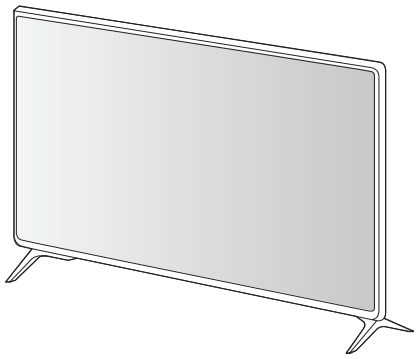
CONFIDENTIAL

LED TV
SERVICE MANUAL

CHASSIS : UA82S

MODEL : 65SK8000PUB

CAUTION
BEFORE SERVICING THE CHASSIS, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



P/NO : MFL70500911 (1802-REV00)

CONTENTS

SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by ⚠ in the Exploded View.
It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.
Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and it's components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1 W), keep the resistor 10 mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

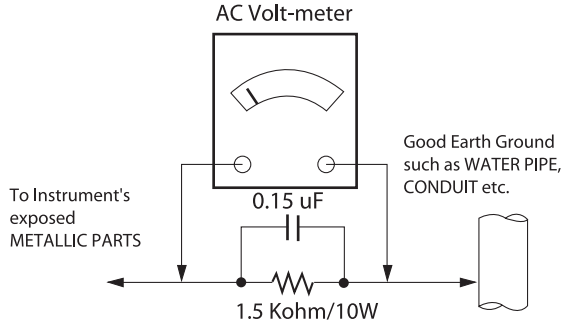
always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)
With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.
If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1 MΩ and 5.2 MΩ.
When the exposed metal has no return path to the chassis the reading must be infinite.
An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)
Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.
Connect 1.5 K / 10 watt resistor in parallel with a 0.15 uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.
Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.
Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which is corresponds to 0.5 mA.
In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



When 25A is impressed between Earth and 2nd Ground for 1 second, Resistance must be less than 0.1 Ω
*Base on Adjustment standard

SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the *SAFETY PRECAUTIONS* on page 3 of this publication.
NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
   a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
   b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".
3. Do not spray chemicals on or near this receiver or any of its assemblies.
4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10 % (by volume) Acetone and 90 % (by volume) isopropyl alcohol (90 % - 99 % strength)
   CAUTION: This is a flammable mixture.
   Unless specified otherwise in this service manual, lubrication of contacts in not required.
5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.
   Always remove the test receiver ground lead last.
8. Use with this receiver only the test fixtures specified in this service manual.
   CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500 °F to 600 °F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
   a. Allow the soldering iron tip to reach normal temperature. (500 °F to 600 °F)
   b. Heat the component lead until the solder melts.
   c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.
6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach a normal temperature (500 °F to 600 °F)
   b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.
   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement
Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal
1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement
1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor Removal/Replacement
1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device
Removal/Replacement
1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement
1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor
Removal/Replacement
1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair
Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections
To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections
Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
   Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1. Application range

This specification is applied to the LED TV used UA82S chassis.

2. Test condition

Each part is tested as below without special appointment.

(1) Temperature: 25 °C ± 5 °C, CST: 40 °C ± 2 °C
(2) Relative Humidity: 65 % ± 10 %
(3) Power Voltage
: Standard input voltage (AC 100-240 V~, 50/60 Hz)
* Standard Voltage of each products is marked by models.
(4) Specification and performance of each parts are followed each drawing and specification by part number in accordance with BOM.
(5) The receiver must be operated for about 5 minutes prior to the adjustment.

3. Test method

(1) Performance: LGE TV test method followed
(2) Demanded other specification
- Safety : CE, IEC specification
- EMC : CE, IEC

4. General Specification

No	Item	Specification	Remark
1	Market	North America	
2	Broadcasting system	ATSC / NTSC-M, 64 & 256 QAM	
3	Available Channel	VHF : 02~13	
		UHF : 14~69	
		DTV : 02-69	
		CATV : 01~135	
		CADTV : 01~135	
4	Receiving system	Digital : ATSC, 64 & 256 QAM Analog : NTSC-M	
5	Video Input	NTSC-M	
7	HDMI Input	PC / DTV format	Side, Support 6Gbps
8	Audio Input	AV Audio / DVI Audio	L/R Input ; Rear(Gender) Av and DVI use same jack ;
9	SPDIF out(1EA)	Optical Audio out	Rear (1EA),
10	USB Input	EMF, DivX HD, For SVC (download)	JPEG, MP3, DivX HD Side(2EA), Rear(1EA) for SK99, SK96, SK95, SK90, SK85 Side(1EA), Rear(2EA) for SK89, SK80

5. External Input Support Format

5.1. HDMI Input (PC/DTV)

No.	Resolution	H-freq(kHz)	V-freq.(kHz)	Pixel clock(MHz)	Proposed	
	HDMI-PC					
1	640*350	31.46	70.09	25.17	EGA	
2	720*400	31.46	70.08	28.32	DOS	
3	640*480	31.46	59.94	25.17	VESA(VGA)	
4	800*600	37.87	60.31	40	VESA(SVGA)	
5	1024*768	48.36	60.00	65	VESA(XGA)	
6	1360*768	47.71	60.01	84.75	VESA(WXGA)	
7	1152*864	54.34	60.05	80	VESA	
8	1280*1024	63.98	60.02	109.00	SXGA	Support to HDMI-PC
9	1920*1080	67.5	60	158.40	WUXGA (Reduced Blanking)	
10	1920*1080	135	120	297	UDTV 1080P	
11	3840*2160	54	24.00	297.00	UDTV 2160P	
12	3840*2160	56.25	25.00	297.00	UDTV 2160P	
13	3840*2160	67.5	30.00	297.00	UDTV 2160P	
14	4096*2160	53.95	23.97	296.70	UDTV 2160P	
15	4096*2160	54	24	297	UDTV 2160P	

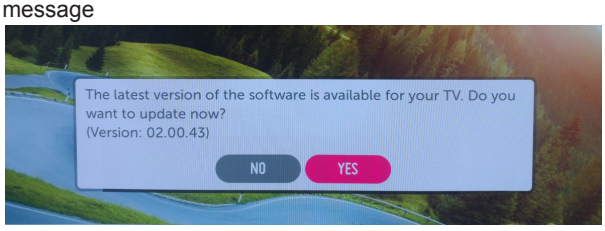
No.	Resolution	H-freq(kHz)	V-freq.(kHz)	Pixel clock(MHz)	Proposed	
	DTV					
1	640*480	31.46	59.94	25.12	SDTV 480P	
2	640*480	31.5	60.00	25.12	SDTV 480P	
3	720*480	15.73	59.94	13.50	SDTV, DVD 480I(525I)	Spec. out but display
4	720*480	15.75	60.00	13.51	SDTV, DVD 480I(525I)	
5	720*576	15.62	50.00	13.50	SDTV, DVD 576I(625I) 50Hz	
6	720*480	31.47	59.94	27	SDTV 480P	
7	720*480	31.5	60.00	27.02	SDTV 480P	
8	720*576	31.25	50.00	27	SDTV 576P	
9	1280*720	44.96	59.94	74.17	HDTV 720P	
10	1280*720	45	60.00	74.25	HDTV 720P	
11	1280*720	37.5	50.00	74.25	HDTV 720P	
12	1920*1080i	28.12	50.00	74.25	HDTV 1080I	
13	1920*1080i	33.72	59.94	74.17	HDTV 1080I	
14	1920*1080i	33.75	60.00	74.25	HDTV 1080I	
15	1920*1080p	26.97	23.97	63.29	HDTV 1080P	
16	1920*1080p	27.00	24.00	63.36	HDTV 1080P	
17	1920*1080p	33.71	29.97	79.120	HDTV 1080P	
18	1920*1080p	33.75	30.00	79.20	HDTV 1080P	
19	1920*1080p	56.25	50.00	148.5	HDTV 1080P	
20	1920*1080p	67.43	59.94	148.35	HDTV 1080P	
21	1920*1080p	67.5	60.00	148.50	HDTV 1080P	
22	1920*1080p	112.5	100	297.00	UDTV 1080P	
23	1920*1080p	134.86	119.88	296.70	UDTV 1080P	
24	1920*1080p	135.00	120	297	UDTV 1080P	
25	3840*2160p	53.95	23.98	296.70	UDTV 2160P	
26	3840*2160p	54	24.00	297.00	UDTV 2160P	
27	3840*2160p	56.25	25.00	297.00	UDTV 2160P	
28	3840*2160p	61.43	29.97	296.70	UDTV 2160P	
29	3840*2160p	67.5	30.00	297.00	UDTV 2160P	
30	3840*2160p	112.5	50.00	594	UDTV 2160P	
31	3840*2160p	134.86	59.94	593.40	UDTV 2160P	
32	3840*2160p	135	60.00	594	UDTV 2160P	
33	4096*2160p	53.95	23.98	296.70	UDTV 2160P	
34	4096*2160p	54	24.00	297	UDTV 2160P	
35	4096*2160	56.25	25.00	297	UDTV 2160P	
36	4096*2160	61.43	29.97	296.70	UDTV 2160P	
37	4096*2160	67.5	30.00	297	UDTV 2160P	
38	4096*2160	112.5	50.00	594	UDTV 2160P	
39	4096*2160	134.86	59.94	593.40	UDTV 2160P	
40	4096*2160	135	60.00	594	UDTV 2160P	

SOFTWARE UPDATE

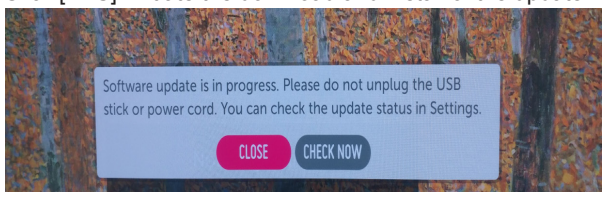
1. USB

(1) Insert the USB memory Stick to the USB port

(2) Automatically detect the SW Version and show the below message

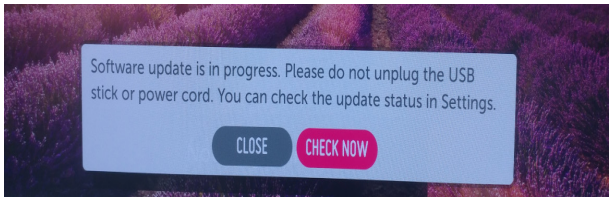


(3) Click [YES]: initiate the download and install of the update.

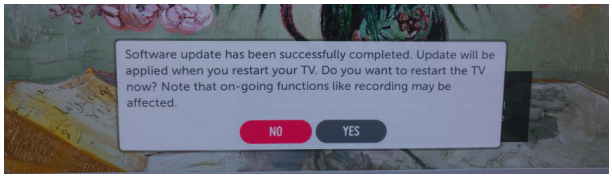


(4) Click [Check Now]: move to “About This TV” page for update

(5) TV is updating



(6) After finished the update, below Pop-up appear



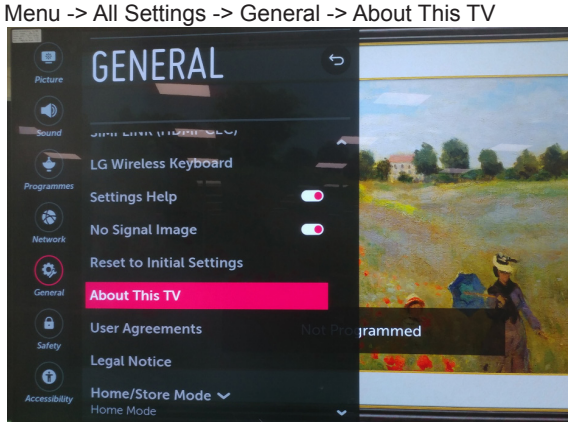
(7) Click [Yes] : TV will be DC OFF -> ON

(8) After TV turned on, Check the updated SW Version and Tool Option

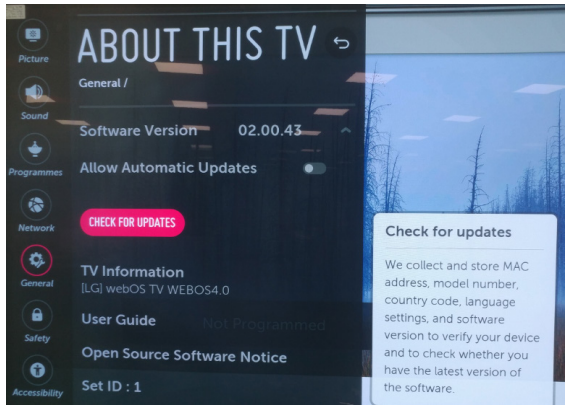
2. NSU

(This Function is needed to connect to the internet)

(1) Menu -> All Settings -> General -> About This TV

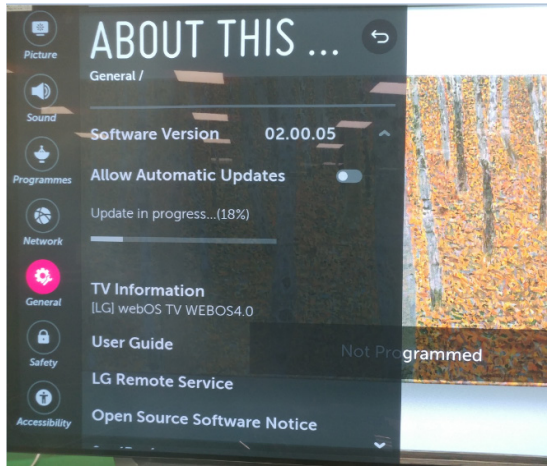


(2) Click [CHEK FOR UPDATES] : system check newest version

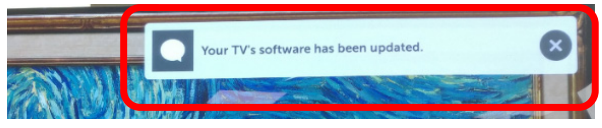


(3) Click [DOWNLOAD AND INSTALL]

(4) TV is updating



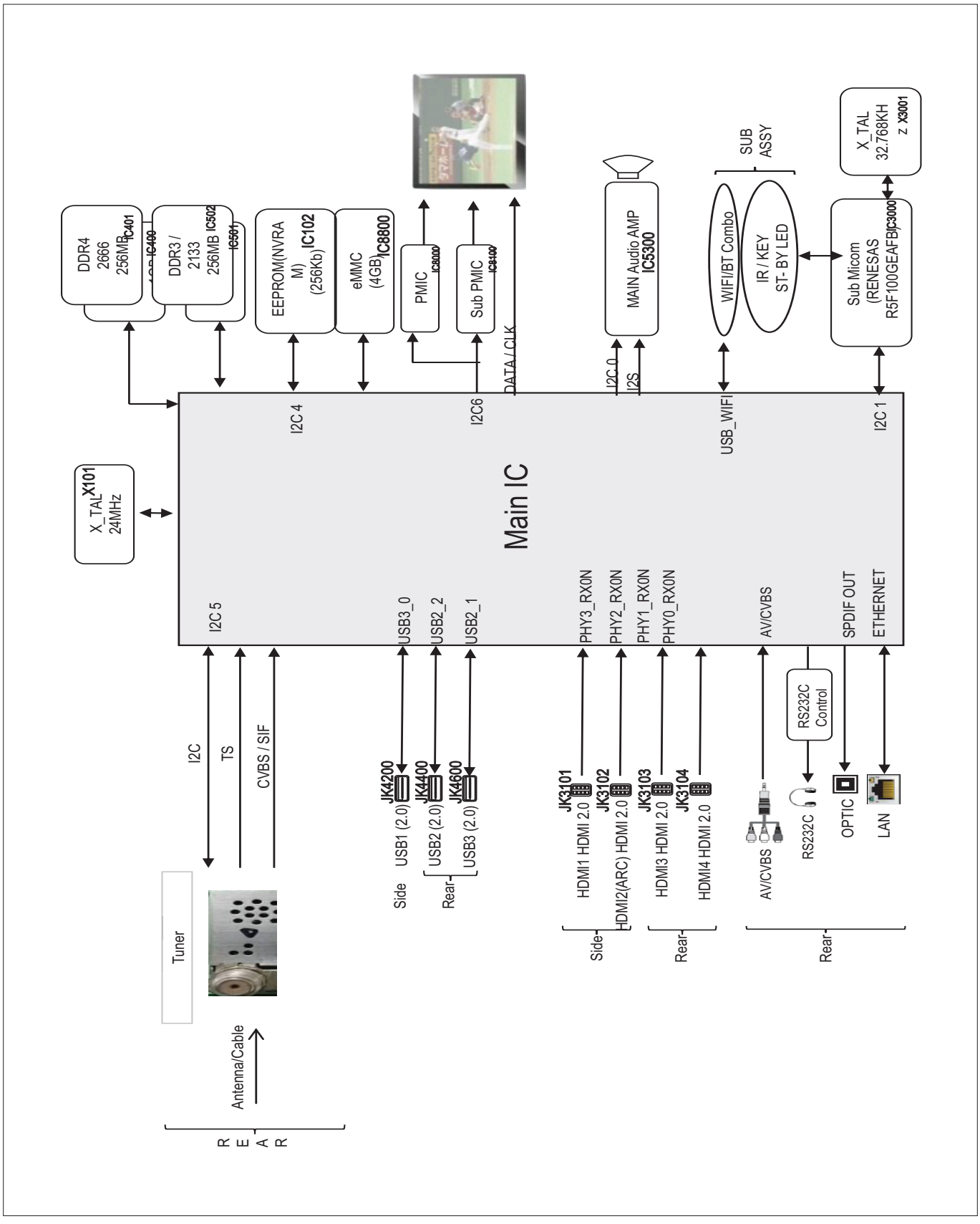
(5) After finished the update, below Pop-up appear



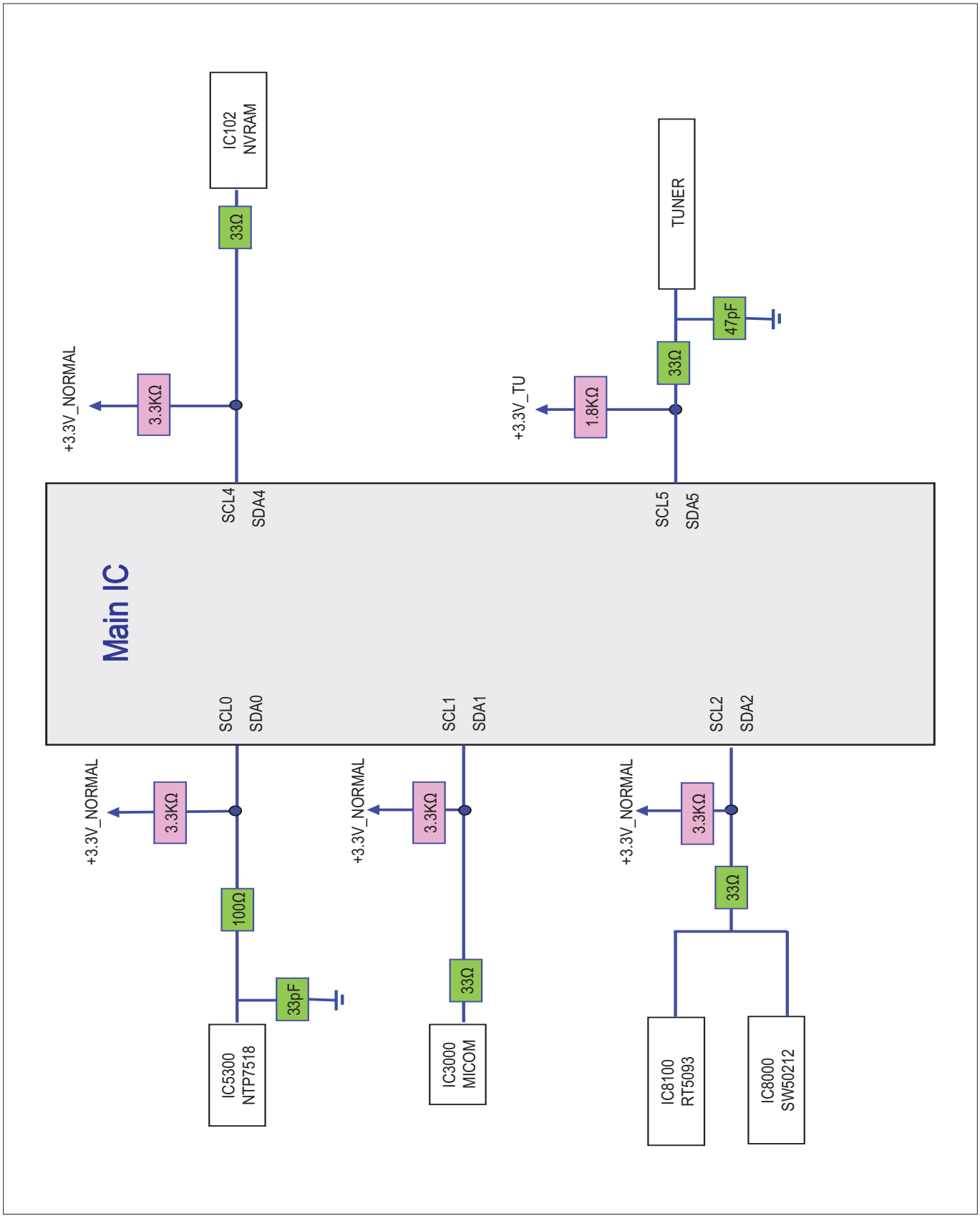
(6) Turn OFF the TV and On. Check the updated SW Version and Tool Option

BLOCK DIAGRAM

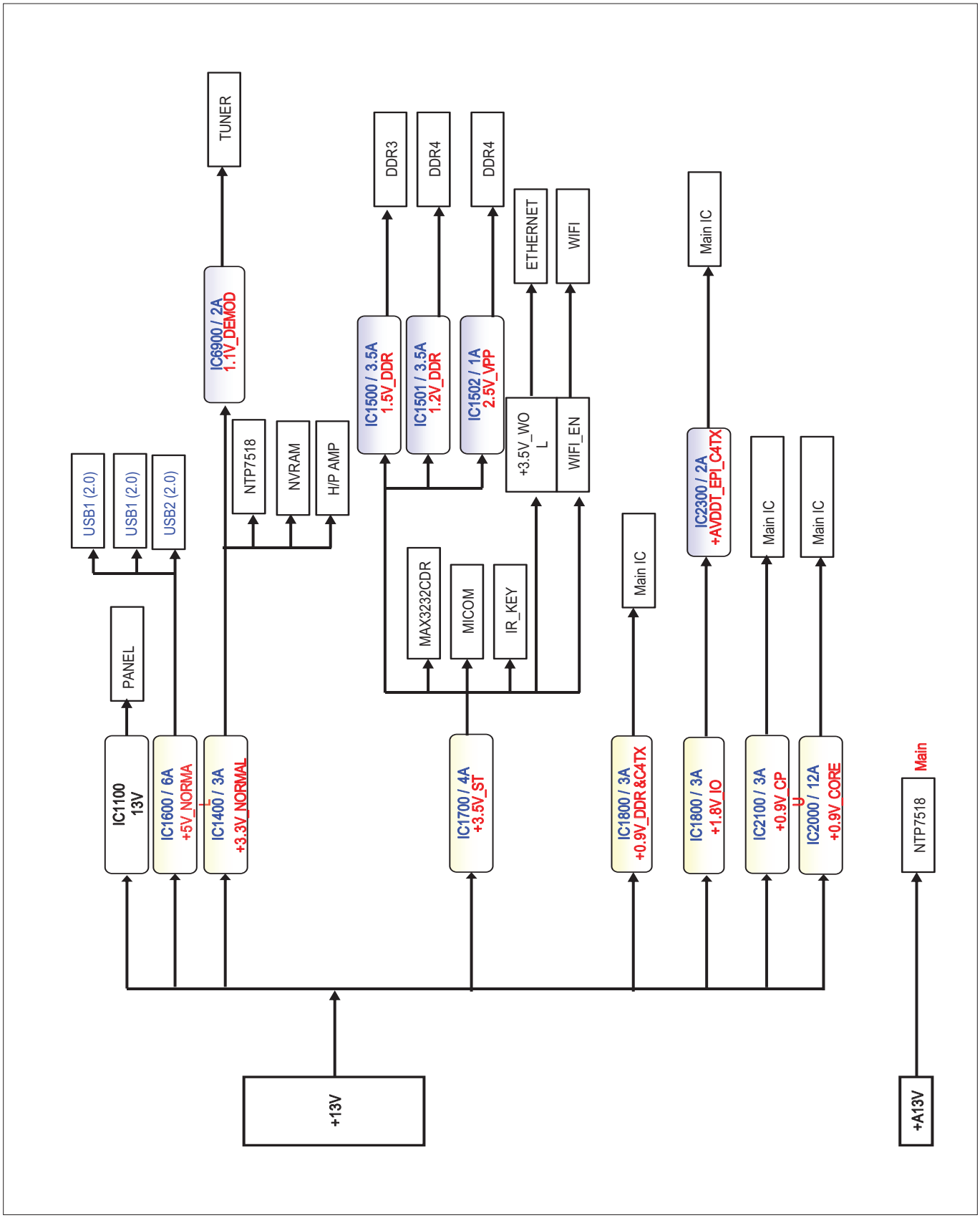
1. Main IC



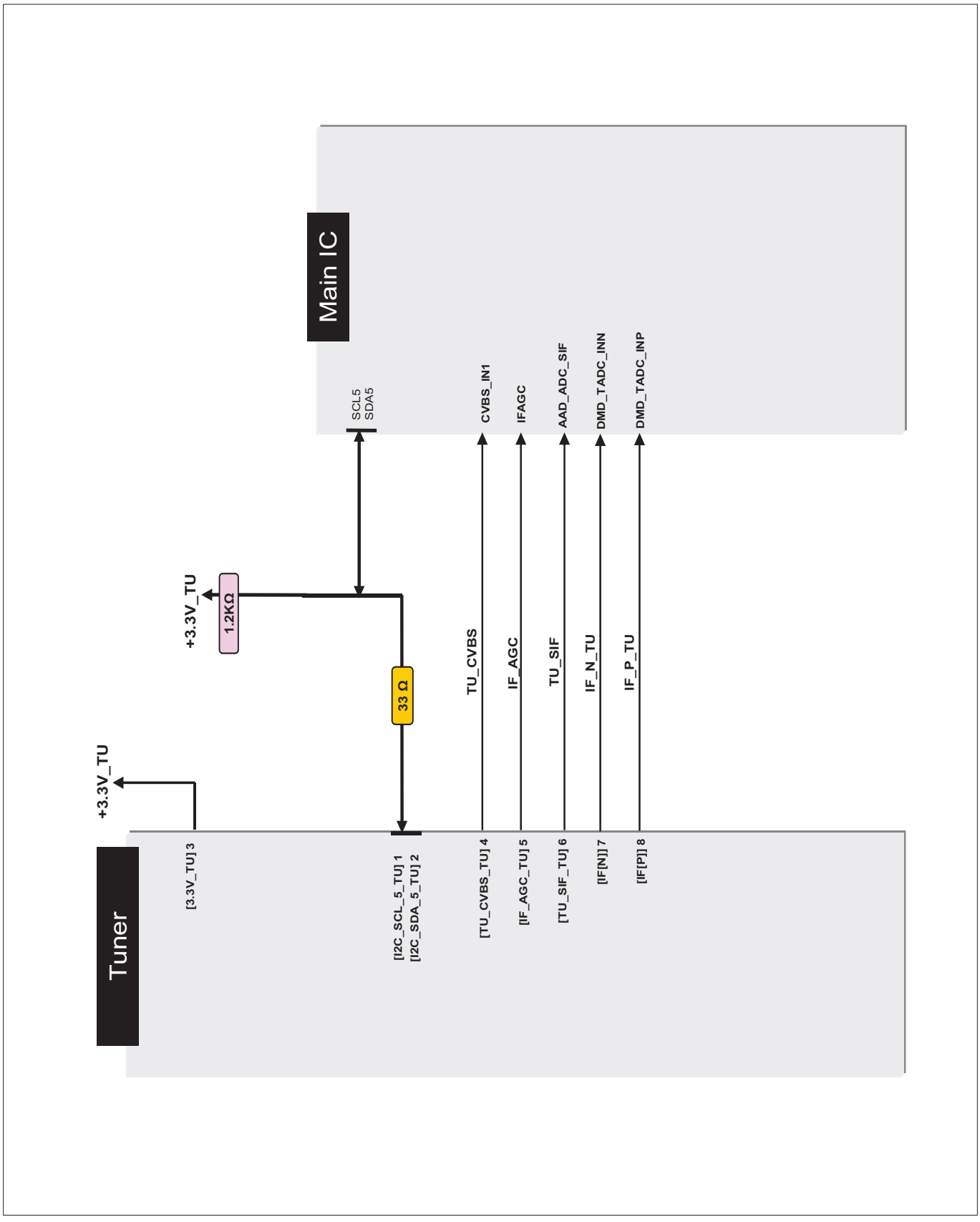
2. I2C



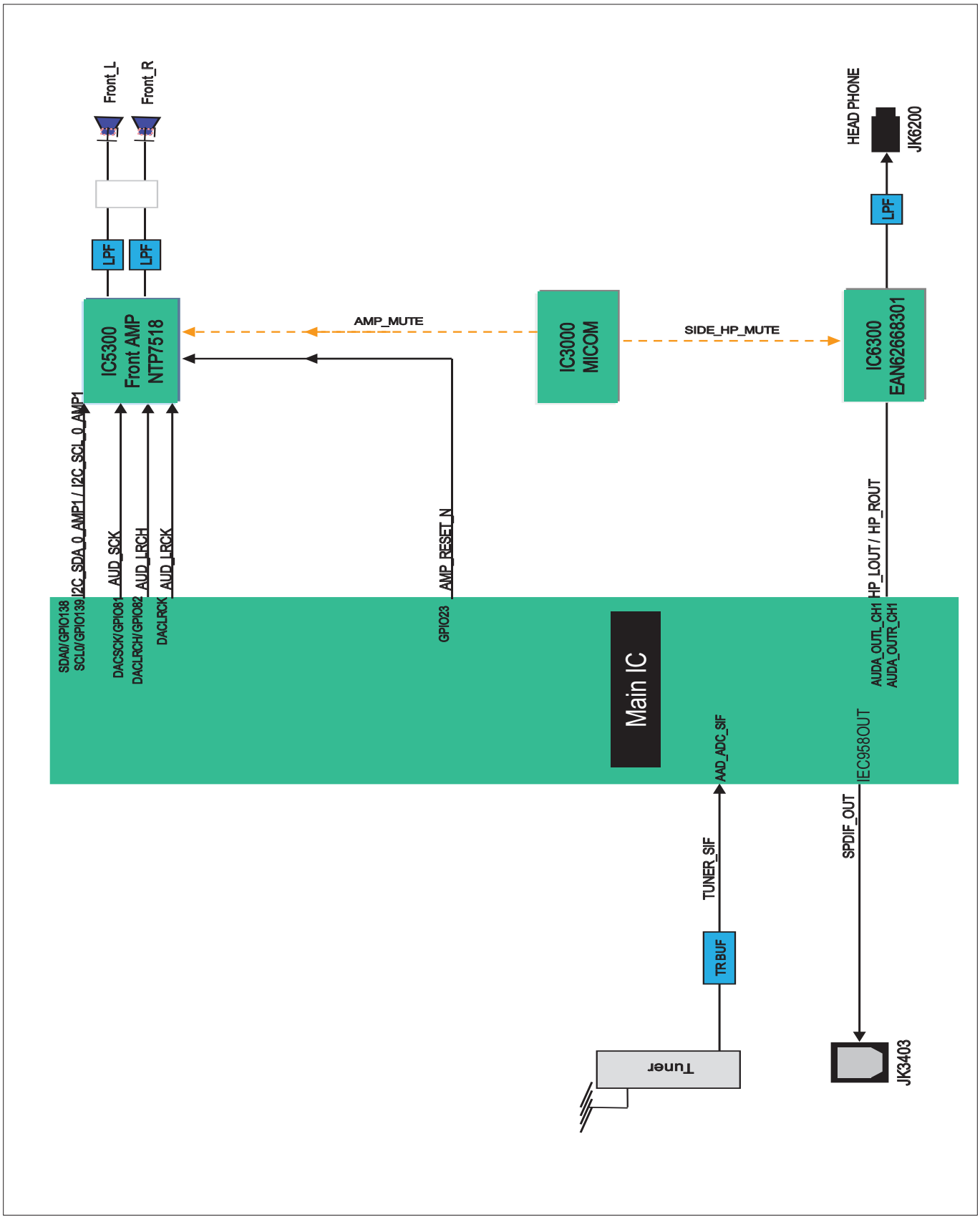
3. Power



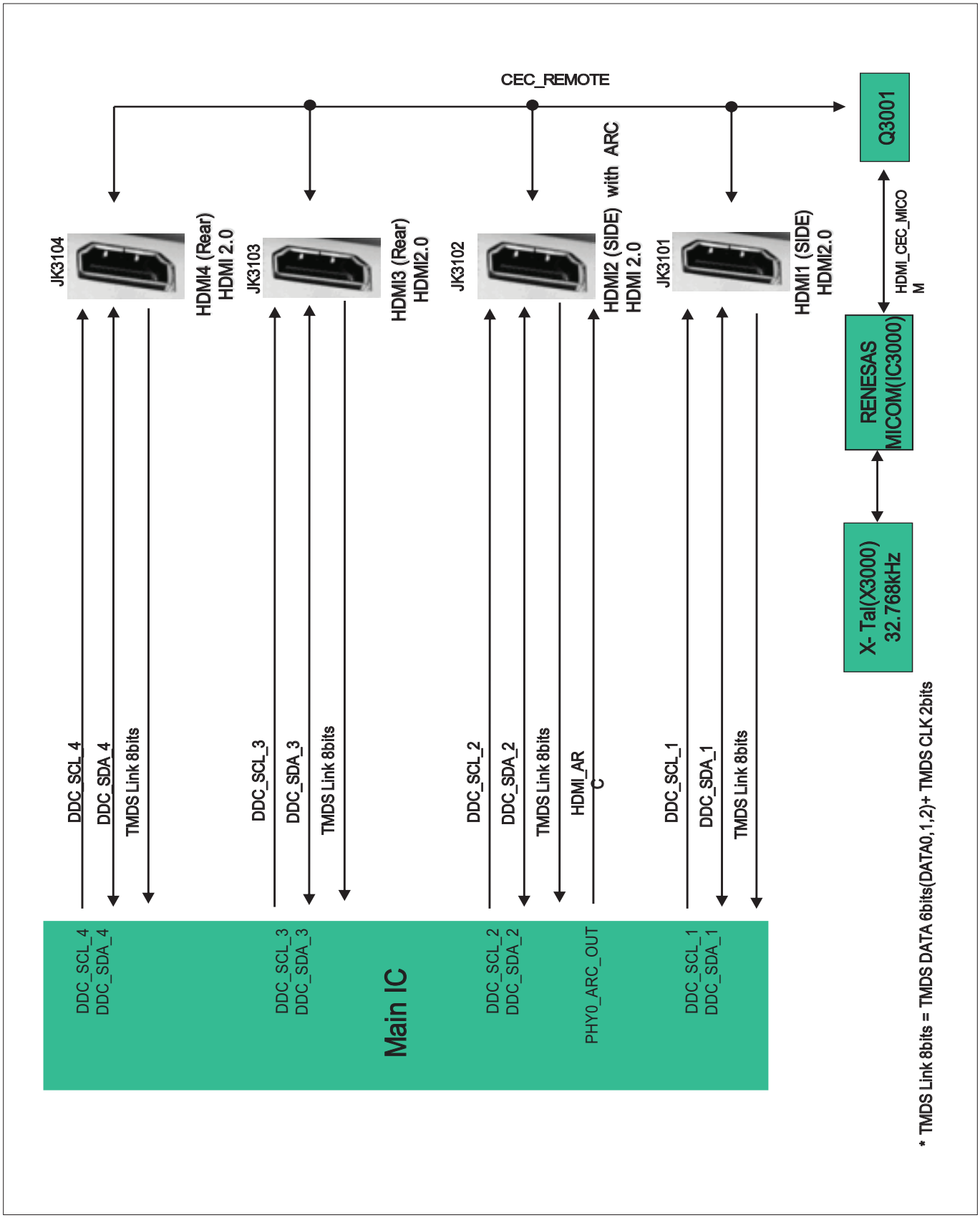
4. Tuner



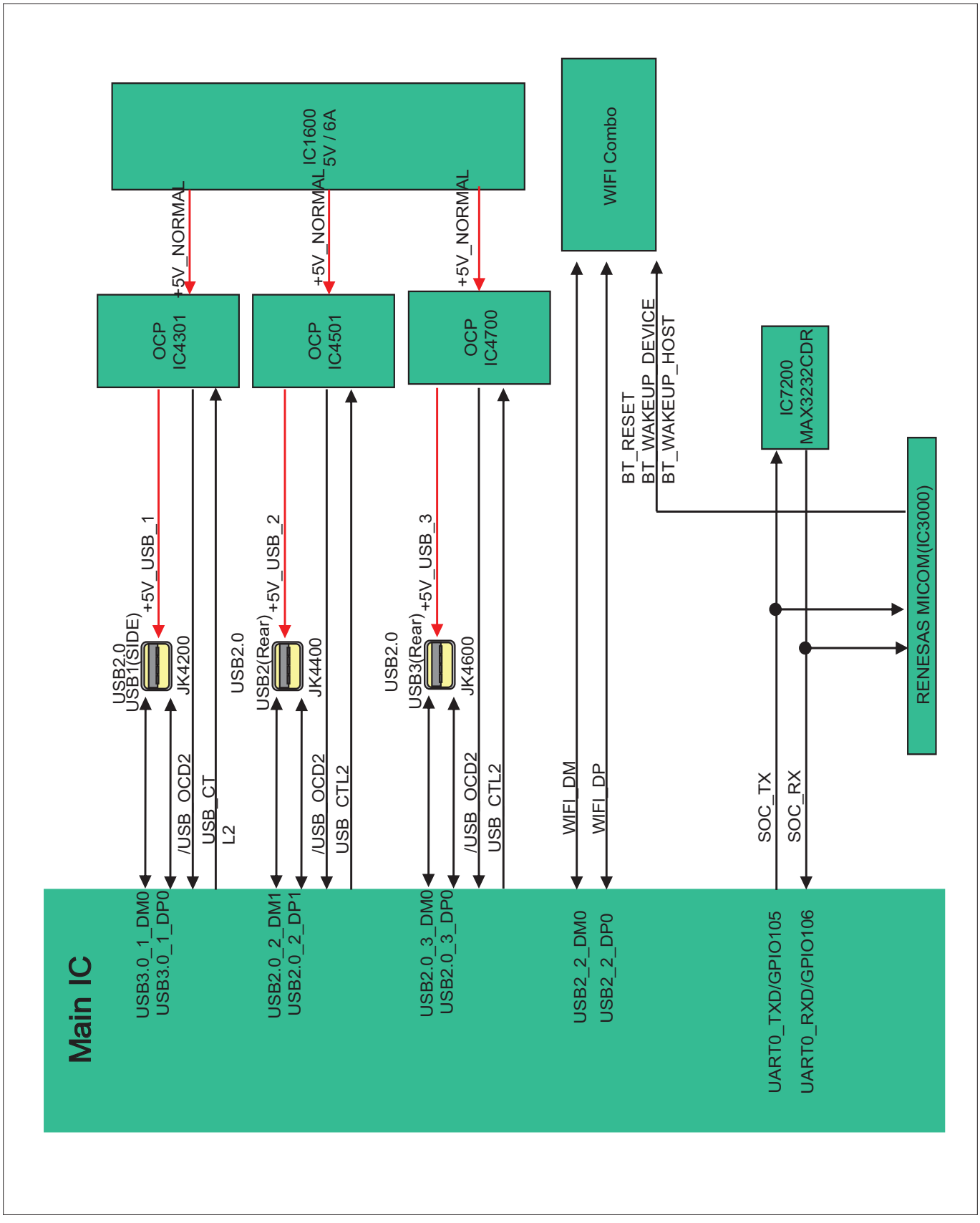
5. Audio Out



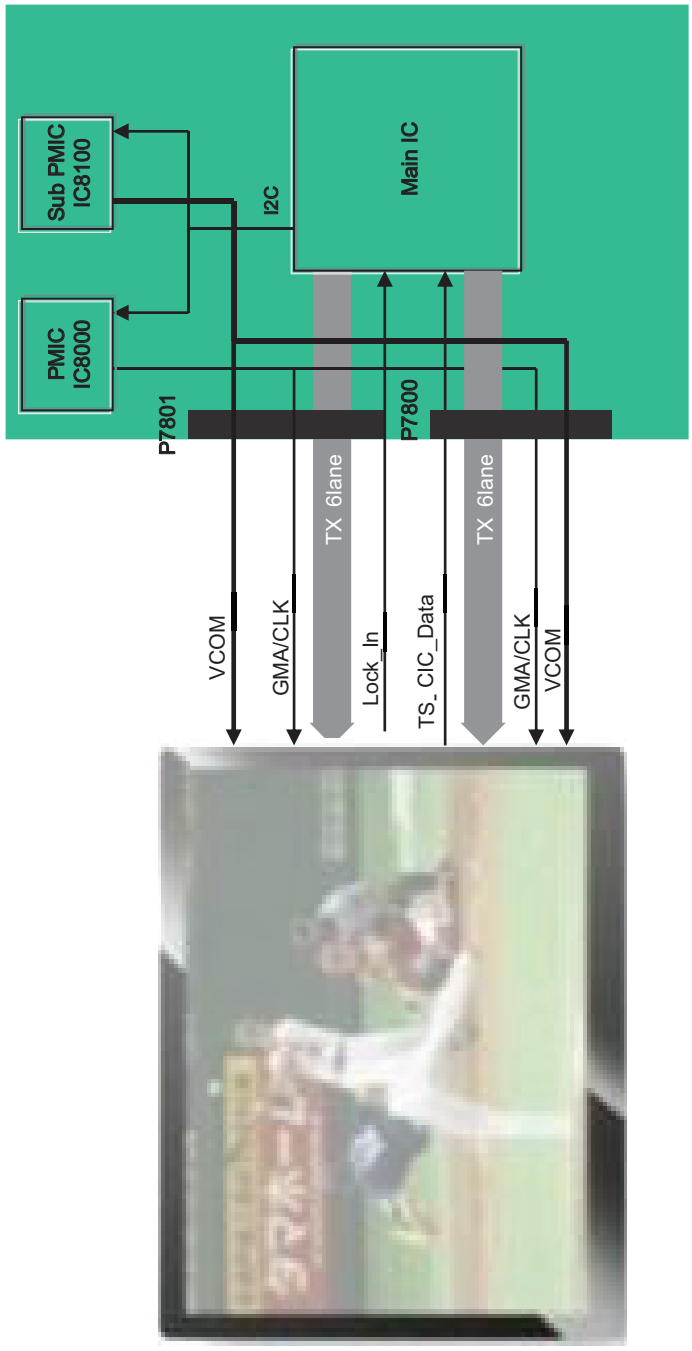
6. HDMI



7. USB / WIFI / M-REMOTE / UART



8.EPI 68Pin Interface



EXPLODED VIEW (SET)

IMPORTANT SAFETY NOTICE

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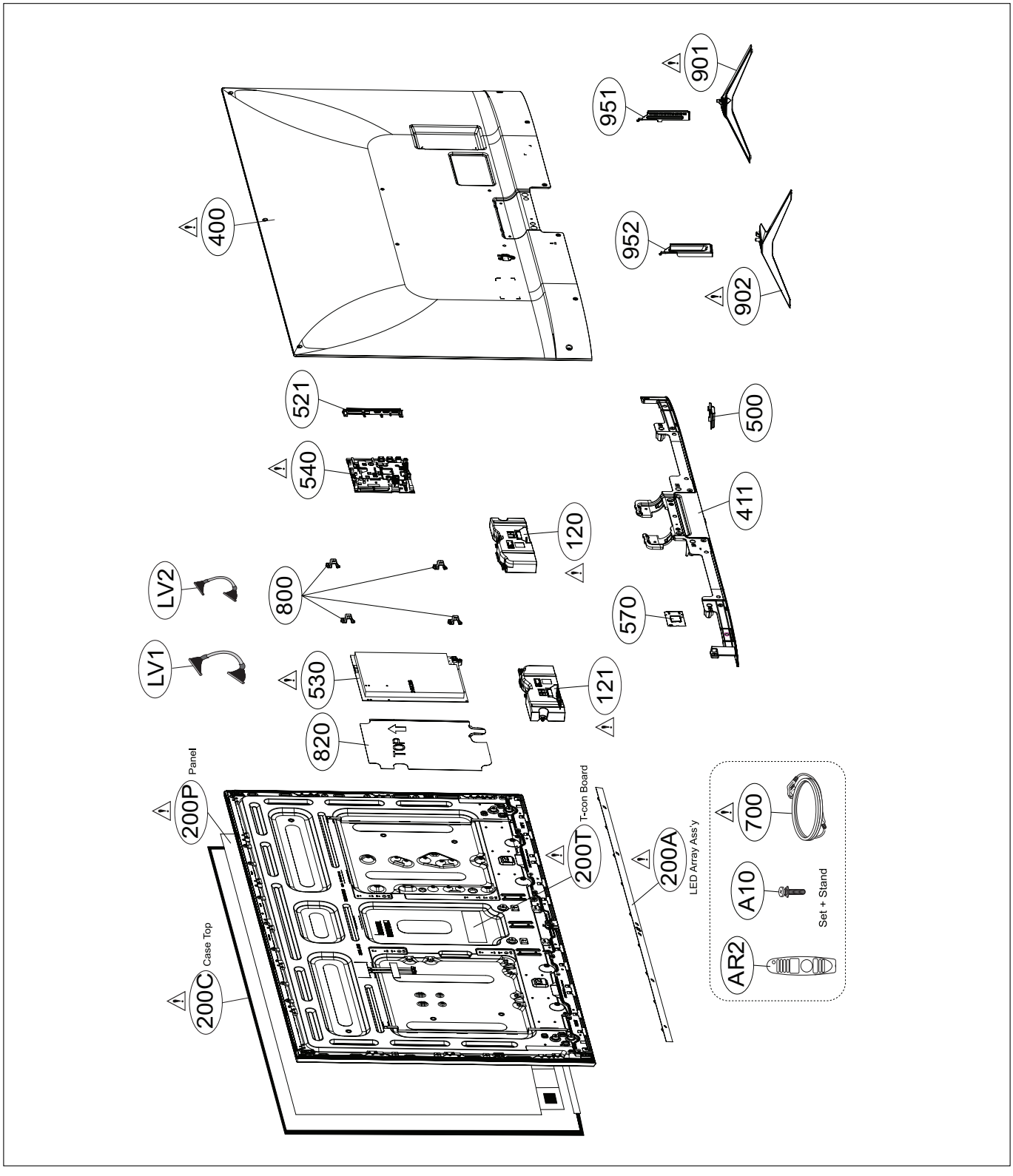
It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.
Do not modify the original design without permission of manufacturer.

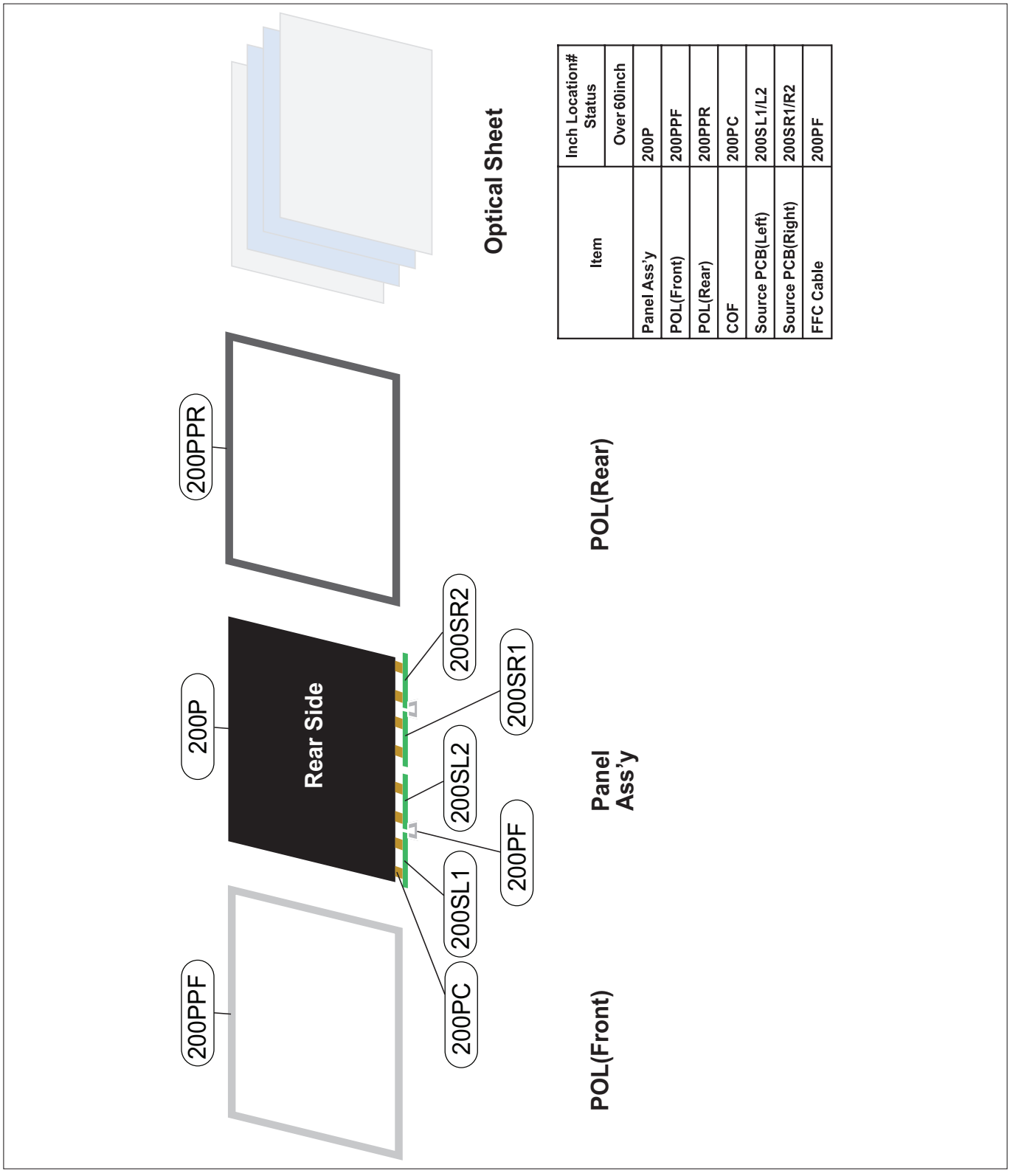


EXPLODED VIEW (MODULE)

IMPORTANT NOTICE

MRC use only

* MRC : Module Repair Center



Item	Inch Location# Status
	Over 60inch
Panel Ass'y	200P
POL(Front)	200PPF
POL(Rear)	200PPR
COF	200PC
Source PCB(Left)	200SL1/L2
Source PCB(Right)	200SR1/R2
FFC Cable	200PF

DISASSEMBLY GUIDE (SET)

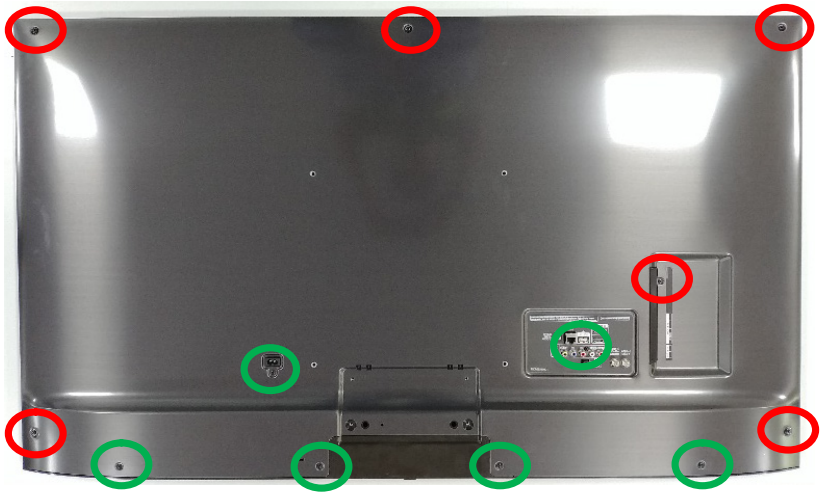
(1) Remove screw of marking area

65UK80
2 Point
Total 4 Point (L/R)

65UK80
3 Point
Total 6 Point(L/R)

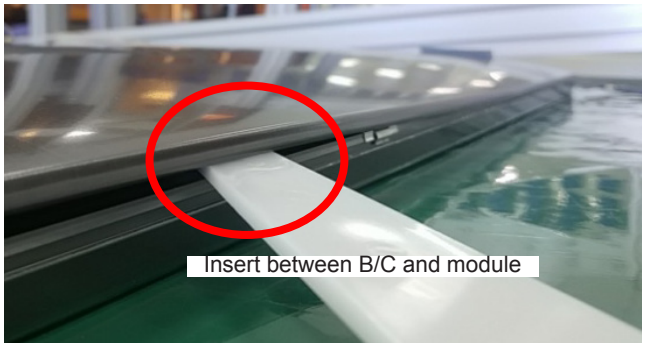
(2) Remove the stand while rotating it in the direction of the arrow.

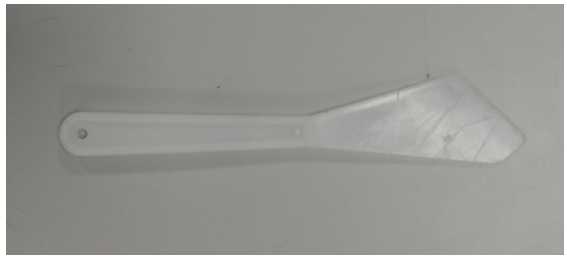
(3) Remove screw of marking area



(4) Open the bottom side edge of B/C left or right, then make a gap for plastic Jig.

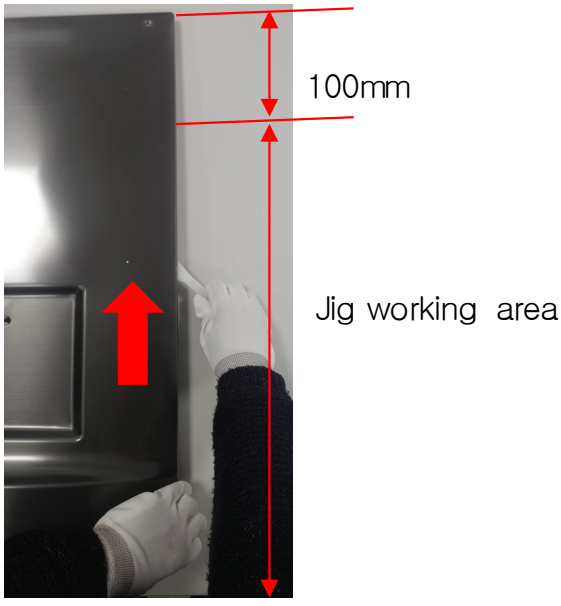
(5) Insert Jig into the open gap



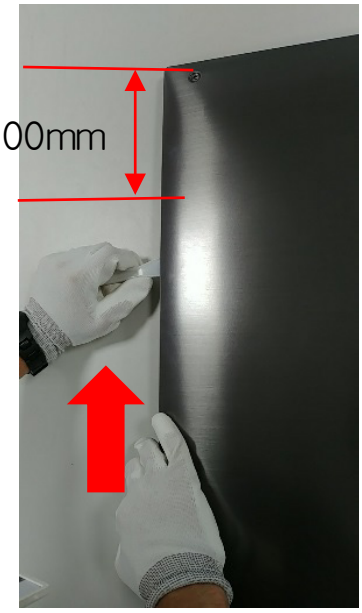


Example of spatula Jig (must use plastic Jig)

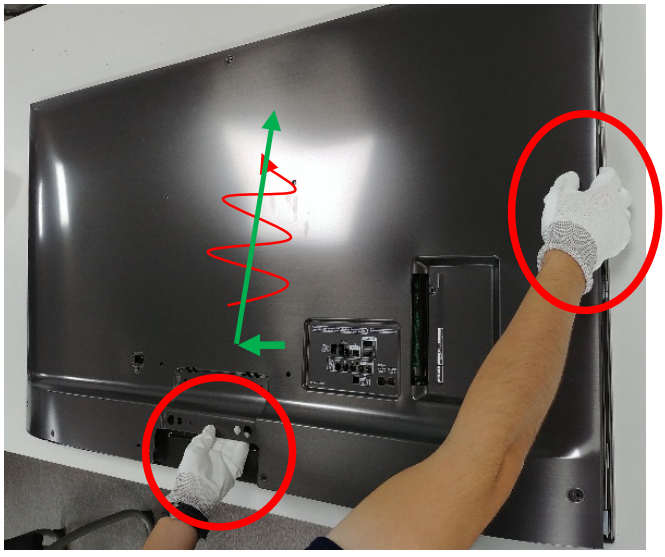
(6) Move the inserted Jig from bottom to 200mm below the top, and release latch

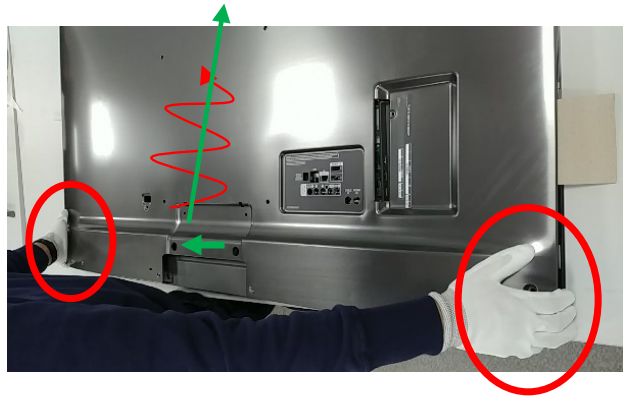


(7) Work same on the other side. At this time, put a soft material in the opened gap of opposite side in order to prevent to re-fasten.
- Must use soft material for prevent scratch.

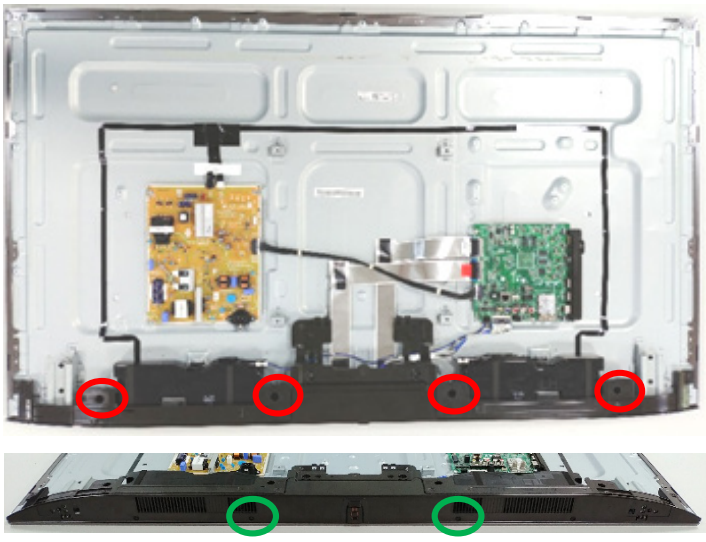


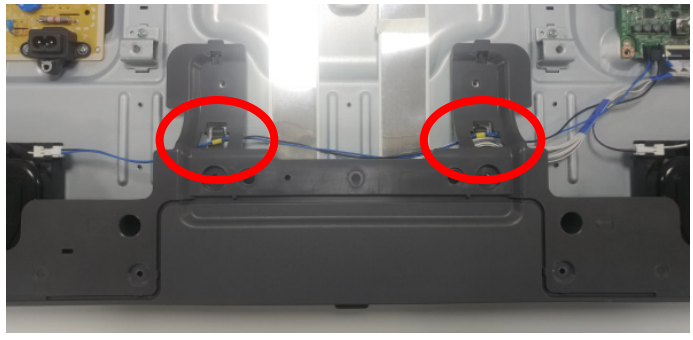
(8) Hold on marked area of B/C (bottom center portion and side central portion, or both side of bottom edge), lift up slightly, then push upward and disassemble B/C.





(9) Remove screw of marking area (including bottom side screw). Unfix speaker cables



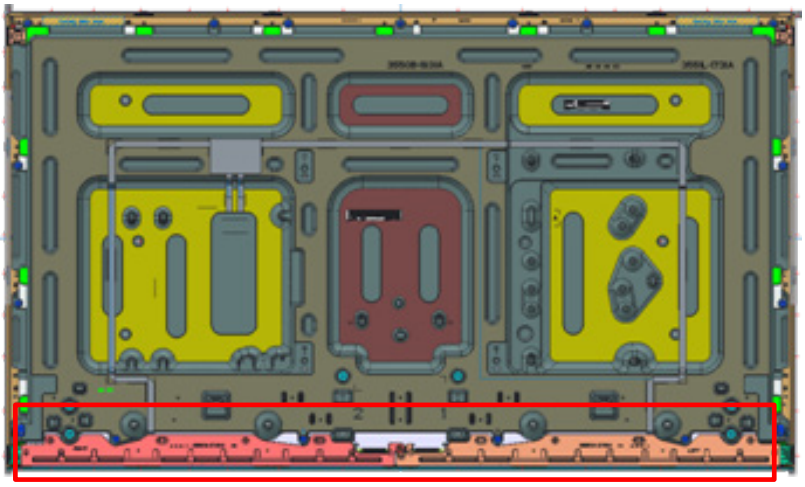


(10) Raise up Bottom B/C, and unfix cables

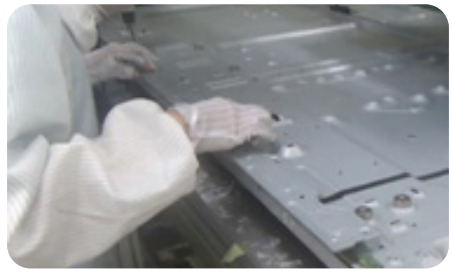
DISASSEMBLY GUIDE (MOUBLE)

[Module Disassemble]

(1) Disassemble of Cover Shield

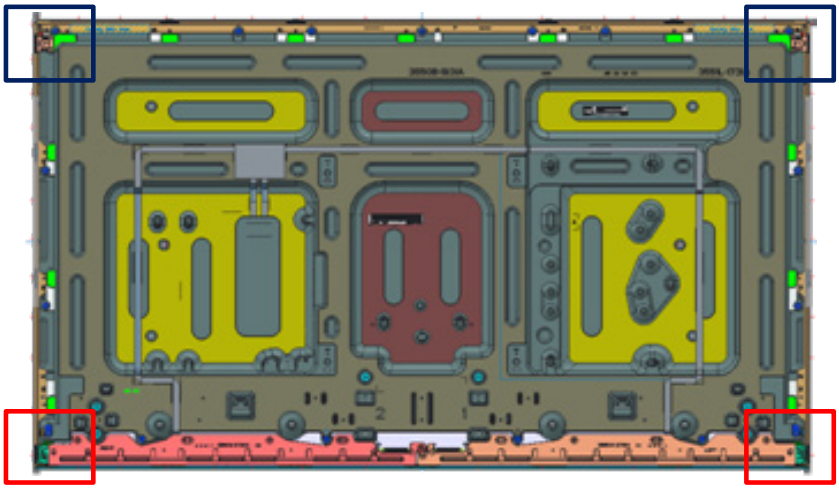


Disassemble the Screws



Disassemble the source PCB from the guide

(2) Disassemble of Clip

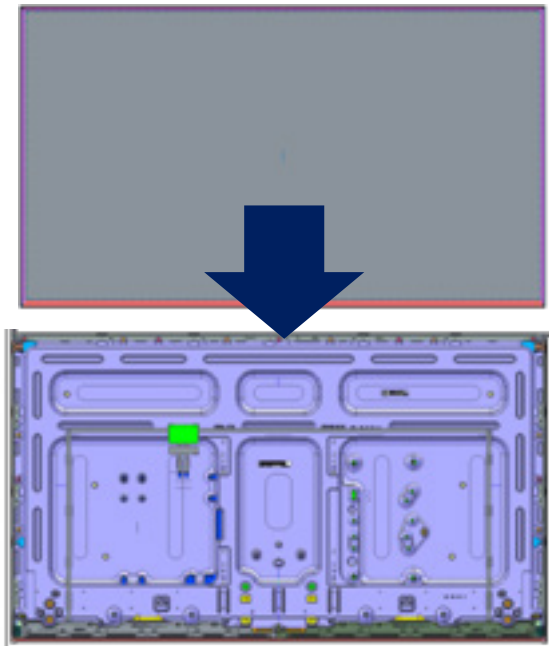


Top Clip Disassembly

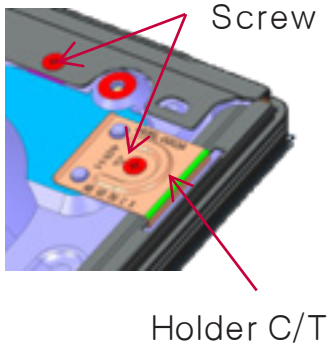
Down Clip Disassembly

[CaseTop Disassemble]

(1) LCM reversal



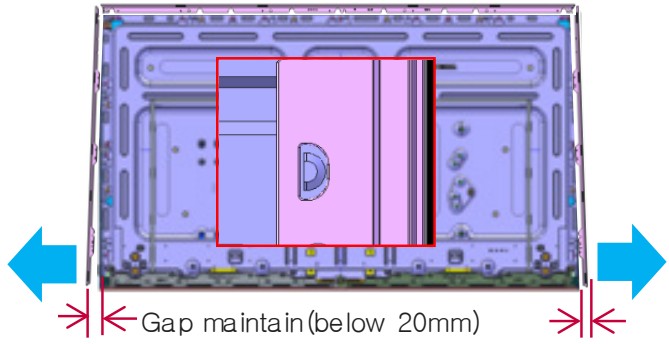
(2) Disassemble and dismantle rear holder



(3) CaseTop Left / Right Breakdown

Dismantle the back hook and disassemble the left / right side.

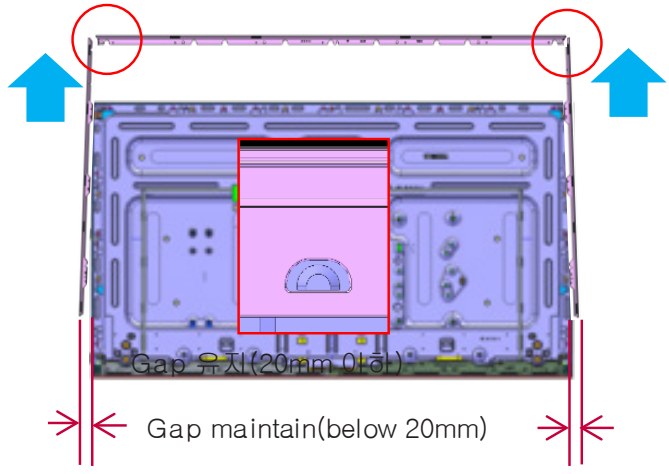
- CaseTop opens left / right. (Minimizing widening)



(4) Case Top Up disassemble

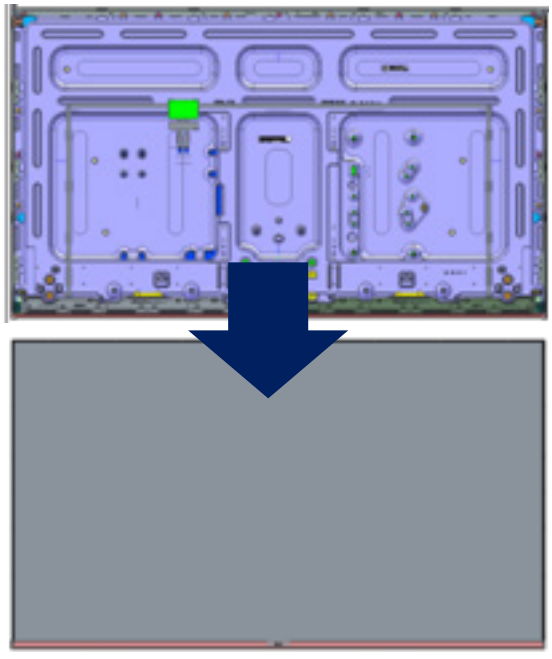
Disassemble the top of the back hook.

- Grab the corner when proceeding to disassemble the upper part



(5) LCM reversal

- When reversing, hold the panel so that it does not fall off.

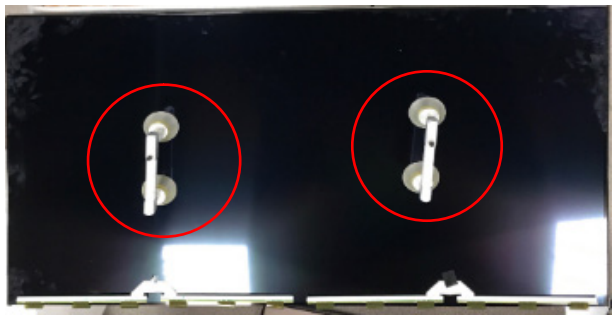


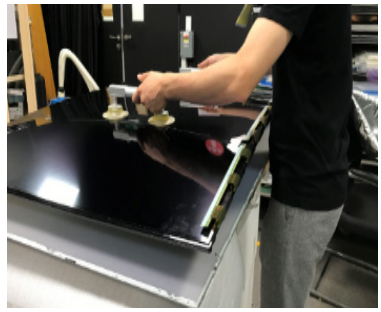
(6) C/Top Down

- CaseTop Down after removing Screw Separate from LCM

[BLU Disassemble]

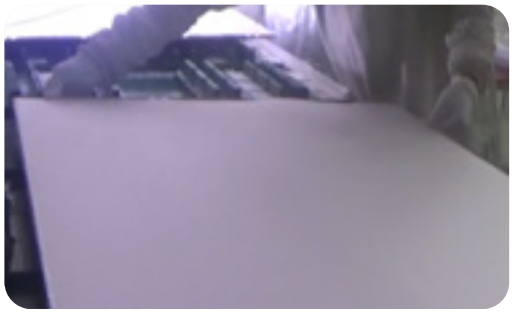
(1) Panel and Guide Panel disassembly (using adsorber)



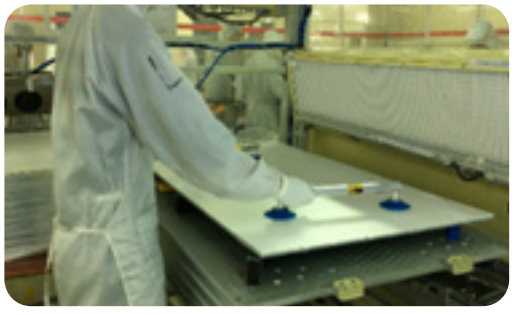


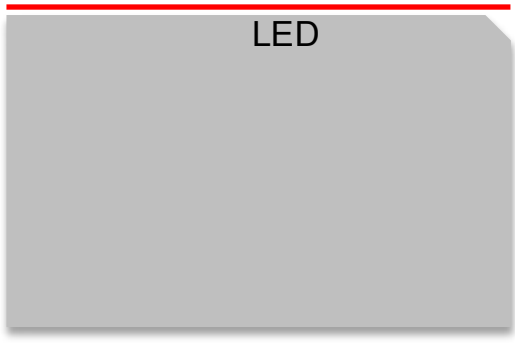
(2) Remove Guide Panel by unhooking Guide Panel Hook

(3) Removal of Sheets

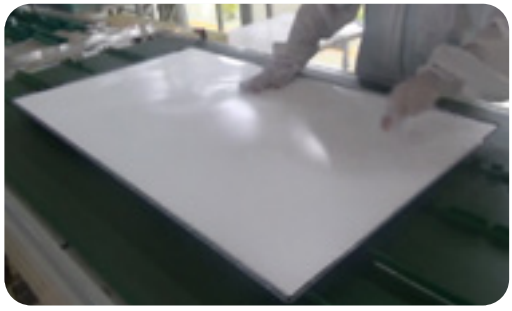


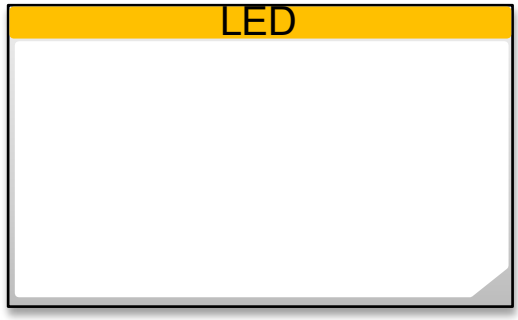
(4) Removal of LGP



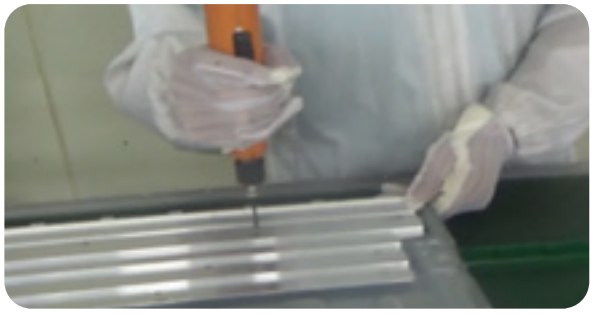


(5) Removal of ReflectorRemoval of Reflector





(6) Removal of LED Housing Assy



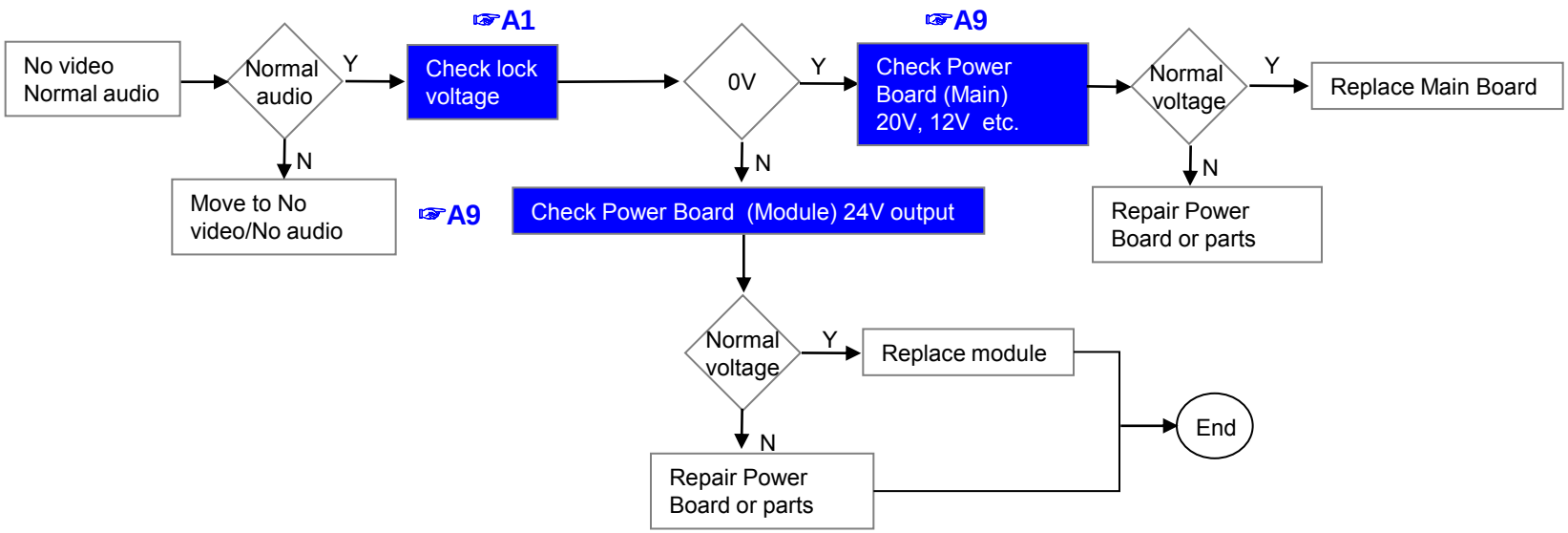
TROUBLE SHOOTING GUIDE

Contents of Standard Repair Process

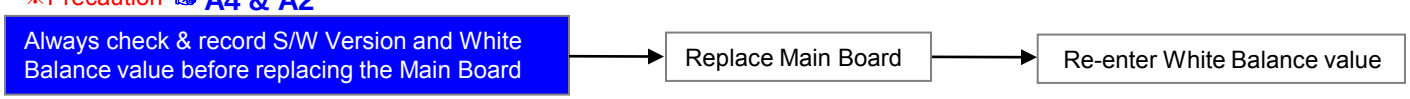
First of all, Check whether there is SVC Bulletin in GSCS System for these model.

	Error symptom	A. Video error	Established date		
		No video/ Normal audio	Revised date		1/16

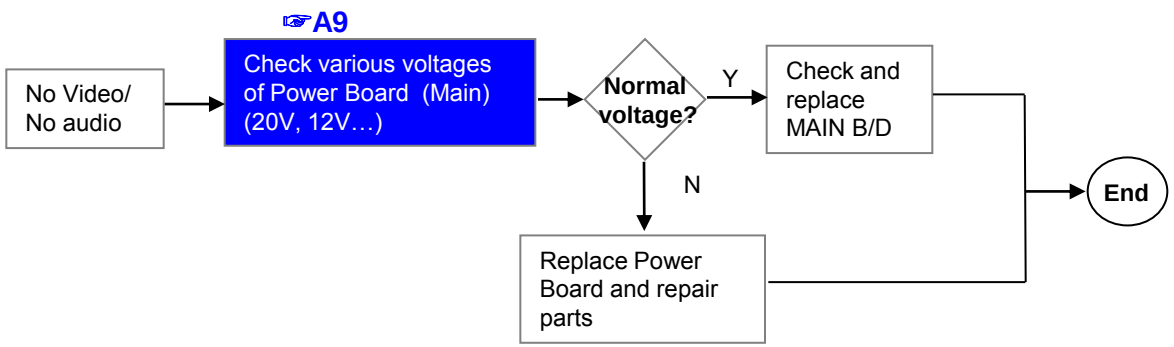
First of all, Check whether all of cables between board is inserted properly or not.
(Main B/D↔ Power B/D, EPI Cable, Speaker Cable, IR B/D Cable,,,)



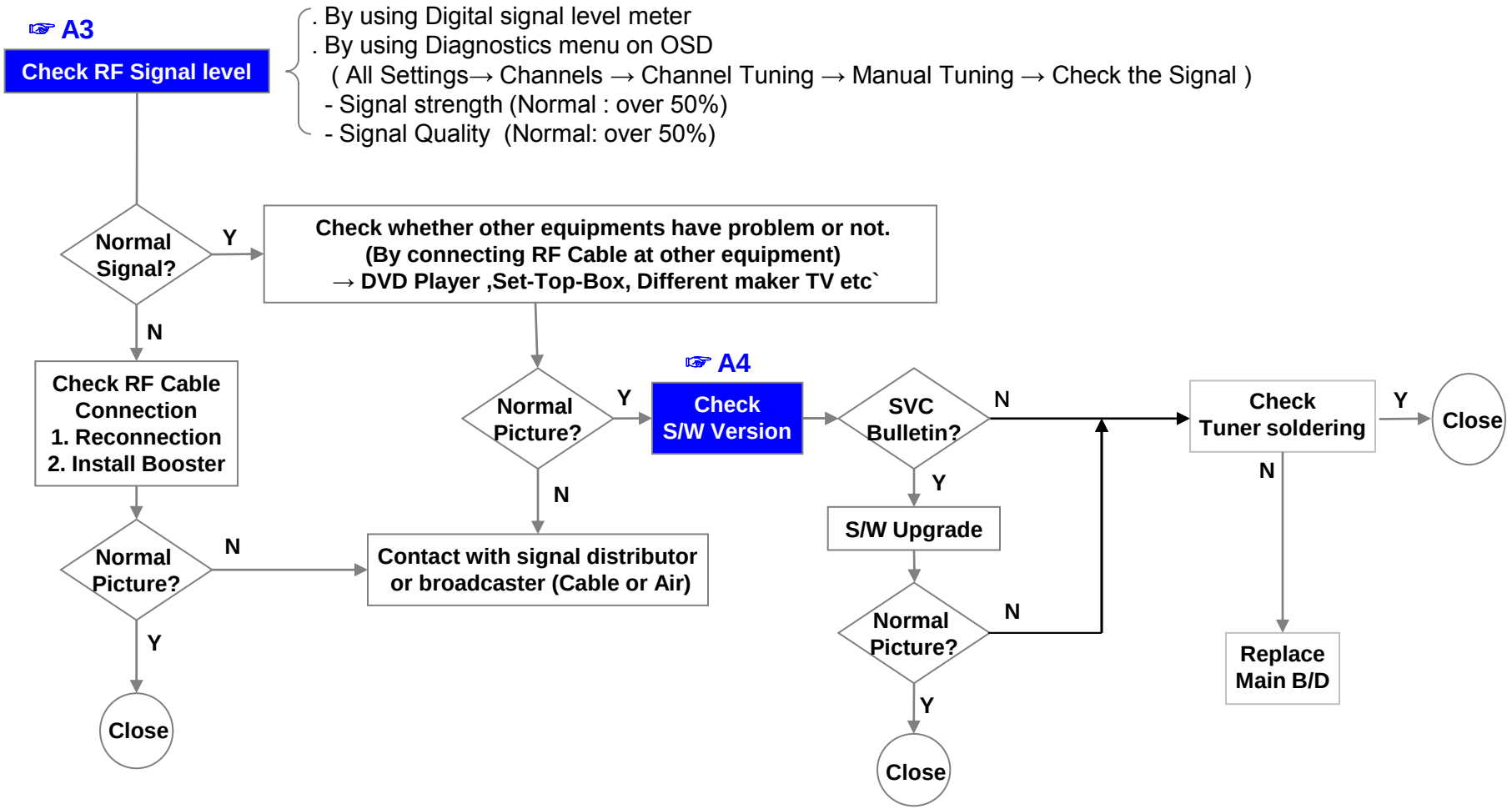
※Precaution ☞A4 & A2



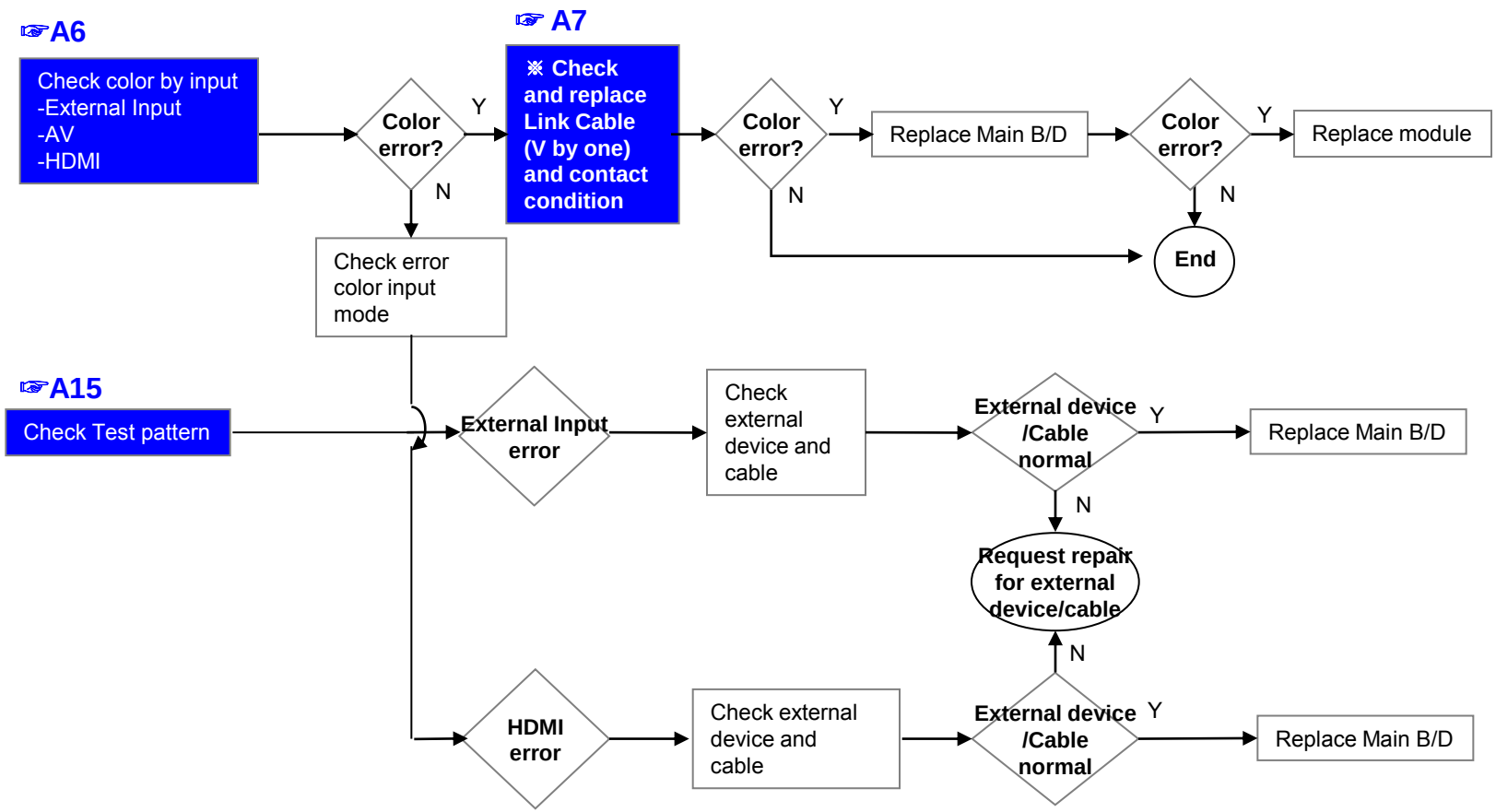
	Error symptom	A. Video error	Established date		
		No video/ No audio	Revised date		2/16



	Error symptom	A. Video error	Established date		
		Picture broken/ Freezing	Revised date		3/16

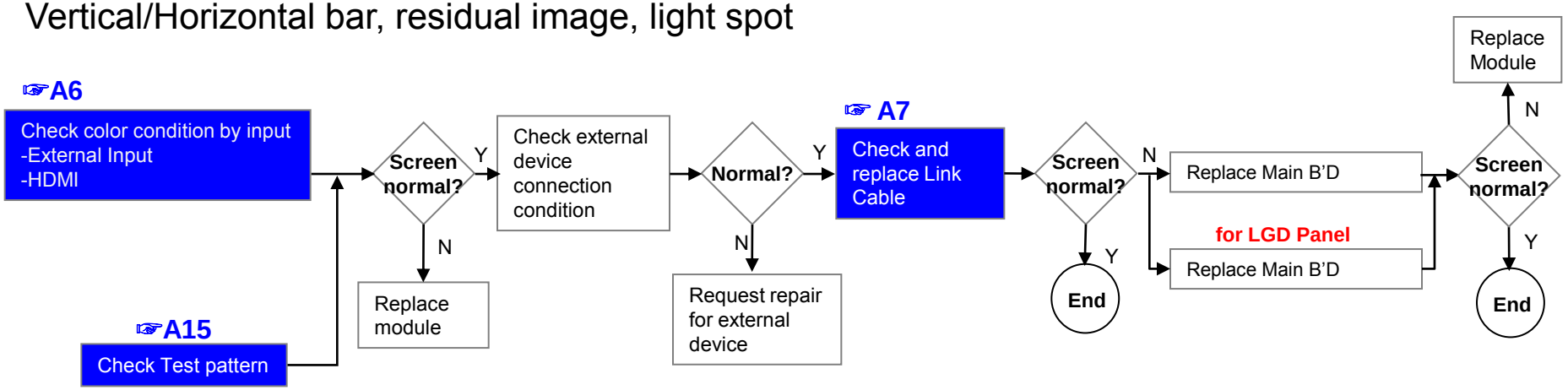


	Error symptom	A. Video error	Established date		
		Color error	Revised date		4/16

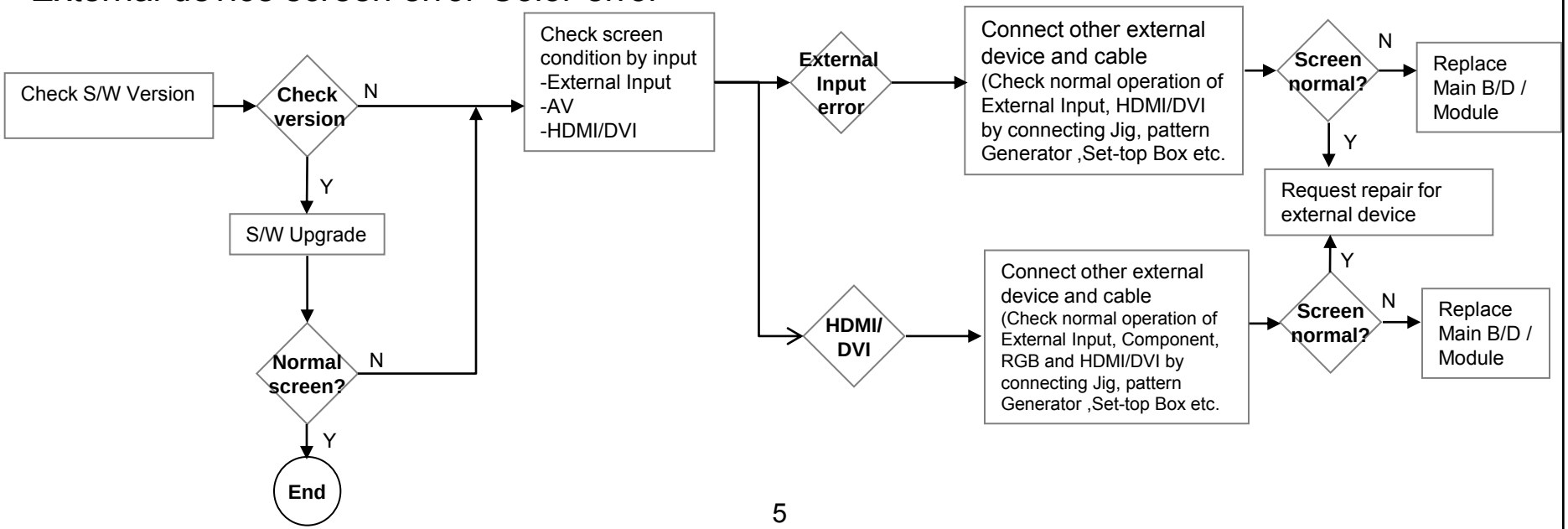


	Error symptom	A. Video error	Established date		
		Vertical / Horizontal bar, residual image, light spot, external device color error	Revised date		5/16

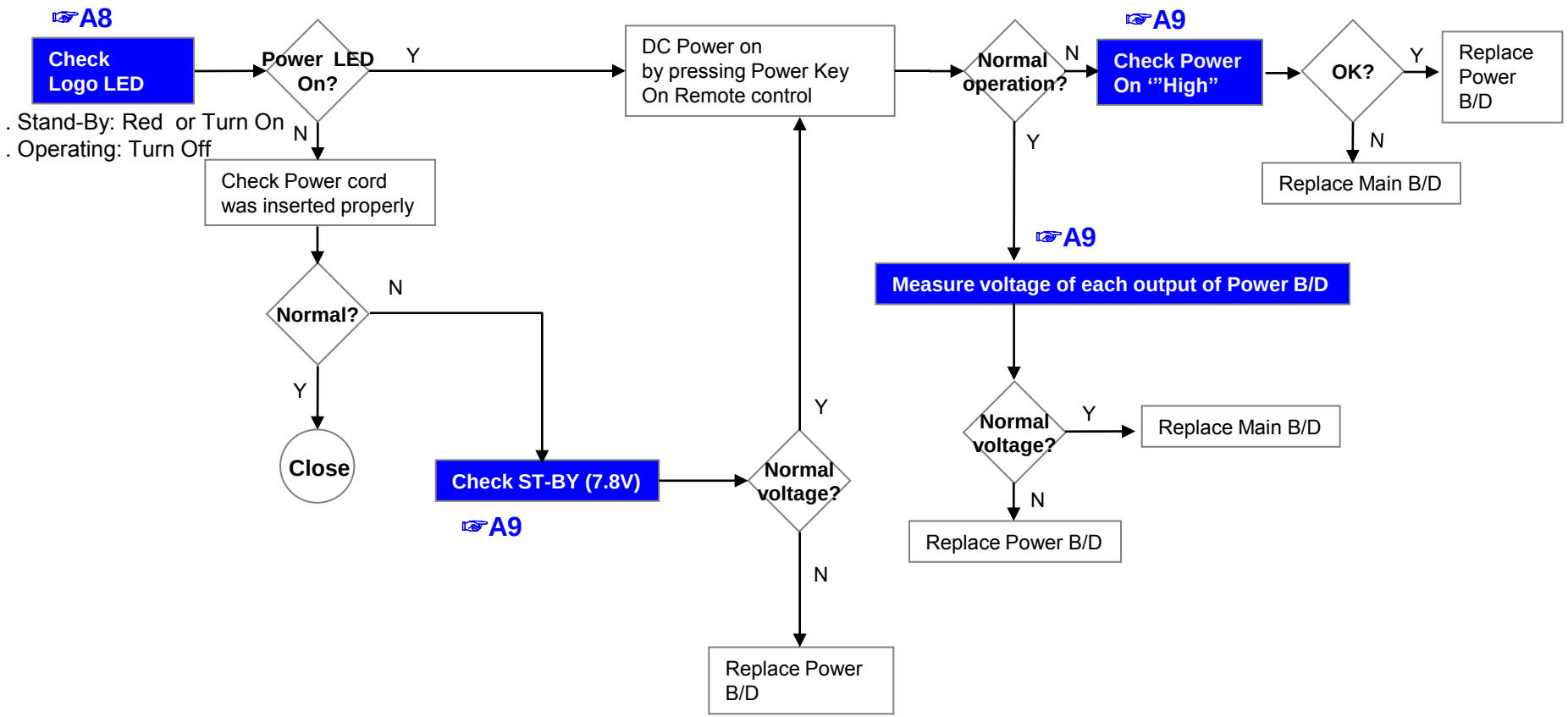
Vertical/Horizontal bar, residual image, light spot



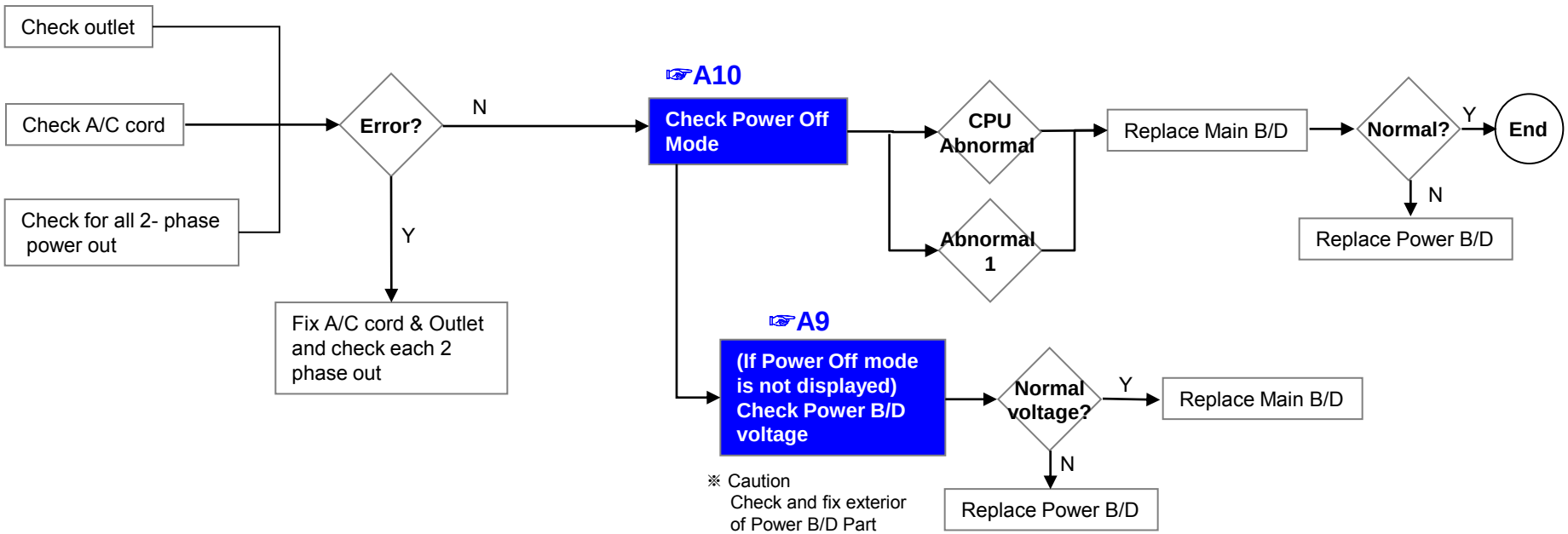
External device screen error-Color error



	Error symptom	B. Power error	Established date		
		No power	Revised date		6/16



	Error symptom	B. Power error	Established date		
		Off when on, off while viewing, power auto on/off	Revised date		7/16



*** Please refer to the all cases which can be displayed on power off mode.**

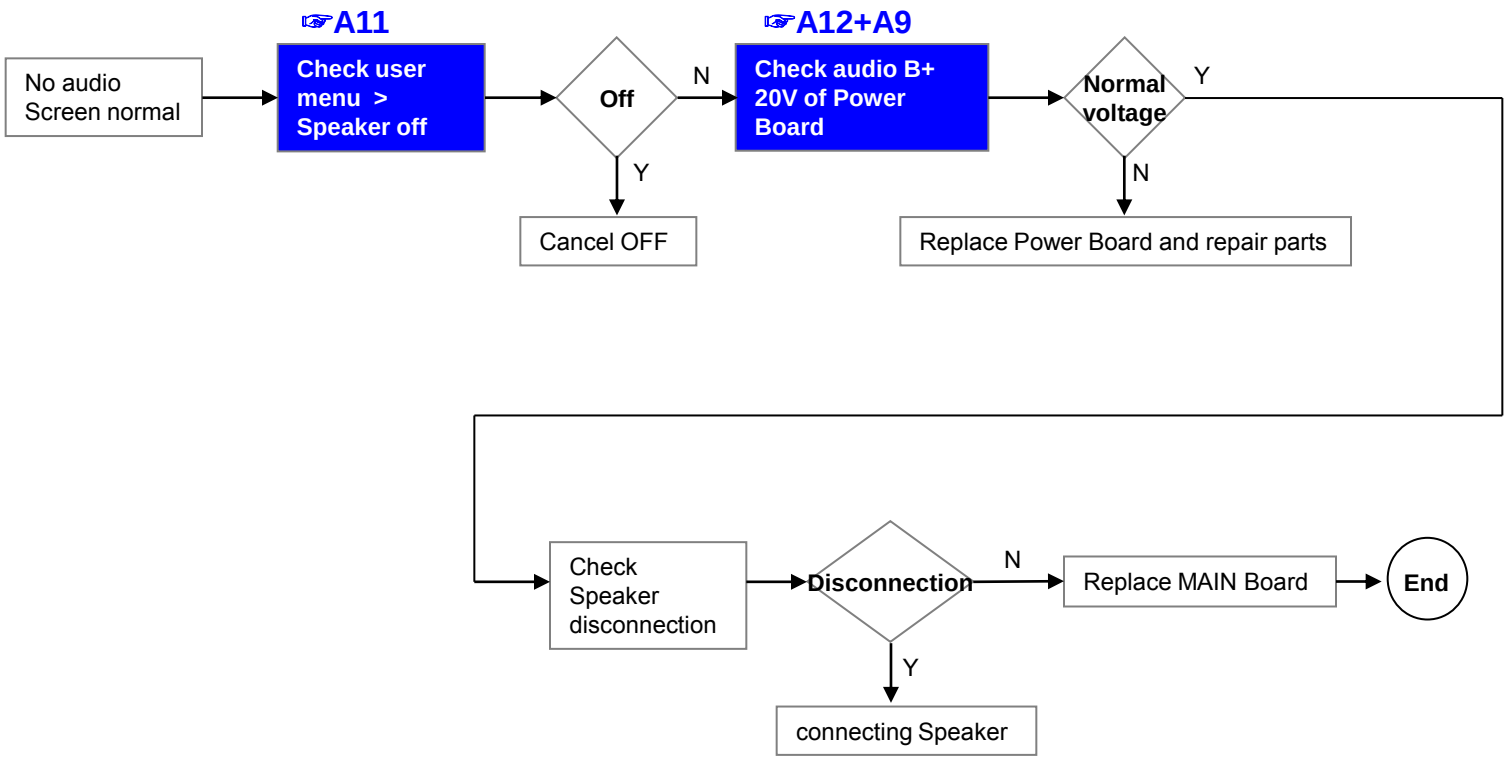
Status	Power off List	Explanation
Normal	"POWER_OFF_BY_REMOTE_KEY"	Power off by REMOTE CONTROL
	"POWER_OFF_BY_OFF_TIMER"	Power off by OFF TIMER
	"POWER_OFF_BY_SLEEP_TIMER"	Power off by SLEEP TIMER
	"POWER_OFF_BY_INSTOP"	Power off by INSTOP KEY
	"POWER_OFF_BY_AUTO_OFF"	Power off by AUTO OFF
	"POWER_OFF_BY_ON_TIMER"	Power off by ON TIMER
	"POWER_OFF_BY_RS232C"	Power off by RS232C
	"POWER_OFF_BY_RESREC"	Power off by Reservated Record
	"POWER_OFF_BY_RECEND"	Power off by End of Recording
	"POWER_OFF_BY_SW_DW"	Power off by S/W Download
	"POWER_OFF_BY_UNKNOWN"	Power off by unknown status except listed case
Abnormal	"POWEROFF_ABNORMAL1"	Power off by abnormal status except CPU trouble
	"POWEROFF_CPUABNORMAL"	Power off by CPU Abnormal

	Error symptom	B. Power error	Established date		
		Off when on, off while viewing, power auto on/off	Revised date		8/16

*** Please refer to the all cases which can be displayed on power off mode.**

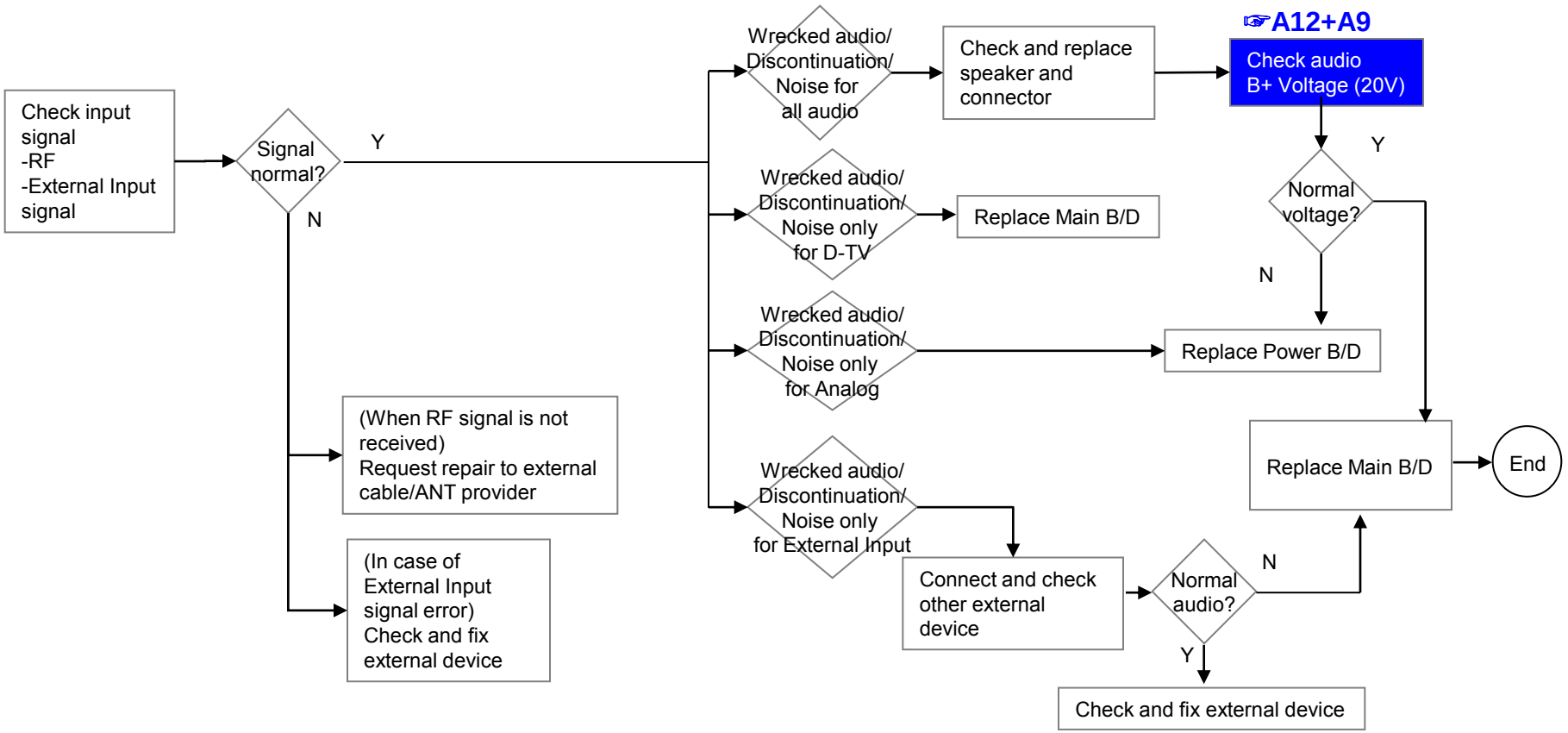
Power Off list	Explanation	Action contents
KEYTIMEOUT	Power off when TV is not turned off during a certain time RESULT : micom force to trigger TV power off. CONDITION : When pressing power key while power on/off status, CPU does not response within 8 seconds	Check & Change Main B/D
1SEC Power OFF	Almost the same as Power Off by KEYTIMEOUT. If there is no vaild communication Bet ween CPU and MICOM for more than 5 seconds, the MICOM switcheds off PSU and Records. Power off by 1SEC Power off. In this case, we don't have information where the malfunction exactly occurred. But in in indicates that CPU had stopped and rebooted.	Check & Change Main B/D
ACDET	In case of AC Off (It is normal when the power cord is unplugged.)	Normal
	If there are many ACDETs connected, Power Board is defective	Check & Change Power B/D
5V MNT	Power off by unstable AC power detect. RESULT : micom check the stable power. CONDITION : When AC on or DC on, stabilization check routine (Power Detect High Check) fail after multi power on.	Check & Change Power B/D
CPUABNORMAL	If the CPU attempts to reset in case of abnormal operation and Shut Down in case of failure.	Check & Change Main B/D
NO POLING	Power off when receiving no ack. RESULT : TV power off/on (Reboot) CONDITION : There is no I2C response from CPU for 15 seconds.	Check & Change Main B/D
CPUCMD	Power off by Main IC command.	Check & Change Main B/D
INV_ERROR	Power off by module error (OLED) CONDITION : OLED Module send signal to micom	Check & Change OLED Module
ONRF_FAIL	RESULT : Reboot, CONDITION : OLED module compensation is running but fails.	Check & Change OLED Module
PNWASHFAIL	Power off by panel noise wash function fail case.	Check & Change OLED Module
RESET	When Micom is reset by AC Off	Normal Case
KEY	Power off by Local key	
OFFTIMER	Power off by Off timer	
SLEEPTIMER	Power off by sleep timer	
NOSIG	Power off by No Signal	
FANSTOP	Power off by FAN operation stopped	
INSTOP	Power off by Instop Key	
AUTO OFF	Power off by auto off function	
RESREC	Power off by reserved recording	
RECEND	Power off when recording stops	
SWDOWN	Reboot by SW down load function	
UNKNOWN	No meaning (same as initial value)	
COMP_END	OLED threshold voltage degradation(Compensation) completes.	
PNWASHDONE	Power off by panel noise wash function complited. (OLED)	

	Error symptom	C. Audio error	Established date		
		No audio/ Normal video	Revised date		9/16



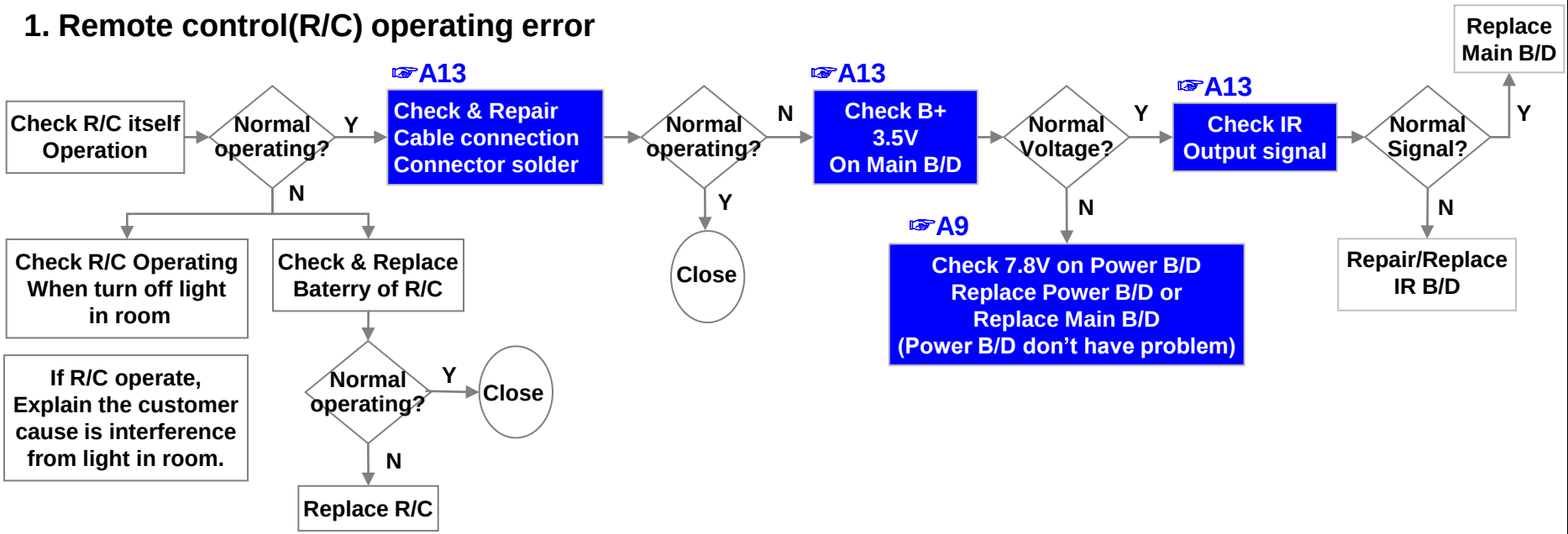
	Error symptom	C. Audio error	Established date		
		Wrecked audio/ discontinuation/noise	Revised date		10/16

→ abnormal audio/discontinuation/noise is same after "Check input signal" compared to No audio



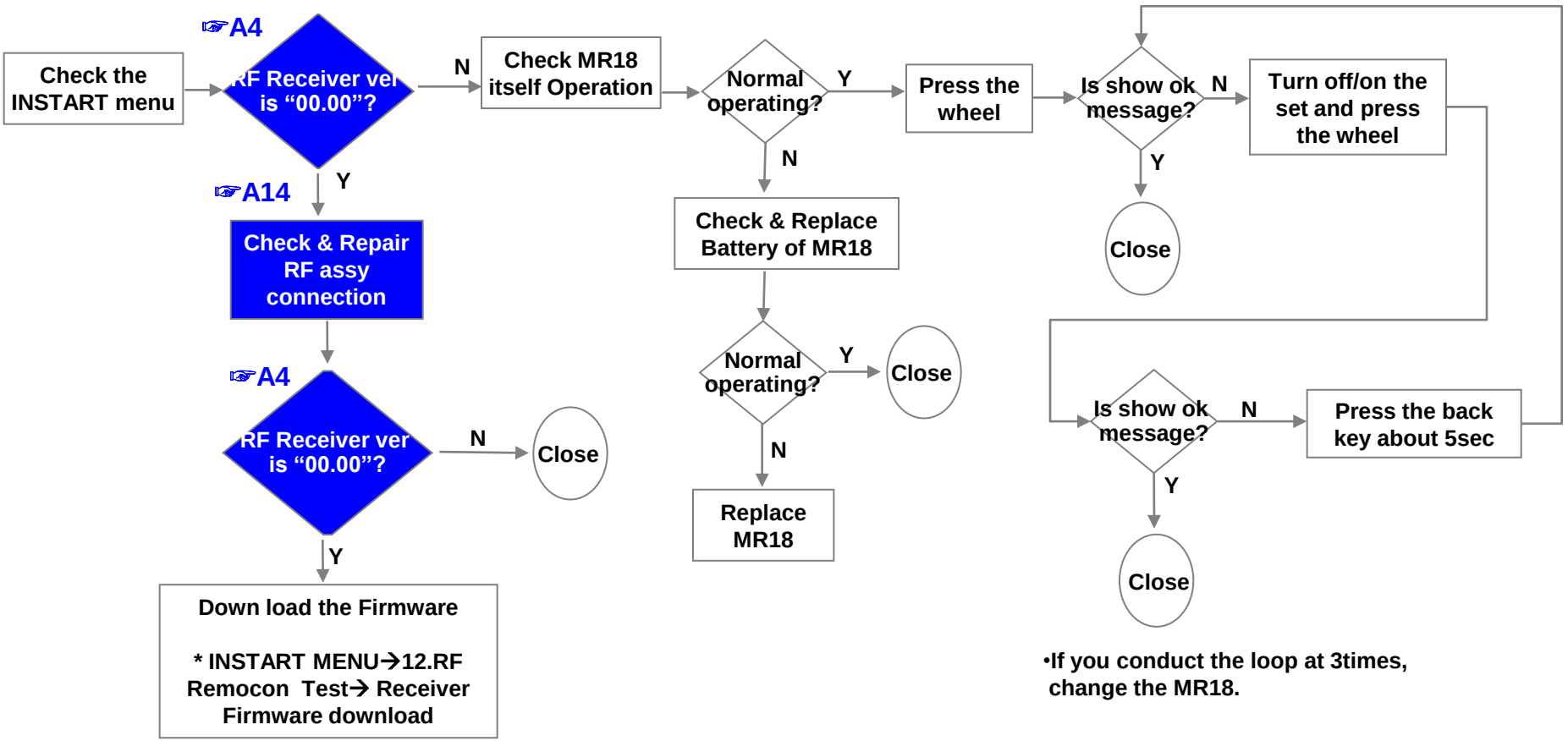
	Error symptom	D. Function error	Established date		
		Remote control & Local switch checking	Revised date		11/16

1. Remote control(R/C) operating error



	Error symptom	D. Function error	Established date		
		MR18 operating checking	Revised date		12/16

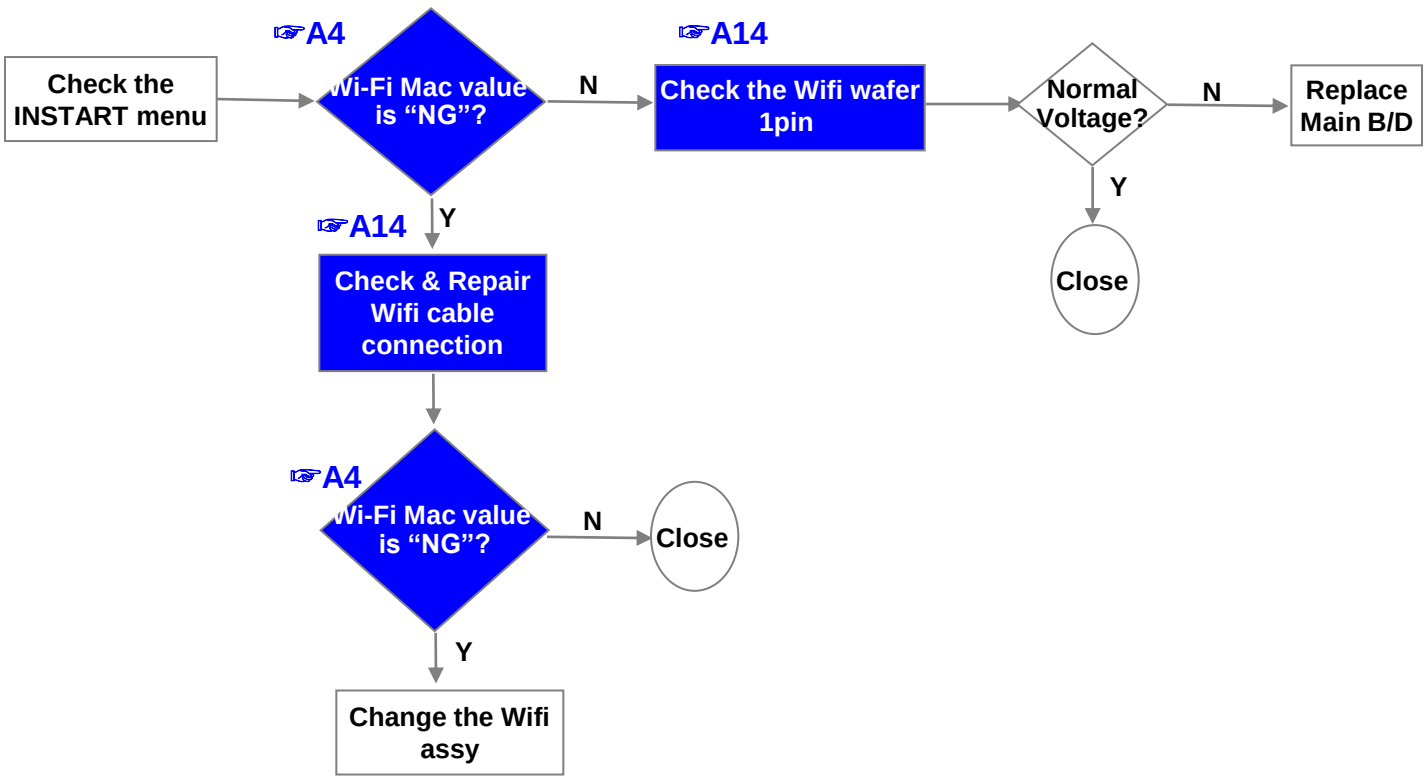
2. MR18(Magic Remocon) operating error



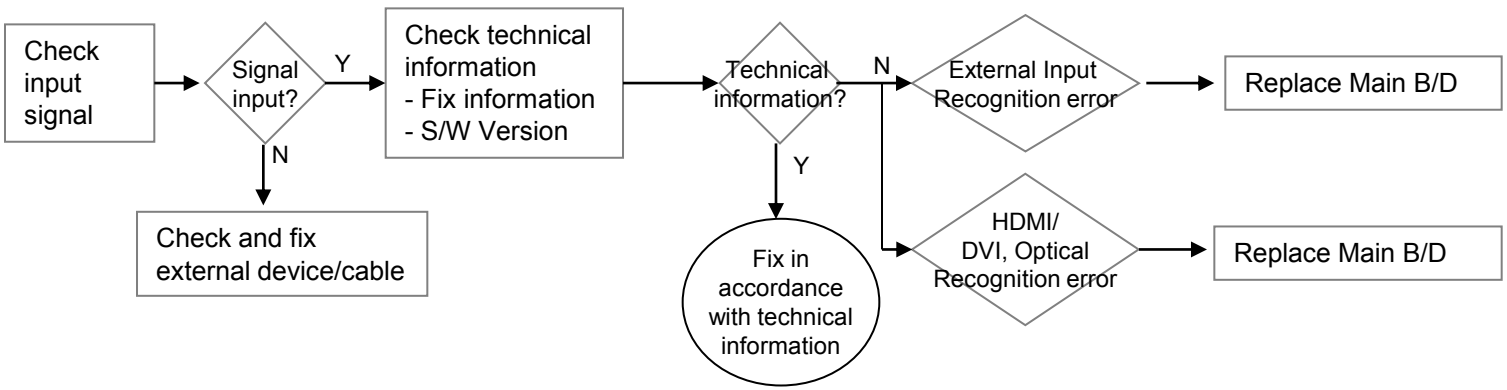
•If you conduct the loop at 3times, change the MR18.

	Error symptom	D. Function error	Established date		
		Wifi operating checking	Revised date		13/16

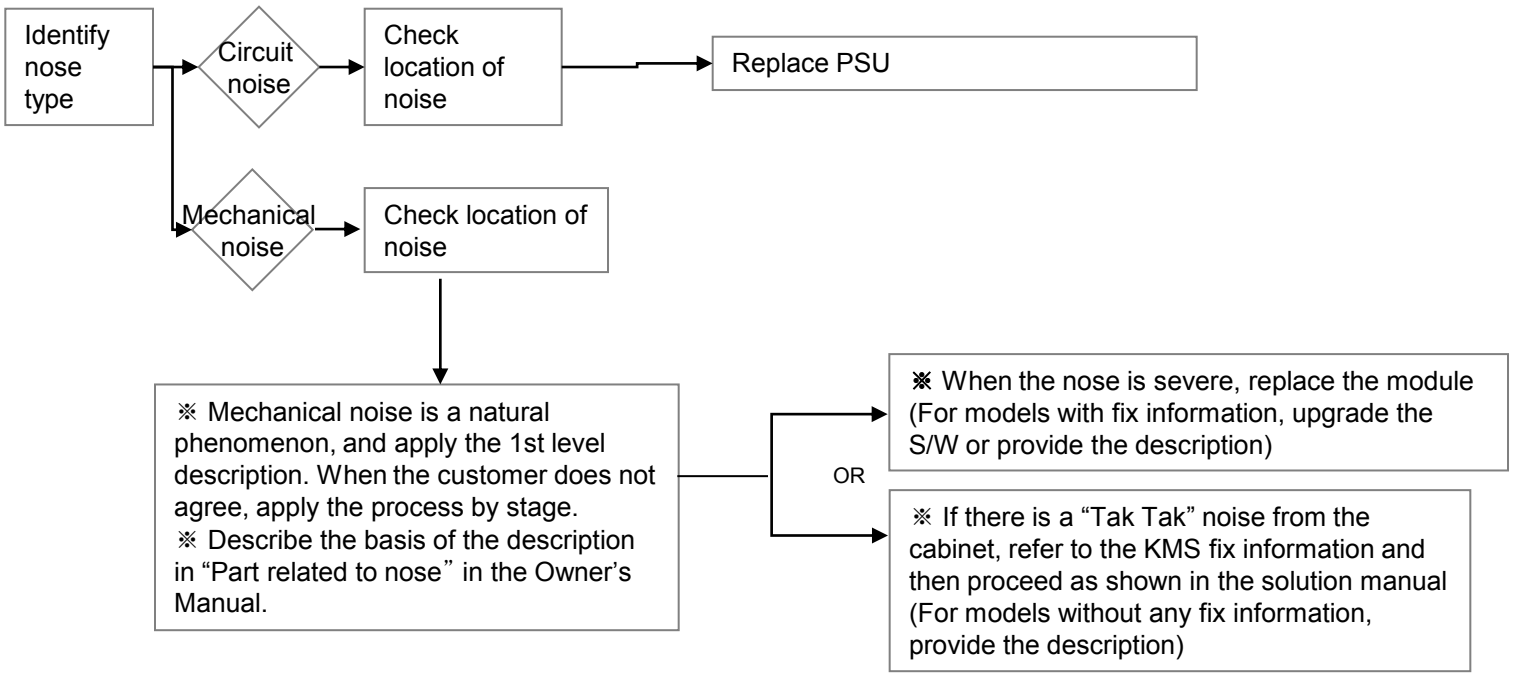
3.Wifi operating error



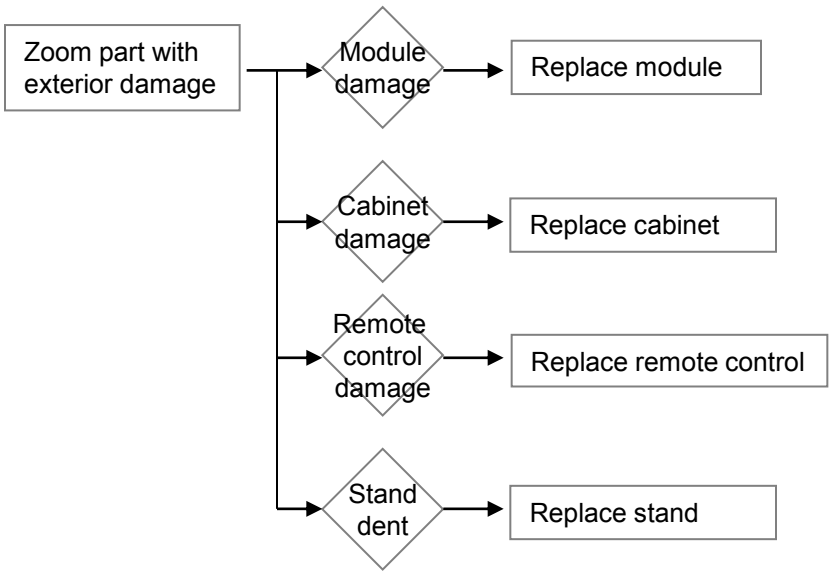
	Error symptom	D. Function error	Established date		
		External device recognition error	Revised date		14/16



	Error symptom	E. Noise	Established date		
		Circuit noise, mechanical noise	Revised date		15/16



	Error symptom	F. Exterior defect	Established date		
		Exterior defect	Revised date		16/16



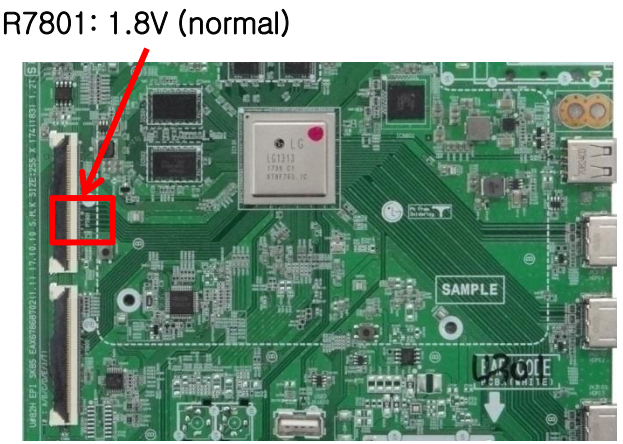
Contents of Standard Repair Process Detail Technical Manual

Contents of Standard Repair Process Detail Technical Manual

Continued from previous page

Standard Repair Process Detail Technical Manual

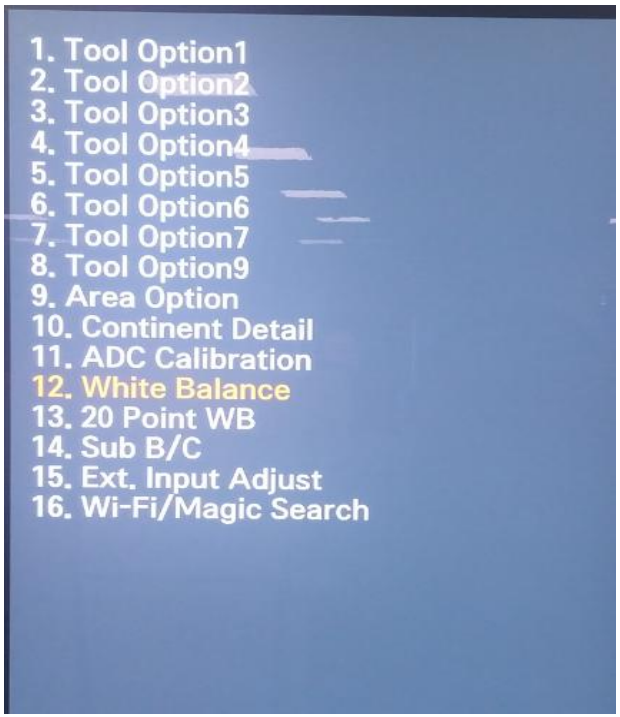
Error symptom	A. Video error_No video/Normal audio			
Content	Check EPI Lock			A1

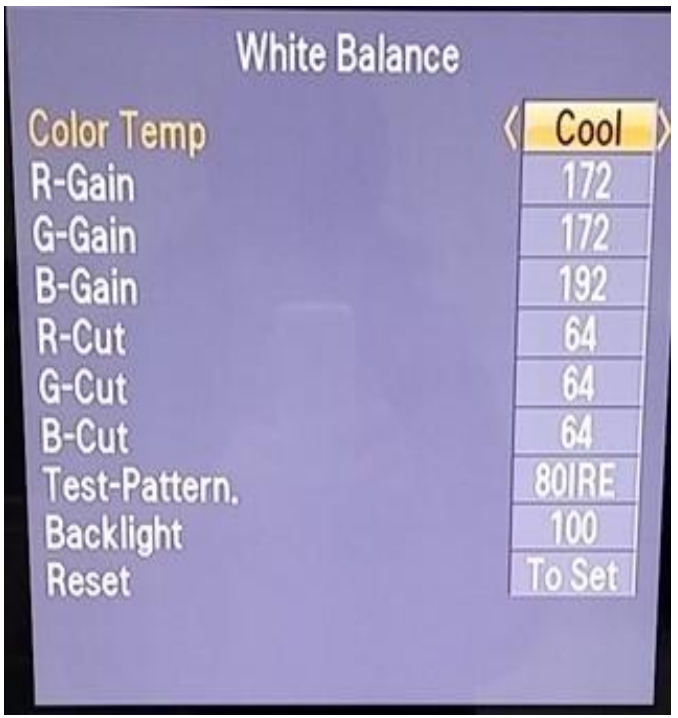


After Remove the Rear Cover, turning on the power and check with the naked eye,
Whether you can checking voltage of R7801

Standard Repair Process Detail Technical Manual

Error symptom	A. Video error_No video/Normal audio			
Content	Check White Balance value			A2





Entry method

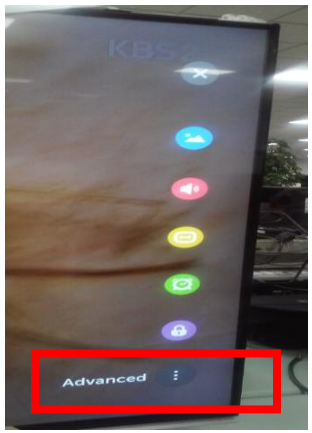
1. Press the ADJ button on the remote control for adjustment.

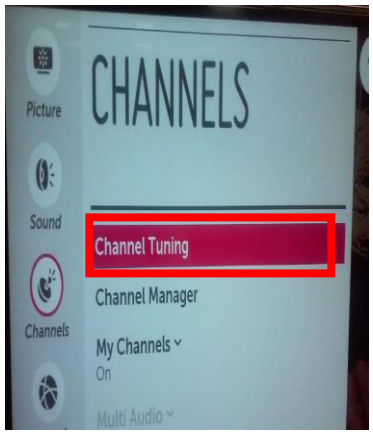
2. Enter into White Balance of item 12.

3. After recording the R, G, B (GAIN, Cut) value of Color Temp (Cool/Medium/Warm), re-enter the value after replacing the MAIN BOARD.

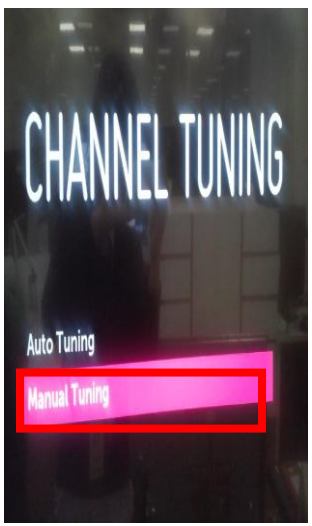
Standard Repair Process Detail Technical Manual

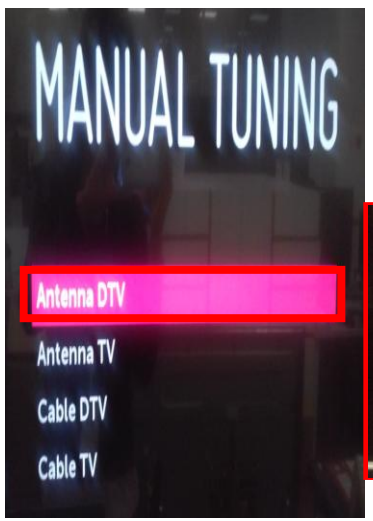
Error symptom	A. Video error_Video error, video lag/stop			
Content	TUNER input signal strength checking method			A3



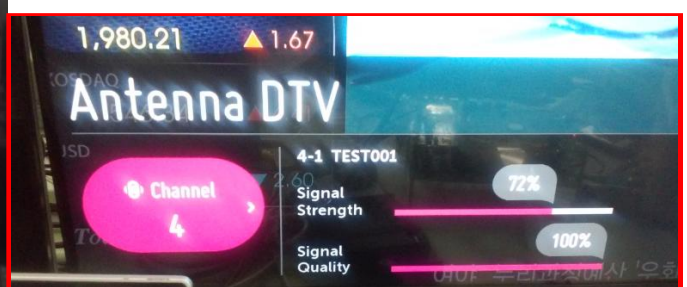


All Settings → Channels → Channel Tuning → Manual Tuning





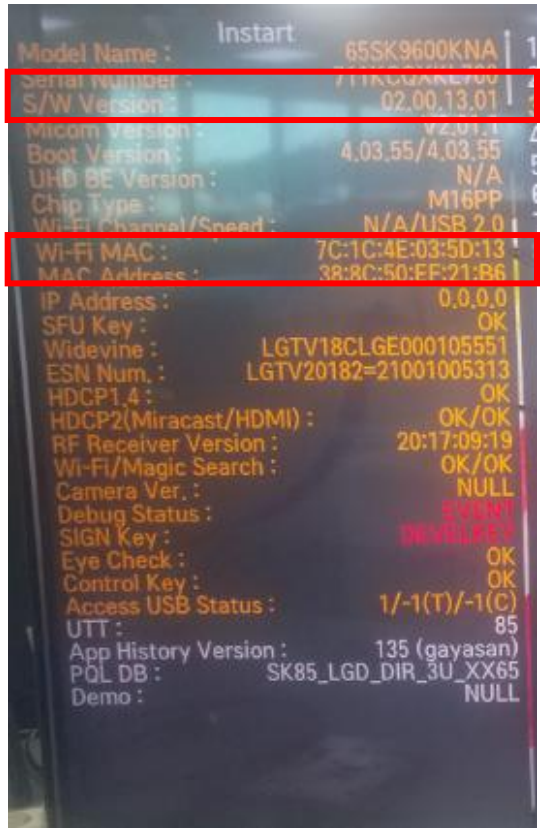
When the signal is strong, use the attenuator (-10dB, -15dB, -20dB etc.)



Standard Repair Process Detail Technical Manual

Error symptom	A. Video error_Video error, video lag/stop			
Content	TV Version checking method			A4

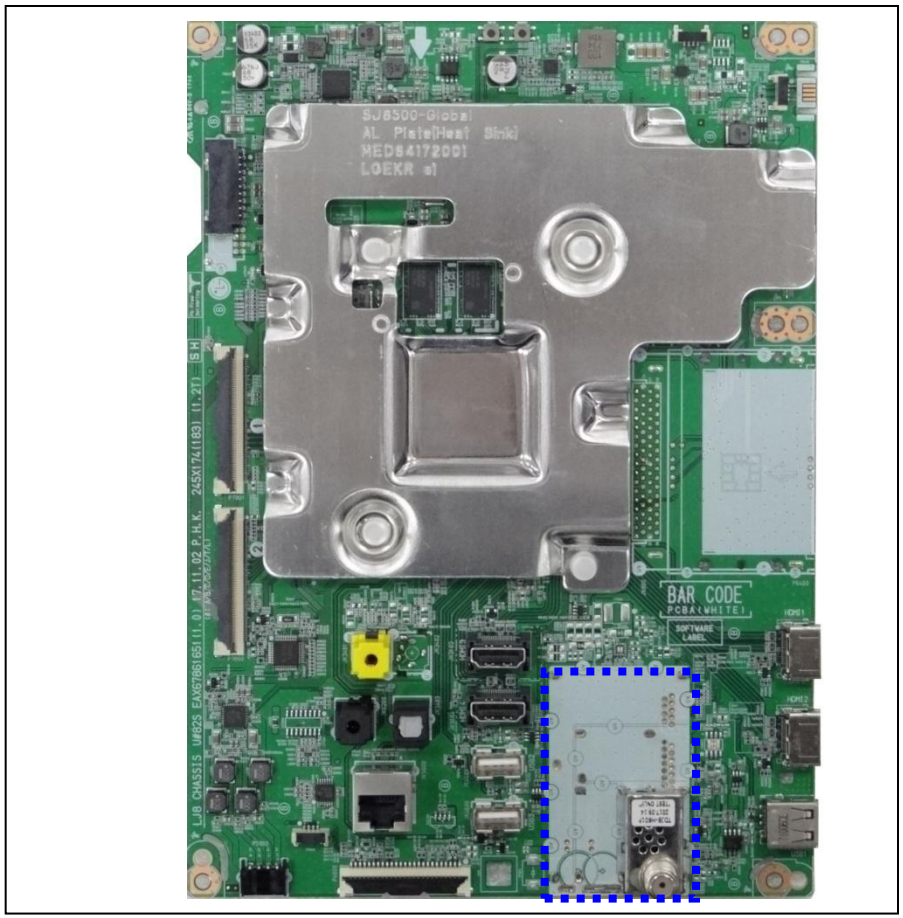
Version



Press the IN-START with the remote control for adjustment

Standard Repair Process Detail Technical Manual

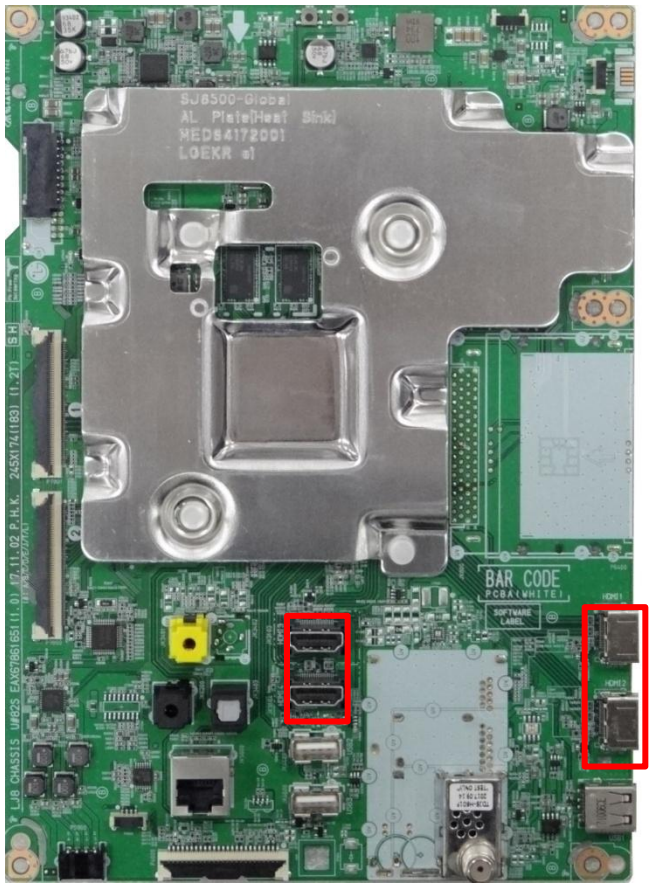
Error symptom	A. Video error_Video error, video lag/stop			
Content	TUNER checking part			A5



Checking method:
1. Check the signal strength or check whether the screen is normal when the external device is connected.
2. After measuring each voltage from power supply, finally replace the MAIN BOARD.

Standard Repair Process Detail Technical Manual

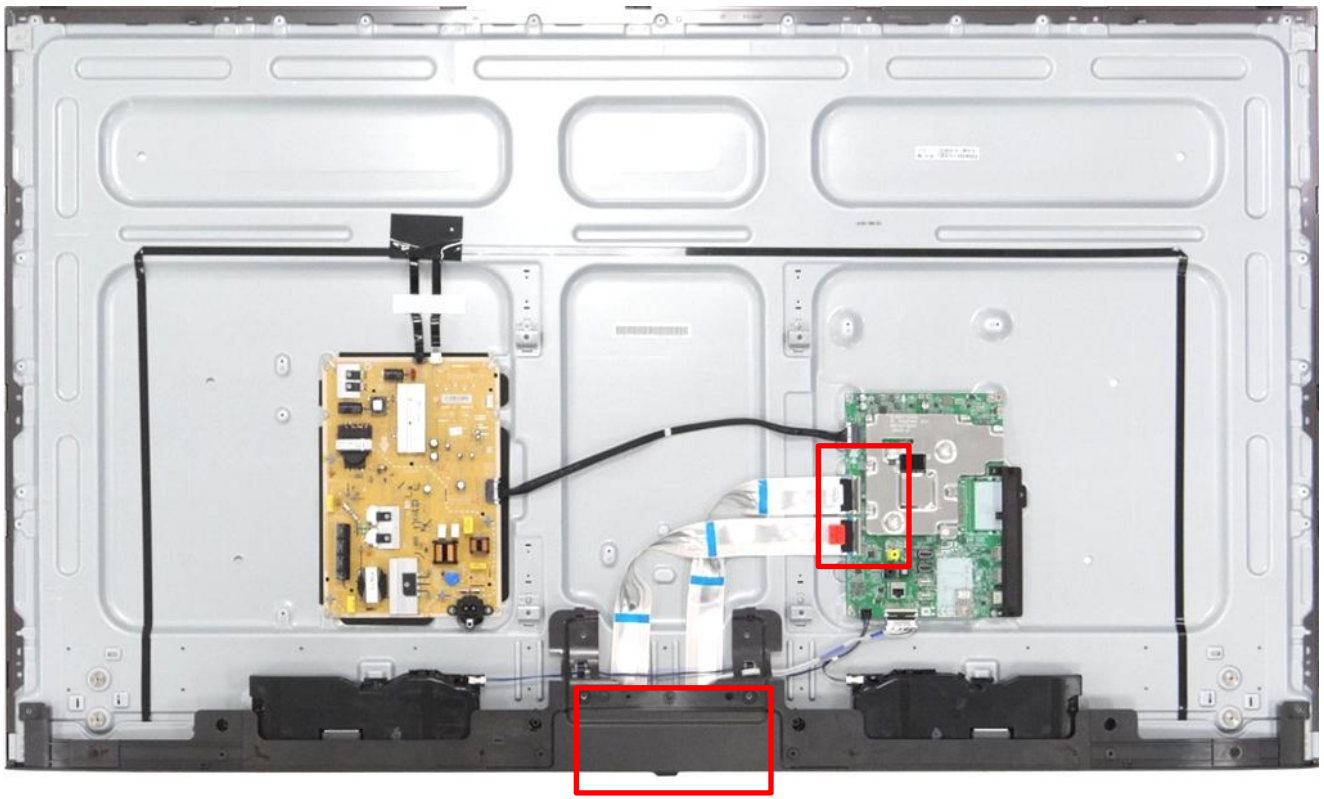
Error symptom	A. Video error _Vertical/Horizontal bar, residual image, light spot			
Content	TV Connection diagram			A6



As the part connecting to the external input, check the screen condition by signal

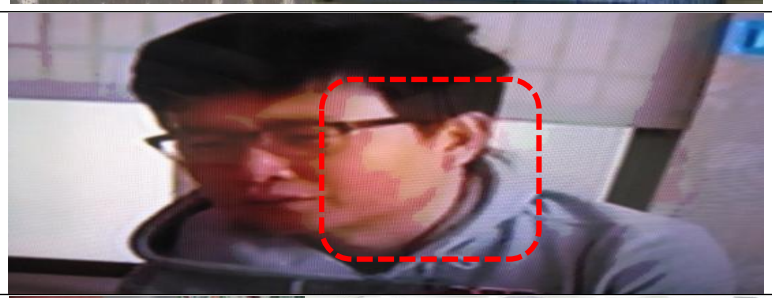
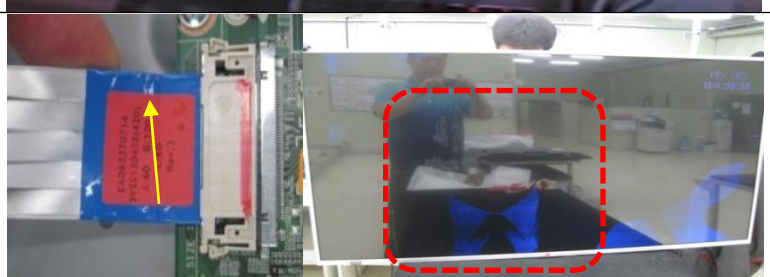
Standard Repair Process Detail Technical Manual

Error symptom	A. Video error_Color error			
Content	Check Link Cable (EPI) reconnection condition			A7

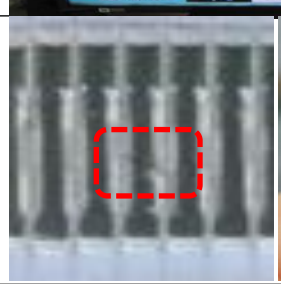
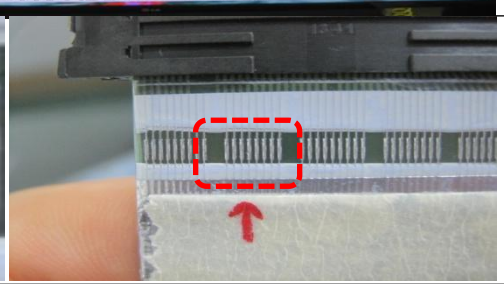


Check the contact condition of the Link Cable, especially dust or mis insertion.

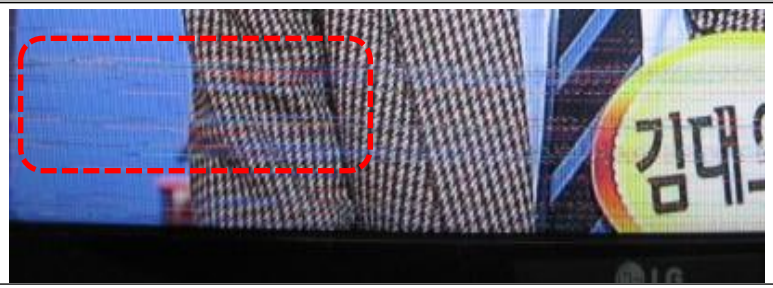
Appendix. Examples of Symptoms(Image error)

Item	Symptom Name	Cause	Symptom Image
CABLE	Color smear	Poor broken pin of FFC cable	
CABLE	R Color Excessive	Color is Excessive due to FFC Cable Contact.	
CABLE	Screen darkness	screen is dark due to poor contact due to disconnection of the FFC cable pin.	
CABLE	G Color Excessive	G color transient due to poor FFC cable connection	

Appendix. Examples of Symptoms(Image error)

Item	Symptom Name	Cause	Symptom Image
CABLE	Color spread	LVDS cable connection problem	
CABLE	Color spread	LVDS cable connection problem	
CABLE	Color spread	LVDS cable connection problem	
CABLE	Screen stop	Due to foreign substance withi nLVDS cable PIN	 

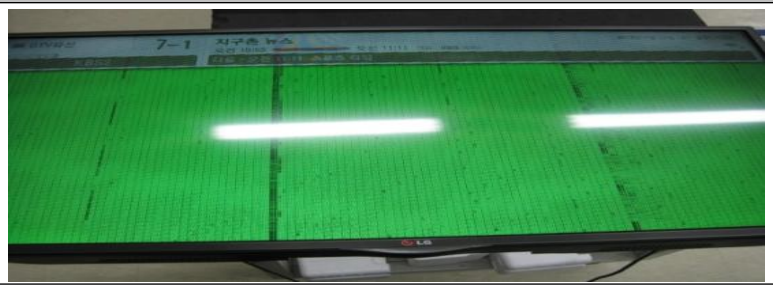
Appendix. Examples of Symptoms(Main)

Item	Symptom Name	Cause	Symptom Image
Main	Screen noise	Bit noise from horizontal screen	
Main	Screen noise	Broken screen due to Main IC problem	
Main	Dark picture	Dark left-side screen	
Main	Broken picture	Top/bottom screen part Picture problem due to tuner Inner side quality problem	

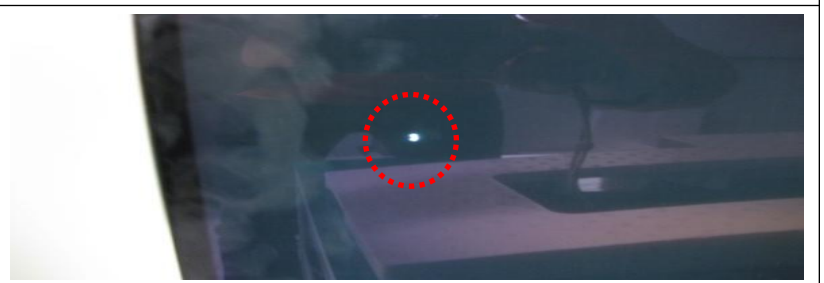
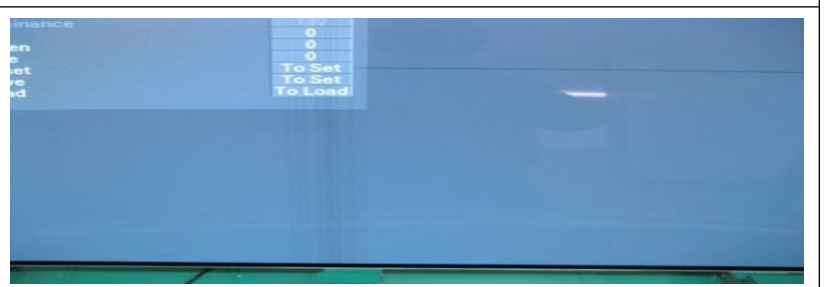
Appendix. Examples of Symptoms(Main)

Item	Symptom Name	Cause	Symptom Image
Main	Broken screen	Broken screen in a horizontal manner	
Main	Screen spread	Screen corner appears blurry	
Main	Color Spread	Color spread on the screen	
Main	Blurry Screen	Blurry picture on the screen	

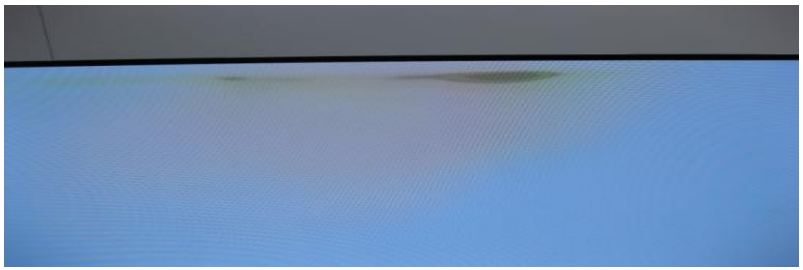
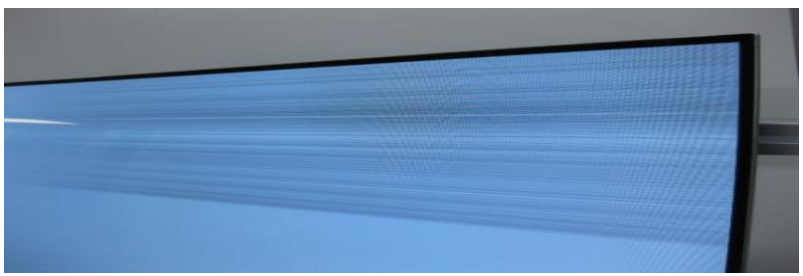
Appendix. Examples of Symptoms(Main)

Item	Symptom Name	Cause	Symptom Image
Main	Broken picture	No problem at the initial stage, G-color spread after 10 minutes	
Main	Right-side Screen problem	Right-side screen problem	
Main	LG logo Screen problem	Screen picture spread problem	
Main	Right-side picture problem	No problem at the initial stage. During Heat run, right-side picture problem	

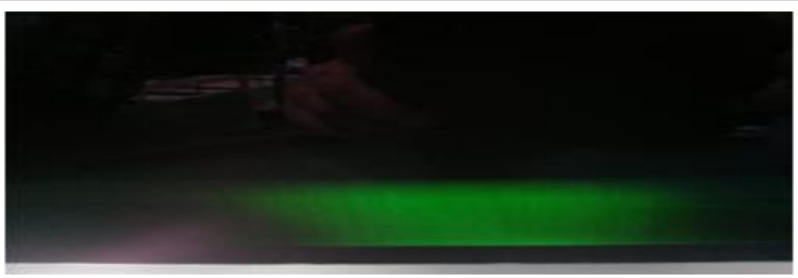
Appendix. Examples of Symptoms(Module)

Item	Symptom Name	Cause	Symptom Image
Module	Vertical bar	Un-repairable Cases In this case please exchange the module	 
Module	image broken	Source Driver issue	
Module	White dot	White dot cause by panel issue	
Module	Line Dim	Vertical Line cause by source drive IC	

Appendix. Examples of Symptoms(Module)

Item	Symptom Name	Cause	Symptom Image
Module	Burnt	Module burnt	
Module	Horizon line	Module has damaged	
Module	Line Defect	Module has damaged	
Module	Press damage	Un-repairable Cases In this case please exchange the module	

Appendix. Examples of Symptoms(Module)

Item	Symptom Name	Cause	Symptom Image
Module	Vertical bar	Vertical Bar cause by source drive IC	 
Module	Vertical Noise Brightness difference	Un-repairable Cases In this case please exchange the module	
Module	Green light	Compensation error when Power On/off	
Module	Color difference	Color difference between screen cause by compensation error	

Appendix. Examples of Symptoms(Module)

Item	Symptom Name	Cause	Symptom Image
Module	No image	Module has damaged (Can't fix it)	
Module	Burnt	Burnt (Can't fix it)	
Module	Mura	Screen Mura (Can't fix it)	

Appendix : Exchange Power Board (PSU)

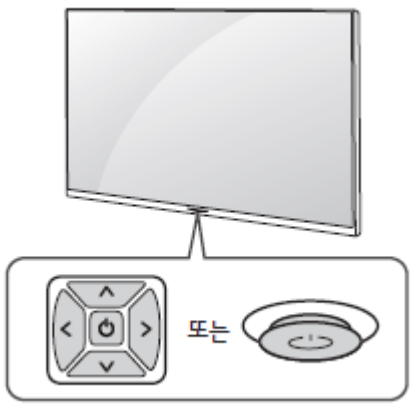
No Light

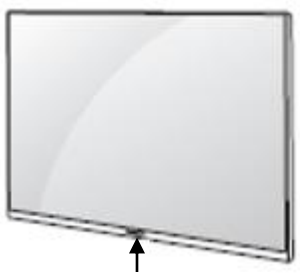
No picture/Sound Ok

Standard Repair Process Detail Technical Manual

Error symptom	B. Power error _No power			
Content	Check front display LED			A8

<A 타입>





ST-BY condition: On or Off
Power ON condition: Turn Off

Standard Repair Process Detail Technical Manual

Error symptom	B. Power error _No power			
Content	Check power input voltage and ST-BY 7.8V			A9

SET Model	Power P/N, Name
65SK80 LGD	EAY64868601, LGP65-18U6

Power Check Sequence

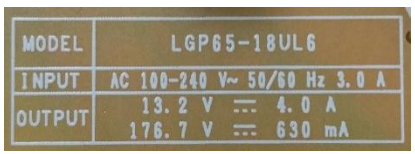
1. AC input Check : SK100 (100~240Vac)

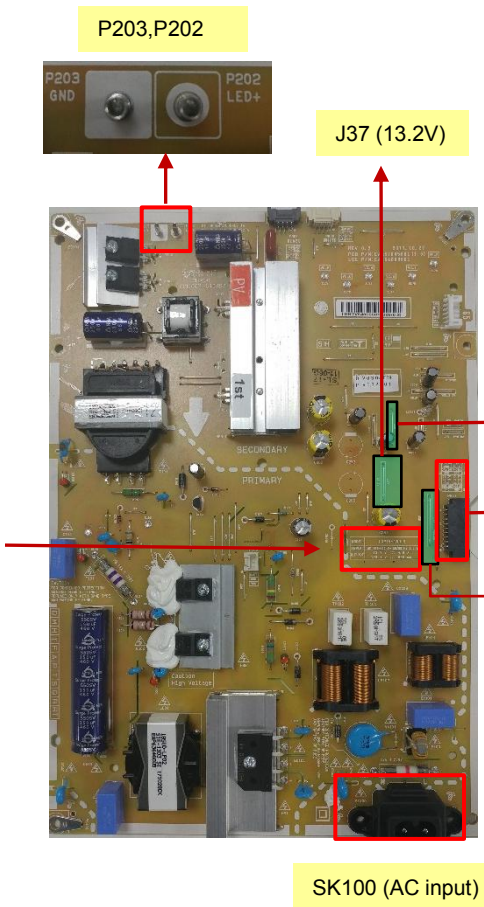
2. PWR-ON Check : J45
   - SET On : above 3V
   - SET St-by : 0V

3. DRV_ON Check : J35
   - SET On : above 3V
   - SET St-by : 0V

4. 13.2V DC Check : J3
   - SET On : 13.2V
   - SET St-by : 8.4V

Power Board
Voltage / Current





5. LED voltage Check : P202(LED+),P203(GND)

Min	Typ.	Max
159.03 V	176.7 V	194.37V

all condition meets, Power Board OK.

Standard Repair Process Detail Technical Manual

Error symptom	B. Power error _No power			
Content	Check power input voltage and ST-BY 7.8V			A10

SET Model	Power P/N, Name
55SK80 LGD	EAY64808601, LGP4955-18UL6

Power Check Sequence

1. AC input Check : SK100 (100~240Vac)

2. PWR-ON Check
   - SET On : above 3V
   - SET St-by : 0V

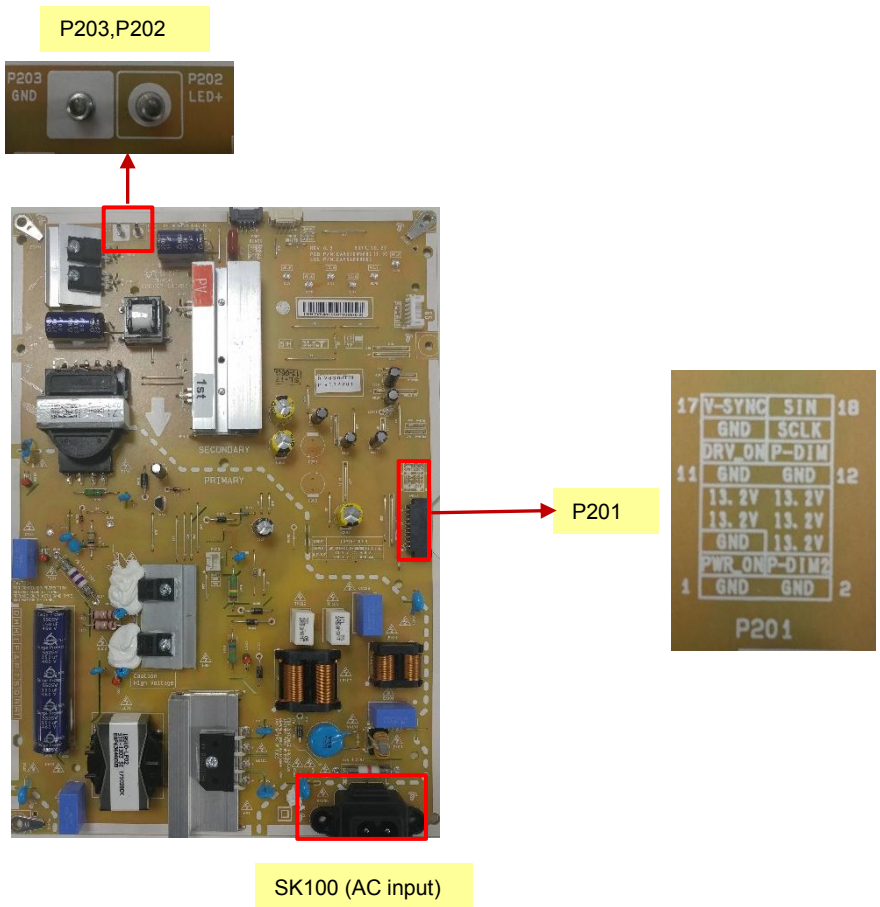
3. DRV_ON Check
   - SET On : above 3V
   - SET St-by : 0V

4. 13.2V DC Check
   - SET On : 13.2V
   - SET St-by : 7.8V

5. LED voltage Check : P202(LED+),P203(GND)

Min	Typ.	Max
117 V	130 V	143V

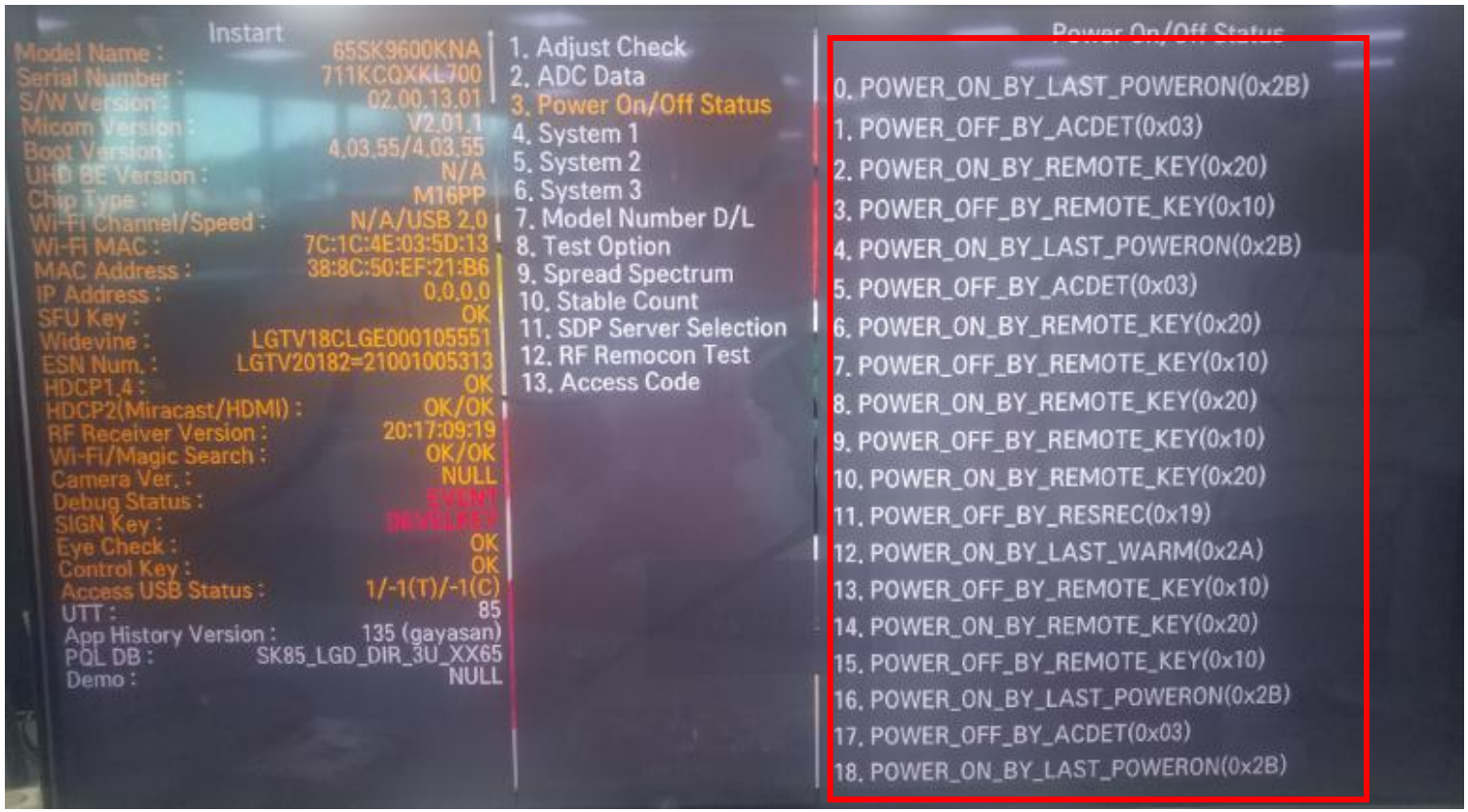
all condition meets, Power Board OK.



Standard Repair Process Detail Technical Manual

Error symptom	B. Power error _Off when on, off whiling viewing			
Content	POWER OFF MODE checking method			A11

<ALL MODELS>

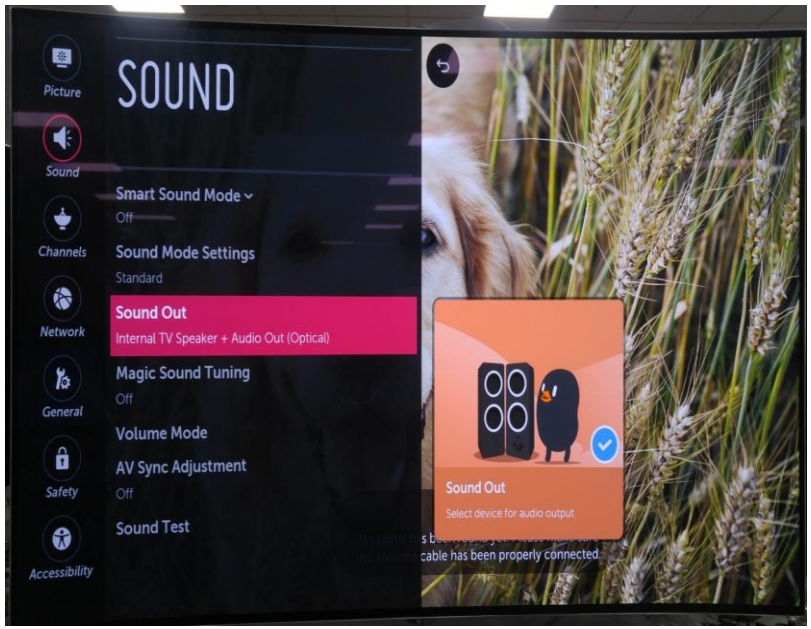


Entry method

1. Press the IN-START button of the remote control for adjustment

2. Check the entry into adjustment item 3 (Power On/Off Status)

Error symptom	C. Audio error_No audio/Normal video			
Content	Checking method in menu when there is no audio			A12



Checking method

1. Press the Setting button on the remote control
2. Select the Sound function of the Menu
3. Select the Sound Out
4. Select TV Speaker`

Standard Repair Process Detail Technical Manual

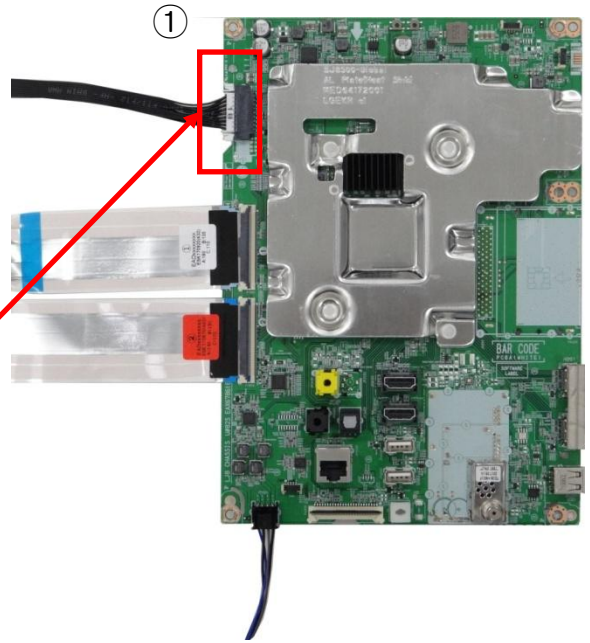
Error symptom	C. Audio error_No audio/Normal video			
Content	Voltage and speaker checking method when there is no audio			A13

Output	Voltage	Current
13.2V / 55”	12.54V ~ 13.86V	3.8A (0.1~3.6A)
13.2V / 49”	12.54V ~ 13.86V	3.6A (0.1~3.6A)

Output	Inch	Voltage	Typycal
VLED	65	159.03~194.37 V	176.7V
	55	105.84V~129.36V	122.89V
	49	117.0V~143.0V	135.85V

Checking method without Audio

P201			
Type : SMAW200-H18S5K Maker : YEONHO			
Pin No.	Signal	Pin No.	Signal
1	GND	2	GND
3	PWR_ON	4	P-DIM2
5	GND	6	13.2V
7	13.2V	8	13.2V
9	13.2V	10	13.2V
11	GND	12	GND
13	DRV_ON	14	P-DIM
15	GND	16	SCLK
17	V-SYNC	18	SIN



1.Check the contact condition of or 13.2V connector of Main Board

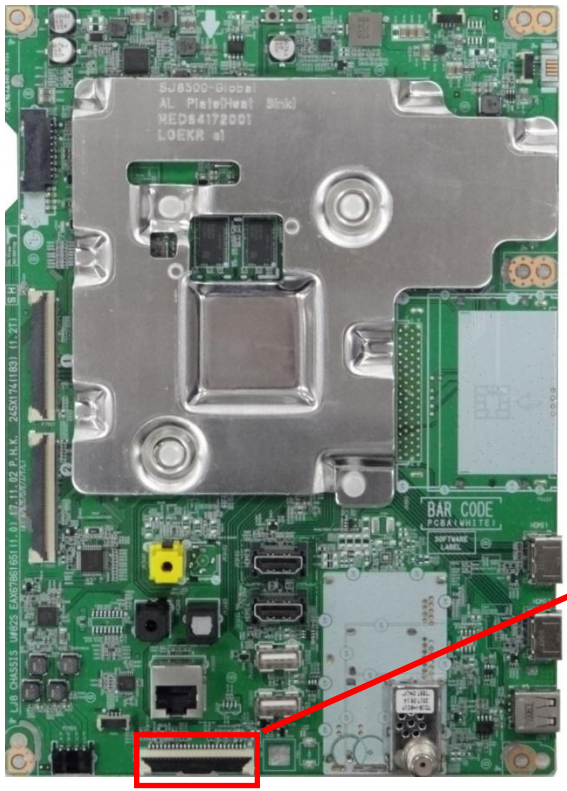
① Checking voltage 20V of Main Board

② Checking voltage 20V of Power Board

③ Connect the tester RX1 to the speaker terminal and if you hear the Chik Chik sound when you touch the GND and output terminal, the speaker is normal.

① IR & EYE Sensor

③



②

Pin	Pin name
1	+3.5V_WIFI
2	WIFI_DM
3	WIFI_DP
4	GND
5	WOL/WIFI_PWR_ON
6	+3.5V_WIFI
7	RESET
8	GND
9	BT_WAKE_UP_DEVICE
10	BT_WAKE_UP_HOST
11	GND
12	No Connection
13	No Connection
14	No Connection
15	No Connection
16	EYE_SDA
17	EYE_SCL
18	GND
19	IR
20	LED_R
21	GND
22	3.5V
23	KEY2
24	KEY1
25	GND

Checking order to check remote control

Checking order

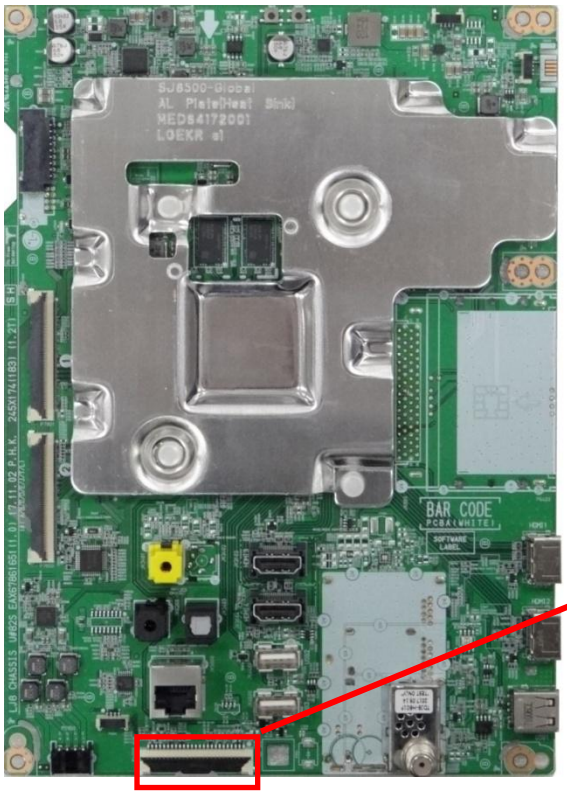
1, 2. Check IR cable condition between IR & Main board.
3. Check the st-by 3.5V on the terminal 4

Standard Repair Process Detail Technical Manual

Error symptom	D. Function error			
Content	Motion remote & wifi operation checking method			A15

① Wifi & BT Front

Wifi & BT Rear



③

②

Pin	Pin name
1	+3.5V_WIFI
2	WIFI_DM
3	WIFI_DP
4	GND
5	WOL/WIFI_PWR_ON
6	+3.5V_WIFI
7	RESET
8	GND
9	BT_WAKE_UP_DEVICE
10	BT_WAKE_UP_HOST
11	GND
12	No Connection
13	No Connection
14	No Connection
15	No Connection
16	EYE_SDA
17	EYE_SCL
18	GND
19	IR
20	LED_R
21	GND
22	3.5V
23	KEY2
24	KEY1
25	GND

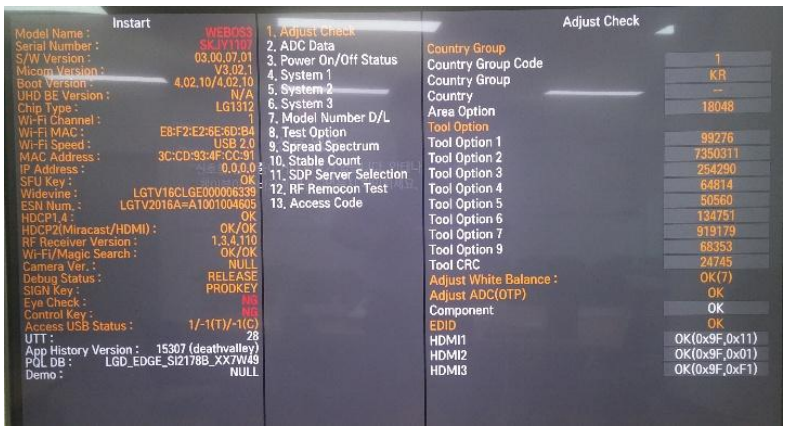
Checking order to check motion remote/wifi

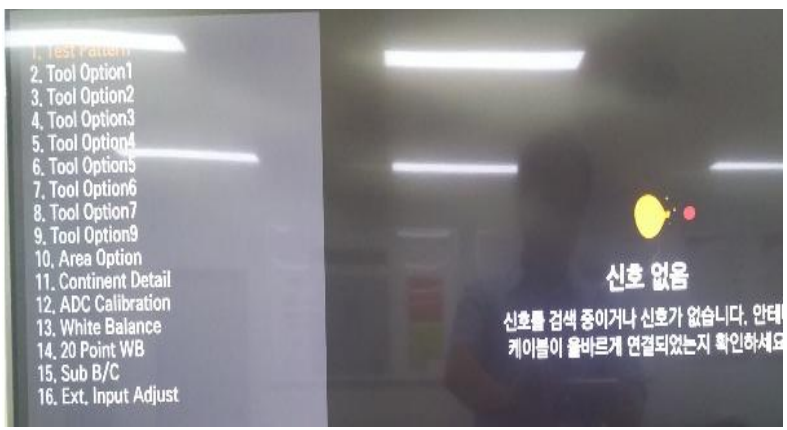
Checking order

1. Check IR cable condition between IR & Main board.
2. Check the 3.5V on the terminal 1

Error symptom	D. Function error			
Content	How to use the Service remote control			A16

1. How to access the remote control





Error symptom	D. Function error			
Content	How to use the Service remote control			A17

2. Remote control part definition

POWER	Power On/Off
ETC (Added Function)	[ETC] Each time pressing the KEY button, Mode gets changed to ETC and P-ONLY each time All KEY function [PIP PR-][PIP PR+][SWAP] [PIP INPUT][DVI] KEY Function
P-ONLY (Added Function)	Changed to factory mode All KEY function &[INFO][STILL][HDMI HOT][USB HOT][HDMI4] KEY Action
INPUT	Change to the external device mode
ARC	Change in the order of 16:9=>Zoom1=>Zoom2=>Cinema Zoom=>Aucto Screen=>4:3=>16:9
PSM	Changes in the order of Bright Picture=>Easy Picture=>Cinema=>Spots=>Game=> Custom PIcture1=>Custom Picture2=>Bright Picture
SSM (Added Function)	Standard(user)=>music=>cinema=>sports=>game=>standard(user)
PIP	Picture In Picture is activated
TEXT	Access to the Power Only mode
CAP	Broadcasting caption(on/off)
MPX	Stereo mode (mono, stereo, foreign language) access
	Used when in factory mode
Simplink (Added Function)	Access to the Simplink-connected device
EYE	Digital EYE function ON/OFF For some Model, access to the Test Pattern
TILT	Used for screen tilting change (Access to the old PDP control mode)

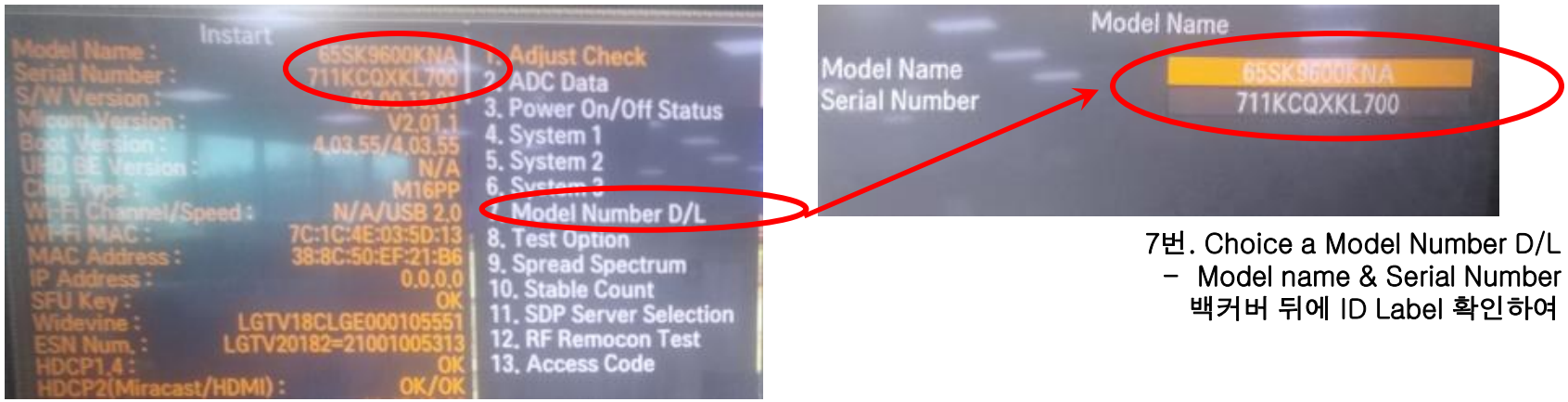
B-TOOTH (Added function)	Connected to Blue-Tooth
IN-START	Model Nam ex) 42PG60D-NA Current Model Name S/W Version ex) V03.11.0 Current S/W version MICOM Version ex) V3.05.0 current Mi-Com version UTT ex) User TV total usage time
ADJ	POWER OFF STATUS ex) Shows power-off status Test Pattern (Off=>White=>Red=>Green=>Blue=>Black=>Pattern=>Off) Change
X-STUDIO (Added function)	HDD,USB, external device's HDD screen is activated
MENU	User function gets activated
EXIT	Exit from the current mode
TIME SHIFT (Added function)	Moves forward/backward of recorded contents
MUTE	Mute function (0 Volume)
IN-STOP	SET to factory mode
VOL + -	Volume Up/Down
CH + -	Channel Up/Down
AV1,2,3 (Added function)	Connects to external input 1,2,3
COMP1,2 (Added function)	Connects to Component 1,2
HDMI1,2,3,4 (Add function)	Connects to HDMI 1,2,3,4
DVI (Add function)	Connects to DVI

Standard Repair Process Detail Technical Manual

Error symptom	E. Etc			
Content	After Changing Main Board, Check list			A19

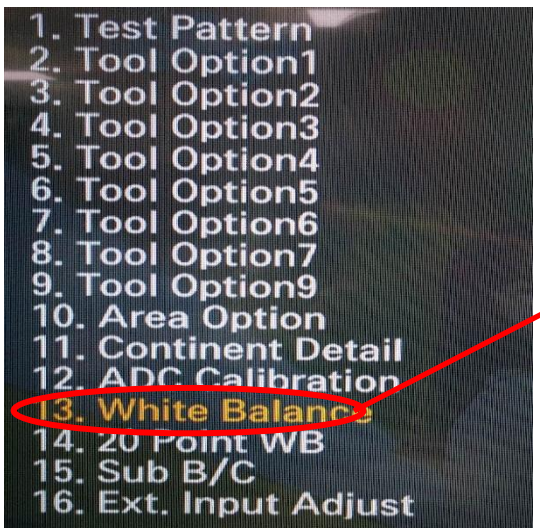
After Changing Main Board, Check list(Model Number D/L, White Balance)

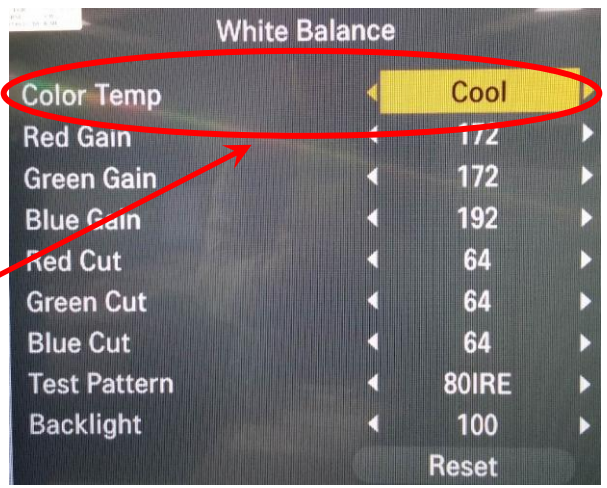
1. Go to Instart button of Operation remote



7번. Choice a Model Number D/L
- Model name & Serial Number
  백커버 뒤에 ID Label 확인하여 입력한다.

2. Go to ADJ button of Operation remote.

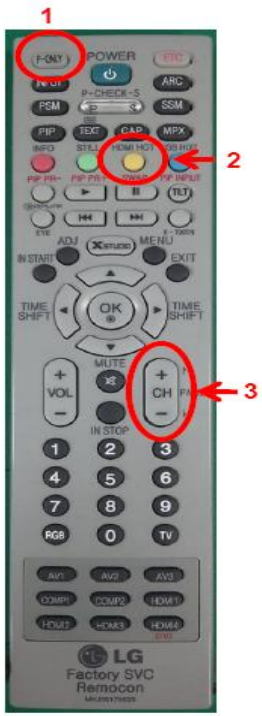


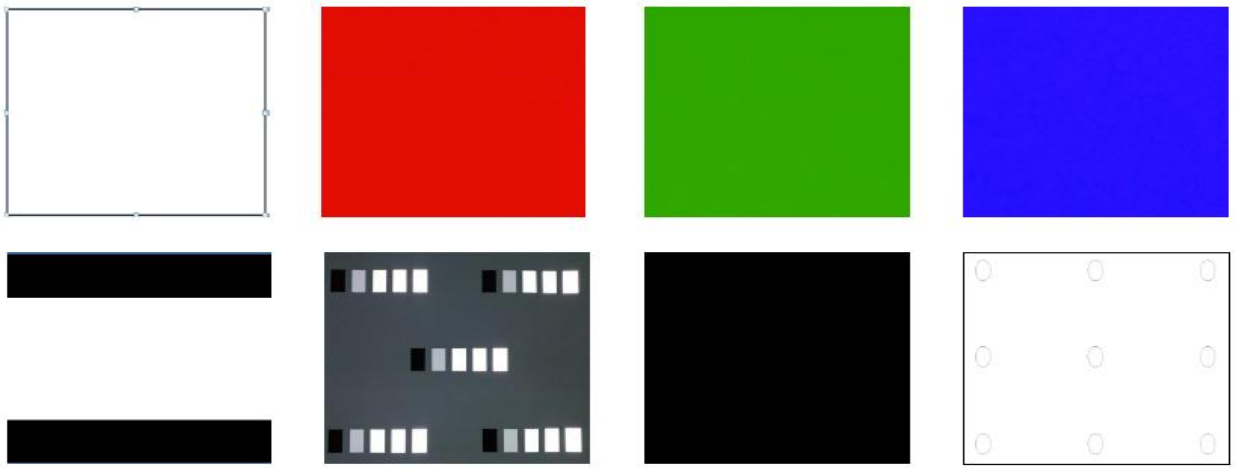


13번. White Balance로 진입
- 색온도의 R, G, B (GAIN, Cut) 값을
  기록한 후 메인보드 교체

Standard Repair Process Detail Technical Manual

Error symptom	E. Etc			
Content	Adjustment Test pattern			A20





Press the P-ONLY → HDMI HOT → CH + or -

You can view 11 types of patterns using the CH+ or - key

Checking item : 1. Defective pixel 2. Residual image 3. MODULE error (ADD-BAR,SCAN BAR..)
4.Video error (Classification of MODULE or Main-B/D!)

Smart JIG Power Diagnosis Muitl Gender Guide

(P/N : RAD32507801)

(P/N : RAD33187801)

Power Board Muitl Gender JIG Diagram (P/N: RAD33187801)

<Defect diagnosis : Power Board ⟷ Main Board>

15Y (LF/UF Series)

16Y (OLED B6)

15Y (OLED)

28Pin

24Pin

24Pin

24Pin

NC

18Pin

24Pin

16Y (OLED)

24Pin

13Y/14Y

28Pin

17Y/18Y (OLED)

24Pin

12Y

17/18Y W7 B8 C8 E8 G8 W8

24Pin

18Y 32LK61/32LK62 43/49LK61

18Y SK80/UK89 SK85/SK96 SK95/SK99

18Y UK63/UK64 UK65/UK7050

16Y/17Y/18Y (UH/UJ/UK SK)

18Pin

18Y UK74 UK75 UK77 UK78 SK79

28Pin

12Pin

12Pin

28Pin

28Pin

Includes 49UJ63

17Y/18Y (SJ/UJ/UK/SK)

16/18Y (UH/UK)

16Y/17Y/18Y (LH/LJ/LK)

16Y/17Y (UH/SJ)

16Y (UH)

Power Board Muitl Gender JIG Diagnostic model List

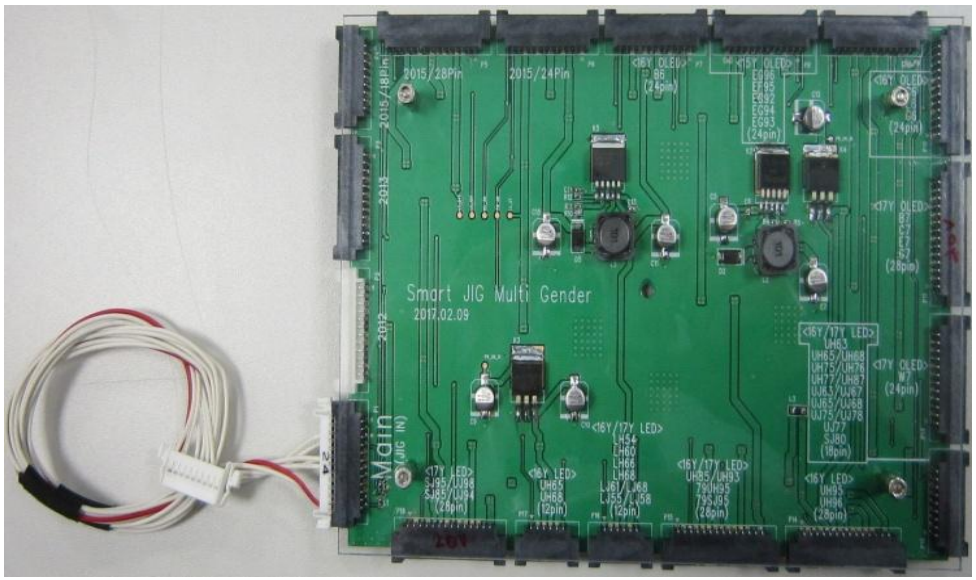
Existing 12Y, 13Y, 14Y, 15Y LED models included
15Y, 16Y, 17Y/18Y OLED, 16/17/18 Y LED model Power diagnosis function newly added

<15Y/16Y/17Y/18Y OLED Model, 16Y/17Y/18Y LED Model>

Year	Product	Model
‘15	OLED	EG92/EG93/EG94 EG96 EF95
‘16	OLED	B6, C6 E6, G6
	LED	UH95/UH96 UH85/UH93 UH77/UH87 UH75/UH76 UH65/UH68 LH68, LH66, LH60,LH54
‘17	OLED	B7, C7 E7, G7 W7
‘17	LED	SJ95/UJ98 SJ85/UJ94 SJ80, UJ77 UJ75/UJ78 UJ65/UJ68 UJ63/UJ67 LJ61/LJ68 LJ55/LJ58
‘18	LED	SK80/SK85/SK95 UK78/UK75/UK77/SK79 UK63/UK64/UK65/UK7050 32LK61/62, 43/49LK61
‘18	OLED	B8, C8, E8 G8, W8

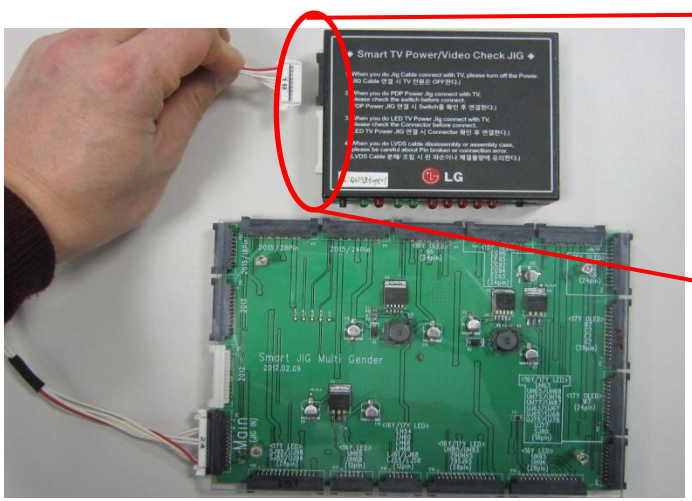
Power Board Muitl Gender How to Connect

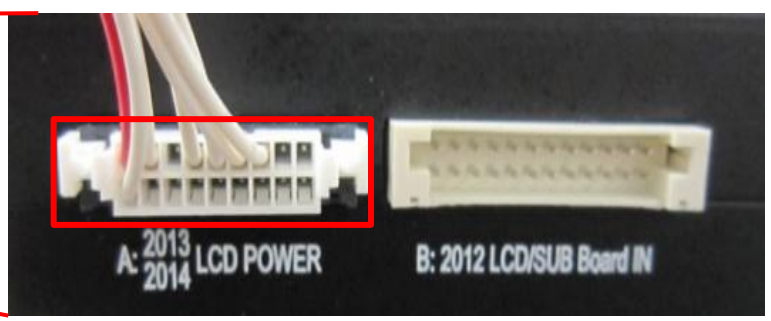
1



▶ Power Board Muitl Gender JIG

2



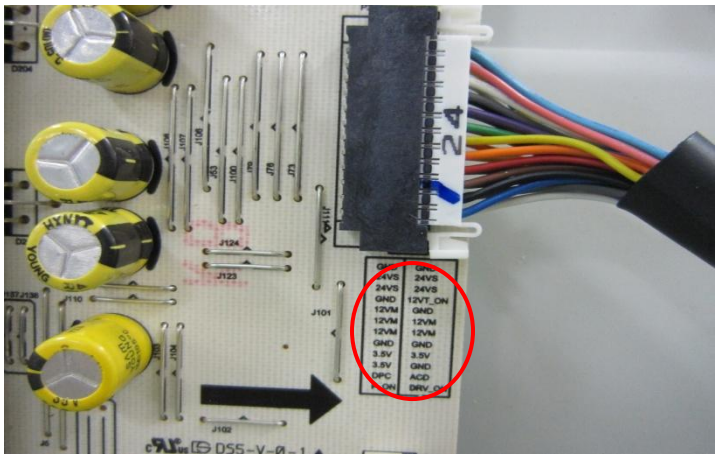


"A: 2013 / 2014 LCD POWER"

▶ Connect the Muiti Gender to the connector (black) as shown in picture 2 of the Smart JIG.

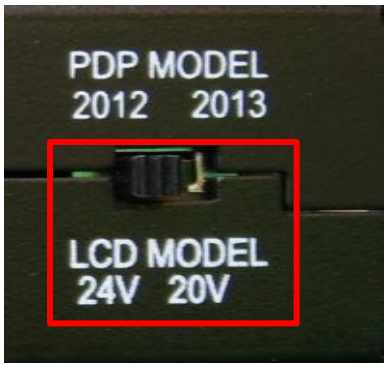
Smart Jig Voltage Setting

1



▶ Check power board voltage.

2



▶ Switch the product S/W in JIG to LCD.

▶ LCD MODEL Check the power voltage and switch to the correct voltage.

※ Note on set up

(The correct power diagnosis can be made only if it is set correctly.)

- 24V Power Board : Change the switch to 24V of Smart Jig Voltage

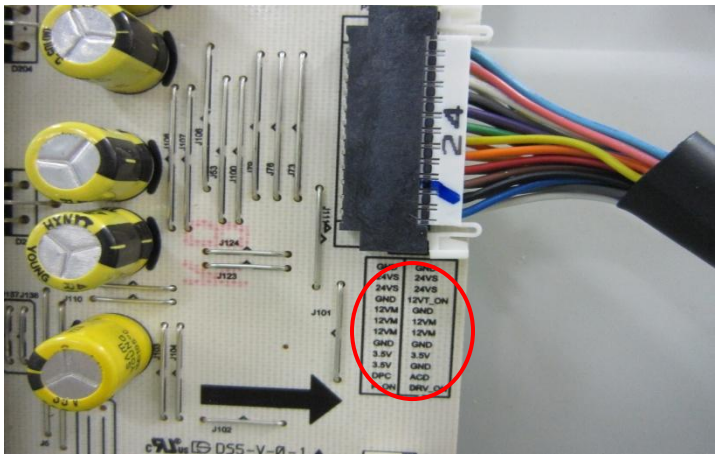
- 20V Power Board : Change the switch to 24V of Smart Jig Voltage

- 13.2V/18V Power Board : Change the switch to 24V of Smart Jig Voltage

Power B/D		Smart Jig Voltage Switch
24V	→	24V
20V	→	20V
13.2V/18V	→	24V

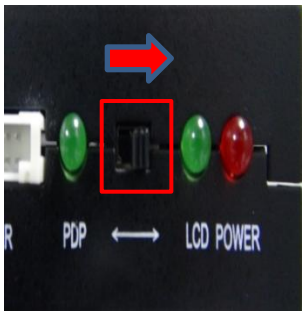
`15Y OLED(EG96,EF95,EG92,EG93,EG94) Power Board Diagnostic method (1)

1



▶ Check power board voltage.

2

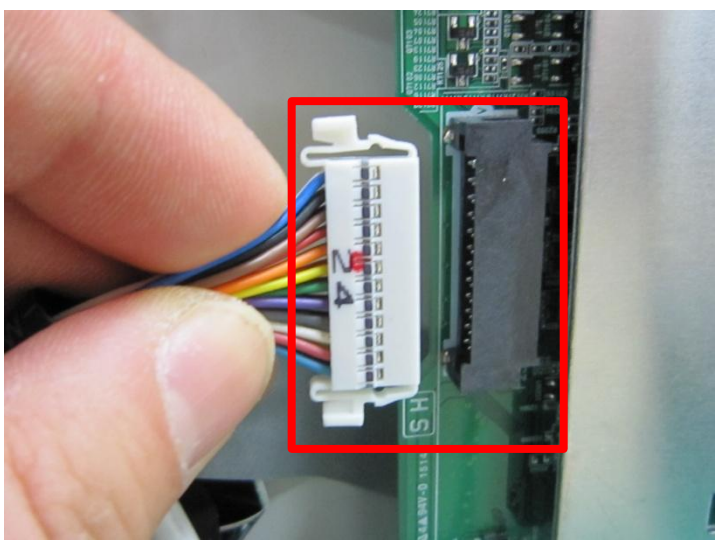


▶ Switch the product S/W in JIG to LCD.

▶ LCD MODEL Check the power voltage and switch(24V) to the correct voltage.

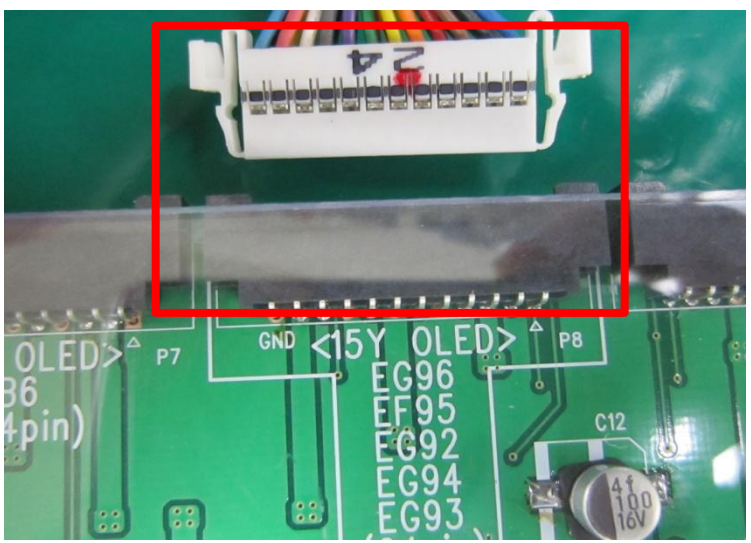
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

3



▶ Disconnect the Main Board 24Pin Power Cable connector.

4

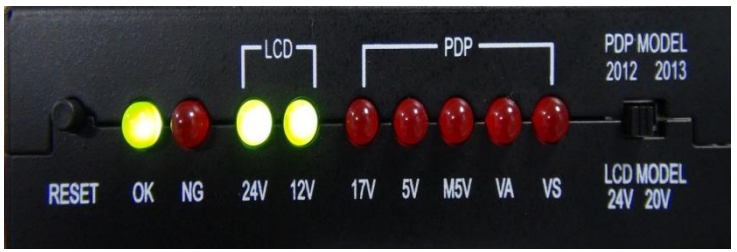


▶ Connect the 24Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

`15Y OLED(EG96,EF95,EG92,EG93,EG94) Power Board Diagnostic method (2)

5

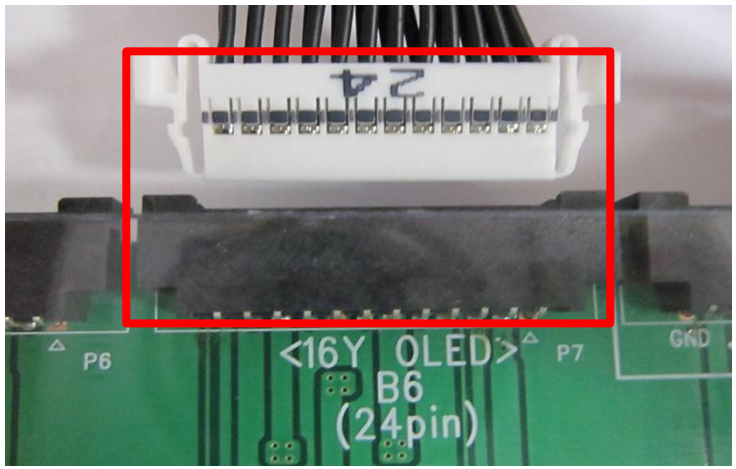
6



- When the OK LED(24V,12V) turns on, Power Board is normal.
- When the NG LED turns on, the Power Board can be judged as defective.

`16Y OLED(B6) Power Board Diagnostic method

1



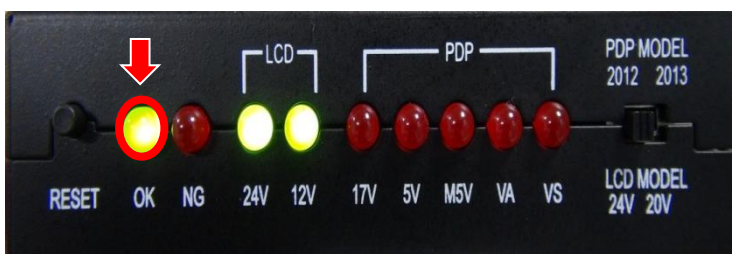
▶ Connect the 24Pin Power Cable connector to the Multi gender JIG 24Pin connector.

2

▶ Switch the LCD MODEL S/W to **24V** by checking the power voltage.

▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

3

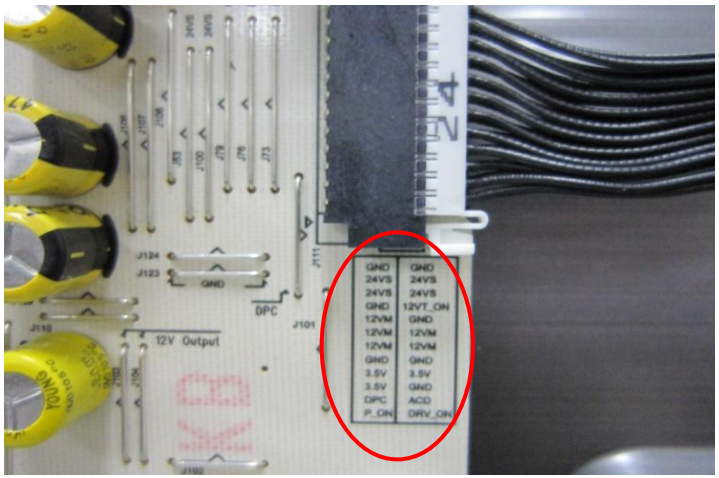


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

`16Y OLED(C6) Power Board Diagnostic method

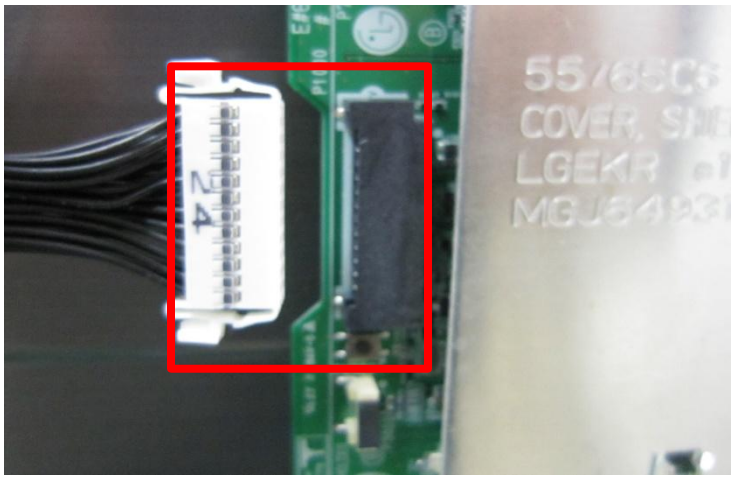
1



▶ Check power board voltage.

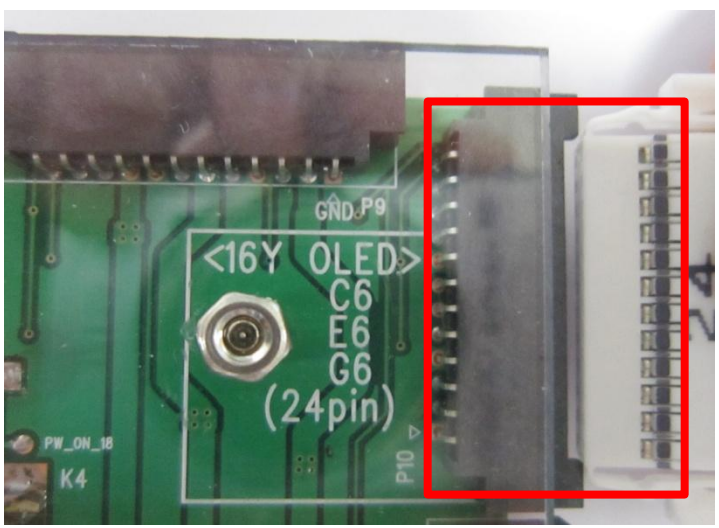
▶ **Smart JIG: Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



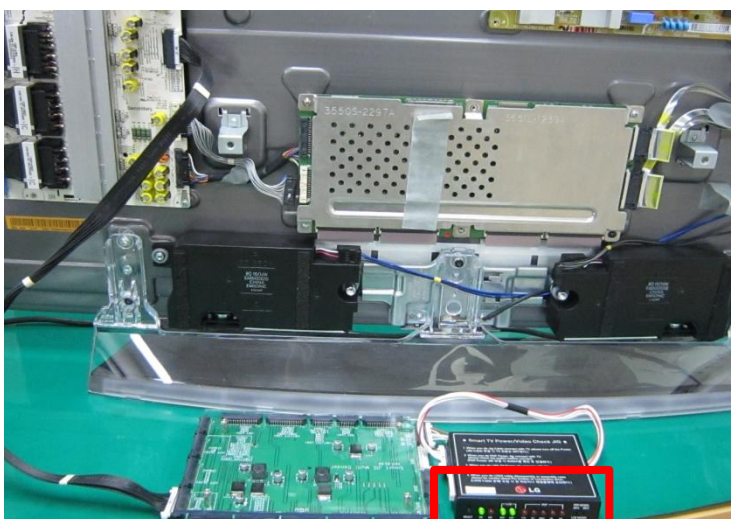
▶ Disconnect the Main Board 24Pin Power Cable connector.

3



▶ Connect the 24Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

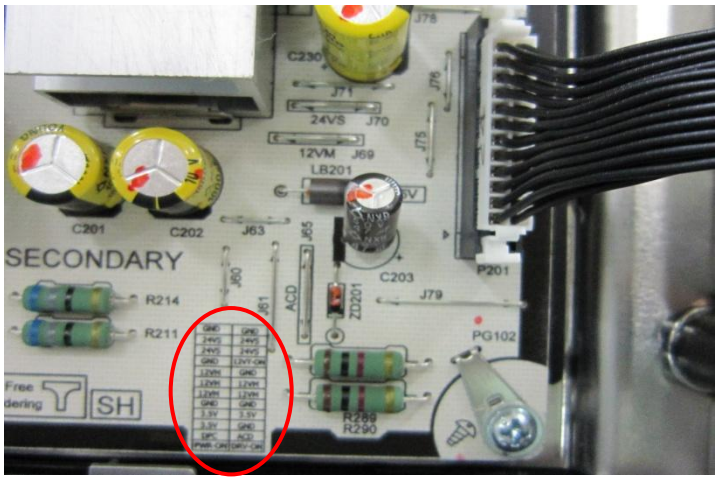
4



▶ When the OK LED(24V,12V) turns on, Power Board is normal.

`16Y OLED(E6) Power Board Diagnostic method

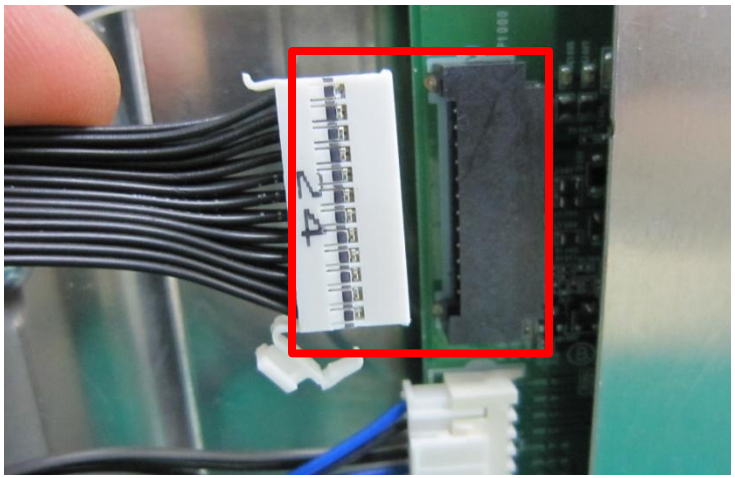
1



▶ Check power board voltage.

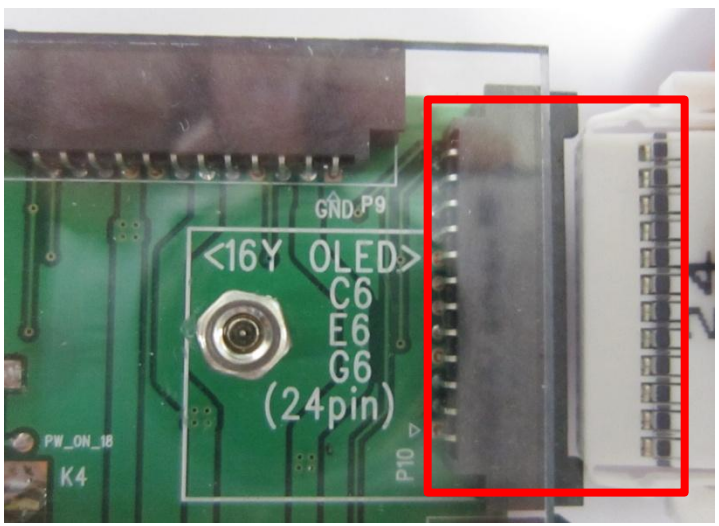
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



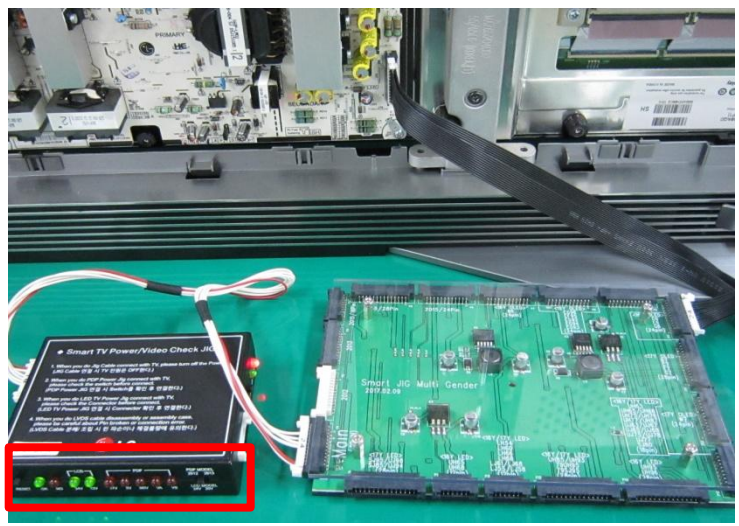
▶ Disconnect the Main Board 24Pin Power Cable connector.

3



▶ Connect the 24Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

4

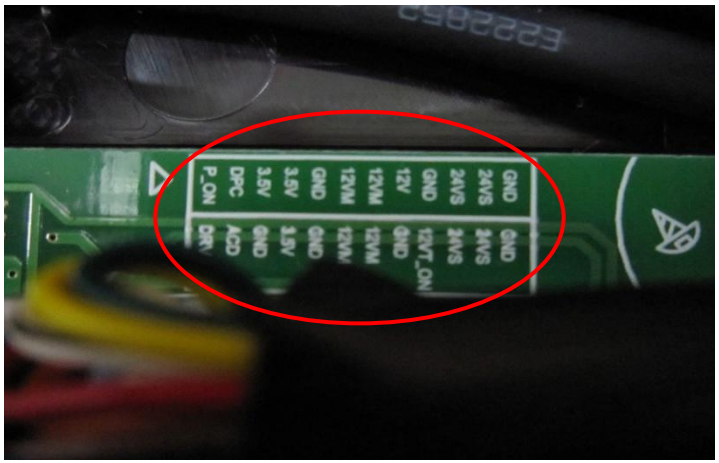


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

`16Y OLED(G6) Power Board Diagnostic method

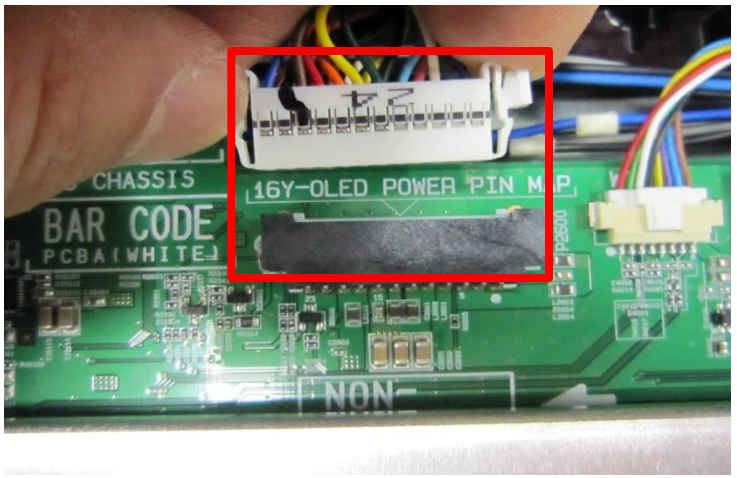
1



▶ Check power board voltage.

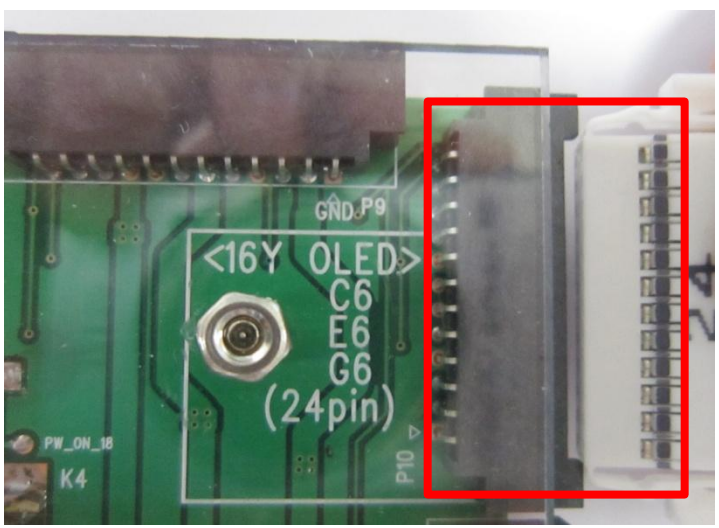
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



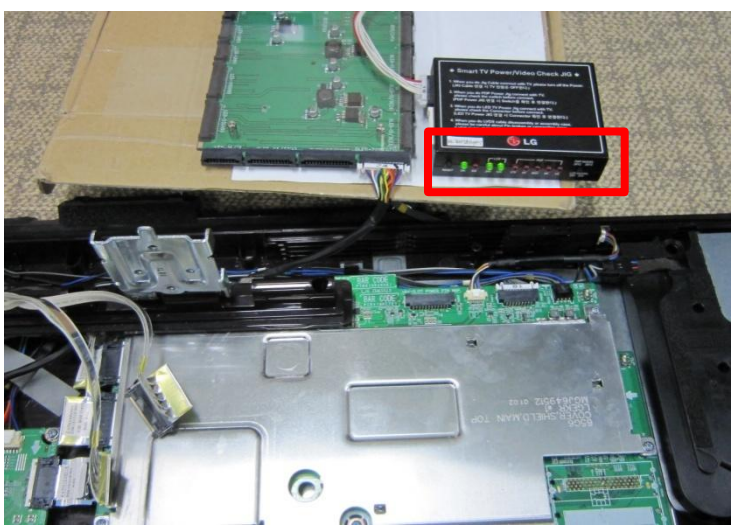
▶ Disconnect the Main Board 24Pin Power Cable connector.

3



▶ Connect the 24Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

4

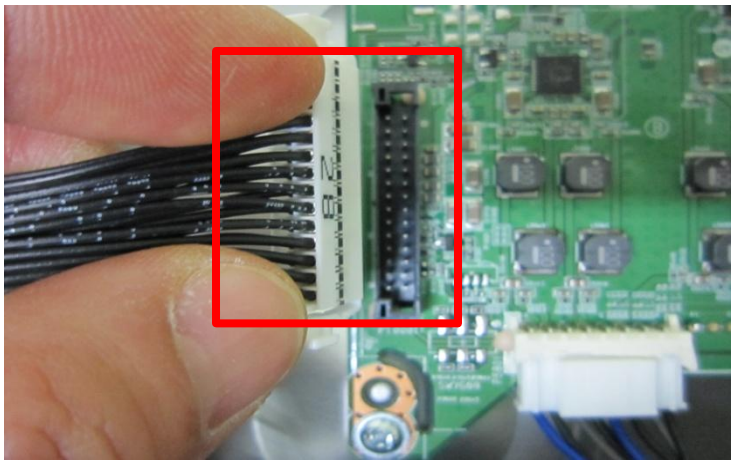


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

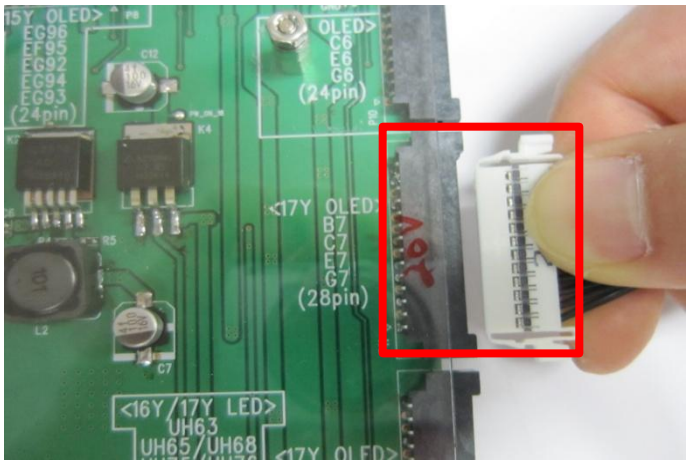
`17Y OLED(B7/C7/E7/G7) Power Board Diagnostic method

1



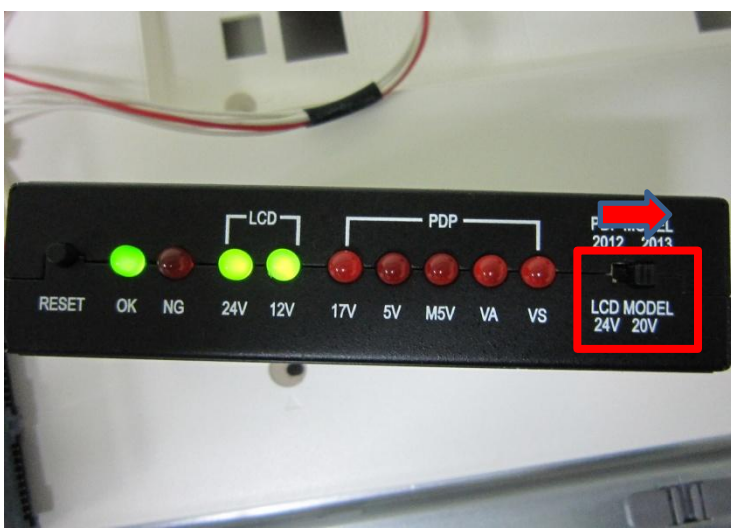
▶ Disconnect the Main Board 28Pin Power Cable connector.

2



▶ Connect the 28Pin Power Cable connector to the Muitl Gender JIG 28Pin connector

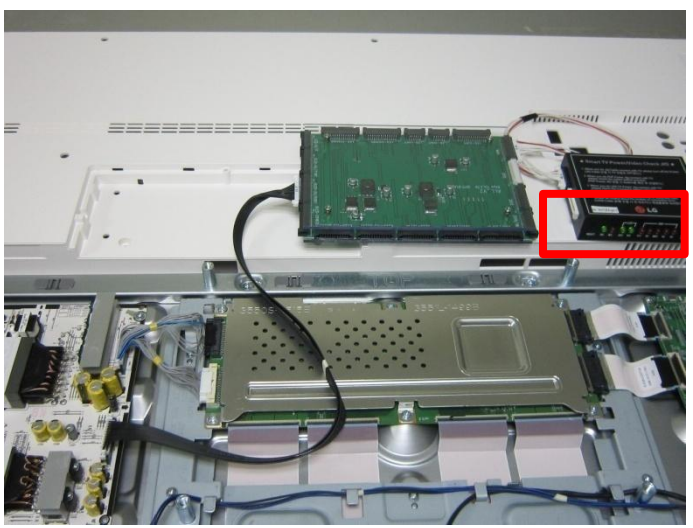
3



▶ Switch the LCD MODEL S/W to **20V** by checking the power voltage.

▶ **Fix the LCD MODEL switch to 20V.(Smart JIG)**

4

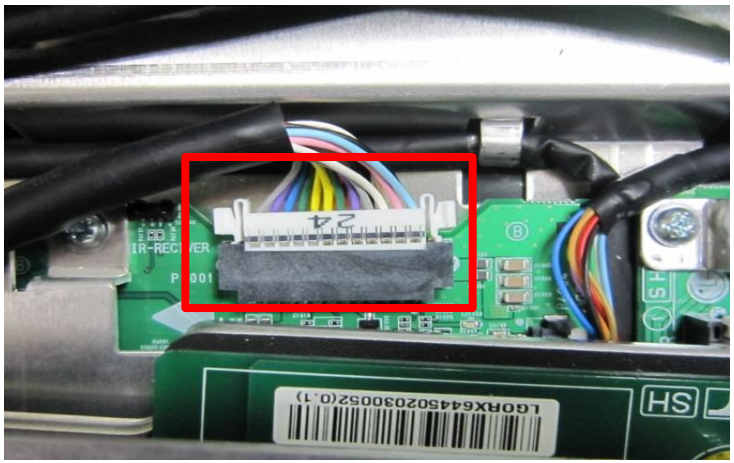


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

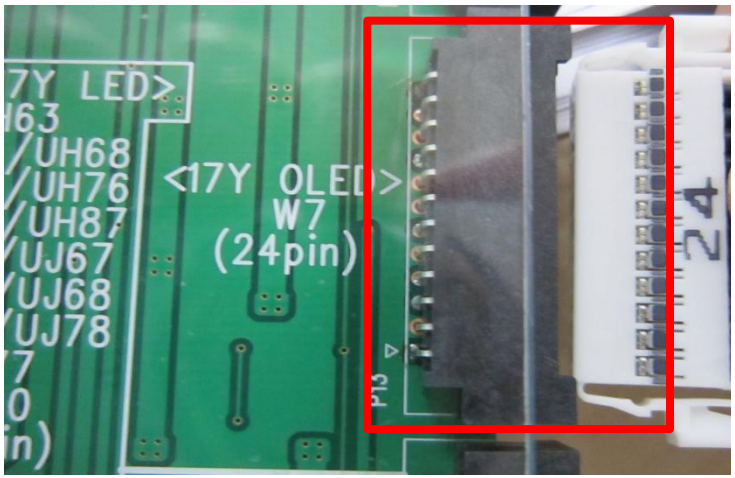
`17Y OLED(W7) Power Board Diagnostic method

1



▶ Disconnect the Main Board 24Pin Power Cable connector.

2



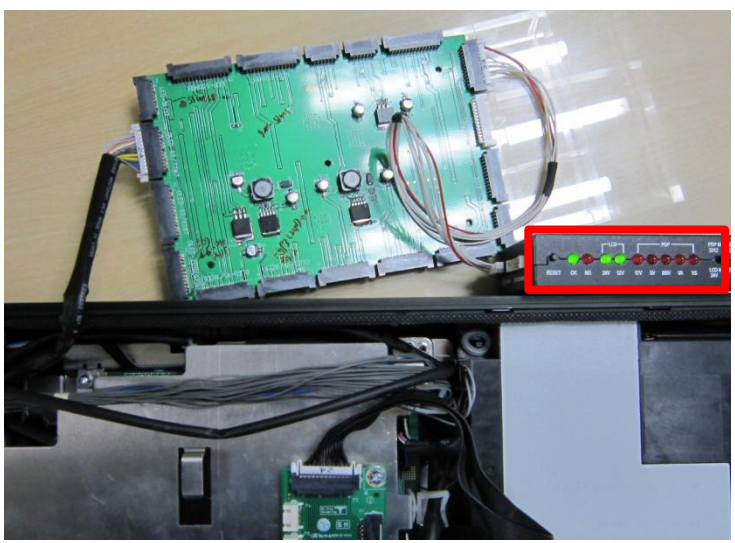
▶ Connect the 24Pin Power Cable connector to the Muitl Gender JIG 28Pin connector

3

▶ Switch the LCD MODEL S/W to 20V by checking the power voltage.

▶ **Fix the LCD MODEL switch to 20V.(Smart JIG)**

4

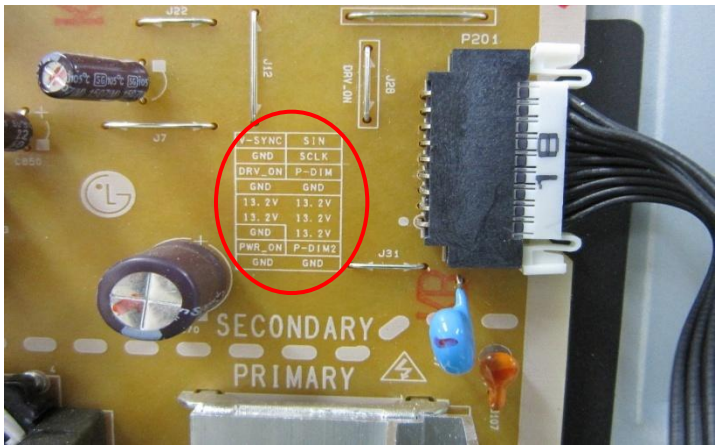


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

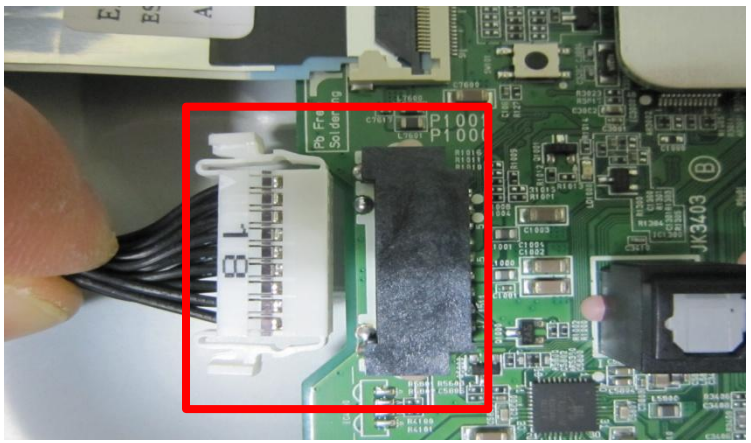
`16Y/`17Y LED 18Pin Power Board Diagnostic method

1



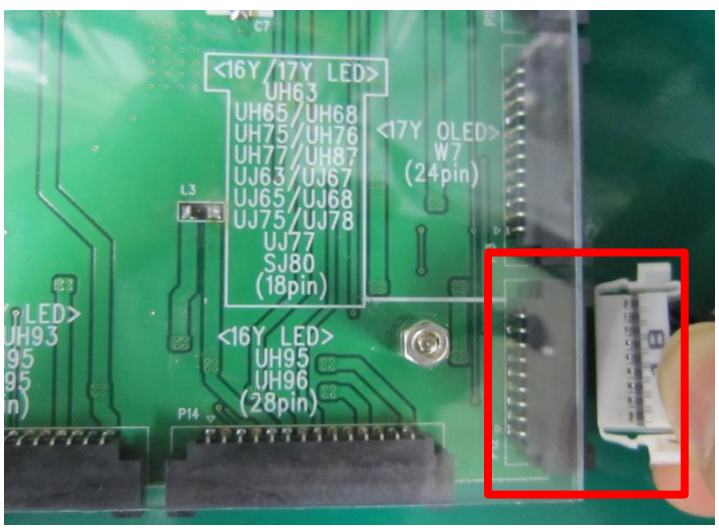
▶ Check power board voltage.
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



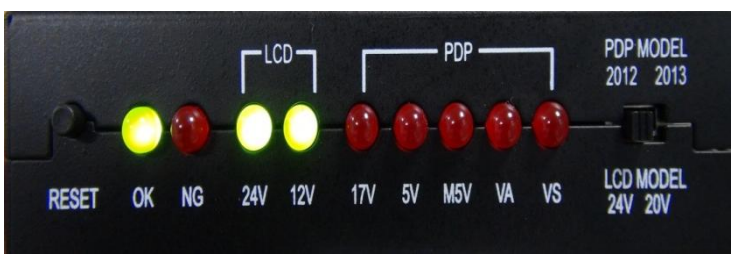
▶ Disconnect the Main Board 18Pin Power Cable connector.

3



▶ Connect the 18Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

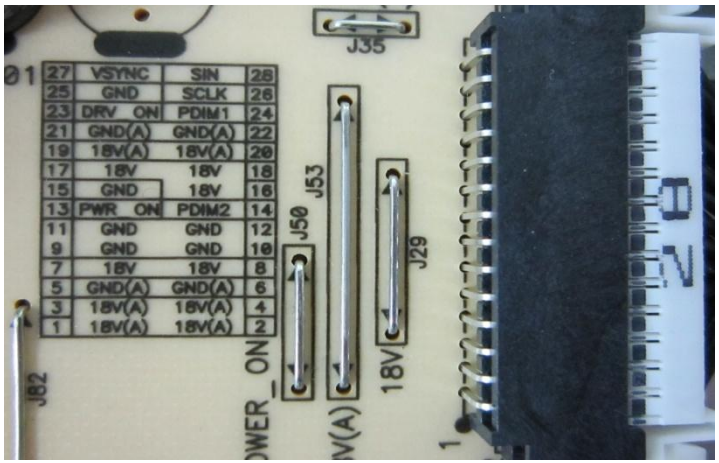
4



▶ When the OK LED(24V,12V) turns on, Power Board is normal.
▶ When the NG LED turns on, the Power Board can be judged as defective.

`16Y LED(UH95/UH96) Power Board Diagnostic method

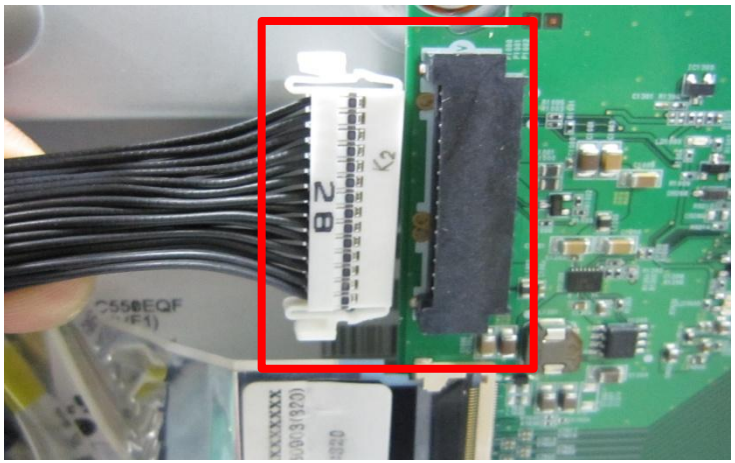
1



▶ Check power board voltage.

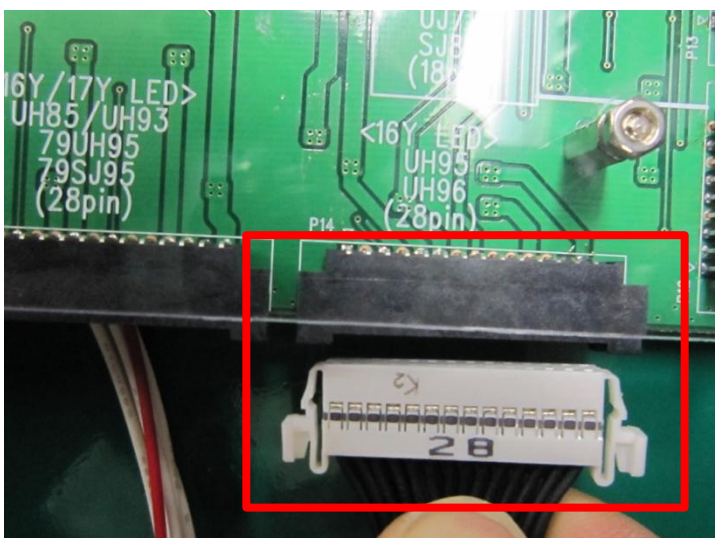
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



▶ Disconnect the Main Board 28Pin Power Cable connector.

3



▶ Connect the 28Pin Power Cable connector to the Muitl Gender JIG 28Pin connector

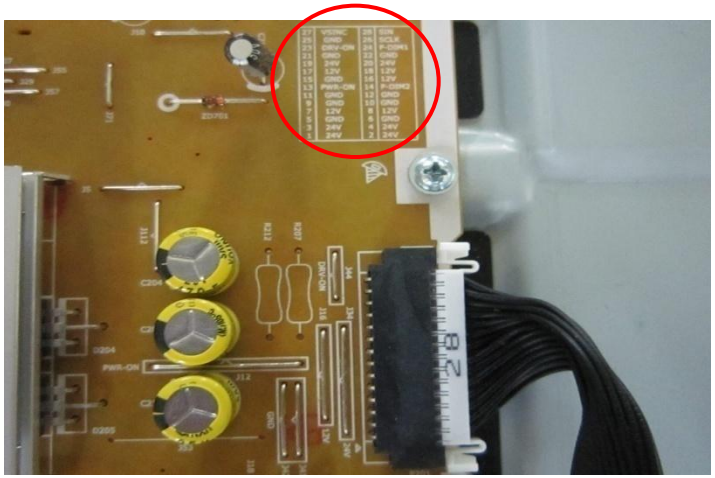
4

▶ When the OK(24V,12V) LED turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

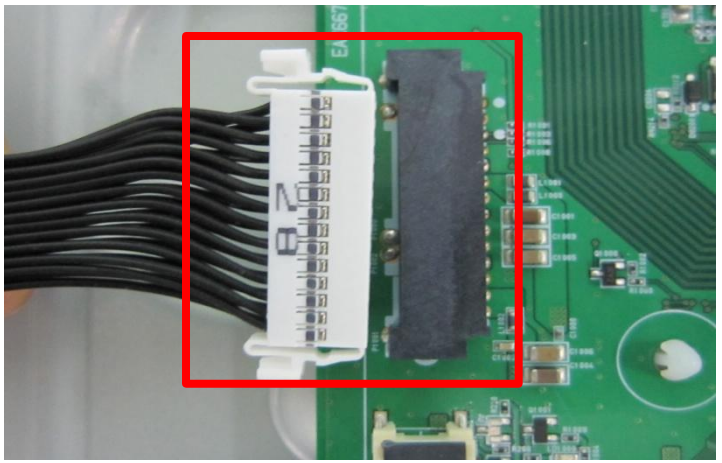
`16Y/`17Y LED(UH85/UH93) Power Board Diagnostic method

1



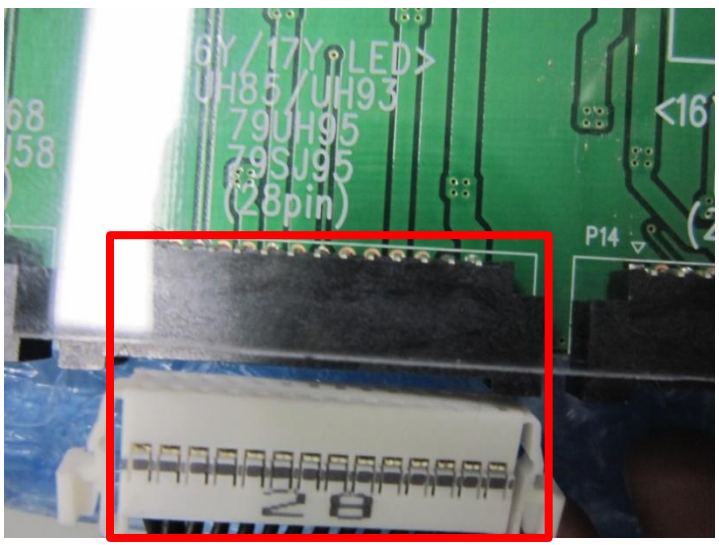
▶ Check power board voltage.
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



▶ Disconnect the Main Board 28Pin Power Cable connector.

3



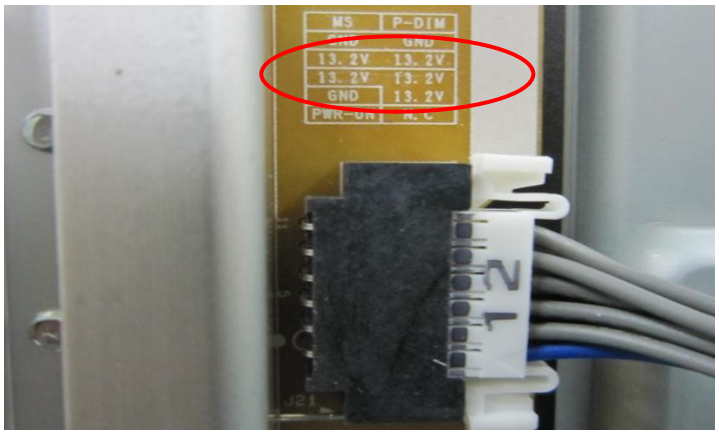
▶ Connect the 28Pin Power Cable connector to the Muitl Gender JIG 28Pin connector

4

▶ When the OK LED(24V,12V) turns on, Power Board is normal.
▶ When the NG LED turns on, the Power Board can be judged as defective.

`16Y/`17Y LED 12Pin Power Board Diagnostic method

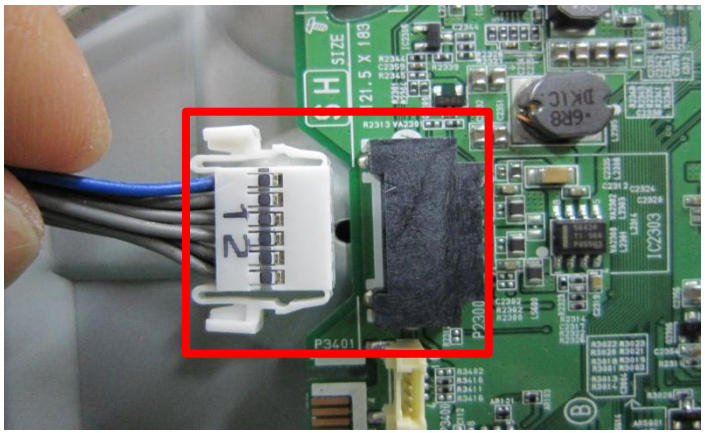
1



▶ Check power board voltage.

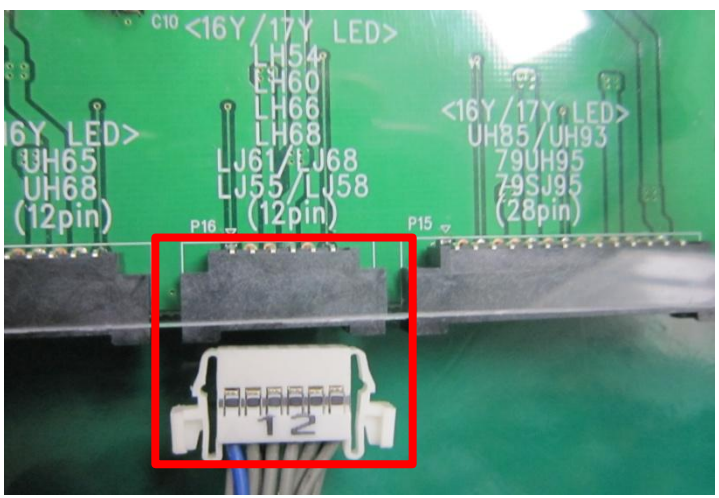
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



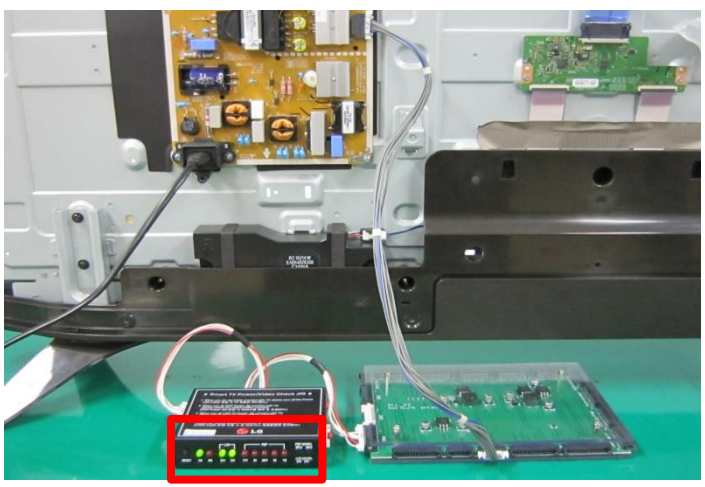
▶ Disconnect the Main Board 12Pin Power Cable connector.

3



▶ Connect the 12Pin Power Cable connector to the Muitl Gender JIG 12Pin connector

4

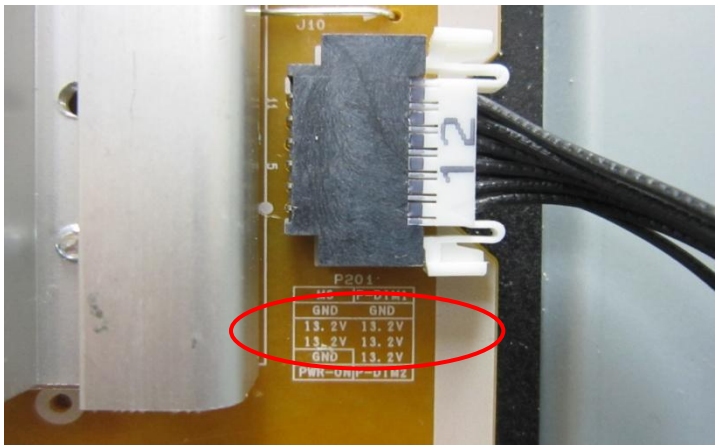


▶ When the OK LED(24V,12V) turns on, Power Board is normal.

▶ When the NG LED turns on, the Power Board can be judged as defective.

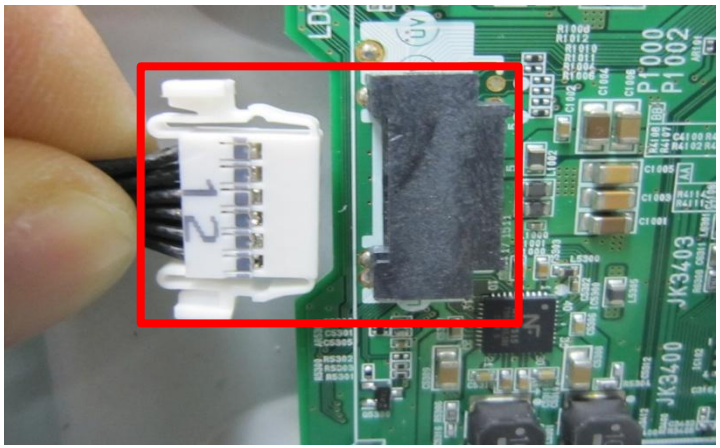
`16Y LED 12Pin Power Board Diagnostic method

1



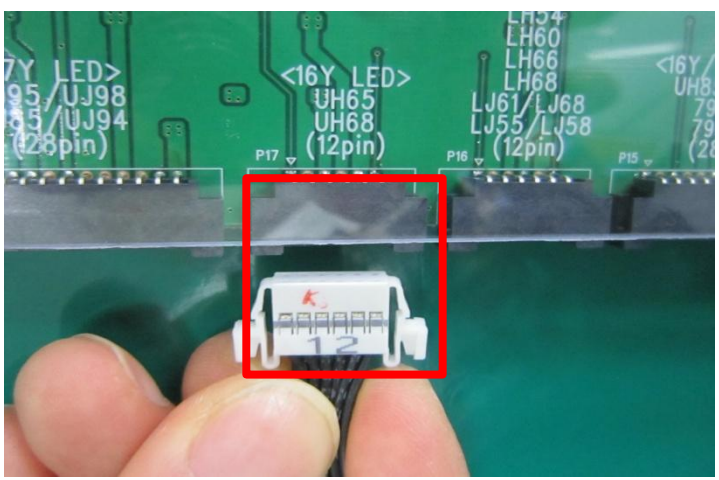
▶ Check power board voltage.
▶ **Fix the LCD MODEL switch to 24V.(Smart JIG)**

2



▶ Disconnect the Main Board 12Pin Power Cable connector.

3



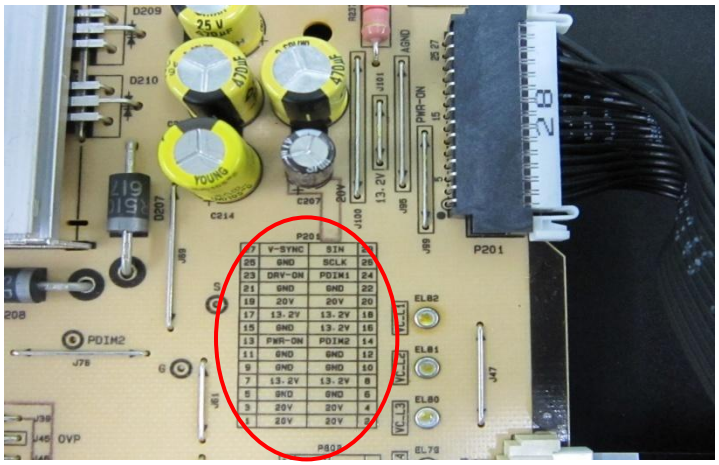
▶ Connect the 12Pin Power Cable connector to the Muitl Gender JIG 24Pin connector

4

▶ When the OK LED(24V,12V) turns on, Power Board is normal.
▶ When the NG LED turns on, the Power Board can be judged as defective.

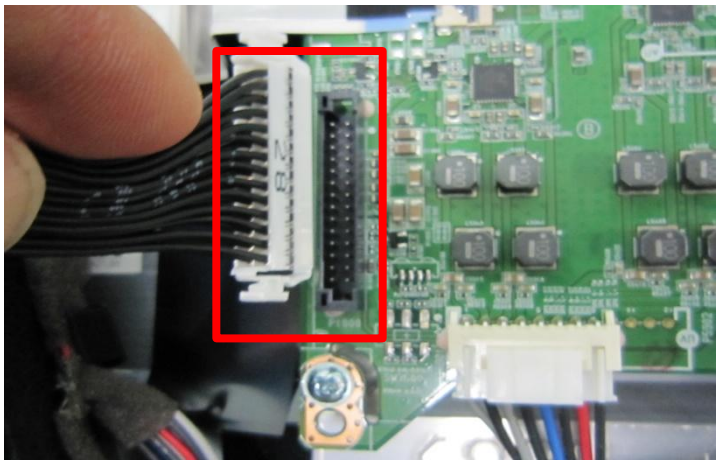
`17Y LED 28Pin Power Board Diagnostic method

1



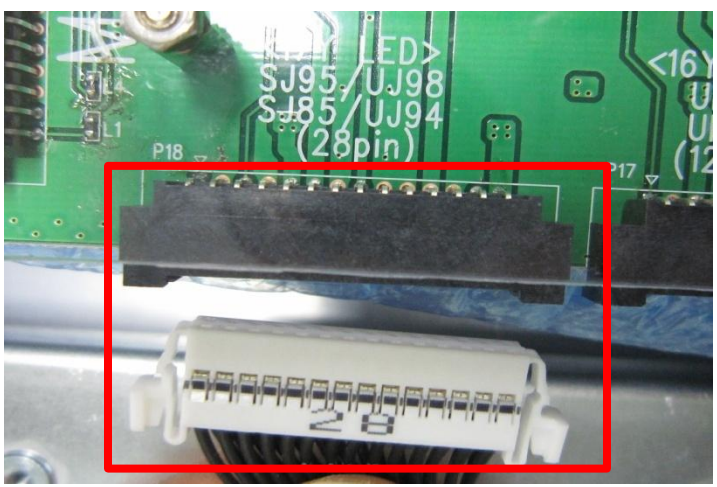
▶ Check power board voltage.
▶ **Fix the LCD MODEL switch to 20V.(Smart JIG)**

2



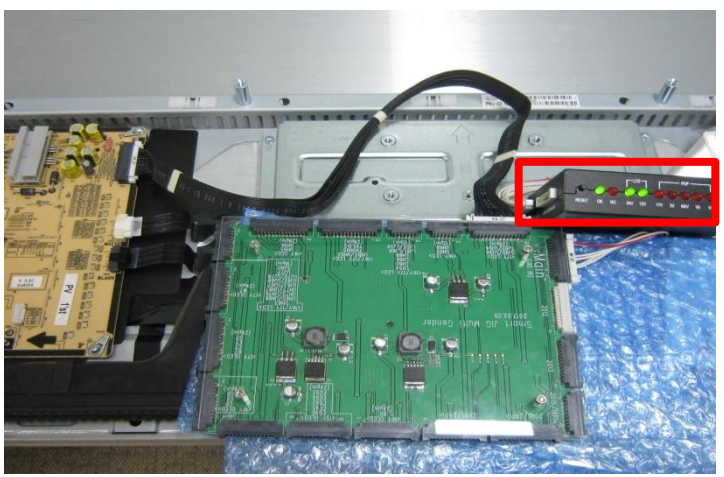
▶ Disconnect the Main Board 28Pin Power Cable connector.

3



▶ Connect the 28Pin Power Cable connector to the Muitl Gender JIG 28Pin connector

4



▶ When the OK LED(24V,12V) turns on, Power Board is normal.
▶ When the NG LED turns on, the Power Board can be judged as defective.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