

# JVC

## SERVICE MANUAL

LCD FLAT TELEVISION

### LT-23X475



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## SPECIFICATION

Items		Contents
Dimentions (W x H x D)		61.9cm x 43.6cm x 8.6cm (TV only) 61.9cm x 49.8cm x 22.7cm
Mass		7.8kg (TV only) 9.8kg
TV RF System		US M TV system
Colour System		NTSC
Sound-multiplex System		US system
Channels and frequencies		Channels (on air) VHF 2 to 13, UHF 14 to 69 Channels (CABLE) 1 to 125
Aerial Input Terminal		75Ω unbalanced
Power Input		TV : 24V DC, AC adapter : AC120V, 60Hz
Power Consumption		120W, Standby : 3W
Display area		Visible size: 58.2cm (Diagonal) / 50.0cm x 30.0cm (H x V)
Display pixels		1280 x 768 (W-XGA)
Speakers		5.4cm, Round type x 2
Audio Output		5W + 5W
Video / Audio Inputs (1/2)	INPUT 1 terminal	Video input, S-VIDEO input, Audio L / R inputs
	INPUT 2 terminal	Component video input, Audio L / R inputs
Audio Output terminal		RCA connectors x3 Audio L / R, Subwoofer outputs
PC Input		Analog RGB : D-SUB(15pin) x1, PC AUDIO IN x1
Headphone		3.5mm stereo mini jack x 1
Remote Control Unit		DA-5000100087 (AA / R06 / UM-3 battery x 2)
AC adapter		DA-5061370338

**NOTE: Design & specifications are subject to change without notice.**

# SECTION 1 PRECAUTION

## 1.1 SAFETY PRECAUTIONS

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**  
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (  $\text{⏏}$  ) side GND, the ISOLATED (NEUTRAL) : (  $\text{⏏}$  ) side GND and EARTH : (  $\text{⏏}$  ) side GND. Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.).  
If above note will not be kept, a fuse or any parts will be broken.
- (5) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
- (6) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- (7) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.

- (8) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

### (9) Isolation Check (Safety for Electrical Shock Hazard)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

### a) Dielectric Strength Test

The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.) This method of test requires a test equipment not generally found in the service trade.

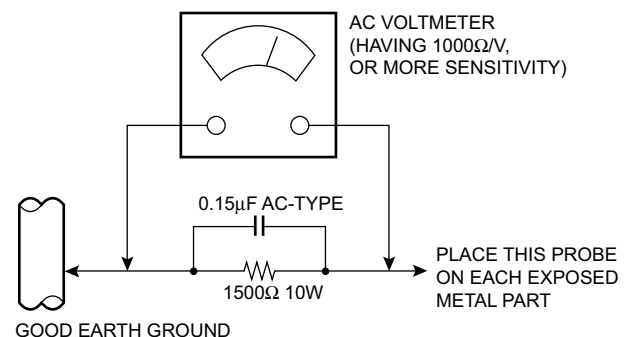
### b) Leakage Current Check

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

### Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



## 1.2 INSTALLATION

### 1.2.1 HEAT DISSIPATION

If the heat dissipation vent behind this unit is blocked, cooling efficiency may deteriorate and temperature inside the unit will rise. Therefore, please make sure pay attention not to block the heat dissipation vent as well as the ventilation outlet behind the unit and ensure that there is room for ventilation around it.

### 1.2.2 INSTALLATION REQUIREMENTS

Ensure that the minimal distance is maintained, as specified below, between the unit with and the surrounding walls.

Install the unit on stable flooring or stands.

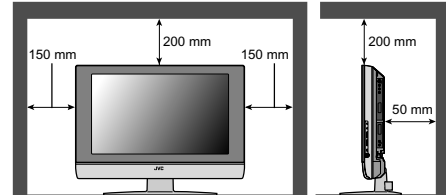
Take precautionary measures to prevent the unit from tipping in order to protect against accidents and earthquakes.

#### Distance recommendations

Avoid improper installation and never position the unit where good ventilation is impossible.

When installing this TV, distance recommendations must be maintained between the set and the wall, as well as inside a tightly enclosed area or piece of furniture.

Keep to the minimum distance guidelines shown for safe operation.



## 1.3 PRECAUTIONS

- (1) Depending on the around temperature, the brightness leaning occurs. Be careful of the environment in the product installation place and so on sufficiently.
- (2) Don't hinder radiation from the back, the heaven and the side. Please refer to the next page that explains about the condition of the installation.  
The inside becomes hot if hindering radiation and there is fear, which the inner circuit damages.
- (3) Install in the place with good ventilation. Use in the condition that around temperature is in the 0~35°C range.
- (4) Avoid preservation and use at the high temperature or high humidity place. If you behave like this, leaning sometimes happens in the screen when the set actives.
- (5) Depending on the condition and the environment of display, the slight fleck of the light and leaning of the screen and so on is sometimes conspicuous. This is the characteristic which is peculiar to liquid crystal display. It is not set trouble.
- (6) This monitor has cool cathode pipe as the backlight. The time change and the use time sometimes change brightness and condition of display.

## 1.4 THE ATTENTION IN TRANSPORTATION

When transporting a set, if the load handling is bad (throwing, falling and so on) however it is using a solid box, pressure inside liquid crystal display.

In the case there is fear to break the liquid crystal display while transporting. To prevent from the accident or trouble while transporting, pay attention to choice of the transportation company sufficiently and also arrange for it in the delivery after the attention of the load handling is explained to the transportation company.

This set is used glass for composing liquid crystal display. When carrying, pay attention not to add over vibration and impact sufficiently.

Ensure that it is placed upright and not horizontally during transportation and storage as the LCD panel is very vulnerable to lateral impacts and may break. During transportation, ensure that the unit is loaded along the traveling direction of the vehicle, and avoid stacking them on one another. For storage, ensure that they are stacked in 2 layers or less even when placed upright.



## **SECTION 2**

### **SPECIFIC SERVICE INSTRUCTIONS**

#### **2.1 DESCRIPTION ABOUT LIQUID CRYSTAL PANEL**

##### **2.2.1 STRUCTURE OF LIQUID CRYSTAL PANEL**

The Liquid Crystal Panel of this model is TFT Panel. The Print circuit board that consist of TFT array and the print circuit board adopted stripe shaped image element alignment are used. These two boards are mixed. The Liquid crystal is enclosed between two boards.

##### **2.1.2 LONG RANGE AFTERIMAGE OF LIQUID CRYSTAL**

The small amount of ion material has mixed a liquid crystal panel with the liquid crystal material in the manufacturing process. If ion material is piled up partially among the poles when the voltage is impressed among the poles, the brightness difference occurs and becomes a long-range afterimage. If same picture is reflected for long time, such a long-range afterimage occurs. If the long-range afterimage occurs, we recommend that you reflect the single color image or moving picture and so on to restore.

##### **2.1.3 THE DISPLAY REPLYING SPEED OF LIQUID CRYSTAL**

Because the speed to display of Liquid crystal panel is slower than the speed of the CRT monitor, some of the moving picture cannot overtake to the speed to display and the image looks flowing is sometimes displayed. This is not trouble, but efficiency of Liquid Crystal.

##### **2.1.4 THE EYESIGHT CORNER OF LIQUID CRYSTAL**

The liquid crystal panel has the wide eyesight corner for which it is difficult to reverse brightness. The tint changes depending on the direction to see a screen. This is not trouble, but efficiency of Liquid Crystal.

##### **2.1.5 THE PICTURE ELEMENT FAULT OF LIQUID CRYSTAL**

The liquid crystal panel is composed of precise technique but all devices don't always work right.

#### **2.2 ATTENTION ITEMS WHEN REPLACING PARTS**

##### **2.2.1 ATTENTION TO EXCHANGE THE LIQUID CRYSTAL PANEL**

- (1) The stillness electricity sometimes makes damage a liquid crystal panel. In liquid crystal panel exchange, do a measure of the stillness electricity such as the earth band.
- (2) A liquid crystal panel and back-light are made from glass. If you gain an impact to these materials, there is fear to damage. So in case of treatment, be careful sufficiently.
- (3) Fix with the screw after confirming that there is not a float to chassis base when exchanging liquid crystal panel. After that reflect all the black signals and confirm that brightness leaning doesn't occur near the screw fixation part. When brightness leaning occurs, slacken a screw in the neighborhood until the brightness leaning is running-out.
- (4) Fix the torque that installs a screw below 0.294Nm. If you install at any more torque, the liquid crystal panel is transformed and sometimes damages.
- (5) If you pull out or insert each connector when power is ON, it causes the trouble. So pull out or insert each connector in the condition to have pulled out a power supply plug.

##### **2.2.2 ATTENTION WHEN EXCHANGING THE MAIN PWB**

To show the original efficiency of the MAIN PWB, pull out a heat think from the previous MAIN PWB and install it in the new PWB surely.

##### **2.2.3 ATTENTION WHEN EXCHANGING THE FUSE**

When exchanging the fuse, please use specified parts. After fuse exchange, confirm that insulater is set to the shield and insulate surely.

## SECTION 3 DISASSEMBLY

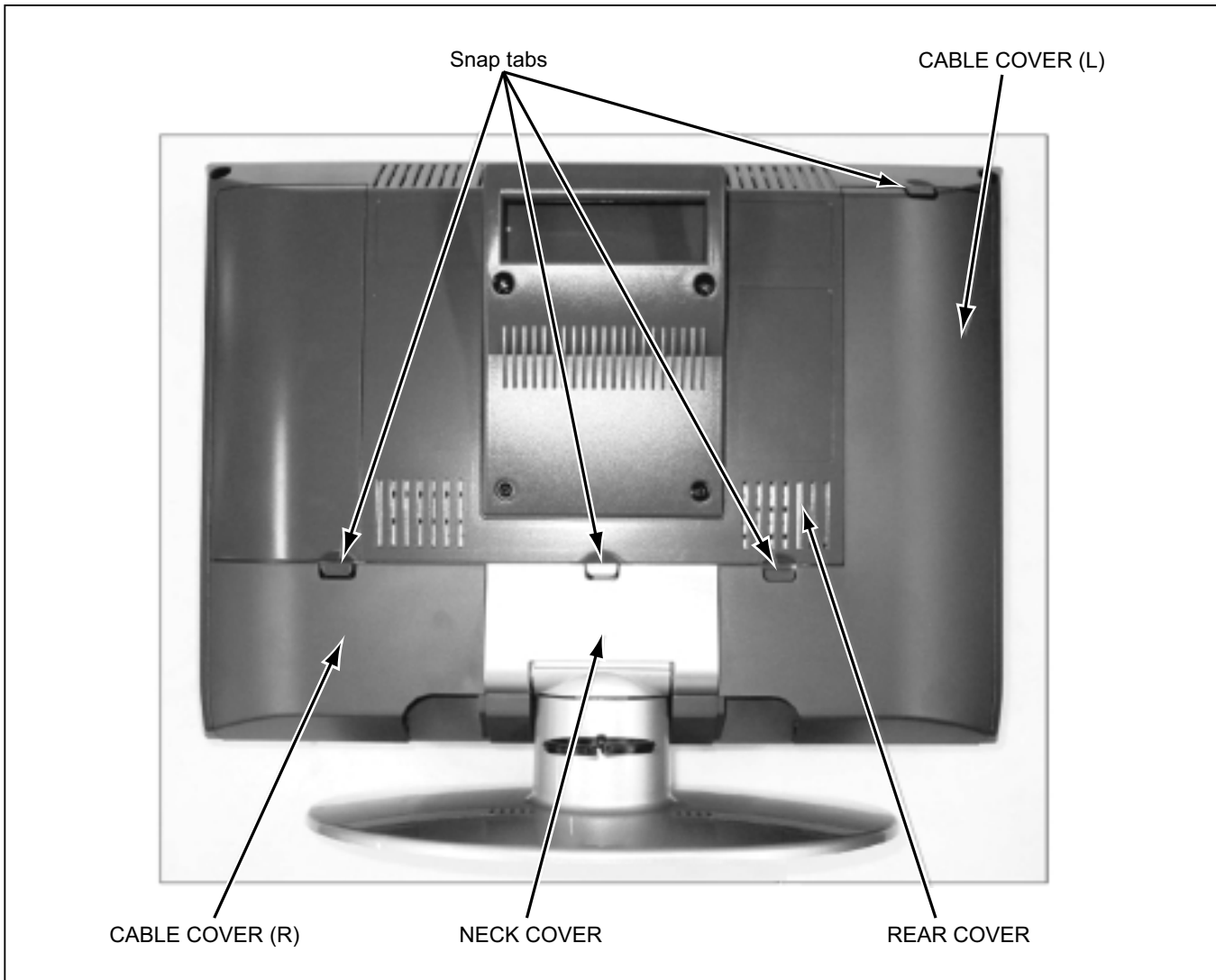
### 3.1 DISASSEMBLY PROCEDURE

#### CAUTION:

- Disconnect the set and attached devices from the electrical outlet
- To avoid ESD (Electro-Static Discharge), ground yourself by using a wrist grounding strap or by periodically touching unpainted metal on the set.

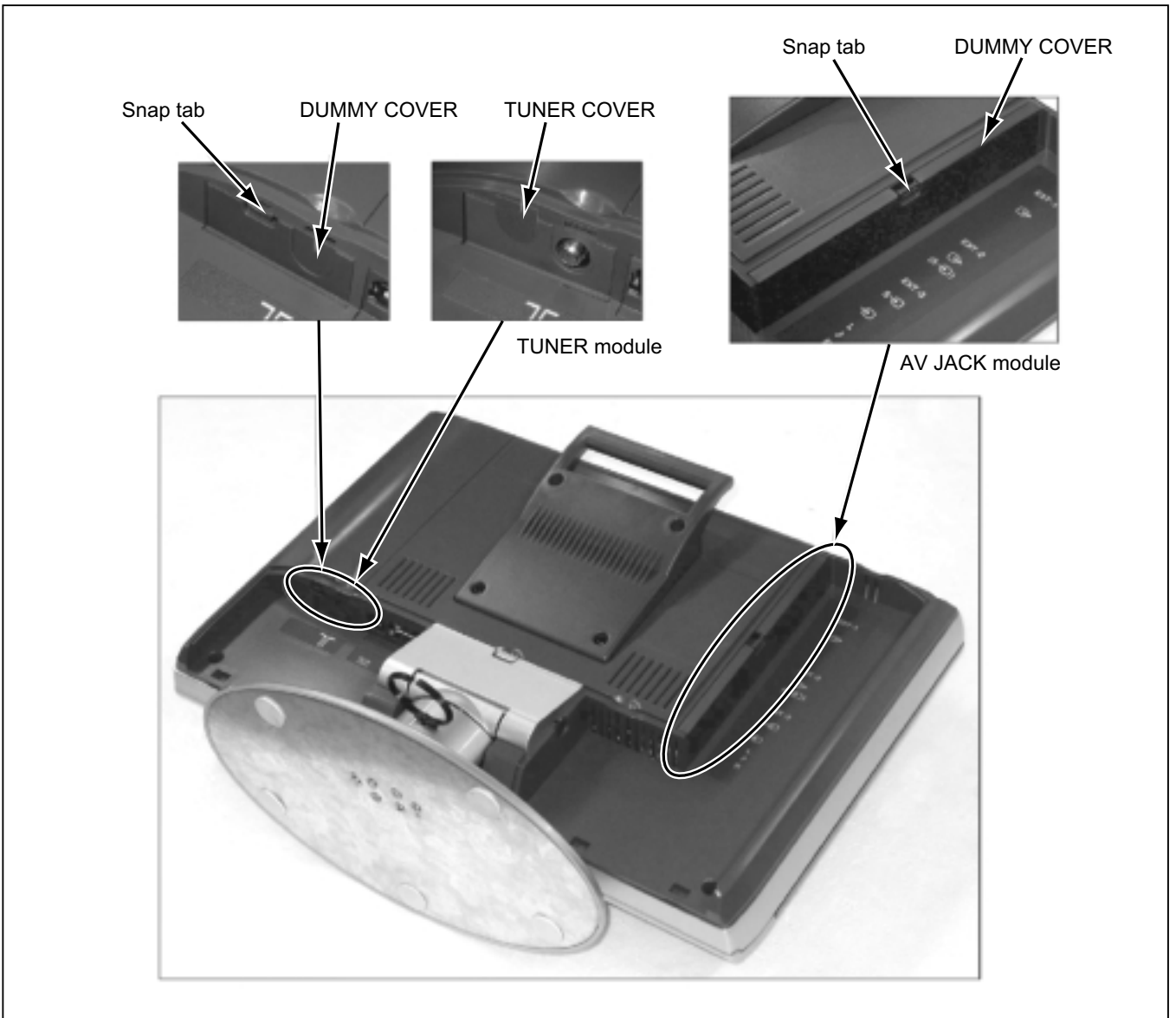
#### 3.1.1 REMOVING THE CABLE COVER AND NECK COVER

- (1) Remove the CABLE COVER (L) by pulling the snap tabs.
- (2) Make similar ways to remove the CABLE COVER (R) and NECK COVER.



### 3.1.2 REMOVING THE DUMMY COVERS (If necessary)

(1) Remove the DUMMY COVERS of TUNER module and AV JACK module by pulling the snap tabs

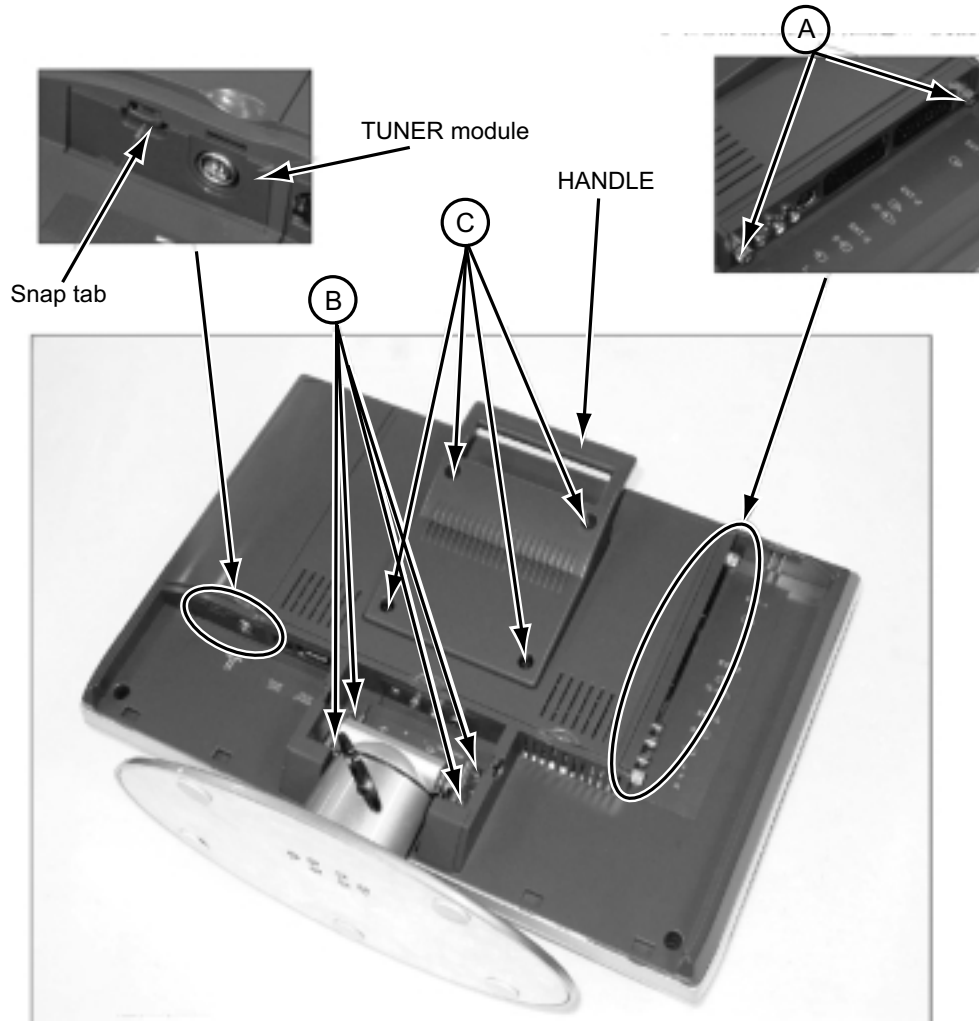


### 3.1.3 PREPARING TO REMOVE THE MODULE UNITS

- (1) Remove the TUNER module cover by pulling snap tab.
- (2) Loosen 2 screws [A] of AV JACK module.

### 3.1.4 REMOVING THE BASE AND THE HANDLE

- (1) Remove 4 screws [B] and remove the BASE by pulling BASE.
- (2) Remove 4 screws [C] and remove the HANDLE.



### 3.1.5 REMOVING THE MODULE UNITS

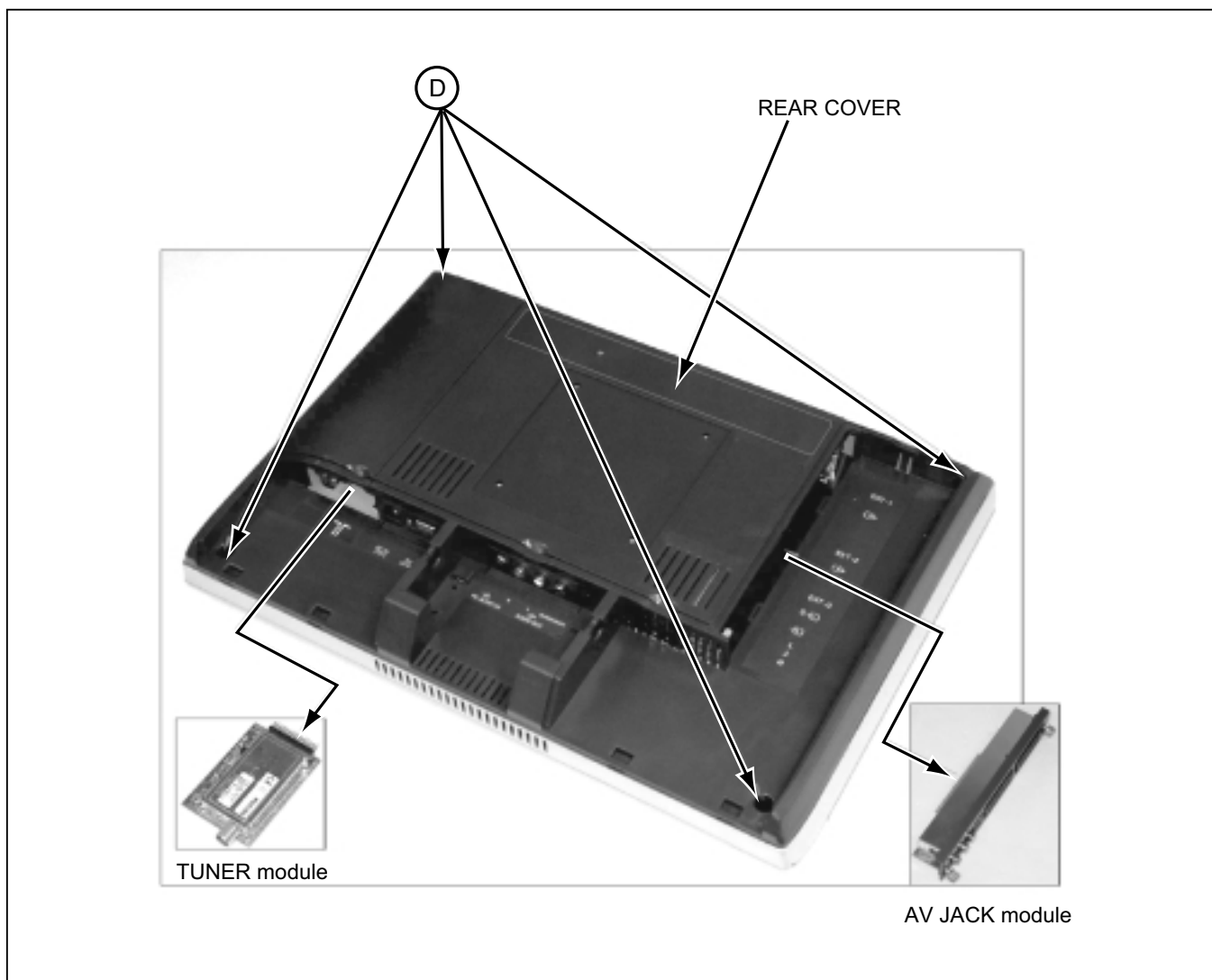
- (1) Remove the TUNER module by pulling carefully.
- (2) Remove the AV JACK module by pulling carefully.

### 3.1.6 REMOVING THE REAR COVER

- (1) Remove 4 screws [D] and remove the REAR COVER.

**NOTE:**

For the REAR COVER is attached tightly, it is easy to open from the corner of the REAR COVER.

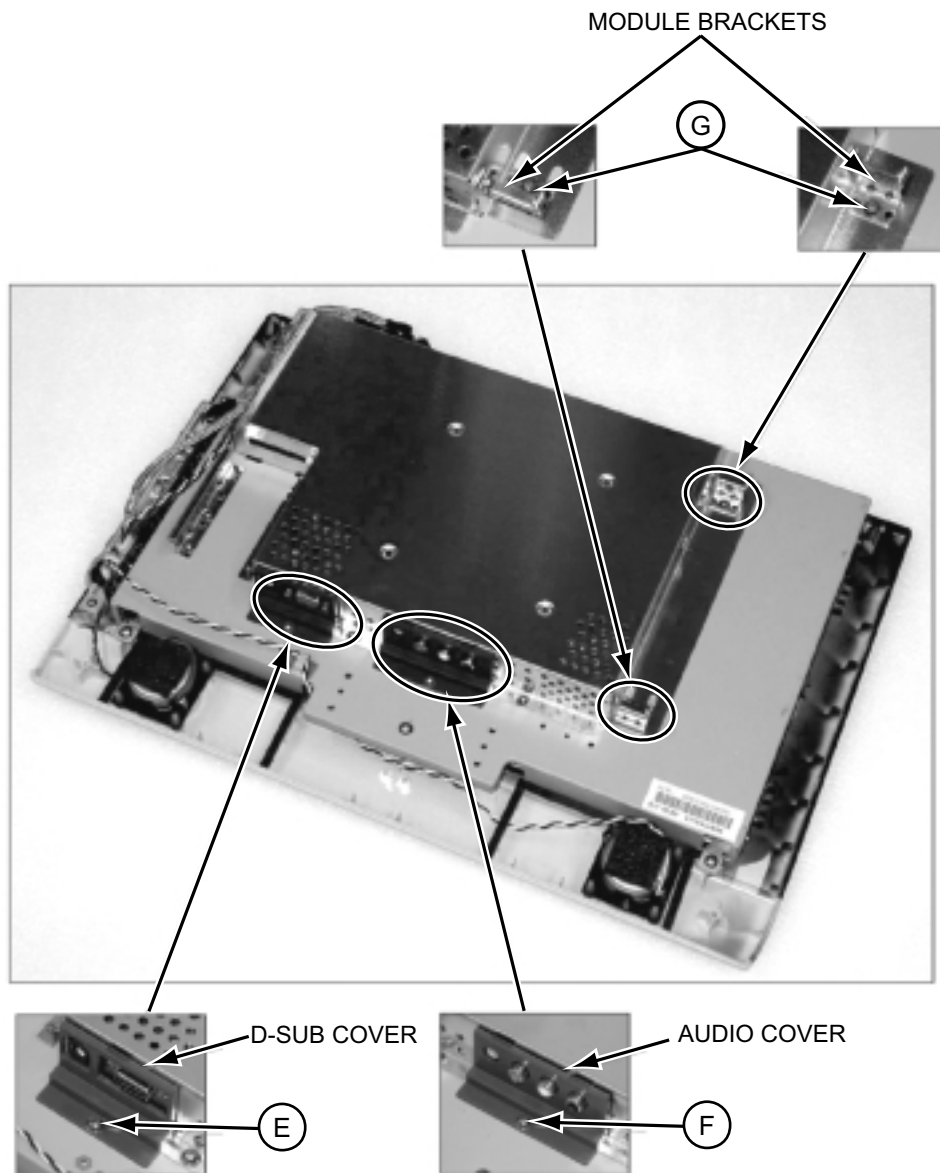


### 3.1.7 REMOVING THE D-SUB COVER AND THE AUDIO COVER

- (1) Remove a screw [E] and remove the D-SUB COVER.
- (2) Remove a screw [F] and remove the AUDIO COVER.

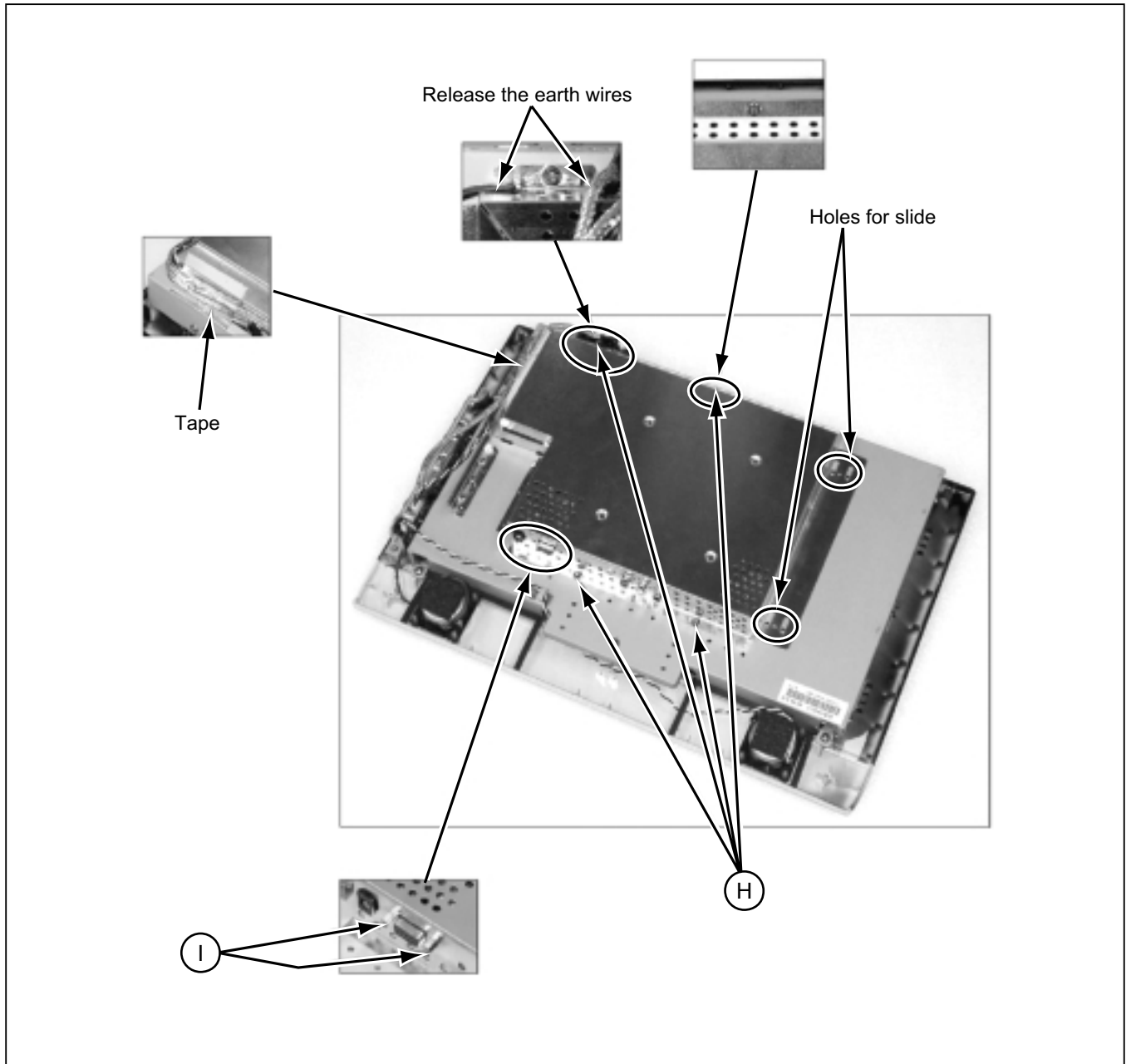
### 3.1.8 REMOVING THE MODULE BRACKETS

- (1) Remove the 2 screws [G] and remove the MODULE BRACKETS.



### 3.1.9 REMOVING THE MAIN BOARD SHIELD

- (1) Remove 4 screws [H] and remove the 2 nuts [I].
- (2) Remove the tape fixing wires.
- (3) Remove the MAIN BOARD SHIELD by sliding to downside and lifting.



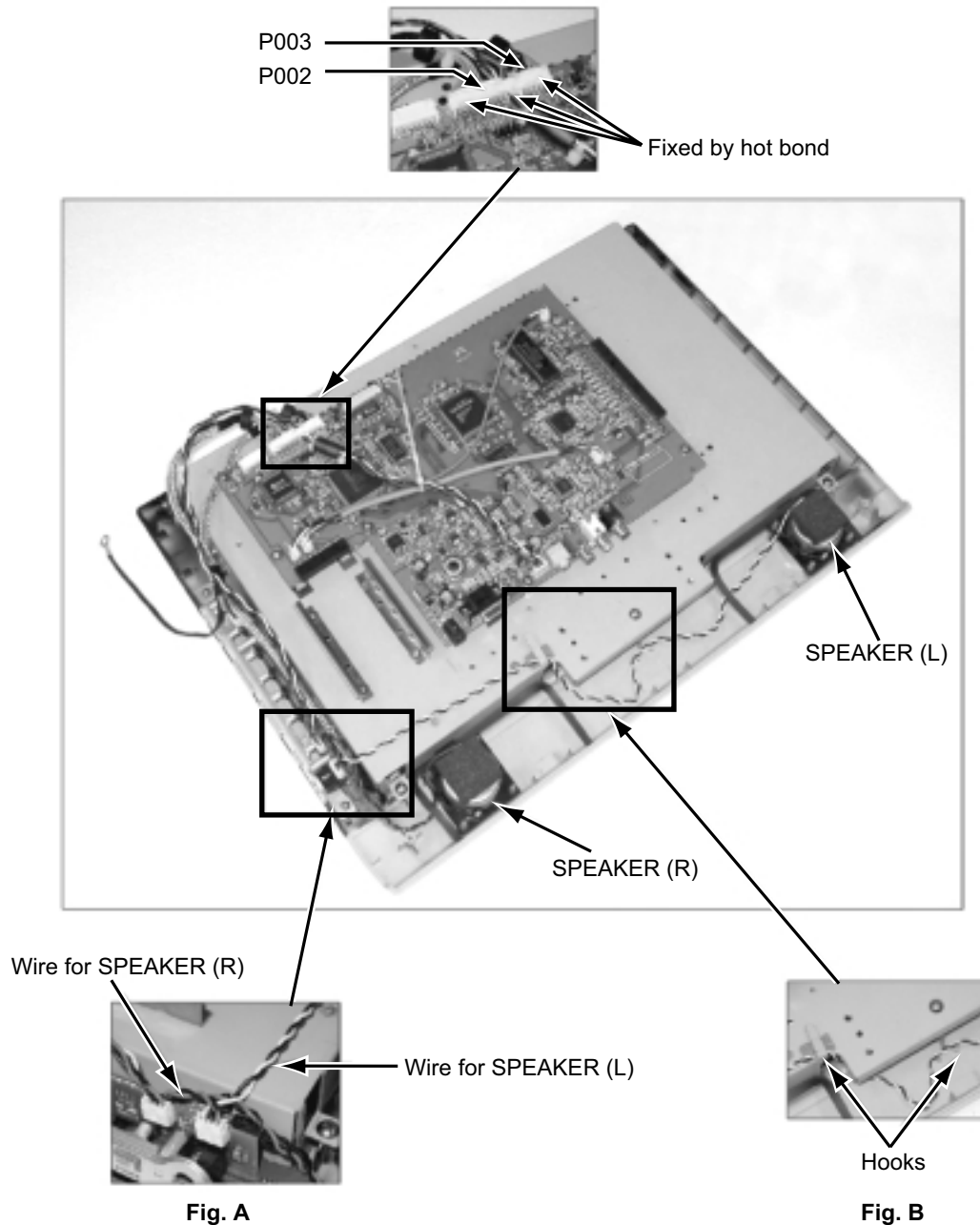
### 3.1.10 DISCONNECTING THE WIRING CONNECTORS

(1) Disconnect the wiring connectors from P002 and P003 on MAIN PWB.

#### NOTES:

Confirm the wiring layout of harnesses.

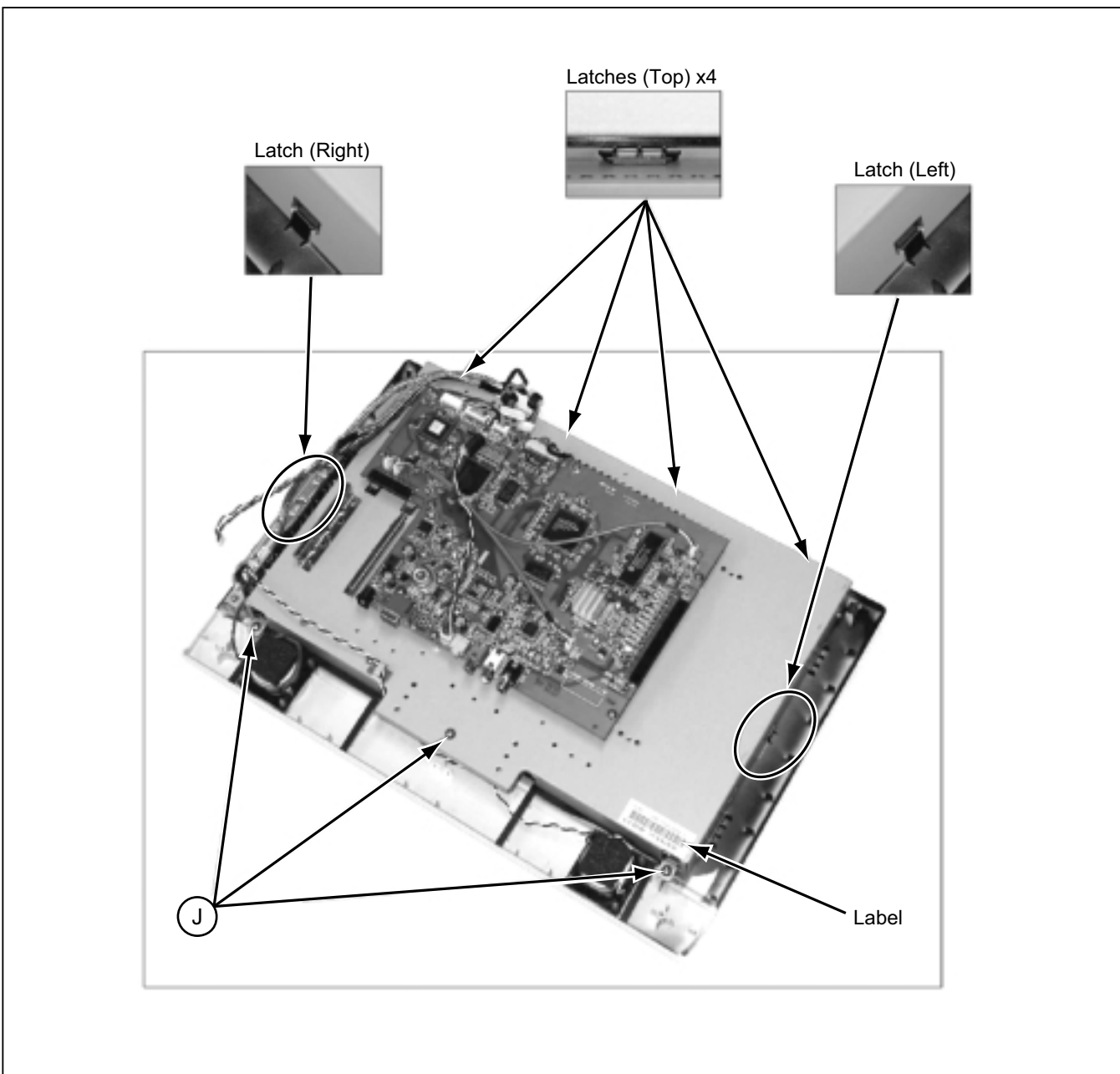
- The AUDIO wires are fixed by hot bond between P002 and P003, after connected.
- The RIGHT SPEAKER wires are turn around into the gap as shown Fig.A.
- The LEFT SPEAKER wires must be put away from the top of the RIGHT SPEAKER and hooked as shown Fig. B.





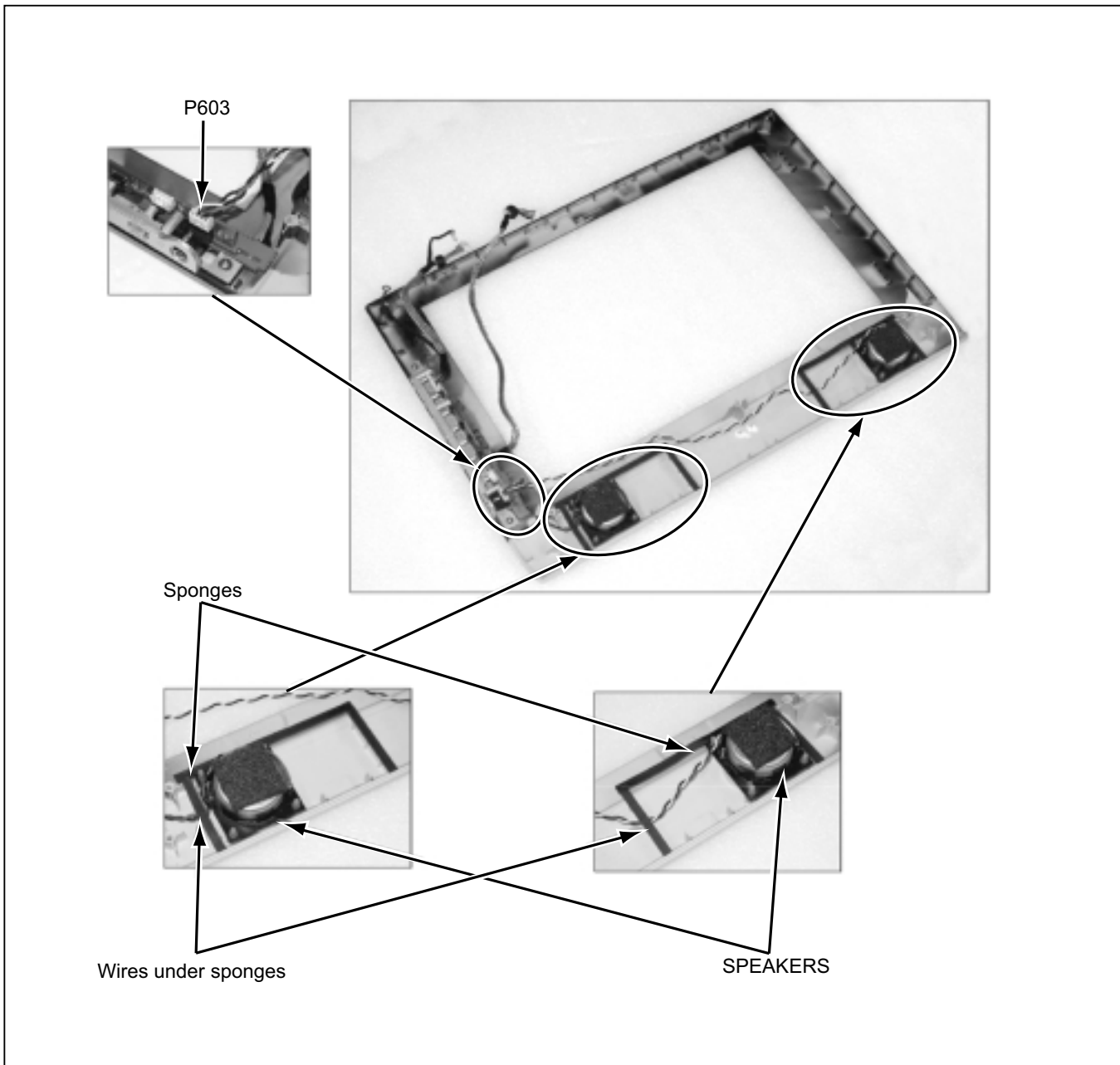
### 3.1.11 REMOVING THE LCD MODULE ASS'Y

- (1) Remove 3 screws [J].
- (2) Remove the LCD MODULE ASS'Y by release from the 6 latches.



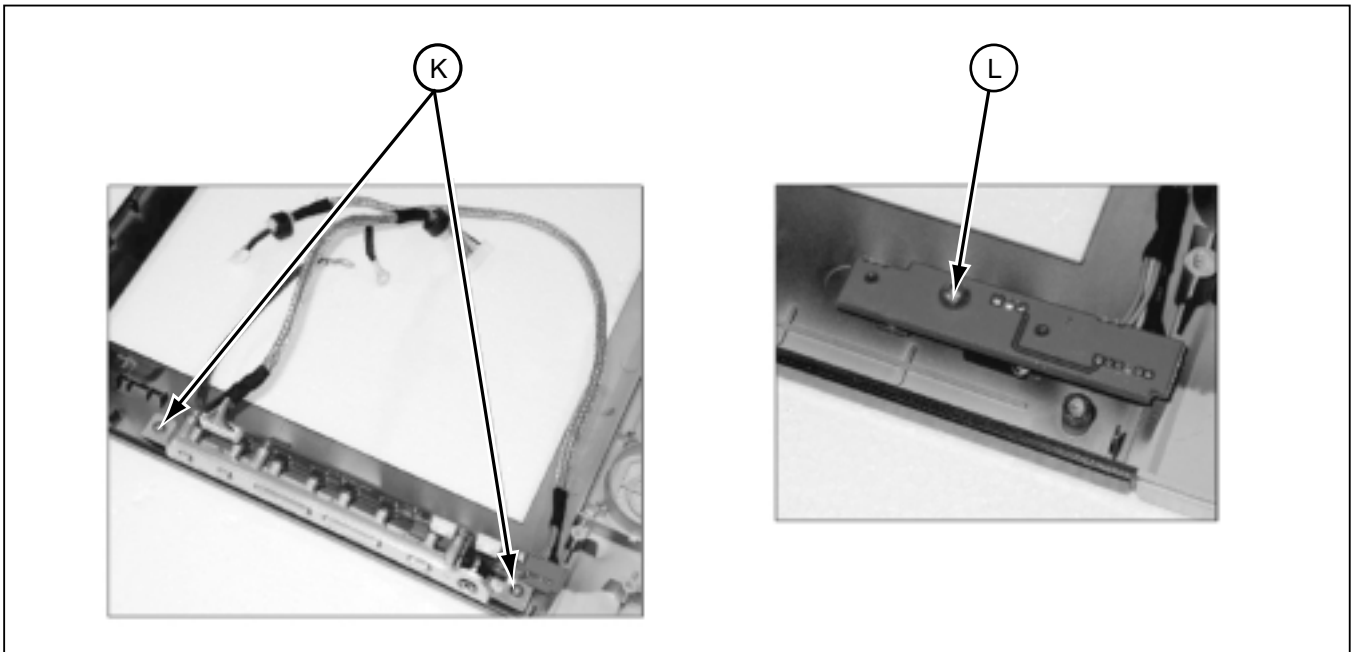
### 3.1.12 REMOVING THE SPEAKERS

- (1) Disconnect the wires from the P603 on FRONT CONTROL PWB.
- (2) Strip off the sponges and lift the SPEAKERS.

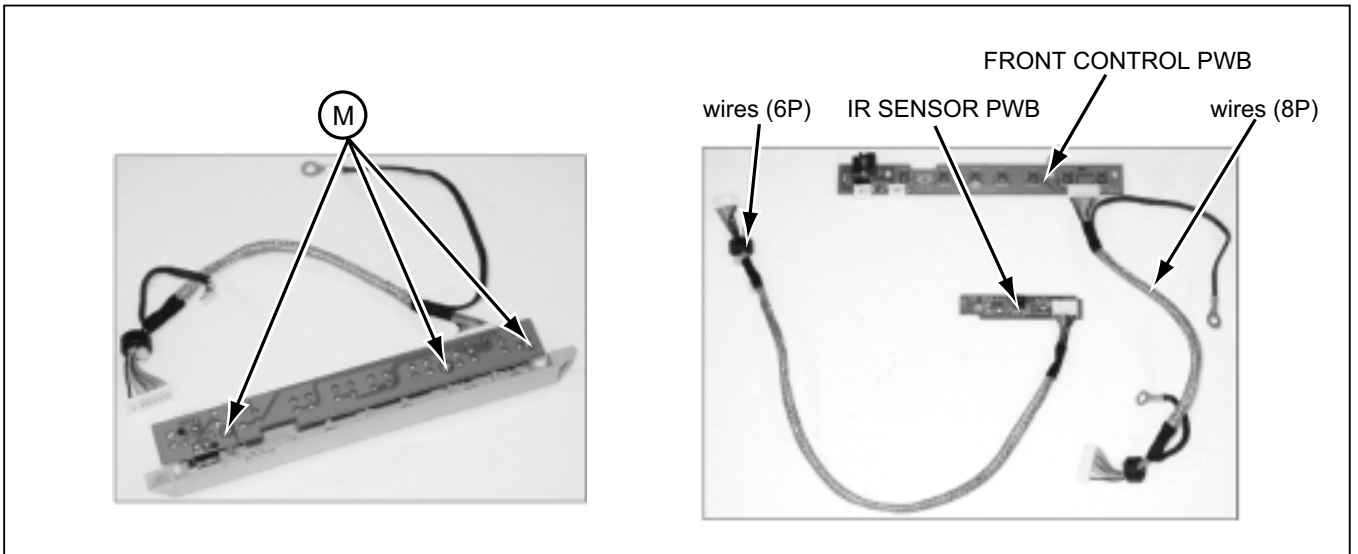


### 3.1.13 REMOVING THE FRONT CONTROL PWB AND IR SENSOR PWB

- (1) Remove 2 screws [K] and remove the FRONT CONTROL PWB.
- (2) Remove a screw [L] and remove the IR SENSOR PWB.

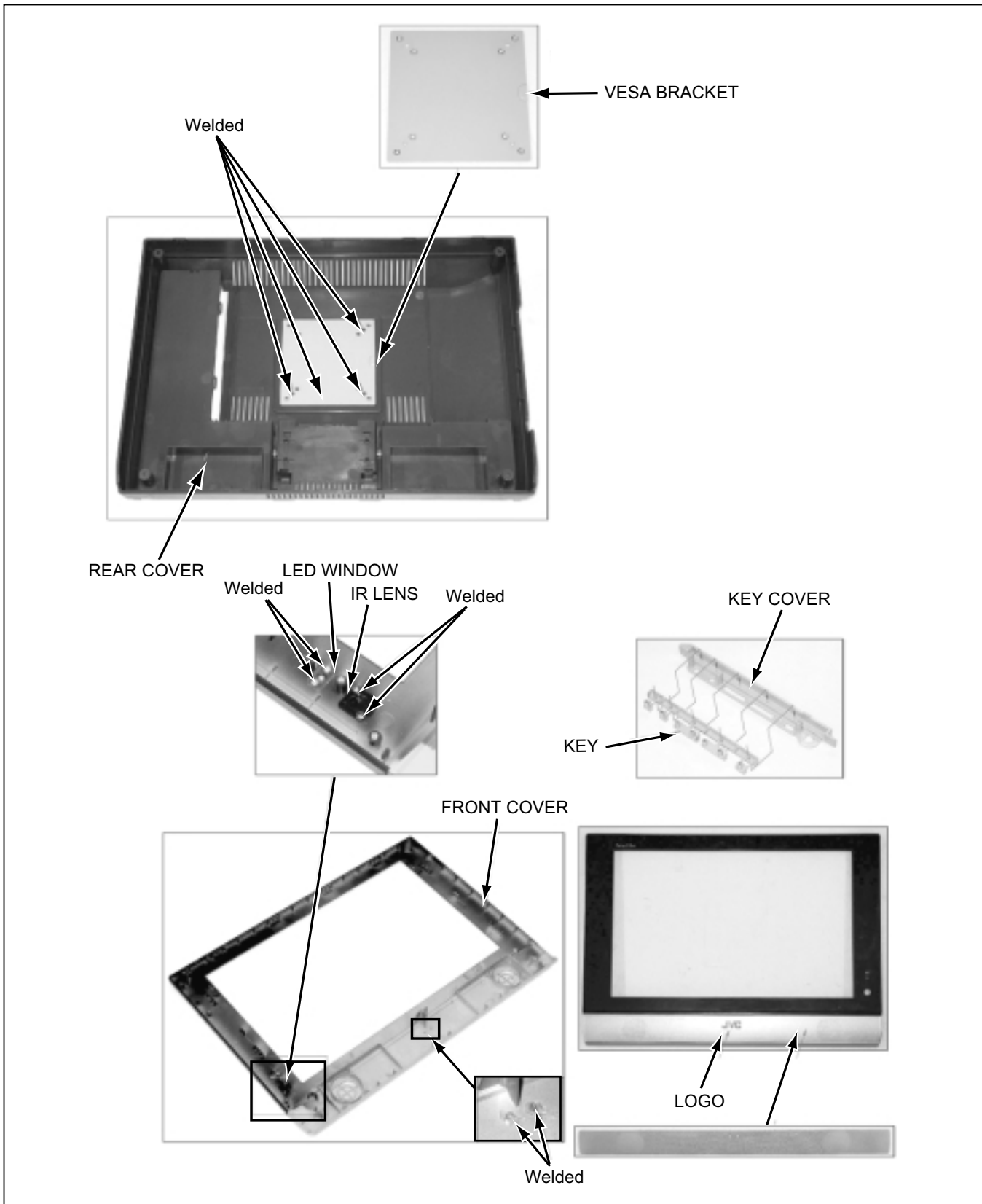


- (3) Remove 3 screws [M] and remove the KEY assembly.



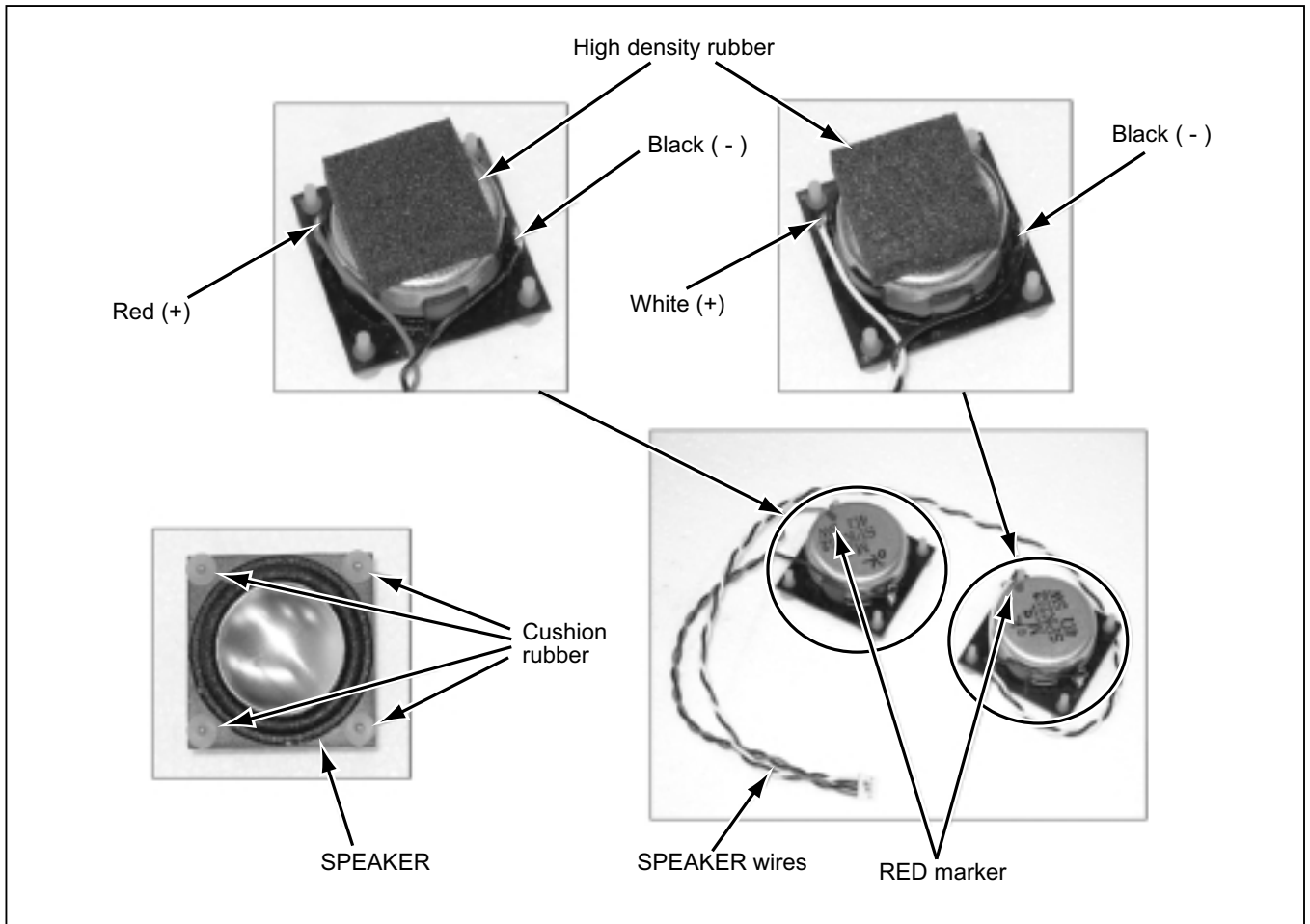
### 3.1.14 SUPPLEMENTAL 1

- The below assemblies are welded process.
- If removing these components, it is necessary to replace them.



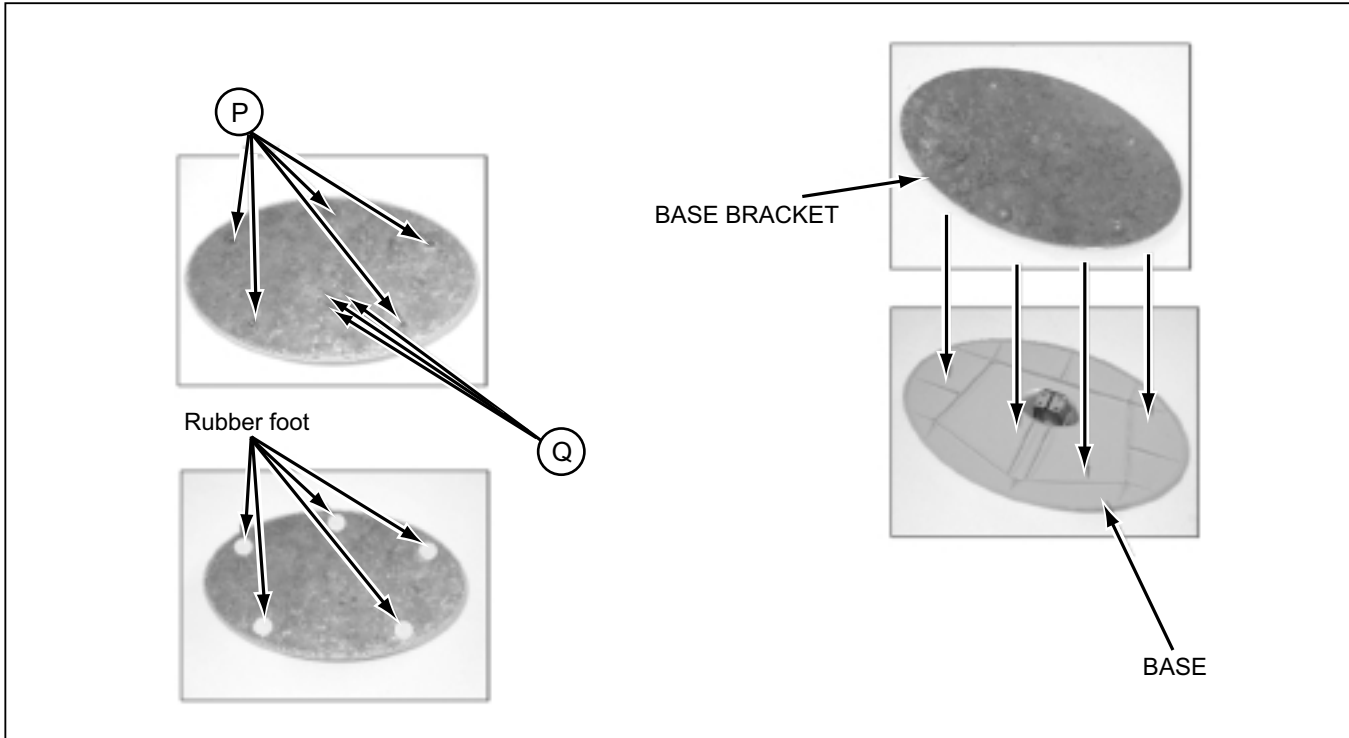
### 3.1.15 SUPPLEMENTAL 2

- SPEAKER assembly.
- Confirm to connect the positive wire to the terminal with RED marker.

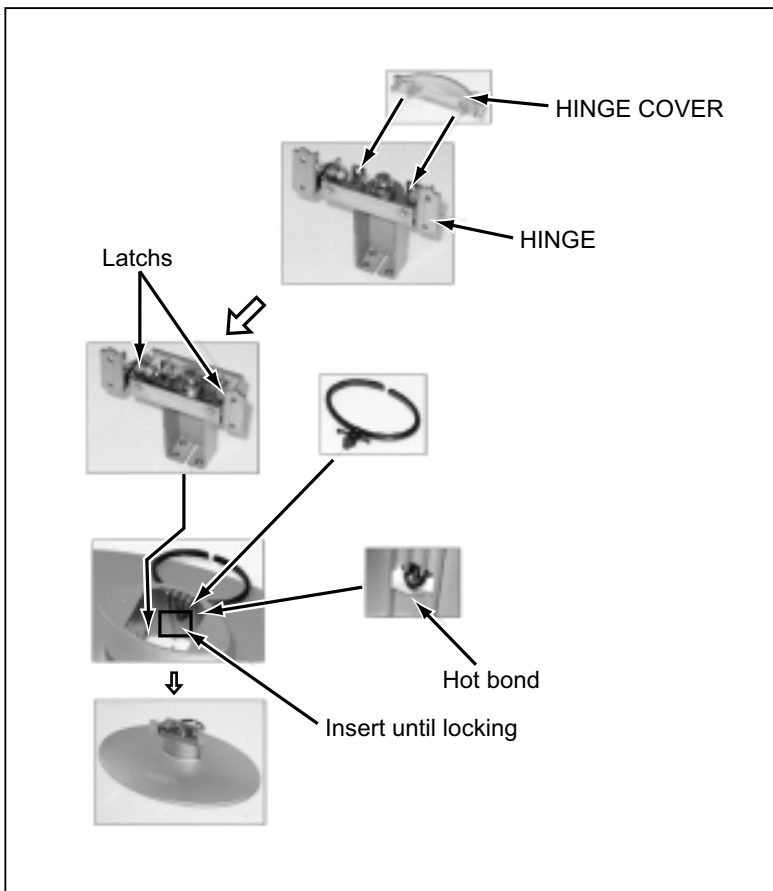


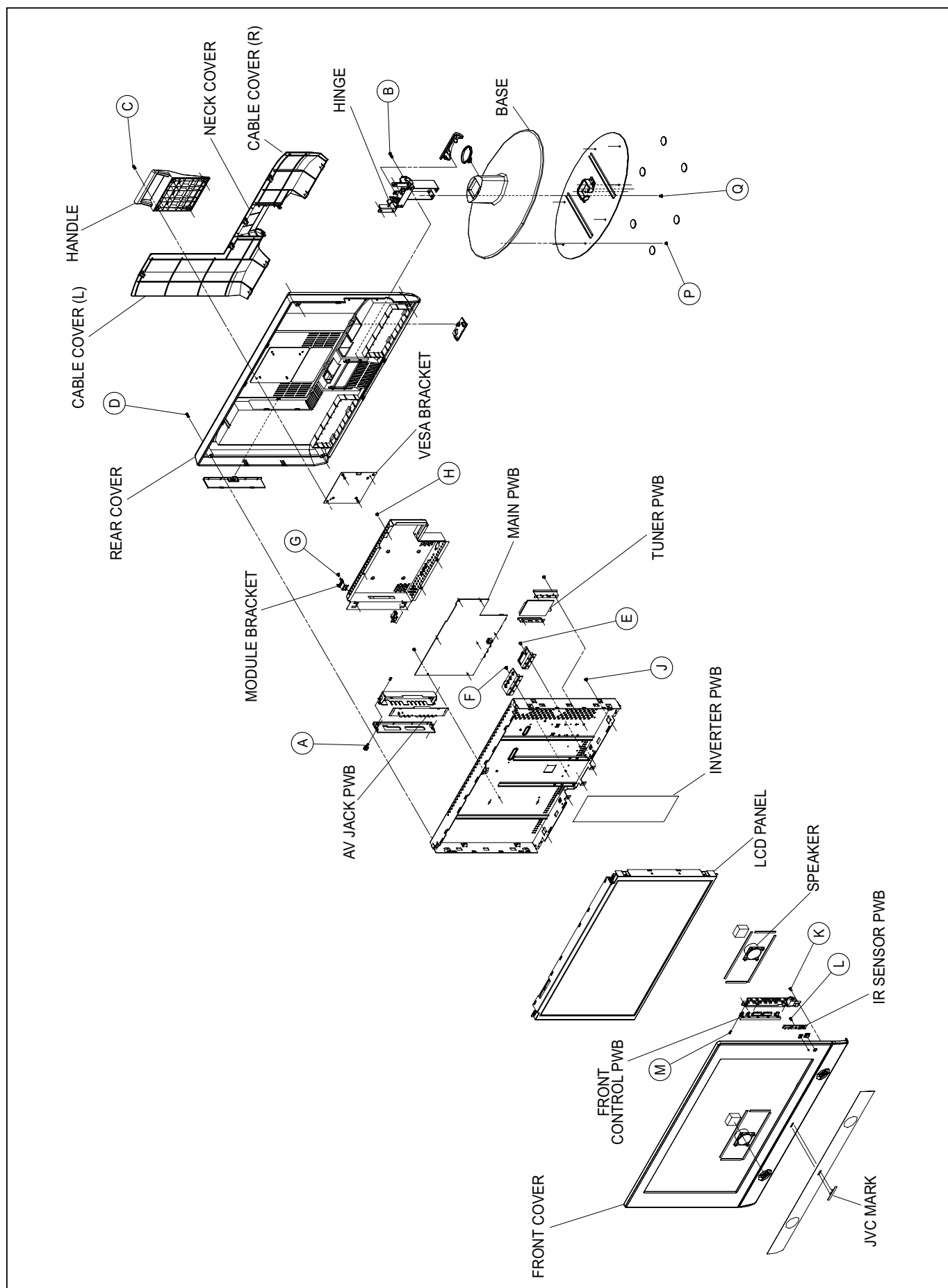
### 3.1.16 SUPPLEMENTAL 3

- BASE assembly.



- HINGE assembly.

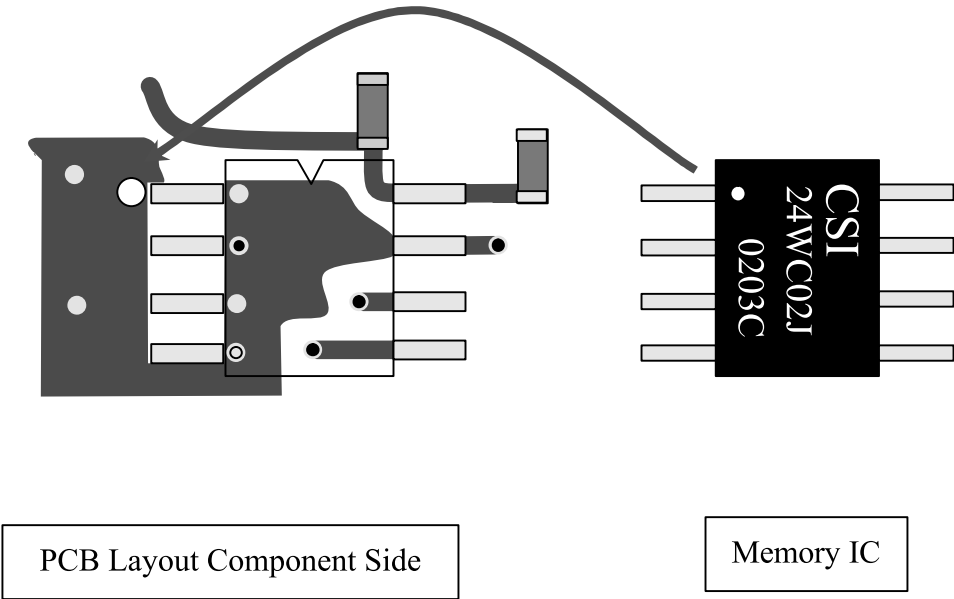




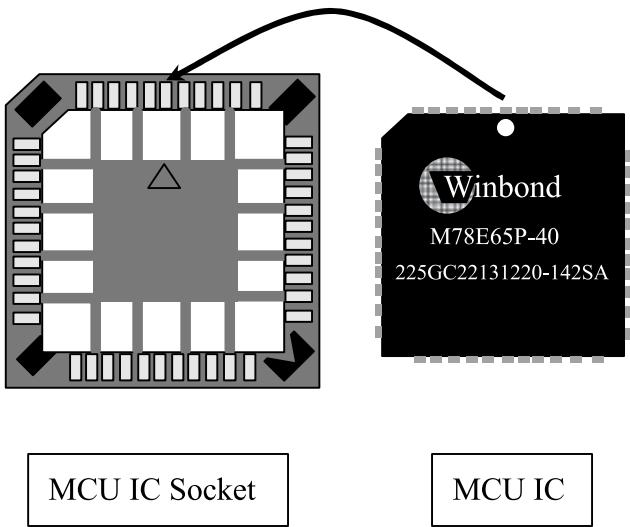
3.2 REPLACEMENT OF MEMORY IC

3.2.1 PROCEDURE FOR REPLACING OF MEMORY IC

Memory IC Notice



MCU IC Notice





### 3.3 REPLACEMENT OF CHIP COMPONENT

#### 3.3.1 CAUTIONS

- (1) Avoid heating for more than 3 seconds.
- (2) Do not rub the electrodes and the resist parts of the pattern.
- (3) When removing a chip part, melt the solder adequately.
- (4) Do not reuse a chip part after removing it.

#### 3.3.2 SOLDERING IRON

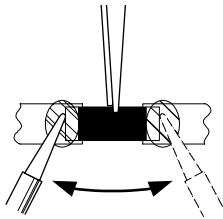
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

#### 3.3.3 REPLACEMENT STEPS

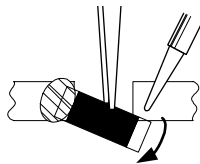
##### 1. How to remove Chip parts

###### [Resistors, capacitors, etc.]

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

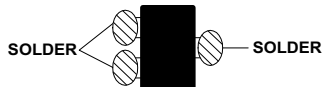


- (2) Shift with tweezers and remove the chip part.

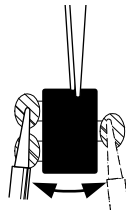


###### [Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



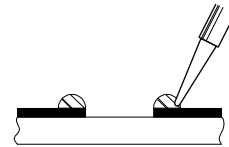
###### Note :

After removing the part, remove remaining solder from the pattern.

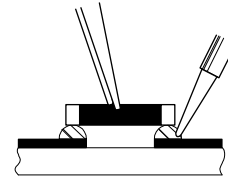
##### 2. How to install Chip parts

###### [Resistors, capacitors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.

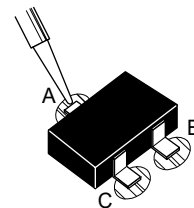


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

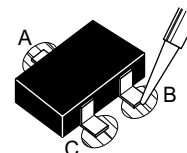


###### [Transistors, diodes, variable resistors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead A as indicated in the figure.

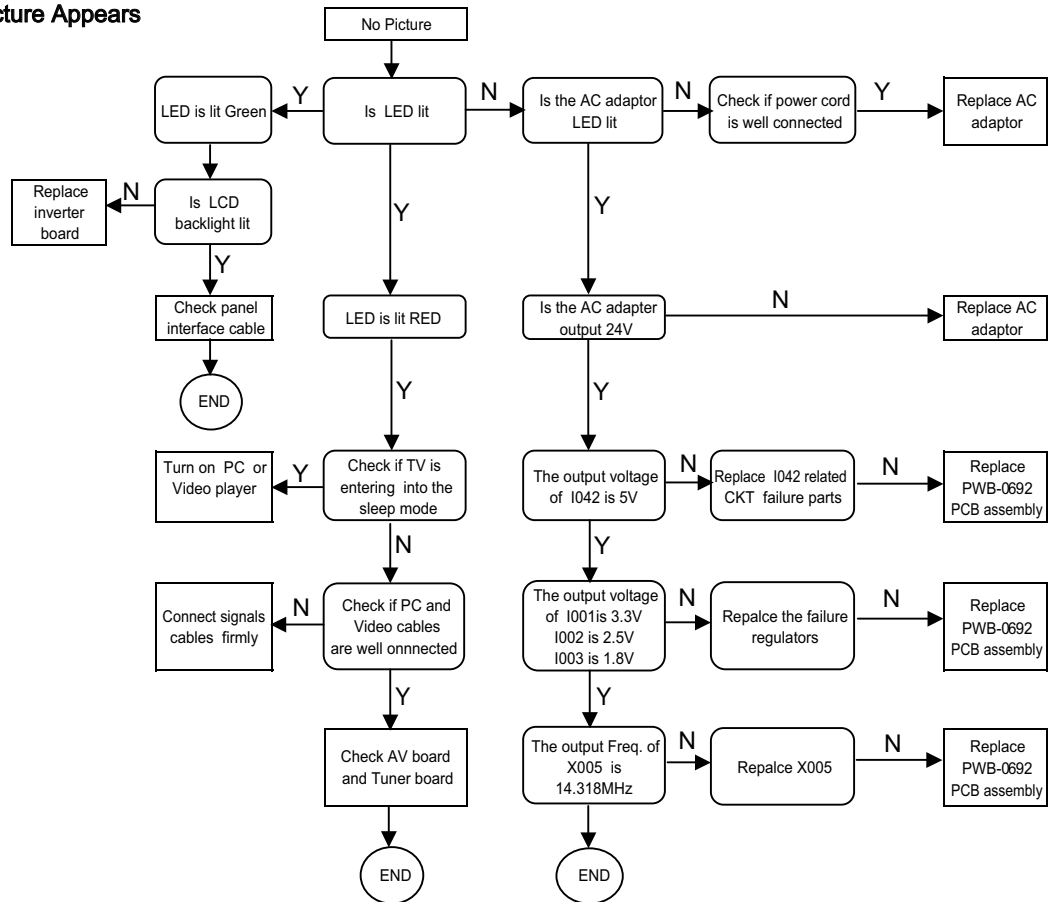


- (4) Then solder leads B and C.

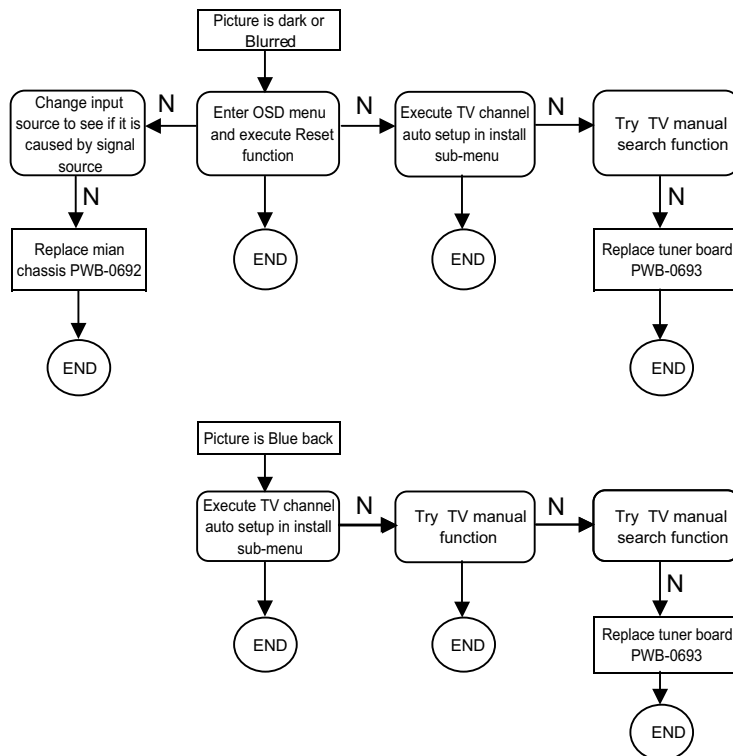


## SECTION 5 TROUBLESHOOTING

### (1) No Picture Appears



### (2) Picture Abnormal



# PARTS LIST

## CAUTION

- The parts identified by the symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines  $\Delta$  in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

## ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
CR	Carbon Resistor	C CAP.	Ceramic Capacitor
FR	Fusible Resistor	E CAP.	Electrolytic Capacitor
PR	Plate Resistor	M CAP.	Mylar Capacitor
VR	Variable Resistor	CH CAP.	Chip Capacitor
HV R	High Voltage Resistor	HV CAP.	High Voltage Capacitor
MFR	Metal Film Resistor	MF CAP.	Metalized Film Capacitor
MGR	Metal Glazed Resistor	MM CAP.	Metalized Mylar Capacitor
MPR	Metal Plate Resistor	MP CAP.	Metalized Polystyrol Capacitor
OMR	Metal Oxide Film Resistor	PP CAP.	Polypropylene Capacitor
CMFR	Coating Metal Film Resistor	PS CAP.	Polystyrol Capacitor
UNFR	Non-Flammable Resistor	TF CAP.	Thin Film Capacitor
CH V R	Chip Variable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH MG R	Chip Metal Glazed Resistor	TAN. CAP.	Tantalum Capacitor
COMP. R	Composition Resistor	CH C CAP.	Chip Ceramic Capacitor
LPTCR	Linear Positive Temperature Coefficient Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
		CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

RESISTORS									
F	G	J	K	M	N	R	H	Z	P
$\pm 1\%$	$\pm 2\%$	$\pm 5\%$	$\pm 10\%$	$\pm 20\%$	$\pm 30\%$	+30% -10%	+50% -10%	+80% -20%	+100% -0%

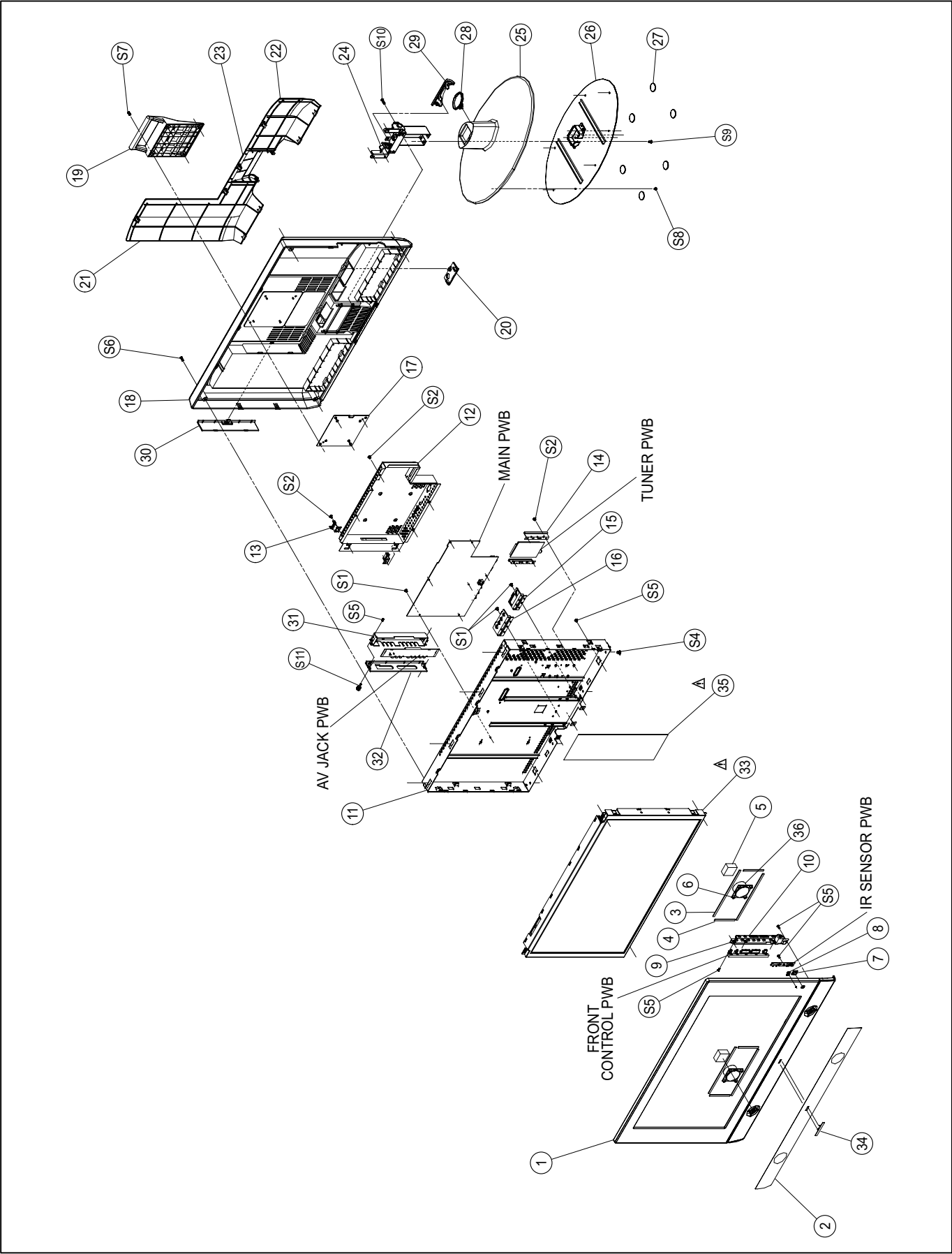
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## EXPLODED VIEW PARTS LIST

△	Ref. No.	Part No.	Part Name	Description
	1	DA-5642297203	FRONT COVER	
	2	DA-5642564600	SPEAKER MESH	
	3	DA-5642026407	SP SPONGE	x4
	4	DA-5642026408	SP SPONGE	x4
	5	DA-5642025603	HIGH DENSITY SPONGE	x2
	6	DA-5042026500	SPEAKER RUBBER	x8
	7	DA-5640331900	IR LENS	
	8	DA-5640331800	LED WINDOW	
	9	DA-5642850600	KEY	
	10	DA-5642319500	KEY COVER	
	11	DA-5642729201	LCD BRACKET	
	12	DA-5646255501	MAIN PWB SHIELD	
	13	DA-5648742300	MODULE BRACKET	x2
	14	DA-5648742200	TUNER BRACKET	x2
	15	DA-5642318800	D-SUB COVER	
	16	DA-5642318900	AUDIO COVER	
	17	DA-5648731700	VESA BRACKET	
	18	DA-5642297300	BACK COVER	
	19	DA-5642901105	HANDLE	
	20	DA-5642318700	TUNER COVER	
	21	DA-5642319400	CABLE COVER (L)	
	22	DA-5642319300	CABLE COVER (R)	
	23	DA-5641415100	NECK COVER	
	24	DA-5640408500	HINGE	
	25	DA-5641415000	BASE	
	26	DA-5640408600	STAND BRACKET	
	27	DA-5642025401	RUBBER FOOT	x6
	28	DA-5642679300	CABLE HOLDER	
	29	DA-5641414900	HINGE COVER	
	30	DA-5642679700	MODULE COVER (DUMMY)	
	31	DA-5642655800	AV JACK SHIELD	
	32	DA-5642679600	AV JACK COVER	
△	33	DA-5051253640	LCD PANEL	
	34	CM48006-010-C	JVC MARK	
△	35	DA-5053910008	INVERTER PWB	
	36	DA-5055125200	SPEAKER	x2
	S1	DA-7000311032	SCREW (M3x06 )	x9
	S2	DA-7136160252	SCREW (M3x04 )	x12
	S4	DA-7134251482	SCREW (M4x10)	x6
	S5	DA-7134161182	SCREW (M3x08)	x8
	S6	DA-7134251682	SCREW (M4x12)	x4
	S7	DA-7134251456	SCREW (M4x10)	x4
	S8	DA-7034250655	SCREW (M4x06 )	x7
	S9	DA-7190564408	SCREW (M4X08)	x4
	S10	DA-7190540084	SCREW (M4X16+SW)	x4
	S11	DA-5640228300	SCREW (L14XD10)	x2

# EXPLODED VIEW



# PRINTED WIRING BOARD PARTS LIST

## PWB ASSEMBLIES LIST

△ Symbol	Part No.	Part Name	Description
	---	MAIN PWB ASS'Y	DA-5097631902
	---	IR SENSOR PWB ASS'Y	DA-5097631902
	---	AV JACK PWB ASS'Y	DA-5098800731
	---	FRONT CONTROL PWB ASS'Y	DA-5098800732
	---	TUNER PWB ASS'Y	DA-5098800733
△	DA-5053910008	INVERTER PWB	

## MAIN PWB ASSEMBLY

△ Symbol	Part No.	Part Name	Description
<b>ICS</b>			
I001	DA-6640003858	VOLTAGE REG.	RC1117S33T
I002	DA-6640010154	VOLTAGE REG.	APL1117-25VC
I003	DA-6640003863	VOLTAGE REG.	RC1117ST
I004	DA6647021813-23	MCU	SM5926C40
I004A	DA-5056304402	SOCKET 44P	
I005	DA-6647026357	EEPROM	CAT24WC16J
I011	DA-6640003858	VOLTAGE REG.	LT1117ST-33
I012	DA-6640003858	VOLTAGE REG.	LT1117ST-33
I013	DA-6649001852	A/D CONVERTER	AD9883AKST-110
I014	DA-6646021451	DIGITAL	74F14
I015	DA6647051862-23	EEPROM	24WC02J-TE13
I016	DA-6649001852	A/D CONVERTER	AD9883AKST-110
I017	DA-6640003858	VOLTAGE REG.	LT1117ST-33
I020	DA-6640010951	VOLTAGE REG.	PJ78M09CP
I021	DA-6640019650	VOLTAGE REG.	Fair KA78M05R
I022	DA-6640001653	VOLTAGE REG.	78M12
I023	DA-6640003858	VOLTAGE REG.	RC1117S33T
I024	DA-6644036001	VIDEO SWITCH	PI5V330
I027	DA-6640003858	VOLTAGE REG.	LT1117ST-33
I028	DA-6647052050	VIDEO DECODER	SAA7118
I031	DA-6646000955	I-P CONVERTER	SII504
I032	DA-6647001653	MEMORY SDRAM	HY57V643220B
I033	DA-6644036001	VIDEO SWITCH	PI5V330
I034	DA-6646000351	LCD CONTROLLER	TP6760
I035	DA-6646013651	SDRAM	HY57V161610
I036	DA-6644001354	LVDS DECODER	THC63LVDM83A
I037	DA-6644009053	MOSFET P-CH.	SI4431DY
I038	DA-6646036750	AUDIO PROCESSOR	MSP3440G
I039	DA-6640010154	VOLTAGE REG.	APL1117-25VC
I040	DA-6644051155	AUDIO POWER AMP	TPA1517
I041	DA-6640008352	VOLTAGE REG.	AP1501
I042	DA-6644009053	MOSFET P-CH.	SI4431DY
I043	DA-6644009053	MOSFET P-CH.	SI4431DY
I044	DA-6645010253	Y/C SEPARATOR	ZC90A65F
I045	DA-6647900552	V-CHIP & CC	T8612912SSC
I046	DA-6644009053	MOSFET P-CH.	SI4431DY
I047	DA-6640008353	VOLTAGE REG.	AP1501-K5
I048	DA-6644020151	AUDIO AMP	AD8092

## TRANSISTORS

Q004	DA-6621015356	NPN	KN3904S
Q031	DA-6621015356	NPN	KN3904S
Q033	DA-6621015356	NPN	KN3904S
Q034	DA-6621015356	NPN	KN3904S
Q035	DA-6623001052	PNP	KRA111S
Q036	DA-6623001052	PNP	KRA111S
Q037	DA-6623001052	PNP	KRA111S
Q039	DA-6621015356	NPN	KN3904S
Q041	DA-6621015356	NPN	KN3904S
Q042	DA-6621015356	NPN	KN3904S
Q043	DA-6621015356	NPN	KN3904S
Q044	DA-6623001052	PNP	KRA111S
Q046	DA-6621015356	NPN	KN3904S
Q047	DA-6621015356	NPN	KN3904S
Q048	DA-6621015356	NPN	KN3904S

△ Symbol	Part No.	Part Name	Description
<b>DIODES</b>			
D002	DA-6613003059	SWITCHING	RLS4148
D003	DA-6613000555	SWITCHING	BAV99-7
D004	DA-6613000555	SWITCHING	BAV99-7
D005	DA-6613000555	SWITCHING	BAV99-7
D006	DA-6611012352	SWITCHING	BAT54C
D009	DA-6613000555	SWITCHING	BAV99-7
D011	DA-6613000555	SWITCHING	BAV99-7
D012	DA-6613003059	SWITCHING	RLS4148
D016	DA-6613000555	SWITCHING	BAV99-7
D017	DA-6613000555	SWITCHING	BAV99-7
D023	DA-6613003059	SWITCHING	RLS4148
D027	DA-6611026557	RECTIFIER SBD	B340
D029	DA-6613000555	SWITCHING	BAV99-7
D030	DA-6613000555	SWITCHING	BAV99-7
D031	DA-6613000555	SWITCHING	BAV99-7
D032	DA-6613000555	SWITCHING	BAV99-7
D033	DA-6613000555	SWITCHING	BAV99-7
D034	DA-6613000555	SWITCHING	BAV99-7
D035	DA-6613000555	SWITCHING	BAV99-7
D039	DA-6611026557	RECTIFIER SBD	B340
D045	DA-6611026557	RECTIFIER SBD	B340
D046	DA-6611026557	RECTIFIER SBD	B340
D053	DA-6614001050	VARICAP	HVU17

## INDUCTORS

L001	DA-5062120130	FERRITE BEAD	
L003	DA-5062132306	FERRITE BEAD	
L004	DA-5062133008	FERRITE BEAD	
L005	DA-5062120113	FERRITE BEAD	
L006	DA-5062120113	FERRITE BEAD	
L007	DA-5062120113	FERRITE BEAD	
L008	DA-5062120113	FERRITE BEAD	
L009	DA-5062120113	FERRITE BEAD	
L010	DA-5062120113	FERRITE BEAD	
L011	DA-5062120113	FERRITE BEAD	
L012	DA-5062120113	FERRITE BEAD	
L013	DA-5062120113	FERRITE BEAD	
L014	DA-5062133008	FERRITE BEAD	
L015	DA-5062133008	FERRITE BEAD	
L017	DA-5062133008	FERRITE BEAD	
L019	DA-5062120132	FERRITE BEAD	
L020	DA-6119210605	WIRE JUMPER	
L021	DA-5062120113	FERRITE BEAD	
L022	DA-5062120132	FERRITE BEAD	
L023	DA-6119210605	WIRE JUMPER	
L024	DA-5062120132	FERRITE BEAD	
L025	DA-5062133008	FERRITE BEAD	
L026	DA-5062133008	FERRITE BEAD	
L027	DA-5062133008	FERRITE BEAD	
L028	DA-5062132317	FERRITE BEAD	
L029	DA-5062120113	FERRITE BEAD	
L030	DA-5062120113	FERRITE BEAD	
L031	DA-5062132317	FERRITE BEAD	
L032	DA-5062120113	FERRITE BEAD	
L033	DA-5062120113	FERRITE BEAD	
L034	DA-5062132317	FERRITE BEAD	
L035	DA-5062132317	FERRITE BEAD	
L036	DA-5062132317	FERRITE BEAD	
L038	DA-5062132317	FERRITE BEAD	
L040	DA-5062120113	FERRITE BEAD	
L041	DA-5062120132	FERRITE BEAD	
L042	DA-5062120132	FERRITE BEAD	
L045	DA-5064415029	COIL CHOKE DIP	15μH
L046	DA-5062120113	FERRITE BEAD	
L048	DA-5062120112	FERRITE BEAD	
L049	DA-5062133008	FERRITE BEAD	
L050	DA-5062133008	FERRITE BEAD	
L051	DA-5064410129	COIL CHOKE DIP	100μH
L052	DA-5062120112	FERRITE BEAD	
L054	DA-5062120113	FERRITE BEAD	
L055	DA-5062120113	FERRITE BEAD	

△	Symbol	Part No.	Part Name	Description	△	Symbol	Part No.	Part Name	Description
L056		DA-5062120113	FERRITE BEAD		C007		DA-5218007891	E CAP.	10μF 16V M
L057		DA-5062120130	FERRITE BEAD		C008		DA-5218007891	E CAP.	10μF 16V M
L058		DA-5064447029	COIL CHOKE DIP	47μH	C009		DA-5230005491	C CAP.	0.1μF 25V Z
L061		DA-5062133008	FERRITE BEAD		C010		DA-5230005491	C CAP.	0.1μF 25V Z
L062		DA-5062120132	FERRITE BEAD		C011		DA-5218014791	E CAP.	4.7μF 16V M
L064		DA-5062120112	FERRITE BEAD		C012		DA-5240610191	C CAP.	100pF 50V J
L065		DA-5062120132	FERRITE BEAD		C013		DA-5230005491	C CAP.	0.1μF 25V Z
L066		DA-5062120112	FERRITE BEAD		C014		DA-5240610191	C CAP.	100pF 50V J
L067		DA-5062120112	FERRITE BEAD		C015		DA-5240610191	C CAP.	100pF 50V J
L068		DA-5062120112	FERRITE BEAD		C016		DA-5240610191	C CAP.	100pF 50V J
L069		DA-5062120132	FERRITE BEAD		C017		DA-5240610191	C CAP.	100pF 50V J
L070		DA-5062133008	FERRITE BEAD		C018		DA-5240610191	C CAP.	100pF 50V J
L071		DA-5062133008	FERRITE BEAD		C019		DA-5240610191	C CAP.	100pF 50V J
L072		DA-5062120112	FERRITE BEAD		C020		DA-5240610191	C CAP.	100pF 50V J
L073		DA-5064468929	COIL CHOKE DIP	6.8μH	C021		DA-5230005491	C CAP.	0.1μF 25V Z
L075		DA-5064468929	COIL CHOKE DIP	6.8μH	C022		DA-5230005491	C CAP.	0.1μF 25V M
L077		DA-5064468929	COIL CHOKE DIP	6.8μH	C032		DA-5240610191	C CAP.	100pF 50V J
L078		DA-5062133008	FERRITE BEAD		C033		DA-5240633091	C CAP.	33pF 50V J
L081		DA-5062120132	FERRITE BEAD		C034		DA-5218007891	E CAP.	10μF 16V M
L082		DA-5062142500	COIL CHOKE DIP	50μH	C039		DA-5230647391	C CAP.	0.047μF 50V K
L083		DA-5062120130	FERRITE BEAD		C040		DA-5230647391	C CAP.	0.047μF 50V K
L084		DA-5062120130	FERRITE BEAD		C042		DA-5240620091	C CAP.	20pF 50V J
L085		DA-5062120132	FERRITE BEAD		C044		DA-5218008991	E CAP.	47μF 16V M
L086		DA-5062120113	FERRITE BEAD		C056		DA-5218007891	E CAP.	10μF 16V M
L087		DA-5062120132	FERRITE BEAD		C057		DA-5218007891	E CAP.	10μF 16V M
L088		DA-5062120132	FERRITE BEAD		C058		DA-5230005491	C CAP.	0.1μF 25V Z
L090		DA-5062120132	FERRITE BEAD		C059		DA-5230005491	C CAP.	0.1μF 25V Z
L091		DA-5062120132	FERRITE BEAD		C060		DA-5230610291	C CAP.	1000pF 50V K
L093		DA-5062120132	FERRITE BEAD		C061		DA-5230005491	C CAP.	0.1μF 25V Z
L094		DA-5062120132	FERRITE BEAD		C062		DA-5230005491	C CAP.	0.1μF 25V Z
L095		DA-5062120132	FERRITE BEAD		C063		DA-5230610291	C CAP.	1000pF 50V K
L096		DA-5062120132	FERRITE BEAD		C064		DA-5230005491	C CAP.	0.1μF 25V Z
L097		DA-5062120132	FERRITE BEAD		C065		DA-5230610291	C CAP.	1000pF 50V K
L098		DA-5062120112	FERRITE BEAD		C066		DA-5230005491	C CAP.	0.1μF 25V Z
L099		DA-5062120112	FERRITE BEAD		C067		DA-5230005491	C CAP.	0.1μF 25V Z
L100		DA-5062142500	COIL CHOKE DIP	50μH	C068		DA-5230005491	C CAP.	0.1μF 25V Z
L102		DA-5062132306	FERRITE BEAD		C069		DA-5230005491	C CAP.	0.1μF 25V Z
L103		DA-5062132306	FERRITE BEAD		C070		DA-5230005491	C CAP.	0.1μF 25V Z
L104		DA-5062133008	FERRITE BEAD		C071		DA-5230610291	C CAP.	1000pF 50V K
L105		DA-5062133008	FERRITE BEAD		C072		DA-5230005491	C CAP.	0.1μF 25V Z
L106		DA-5062133008	FERRITE BEAD		C073		DA-5230610291	C CAP.	1000pF 50V K
L108		DA-5062133008	FERRITE BEAD		C074		DA-5230005491	C CAP.	0.1μF 25V Z
L109		DA-5062120113	FERRITE BEAD		C075		DA-5218007891	E CAP.	10μF 16V M
L110		DA-5062133008	FERRITE BEAD		C076		DA-5218007891	E CAP.	10μF 16V M
L111		DA-5062133008	FERRITE BEAD		C077		DA-5230005491	C CAP.	0.1μF 25V Z
L112		DA-5062120113	FERRITE BEAD		C078		DA-5230647391	C CAP.	0.047μF 50V K
L113		DA-5062120132	FERRITE BEAD		C079		DA-5230647391	C CAP.	0.047μF 50V K
L114		DA-5062132306	FERRITE BEAD		C081		DA-5230610291	C CAP.	1000pF 50V K
L115		DA-5062132317	FERRITE BEAD		C082		DA-5218008991	E CAP.	47μF 16V M
L116		DA-5062120123	FERRITE BEAD		C083		DA-5230005491	C CAP.	0.1μF 25V Z
L118		DA-5062120132	FERRITE BEAD		C084		DA-5230005491	C CAP.	0.1μF 25V Z
L120		DA-5062120132	FERRITE BEAD		C085		DA-5230647391	C CAP.	0.047μF 50V K
L122		DA-5062120132	FERRITE BEAD		C086		DA-5230019091	C CAP.	0.082μF 16V Z
L123		DA-5062132306	FERRITE BEAD		C087		DA-5230682291	C CAP.	0.0082μF 50V K
L126		DA-5062120112	FERRITE BEAD		C088		DA-5230005491	C CAP.	0.1μF 25V Z
L127		DA-5062120112	FERRITE BEAD		C089		DA-5230005491	C CAP.	0.1μF 25V Z
L128		DA-5062120112	FERRITE BEAD		C093		DA-5218014791	E CAP.	4.7μF 16V M
L129		DA-5062120113	FERRITE BEAD		C094		DA-5230005491	C CAP.	0.1μF 25V Z
L130		DA-5062133008	FERRITE BEAD		C095		DA-5240610191	C CAP.	100pF 50V J
L131		DA-5062133008	FERRITE BEAD		C098		DA-5240647091	C CAP.	47pF 50V J
L133		DA-5062133008	FERRITE BEAD		C102		DA-5230005491	C CAP.	0.1μF 25V Z
LP01		DA-5062128504	FERRITE BEAD		C117		DA-5218008991	E CAP.	47μF 16V M
LP02		DA-5062128504	FERRITE BEAD		C118		DA-5218007891	E CAP.	10μF 16V M
LP03		DA-5062128504	FERRITE BEAD		C119		DA-5240622091	C CAP.	22pF 50V J
LP04		DA-5062128504	FERRITE BEAD		C120		DA-5240622091	C CAP.	22pF 50V J
LP05		DA-5062128504	FERRITE BEAD		C123		DA-5230005491	C CAP.	0.1μF 25V Z
LP06		DA-5062128504	FERRITE BEAD		C124		DA-5240610291	C CAP.	1000pF 50V J
LT01		DA-5064410129	COIL CHOKE DIP	100μH	C125		DA-5230005491	C CAP.	0.1μF 25V Z
					C126		DA-5240610291	C CAP.	1000pF 50V J
					C127		DA-5230005491	C CAP.	0.1μF 25V Z
					C128		DA-5230005491	C CAP.	0.1μF 25V Z
					C129		DA-5240610291	C CAP.	1000pF 50V J
					C130		DA-5230005491	C CAP.	0.1μF 25V Z
					C131		DA-5230005491	C CAP.	0.1μF 25V Z
					C132		DA-5230005491	C CAP.	0.1μF 25V Z
					C133		DA-5230005491	C CAP.	0.1μF 25V Z
					C134		DA-5240610291	C CAP.	1000pF 50V J
<b>CAPACITORS</b>									
C001		DA-5218007891	E CAP.	10μF 16V M					
C002		DA-5218007991	E CAP.	100μF 16V M					
C003		DA-5230005491	C CAP.	0.1μF 25V Z					
C004		DA-5218007891	E CAP.	10μF 16V M					
C005		DA-5218007891	E CAP.	10μF 16V M					
C006		DA-5230005491	C CAP.	0.1μF 25V Z					

△ Symbol	Part No.	Part Name	Description		△ Symbol	Part No.	Part Name	Description	
C135	DA-5230005491	C CAP.	0.1μF 25V	Z	C299	DA-5230005491	C CAP.	0.1μF 25V	Z
C136	DA-5240610291	C CAP.	1000pF 50V	J	C300	DA-5230005491	C CAP.	0.1μF 25V	Z
C137	DA-5230005491	C CAP.	0.1μF 25V	Z	C301	DA-5230005491	C CAP.	0.1μF 25V	Z
C138	DA-5230610391	C CAP.	0.01μF 50V	K	C302	DA-5240622091	C CAP.	22pF 50V	K
C139	DA-5230647391	C CAP.	0.047μF 50V	K	C303	DA-5240622091	C CAP.	22pF 50V	K
C140	DA-5230005491	C CAP.	0.1μF 25V	Z	C306	DA-5230647391	C CAP.	0.047μF 50V	K
C141	DA-5230005491	C CAP.	0.047μF 50V	K	C307	DA-5230005491	C CAP.	0.1μF 25V	Z
C142	DA-5240627091	C CAP.	27pF 50V	J	C308	DA-5230647391	C CAP.	0.047μF 50V	K
C143	DA-5218007891	E CAP.	10μF 16V	M	C310	DA-5230005491	C CAP.	0.1μF 25V	Z
C144	DA-5240610291	C CAP.	1000pF 50V	J	C311	DA-5230005491	C CAP.	0.1μF 25V	Z
C145	DA-5230647391	C CAP.	0.047μF 50V	K	C312	DA-5230647391	C CAP.	0.047μF 50V	K
C146	DA-5230005491	C CAP.	0.1μF 25V	Z	C313	DA-5230005491	C CAP.	0.1μF 25V	Z
C147	DA-5240610291	C CAP.	1000pF 50V	J	C317	DA-5230647391	C CAP.	0.047μF 50V	K
C148	DA-5230019091	C CAP.	0.082μF 16V	Z	C318	DA-5230647391	C CAP.	0.047μF 50V	K
C149	DA-5230005491	C CAP.	0.1μF 25V	Z	C319	DA-5230647391	C CAP.	0.047μF 50V	K
C150	DA-5230682291	C CAP.	0.0082μF 50V	Z	C320	DA-5218008991	E CAP.	47μF 16V	M
C151	DA-5230005491	C CAP.	0.1μF 25V	Z	C321	DA-5230610391	C CAP.	0.01μF 50V	K
C152	DA-5230005491	C CAP.	0.1μF 25V	Z	C322	DA-5230647391	C CAP.	0.047μF 50V	K
C154	DA-5218017691	E CAP.	220μF 25V	M	C323	DA-5230647391	C CAP.	0.047μF 50V	K
C155	DA-5218017691	E CAP.	220μF 25V	M	C324	DA-5230610391	C CAP.	0.01μF 50V	K
C158	DA-5218007891	E CAP.	10μF 16V	M	C325	DA-5230647391	C CAP.	0.047μF 50V	K
C159	DA-5230005491	C CAP.	0.1μF 25V	Z	C326	DA-5230000691	C CAP.	0.47μF 25V	Z
C160	DA-5230005491	C CAP.	0.1μF 25V	Z	C327	DA-5230647391	C CAP.	0.047μF 50V	K
C162	DA-5230005491	C CAP.	0.1μF 25V	Z	C328	DA-5240647091	C CAP.	47pF 50V	J
C163	DA-5218008991	E CAP.	47μF 16V	M	C329	DA-5230647391	C CAP.	0.047μF 50V	K
C164	DA-5218008991	E CAP.	47μF 16V	M	C330	DA-5230615291	C CAP.	1500pF 50V	K
C165	DA-5230005491	C CAP.	0.1μF 25V	Z	C331	DA-5230005491	C CAP.	0.1μF 25V	Z
C166	DA-5240622091	C CAP.	22pF 50V	J	C332	DA-5230610391	C CAP.	0.01μF 50V	K
C167	DA-5218007891	E CAP.	10μF 16V	M	C333	DA-5230610391	C CAP.	0.01μF 50V	K
C168	DA-5230014191	E CAP.	2.2μF 16V	M	C335	DA-5230000691	C CAP.	0.47μF 25V	Z
C169	DA-5240622091	C CAP.	22pF 50V	J	C336	DA-5230005491	C CAP.	0.1μF 25V	Z
C170	DA-5240622091	C CAP.	22pF 50V	J	C337	DA-5230005491	C CAP.	0.1μF 25V	Z
C171	DA-5240618191	C CAP.	180pF 50V	J	C339	DA-5240633091	C CAP.	33pF 50V	J
C172	DA-5230014191	E CAP.	2.2μF 16V	M	C341	DA-5230610391	C CAP.	0.01μF 50V	K
C173	DA-5240622091	C CAP.	22pF 50V	J	C342	DA-5230005491	C CAP.	0.1μF 25V	Z
C174	DA-5240622091	C CAP.	22pF 50V	J	C343	DA-5230005491	C CAP.	0.1μF 25V	Z
C175	DA-5240615191	C CAP.	150pF 50V	J	C344	DA-5218008991	E CAP.	47μF 16V	M
C176	DA-5240618191	C CAP.	180pF 50V	J	C345	DA-5218007991	E CAP.	100μF 16V	M
C179	DA-5240633091	C CAP.	33pF 50V	J	C346	DA-5230610391	C CAP.	0.01μF 50V	K
C204	DA-5218019791	E CAP.	100μF 25V	M	C347	DA-5230610391	C CAP.	0.01μF 50V	K
C205	DA-5218007891	E CAP.	10μF 16V	M	C348	DA-5230610391	C CAP.	0.01μF 50V	K
C206	DA-5230005491	C CAP.	0.1μF 25V	Z	C349	DA-5230610391	C CAP.	0.01μF 50V	K
C263	DA-5230014191	E CAP.	2.2μF 16V	M	C350	DA-5230005491	C CAP.	0.1μF 25V	Z
C264	DA-5230014191	E CAP.	2.2μF 16V	M	C351	DA-5218014791	E CAP.	4.7μF 16V	M
C265	DA-5230014191	E CAP.	2.2μF 16V	M	C354	DA-5230610391	C CAP.	0.01μF 50V	K
C267	DA-5230014191	E CAP.	2.2μF 16V	M	C355	DA-5240610291	C CAP.	1000pF 50V	J
C268	DA-5230005491	C CAP.	0.1μF 25V	Z	C356	DA-5230005491	C CAP.	0.1μF 25V	Z
C269	DA-5218007891	E CAP.	10μF 16V	M	C361	DA-5230005491	C CAP.	0.1μF 25V	Z
C270	DA-5230005491	C CAP.	0.1μF 25V	Z	C362	DA-5230005491	C CAP.	0.1μF 25V	Z
C271	DA-5230005491	C CAP.	0.1μF 25V	Z	C363	DA-5230005491	C CAP.	0.1μF 25V	Z
C272	DA-5230005491	C CAP.	0.1μF 25V	Z	C364	DA-5230622191	C CAP.	220pF 50V	K
C273	DA-5230005491	C CAP.	0.1μF 25V	Z	C365	DA-5230668391	C CAP.	0.068μF 50V	K
C274	DA-5230005491	C CAP.	0.1μF 25V	Z	C366	DA-5240610091	C CAP.	10pF 50V	J
C275	DA-5218007891	E CAP.	10μF 16V	M	C367	DA-5230005491	C CAP.	0.1μF 25V	Z
C276	DA-5218007891	E CAP.	10μF 16V	M	C369	DA-5230005491	C CAP.	0.1μF 25V	Z
C277	DA-5218007891	E CAP.	10μF 16V	M	C370	DA-5230005491	C CAP.	0.1μF 25V	Z
C278	DA-5218008991	E CAP.	47μF 16V	M	C371	DA-5230005491	C CAP.	0.1μF 25V	Z
C279	DA-5230005491	C CAP.	0.1μF 25V	Z	C372	DA-5218008891	E CAP.	22μF 16V	M
C280	DA-5230005491	C CAP.	0.1μF 25V	Z	C373	DA-5218008891	E CAP.	22μF 16V	M
C281	DA-5230005491	C CAP.	0.1μF 25V	Z	C374	DA-5230005491	C CAP.	0.1μF 25V	Z
C282	DA-5230005491	C CAP.	0.1μF 25V	Z	C375	DA-5230005491	C CAP.	0.1μF 25V	Z
C283	DA-5230005491	C CAP.	0.1μF 25V	Z	C376	DA-5230005491	C CAP.	0.1μF 25V	Z
C284	DA-5230005491	C CAP.	0.1μF 25V	Z	C377	DA-5230005491	C CAP.	0.1μF 25V	Z
C285	DA-5230005491	C CAP.	0.1μF 25V	Z	C379	DA-5230647391	C CAP.	0.047μF 50V	K
C286	DA-5230005491	C CAP.	0.1μF 25V	Z	C380	DA-5240610091	C CAP.	10pF 50V	J
C287	DA-5218007891	E CAP.	10μF 16V	M	C381	DA-5218007991	E CAP.	100μF 16V	M
C288	DA-5218007891	E CAP.	10μF 16V	M	C382	DA-5218007891	E CAP.	10μF 16V	M
C289	DA-5230005491	C CAP.	0.1μF 25V	Z	C383	DA-5230005491	C CAP.	0.1μF 25V	Z
C290	DA-5230005491	C CAP.	0.1μF 25V	Z	C384	DA-5230005491	C CAP.	0.1μF 25V	Z
C291	DA-5230005491	C CAP.	0.1μF 25V	Z	C385	DA-5230005491	C CAP.	0.1μF 25V	Z
C292	DA-5230005491	C CAP.	0.1μF 25V	Z	C386	DA-5230005491	C CAP.	0.1μF 25V	Z
C293	DA-5218007891	E CAP.	10μF 16V	M	C387	DA-5230005491	C CAP.	0.1μF 25V	Z
C294	DA-5230005491	C CAP.	0.1μF 25V	Z	C388	DA-5230005491	C CAP.	0.1μF 25V	Z
C295	DA-5230005491	C CAP.	0.1μF 25V	Z	C389	DA-5230005491	C CAP.	0.1μF 25V	Z
C296	DA-5230005491	C CAP.	0.1μF 25V	Z	C390	DA-5230005491	C CAP.	0.1μF 25V	Z
C297	DA-5230005491	C CAP.	0.1μF 25V	Z	C391	DA-5230005491	C CAP.	0.1μF 25V	Z
C298	DA-5230005491	C CAP.	0.1μF 25V	Z	C392	DA-5230005491	C CAP.	0.1μF 25V	Z



△	Symbol	Part No.	Part Name	Description		△	Symbol	Part No.	Part Name	Description	
	C393	DA-5230005491	C CAP.	0.1μF 25V	Z		C493	DA-5230011191	C CAP.	1μF 16V	K
	C394	DA-5230005491	C CAP.	0.1μF 25V	Z		C494	DA-5230011191	C CAP.	1μF 16V	K
	C395	DA-5230005491	C CAP.	0.1μF 25V	Z		C495	DA-5230011191	C CAP.	1μF 16V	K
	C396	DA-5230005491	C CAP.	0.1μF 25V	Z		C496	DA-5218007891	E CAP.	10μF 16V	M
	C397	DA-5230005491	C CAP.	0.1μF 25V	Z		C497	DA-5240610291	C CAP.	1000pF 50V	J
	C398	DA-5230005491	C CAP.	0.1μF 25V	Z		C498	DA-5218007891	E CAP.	10μF 16V	M
	C399	DA-5230005491	C CAP.	0.1μF 25V	Z		C499	DA-5218017691	E CAP.	220μF 25V	M
	C400	DA-5230005491	C CAP.	0.1μF 25V	Z		C500	DA-5230005491	C CAP.	0.1μF 25V	Z
	C401	DA-5230005491	C CAP.	0.1μF 25V	Z		C501	DA-5240610291	C CAP.	1000pF 50V	J
	C402	DA-5230005491	C CAP.	0.1μF 25V	Z		C502	DA-5240610291	C CAP.	1000pF 50V	J
	C403	DA-5230005491	C CAP.	0.1μF 25V	Z		C503	DA-5218014791	E CAP.	4.7μF 16V	M
	C404	DA-5230005491	C CAP.	0.1μF 25V	Z		C504	DA-5240610291	C CAP.	1000pF 50V	J
	C405	DA-5230005491	C CAP.	0.1μF 25V	Z		C505	DA-5240610191	C CAP.	100pF 50V	J
	C406	DA-5230005491	C CAP.	0.1μF 25V	Z		C506	DA-5230005491	C CAP.	0.1μF 25V	Z
	C407	DA-5230005491	C CAP.	0.1μF 25V	Z		C507	DA-5218007891	E CAP.	10μF 16V	M
	C408	DA-5230005491	C CAP.	0.1μF 25V	Z		C508	DA-5240656191	C CAP.	560pF 50V	J
	C409	DA-5230005491	C CAP.	0.1μF 25V	Z		C510	DA-5240633991	C CAP.	3.3pF 50V	G
	C410	DA-5230005491	C CAP.	0.1μF 25V	Z		C511	DA-5240633991	C CAP.	3.3pF 50V	G
	C411	DA-5230005491	C CAP.	0.1μF 25V	Z		C512	DA-5240656091	C CAP.	56pF 50V	G
	C412	DA-5230005491	C CAP.	0.1μF 25V	Z		C513	DA-5240656091	C CAP.	56pF 50V	G
	C413	DA-5230005491	C CAP.	0.1μF 25V	Z		C514	DA-5230005491	C CAP.	0.1μF 25V	Z
	C414	DA-5230005491	C CAP.	0.1μF 25V	Z		C515	DA-5240610291	C CAP.	1000pF 50V	J
	C415	DA-5230005491	C CAP.	0.1μF 25V	Z		C516	DA-5218007891	E CAP.	10μF 16V	M
	C416	DA-5230005491	C CAP.	0.1μF 25V	Z		C517	DA-5230011191	C CAP.	1μF 16V	K
	C417	DA-5218008891	E CAP.	22μF 16V	M		C518	DA-5230005491	C CAP.	0.1μF 25V	Z
	C418	DA-5230005491	C CAP.	0.1μF 25V	Z		C519	DA-5218007891	E CAP.	10μF 16V	M
	C419	DA-5230610291	C CAP.	1000pF 50V	K		C520	DA-5218014791	E CAP.	4.7μF 16V	M
	C420	DA-5230005491	C CAP.	0.1μF 25V	Z		C521	DA-5230005491	C CAP.	0.1μF 25V	Z
	C421	DA-5230005491	C CAP.	0.1μF 25V	Z		C522	DA-5230005491	C CAP.	0.1μF 25V	Z
	C422	DA-5230005491	C CAP.	0.1μF 25V	Z		C523	DA-5230005491	C CAP.	0.1μF 25V	Z
	C423	DA-5230005491	C CAP.	0.1μF 25V	Z		C527	DA-5230005491	C CAP.	0.1μF 25V	Z
	C424	DA-5230005491	C CAP.	0.1μF 25V	Z		C535	DA-5205447102	E CAP. DIP	470μF 25V	M
	C425	DA-5230005491	C CAP.	0.1μF 25V	Z		C536	DA-5218008891	E CAP.	22μF 16V	M
	C426	DA-5230005491	C CAP.	0.1μF 25V	Z		C537	DA-5218007991	E CAP.	100μF 16V	M
	C427	DA-5230005491	C CAP.	0.1μF 25V	Z		C538	DA-5218008891	E CAP.	22μF 16V	M
	C428	DA-5230005491	C CAP.	0.1μF 25V	Z		C539	DA-5218007991	C CAP.	100μF 16V	M
	C429	DA-5218007891	E CAP.	10μF 16V	M		C540	DA-5218008891	E CAP.	22μF 16V	M
	C430	DA-5218007891	E CAP.	10μF 16V	M		C541	DA-5230019191	C CAP.	0.15μF 16V	Z
	C431	DA-5230005491	C CAP.	0.1μF 25V	Z		C542	DA-5230014191	C CAP.	2.2μF 16V	M
	C432	DA-5230005491	C CAP.	0.1μF 25V	Z		C543	DA-5240610091	C CAP.	10pF 50V	J
	C433	DA-5230005491	C CAP.	0.1μF 25V	Z		C544	DA-5230014191	C CAP.	2.2μF 16V	M
	C434	DA-5230005491	C CAP.	0.1μF 25V	Z		C545	DA-5205447102	E CAP. DIP	470μF 25V	M
	C435	DA-5230005491	C CAP.	0.1μF 25V	Z		C546	DA-5240610091	C CAP.	10pF 50V	J
	C436	DA-5218007891	E CAP.	10μF 16V	M		C547	DA-5230019191	C CAP.	0.15μF 16V	Z
	C437	DA-5230005491	C CAP.	0.1μF 25V	Z		C548	DA-5230005491	C CAP.	0.1μF 25V	Z
	C438	DA-5230005491	C CAP.	0.1μF 25V	Z		C549	DA-5230005491	C CAP.	0.1μF 25V	Z
	C440	DA-5218014791	E CAP.	4.7μF 16V	M		C550	DA-5205447102	E CAP. DIP	470μF 25V	M
	C441	DA-5240627091	C CAP.	27pF 50V	J		C551	DA-5230005491	C CAP.	0.1μF 25V	Z
	C442	DA-5240627091	C CAP.	27pF 50V	J		C552	DA-5205447102	E CAP. DIP	470μF 25V	M
	C443	DA-5240627091	C CAP.	27pF 50V	J		C553	DA-5218007991	E CAP.	100μF 16V	M
	C444	DA-5240627091	C CAP.	27pF 50V	J		C556	DA-5230004191	E CAP.	0.33μF 16V	M
	C445	DA-5240627091	C CAP.	27pF 50V	J		C557	DA-5230004191	E CAP.	0.33μF 16V	M
	C446	DA-5240627091	C CAP.	27pF 50V	J		C563	DA-5230004191	E CAP.	0.33μF 16V	M
	C447	DA-5230005491	C CAP.	0.1μF 25V	Z		C564	DA-5230004191	E CAP.	0.33μF 16V	M
	C448	DA-5230005491	C CAP.	0.1μF 25V	Z		C565	DA-5230004191	E CAP.	0.33μF 16V	M
	C449	DA-5230005491	C CAP.	0.1μF 25V	Z		C566	DA-5230004191	E CAP.	0.33μF 16V	M
	C450	DA-5230005491	C CAP.	0.1μF 25V	Z		C567	DA-5205447102	E CAP. DIP	470μF 25V	M
	C451	DA-5230005491	C CAP.	0.1μF 25V	Z		C568	DA-5205447102	E CAP. DIP	470μF 25V	M
	C452	DA-5230005491	C CAP.	0.1μF 25V	Z		C569	DA-5230014191	E CAP.	2.2μF 16V	M
	C455	DA-5218017691	E CAP.	220μF 25V	M		C570	DA-5218019791	E CAP.	100μF 25V	M
	C458	DA-5240605091	C CAP.	5pF 50V	G		C571	DA-5230005491	C CAP.	0.1μF 25V	Z
	C459	DA-5240605091	C CAP.	5pF 50V	G		C574	DA-5240610291	C CAP.	1000pF 50V	J
	C460	DA-5230005491	C CAP.	0.1μF 25V	Z		C575	DA-5230005491	C CAP.	0.1μF 25V	Z
	C462	DA-5230005491	C CAP.	0.1μF 25V	Z		C576	DA-5230005491	C CAP.	0.1μF 25V	Z
	C463	DA-5230610391	C CAP.	0.01μF 50V	K		C577	DA-5218007991	E CAP.	100μF 16V	M
	C464	DA-5230610391	C CAP.	0.01μF 50V	K		C578	DA-5230005491	C CAP.	0.1μF 25V	Z
	C465	DA-5230005491	C CAP.	0.1μF 25V	Z		C579	DA-5240610291	C CAP.	1000pF 50V	J
	C467	DA-5230005491	C CAP.	0.1μF 25V	Z		C580	DA-5218007991	E CAP.	100μF 16V	M
	C469	DA-5230005491	C CAP.	0.1μF 25V	Z		C581	DA-5218007991	E CAP.	100μF 16V	M
	C470	DA-5218007891	E CAP.	10μF 16V	M		C582	DA-5230005491	C CAP.	0.1μF 25V	Z
	C471	DA-5230005491	C CAP.	0.1μF 25V	Z		C583	DA-5230005491	C CAP.	0.1μF 25V	Z
	C476	DA-5218007891	E CAP.	10μF 16V	M		C584	DA-5230005491	C CAP.	0.1μF 25V	Z
	C477	DA-5230610391	C CAP.	0.01μF 50V	K		C585	DA-5230005491	C CAP.	0.1μF 25V	Z
	C478	DA-5218007891	E CAP.	10μF 16V	M		C587	DA-5230005491	C CAP.	0.1μF 25V	Z
	C482	DA-5218007891	E CAP.	10μF 16V	M		C588	DA-5218007891	E CAP.	10μF 16V	M
	C483	DA-5230610391	C CAP.	0.01μF 50V	K		C589	DA-5218009791	E CAP.	100μF 25V	M
	C492	DA-5218007891	E CAP.	10μF 16V	M		C590	DA-5240656191	C CAP.	560pF 50V	J

△	Symbol	Part No.	Part Name	Description		△	Symbol	Part No.	Part Name	Description	
	C591	DA-5230005491	C CAP.	0.1μF 25V	Z		R080	DA-5134175099	MG RES. 1%	75Ω 1/16W	F
	C592	DA-5230005491	C CAP.	0.1μF 25V	Z		R081	DA-5134175099	MG RES. 1%	75Ω 1/16W	F
	C593	DA-5218007991	E CAP.	100μF 16V	M		R082	DA-5134175099	MG RES. 1%	75Ω 1/16W	F
	C594	DA-5240610291	C CAP.	1000pF 50V	J		R084	DA-5134318009	MG RES.	18Ω 1/16W	J
	C595	DA-5240656091	C CAP.	56pF 50V	J		R085	DA-5134356009	MG RES.	56Ω 1/16W	J
	C597	DA-5218007991	E CAP.	100μF 16V	M		R086	DA-5134318009	MG RES.	18Ω 1/16W	J
<b>RESISTORS</b>							R087	DA-5134356009	MG RES.	56Ω 1/16W	J
	R001	DA-5134310409	MG RES.	100KΩ 1/16W	J		R088	DA-5134318009	MG RES.	18Ω 1/16W	J
	R002	DA-5134310209	MG RES.	1KΩ 1/16W	J		R089	DA-5134356009	MG RES.	56Ω 1/16W	J
	R003	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R090	DA-5134318009	MG RES.	18Ω 1/16W	J
	R004	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R091	DA-5134356009	MG RES.	56Ω 1/16W	J
	R005	DA-5134322109	MG RES.	220Ω 1/16W	J		R092	DA-5134310109	MG RES.	100Ω 1/16W	J
	R006	DA-5134310109	MG RES.	100Ω 1/16W	J		R098	DA-5134310109	MG RES.	100Ω 1/16W	J
	R007	DA-5134310309	MG RES.	10KΩ 1/16W	J		R099	DA-5134327209	MG RES.	2.7KΩ 1/16W	J
	R008	DA-5134310209	MG RES.	1KΩ 1/16W	J		R100	DA-5134333109	MG RES.	330Ω 1/16W	J
	R009	DA-5134310209	MG RES.	1KΩ 1/16W	J		R101	DA-5134327209	MG RES.	2.7KΩ 1/16W	J
	R010	DA-5134310309	MG RES.	10KΩ 1/16W	J		R102	DA-5134310109	MG RES.	100Ω 1/16W	J
	R011	DA-5134300009	MG RES.	Ω 1/16W	J		R104	DA-5134310009	MG RES.	10Ω 1/16W	J
	R012	DA-5134320209	MG RES.	2KΩ 1/16W	J		R109	DA-5134327209	MG RES.	2.7KΩ 1/16W	J
	R013	DA-5134300009	MG RES.	Ω 1/16W	J		R111	DA-5134310309	MG RES.	10KΩ 1/16W	J
	R014	DA-5134318009	MG RES.	18Ω 1/16W	J		R114	DA-5134300009	MG RES.	Ω 1/16W	J
	R015	DA-5134356009	MG RES.	56Ω 1/16W	J		R115	DA-5134310009	MG RES.	10Ω 1/16W	J
	R016	DA-5134310309	MG RES.	10KΩ 1/16W	J		R116	DA-5134300009	MG RES.	Ω 1/16W	J
	R017	DA-5134310309	MG RES.	10KΩ 1/16W	J		R117	DA-5134300009	MG RES.	Ω 1/16W	J
	R019	DA-5134300009	MG RES.	Ω 1/16W	J		R118	DA-5134300009	MG RES.	Ω 1/16W	J
	R020	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R121	DA-5134300009	MG RES.	Ω 1/16W	J
	R021	DA-5134310309	MG RES.	10KΩ 1/16W	J		R122	DA-5134300009	MG RES.	Ω 1/16W	J
	R023	DA-5134310209	MG RES.	1KΩ 1/16W	J		R123	DA-5134310109	MG RES.	100Ω 1/16W	J
	R024	DA-5134315209	MG RES.	1.5KΩ 1/16W	J		R124	DA-5134310309	MG RES.	10KΩ 1/16W	J
	R028	DA-5134310309	MG RES.	10KΩ 1/16W	J		R126	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R029	DA-5134310309	MG RES.	10KΩ 1/16W	J		R127	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R030	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R181	DA-5134300009	MG RES.	Ω 1/16W	J
	R032	DA-5134310309	MG RES.	10KΩ 1/16W	J		R194	DA-5134300009	MG RES.	Ω 1/16W	J
	R033	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R199	DA-5134300009	MG RES.	Ω 1/16W	J
	R034	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R201	DA-5134300009	MG RES.	Ω 1/16W	J
	R035	DA-5134310309	MG RES.	10KΩ 1/16W	J		R202	DA-5134310209	MG RES.	1KΩ 1/16W	J
	R037	DA-5134315209	MG RES.	1.5KΩ 1/16W	J		R203	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R038	DA-5134310509	MG RES.	1MΩ 1/16W	J		R204	DA-5134310409	MG RES.	100KΩ 1/16W	J
	R039	DA-5134310309	MG RES.	10KΩ 1/16W	J		R205	DA-5134375009	MG RES.	75Ω 1/16W	J
	R040	DA-5134336309	MG RES.	36KΩ 1/16W	J		R206	DA-5134375009	MG RES.	75Ω 1/16W	J
	R043	DA-5134310309	MG RES.	10KΩ 1/16W	J		R207	DA-5134320209	MG RES.	2.2KΩ 1/16W	J
	R044	DA-5134310309	MG RES.	10KΩ 1/16W	J		R211	DA-5134300009	MG RES.	Ω 1/16W	J
	R045	DA-5134310209	MG RES.	1KΩ 1/16W	J		R213	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R046	DA-5134318009	MG RES.	18Ω 1/16W	J		R214	DA-5134300009	MG RES.	Ω 1/16W	J
	R047	DA-5134310109	MG RES.	100Ω 1/16W	J		R218	DA-5134300009	MG RES.	Ω 1/16W	J
	R048	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R222	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R049	DA-5134310209	MG RES.	1KΩ 1/16W	J		R223	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R050	DA-5134343209	MG RES.	4.3KΩ 1/16W	J		R224	DA-5134315109	MG RES.	150Ω 1/16W	J
	R051	DA-5134310409	MG RES.	100KΩ 1/16W	J		R225	DA-5134368209	MG RES.	6.8KΩ 1/16W	J
	R052	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R226	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R053	DA-5134310209	MG RES.	1KΩ 1/16W	J		R227	DA-5134315109	MG RES.	150Ω 1/16W	J
	R054	DA-5134318009	MG RES.	18Ω 1/16W	J		R228	DA-5134368209	MG RES.	6.8KΩ 1/16W	J
	R055	DA-5134310109	MG RES.	100Ω 1/16W	J		R229	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R056	DA-5134315109	MG RES.	150Ω 1/16W	J		R230	DA-5134315109	MG RES.	150Ω 1/16W	J
	R057	DA-5134310109	MG RES.	100Ω 1/16W	J		R231	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R058	DA-5134375009	MG RES.	75Ω 1/16W	J		R232	DA-5134312109	MG RES.	120Ω 1/16W	J
	R059	DA-5134330109	MG RES.	300Ω 1/16W	J		R233	DA-5134347209	MG RES.	4.7KΩ 1/16W	J
	R060	DA-5134375009	MG RES.	75Ω 1/16W	J		R235	DA-5134300009	MG RES.	Ω 1/16W	J
	R061	DA-5134330109	MG RES.	300Ω 1/16W	J		R236	DA-5134300009	MG RES.	Ω 1/16W	J
	R062	DA-5134310109	MG RES.	100Ω 1/16W	J		R239	DA-5134310509	MG RES.	1MΩ 1/16W	J
	R063	DA-5062132317	FERRITE BEAD				R254	DA-5134110029	MG RES. 1%	10KΩ 1/16W	F
	R064	DA-5134327209	MG RES.	2.7KΩ 1/16W	J		R257	DA-5134368209	MG RES.	6.8KΩ 1/16W	J
	R065	DA-5134375009	MG RES.	75Ω 1/16W	J		R258	DA-5134310309	MG RES.	10KΩ 1/16W	J
	R066	DA-5134310109	MG RES.	100Ω 1/16W	J		R261	DA-5134300009	MG RES.	Ω 1/16W	J
	R067	DA-5134375009	MG RES.	75Ω 1/16W	J		R263	DA-5134324209	MG RES.	2.4KΩ 1/16W	J
	R068	DA-5134318109	MG RES.	180Ω 1/16W	J		R264	DA-5134324209	MG RES.	2.4KΩ 1/16W	J
	R069	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R267	DA-5134324209	MG RES.	2.4KΩ 1/16W	J
	R070	DA-5134322209	MG RES.	2.2KΩ 1/16W	J		R268	DA-5134324209	MG RES.	2.4KΩ 1/16W	J
	R072	DA-5134347209	MG RES.	4.7KΩ 1/16W	J		R269	DA-5134310309	MG RES.	10KΩ 1/16W	J
	R073	DA-5134347009	MG RES.	47Ω 1/16W	J		R271	DA-5134300009	MG RES.	Ω 1/16W	J
	R074	DA-5134375009	MG RES.	75Ω 1/16W	J		R272	DA-5134300009	MG RES.	Ω 1/16W	J
	R076	DA-5134375009	MG RES.	75Ω 1/16W	J		R273	DA-5134300009	MG RES.	Ω 1/16W	J
	R077	DA-5134347009	MG RES.	47Ω 1/16W	J		R274	DA-5134310309	MG RES.	10KΩ 1/16W	J
	R078	DA-5134322209	MG RES.	2.2KΩ 1/16W	J		R275	DA-5134318009	MG RES.	18Ω 1/16W	J
	R079	DA-5134318109	MG RES.	180Ω 1/16W	J		R276	DA-5134300009	MG RES.	Ω 1/16W	J
							R282	DA-5134300009	MG RES.	Ω 1/16W	J
							R283	DA-5134300009	MG RES.	Ω 1/16W	J

(No. YA036) 3-9

△	Symbol	Part No.	Part Name	Description
	P008	DA-5056310015	20P TIN SMD	
	P014	DA-5056415231	2P CONN.	
	P015	DA-5056302054	RCA JACK (WHITE)	
	P016	DA-5056302039	RCA JACK (RED)	
	P017	DA-5056302059	RCA JACK (BLACK)	
	P018	DA-5056415326	3P CONN.	
	P019	DA-5056415231	2P CONN.	
△	P020	DA-5056300707	DC JACK	
	P021	DA-5056415326	3P CONN.	
	PJ01	DA-5056309125	D-SUB VGA	
	PJ02	DA-5056300105	AUDIO JACK	

### OTHERS

	X003	DA-6699134506	XTAL	24.576MHz
	X006	DA-6699153630	XTAL	18.432MHz
	X007	DA-6699137813	XTAL	3.579545MHz
	X008	DA-6699106034	XTAL	14.318MHz

△	F001	DA-5054470091	FUSE	125V/7A
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### IR SENSOR PWB ASSEMBLY

△	Symbol	Part No.	Part Name	Description
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### IC

	IR601	DA-6642003904	IR SENSOR	TSOP4838(IR)
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### DIODE

	D601	DA-6618018175	LED	L-158EGC-TR-H
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### CAPACITOR

	C601	DA-5218007991	E CAP.	100μF 16V M
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### RESISTOR

	R601	DA-5134300009	MG RES.	0 1/16W J
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### CONNECTOR

	P601	DA-5056415685	6P CONN.	2011P06H
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### AV JACK PWB ASSEMBLY

△	Symbol	Part No.	Part Name	Description
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### DIODE

	D005	DA-6613000555	SWITCHING	BAV99-7
	D006	DA-6613000555	SWITCHING	BAV99-7
	D009	DA-6613000555	SWITCHING	BAV99-7
	D010	DA-6613000555	SWITCHING	BAV99-7
	D011	DA-6613000555	SWITCHING	BAV99-7

### INDUCTORS

	L005	DA-5062120112	FERRITE BEAD	
	L006	DA-5062120112	FERRITE BEAD	
	L007	DA-5062120112	FERRITE BEAD	
	L008	DA-5062120112	FERRITE BEAD	
	L009	DA-5062120112	FERRITE BEAD	
	L010	DA-5134333009	MG RES.	33Ω 1/16W J
	L011	DA-5062120112	FERRITE BEAD	
	L012	DA-5062120112	FERRITE BEAD	

△	Symbol	Part No.	Part Name	Description
	L013	DA-5062120112	FERRITE BEAD	
	L014	DA-5062120112	FERRITE BEAD	
	L015	DA-5062120112	FERRITE BEAD	

### CAPACITORS

	C024	DA-5240633191	C CAP.	330pF 50V J
	C025	DA-5240633191	C CAP.	330pF 50V J
	C026	DA-5240633191	C CAP.	330pF 50V J
	C027	DA-5240633191	C CAP.	330pF 50V J
	C028	DA-5240633191	C CAP.	330pF 50V J
	C030	DA-5240633191	C CAP.	330pF 50V J
	C031	DA-5240633191	C CAP.	330pF 50V J
	C032	DA-5240633191	C CAP.	330pF 50V J
	C033	DA-5240633191	C CAP.	330pF 50V J
	C034	DA-5240633191	C CAP.	330pF 50V J

### CONNECTORS

	P013	DA-5056302066	S-VIDEO	
	P014	DA-5056302055	RCA JACK (YELLOW)	
	P015	DA-5056302054	RCA JACK (WHITE)	
	P016	DA-5056302039	RCA JACK (RED)	
	P017	DA-5056302057	RCA JACK (GREEN)	
	P018	DA-5056302054	RCA JACK (WHITE)	
	P019	DA-5056302039	RCA JACK (RED)	
	P020	DA-5056404014	40P CONN.	
	P021	DA-5056302058	RCA JACK (BLUE)	
	P022	DA-5056302067	RCA JACK (RED)	

### FRONT CONTROL PWB ASSEMBLY

△	Symbol	Part No.	Part Name	Description
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### RESISTORS

	R602	DA-5142127195	CARBON FILM	270Ω 1/6W J
	R603	DA-5142127195	CARBON FILM	270Ω 1/6W J

### CONNECTORS

	P602	DA-5056415852	8P CONN.	
	P603	DA-5056415484	4P CONN.	
	P604	DA-5056415484	4P CONN.	
	P605	DA-5056302064	PHONE JACK	

### SWITCHES

	S601	DA-5054513070	TACT SPST	
	S602	DA-5054513070	TACT SPST	
	S603	DA-5054513070	TACT SPST	
	S604	DA-5054513070	TACT SPST	
	S605	DA-5054513070	TACT SPST	
	S606	DA-5054513070	TACT SPST	
	S607	DA-5054513070	TACT SPST	

### TUNER PWB ASSEMBLY

△	Symbol	Part No.	Part Name	Description
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### UNIT

	UT01	DA-5052110000	TUNER	FQ1236
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### INDUCTORS

	LT01	DA-5064410129	COIL,PEAKING	100μH
	LT02	DA-5064410129	COIL,PEAKING	100μH

△	Symbol	Part No.	Part Name	Description
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# CAPACITORS

CT01	DA-5218007991	E CAP.	100μF	16V	M
CT02	DA-5230005491	C CAP.	0.1μF	25V	Z
CT03	DA-5218007991	E CAP.	100μF	16V	M
CT05	DA-5230005491	C CAP.	0.1μF	25V	Z
CT09	DA-5218007991	E CAP.	100μF	16V	M

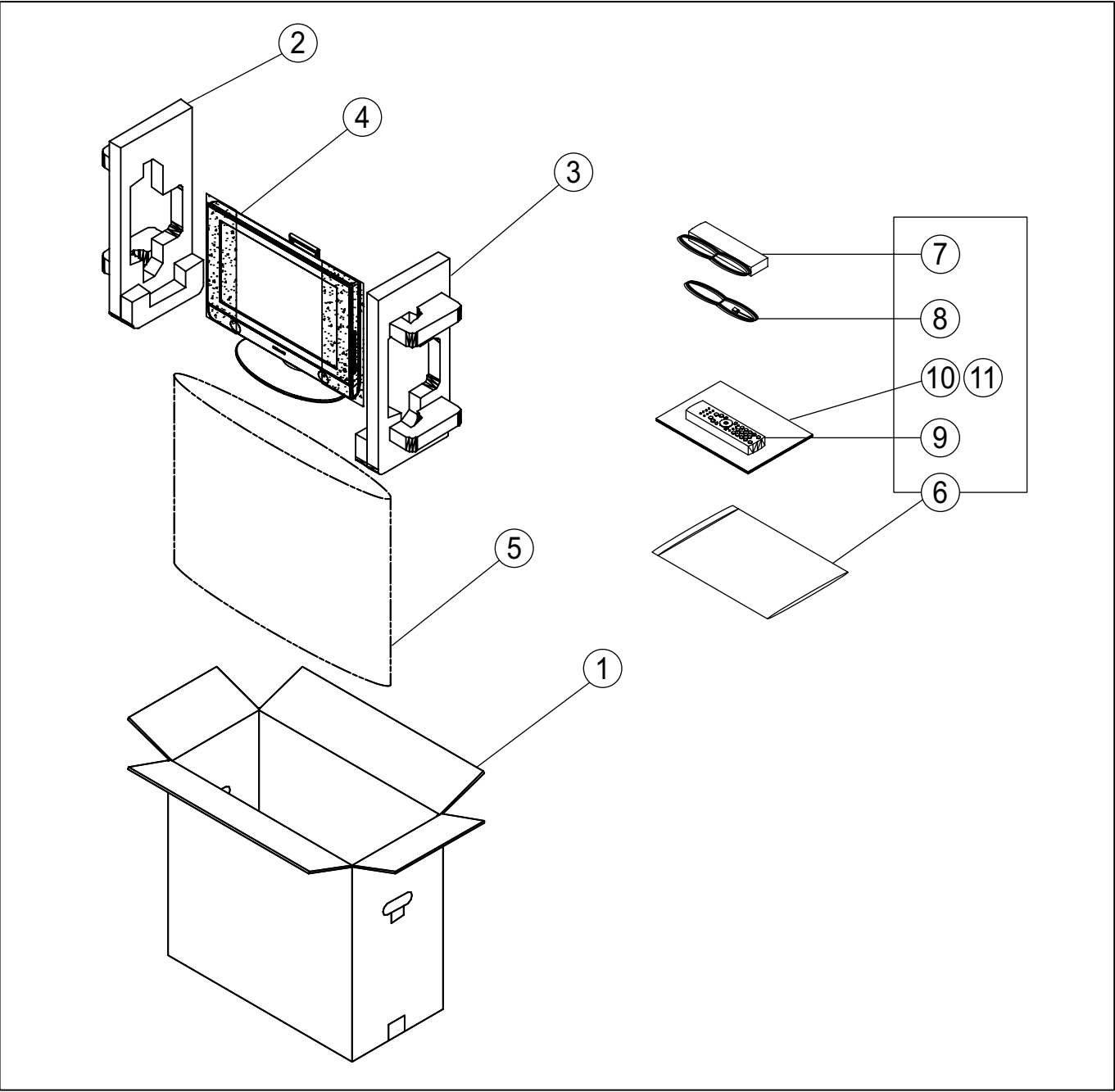
# RESISTORS

RT04	DA-5134300009	MG RES.	0Ω	1/16W	J
RT05	DA-5134300009	MG RES.	0Ω	1/16W	J
RT06	DA-5134300009	MG RES.	0Ω	1/16W	J
RT08	DA-5134300009	MG RES.	0Ω	1/16W	J

# CONNECTOR

P012	DA-5056403004	30P CONN.
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# PACKING



## PACKING PARTS LIST

△ Ref. No.	Part No.	Part Name	Description
1	DA-9513390356	CARTON BOX	
2	DA-9533390556	EPE PAD-L	
3	DA-9533390656	EPE PAD-R	
4	DA-9533399956	EPE BAG	for SET
5	DA-9533399856	PE BAG	for SET
6	DA-9533389756	PE BAG	for ACCESSORIES
△ 7	DA-5061370338	AC ADAPTER	
△ 8	DA-5056700411	POWER CORD	
9	DA-5000100087	REMOTE CONTROL UNIT	
10	DA-5030057021	INSTRUCTION MANUAL	
11	DA-5030250025	WARRANTY CARD	

# **JVC**

## **SCHEMATIC DIAGRAMS**

LCD FLAT TELEVISION

### **LT-23X475**

CD-ROM No. SML200409



# LT-23X475

## STANDARD CIRCUIT DIAGRAMS

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### USING P.W. BOARD

MAIN P.W. BOARD	DA-5097631902 (PWB-0692-1)
IR SENSOR P.W. BOARD	DA-5097631902 (PWB-0692-2)
AV JACK P.W. BOARD	DA-5098800731 (PWB-0693-1)
FRONT CONTROL P.W. BOARD	DA-5098800732 (PWB-0693-2)
TUNER P.W. BOARD	DA-5098800733 (PWB-0693-3)

### SEMICONDUCTOR SHAPES

#### TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

#### IC

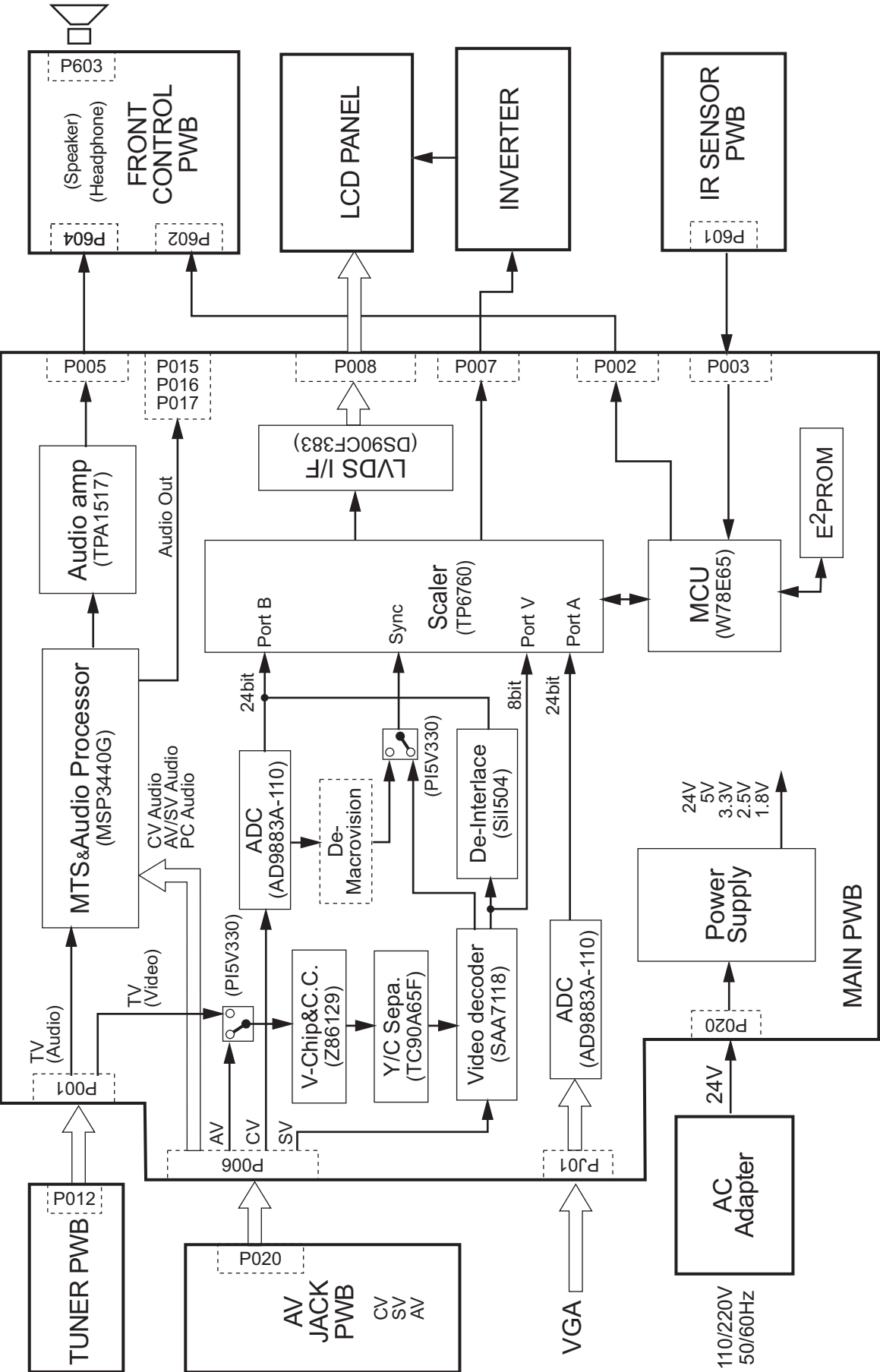
BOTTOM VIEW	FRONT VIEW			TOP VIEW

#### CHIP IC

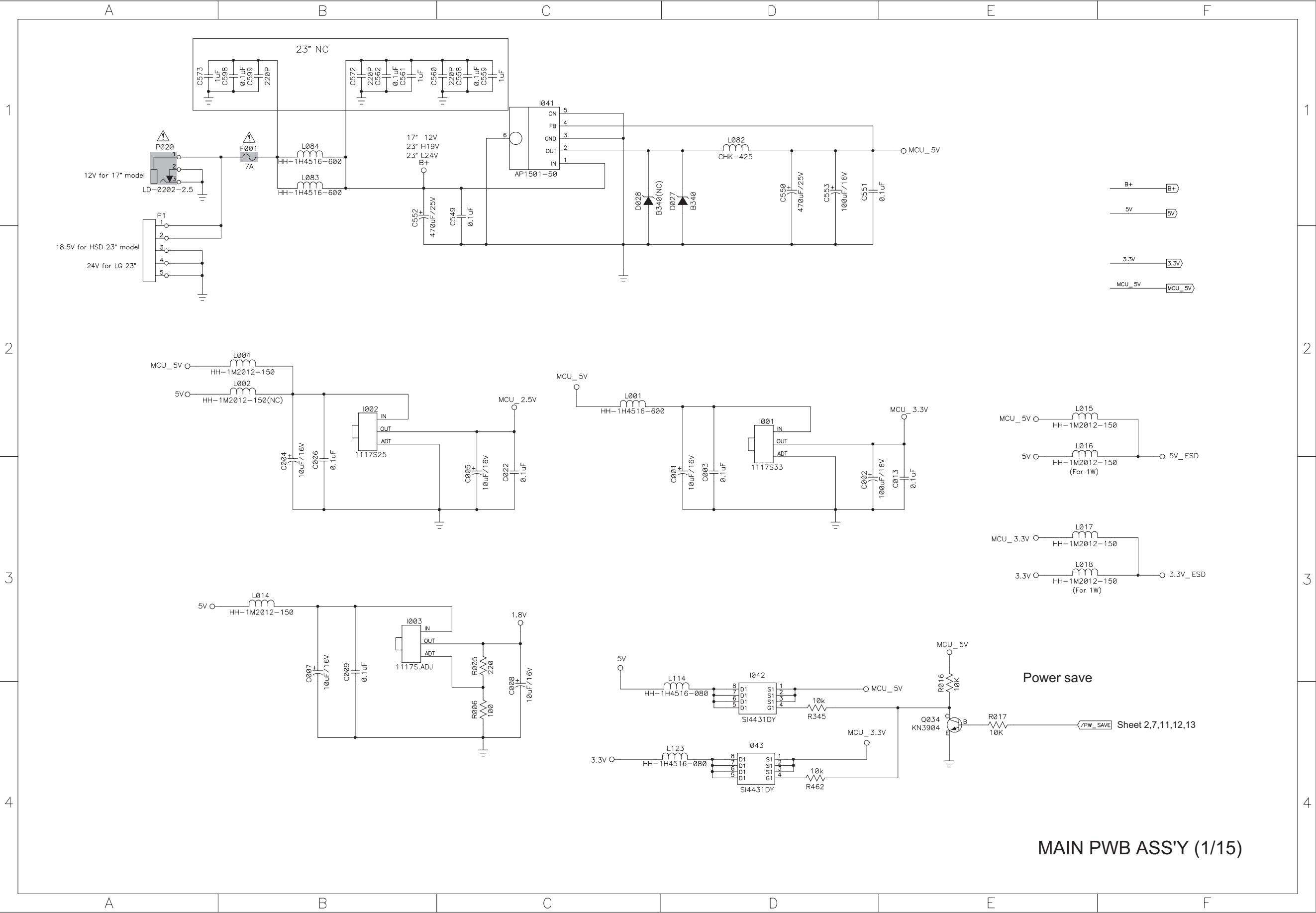
TOP VIEW		



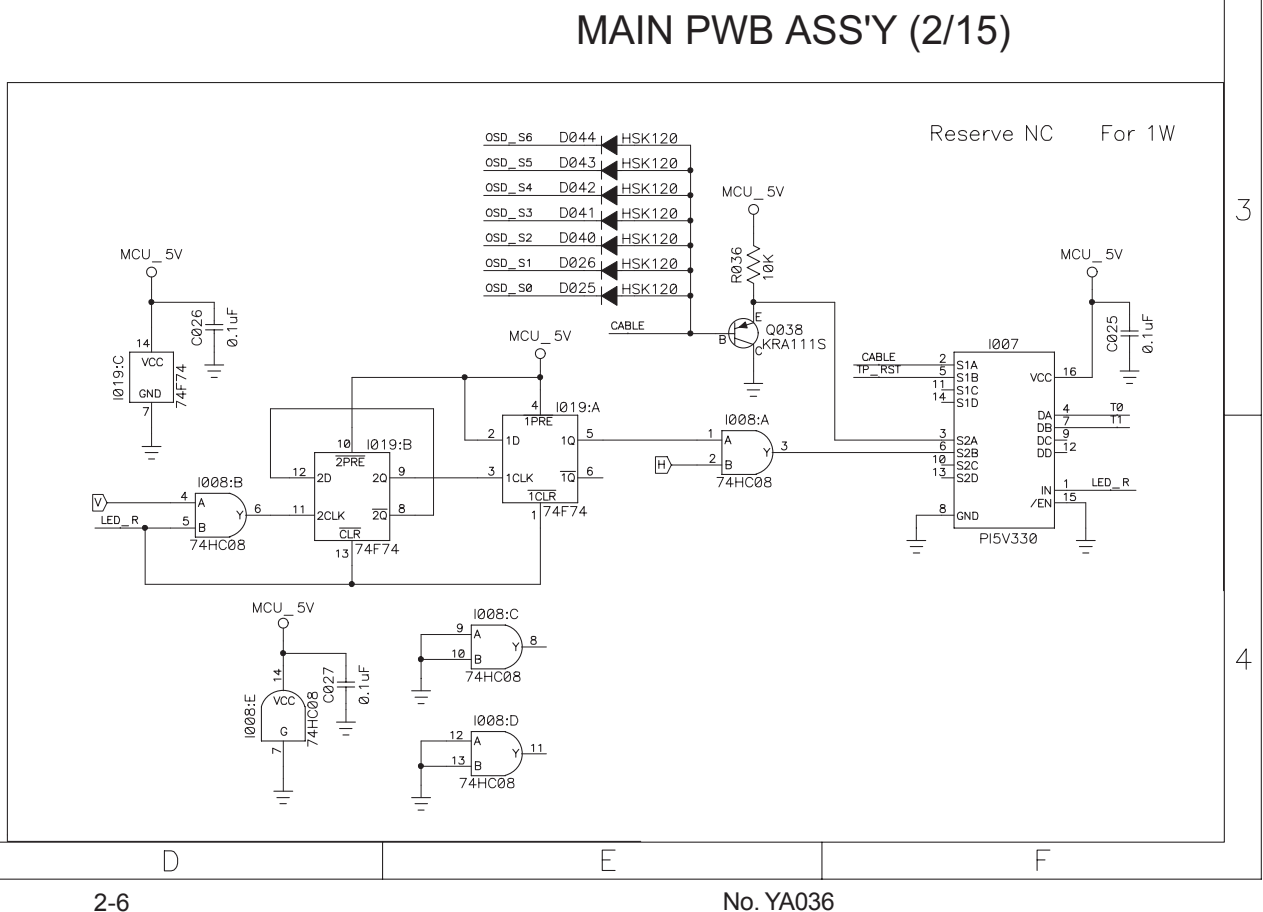
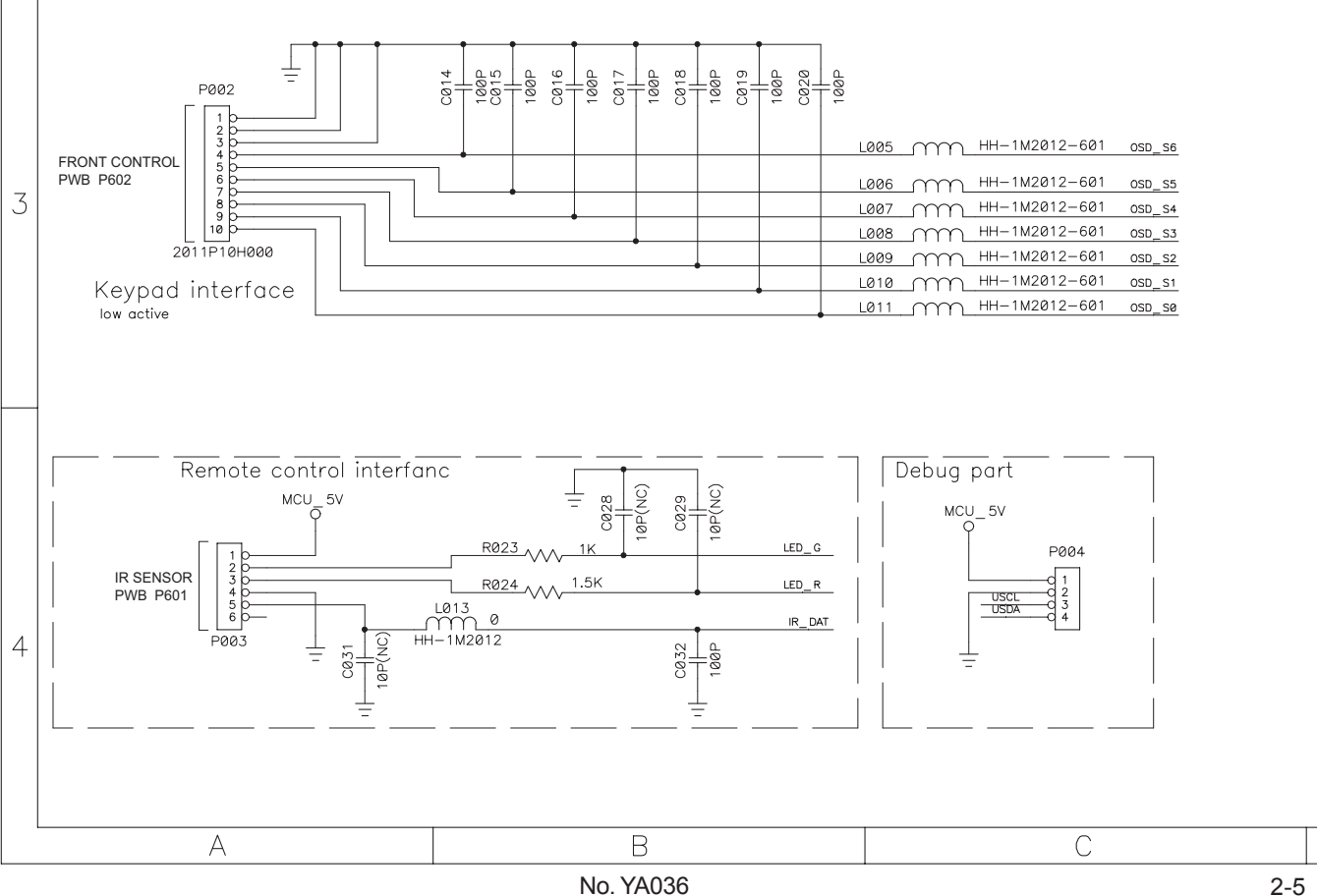
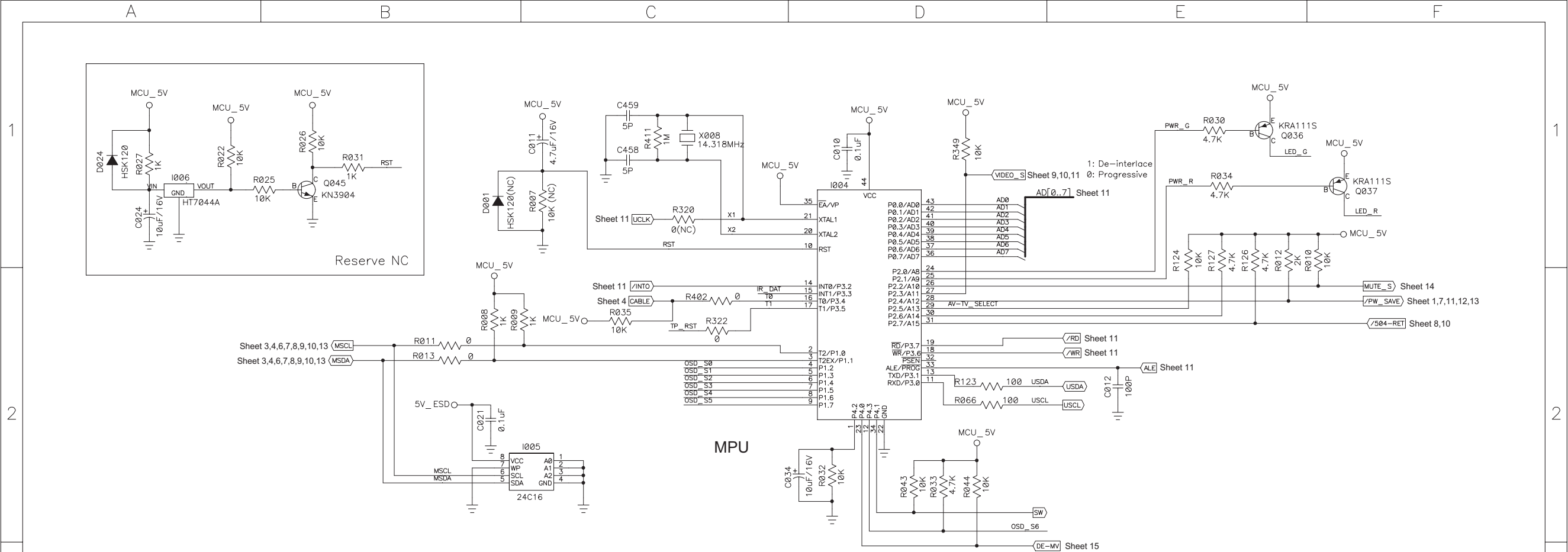
BLOCK DIAGRAM

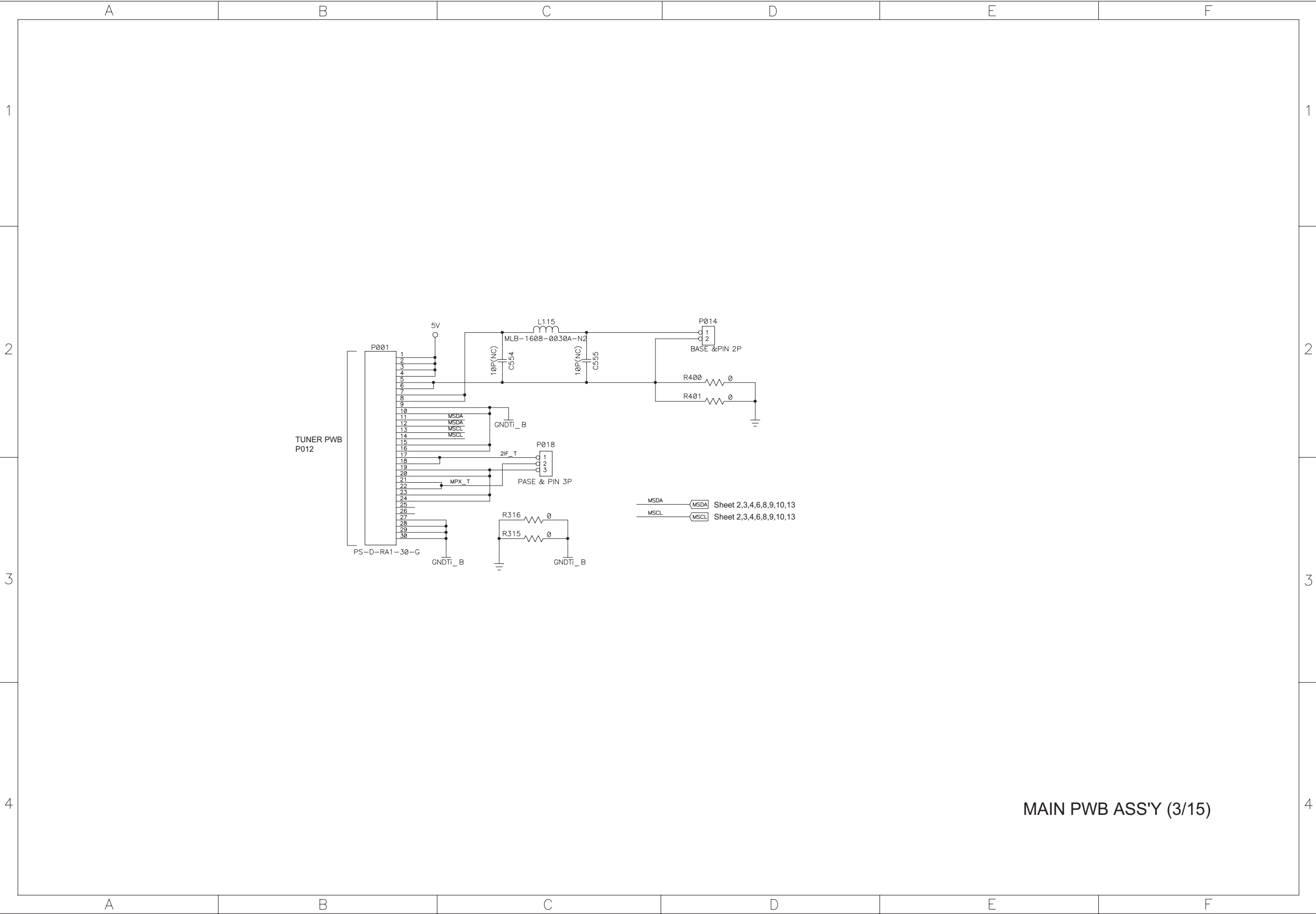


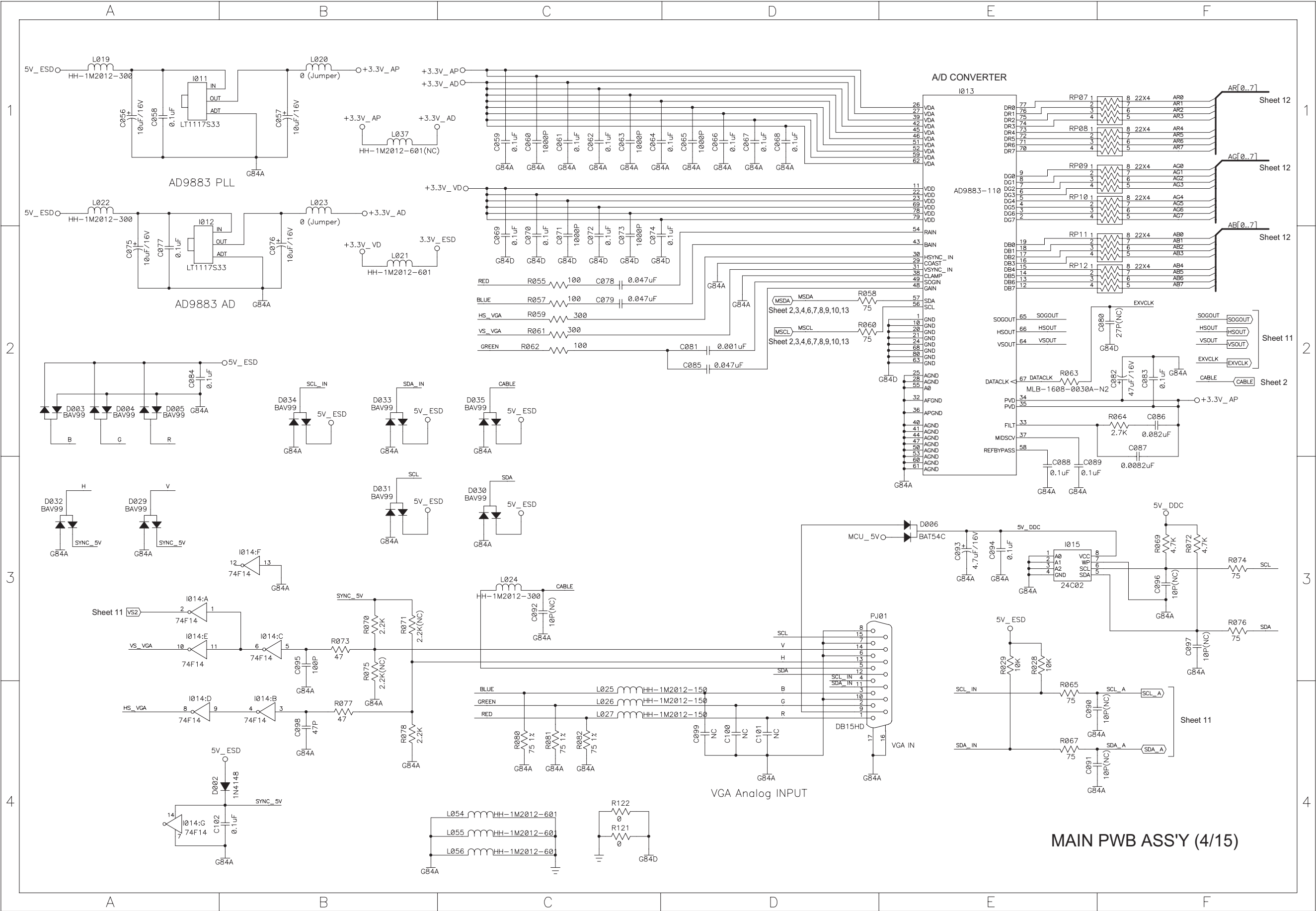
CIRCUIT DIAGRAMS  
MAIN PWB CIRCUIT DIAGRAM (1/15)

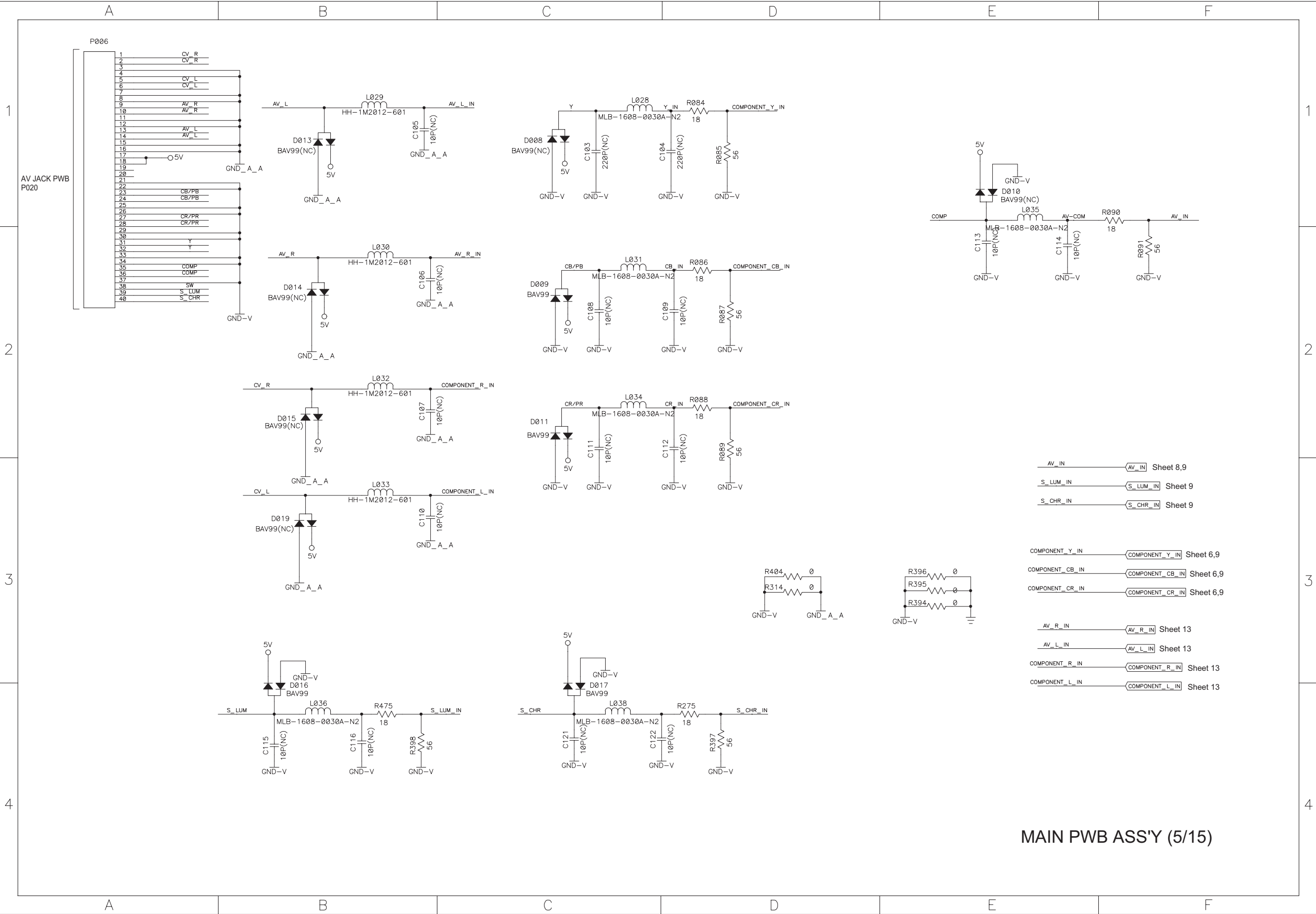


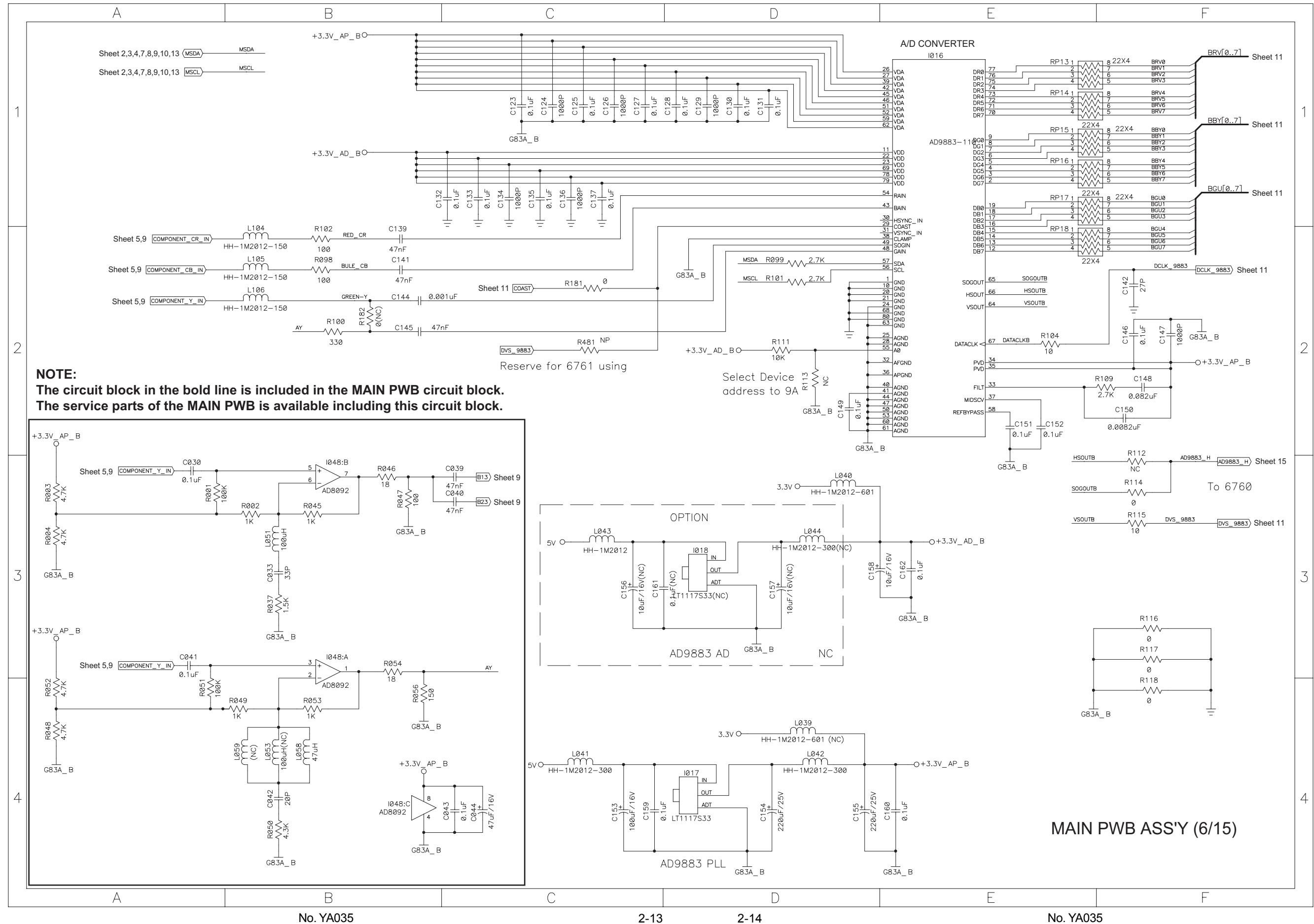
MAIN PWB CIRCUIT DIAGRAM (2/15)

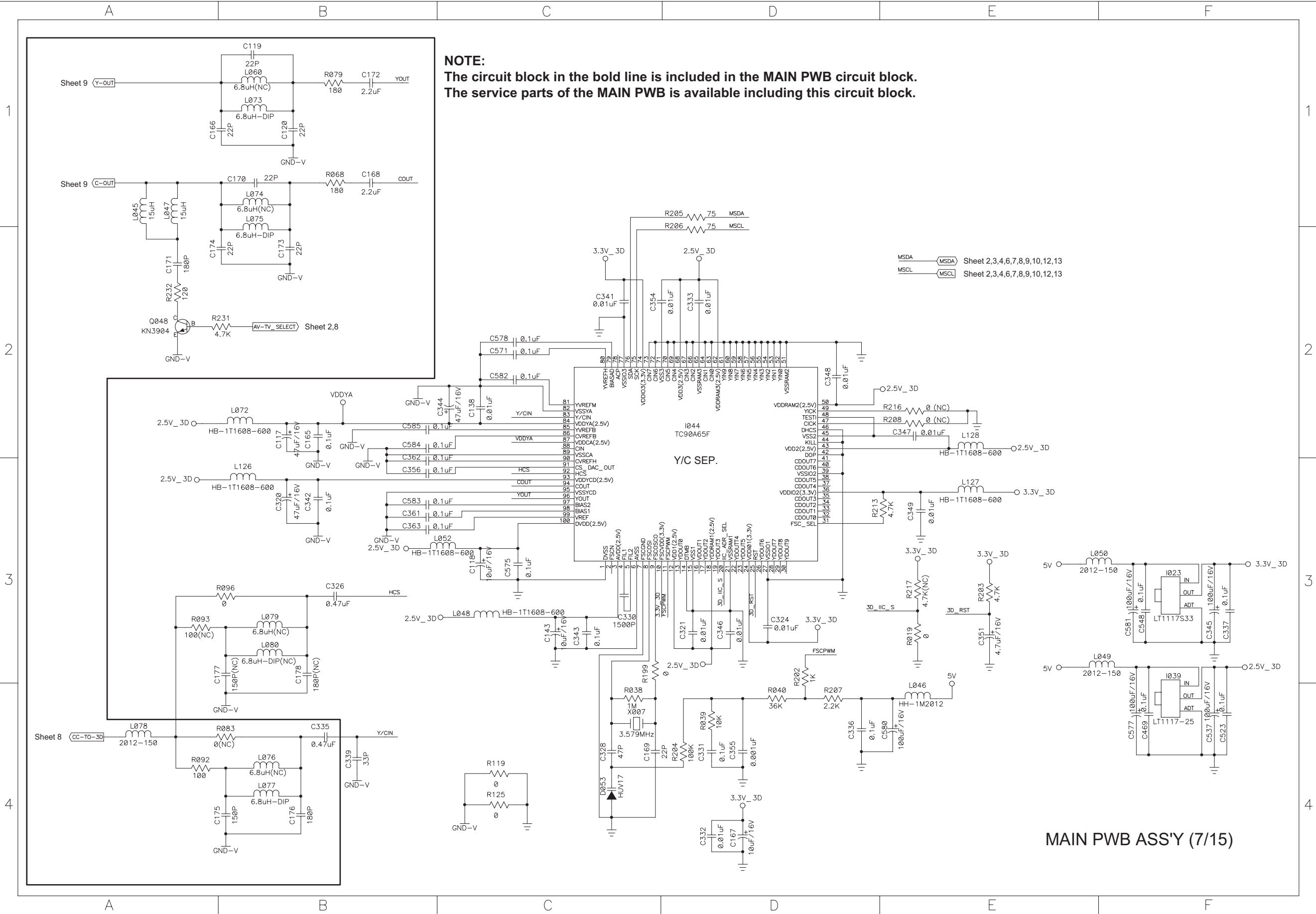






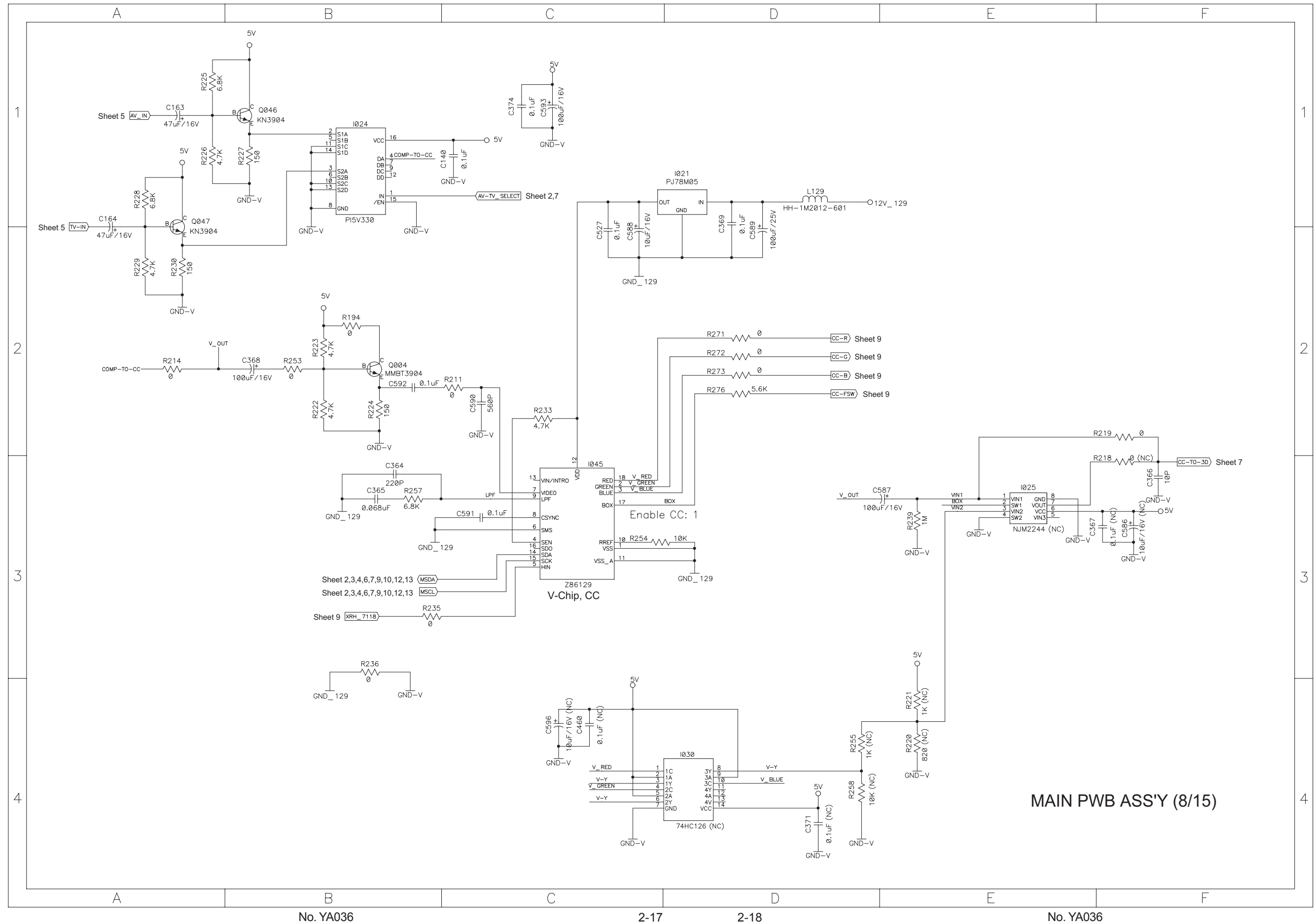


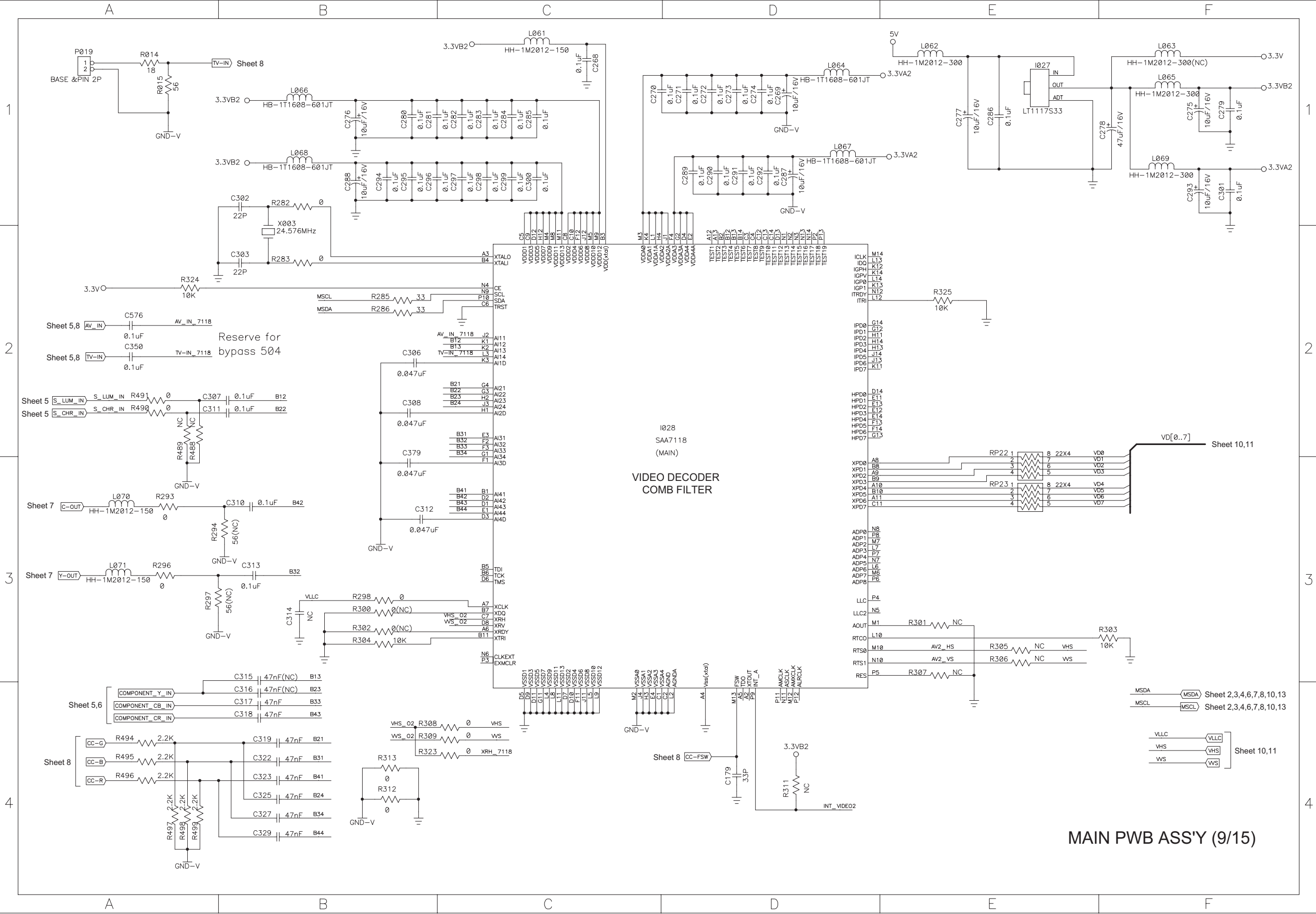




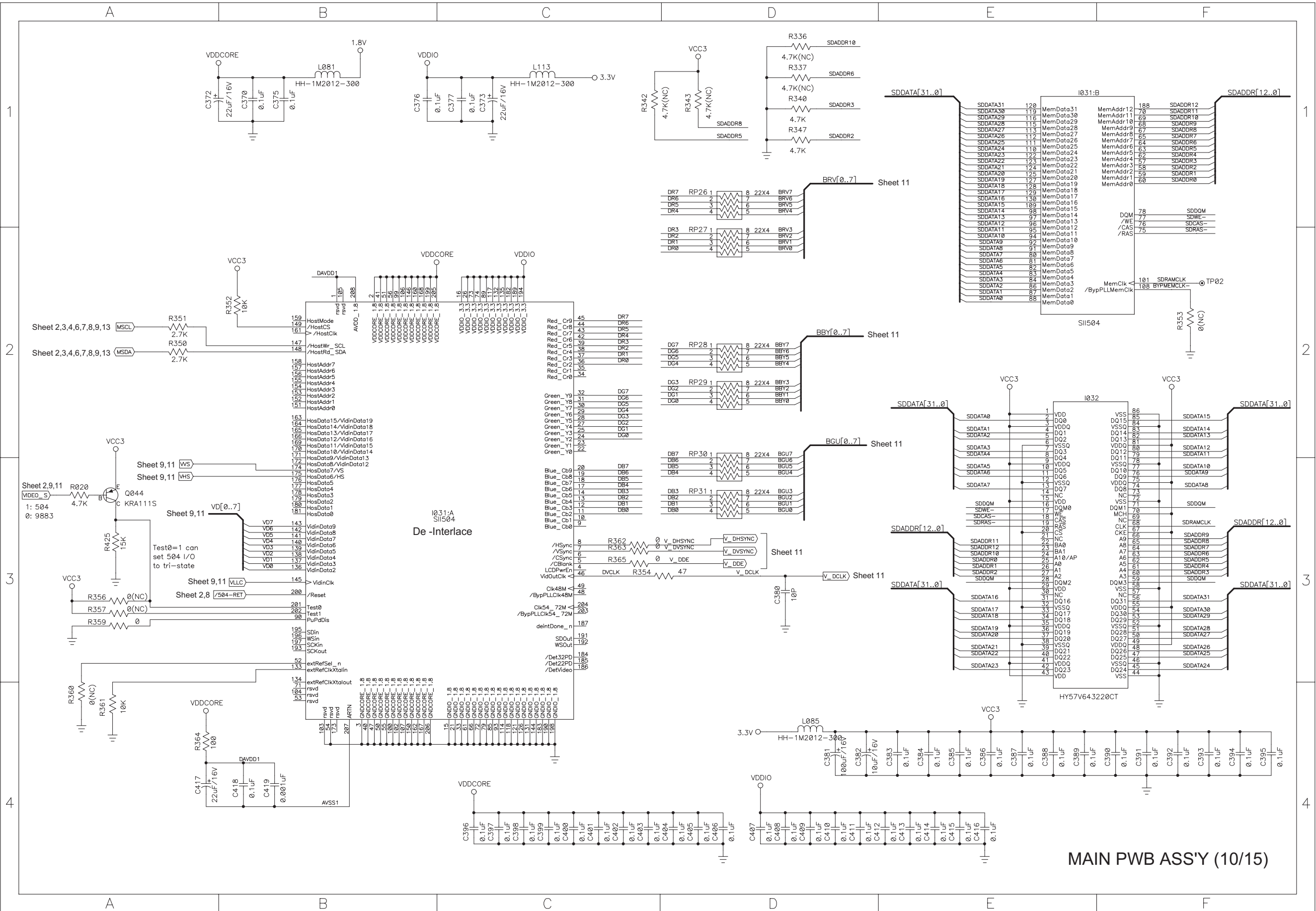


**MAIN PWB CIRCUIT DIAGRAM (8/15)**

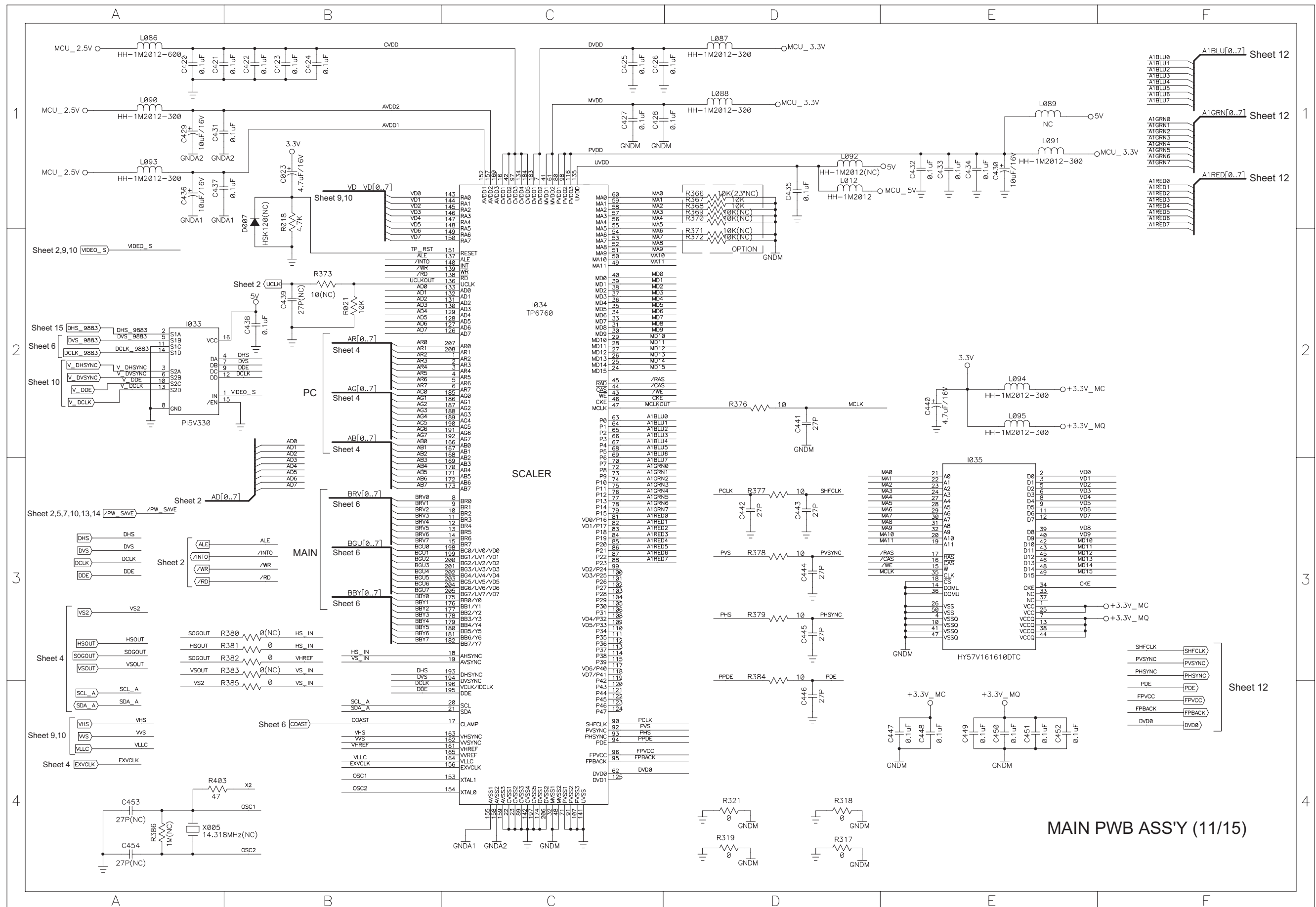


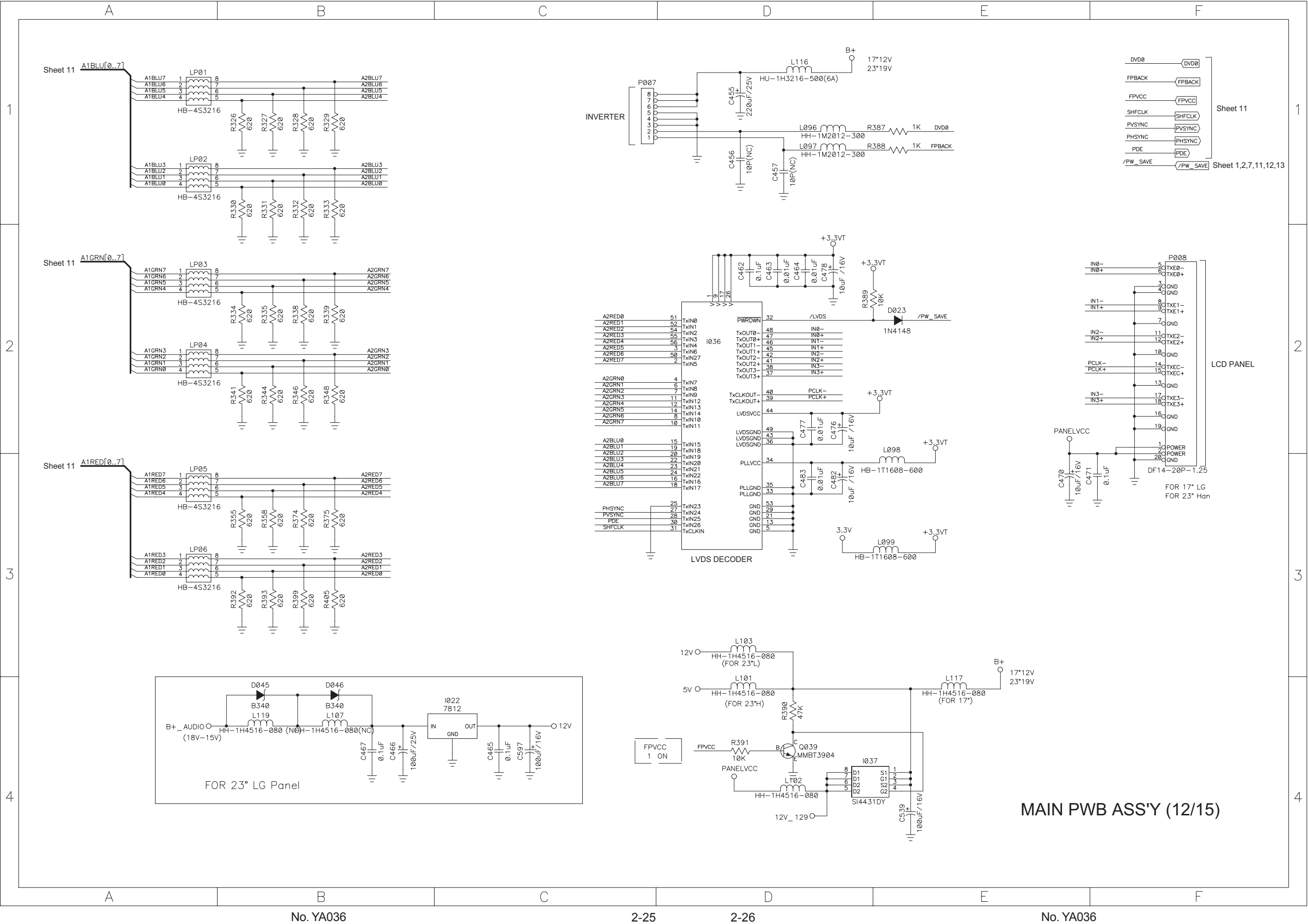


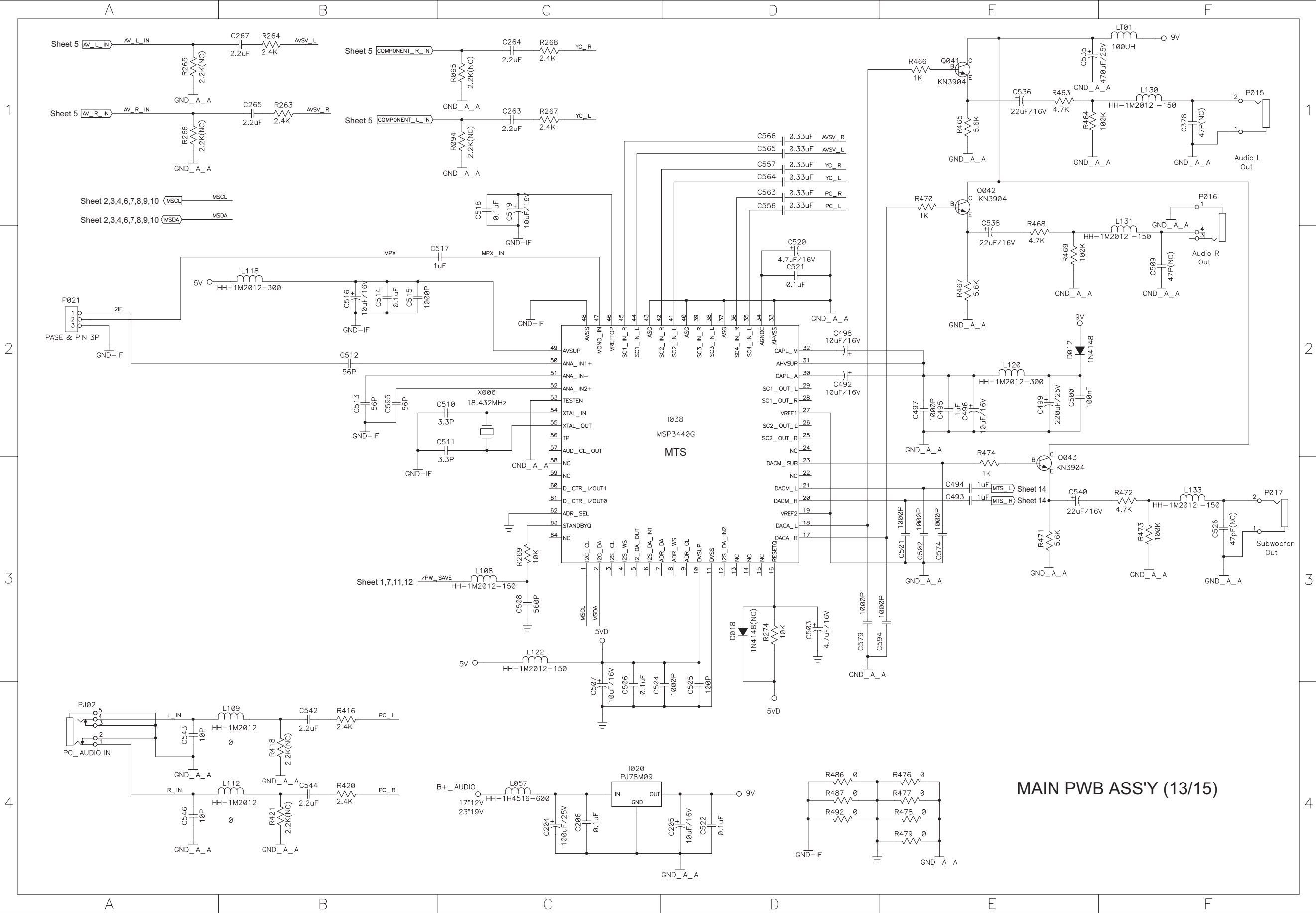
MAIN PWB ASS'Y (9/15)



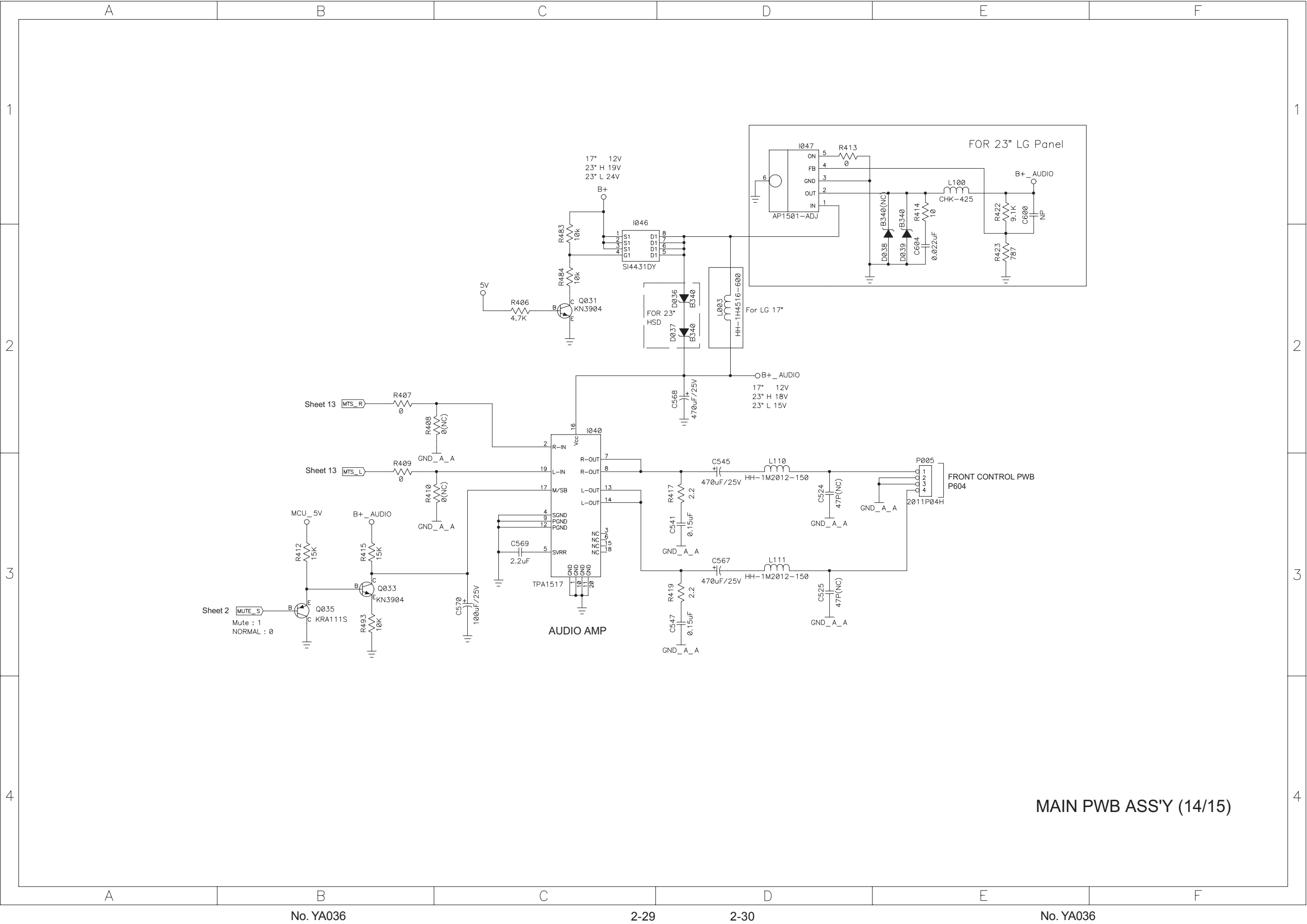
## MAIN PWB CIRCUIT DIAGRAM (11/15)

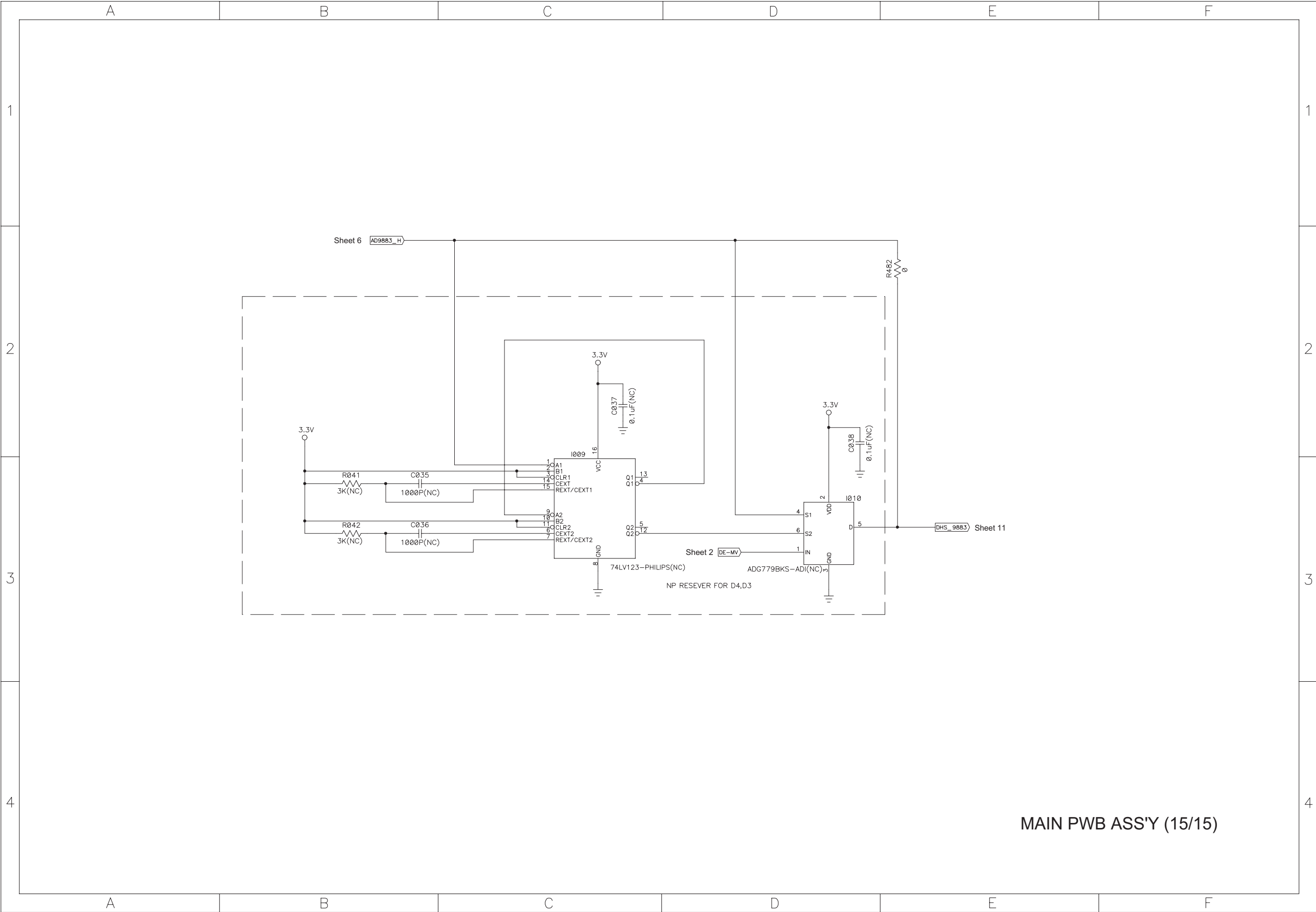






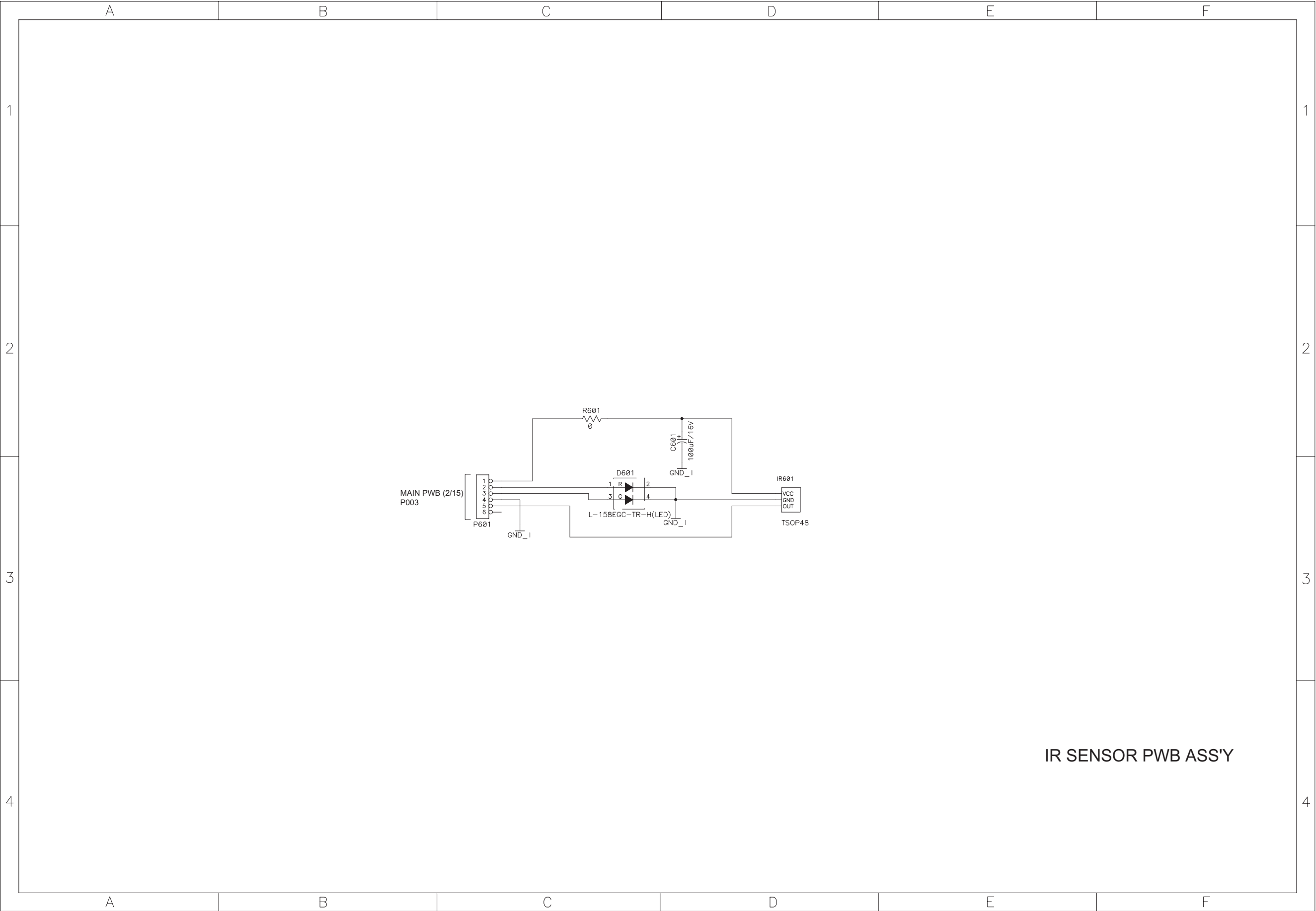




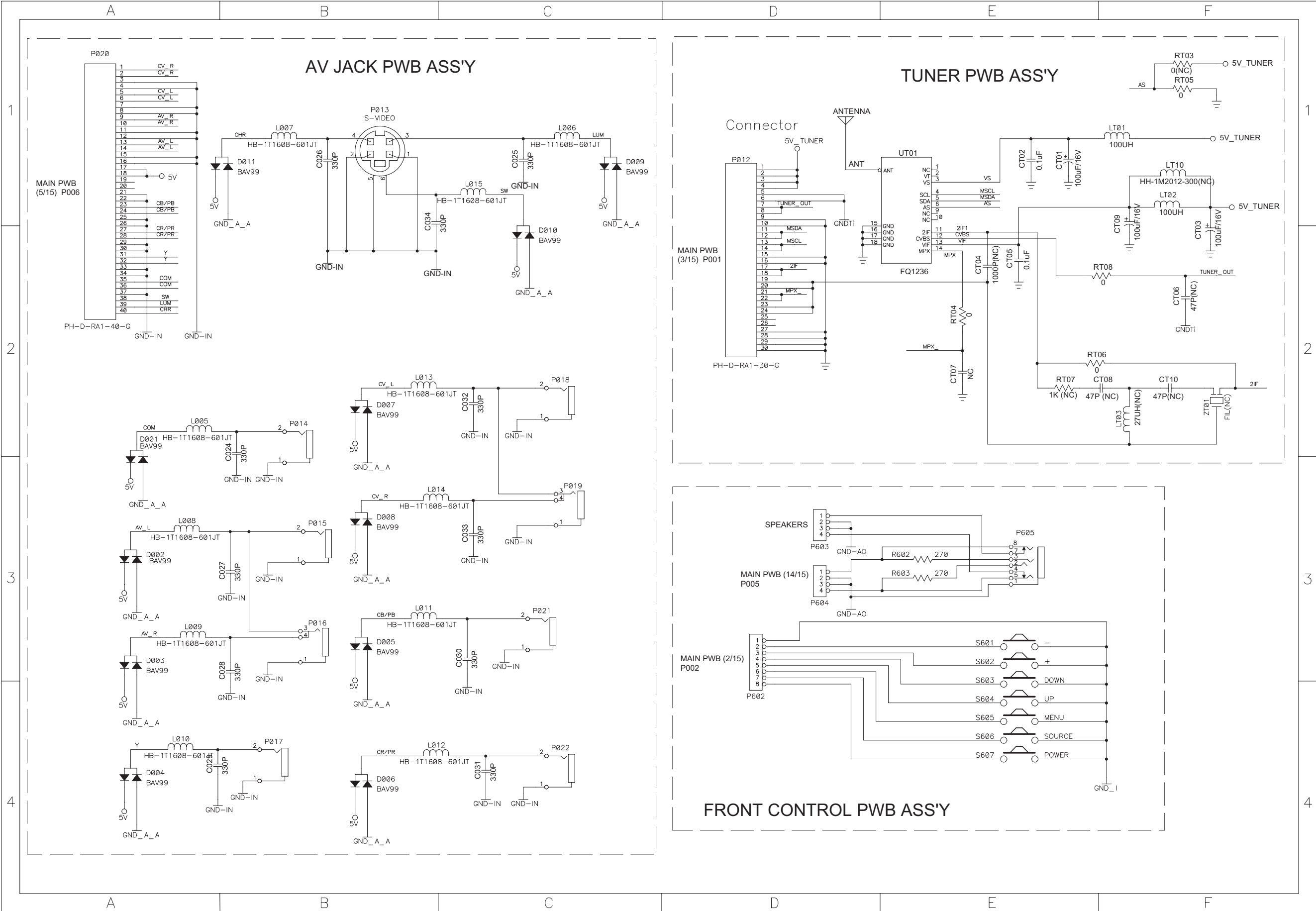




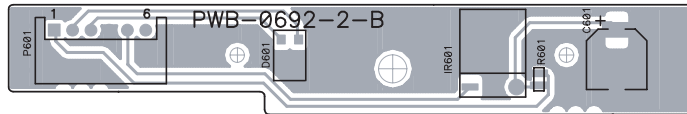
IR SENSOR PWB CIRCUIT DIAGRAM



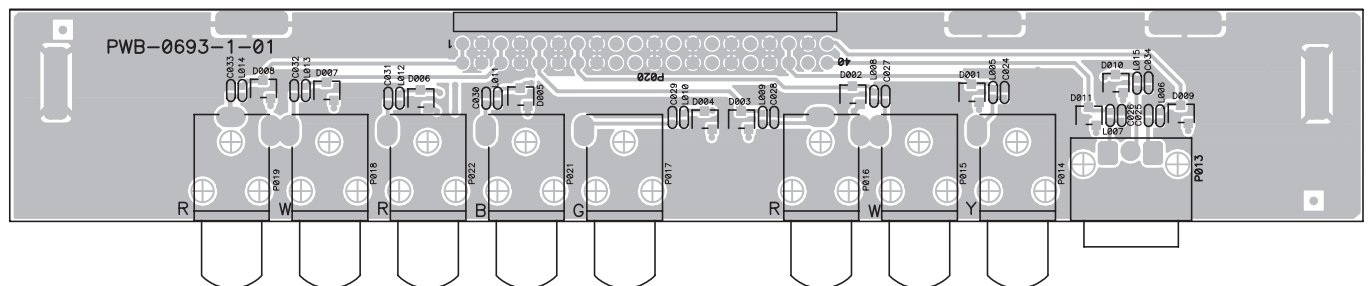
IR SENSOR PWB ASS'Y



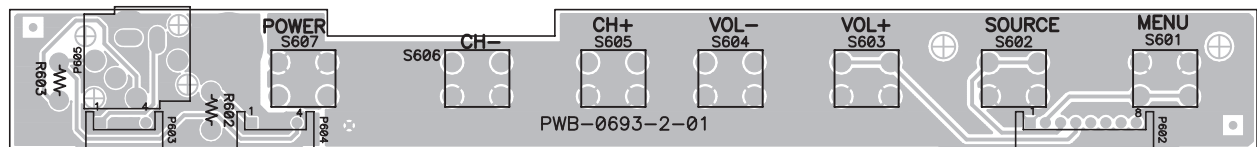
## IR SENSOR PWB PATTERN



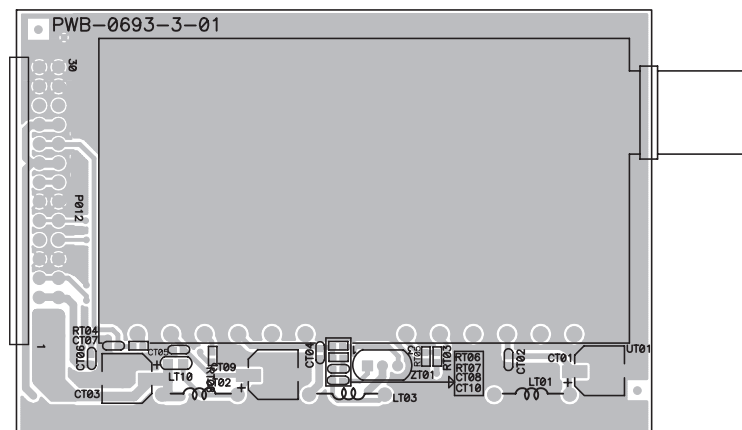
## AV JACK PWB PATTERN



## FRONT CONTROL PWB PATTERN



## TUNER PWB PATTERN



# **JVC®**

## **LT-17X475**

## **LT-23X475**

ENGLISH  
FRANÇAIS  
CASTELLANO



### **LCD FLAT TELEVISION**

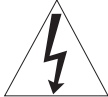
### **INSTRUCTIONS**

TELEVISEUR A ECRAN PLAT – LCD  
TELEVISOR PLANO LCD


MANUEL D'INSTRUCTIONS  
MANUAL DE INSTRUCCIONES




# Important Safety Precautions




**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



**CAUTION :** To reduce the risk of electric shock. Do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS TV SET TO RAIN OR MOISTURE.

**CAUTION:** TO INSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid improper installation and never position the unit where good ventilation is unattainable.
4. Do not allow objects or liquid into the cabinet opening.
5. In the event of trouble, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

Changes of modifications not approved by JVC could void the warranty.

- \* When you don't use the TV set for a long period of time, be sure to disconnect both the power plug from the AC outlet and antenna for your safety.
- \* To prevent electric shock do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

## IMPORTANT RECYCLING INFORMATION

This product has a fluorescent lamp that contains a small amount of mercury. It also contains lead in some components. Disposal of the materials may be regulated in your community due to environmental considerations. For disposal or recycling information, please contact your local authorities, or the Electronic Industries Alliance:

<http://www.eiae.org>



- As an "ENERGY STAR®" partner, JVC has determined that this product or product model meets the "ENERGY STAR®" guidelines for energy efficiency.

## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug.  
A polarized plug has two blades with wider than the other.  
A grounding type plug has two blades and a third grounding prong.  
The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Apparatus shall not be exposed to dripping or splashing and no objects fill with liquids, such as vases, shall be placed on the apparatus.

Thank you for buying this JVC LCD flat television.  
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.  
("LCD" stands for Liquid Crystal Display.)

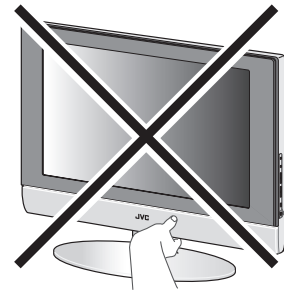
**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### WARNING

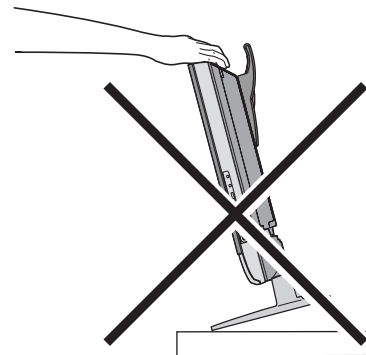
Always use the provided AC adapter and power cord.

### WARNING

- Fingers may be trapped under the TV causing injuries. Hold the TV at the bottom in the middle, and do not allow it to tilt up or down.

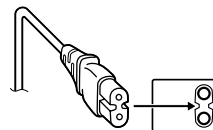


- The TV may fall causing injuries. Hold the bottom of the stand with your hand and tilt the TV up and down.
- Do not allow children to hang from the TV, place their elbows on the TV or lean against the TV. Doing so may cause the TV to fall over and lead to injuries.



### CAUTION:

- To avoid electric shock or damage to the unit, first firmly insert the small end of the power cord into the AC Adapter unit it is no longer wobbly, and then plug the larger end of power cord into an AC outlet.



• Illustration of LT-17X475

### CAUTION:

- Operate only from the power source (AC 120V, 60 Hz).
- Avoid damaging the AC plug, AC adapter and power cord.
- When you are not using this unit for a long period of time, it is recommended that you disconnect the power cord from the main outlet.

### CAUTION ON HEATING OF AC ADAPTER:

- In using, the AC adapter get heat on the surface of case. It is normal, not defective.
- Don't be covered with any material on case of AC adapter while it is in operation.

### NOTES:

- The rating plate (serial number plate) and safety caution are on the back of the main unit.
- The rating information and safety caution of the AC Adapter are on its upper and lower sides.

### Point defects

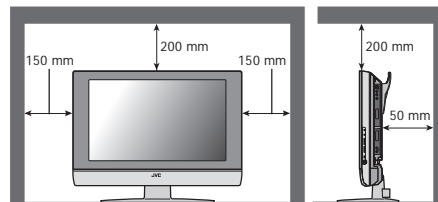
LCDs use collections of fine pixels to display images. While there is no problem with more than 99.99% of these pixels, please understand that a very small number of pixels may not light or may light all the time.

### Distance recommendations

Avoid improper installation and never position the unit where good ventilation is impossible.

When installing this TV, distance recommendations must be maintained between the set and the wall, as well as inside a tightly enclosed area or piece of furniture.

Keep to the minimum distance guidelines shown for safe operation.



### Failure to take the following precautions may cause damage to the television or remote control.

DO NOT block the TV's ventilation openings or holes.

(If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)

DO NOT place anything on top of the TV.

(such as cosmetics or medicines, flower vases, potted plants, cups, etc.)

DO NOT allow objects or liquid into the cabinet openings.

(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

DO NOT place any naked flame sources, such as lighted candles, on the TV.

DO NOT subject the TV to direct sunlight.

The surface of the TV screen is easily damaged. Be very careful with it when handling the TV.

Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully.

Never use any cleaner or detergent on it.

If there is a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover and the AC adapter.

### Cleaning the screen

The screen is coated with a special thin film to reduce reflection. If this film is damaged, uneven colors, discoloration, scratches, and other problems that can not be repaired may occur. Pay attention to the following when handling the screen.

- Do not use glue or adhesive tape on the screen.
- Do not write on the screen.
- Do not allow the screen to come in contact with any hard objects.
- Do not allow condensation to form on the screen.
- Do not use alcohol, thinner, benzene or other solvents on the screen.
- Do not rub the screen hard.



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# Setting up your TV

## Installation

### Cautions for installation

- Install the TV in a corner on a wall or on the floor so as to keep cords out of the way.
- The TV will generate a slight amount of heat during operation. Ensure that sufficient space is available around the TV to allow satisfactory cooling. See “Distance recommendations” on page 4.

## Using the stand

### This TV comes with a Table Top Stand already attached.

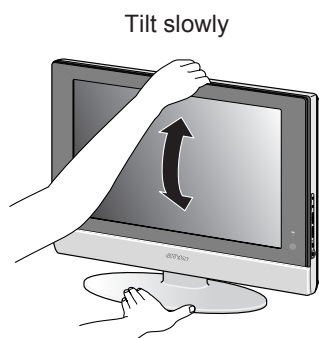
This stand can be used to adjust the direction of the TV screen 5° up, 10° down, and 20° to the left or right.

### Tilt the TV up and down:

While holding the bottom of the stand with one hand, use your other hand to hold the middle of the top of the TV and slowly tilt the TV up and down.

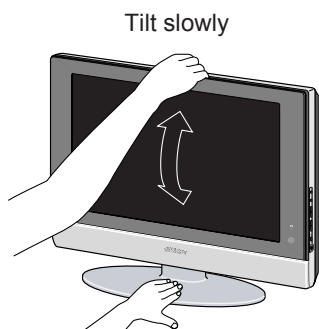
- As a safety measure, the stand is constructed so that it requires a certain amount of force to tilt the TV.

### LT-17X475



Hold down steadily in front of center on stand

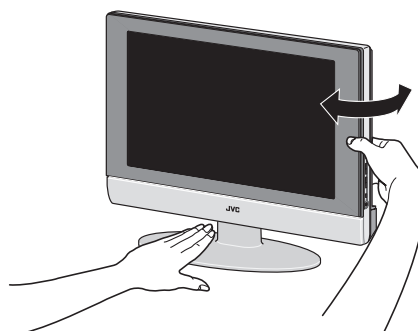
### LT-23X475



Hold down steadily

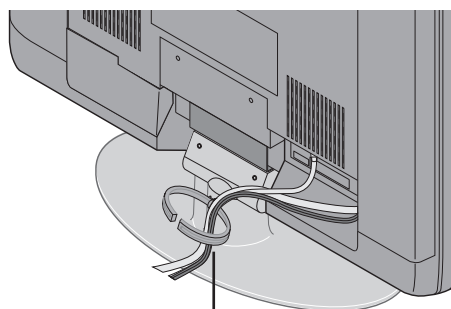
### Rotate the TV to the left and right:

While holding the bottom of the stand with one hand, use your other hand to hold the edge of the panel and slowly adjust the direction of the TV screen.



### Cable holder

A cable holder which is used to keep the connection cables tidy is attached to the back of the stand.

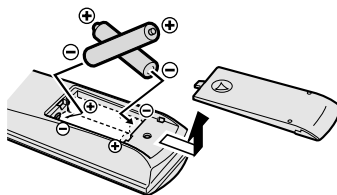


cable holder

## Putting the batteries into the Remote control

Use two AA/R6 dry cell batteries.

Insert the batteries from the - end, making sure the + and - polarities are correct.



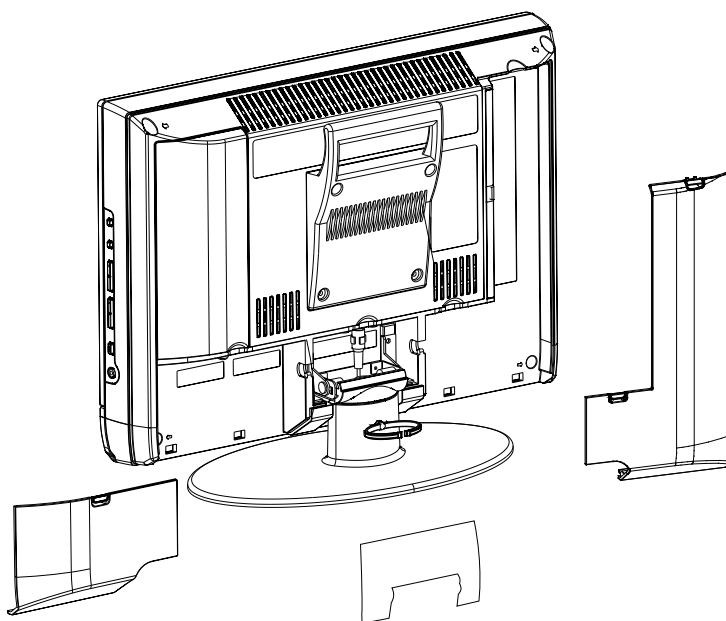
- Follow the warnings printed on the batteries.
- Battery life is about six months to one year, depending on your frequency of use.
- The batteries we supply are only for setting up and testing your TV, please replace them as soon as you need to.
- If the remote control does not work properly, replace the batteries.

## Remove the terminal cover

There are connection terminals behind the covers of the rear of the TV. Remove the cover before connecting a DVD or VCR.

The covers can be removed by removing the hook at the top and then pulling out while lifting slightly. To replace the covers, first connect the hook at the bottom of the cover to the TV and then insert the hook at the top.

- Leave the covers off if they do not fit properly. Do not force to replace the covers. Doing so may cause damages of the connection cables and the covers.
- Leave these covers off when mounting the TV on a wall.



- 100mm mount based on VESA regulation is equipped. As for the wall mounting unit, please consult your dealer. □ □
- The handle and the stand can be left by loosening the screws with a screwdriver when mounting the TV on a wall.
- Spread a soft cloth on a flat table and then place the TV on the cloth with the screen facing downwards when you leave the handle and the stand.

## Connecting the aerial and video cassette recorder (VCR)

- The connecting cables are not provided.
- For further details, refer to the manuals provided with the devices to be connected.

**If you are connecting a VCR, follow ①→②→③ in the diagram below.**

**If you are not connecting a VCR, follow ①.**

- To connect the PC, please see "Connecting the PC" on page 24.
- To connect more equipment, please see "Connecting external equipment" on page 23.
- To connect additional audio equipment, see "Connecting Speakers/Amplifier" on page 24.

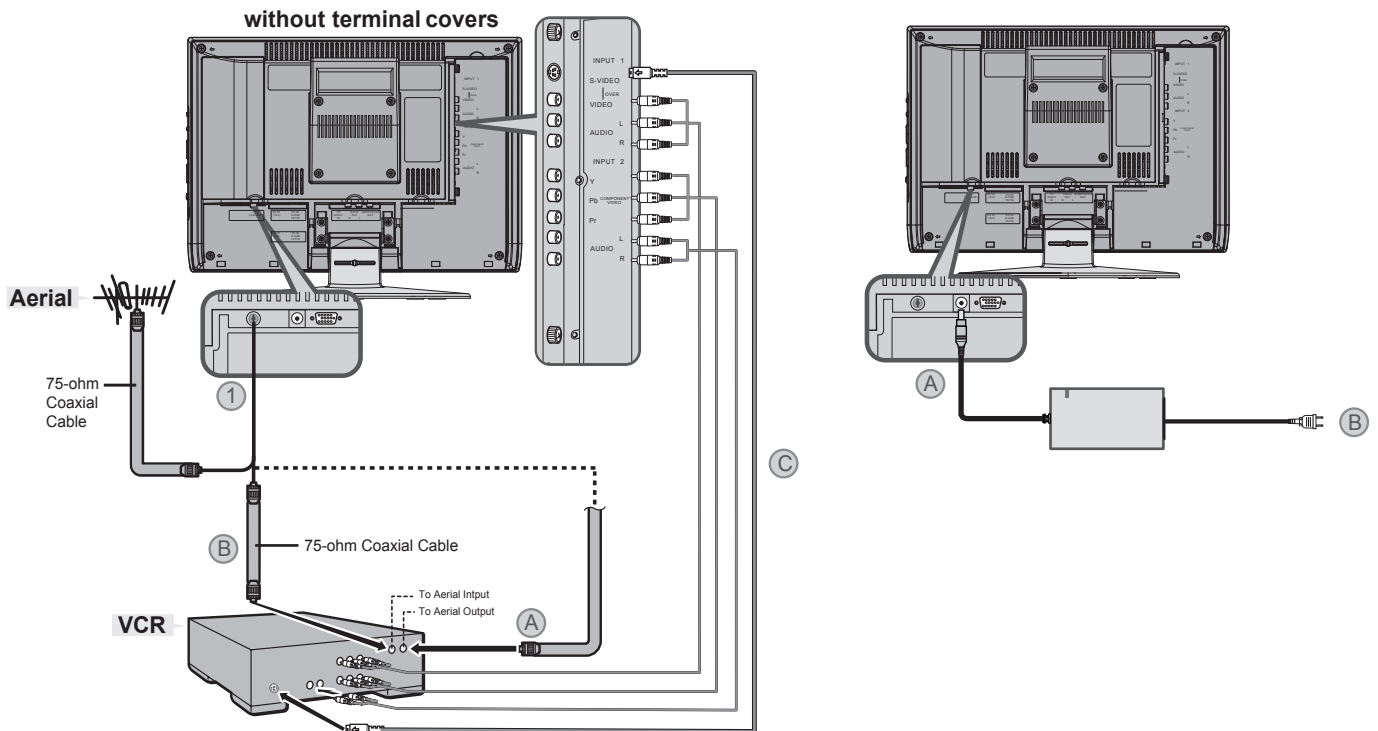
## Connecting the power cord to the AC outlet

**If you are connecting a AC adapter, follow ①→② in the diagram below.**

- Connect ① to the TV and ② to the AC outlet.

### Caution

- Operate only from the power source (AC 100 V, 60 Hz)
  - Remove the AC plug from the outlet to completely disconnect the TV from the power supply.



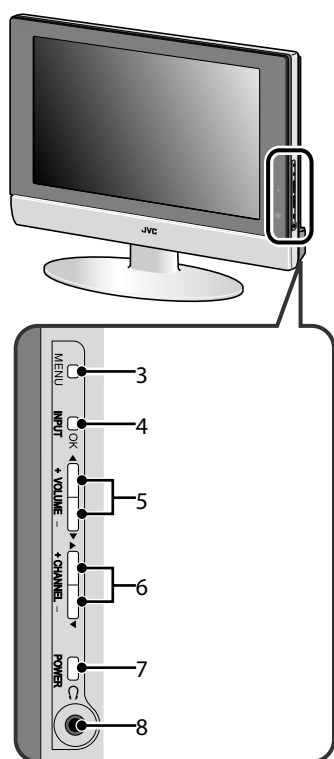
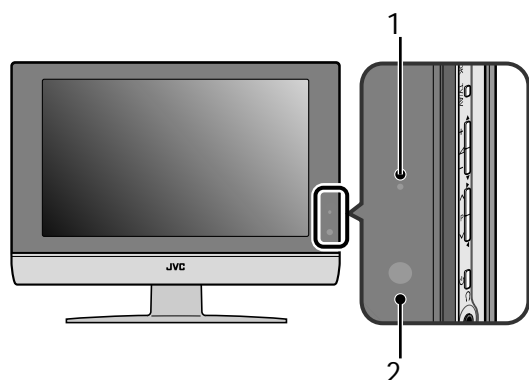
## INITIAL SETUP

When the television is first turned on, the INITIAL SETUP menu will appear. First in beginning, please select the LANGUAGE and do AUTO TUNER SETUP.

INITIAL SETUP	
▶ LANGUAGE	ENG/FRA/ESP/中文
AUTO TUNER SETUP	▶
CLOSED CAPTION	▶
CHANNEL SUMMARY	▶
V-CHIP	▶
SET LOCK CODE	▶
▼▲ : SELECT	OK : OPERATE

- As for setting Language and Auto Tuner Setup, see page 18.
- When you do not perform AUTO TUNER SETUP, the INITIAL SETUP menu will appear every time you turn the power on.

# TV buttons and functions



- 1 Power lamp
- 2 Remote control sensor
- 3 MENU button
- 4 INPUT OK button
- 5 VOLUME - / + button
- 6 CHANNEL - / + button
- 7 Standby button
- 8 Headphone jack (mini jack)

## Turn the TV on from standby mode

Press the **POWER** button or **CHANNEL - / +** buttons to turn the TV on from standby mode

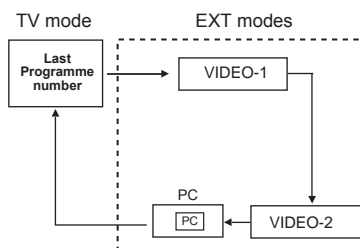
- Check that the AC plug on the power cord from the TV is connected to correctly AC outlet.

## Choose a TV channel

Press the **CHANNEL - / +** buttons to choose a programme number

## Watch images from external devices

Press the **INPUT** button to choose a **INPUT** terminal



## Adjust the volume

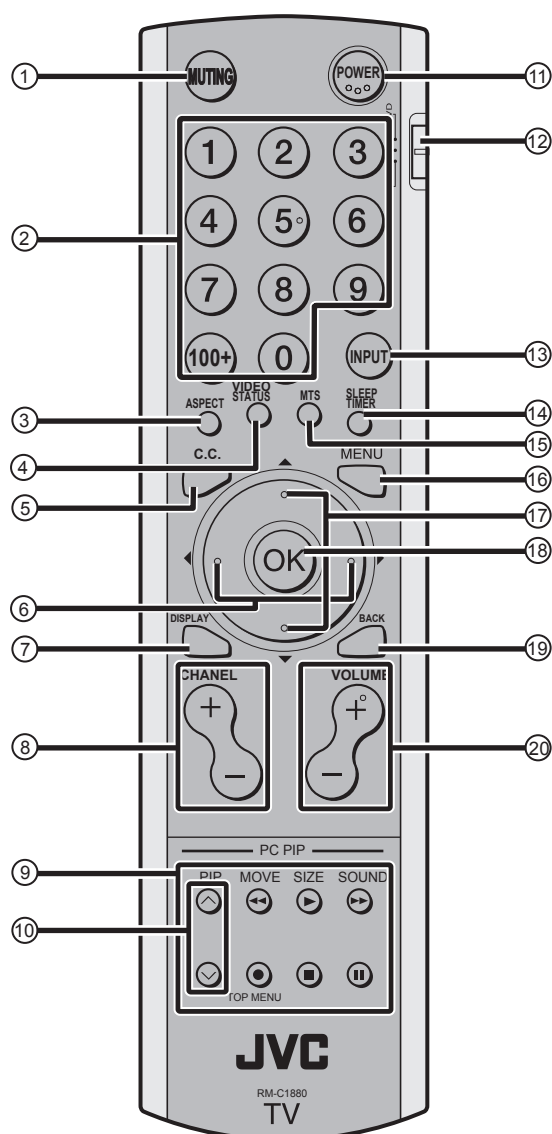
Press the **VOLUME - / +** buttons  
The volume level indicator appears.

## Using the Menu

**Use the MENU button.**

Refer to “Using the TV’s menu” (see page 14) for details of using the menu.

# Remote control buttons and functions



- 1 Muting button
- 2 Number buttons
- 3 ASPECT button
- 4 VIDEO STATUS button
- 5 C.C. button
- 6 ◀/▶ buttons
- 7 DISPLAY button
- 8 CHANNEL +/- buttons
- 9 VCR/DVD/PIP control buttons
- 10 ∇/▲ buttons
- 11 POWER button
- 12 VCR/TV/DVD switch
- 13 INPUT button
- 14 SLEEP TIMER button
- 15 MTS button
- 16 MENU button
- 17 ▼/▲ buttons
- 18 OK button
- 19 BACK button
- 20 VOLUME +/- buttons

## Turn the TV on or off from standby mode

### 1 Make sure to set the VCR/TV/DVD switch to the TV position.

- You cannot turn the TV on or off when the VCR/TV/DVD switch is set to the VCR or DVD position.

### 2 Press the POWER button to turn on or off.

When the TV is turned on, the power lamp lights.

- The power can be turned on by pressing the TV button, CHANNEL +/- buttons or number buttons
- Check that the AC plug on the power cord from the TV is connected to AC outlet.

## Choose a TV channel

### Use the number buttons:

Enter the programme number of the channel using the number buttons.

Example:

- 6 → press 0 and 6
- 12 → press 1 and 2
- 123 → press 100+ and 2 and 3

### Use the CHANNEL +/- buttons:

Press the CHANNEL +/- buttons to choose the programme number you want.

## Adjust the volume

**Press the VOLUME -/+ buttons to adjust the volume.**

The volume indicator appears and the volume changes as you press the VOLUME -/+ buttons.

### Muting the sound

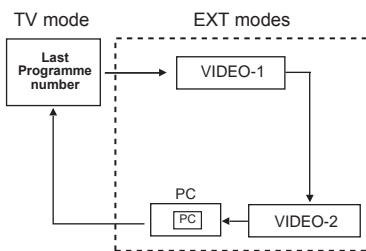
**Press the muting button to turn off the sound.**

Pressing the muting button again restores the previous volume level.

## Watch images from external equipment

**Use the INPUT button:**

**Press the INPUT button to choose an VIDEO terminal.**



### In the PC mode:

If following message appears, the power lamp blinks in amber and the TV goes in to reduced power mode.

- "NO SIGNAL"
- "CABLE NO INSERT"
- "OUT OF RANGE"

See "Troubleshooting" on page 25 for details of these messages.

## MTS (Multi-Channel Television Sound)

MTS technology allows several audio signals to be broadcast at once, giving you a choice in what you wish to hear with a TV program. In addition to mono or stereo sound, an MTS broadcast may also include a second audio program (SAP).

**Press MTS button to switch STEREO/SAP/MONO.**

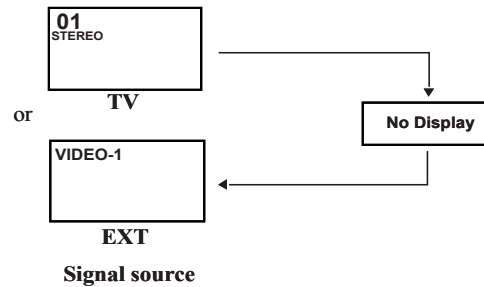
- Keep the TV in stereo mode to get the best sound quality. The sound will work in stereo mode even if a certain broadcast is in mono sound only.
- Choose the mono setting to reduce excessive noise on a certain channel or broadcast.
- Selecting SAP will allow you to hear an alternative soundtrack, if one is available.
- MTS unavailable if your television's input source is in VIDEO-1, VIDEO-2.

## Displaying the source information

You can display the source information on the screen.

**Press the DISPLAY button to display the source information.**

Pressing the DISPLAY button changes the display as follows:



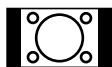
- The source information switched by DISPLAY button.
- The source type :  
TV/VIDEO-1/VIDEO-2/PC

## ASPECT function

You can change the screen size according to the picture aspect ratio. Choose the optimum one from the following ASPECT modes.

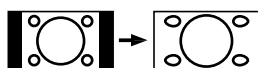
### REGULAR:

Use to view a normal picture (4:3 aspect ratio) as this is its original shape.



### PANORAMA:

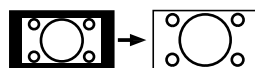
This stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the screen, without making the picture appear unnatural.



- The top and bottom of the picture are slightly cut off.

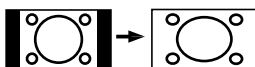
### CINEMA:

This zooms up the wide picture (16:9 aspect ratio) to the full screen.



### FULL:

This uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to the wide TV screen.



- For 16:9 aspect ratio pictures that have been squeezed into a normal picture (4:3 aspect ratio), use the FULL mode to restore the picture to its original shape.
- When it is in PC mode, you can choose REGULAR and FULL mode only.

### Choose the ASPECT mode

- 1 Press the ASPECT button to display the aspect mode

#### Adjusting the visible area of the picture

If subtitles or the top (or bottom) of the picture are cut off, you can adjust the visible area of the picture manually.

- 1 Press the ASPECT button

The ASPECT is displayed in OSD.



- 2 While it is displayed, press the ▼/▲ buttons to change the position of the picture

- You cannot adjust the visible area in REGULAR or FULL mode.
- When the PANORAMA and CINEMA mode appears arrows on top and bottom to move the screen.

## Sleep timer function

The Sleep Timer can turn the TV off for you after you fall asleep. Program it to work in intervals of 10 minutes, for a total time of up to 120 minutes.

**Press the sleep timer button.**

## VIDEO STATUS

You can choose one of five VIDEO STATUS to adjust the picture settings automatically.

**Press the VIDEO STATUS button.**

### STANDARD:

Standardizes picture adjustment.

### DYNAMIC:

Heightens contrast and sharpness.

### THEATER:

Softens contrast and sharpness.

### GAME:

Normal contrast and sharpness.

### CHOICE:

User define.

## C.C. (Closed Caption)

Use the C.C. (Closed Caption) button to select the mode of closed caption.

**Press the C.C. button to switch OFF/CAPTION/TEXT.**

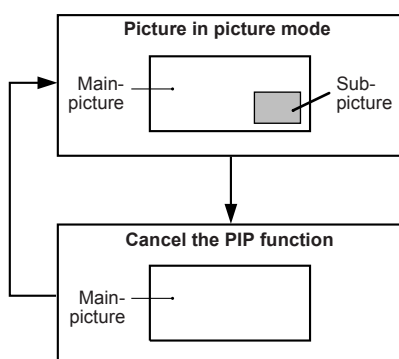
- See page 19 when you set the caption/text mode.



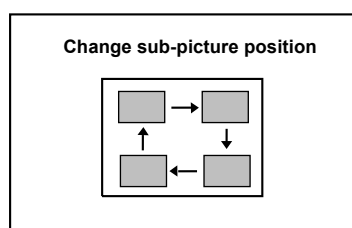
## Using the PC PIP function

A PC picture and TV or a video program from an external device can be watched at the same time.

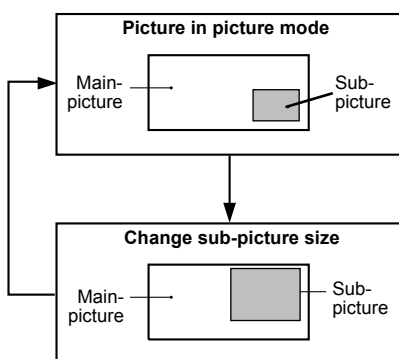
### 1 Press the PIP button.



### 2 Press the MOVE button to change the position of sub-picture



### 3 Press the SIZE button to change the sub-picture size



### 4 Press the SOUND button to choose the sound

**MAIN :** Main picture

**PIP :** Sub picture

- PIP does not apply for 525p.

## Operating a JVC brand VCR or DVD player

These buttons will operate a JVC brand VCR or DVD player. Pressing a button that looks the same as the device's original remote control button has the same effect as the original remote control.

### 1 Set the VCR/TV/DVD switch to the VCR or DVD position

#### VCR:

When you are using a VCR, set the switch to the VCR position. You can turn the VCR on or off with the Standby button.

#### DVD:

When you are using a DVD player, set the switch to the DVD position. You can turn the DVD player on or off with the Standby button.

### 2 Press the VCR/DVD Control Button to control your VCR or DVD player

- If your device is not made by JVC, these buttons will not work.
- Even if your device is made by JVC, some of these buttons may not work, depending on the device you are using.
- You can use the CHANNEL-/ + buttons to choose a TV channel the VCR will receive, or choose the chapter the DVD player plays back.
- Some models of DVD player use the CHANNEL-/ + buttons for both operating the fast forward/backward functions and for choosing the chapter.
- Set the VCR/TV/DVD switch to the TV position when you turn the TV on or off.

### To use DVD MENU button

Some DVDs allow you to select the disc contents using the menu. When you playback these DVDs, you can select the subtitle language and sound-track language, etc. by using the DVD menu.

### 1 Press DVD MENU button during play back

The DVD menu appears on the screen.

- Press DVD MENU button again to resume playback at the scene when you pressed the button.

### 2 Press ▼/▲ or ◀/▶ buttons to select the desired item

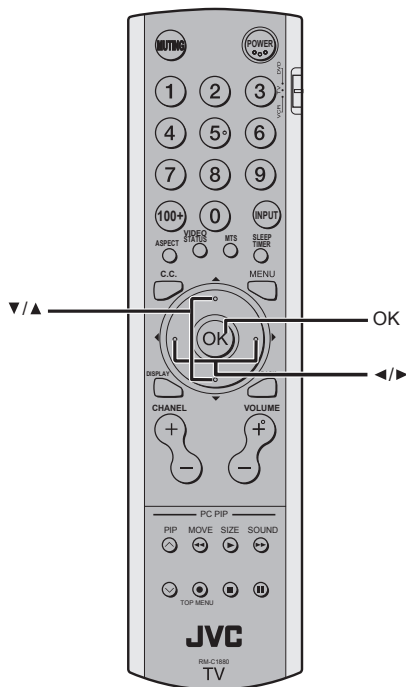
### 3 Press OK button

The menu continues to another screen.

Repeat steps 2 and 3 to set additional items if any.

# Using the TV's menu

This TV has a number of functions you can operate using menus. To use all your TV's functions, you need to understand the basic menu operating techniques fully.



## Basic operation

- 1 Press the **MENU** button to display the **MENU** (main menu)

MENU		
▶ PICTURE	▶	
SOUND	▶	
FEATURES	▶	
INITIAL SETUP	▶	
▼▲ : SELECT      OK : OPERATE		

- 2 Press the **▼/▲** buttons to choose a menu title, and press the **OK** button

The menu appears.

### To return to the previous menu:

Press the **BACK** button on the remote control or the **MENU** button on the TV.

### To exit a menu instantly:

Press the **MENU** button on the remote control or press the **MENU** button on the TV several times.

- 3 Press the **▼/▲** buttons to choose a function

- For details of the functions in the menus, see the following pages.

- 4 Press the **◀/▶** buttons to choose the setting of that function

- If you want to operate a function which appears only with its name, follow the descriptions of that function on the following pages.
- The display appearing at the bottom of a menu shows you a button on the remote control that you can use when you operate a chosen function.

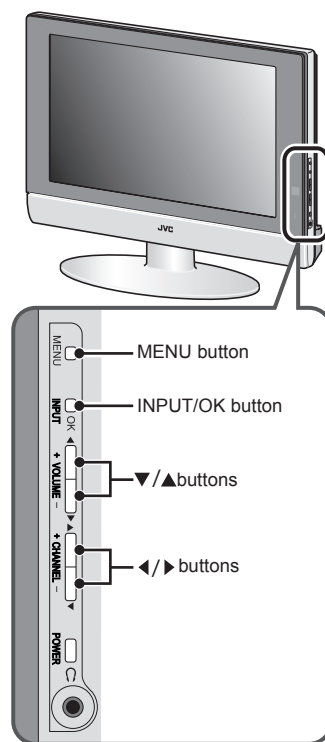
- 5 Press the **OK** button to complete the setting

The menu disappears.

- The menu will disappear if you press the **CHANNEL** +/- buttons, the **AV** button or the number buttons while the menu is displayed.

## Operation with the buttons on the TV

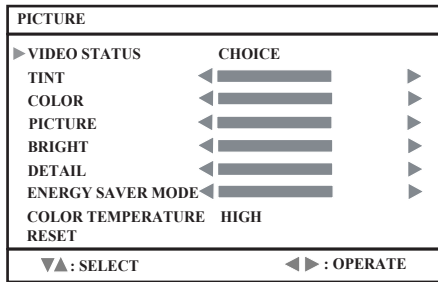
You can also operate the menus using the buttons on the front panel of the TV.



The menu will disappear after about two minutes if no operation is performed.

# PICTURE SETTING

Refer to “Using the TV’s menu” (see page 14) for details of displaying the menu.



## VIDEO STATUS

You can choose one of five VIDEO STATUS to adjust the picture settings automatically.

### STANDARD:

Standardizes picture adjustment.

### DYNAMIC:

Heightens contrast and sharpness.

### THEATER:

Softens contrast and sharpness.

### GAME:

Normal contrast and sharpness.

### CHOICE:

User define.

- You select CHOICE, you can set the setting you like.

## Picture Adjustment

You can change the picture settings of each PICTURE MODE mode as you like.

### TINT:

You can adjust the levels of red and green in your TV picture.

◀ : reddish

▶ : greenish

### COLOR:

You can make all the colors in the TV picture appear either more vivid or subtle.

◀ : lighter

▶ : deeper

### PICTURE:

You can adjust the levels of black and white on TV screen, giving you a darker or brighter picture overall.

◀ : lower

▶ : higher

### BRIGHT:

You can adjust the overall brightness of the TV picture with the Bright control.

◀ : darker

▶ : brighter

### DETAIL:

You can adjust the level of fine detail displayed in the picture.

◀ : softer

▶ : sharper

### ENERGY SAVER MODE:

You can adjust the back light.

◀ : darker

▶ : lighter

- DETAIL do not apply for 525i and 525p.

## COLOR TEMPERATURE

You can select one of three COLOR TEMP. modes (three tones of white) to adjust the white balance of the picture. Since white is the color which is used as a reference for all the other colors, changing the COLOR TEMP. mode affects the appearance of all the other colors on the screen.

### HIGH:

A bluish white. Using this mode when watching bright pictures allows you to enjoy a more vivid and bright picture.

### LOW:

A reddish white. Using this mode when watching films allows you to enjoy colors that are characteristic of films.

## RESET

You can reset the picture settings you have chosen to the default settings in case of COLOR TEMPERATURE and CHOICE.

# SOUND SETTING

Refer to “Using the TV’s menu” (see page 14) for details of displaying the menu.

SOUND		
▶ BASS	◀ [bar] ▶	▶
TREBLE	◀ [bar] ▶	▶
BALANCE	◀ [bar] ▶	▶
HYPER SURROUND	OFF	
▼▲ : SELECT      ◀▶ : OPERATE		

## Sound Adjustment

You can adjust the sound to your liking.

**BASS:**

You can adjust the low tone of the sound.

- ◀ : weaker
- ▶ : strong

**TREBLE:**

You can adjust the high tone of the sound.

- ◀ : weaker
- ▶ : strong

**BALANCE:**

You can adjust the volume balance between the left and right speaker.

- ◀ : turn the left speaker’s volume level up.
- ▶ : turn the right speaker’s volume level up.

**HYPER SURROUND:**

You can enjoy Surround sound with a “live” effect by using the HYPER SURROUND functions.

**ON:** HYPER SURROUND function is turned on.

**OFF:** HYPER SURROUND function is turned off.

- When the bar is in center of BASS, TREBLE and BALANCE, ◀▶ become yellow.

# FEATURES

Refer to “Using the TV’s menu” (see page 14) for details of displaying the menu.

FEATURES	
▶ NOISE MUTING	OFF
FRONT PANEL LOCK	OFF
AUTO SHUT OFF	OFF
▼▲ : SELECT	◀▶ : OPERATE

## NOISE MUTING

You can set the TV to automatically change to a blue screen and mute the sound if the signal is weak or absent, or when there is no input from an external device.

**ON:**  
This function is turned on.

**OFF:**  
This function is turned off.

## FRONT PANEL LOCK

This allows you to lock the keys on the front of the TV, so that a child may not accidentally change your viewing preferences.

## AUTO SHUT OFF

When the AUTO SHUT OFF mode is on, the TV will shut off when received no signal after 9 minutes.

# INITIAL SETUP

Refer to "Using the TV's menu" (see page 14) for details of displaying the menu.

INITIAL SETUP	
▶ LANGUAGE	ENG/Fran/ESP/中文
AUTO TUNER SETUP	▶
CLOSED CAPTION	▶
CHANNEL SUMMARY	▶
V-CHIP	▶
~ SET LOCK CODE	▶
▼▲ : SELECT	OK : OPERATE

## LANGUAGE

Select **LANGUAGE** and press the ◀/▶ buttons to choose the language.

ENG/Fran/ESP/中文

The language in which you want the onscreen menus to appear.

## AUTO TUNER SETUP

In auto tuner setup, the TV automatically scans through all available channels.

AUTO TUNER SETUP	
▶ TUNER MODE	CABLE
START	
▼▲ : SELECT	◀▶ : OPERATE

1 Select **TUNER MODE** and press the ◀/▶ buttons to switch AIR/CABLE

2 Select **START** and press the ◀/▶ button to start channel programming.

CHANNEL SUMMARY			
CHNO. SCAN	🔒	CHNO. SCAN	🔒
01		11	✓
02		12	
03		13	
04		14	
05		15	
06		16	
07	✓	17	
08		18	
09	✓	19	
10		20	
▼▲ ◀▶ : SELECT		OK : OPERATE	

After scanning, the **CHANNEL SUMMARY** menu appears, and the channel with program signal will be marked by mark ✓.

## CHANNEL SUMMARY

1 Press the ▼/▲ buttons to choose the **CHANNEL SUMMARY** and press ◀/▶ to OPERATE.

CHANNEL SUMMARY			
CHNO. SCAN	🔒	CHNO. SCAN	🔒
01		11	✓
02	✓	12	
03		13	
04		14	
05		15	
06		16	
07	✓	17	
08		18	
09	✓	19	
10		20	
▼▲ ◀▶ : SELECT		OK : OPERATE	

2 Press the ▼/▲ and ◀/▶ buttons to choose the **CHANNEL** that you want. Then press OK button to enable or disable the channel by mark ✓.

CHANNEL SUMMARY			
CHNO. SCAN	🔒	CHNO. SCAN	🔒
01		11	✓
02	✓	12	
03		13	
04		14	
05		15	
06		16	
07	✓	17	
08		18	
09	✓	19	
10		20	
▼▲ ◀▶ : SELECT		OK : OPERATE	

You can delete channels from the scan by removing the "✓". If any channels were missed during auto setup and you wish to add them, you may by placing an "✓" next to the channel number.

3 Press the ▼/▲ and ◀/▶ buttons to choose the **CHANNEL** that you want. Then press 0 button to lock or unlock channel by mark.

### Channel Guard Message

When a viewer attempts to watch a blocked channel, this message appears:

THIS CHANNEL IS LOCKED BY  
CHANNEL GUARD.  
PLEASE ENTER LOCK CODE BY  
10 KEY PAD TO UNLOCK IT.  
NO. ----

To watch a channel that you have locked, enter the Lock Code using the 10 key pad. If the wrong code is entered, the message "INVALID LOCK CODE!" will flash on screen.

The channel cannot be accessed until the correct lock code is entered.

### NOTE :

- Once a channel has been locked, it will remain unlocked until the television is turned off.
- See also "SET LOCK CODE", page 20.

## CLOSED CAPTION

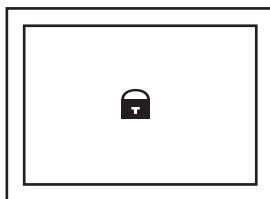
Select **CAPTION** or **TEXT** and press the **◀/▶** buttons to select a caption (CC1 to CC4) or text channel (T1 to T4).

CLOSED CAPTION	
▶ CAPTION	CC1
TEXT	T1
▼▲ : SELECT      ◀▶ : OPERATE	

Many broadcasts now include an onscreen display of dialog called closed captions. Some broadcasts may also include displays of additional information in text form. Your TV can access and display this information using the closed caption feature.

## V-CHIP

Your TV is equipped with V-Chip technology which enables you to block channels or content that you feel to be inappropriate for children, based on US and Canada rating guidelines.



You can customize the V-Chip settings of your television to match your personal tastes.

### US V-Chip Ratings :

#### U.S. PARENTAL RATING SYSTEMS

Programs with the following rating are appropriate for children.

##### • TV Y is Appropriate for All Children

Programs are created for very young viewers and should be suitable for all ages, including children ages 2 - 6.

##### • TV Y7 is Appropriate for Older Children

Most parents would find such programs suitable for children 7 and above. These programs may contain some mild fantasy violence or comedic violence, which children should be able to discern from reality.

Programs with the following rating are appropriate for entire audience.

##### • TV G stands for General Audience

Most parents would find these programs suitable for all age groups. They contain little or no violence, no strong language, and little or no sexual dialog or situations.

##### • TV PG Parental Guidance Suggested

May contain some, but not much, strong language, limited violence, and some suggestive sexual dialog or situations. It is recommended that parents watch these programs first, or with their children.

##### • TV 14 Parents Strongly Cautioned

Programs contain some material that may be unsuitable for children under the age of 14 including possible intense violence, sexual situations, strong coarse language, or intensely suggestive dialog. Parents are cautioned against unattended viewing by children under 14.

##### • TV MA Mature Audiences Only

These programs are specifically for adults and may be unsuitable for anyone under 17 years of age. TV MA programs may have extensive V, S, L, or D.

### Viewing Guidelines

In addition to the rating categories explained above, information on specific kinds of content are also supplied with the V-Chip rating. These types of content may also be blocked. The content types are:

- **V/FV** is for VIOLENCE/FANTASY VIOLENCE
- **S** stands for SEXUAL CONTENT
- **L** stands for strong LANGUAGE
- **D** stands for suggestive DIALOG

### 1 Press 0 to enter the V-Chip setting menu.

V-CHIP	
▶ V-CHIP	ON
SET US TV RATINGS SET MOVIE RATINGS	
▼▲ : SELECT      ◀▶ : OPERATE	

### 2 Select V-CHIP and press the ◀/▶ button to turn on or turn off V-CHIP function.

### 3 Select SET US TV RATINGS and press the ◀/▶ buttons to turn on or turn off the lock.

SET US TV RATINGS						
	TV-MA	TV-14	TV-PG	TV-G	TV-Y7	TV-Y
	■	-	-	-	-	-
V/FV	-	-	-	-	-	-
S	-	-	-	-	-	-
L	-	-	-	-	-	-
D	-	-	-	-	-	-
FINISH						

For example. To block viewing of all TV 14 shows, move the cursor to the top row of that column and add a lock icon. Once you've put a lock on the top everything in that column is automatically locked.

SET US TV RATINGS						
	TV-MA	TV-14	TV-PG	TV-G	TV-Y7	TV-Y
	-	■	-	-	-	-
V/FV	-	■	-	-	-	-
S	-	■	-	-	-	-
L	-	■	-	-	-	-
D	-	■	-	-	-	-
FINISH						

**Note:**

If you want to change the setup, move the cursor to the top column and change the lock icon to " - " by pressing ◀ or ▶ again. You may then select individual categories to block.

**Movies Ratings :**

- **NR - Not Rated**

This is a film which has no rating. In many cases these films were imported from countries which do not use the MPAA ratings system. Other NR films may be from amateur producers who didn't intend to have their film widely released.

**NR (Not Rated) Programming may contain all types of programming including children's programming, foreign programs, or adult material.**

- **G - General Audience**

In the opinion of the review board, these films contain nothing in the way of sexual content, violence, or language that would be unsuitable for audiences of any age.

- **PG - Parental Guidance**

Parental Guidance means the movie may contain some contents such as mild violence, some brief nudity, and strong language. The contents are not deemed intense.

- **PG -13 - Parents Strongly Cautioned**

Parents with children under 13 are cautioned that the content of movies with this rating may include more explicit sexual, language, and violence content than movies rated PG.

- **R - Restricted**

These films contain material that is explicit in nature and is not recommended for unsupervised children under the age of 17.

- **NC-17 - No One Under 17**

These movies contain content which most parents would feel is too adult for their children to view. Content can consist of strong language, nudity, violence, and suggestive or explicit subject matter.

- **X - No One Under 18**

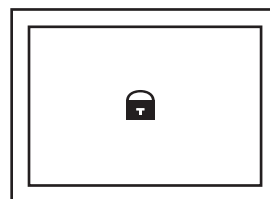
Inappropriate material for anyone under 18.

- 1 Select **SET MOVIE RATINGS** and press the ◀/▶ buttons to turn on or turn off the lock.

SET MOVIE RATINGS						
X	NC-17	R	PG-13	PG	G	NR
-	-	-	-	-	-	-
FINISH						

## SET LOCK CODE

Channel guard and V-Chip settings are protected by a four-digit lock code. Your TV comes preset with a lock code of "0000". You may change the code to any four-digit number you wish.



- 1 Select **SET LOCK CODE** and press 0 to enter the the SET LOCK CODE setting menu.

LOCK CODE	0 0 0 0
FINISH	

- 2 Press the ▼/▲ buttons to move to the next digit and press the ◀/▶ to select the number. Then move to **FINISH** and press OK to save settings and exit.

When a viewer attempts to watch a blocked channel, this message appears:

THIS PROGRAMMING EXCEEDS YOUR RATING LIMITS. PLEASE ENTER LOCK CODE BY 10 KEY PAD TO UNLOCK IT. NO. ----
--

The channel will remain blocked until the correct lock code is entered.



# PC MENU (In PC mode only)

This TV also has a number of functions on PC mode, you can operate using pc menus.

PC MENU	
▶ PC PICTURE POSITION ▶	
PC PICTURE ▶	
SOUND ▶	
▼▲ : SELECT	OK : OPERATE
1024 X 768	
H : 48 kHz	V : 60 Hz

## PC PICTURE POSITION

You can adjust the picture settings as following functions.  
At first, we recommend you complete the AUTO SET UP before you start using your PC.

PC PICTURE POSITION	
▶ AUTO SET UP ▶	
H POSITION ◀ [bar] ▶	
V POSITION ◀ [bar] ▶	
CLOCK ◀ [bar] ▶	
PHASE ◀ [bar] ▶	
RESET	
▼▲ : SELECT	◀▶ : OPERATE

### AUTO SET UP:

You can adjust picture settings automatically for optimized picture position, clock and phase.

### H POSITION:

You can adjust picture horizontal position.

- ◀ : left
- ▶ : right

### V POSITION:

You can adjust picture vertical position.

- ◀ : down
- ▶ : up

### CLOCK:

You can adjust CLOCK to fine tune picture.

### PHASE:

You can adjust PHASE to fine tune picture.

### RESET:

You can select RESET for default setting.

## PC PICTURE

You can change the picture settings of each PICTURE MODE mode as you like.

PC PICTURE	
▶ CONTRAST ▶	
BRIGHT ▶	
COLOR TEMPERATURE HIGH	
R ▶	
G ▶	
B ▶	
RESET	
▼▲ : SELECT	◀▶ : OPERATE

### CONTRAST:

You can adjust the picture contrast.

- ◀ : lower
- ▶ : higher

### BRIGHT:

You can adjust the brightness.

- ◀ : darker
- ▶ : lighter

### COLOR TEMPERATURE:

You can adjust the picture color mode.

#### HIGH

A bluish white. Using this mode when watching bright pictures allows you to enjoy a more vivid and bright picture.

#### LOW:

A reddish white. Using this mode when watching films allows you to enjoy colors that are characteristic of films.

#### MANUAL:

User defined.

### R:

You can adjust the Red color component.

- ◀ : To decrease the levels of red
- ▶ : To increase the levels of red

### G:

You can adjust the Green color component

- ◀ : To decrease the levels of green
- ▶ : To increase the levels of green

### B:

You can adjust the Blue color component.

- ◀ : To decrease the levels of blue
- ▶ : To increase the levels of blue

### RESET:

You can select RESET for default setting.

## SOUND

You can adjust the sound to your liking.

SOUND	
▶ BASS ▶	
TREBLE ▶	
BALANCE ▶	
HYPER SURROUND	OFF
▼▲ : SELECT	◀▶ : OPERATE

### BASS:

You can adjust the low tone of the sound.

- ◀ : weaker
- ▶ : strong

### TREBLE:

You can adjust the high tone of the sound.

- ◀ : weaker
- ▶ : strong

### BALANCE:

You can adjust the volume balance between the left and right speaker.

- ◀ : turn the left speaker's volume level up.
- ▶ : turn the right speaker's volume level up.

### HYPER SURROUND:

You can enjoy Surround sound with a "live" effect by using the HYPER SURROUND functions.

**ON: HYPER SURROUND** function is turned on.

**OFF: HYPER SURROUND** function is turned off.

## PC support mode list

## LT-17X475

Mode NO.	Mode Name Resolution	H Freq. (kHz) V Freq. (Hz)
1	VGA 60 Hz 640x480	31.469 59.941
2	SVGA 56 Hz 800x600	35.16 56.25
3	SVGA 60 Hz 800x600	37.879 60.317
4	XGA 60 Hz 1024x768	48.363 60.004
5	WXGA 1280x768	47.73 60

## LT-23X475

Mode NO.	Mode Name Resolution	H Freq. (kHz) V Freq. (Hz)
1	VGA 70 Hz 640x350	31.469 70.087
2	VGA 60 Hz 640x480	31.469 59.941
3	SVGA 56 Hz 800x600	35.16 56.25
4	SVGA 60 Hz 800x600	37.879 60.317
5	XGA 60 Hz 1024x768	48.363 60.004
6	XGA 70 Hz 1024x768	56.476 70.069
7	MAC VGA 640x480	35 66.667
8	US TEXT 720x400	31.469 70.087
9	WXGA 1280x768	47.73 60

The resolution and the frequencies which are displayed on the screen may not exactly same as this list.

# Additional preparation

## Connecting external equipment

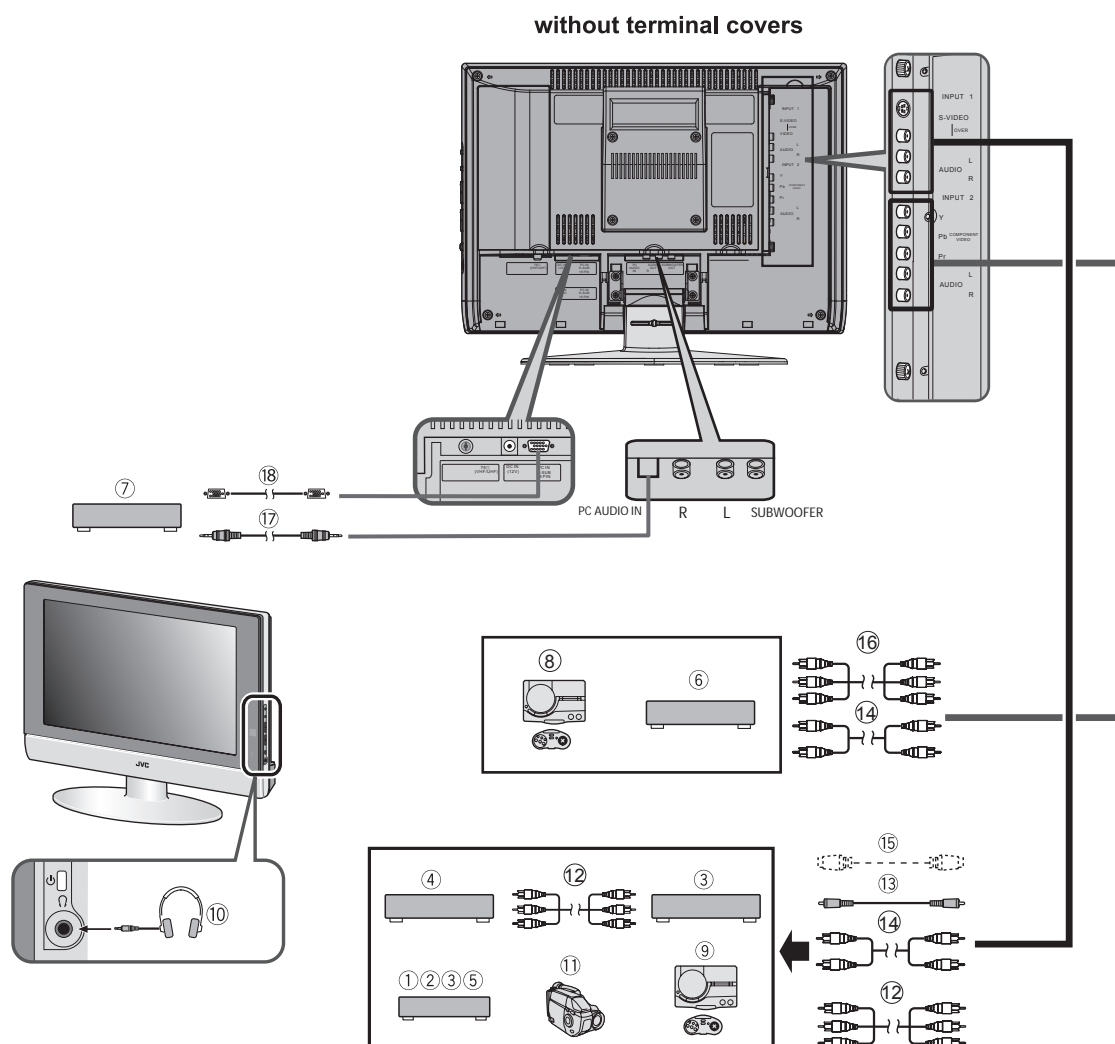
Connect the equipment to the TV, making the correct rear panel and front panel connections.

### Before connecting anything:

- Read the manuals that came with the equipment.  
Depending on the equipment, the connection method may be different from the diagram. Also, the equipment settings may need to change depending on the connection method.
- Turn off all the equipment including the TV.
- The “Specifications” on page 29 give the details of the EXT terminals. If you are connecting equipment not listed in the following connection diagram, see the table to choose the best EXT terminal.
- Connecting cables are not supplied.

- 1 VCR (composite signal)
- 2 VCR (composite signal/S-VIDEO signal)
- 3 T-V LINK compatible VCR (composite signal/S-VIDEO signal)
- 4 Decoder
- 5 DVD player (composite signal/S-VIDEO signal)
- 6 DVD player (component signal)
- 7 PC
- 8 TV game (component signal)
- 9 TV game (composite signal/S-VIDEO signal)
- 10 Headphones
- 11 Camcorder (composite signal/S-VIDEO signal)
- 12 Video+Audio cable
- 13 Video cable
- 14 Audio cable
- 15 S-VIDEO cable
- 16 Y/Pb/Pr cable (apply for 525i and 525p only)
- 17 PC Audio in
- 18 D-SUB in

ENGLISH



## Connecting headphones

Connect the headphones with a stereo mini-jack (3.5 mm diameter) to the headphone socket at the TV.

## Connecting the PC

Connect the PC with the D-SUB cable to the D-SUB in at the TV, and connect the sound device of PC with a stereo mini-jack to PC AUDIO IN.

You can adjust the picture by AUTO SET UP function when the PC signal is output correctly, the AUTO SET UP function can optimize the picture position, clock and phase. You can have a fine vision after AUTO SET UP function executed.

## Connecting Speakers/Amplifier

See the Audio equipment connection diagram, then connect the audio equipment you desire to the TV.

You can use external front speakers to listen to the TV sound instead of the TV speakers.

### Before connecting anything:

- Read the manuals provided with the amplifier and speakers.
- Turn the TV and amplifier off.
- To prevent magnetism from the speakers adversely affecting the TV screen, use magnetically-shielded speakers for the front speakers.
- Note that connecting cables are not supplied.

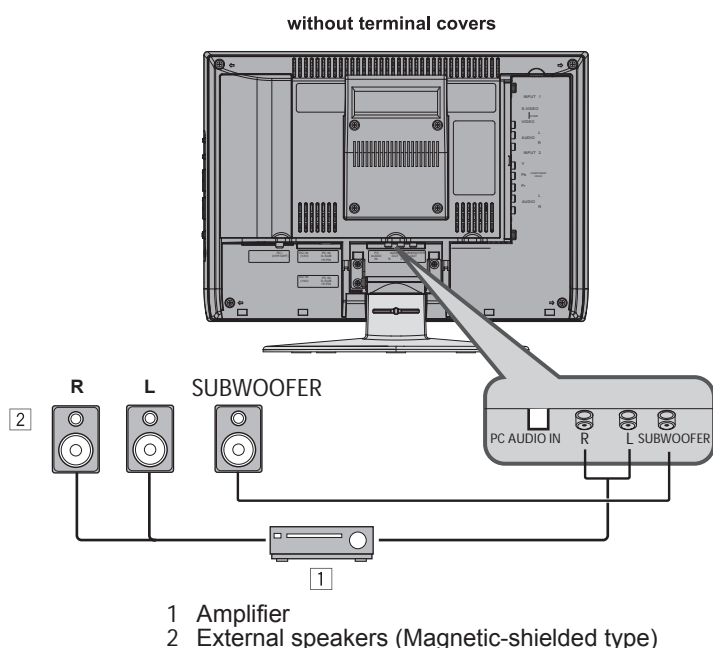
- Do not connect Subwoofer and Amplifier simultaneously. They cannot use simultaneously.
- According to your using cable cord type, it may be difficult to insert your using cable cord to the Audio output terminal or PC audio terminal. (LT-17X475)

### Amplifier note:

- The Audio output terminal is fix.
- The output from the AUDIO OUT terminal is not interrupted by headphone connection to the TV. You cannot cut the sound from the front speaker even if you connect a headphone to the TV
- When the TV volume level is 0, you can adjust the volume of the external speaker with the amplifier.

### Subwoofer note:

- Connect the subwoofer which carried an amplifier.
- The subwoofer is interlocked with the TV volume.



# Troubleshooting

If a problem arises while you are using the TV, please read this troubleshooting guide carefully before you ask to have the TV repaired. You may be able to fix it easily by yourself. For example, if the mains plug is disconnected from the mains outlet, or the TV aerial has problems, you may think there is a problem with the TV itself.

## Important:

- This troubleshooting guide only covers problems whose causes are not easy to decide. If you have a question when you are operating a function, read the page(s) for that function carefully, not this troubleshooting guide.
- If you follow the advice in this troubleshooting guide without any success, unplug the mains plug and ask for your TV to be repaired. Do not attempt to repair the TV by yourself or to remove the rear cover of the TV.

## If you cannot turn on the TV

- Are the AC plug on the power cord from the TV is connected to AC outlet?
- Make sure to set the VCR/TV/DVD switch to the TV position. You cannot turn the TV on when the VCR/TV/DVD switch is set to the VCR or DVD position.

## If you cannot turn off the TV

- Make sure to set the VCR/TV/DVD switch to the TV position. You cannot turn the TV off when the VCR/TV/DVD switch is set to the VCR or DVD position.

## No picture

- Have you chosen a TV channel with very poor reception? If so, the NOISE MUTING function will be activated: the entire screen becomes blue, and the sound is muted. If you still want to view the TV channel, follow the description "NOISE MUTING" on page 17 to change the NOISE MUTING function setting to OFF.

## Poor picture

- If noise (snow) totally blocks out the picture, there may be a problem with the aerial or aerial cable. Check the following to try to solve the problem:
  - Have the TV and aerial been connected properly?
  - Has the aerial cable been damaged?
  - Is the aerial pointing in the right direction?
  - Is the aerial itself faulty?
- If the TV or aerial suffers interference from other equipment, stripes or noise may appear in the picture. Move any equipment such as an amplifier, personal computer, or a hair drier, that can cause interference away from your TV. Or try moving the TV. If the aerial suffers interference from a radio tower or high-voltage wire, please contact your local dealer.
- If the TV suffers interference from signals reflecting from mountains or buildings, double-pictures (ghosting) will occur. Try to change the aerial's direction or replace it with one with better directionality.
- Have the COLOR and BRIGHT settings been adjusted properly? Follow the description "Picture Adjustment" on page 15 to try to adjust them properly.
- Videotaping teletext is not recommended because it may not record correctly.
- When viewing images from commercially available video software products, or videos from videotapes which have been recorded improperly, the top of the image may be distorted. This is due to the condition of the video signal. There is nothing wrong with the TV.

## Poor sound

- Have you adjusted BASS or TREBLE properly? If not, follow the description "Sound Adjustment" on page 16.

## If the TV does not respond to the remote control

- Have the batteries of the remote control worn out? Follow the description "Putting the batteries into the Remote control" on page 7 and replace them with new batteries.
- Have you attempted to use the remote control from the sides or rear of the TV or from more than seven metres away from the TV? Use the remote control in the front of your TV or from less than seven metres away.
- If the TV suddenly stops responding, disconnect the power cord of the TV from the AC outlet. Connect them to the AC outlet again to turn on the TV. If the TV returns to a normal state, it is not a failure.

### Other concerns

- When the SLEEP TIMER function operates, the TV is automatically turned off. If the TV suddenly turns off, try to press the standby button to turn on the TV once again. If the TV goes back to normal, there is no problem.
- It takes a short period of time from the time an operation such as changing channels is performed until an image is displayed. This is not a malfunction. This is the time required for the image to stabilize before it can be displayed.
- The TV may make a crackling sound due to a sudden change in temperature. The picture or sound may be normal. If you hear crackling sounds frequently while you are viewing the TV, there may be other causes. As a precaution, ask your service technician to inspect it.
- The top of the TV and the screen may become hot during use but this has no affect on the performance of the TV. Ensure that the ventilation holes are not blocked.
- When the picture is unstable, the screen may become white for a moment. This occurs when the signal which drives the liquid crystal is missing. This is not a malfunction.
- When a still image has been displayed for a long period, a faint residual image may remain on the screen for a short time after the power has been turned off or when another image is displayed. This is not a malfunction and the image will eventually disappear.
- When the correct picture has not been displayed on screen, the following error messages will display on screen.  
NO SIGNAL - TV recived no signal from PC, you may check your PC is working correctly or not.  
CABLE NO INSERT - The cable is not connected correctly. Ensure that the cable is connected correctly.  
OUT OF RANGE - The picture resolution is out of limit. Ensure that the PC picture resolution is set correctly.



## LIMITED WARRANTY

COLOR TV 1-1

For Canadian model televisions, see separate sheets for Canadian Warranty information.

JVC COMPANY OF AMERICA (JVC) warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL RETAIL PURCHASER to be FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP from the date of original purchase for the period shown below. ("The Warranty Period")

Parts	<b>1 YEAR</b>	Labor	<b>1 YEAR</b>
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**THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY (50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN THE COMMONWEALTH OF PUERTO RICO.**

### WHAT WE WILL DO:

If this product is found to be defective within the warranty period, JVC will repair or replace defective parts with new or rebuilt equivalents at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers. Parts used for replacement are warranted only for the remainder of the Warranty Period. All products may be brought to a JVC authorized service center on a carry-in basis. Color televisions with a screen size of 27" or greater qualify for in-home service. In such cases, a technician will come to your home and either repair the TV there or remove and return it if it cannot be repaired in your home.

### WHAT YOU MUST DO FOR WARRANTY SERVICE:

**Please do not return your product to the retailer**

**Instead, return your product to the JVC authorized service center nearest you. If shipping the product to the service center, please be sure to package it carefully, preferably in the original packaging, and include a brief description of the problem(s). Please call 1-800-252-5722 to locate the nearest JVC authorized service center. Service locations can also be obtained from our website <http://www.jvc.com>. If your product qualifies for in-home service, the service representative will require clear access to the product.**

If you have any questions concerning your JVC Product, please contact our Customer Relations Department at 800-252-5722

### WHAT IS NOT COVERED:

This limited warranty provided by JVC does not cover:

1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
2. Initial installation, installation and removal from cabinets or mounting systems.
3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
5. Signal reception problems and failures due to line power surge;
6. Video Pick-up Tubes/CCD Image Sensors are covered for 90 days from the date of purchase;
7. Accessories;
8. Batteries (except that Rechargeable Batteries are covered for 90 days from the date of purchase);
9. Products used for commercial purposes, including, but not limited to rental.

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE, OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

Some states do not allow the exclusion of incidental or consequential damages or limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

JVC COMPANY OF AMERICA  
DIVISION OF JVC AMERICAS CORP.

1700 Valley Road  
Wayne, NJ 07470

<http://www.jvc.com>

REFURBISHED PRODUCTS CARRY A SEPARATE WARRANTY, THIS WARRANTY DOES NOT APPLY. FOR DETAIL OF REFURBISHED PRODUCT WARRANTY, PLEASE REFER TO THE REFURBISHED PRODUCT WARRANTY INFORMATION PACKAGED WITH EACH REFURBISHED PRODUCT.

### For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. :

Serial No. :

Purchase date :

Name of dealer :

## ***TO OUR VALUED CUSTOMER*** ———

THANK YOU FOR PURCHASING THIS JVC PRODUCT.

WE WANT TO HELP YOU ACHIEVE A PERFECT EXPERIENCE.

**NEED HELP ON HOW TO HOOK UP?  
NEED ASSISTANCE ON HOW TO OPERATE?  
NEED TO LOCATE A JVC SERVICE CENTER?  
LIKE TO PURCHASE ACCESSORIES?**

**JVC<sup>®</sup> IS HERE TO HELP!**  
**TOLL FREE: 1(800)252-5722**  
**<http://www.jvc.com>**

Remember to retain your Bill of Sale for Warranty Service.

————— **Do not attempt to service the product yourself** —————

**Caution**

To prevent electrical shock, do not open the cabinet.

There are no user serviceable parts inside.

Please refer to qualified service personnel for repairs.

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# Specifications

Item	Model	LT-17X475	LT-23X475
Broadcasting systems		US M TV system	
Color systems		NTSC	
Channels and frequencies		<ul style="list-style-type: none"> <li>• Channels(on air) VHF 2 to 13, UHF 14 to 69</li> <li>• Channels(CABLE) 1 to 125</li> </ul>	
Sound-multiplex systems		US system	
Power requirements		TV : 12V DC, Power source : AC 120V 60 Hz	TV : 24V DC, Power source : AC 120V 60 Hz
Power consumption		60 W, Standby : 3 W	120W, Standby : 3 W
Screen size		Viewable area 43.5cm(measured diagonally)	Viewable area 58.2cm(measured diagonally)
Display resolution		1280 X 768 (W-XGA)	
Audio output		Rated Power output: 3 W + 3 W	Rated Power output: 5 W + 5 W
Speakers		5.4 cm round x 2	
INPUT 1 terminal		• Video input, S-VIDEO (Y/C) input and Audio L/R inputs are available.	
INPUT 2 terminal		• Component Video input and Audio L/R inputs are available.	
AUDIO OUT terminal		RCA connectors x 3 • Audio L/R outputs and a subwoofer output are available.	
PC INPUT terminal		Analog RGB : D-SUB (15 pins) x 1, PC AUDIO IN x 1 • PC signal and audio inputs are available.	
Headphone jack		Stereo mini-jack (3.5 mm in diameter)	
Dimensions (W x H x D)		465 mm x 325 mm x 78 mm (TV only) 465 mm x 363 mm x 190 mm	619 mm x 426 mm x 86 mm (TV only) 619 mm x 498 mm x 227 mm
Weight		6.1 kg (TV only) 7.3 kg	7.8 kg (TV only) 9.8 kg
Accessories		Remote control unit X 1 (RM-C1880) AA/R6 dry cell battery X 2 AC adapter x 1 (HP-OL060D031) Power cord x 1	Remote control unit X 1 (RM-C1880) AA/R6 dry cell battery X 2 AC adapter x 1 (HP-OW120A031) Power cord x 1

## Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's ZOOM functions should not be shown for any commercial or demonstration purpose in public places (cafes, hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

**JVC COMPANY OF AMERICA**  
 Division of JVC Americas Corp.  
 1700 Valley Road  
 Wayne, New Jersey, 07470



**JVC CANADA, INC.**  
 21 Finchdene Square  
 Scarborough, Ontario  
 Canada, M1X 1A7