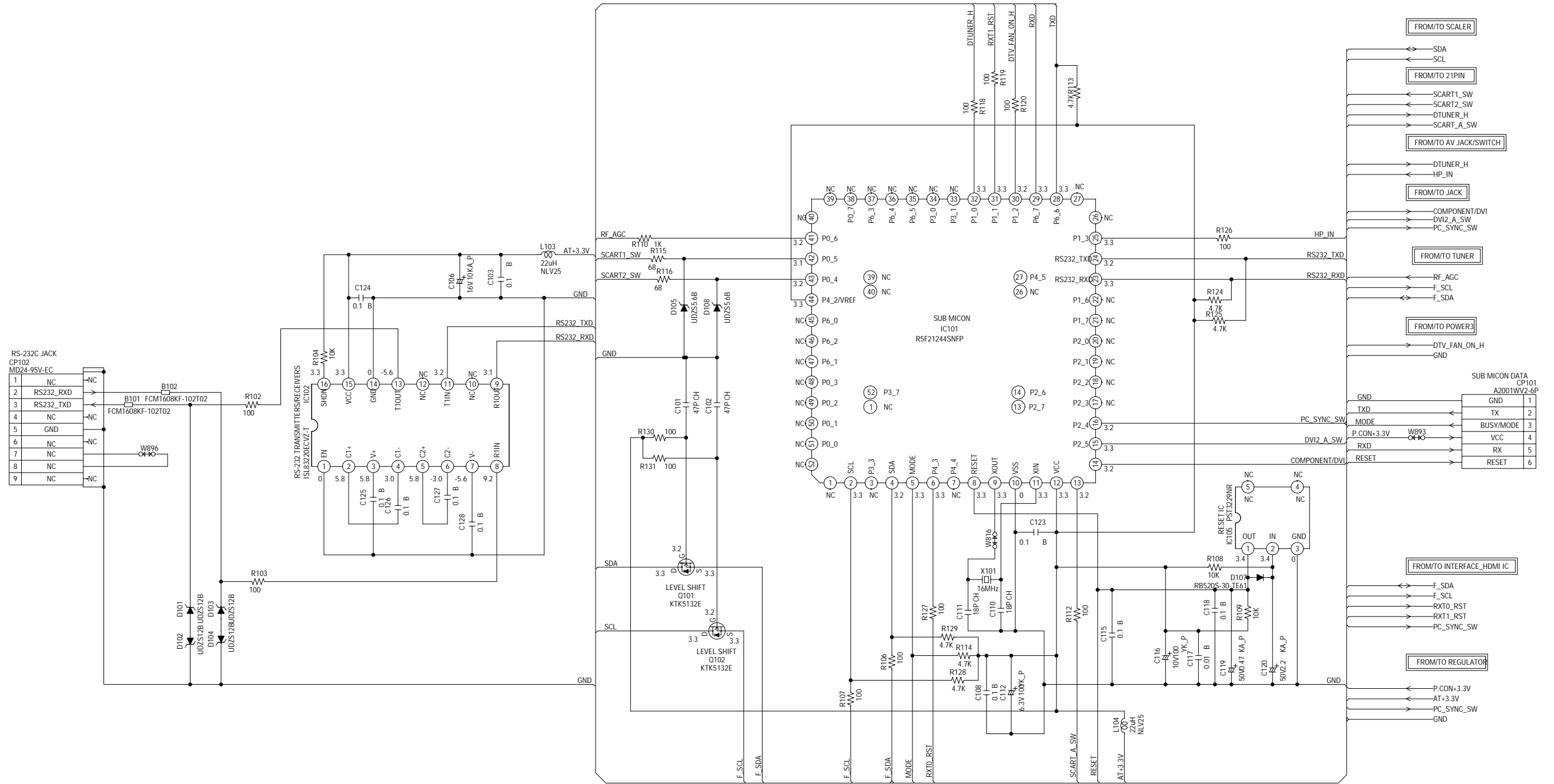


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

PCBF40  
CMF111

# SUB MICON/RS-232C SCHEMATIC DIAGRAM (MAIN PCB)

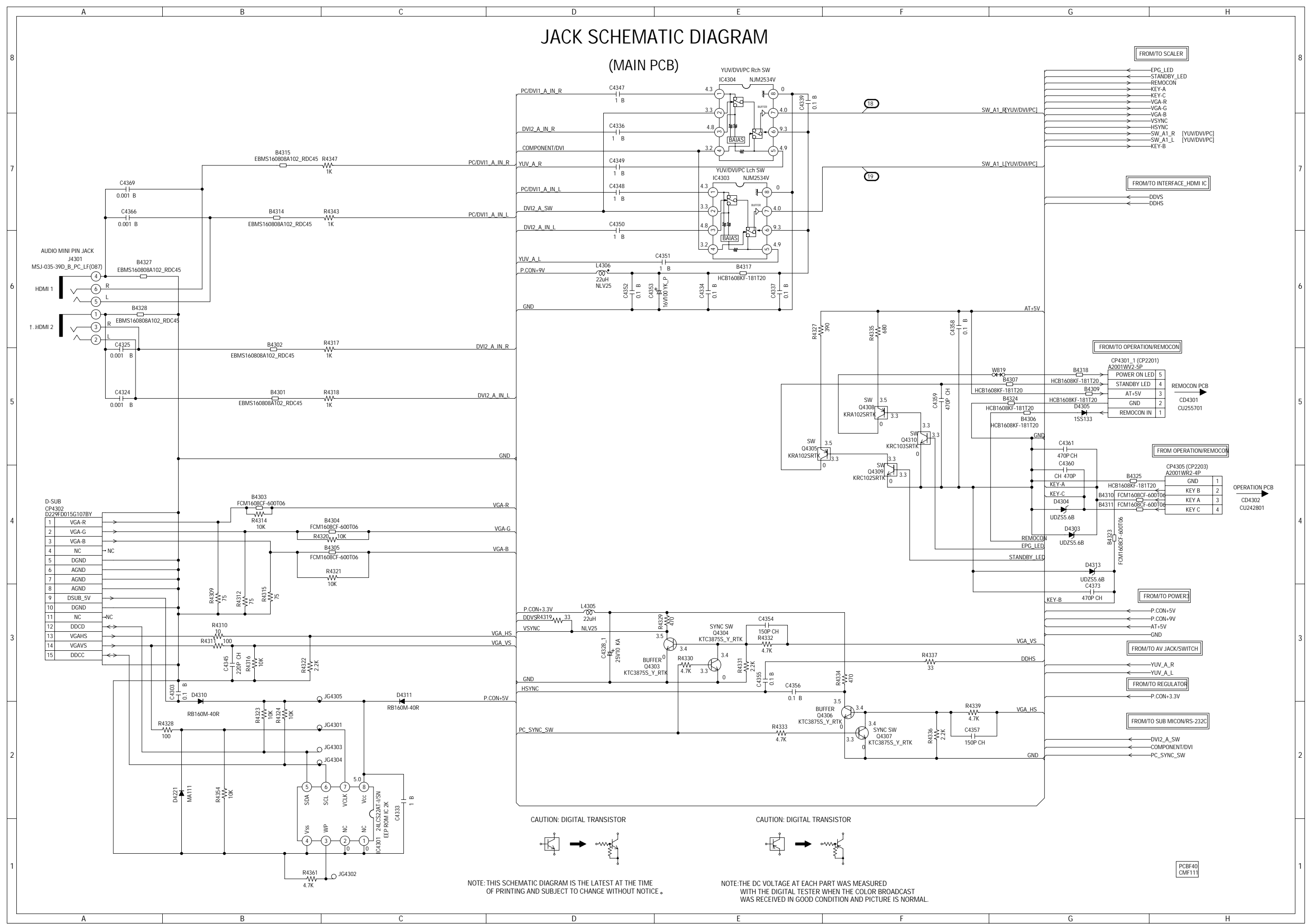


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

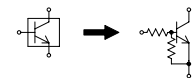
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBF00  
CMF111

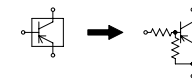
# JACK SCHEMATIC DIAGRAM (MAIN PCB)



CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR

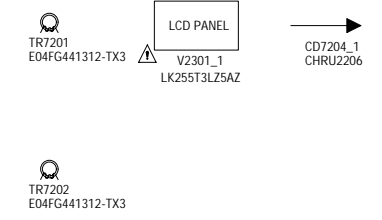
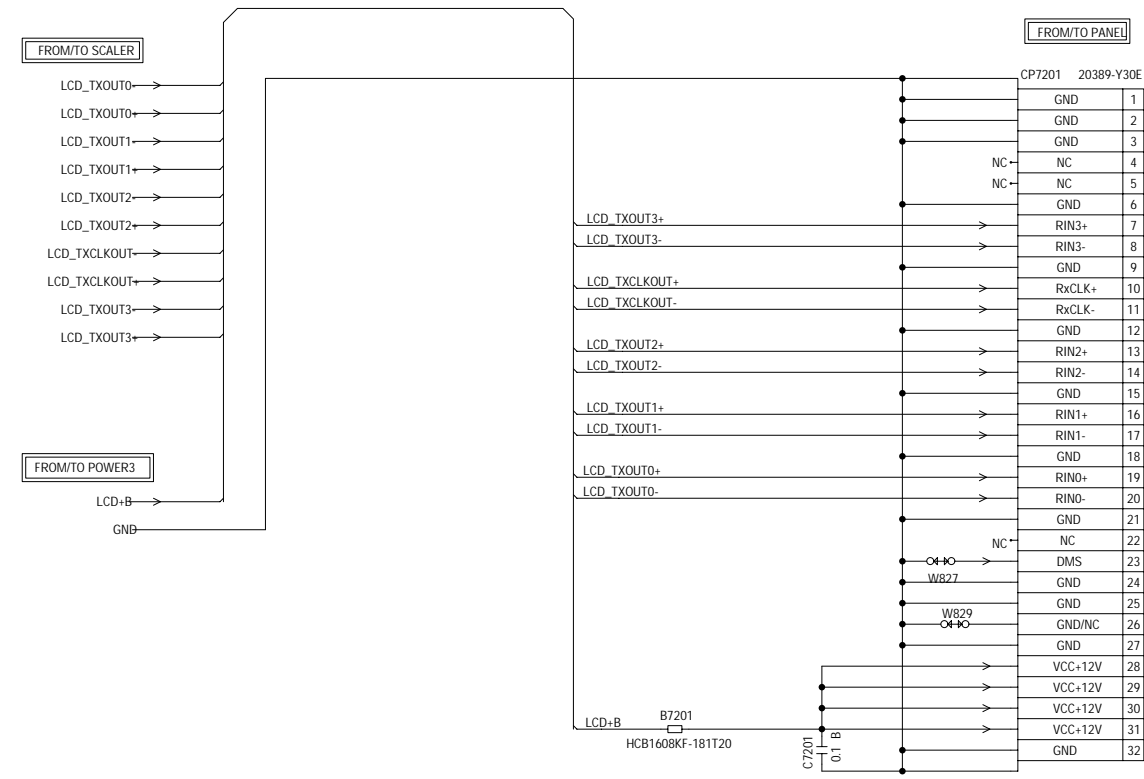


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

PCB40  
CMF11

# PANEL INTERFACE DIAGRAM (MAIN PCB)



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

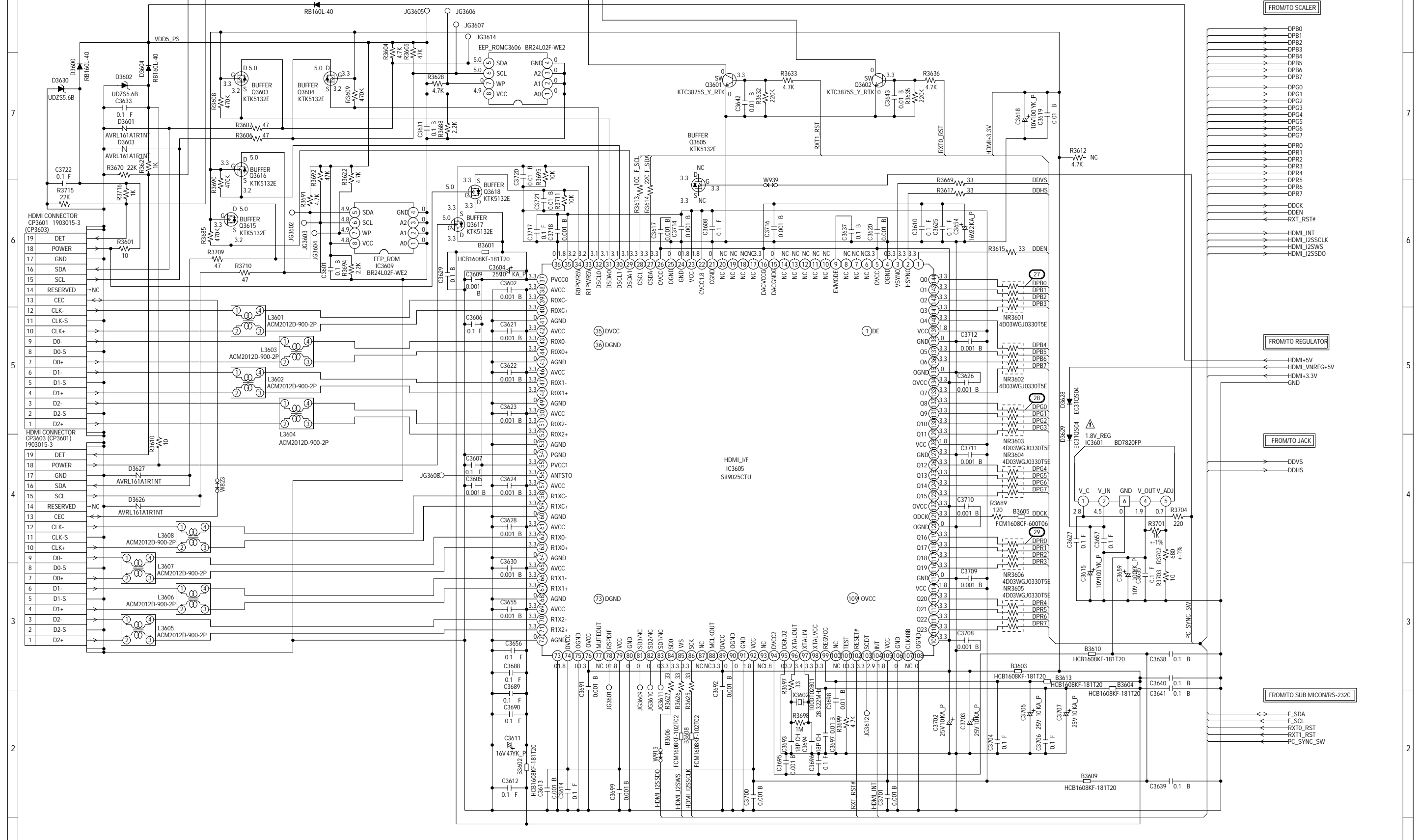
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

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

PCBF40  
GMF111

# INTERFACE\_HDMI IC SCHEMATIC DIAGRAM (MAIN PCB)



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

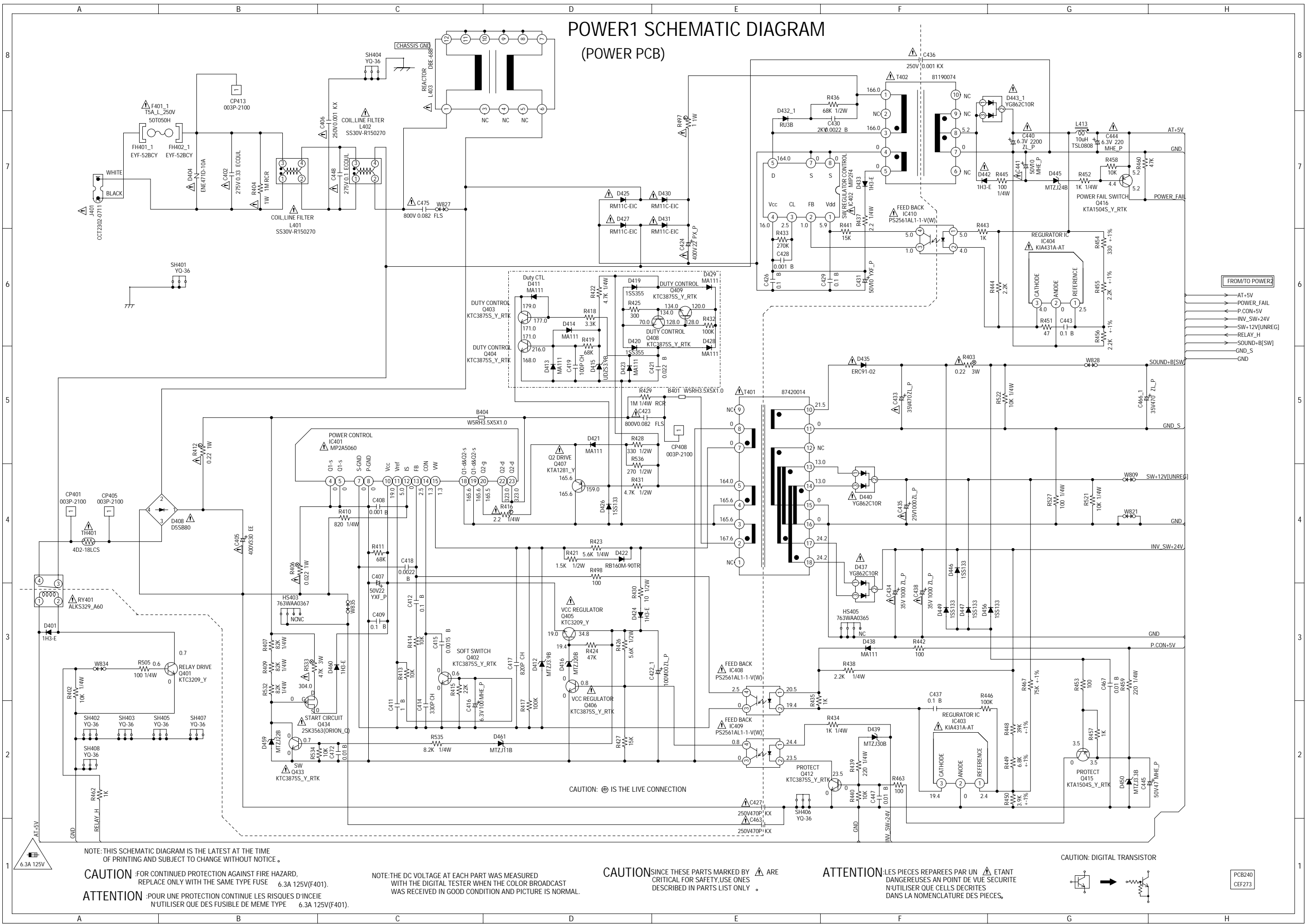
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

**ATTENTION** LES PIÈCES RÉPARÉES PAR UN  $\Delta$  ÉTANT DANGEREUSES AN POINT DE VUE SECURITE UTILISER QUE CELLS DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

PCBF40  
CMF111

# POWER1 SCHEMATIC DIAGRAM (POWER PCB)



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

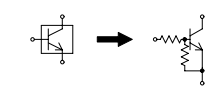
**CAUTION** :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F401).  
**ATTENTION** :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCIEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F401).

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

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

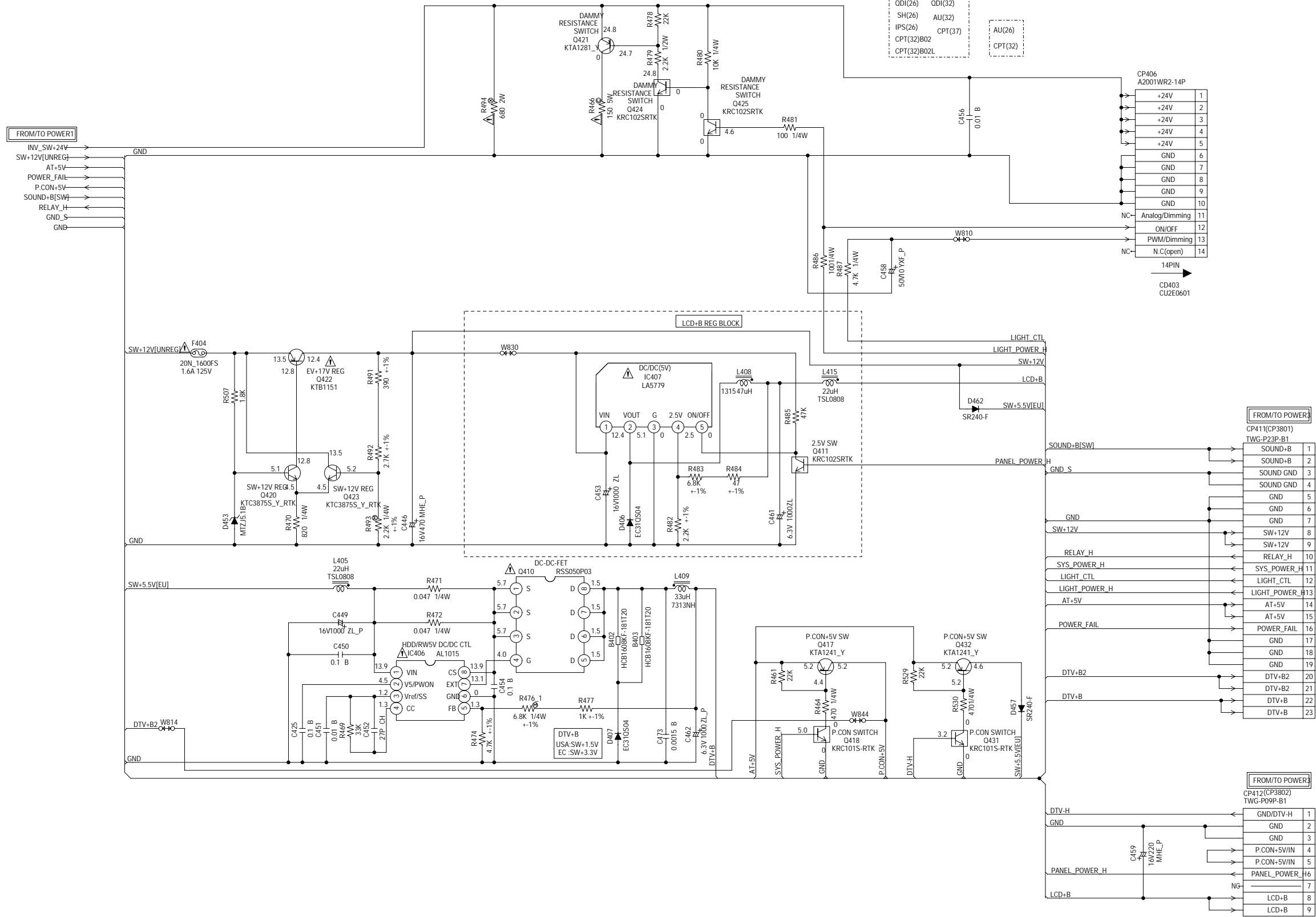
**ATTENTION** :LES PIÈCES RÉPARÉES PAR UN ⊕ ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR



PCB240  
CEF273

# POWER2 SCHEMATIC DIAGRAM (POWER 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: IS THE LIVE CONNECTION

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

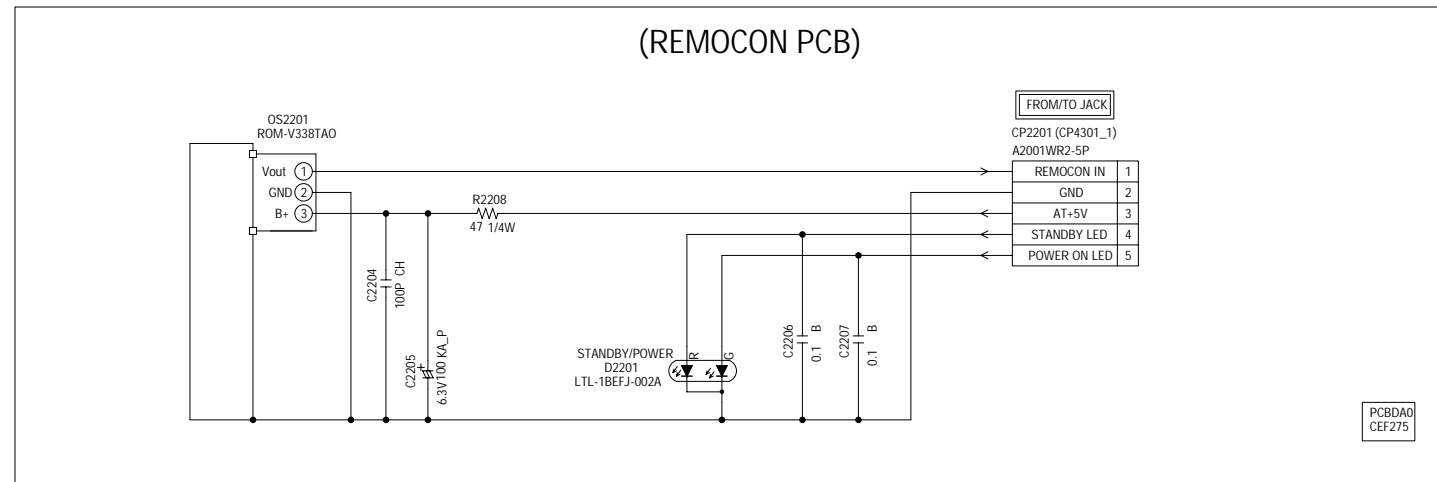
ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR

PCB240  
CEF273

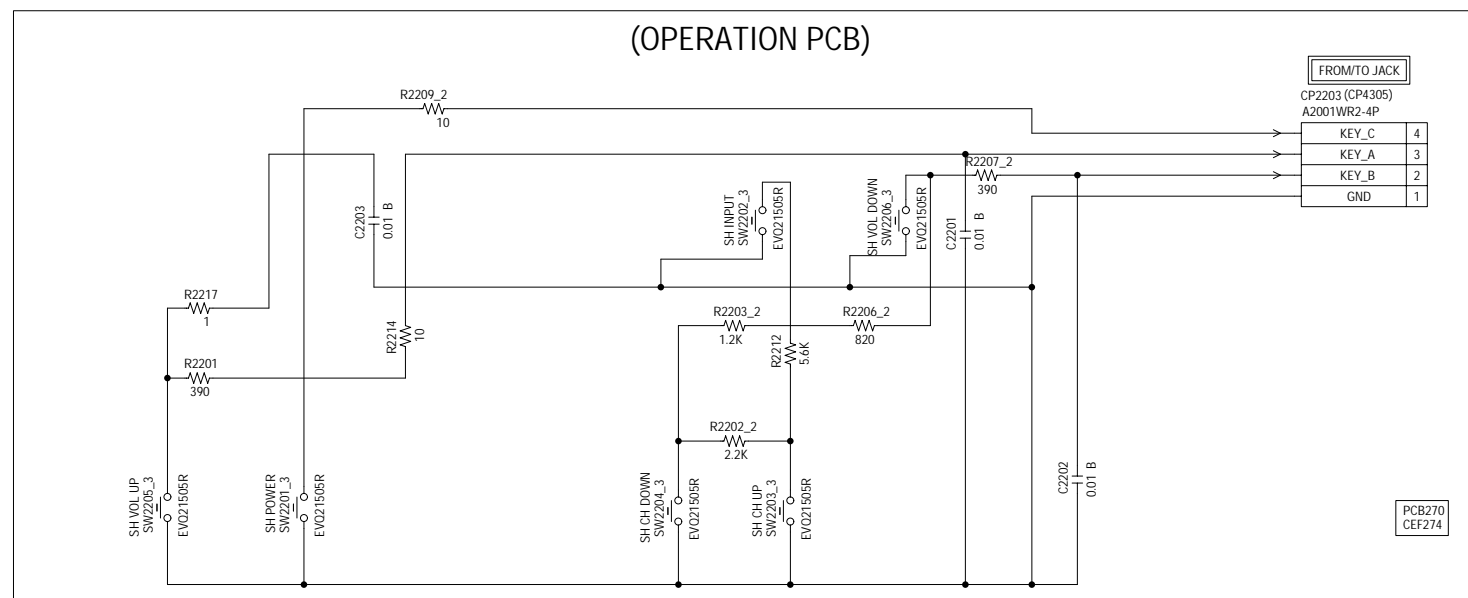
# OPERATION/REMOCON SCHEMATIC DIAGRAM

## (REMOCON PCB)



PCBD00  
CEF275

## (OPERATION PCB)



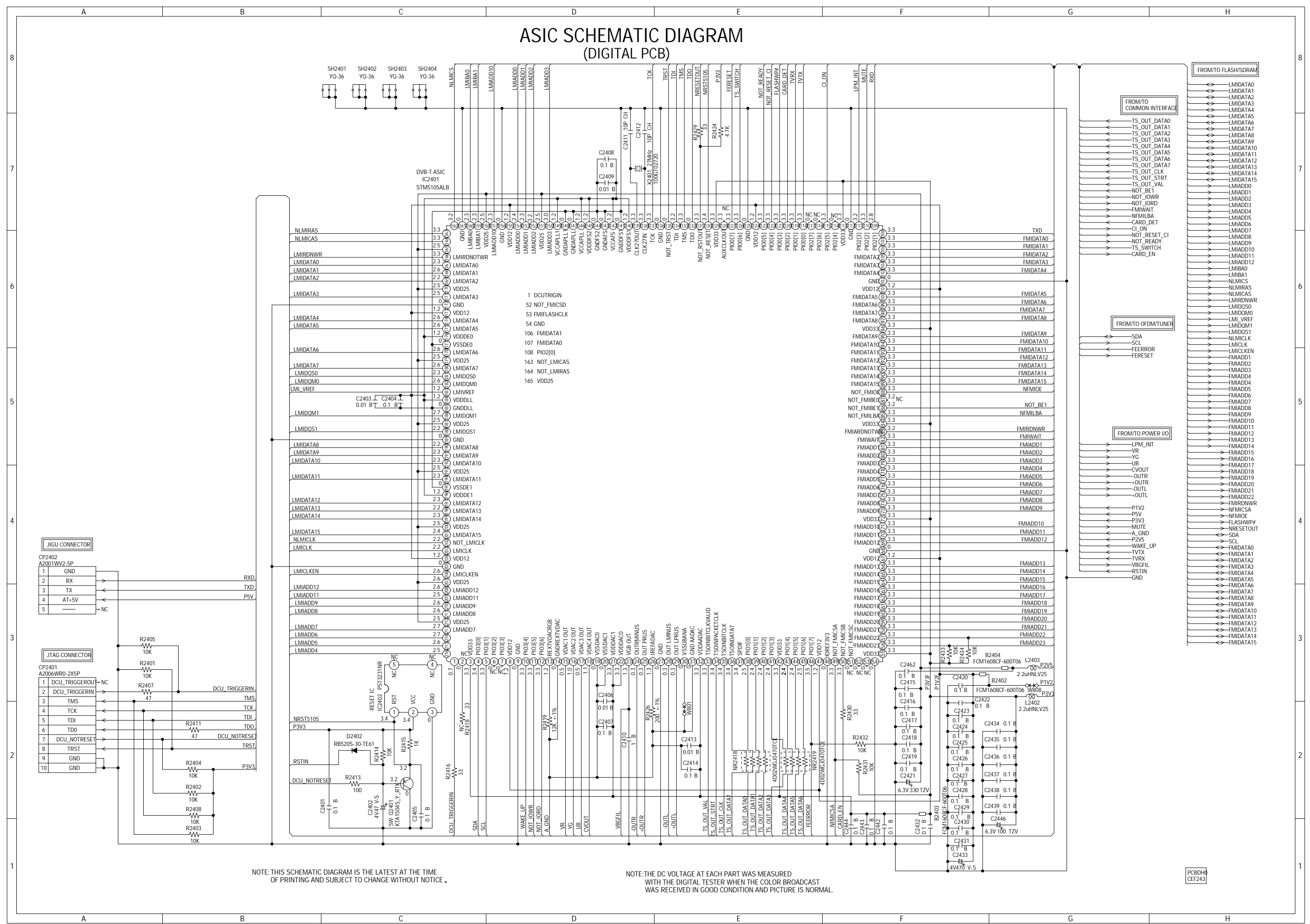
PCB270  
CEF274

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.



# ASIC SCHEMATIC DIAGRAM (DIGITAL PCB)

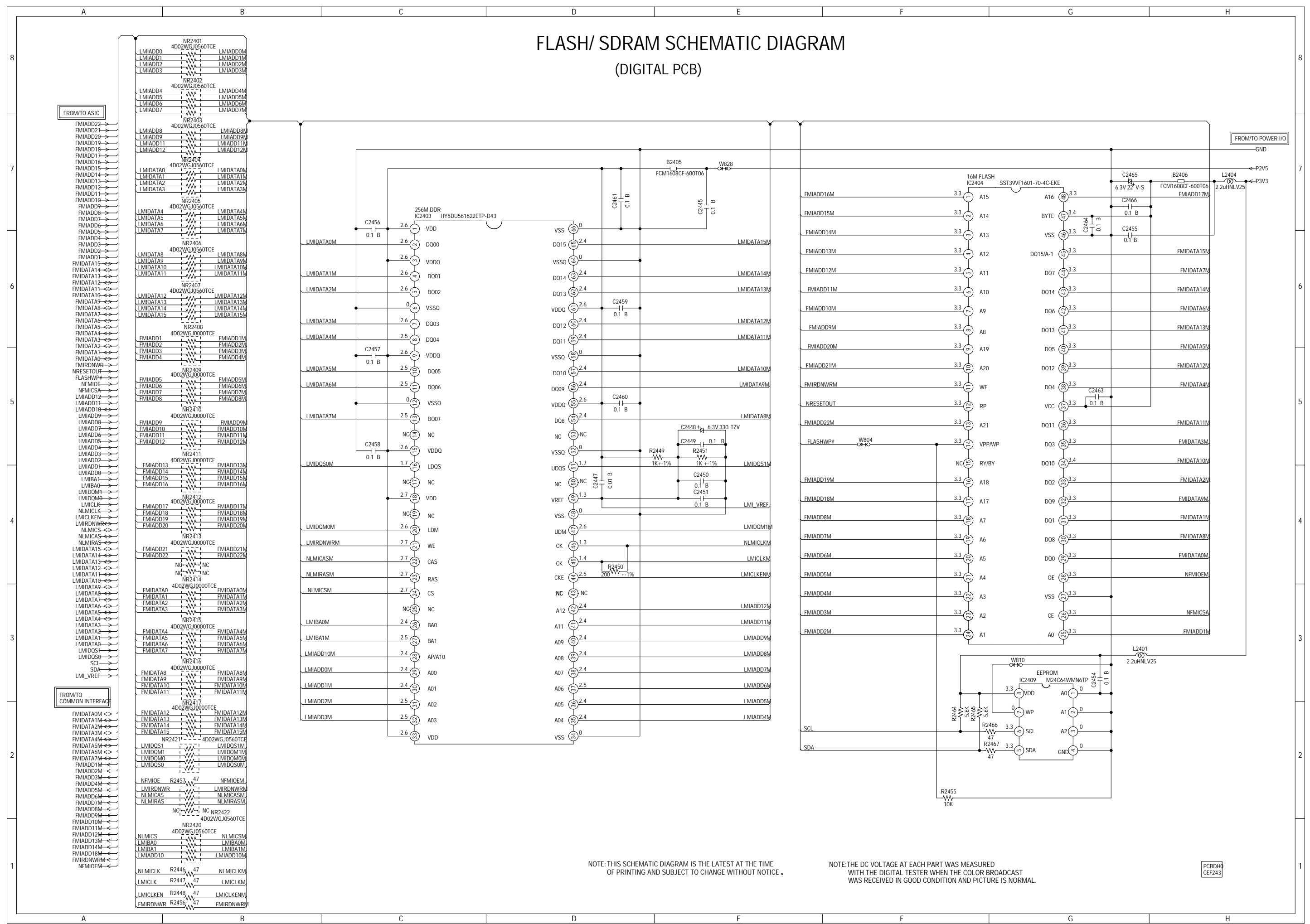


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

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.

PCB04  
CEF243

# FLASH/SDRAM SCHEMATIC DIAGRAM (DIGITAL PCB)

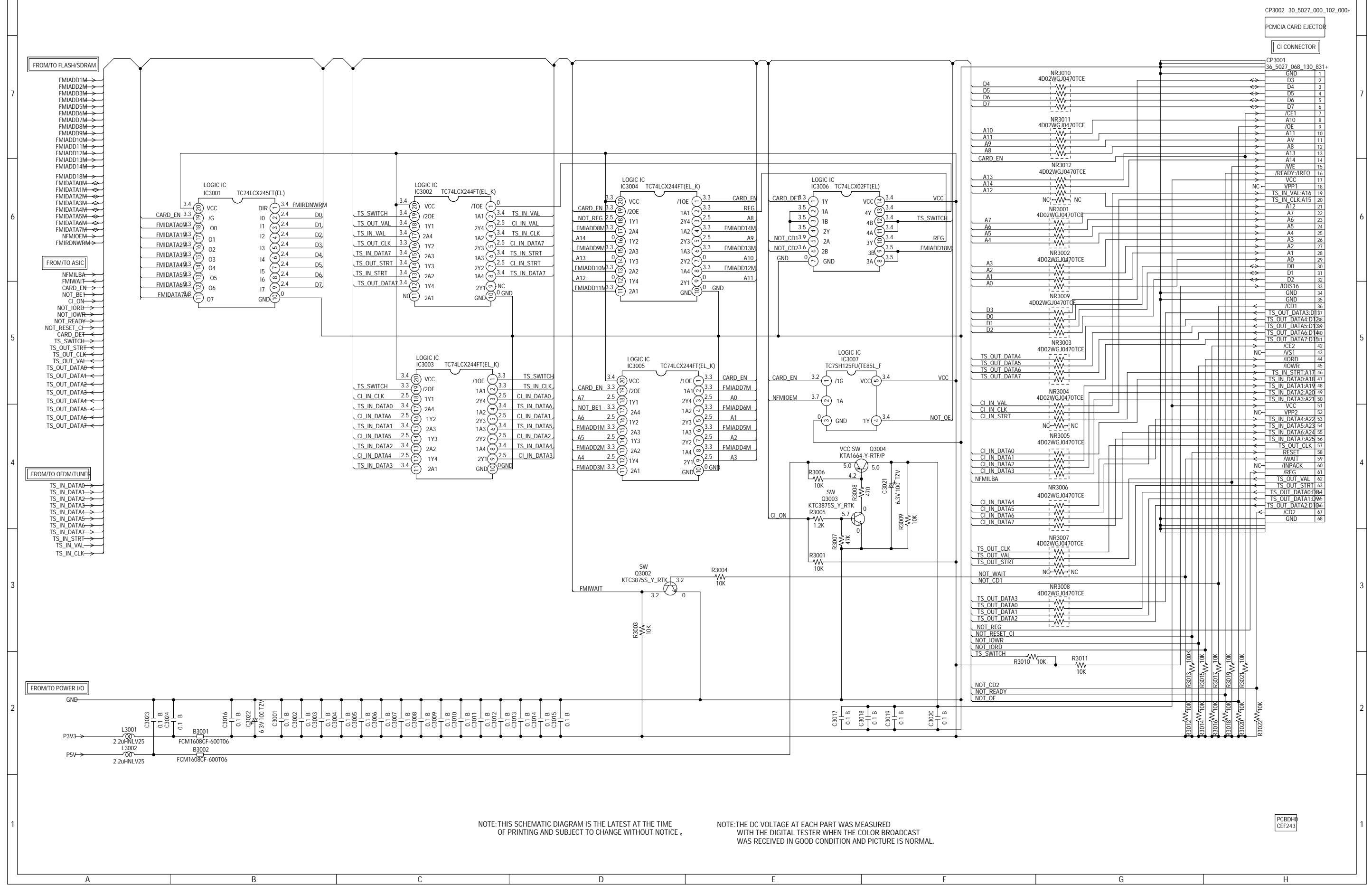


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

PCBDH0  
CEF243

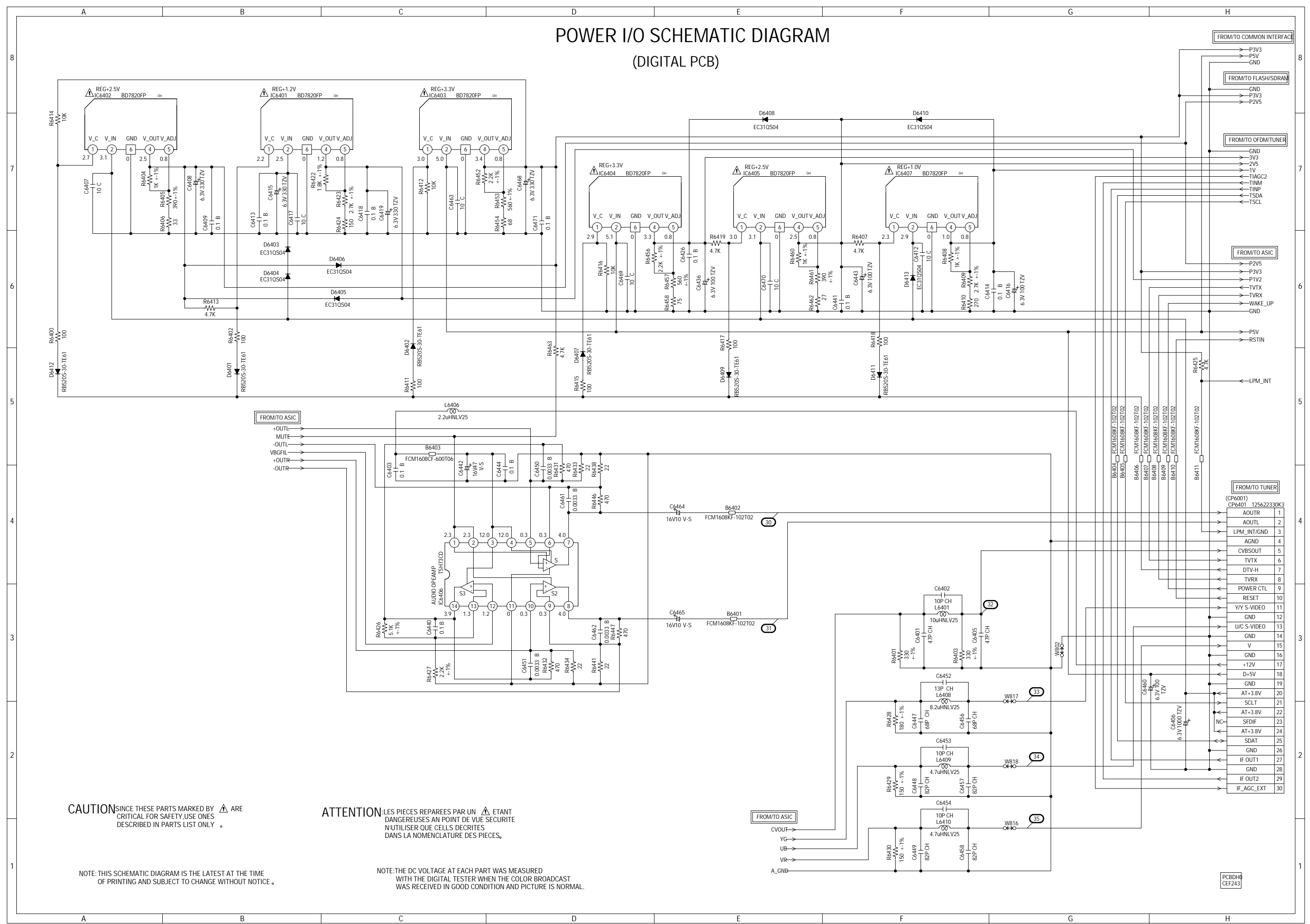
# COMMON INTERFACE SCHEMATIC DIAGRAM (DIGITAL PCB)



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.

# POWER I/O SCHEMATIC DIAGRAM (DIGITAL PCB)



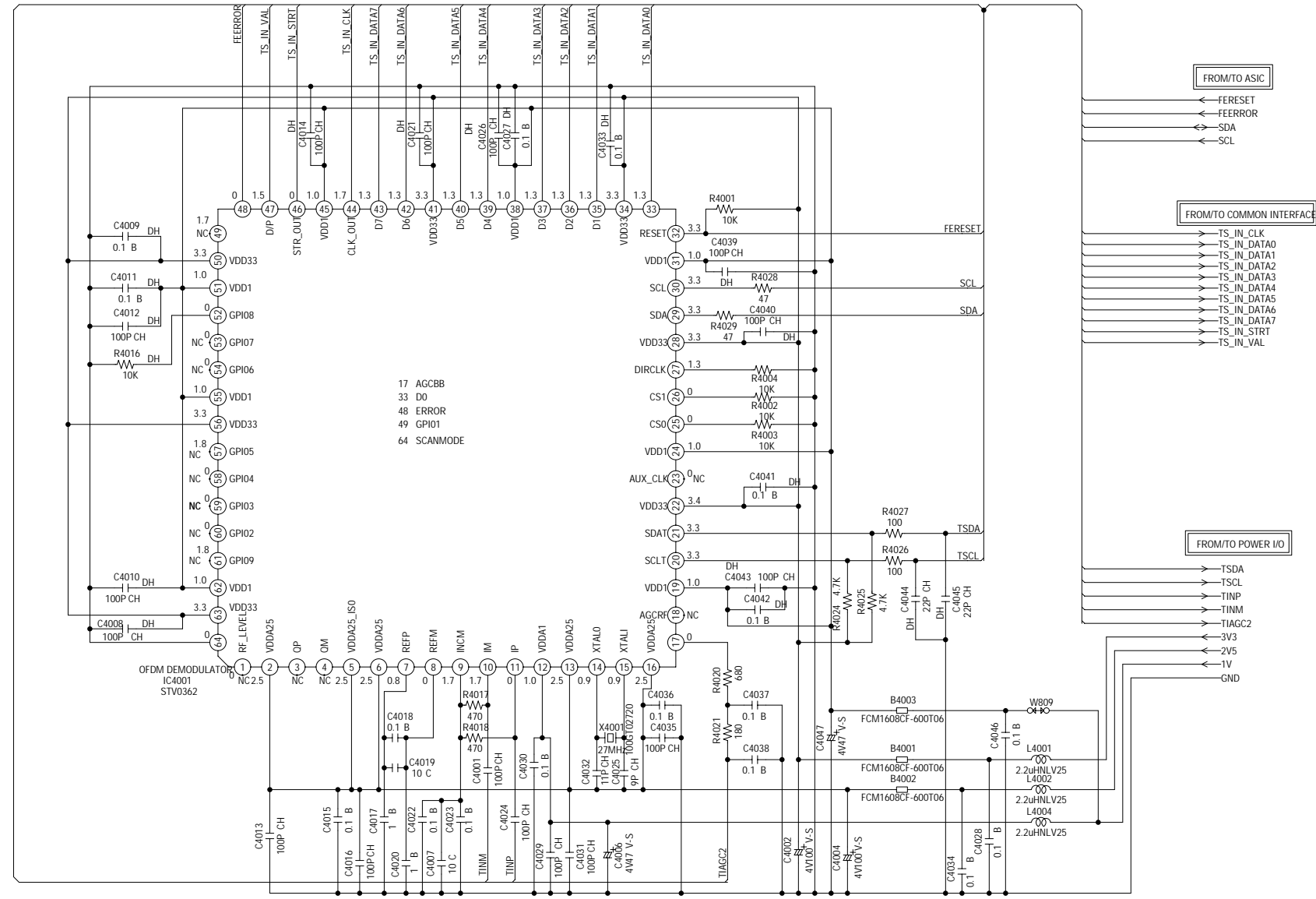
**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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

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.

# OFDM/TUNER SCHEMATIC DIAGRAM (DIGITAL PCB)

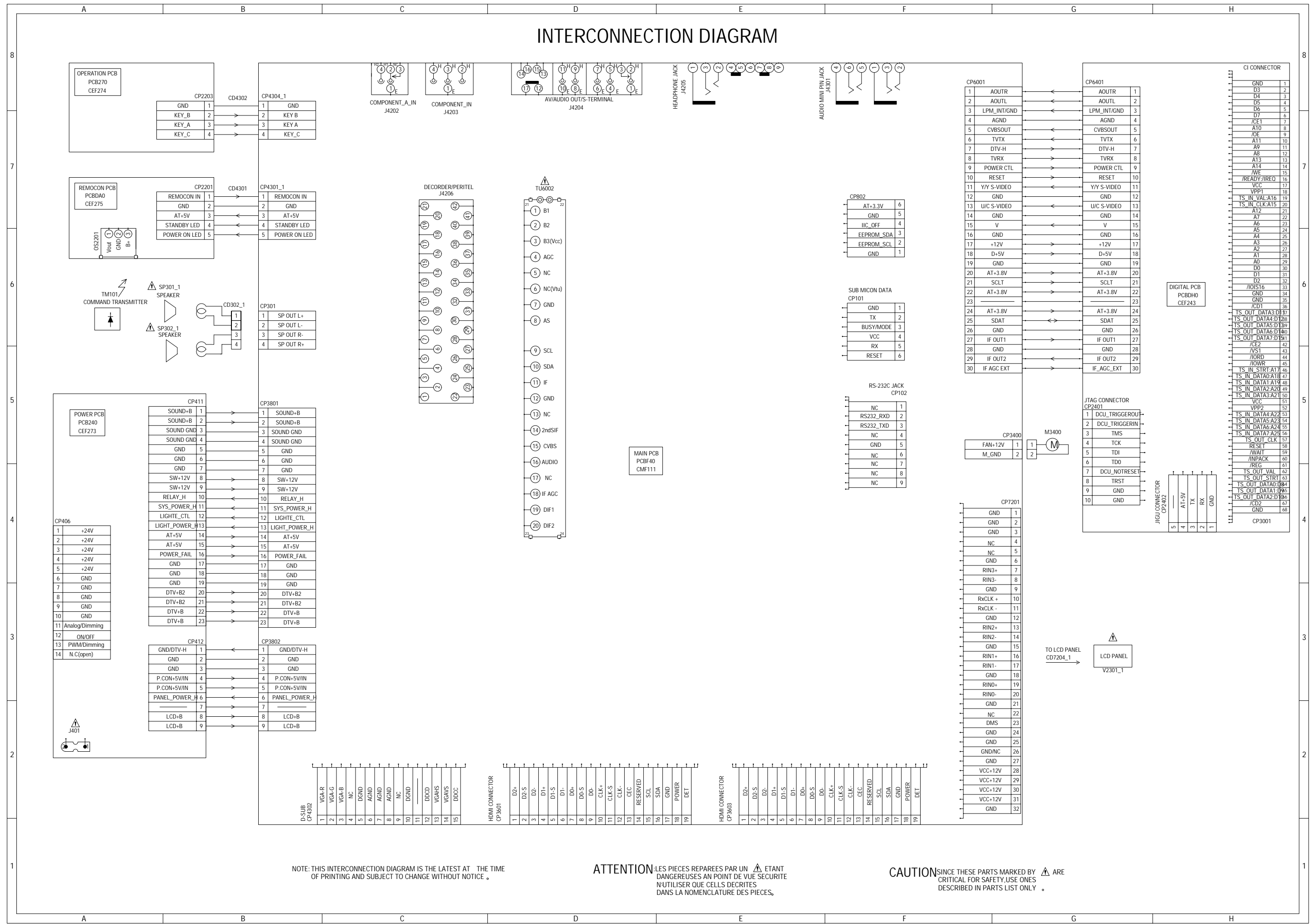


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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.

PCBDH  
CEF243

# INTERCONNECTION DIAGRAM



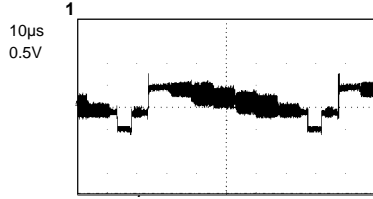
NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

**ATTENTION** LES PIECES REPARÉES PAR UN ⚠ ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

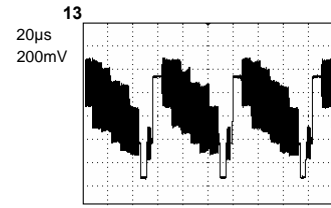
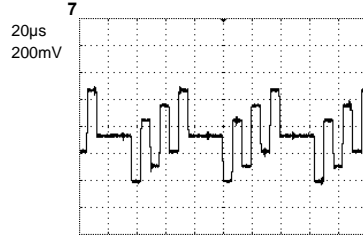
**CAUTION** SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

# WAVEFORMS

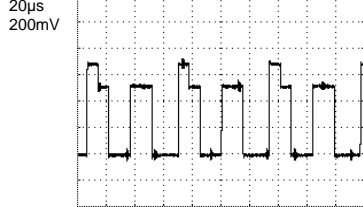
21PIN



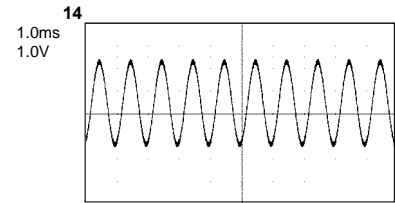
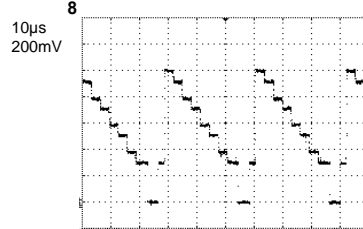
21PIN



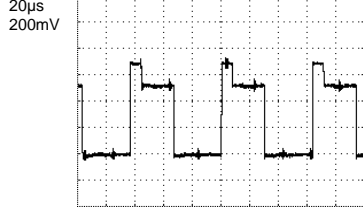
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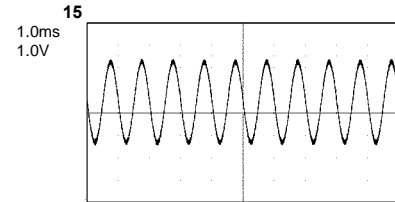
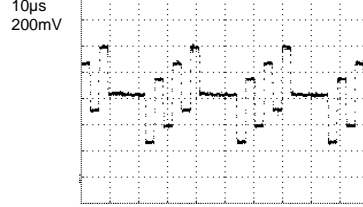
AV JACK/SWITCH



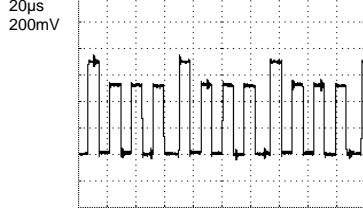
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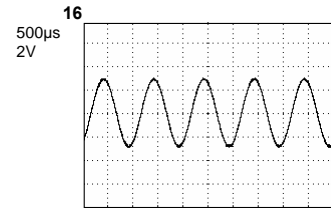
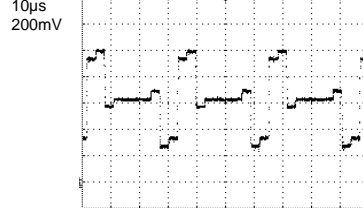
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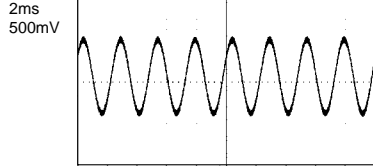
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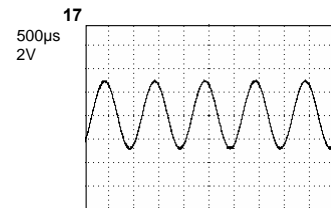
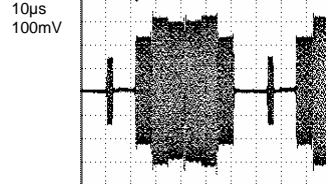
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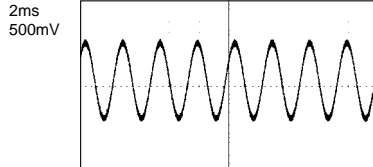
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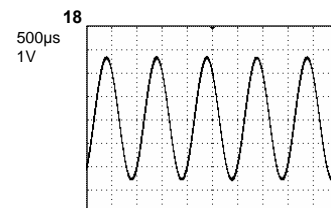
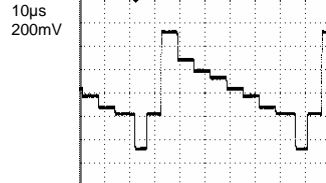
11



6

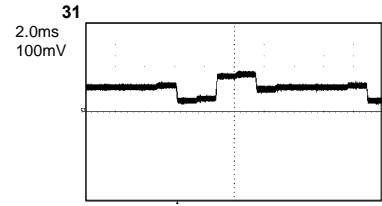
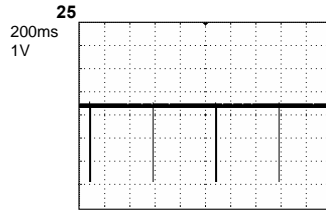
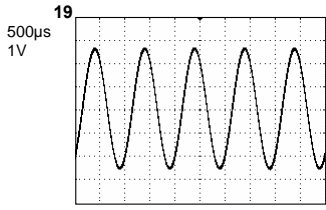


12

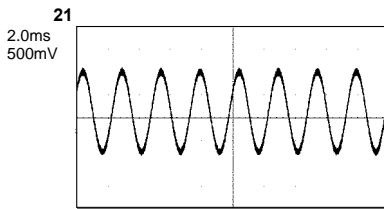
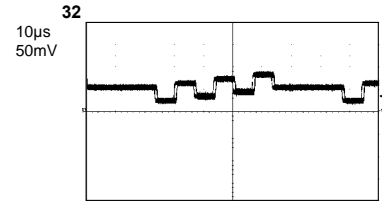
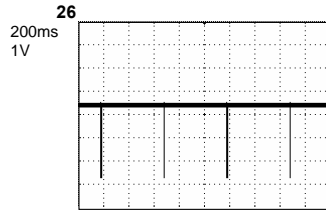
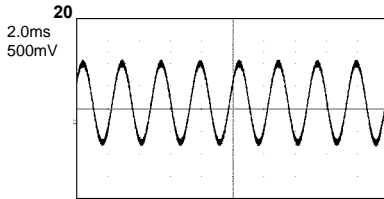


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

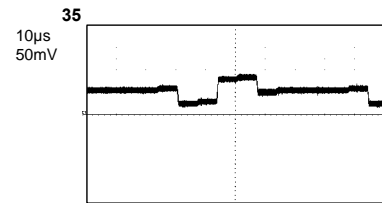
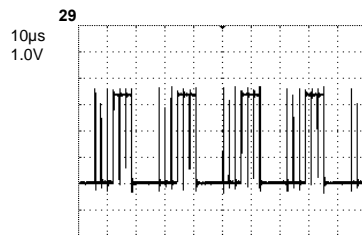
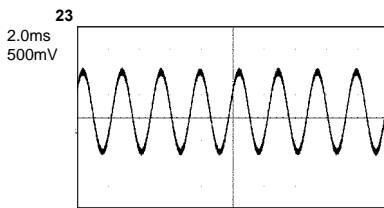
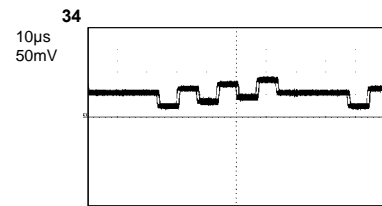
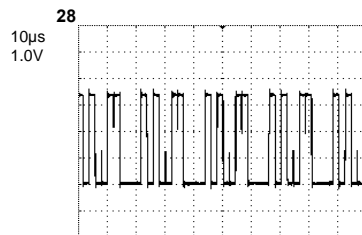
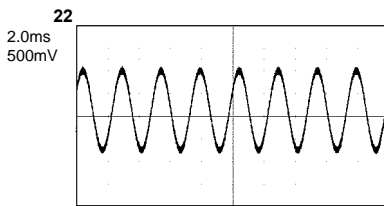
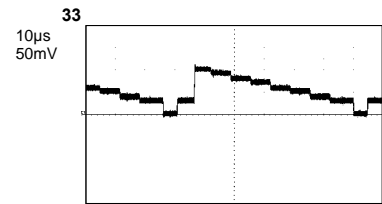
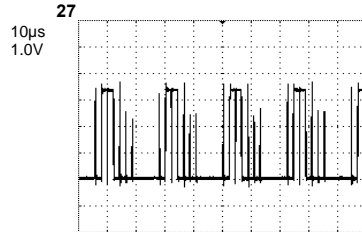
# WAVEFORMS



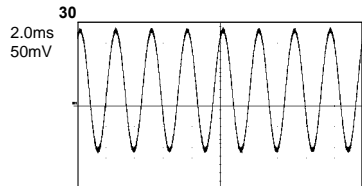
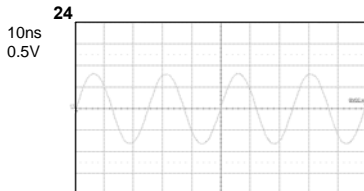
## SOUND AMP/HEADPHONE AMP



## INTERFACE\_HDMI IC



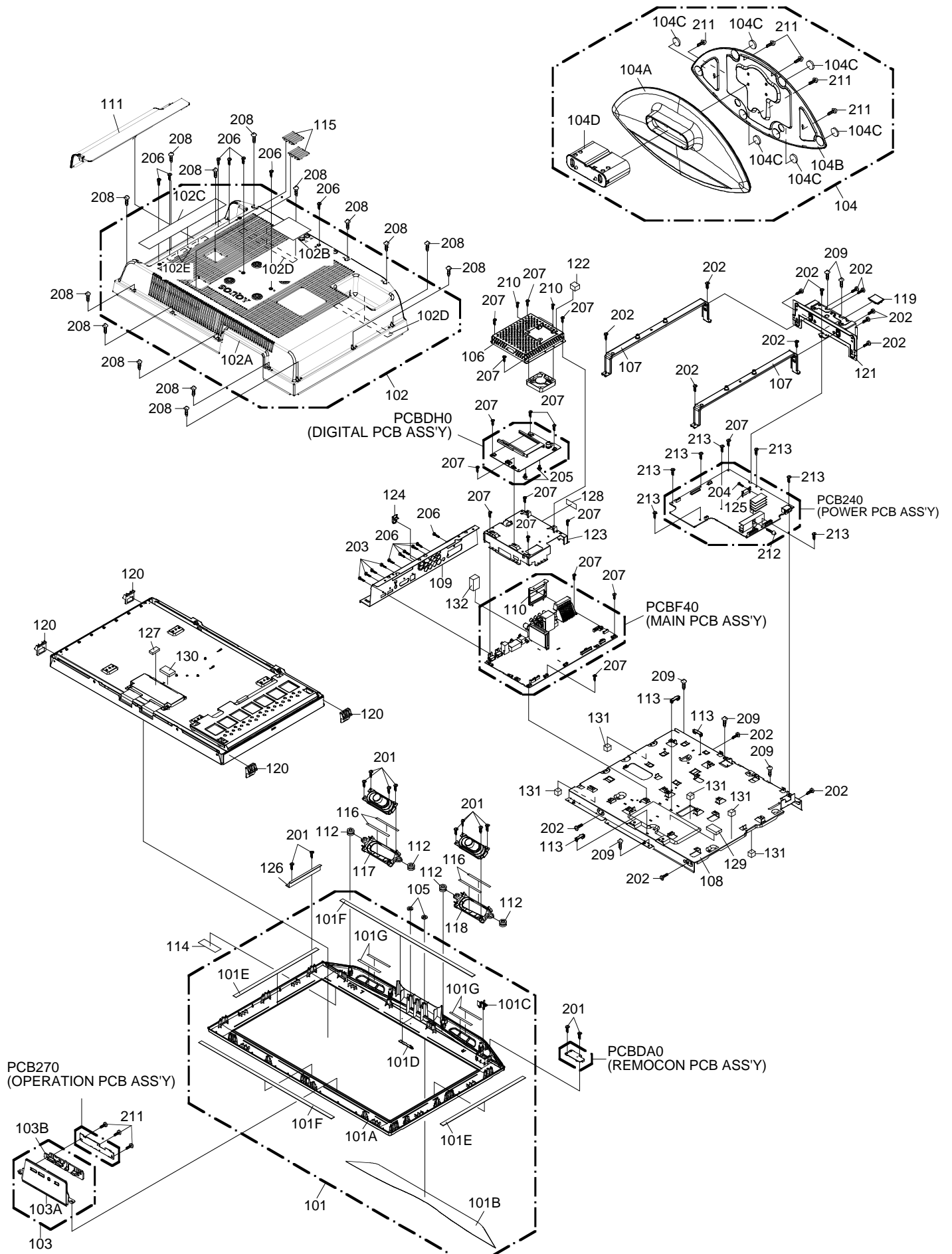
## SCALER/MICON



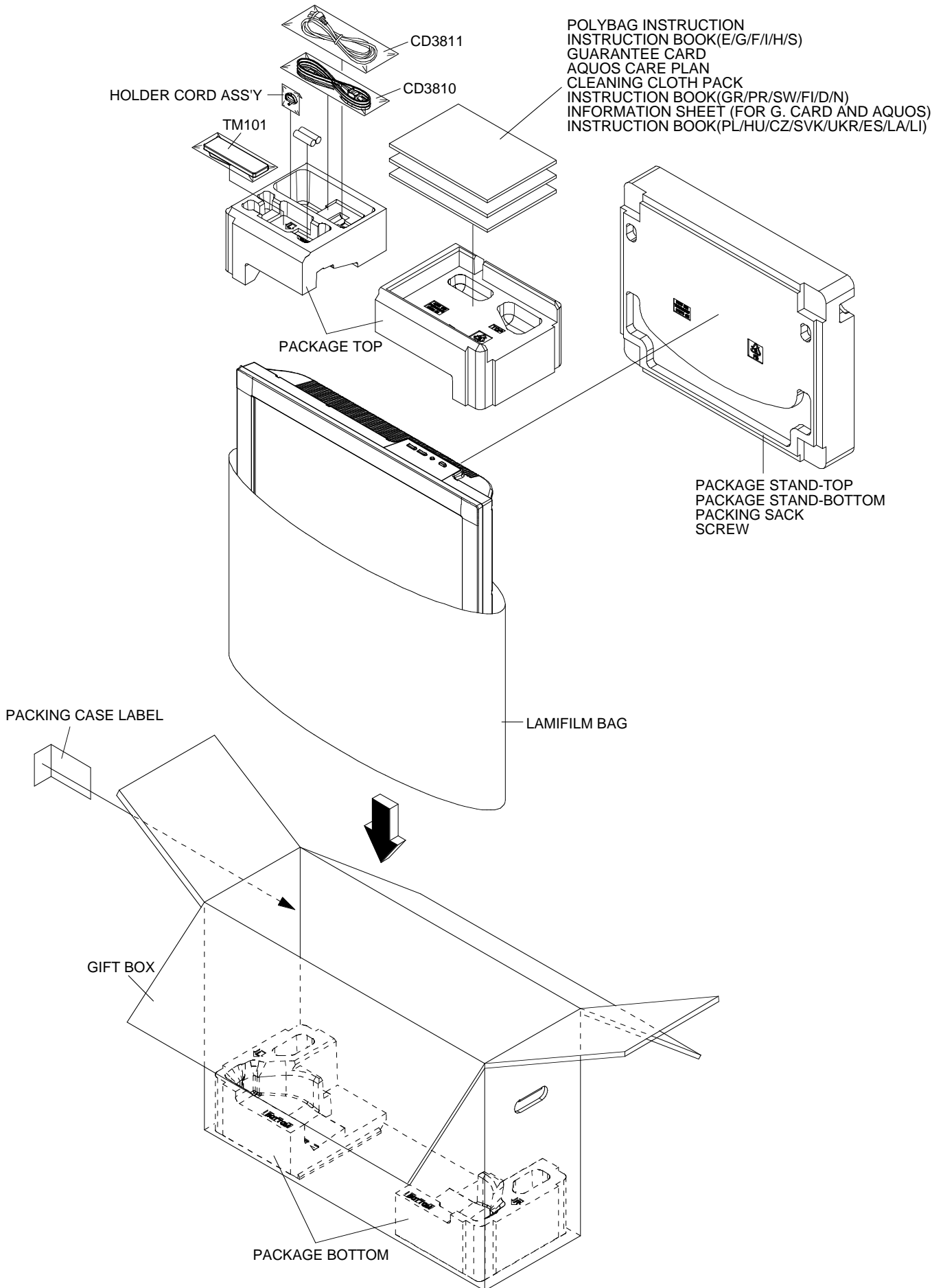
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.



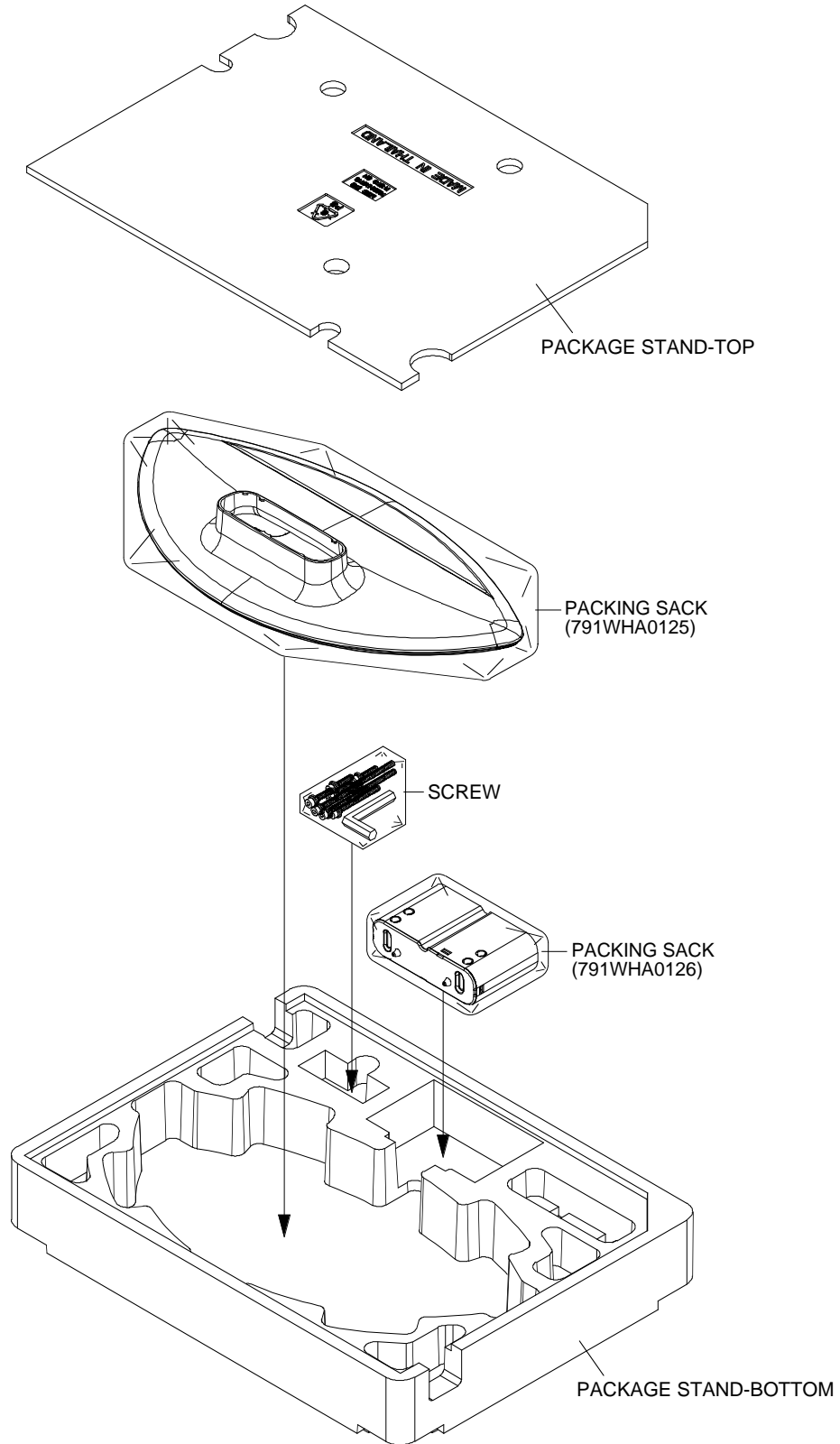
# MECHANICAL EXPLODED VIEW



# MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



# MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



# MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
101	9JD7A7010301A	FRONT CABI ASS'Y	
101A	9JD701WPJ1497	CABINET FRONT	
101B	9JD702WNB0003	SHEET SPEAKER	
101C	9JD713WPA0415	GLASS LED	
101D	9JD7235270040	BADGE BRAND	
101E	9JD800WQ00124	FELT SHEET	
101F	9JD800WQ00125	FELT SHEET	
101G	9JD800WQ00132	FELT SHEET	
102	9JD7A7020135A	BACK CABI ASS'Y	
102A	9JD702WPA1297	CABINET BACK	
102B	9JD7225270047	SHEET RATING	
102C	9JD7230008382	SHEET JACK	
102D	9JD800WQ0A113	FELT SHEET	
102E	9JD800WQ0A110	FELT SHEET	
103	9JD7A7110024A	PLATE BUTTON ASS'Y	
103A	9JD711WPD0732	PLATE BUTTON	
103B	9JD735WPB0371	BUTTON FRAME	
104	9JD7A7040042A	STAND ASS'Y	
104A	9JD704WPA0078	STAND	
104B	9JD761WSA0465	ANGLE STAND	
104C	9JD800WFA0120	CUSHION LEG	
104D	9JD7A7640006A	FRAME STAND ASS'Y	
105	9JD800WB0A017	FIBER WASHER	
106	9JD752WSA0677	SHIELD DIGITAL	
107	9JD761WSA0480	ANGLE MAIN	
108	9JD761WSA0506	COVER LCD	
109	9JD761WSB0060	PLATE JACK	
110	9JD761WSA0432	SHIELD 21PIN	
111	9JD702WPA1298	COVER BACK	
112	9JD800WR00084	DAMPER SPEAKER	
113	9JD899RFC21V0	HOLDER CORD	
114	9JD7230008367	POP LABEL	
115	9JD706WPA0029	COVER CONNECTOR	
116	9JD800WQ00127	FELT SHEET	
117	9JD761WPA0473	HOLDER SPEAKER-L	
118	9JD761WPA0474	HOLDER SPEAKER-R	
119	9JD761WPA0477	COVER HINGE	
120	9JD761WPA0478	HOLDER PANEL	
121	9JD761WSA0466	ANGLE HINGE	
122	9JD8965TS1010	CUSHION 65TS10-10(10x10x25)	
123	9JD752WSA0653	SHIELD SCALER	
124	9JD761WPA0489	COVER TUNER	
125	9JD761WSA0459	SHIELD IC	
126	9JD761WSA0537	ANGLE PANEL	
127	9JD800JFA0047	CUSHION	
128	9JD7250000607	SHEET PE	
129	9JD800WFA0066	CUSHION 30*14*T2	

# MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE
130	9JD800WFAA029	CUSHION	
131	9JD8965TS1210	CUSHION W10/H12/L10	
132	9JD8965TS2010	CUSHION W8/H20/L10	
201	9JD8110630A0U	SCREW TAP TITE(P) BRAZIER	3x10 CH
202	9JD810A14080U	SCREW WASHER(A)	M4x8 CH
203	9JD810213080S	SCREW PAN	M3x8 BK
204	9JD810763080U	SCREW TAP TITE(S) BRAZIER	3x8 CH
205	9JD8102220A0U	SCREW,BIND M2*10 CH	
206	9JD810923080S	SCREW TAP TITE(B) BIND	3x8 BK
207	9JD810923080U	SCREW TAP TITE(B) BIND	3x8 CH
208	9JD8110230B5S	SCREW TAP TITE(P) BIND	3x25 BK
209	9JD8117540A0U	SCREW TAPPING(B0) TRUSS	4x10 CH
210	9JD811022680U	SCREW TAP TITE(P) BIND	2.6x8 CH
211	9JD811063080U	SCREW TAP TITE(P) BRAZIER	3x8 CH
212	9JD8109130A0U	SCREW TAP TITE(B) WH7	3x10 CH
213	9JD8171130A0U	SCREW TAP TITE(B) WASHER12	3x10 CH
---	9JD7235270055	PACKING CASE LABEL	
---	9JD791WHA0125	PACKING SACK	
---	9JD791WHA0126	PACKING SACK	
---	9JD791WHA0142	LAMIFILM BAG	
---	9JD792PHA0011	PACKAGE TOP	
---	9JD792PHA0012	PACKAGE BOTTOM	
---	9JD792WHA0716	PACKAGE STAND TOP	
---	9JD792WHA0717	PACKAGE STAND BOTTOM	
---	9JD793PCD0008	GIFT BOX	
---	9JD89001122A2	SCREW	
---	9JD890CCOR002	CLEANING CLOTH PACK	
---	9JDJ32A0101A	INSTRUCTION BOOK(E/G/F//H/S)	
---	9JDJ32A0102A	GUARANTEE CARD	
---	9JDJ32A0110A	INSTRUCTION BOOK(GR/PR/SW/FI/D/N)	
---	9JDJ32A0111A	INST BOOK(PL/HU/CZ/SVK/UKR/ES/LA/LI)	
---	9JDJ32A0119A	AQUOS CARE PLAN	
---	9JDJ32A0129A	INFORMATION SHEET(FOR G.CARD AND AQUOS)	
---	9JDJA4PD100	POLYBAG,INSTRUCTION	
---	9JDJA4PD400	POLYBAG,INSTRUCTION	
---	9JD7A7360001A	HOLDER CORD ASS'Y	

# ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE	
		<b>REMOCON PCB ASS'Y</b>		
		*** PCB ***		
PCBDA0	9JDA31Z01EDA0L	REMOCON PCB ASS'Y	CEF275A	
		*** DIODES ***		
D2201	9JD0021E9Q010	LED	LTL-1BEFJ-002A	
		*** CONNECTORS ***		
CD4301	9JD06CU255701	CORD CONNECTOR	CU255701	
CP2201	9JD069S250639	CONNECTOR PCB SIDE	A2001WR2-5P	
		*** OTHERS ***		
OS2201	9JD077A033001	REMOTE RECEIVER	ROM-V338TAO	
		DIGITAL PCB ASS'Y		
		*** PCB ***		
PCBDH0	9JDA31Z01EDH0L	DIGITAL PCB ASS'Y	CEF243A	
		*** DIODES ***		
D2402	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6401	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6402	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6403	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6403	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6404	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6404	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6405	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6405	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6406	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6406	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6407	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6408	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6408	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6409	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6410	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6410	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D6411	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6412	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61	
D6413	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D6413	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
		*** ICS ***		
IC2401	9JDI5PK051050	IC	STM5105ALB	
IC2402	9JDI9UF032310	IC	PST3231NR	
IC2403	9JDICLJ022ET5	IC	HY5DU561622ETP-D43	
IC2404	9JDS31Z01EF01	MEMORY DATA	SST39VF1601-70-4C-EKE	
IC2409	9JDI5PJ0064W0	IC	M24C64WMN6TP	
IC3001	9JDI55F045FT0	IC	TC74LCX245FT(EL)	
IC3002	9JDI55J0X2440	IC	TC74LCX244FT(EL,K)	
IC3003	9JDI55J0X2440	IC	TC74LCX244FT(EL,K)	
IC3004	9JDI55J0X2440	IC	TC74LCX244FT(EL,K)	
IC3005	9JDI55J0X2440	IC	TC74LCX244FT(EL,K)	
IC3006	9JDI55J0CX020	IC	TC74LCX02FT(EL)	
IC3007	9JDI55F0125F0	IC	TC7SH125FU(TE85L,F)	
IC4001	9JDI5PK003620	IC	STV0362	
⚠ IC6401	9JDI07F078200	IC	BD7820FP-E2	
⚠ IC6402	9JDI07F078200	IC	BD7820FP-E2	
⚠ IC6403	9JDI07F078200	IC	BD7820FP-E2	
⚠ IC6404	9JDI07F078200	IC	BD7820FP-E2	
⚠ IC6405	9JDI07F078200	IC	BD7820FP-E2	
IC6406	9JDI0WF0H73C0	IC	TSH73CDT	

# ELECTRICAL REPLACEMENT PARTS LIST

△ IC6407	9JDI07F078200	IC	BD7820FP-E2
*** TRANSISTORS ***			
Q2401	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q3002	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3003	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3004	9JDTAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
*** COILS ***			
B2402	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B2403	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B2404	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B2405	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B2406	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B3001	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B3002	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B4001	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B4002	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B4003	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B6401	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6402	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6403	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B6404	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6405	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6406	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6407	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6408	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6409	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6410	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B6411	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
L2401	9JD0216SD2R2J	COIL	2.2 UH
L2402	9JD0216SD2R2J	COIL	2.2 UH
L2403	9JD0216SD2R2J	COIL	2.2 UH
L2404	9JD0216SD2R2J	COIL	2.2 UH
L3001	9JD0216SD2R2J	COIL	2.2 UH
L3002	9JD0216SD2R2J	COIL	2.2 UH
L4001	9JD0216SD2R2J	COIL	2.2 UH
L4002	9JD0216SD2R2J	COIL	2.2 UH
L4004	9JD0216SD2R2J	COIL	2.2 UH
L6401	9JD0216SD100J	COIL	10 UH
L6406	9JD0216SD2R2J	COIL	2.2 UH
L6408	9JD0216SD8R2J	COIL	8.2 UH
L6409	9JD0216SD4R7J	COIL	4.7 UH
L6410	9JD0216SD4R7J	COIL	4.7 UH
*** JACKS ***			
CP3002	9JD063M800002	HOLDER,IC	30_5027_000_102_000+
*** CONNECTORS ***			
CP2401	9JD069S250679	CONNECTOR PCB SIDE	A2006WR0-2X5P
CP2402	9JD069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP3001	9JD069EN68020	CONNECTOR PCB SIDE	36_5027_068_130_831+
CP6401	9JD06972UT018	CONNECTOR PCB SIDE	125622330K3
*** CRYSTAL & CERAMIC OSCILLATORS ***			
X2401	9JD100GT02720	CRYSTAL	B27000C005
X4001	9JD100GT02720	CRYSTAL	B27000C005
*** NETWORKS ***			
NR2401	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2402	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2403	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2404	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2405	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2406	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE

# ELECTRICAL REPLACEMENT PARTS LIST

NR2407	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2408	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2409	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2410	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2411	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2412	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2413	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2414	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2415	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2416	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2417	9JD110P4000M5	R,NETWORK	4D02WGJ0000TCE
NR2418	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR2419	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR2420	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2421	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR2422	9JD110P4560M5	R,NETWORK	4D02WGJ0560TCE
NR3001	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3002	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3003	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3004	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3005	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3006	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3007	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3008	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3009	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3010	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3011	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3012	9JD110P4470M5	R,NETWORK	4D02WGJ0470TCE

\*\*\* OTHERS \*\*\*


SH2401	9JD126D000044	TERMINAL PIN	YQ-36	or
SH2401	9JD126R000038	TERMINAL PIN	TP00370-21	
SH2402	9JD126D000044	TERMINAL PIN	YQ-36	or
SH2402	9JD126R000038	TERMINAL PIN	TP00370-21	
SH2403	9JD126D000044	TERMINAL PIN	YQ-36	or
SH2403	9JD126R000038	TERMINAL PIN	TP00370-21	
SH2404	9JD126D000044	TERMINAL PIN	YQ-36	or
SH2404	9JD126R000038	TERMINAL PIN	TP00370-21	

### MAIN PCB ASS'Y

\*\*\* PCB \*\*\*

PCBF40	9JDA31Z01EF40L	MAIN PCB ASS'Y	CMF111A
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\*\*\* RESISTORS \*\*\*

 R3808	9JDR65584470J	R,FUSE	47 OHM 1/4W
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\*\*\* CAPACITORS \*\*\*

C376	9JDE7EYF3102M	CE	1000 UF 25V	or
C376	9JDE61FF3102D	CE	1000 UF 25V	
C384	9JDE7EYF3102M	CE	1000 UF 25V	or
C384	9JDE61FF3102D	CE	1000 UF 25V	
C3201	9JDE7EYF2222M	CE	2200 UF 16V	

\*\*\* DIODES \*\*\*

D101	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177
D102	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177
D103	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177
D104	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177
D105	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D107	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D108	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D301	9JDD28R11FS20	DIODE	EC11FS2-TE12L
D802	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D803	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D804	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61
D805	9JDDD7R20S300	DIODE SCHOTTKY BARRIER	RB520S-30-TE61



## ELECTRICAL REPLACEMENT PARTS LIST

D806	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D807	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D808	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D809	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D810	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D811	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D812	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D813	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D814	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D818	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D3201	9JDDD7RB051L0	DIODE SCHOTTKY	RB051L-40_TE25	
D3202	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3202	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3204	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3204	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3205	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3205	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3209	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3209	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3210	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3210	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3600	9JDDD7R60L400	DIODE SCHOTTKY	RB160L-40-TE25	
D3601	9JDD77R1A1R10	DIODE VARISTA	AVRL161A1R1NT	
D3602	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D3603	9JDD77R1A1R10	DIODE VARISTA	AVRL161A1R1NT	
D3604	9JDDD7R60L400	DIODE SCHOTTKY	RB160L-40-TE25	
D3605	9JDDD7R60L400	DIODE SCHOTTKY	RB160L-40-TE25	
D3626	9JDD77R1A1R10	DIODE VARISTA	AVRL161A1R1NT	
D3627	9JDD77R1A1R10	DIODE VARISTA	AVRL161A1R1NT	
D3628	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3628	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3629	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D3629	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
D3630	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17	
D3804	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
D4209	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4210	9JDDE7RB4R72B	DIODE ZENER	UDZS4.7B TE-17	
D4211	9JDDE7RB4R72B	DIODE ZENER	UDZS4.7B TE-17	
D4212	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4213	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4214	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4215	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4216	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4217	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4218	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4219	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4220	9JDDE7RB6R82B	DIODE ZENER	UDZS6.8B TE-17	
D4221	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D4221	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4222	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4223	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4235	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4236	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4237	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4238	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4239	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4240	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4241	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4242	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4243	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4244	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4245	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4246	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4247	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-17	
D4248	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4249	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4250	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4251	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4252	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4253	9JDDE7RB1202B	DIODE ZENER	UDZS12B TE-177	
D4254	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D4255	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	

## ELECTRICAL REPLACEMENT PARTS LIST

D4256	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17
D4257	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17
D4258	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17
D4259	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17
D4303	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D4304	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D4305	9JDD1VT001330	DIODE,SILICON	1SS133T-77
D4310	9JDDD7R60M400	DIODE SCHOTTKY BARRIER	RB160M-40-TR
D4311	9JDDD7R60M400	DIODE SCHOTTKY BARRIER	RB160M-40-TR
D4313	9JDDE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D6001	9JDD1VT001330	DIODE,SILICON	1SS133T-77

### \*\*\* ICS \*\*\*

IC101	9JDS31Z01EM01	MEMORY DATA	R5F21244SNFP
IC102	9JDICMF032200	IC	ISL83220ECVZ-T
IC105	9JDI9UF032290	IC	PST3229NR
IC300	9JDI0QJP21510	IC	NJM2151AV(TE1)
△ IC301	9JDI0KJP89320	IC	TDA8932T
IC801	9JDS31Z01EE02	MEMORY DATA	M24256-BWMN6TP
IC802	9JDI9UF032290	IC	PST3229NR
IC803	9JDS31Z01EM02	MEMORY DATA	VCT6973G-FA-B3-000
△ IC3201	9JDI07F0C0WF0	IC	BA00BC0WFP-E2
△ IC3202	9JDI1LF010150	IC	AL1015
△ IC3203	9JDI07F078200	IC	BD7820FP-E2
△ IC3204	9JDI07F078200	IC	BD7820FP-E2
△ IC3205	9JDI1KF98D050	IC	KIA78D05F
△ IC3601	9JDI07F078200	IC	BD7820FP-E2
IC3605	9JDIG1F090250	IC	SII9025CTU
IC3606	9JDS31Z01EE03	MEMORY DATA	BR24L02F-WE2
IC3609	9JDS31Z01EE04	MEMORY DATA	BR24L02F-WE2
△ IC3801	9JDI07F0C0WF0	IC	BA00BC0WFP-E2
IC4201	9JDI0UF015020	IC	MM1502XNRE
IC4202	9JDI0UF015010	IC	MM1501XNRE
IC4203	9JDI0UF015010	IC	MM1501XNRE
IC4204	9JDI0QF025840	IC	NJM2584AM(TE1)
IC4205	9JDI0QF025840	IC	NJM2584AM(TE1)
IC4206	9JDI0UF015010	IC	MM1501XNRE
IC4301	9JDS31Z01EE01	MEMORY DATA	24LCS22AT-I/SN
IC4303	9JDI0QF02534V	IC	NJM2534V(TE2)
IC4304	9JDI0QF02534V	IC	NJM2534V(TE2)
IC6001	9JDI0CJ040530	IC	SN74LV4053APWR

### \*\*\* TRANSISTORS \*\*\*

Q101	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q102	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q300	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SRTK
Q301	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SRTK
Q302	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q303	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q304	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q305	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q321	9JDTAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q3200	9JDT77J011320	TRANSISTOR SILICON	2SB1132T100(Q,R)
Q3201	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SRTK
△ Q3202	9JDT3M000044	COMPOUND TRANSISTOR	CPH6312-TL-E
Q3205	9JDTAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
Q3206	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3601	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3602	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3603	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3604	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3605	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3615	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3616	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3617	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3618	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q3801	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3802	9JDTAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
Q3803	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3804	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SRTK

## ELECTRICAL REPLACEMENT PARTS LIST

Q3805	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q3806	9JDTAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q3807	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q4201	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4203	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4204	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4205	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4207	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4208	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4209	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4210	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4214	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4216	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4217	9JDTPAAC05002	COMPOUND TRANSISTOR	KRA103SRTK
Q4218	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q4221	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4222	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4223	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q4224	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4303	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4304	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4305	9JDTPAAB05001	COMPOUND TRANSISTOR	KRA102SRTK
Q4306	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4307	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4308	9JDTPAAB05001	COMPOUND TRANSISTOR	KRA102SRTK
Q4309	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q4310	9JDTNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q6001	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q6002	9JDT2AA5132E0	FET	KTK5132E-RTK/P
Q6005	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK

\*\*\* COILS \*\*\*

B101	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B102	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B301	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B302	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B303	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B304	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B305	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B306	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B307	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B801	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B802	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B803	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B804	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B805	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B806	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B807	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B808	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B809	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B810	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B811	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B812	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B813	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B817	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B818	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B819	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3201	9JD024HC51216	CORE,BEADS	HCB1608KF-121T20
B3601	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3602	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3603	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3604	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3605	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B3606	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B3608	9JD024HC51023	CORE,BEADS	FCM1608KF-102T02
B3609	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3610	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3613	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B3801	9JD024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B4200	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06
B4203	9JD024HC56013	CORE,BEADS	FCM1608KF-601T02

## ELECTRICAL REPLACEMENT PARTS LIST

B4204	9JD024HC56013	CORE,BEADS	FCM1608KF-601T02	
B4205	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4206	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4207	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4208	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4209	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B4210	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B4211	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B4212	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B4213	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B4214	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4215	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	or
B4215	9JD024AC5330J	CORE,BEADS	BLM18PG330SN1D	
B4216	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	or
B4216	9JD024AC5330J	CORE,BEADS	BLM18PG330SN1D	
B4220	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	or
B4220	9JD024AC5330J	CORE,BEADS	BLM18PG330SN1D	
B4221	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	or
B4221	9JD024AC5330J	CORE,BEADS	BLM18PG330SN1D	
B4222	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	or
B4222	9JD024AC5330J	CORE,BEADS	BLM18PG330SN1D	
B4223	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	
B4224	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	
B4226	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	
B4227	9JD024HC53306	CORE,BEADS	HCB1608KF-330T50	
B4228	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4229	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4301	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4302	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4303	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4304	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4305	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4306	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4307	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4309	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4310	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4311	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4314	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4315	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4317	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4318	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4323	9JD024HC56005	CORE,BEADS	FCM1608CF-600T06	
B4324	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4325	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
B4327	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B4328	9JD024NC51021	CORE,BEADS	EBMS160808A102_RDC45	
B6001	9JD024HC56013	CORE,BEADS	FCM1608KF-601T02	
B6003	9JD024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2	
B7201	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20	
L103	9JD0216SD220J	COIL	22 UH	
L104	9JD0216SD220J	COIL	22 UH	
L300	9JD021U0L220M	COIL	22 UH	or
L300	9JD02130G220M	COIL	22 UH	
L302	9JD021U0L220M	COIL	22 UH	or
L302	9JD02130G220M	COIL	22 UH	
L3201	9JD02167E220K	COIL	22 UH	
L3202	9JD021U0L330M	COIL	33 UH	or
L3202	9JD02130G330M	COIL	33 UH	
L3203	9JD02167E220K	COIL	22 UH	
L3601	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3602	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3603	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3604	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3605	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3606	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3607	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L3608	9JD02D6000068	COIL CHOKE	ACM2012D-900-2P-T00	
L4202	9JD021LA6220J	COIL	22 UH	
L4203	9JD021LA6220J	COIL	22 UH	
L4204	9JD021LA6220J	COIL	22 UH	
L4205	9JD021LA6220J	COIL	22 UH	

## ELECTRICAL REPLACEMENT PARTS LIST

L4206	9JD021LA6220J	COIL	22 UH
L4207	9JD021LA6220J	COIL	22 UH
L4208	9JD021LA6220J	COIL	22 UH
L4209	9JD0216MA220K	COIL	22 UH
L4210	9JD0216MA220K	COIL	22 UH
L4211	9JD021LA6220J	COIL	22 UH
L4212	9JD021LA6220J	COIL	22 UH
L4213	9JD021LA6100J	COIL	10 UH
L4214	9JD021LA6470J	COIL	47 UH
L4215	9JD0216S81R5M	COIL	1.5 UH
L4216	9JD0216S81R5M	COIL	1.5 UH
L4217	9JD021LA6100J	COIL	10 UH
L4218	9JD0216S81R5M	COIL	1.5 UH
L4219	9JD021LA6470J	COIL	47 UH
L4221	9JD021LA6470J	COIL	47 UH
L4223	9JD021LA6470J	COIL	47 UH
L4224	9JD0216S91R5M	COIL	1.5 UH
L4225	9JD021LA6100J	COIL	10 UH
L4226	9JD021LA6470J	COIL	47 UH
L4227	9JD021LA6220J	COIL	22 UH
L4230	9JD0216MA220K	COIL	22 UH
L4231	9JD0216MA220K	COIL	22 UH
L4232	9JD0216S91R5M	COIL	1.5 UH
L4233	9JD021LA6470J	COIL	47 UH
L4305	9JD0216SD220J	COIL	22 UH
L4306	9JD0216SD220J	COIL	22 UH

\*\*\* JACKS \*\*\*

CP102	9JD063W100053	JACK	MD24-95V-EC
J4202	9JD060K431033	RCA JACK	AV2-57A03-01
J4203	9JD060R411054	RCA JACK	RCA-349-00D-01
J4204	9JD063Y000089	JACK PLATE	RCA/DIN-501A-00B-03
J4205	9JD060J131021	HEADPHONE JACK	MSJ-035-08D_PC(O87)
J4206	9JD063D000077	SOCKET,21PIN	MRC-021V-27_PC
J4301	9JD060J151001	HEADPHONE JACK	MSJ-035-39D_B_PC_LF(O87)

\*\*\* CONNECTORS \*\*\*

CP101	9JD069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP301	9JD069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP802	9JD069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP3400	9JD069S220629	CONNECTOR PCB SIDE	A2001WV2-2P
CP3601	9JD0694YJ3018	CONNECTOR PCB SIDE	1903015-3
CP3603	9JD0694YJ3018	CONNECTOR PCB SIDE	1903015-3
CP3801	9JD06977NM020	CONNECTOR PCB SIDE	127301123K2
CP3802	9JD069779M020	CONNECTOR PCB SIDE	127301109K2
CP4301	9JD069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP4305	9JD069S240639	CONNECTOR PCB SIDE	A2001WR2-4P
CP6001	9JD06972UM018	CONNECTOR PCB SIDE	TKC-W30P-P1

\*\*\* CRYSTAL & CERAMIC OSCILLATORS \*\*\*

X101	9JD100GT01615	CRYSTAL	B16000E007
X801	9JD100DT02007	CRYSTAL	DSX840GA
X3602	9JD100DT02801	CRYSTAL	SMD-49

\*\*\* NETWORKS \*\*\*

NR801	9JD110P4470M4	R,NETWORK	4D03WGJ0470T5E
NR802	9JD110P4470M4	R,NETWORK	4D03WGJ0470T5E
NR3601	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E
NR3602	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E
NR3603	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E
NR3604	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E
NR3605	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E
NR3606	9JD110P4330M4	R,NETWORK	4D03WGJ0330T5E

\*\*\* OTHERS \*\*\*

CP4302	9JD06G2S21501	CONNECTOR PCB SIDE	D229FD015G107BY
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# ELECTRICAL REPLACEMENT PARTS LIST

CP7201	9JD06G3VWT01A	CONNECTOR PCB SIDE	20389-Y30E	
SH4301	9JD126D000044	TERMINAL PIN	YQ-36	
SH4302	9JD126D000044	TERMINAL PIN	YQ-36	
SH4303	9JD126D000044	TERMINAL PIN	YQ-36	
SH4304	9JD126D000044	TERMINAL PIN	YQ-36	
SH4305	9JD126D000044	TERMINAL PIN	YQ-36	
SH4306	9JD126D000044	TERMINAL PIN	YQ-36	
SH4307	9JD126D000044	TERMINAL PIN	YQ-36	
<b>POWER PCB ASS'Y</b>				
*** PCB ***				
PCB240	9JDA31Z01E240L	POWER PCB ASS'Y	CEF273A	
*** RESISTORS ***				
⚠ R403	9JDR3X28BR22J	R,METAL OXIDE	0.22 OHM 3W	
⚠ R406	9JDR3K681S22J	R,METAL OXIDE	0.022 OHM 1W	
⚠ R412	9JDR63881R22J	R,FUSE	0.22 OHM 1W	
⚠ R416	9JDR655842R2J	R,FUSE	2.2 OHM 1/4W	
⚠ R466	9JDR5X2AD151J	R,CEMENT	150 OHM 5W	
⚠ R494	9JDR3K78A681J	R,METAL OXIDE	680 OHM 2W	
⚠ R497	9JDR65581010J	R,FUSE	1 OHM 1W	or
⚠ R497	9JDR63881010J	R,FUSE	1 OHM 1W	
⚠ R533	9JDR3X28B473J	R,METAL OXIDE	47K OHM 3W	
*** CAPACITORS ***				
⚠ C402	9JDP2122B334M	CMP	0.33 UF 275V ECQUL	
⚠ C405	9JDE71LHH331D	CE	330 UF 400V	or
⚠ C405	9JDE77CHH331M	CE	330 UF 400V	
⚠ C406	9JDCD39E0M13M	CC	0.001 UF 250V	
C422	9JDE7EY78101D	CE	100 UF 100V	
⚠ C423	9JDP4NAE6823H	CMPP	0.082 UF 800V	
⚠ C424	9JDE8E6FH220M	CE	22 UF 400V	
⚠ C427	9JDCD39B0MQ2K	CC	470 PF 250V	
⚠ C433	9JDE7EYF4471M	CE	470 UF 35V	
⚠ C434	9JDE7EYF4102M	CE	1000 UF 35V	
⚠ C435	9JDE7EYF3102M	CE	1000 UF 25V	
⚠ C436	9JDCD39E0M13M	CC	0.001 UF 250V	
⚠ C438	9JDE7EYF4102M	CE	1000 UF 35V	
⚠ C440	9JDE7EYF0222M	CE	2200 UF 6.3V	
⚠ C441	9JDE7ESU5100M	CE	10 UF 50V	
⚠ C444	9JDE7ESU0221M	CE	220 UF 6.3V	
⚠ C448	9JDP2122B104M	CMP	0.1 UF 275V ECQUL	
C449	9JDE7EYF2102M	CE	1000 UF 16V	
C453	9JDE7EYF2102M	CE	1000 UF 16V	
⚠ C463	9JDCD39B0MQ2K	CC	470 PF 250V	
C466	9JDE7EYF4471M	CE	470 UF 35V	
⚠ C475	9JDP4NAE6823H	CMPP	0.082 UF 800V	
*** DIODES ***				
D401	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
⚠ D404	9JDD6C047110A	DIODE VARISTA	ENE471D-10A	
D406	9JDD28R1QS040	DIODE	EC31QS04-TE12L	
D407	9JDD28R1QS040	DIODE	EC31QS04-TE12L	or
D407	9JDD4CRSK34A0	DIODE SCHOTTKY	SK34A	
⚠ D408	9JDD2Z05SB800	DIODE,BRIDGE	D5SB80	
D411	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D411	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D412	9JDD97U03R91B	DIODE,ZENER	MTZJ3.9B T-77	
D413	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D413	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D414	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D414	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D415	9JDDE7RB3R92B	DIODE ZENER	UDZS3.9B TE-17	
D416	9JDD97U02001B	DIODE,ZENER	MTZJ20B T-77	
D419	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D420	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	

## ELECTRICAL REPLACEMENT PARTS LIST

D421	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D421	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D422	9JDDD7R60M900	DIODE SCHOTTKY BARRIER	RB160M-90TR	
D423	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D423	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D424	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
⚠ D425	9JDD2WTRM11C0	DIODE SILICON	RM11C-EIC	
D426	9JDD1VT001330	DIODE,SILICON	1SS133T-77	
⚠ D427	9JDD2WTRM11C0	DIODE SILICON	RM11C-EIC	
D428	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D428	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D429	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D429	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
⚠ D430	9JDD2WTRM11C0	DIODE SILICON	RM11C-EIC	
⚠ D431	9JDD2WTRM11C0	DIODE SILICON	RM11C-EIC	
D432	9JDD2BE0RU3B0	DIODE SILICON	RU3B LF-A5	
D433	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
⚠ D435	9JDD2CFC91020	DIODE SILICON	ERC91-02J11SC	
⚠ D437	9JDD2CA2C10R0	DIODE SCHOTTKY BARRIER	YG862C10R	
D438	9JDDGERMA1110	DIODE SILICON	MA111-(TX)	or
D438	9JDDD7R0S3550	DIODE SILICON	1SS355 TE-17	
D439	9JDD97U03001B	DIODE,ZENER	MTZJ30B T-77	
⚠ D440	9JDD2CA2C10R0	DIODE SCHOTTKY BARRIER	YG862C10R	
⚠ D442	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
⚠ D443	9JDD2CA2C10R0	DIODE SCHOTTKY BARRIER	YG862C10R	
D445	9JDD97U02401B	DIODE,ZENER	MTZJ24B T-77	
D446	9JDD1VT001330	DIODE,SILICON	1SS133T-77	
D447	9JDD1VT001330	DIODE,SILICON	1SS133T-77	
D449	9JDD1VT001330	DIODE,SILICON	1SS133T-77	
D450	9JDD97U03R31B	DIODE,ZENER	MTZJ3.3B T-77	
D453	9JDD97U05R11B	DIODE,ZENER	MTZJ5.1B T-77	
D456	9JDD1VT001330	DIODE,SILICON	1SS133T-77	
D457	9JDD2LXSR2400	DIODE SCHOTTKY	SR240-F	
D459	9JDD97U02201B	DIODE ZENER	MTZJ22B T-77	
D460	9JDD4AT01H3E0	DIODE RECTIFIER	1H3-E	
D461	9JDD97U01101B	DIODE,ZENER	MTZJ11B T-77	
D462	9JDD2LXSR2400	DIODE SCHOTTKY	SR240-F	

\*\*\* ICS \*\*\*

⚠ IC401	9JDI2GT050600	IC	MP2A5060	
⚠ IC402	9JDI5SD0P2F40	IC	MIP2F4	
⚠ IC403	9JDI1KJ9A431A	IC	KIA431A-AT	
⚠ IC404	9JDI1KJ9A431A	IC	KIA431A-AT	
⚠ IC406	9JDI1LF010150	IC	AL1015	
⚠ IC407	9JDI03T057790	IC	LA5779-E	
⚠ IC408	9JD000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)	
⚠ IC409	9JD000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)	
⚠ IC410	9JD000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)	

\*\*\* TRANSISTORS \*\*\*

Q401	9JDTCAT03209Y	TRANSISTOR SILICON	KTC3209_Y-AT	
Q402	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
Q403	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
Q404	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
⚠ Q405	9JDTCAT03209Y	TRANSISTOR SILICON	KTC3209_Y-AT	
⚠ Q406	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
⚠ Q407	9JDTAAT01281Y	TRANSISTOR SILICON	KTA1281_Y	
Q408	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
Q409	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
⚠ Q410	9JDTJ7M50P030	FET	RSS050P03_TB	
Q411	9JDTNAA05003	COMPOUND TRANSISTOR	KRC102SR TK	
Q412	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
Q415	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK	
Q416	9JDTAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK	
Q417	9JDTAAT01241Y	TRANSISTOR SILICON	KTA1241_Y-AT	
Q418	9JDTNAAA05001	COMPOUND TRANSISTOR	KRC101S-RTK	
Q420	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	
Q421	9JDTAAT01281Y	TRANSISTOR SILICON	KTA1281_Y	
⚠ Q422	9JDTBA0011510	TRANSISTOR SILICON	KTB1151	
Q423	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK	

## ELECTRICAL REPLACEMENT PARTS LIST

Q424	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SR TK
Q425	9JDTNAAB05003	COMPOUND TRANSISTOR	KRC102SR TK
Q431	9JDTNAAA05001	COMPOUND TRANSISTOR	KRC101S-RTK
Q432	9JDTAAT01241Y	TRANSISTOR SILICON	KTA1241_Y-AT
⚠ Q433	9JDTCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
⚠ Q434	9JDT25F035630	FET	2SK3563(ORION_Q)
*** COILS ***			
B401	9JD024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B402	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B403	9JD024HC51816	CORE,BEADS	HCB1608KF-181T20
B404	9JD024HT03553	CORE,BEADS	W5RH3.5X5X1.0
⚠ L401	9JD029X000135	COIL,LINE FILTER	SS30V-R150270
⚠ L402	9JD029X000135	COIL,LINE FILTER	SS30V-R150270
⚠ L403	9JD02F1000001	COIL CHOKE	DBE-688
L405	9JD02167E220K	COIL	22 UH
L408	9JD021U0L470M	COIL	47 UH
L409	9JD02130G330M	COIL	33 UH
L413	9JD02167E100K	COIL	10 UH
L415	9JD02167E220K	COIL	22 UH
*** TRANSFORMERS ***			
⚠ T401	9JD0487420014	TRANSFORMER,SWITCHING	87420014
⚠ T402	9JD0481190074	TRANSFORMER,SWITCHING	81190074
*** JACKS ***			
⚠ J401	9JD064Q2A0001	JACK,AC	CCT2302-0711
*** CONNECTORS ***			
CD403	9JD06CU2E0601	CORD CONNECTOR	CU2E0601
CP401	9JD069D01001A	CONNECTOR PCB SIDE	003P-2100
CP405	9JD069D01001A	CONNECTOR PCB SIDE	003P-2100
CP406	9JD069S2E0639	CONNECTOR PCB SIDE	A2001WR2-14P
CP408	9JD069D01001A	CONNECTOR PCB SIDE	003P-2100
CP411	9JD06977N001B	CONNECTOR PCB SIDE	TWG-P23P-B1
CP412	9JD069779001B	CONNECTOR PCB SIDE	TWG-P09P-B1
CP413	9JD069D01001A	CONNECTOR PCB SIDE	003P-2100
*** FUSES ***			
⚠ F401	9JD080NT05004	FUSE	50T050H
⚠ F404	9JD0835C01603	MICRO FUSE	20N_1600FS
FH401	9JD06710T0009	HOLDER,FUSE	EYF-52BCY
FH402	9JD06710T0009	HOLDER,FUSE	EYF-52BCY
*** RELAYS ***			
⚠ RY401	9JD0560V50119	RELAY	ALKS329 A60
*** THERMISTOR ***			
⚠ TH401	9JDDSQ0VE4R0L	THERMISTOR	4D2-18LCS
*** OTHERS ***			
EL2401	9JD124116281A	EYE LET	XRY16X28BD
EL2402	9JD124120301A	EYE LET	XRY20X30BD
SH401	9JD126D000044	TERMINAL PIN	YQ-36
SH402	9JD126D000044	TERMINAL PIN	YQ-36
SH403	9JD126D000044	TERMINAL PIN	YQ-36
SH404	9JD126D000044	TERMINAL PIN	YQ-36
SH405	9JD126D000044	TERMINAL PIN	YQ-36
SH406	9JD126D000044	TERMINAL PIN	YQ-36
SH407	9JD126D000044	TERMINAL PIN	YQ-36
SH408	9JD126D000044	TERMINAL PIN	YQ-36



# ELECTRICAL REPLACEMENT PARTS LIST

## OPERATION PCB ASS'Y

\*\*\* PCB \*\*\*

PCB270	9JDA31Z01E270L	OPERATION PCB ASS'Y	CEF274A
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\*\*\* SWITCHES \*\*\*

SW2201	9JD0504101T34	SWITCH,TACT	EVQ21505R
SW2202	9JD0504101T34	SWITCH,TACT	EVQ21505R
SW2203	9JD0504101T34	SWITCH,TACT	EVQ21505R
SW2204	9JD0504101T34	SWITCH,TACT	EVQ21505R
SW2205	9JD0504101T34	SWITCH,TACT	EVQ21505R
SW2206	9JD0504101T34	SWITCH,TACT	EVQ21505R

\*\*\* CONNECTORS \*\*\*

CD4302	9JD06CU242801	CORD CONNECTOR	CU242801
CP2203	9JD069S240639	CONNECTOR PCB SIDE	A2001WR2-4P

## AND OTHERS

\*\*\* COILS \*\*\*

TR7201	9JD02AS6513C1	CORE FERRITE	E04FG441312-TX3
TR7202	9JD02AS6513C1	CORE FERRITE	E04FG441312-TX3

\*\*\* CONNECTORS \*\*\*

CD302	9JD06CU144503	CORD CONNECTOR	CU144503
CD7204	9JD06CHRU2206	CORD CONNECTOR	CHRU2206

\*\*\* TUNER \*\*\*

TU6002	9JD0164Y03002	DIGITAL TUNER	TDTG-S156D
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\*\*\* AC CORD \*\*\*

CD3810	9JD120Q155804	CORD AC	P205-1324-4
CD3811	9JD120D145801	CORD SET AC	4K6G-431-00K

\*\*\* OTHERS \*\*\*

BT001	9JD141L003010	BATTERY,MANGAN	R6P(AR)XICI
BT002	9JD141L003010	BATTERY,MANGAN	R6P(AR)XICI

M3400	9JD1519Y55L01	FAN MOTOR	2004KL-04W-B30-M09
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SP301	9JD070Y056003	SPEAKER	S0412F03
SP302	9JD070Y056003	SPEAKER	S0412F03

TM101	9JD076B0MU030	TRANSMITTER	ETR0088-010240
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V2301	9JD09E4126009	LCD	LK255T3LZ5AZ
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## RESISTOR

RC.....	CARBON RESISTOR
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## 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

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