



Internal Use Only

LED TV

SERVICE MANUAL

Chassis: NT72461

MODEL:

32LJ500U-ZB_43LJ500V-ZB(EU)

32LJ503U-ZA_43LJ503V-ZA(CIS)

32LJ503U-ZA_43LJ503V-ZA(RU)

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




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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 its 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 M Ω and 5.2 M Ω .

When the exposed metal has no return path to the chassis the reading must be infinite.

Another 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 μ F capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

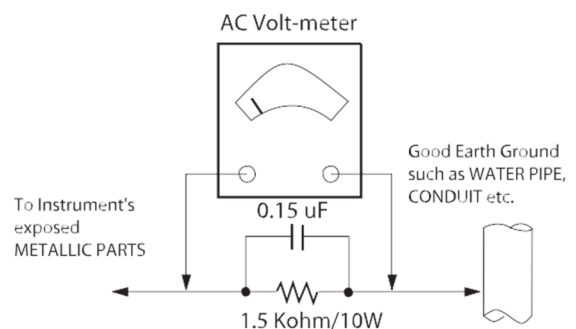
Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

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 corresponds to

1.5 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 is 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 of 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 small 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 32 and 43 (EU/CIS/RU) model.

2.Requirement for Test

Each part is tested as below without special appointment.

1)Temperature: 25 °C ± 5 °C(77 °F ± 9 °F), CST: 40 °C ± 5 °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 20 minutes prior to the adjustment

4.Model General Specification

No	Item	Specification					Remark	
1	Television System	DVB-T/C/T2/S/S2					Digital TV for EU & UK	
		PAL B/G/I/D/K , SECAM L					Analogue TV for EU & UK	
2	Program coverage	46 ~ 862MHz					Analogue TV	
		VHF III: 174 ~230 MHz, UHF IV: 470 ~ 606MHz, UHF V: 606 ~ 862MHz					Digital TV DVB-T/T2	
		46 ~ 890MHz					Digital TV DVB-C	
		950 ~ 2150MHz					Digital TV DVB-S/S2	
3	Input Voltage	AC 100 ~ 240V @ 50/60Hz						
4	Screen Size	43 inch Wide (1920 × 1080)						
		40 inch Wide (1920 × 1080)						
		32 inch Wide (1366 × 768)						
		28 inch Wide (1366 × 768)						
5	Aspect Ratio	16:9						
6	Module	LCM Model No.	Panel No.	Model	Panel Maker	Resolution	Frame Rate	
		LVB280WX220ADE2X0X	HV280WX2-270		BOE	HD	50 Hz	28MT42VF-PZ

3.Test method

1)Performance: LGE TV test method followed

2)Demanded other specification

Safety : IEC 60065 Ed.8, EN 60065 Ed.8, Erp Directive (No.642/2009), Energy Labelling of TV (No. 1062/2010) , CU(EAC mark), DoU, Uzbekistan Energy Raw, Brazil INMETRO RTQ

EMC : EN55032, EN55020, EN55024, EN61000-3-2, EN61000-3-3, EN62311, CISPR 32

No	Item	Specification					Remark
		LVB315WHBN0ALT2X0X	HV320WHB-N80	BOE	HD	50 Hz	32LJ500U-ZB / 32LJ500B-SB / 32LJ503-ZA
		LVM400J6PE1AF62X0X	V400Hj6-PE1_C 3	INX	FHD	50 Hz	40LJ500V-ZB
		LVG430DUYA1AGL2X0X	LC430DUY-SHA 1	AUO	FHD	50 Hz	43LJ500V-ZB / 43LJ503V-ZA
7	Operating Environment	1) Temp : 0 ~ 40 deg 2) Humidity : ~ 80 %					
8	Storage Environment	1) Temp : -20 ~ 60 deg 2) Humidity : ~ 85 %					

5. Component Video Input (Y, Cb/Pb, Cr/Pr)

No	Resolution	H-freq(kHz)	V-freq.(Hz)
1	720(1440)*480i	15.73	59.94
2		15.75	60.00
3	720*480p	31.47	59.94
4		31.50	60.00
5	720(1440)*576i	15.63	50.00
6	720*576p	31.25	50.00
7	1280*720p	44.96	59.94
8		45.00	60.00
9		37.50	50.00
10	1920*1080i	33.72	59.94
11		33.75	60.00
12		28.13	50.00
13	1920*1080p	67.43	59.94
14		67.50	60.00
15		56.25	50.00

6. HDMI Input (DTV&PC):

6.1 DTV

No	Resolution	H-freq(kHz)	V-freq.(Hz)
1	640*480p	31.47	59.94
2		31.50	60.00
3	720(1440)*480i	15.73	59.94
4		15.75	60.00
5	720*480p	31.47	59.94
6		31.50	60.00
7	720(1440)*576i	15.63	50.00
8	720*576p	31.25	50.00
9	1280*720p	44.96	59.94
10		45.00	60.00
11		37.50	50.00
12	1920*1080i	33.72	59.94
13		33.75	60.00
14		28.13	50.00
15	1920*1080p	67.43	59.94
16		67.50	60.00
17		56.25	50.00
18		26.97	23.976
19		27.00	24.00
20		33.72	29.97
21		33.75	30.00

6.2 PC

No	Resolution	H-freq(kHz)	V-freq.(Hz)
1	720*400	31.469	70.08
2	640*480	31.469	59.94
3	800*600	37.879	60.31
4	1024*768	48.363	60.00
5	1280*720	45.00	60.00
6	1360*768	47.712	60.015
7	1366*768 (for 28/32 inch)	47.712	59.79
8	1280*1024 (for 40/43 inch)	63.981	60.020
9	1920*1080 (for 40/43 inch)	67.50	60.00

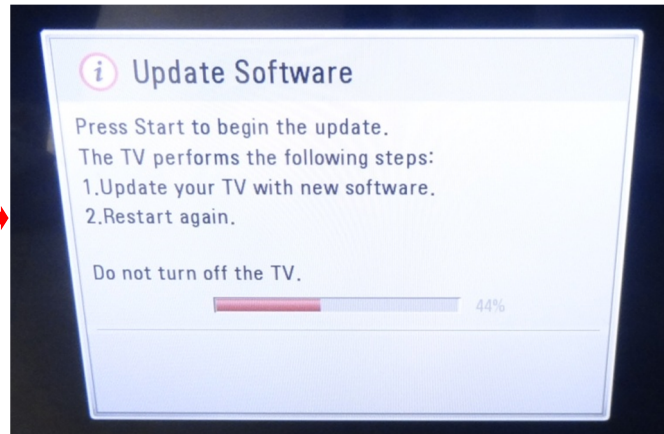
SOFTWARE UPGRADE PROCEDURE

Step 1: Ready for F/W Upgrade

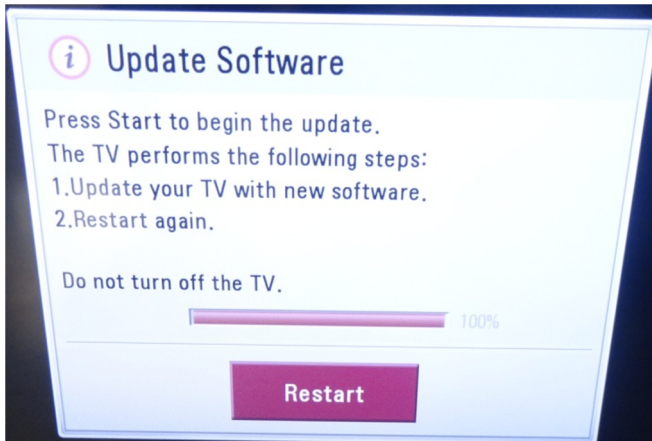
- 1.1 Prepare a FAT 32 format USB memory .
- 1.2 Copy the software(*.pkg file) to USB flash disk(root directory).

Step 2: F/W Upgrade

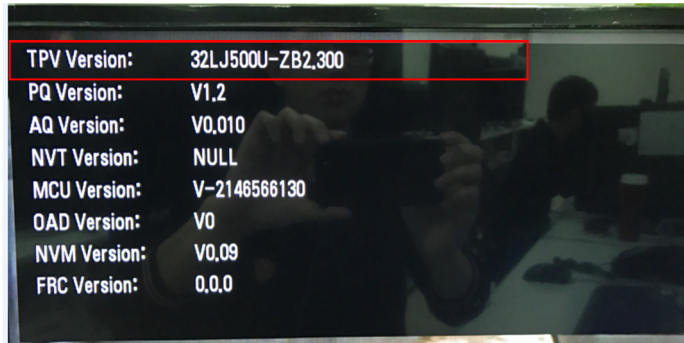
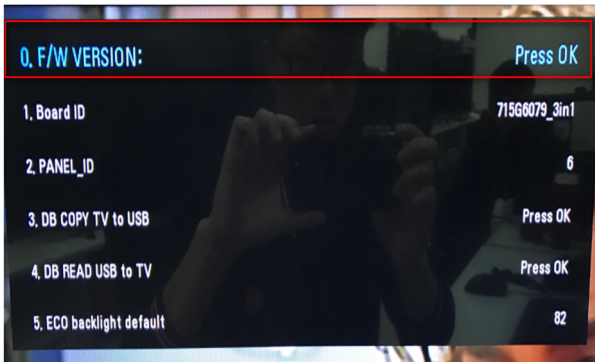
- 2.1 Plug the USB memory on the USB port.
- 2.2 Automatically detecting update file in USB flash disk, Press Start, Updating is starting.



- 2.3 Updating Completed, Press Restart ,TV will reboot automatically.

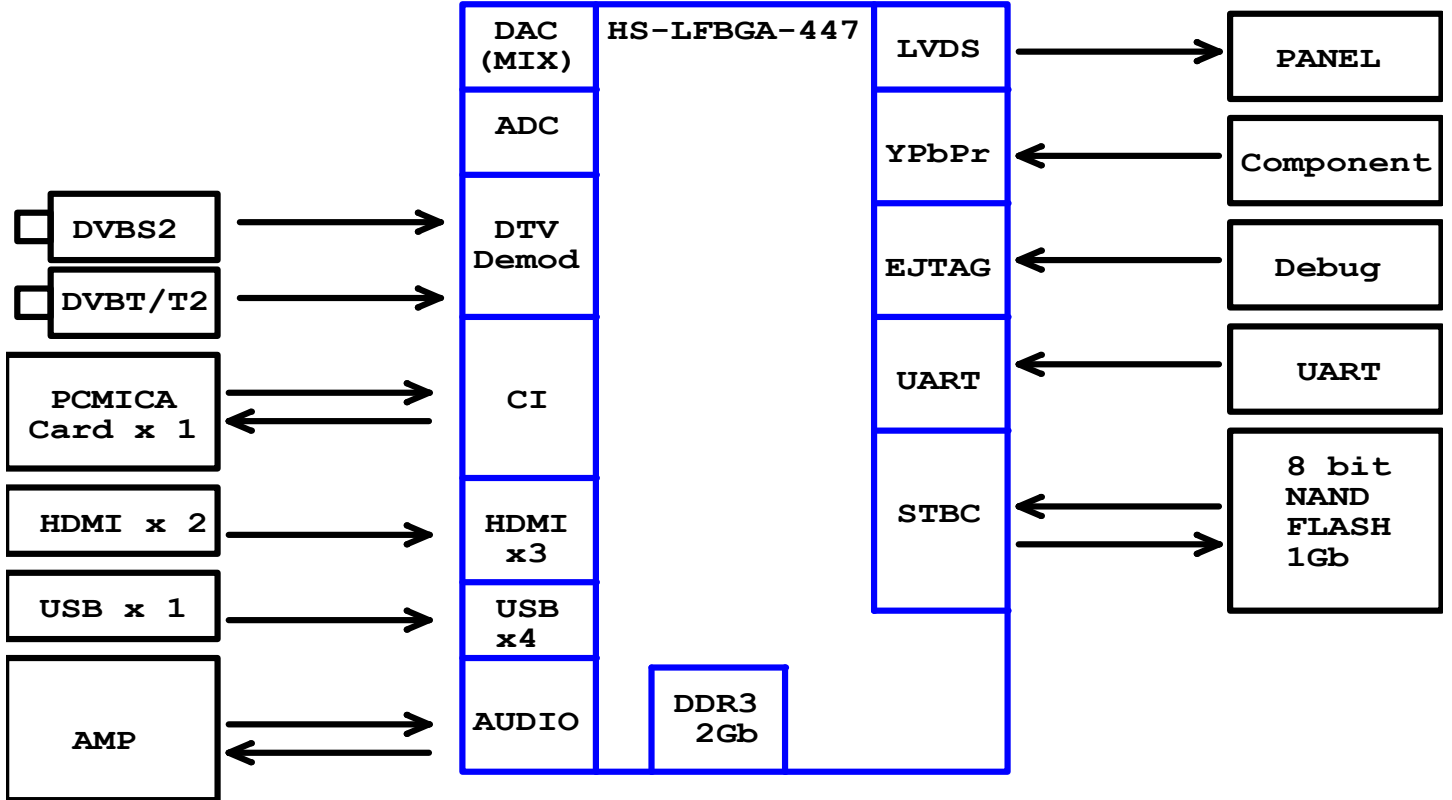


- 2.4 Press "Settings+1999+Q.VIEW" on the remote to enter in factory mode to check your updated version.




Block Diagram

NT72461MBG-BA



EXPLODED VIEW

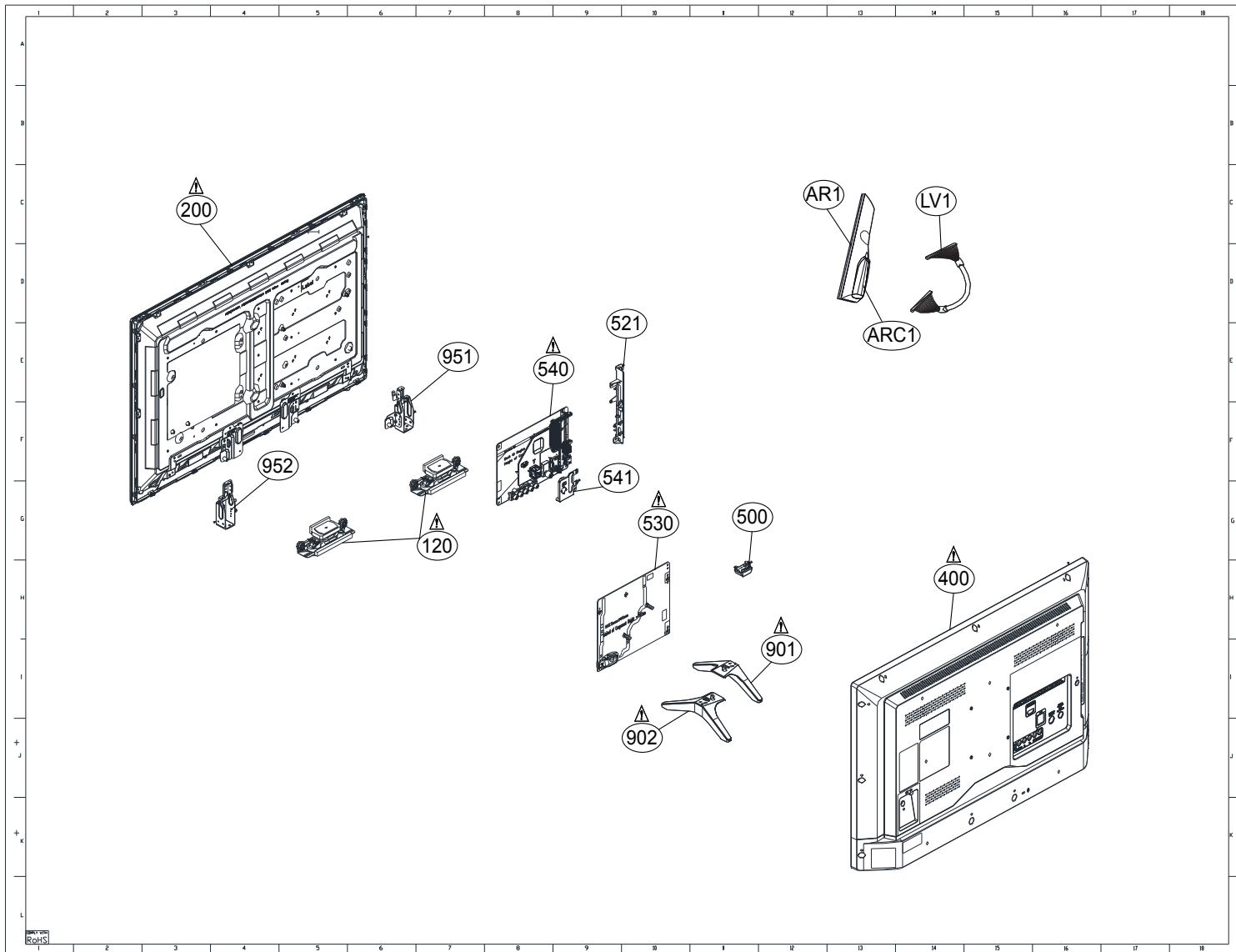
IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by  in the EXPLODED View.

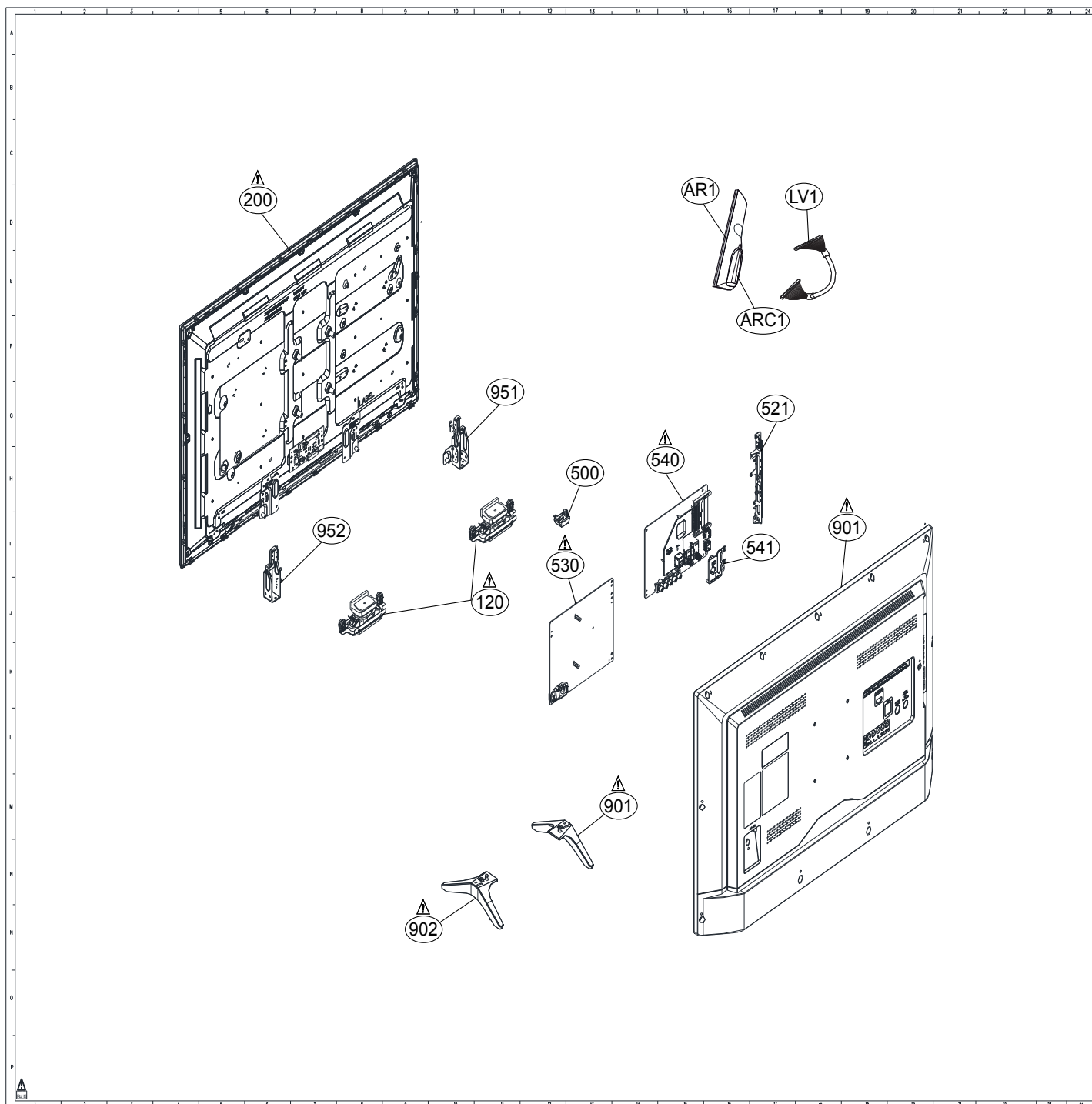
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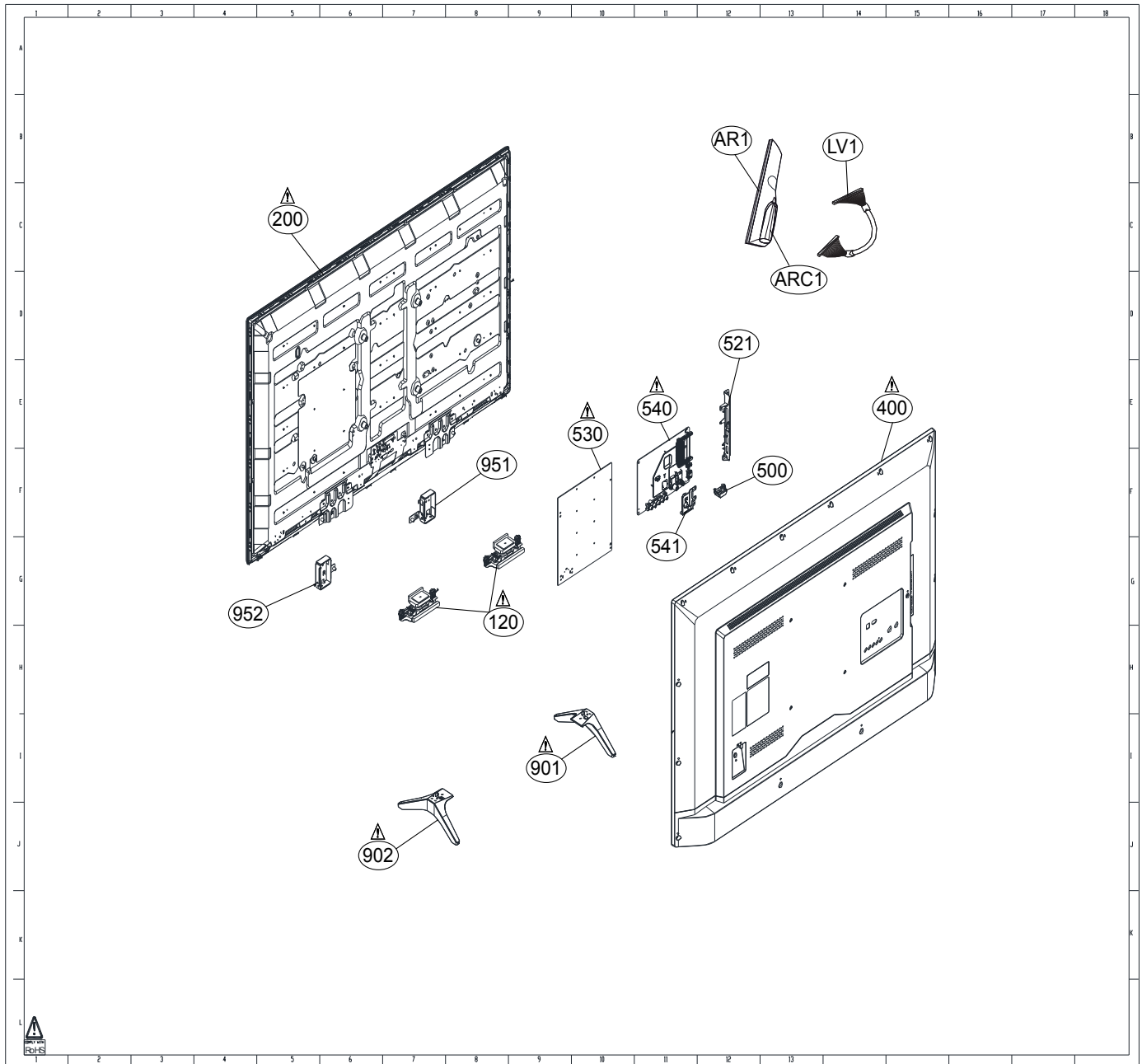
32 (EU) MODEL



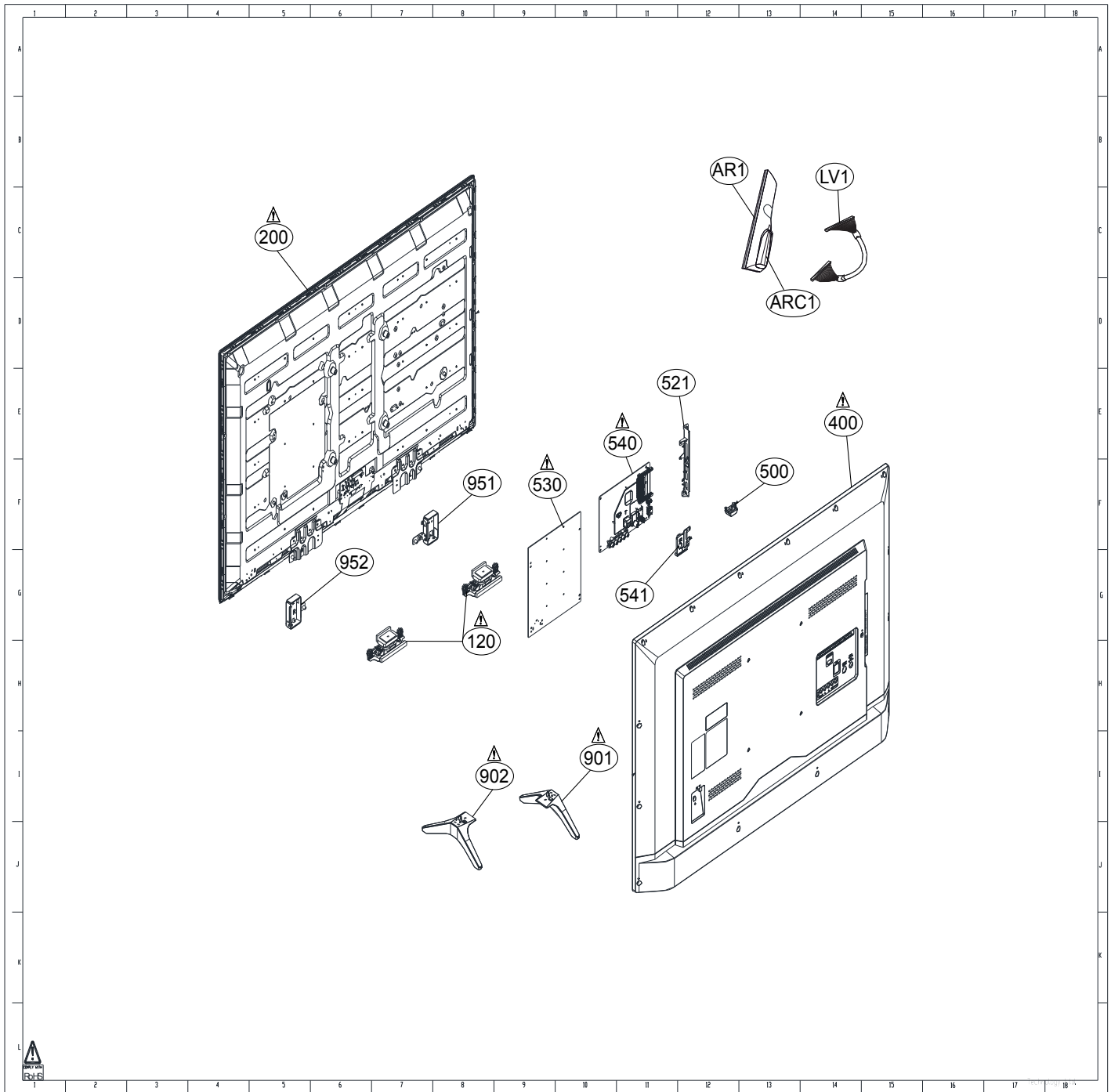
32 (UK) MODEL



43 (EU) MODEL



43 (UK) MODEL



Product Disassembly Process

32 MODEL

1	Unlock screw("A-2EA") to separate the base.	Fig.1
2	Unlock screw("B-14EA") to separate the back cover assembly.	Fig.2
3	Separate the cushion and Mylar ("C-2EA") from backcover.	Fig.3
4	Unlock screw("D-5EA") to separate the power board.	Fig.4
5	Unlock screw("E-4EA") to separate the main board.	
6	Separate the receive assembly from front cover.	Fig.5
	Unlock screw("F") to separate the receive board from IR LENS.	

Fig.1↵



※Hold red circle area Pull in

Fig.3↵

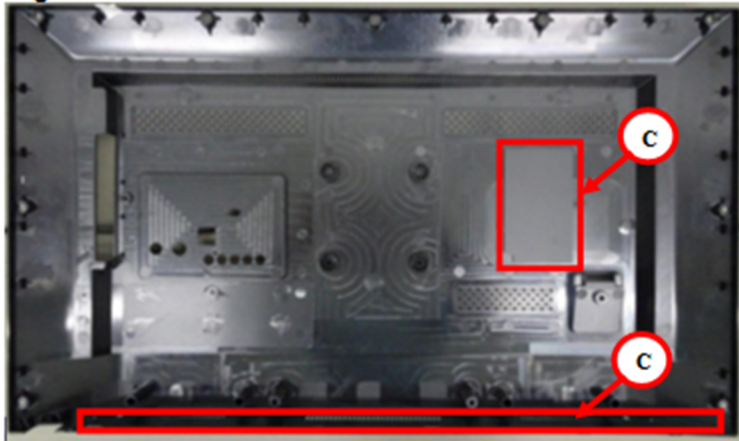


Fig.4

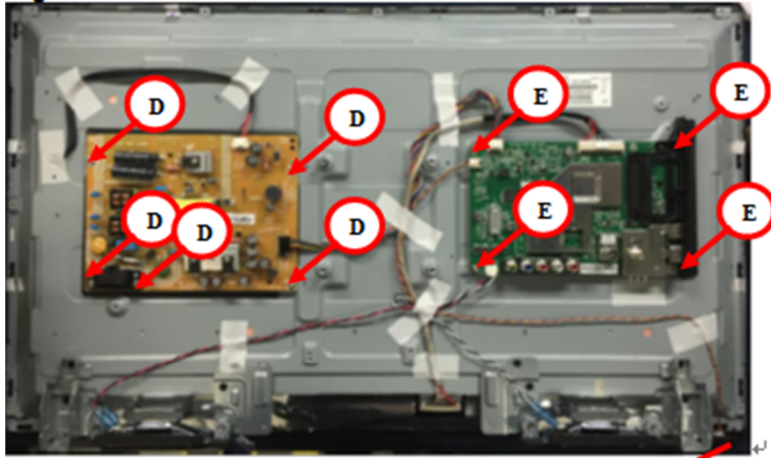


Fig.5



43 MODEL

1	Unlock screw("A-4EA") to separate the base.	Fig.1
2	Unlock screw("B-17EA") to separate the back cover assembly.	Fig.2
3	Separate the cushion and Mylar ("C-2EA") from backcover.	Fig.3
4	Unlock screw("D-5EA") to separate the power board.	Fig.4
5	Unlock screw("E-4EA") to separate the main board.	
6	Separate the receive assembly from front cover.	Fig.5
	Unlock screw("F") to separate the receive board from IR LENS.	

Fig.1



※Hold red circle area Pull in

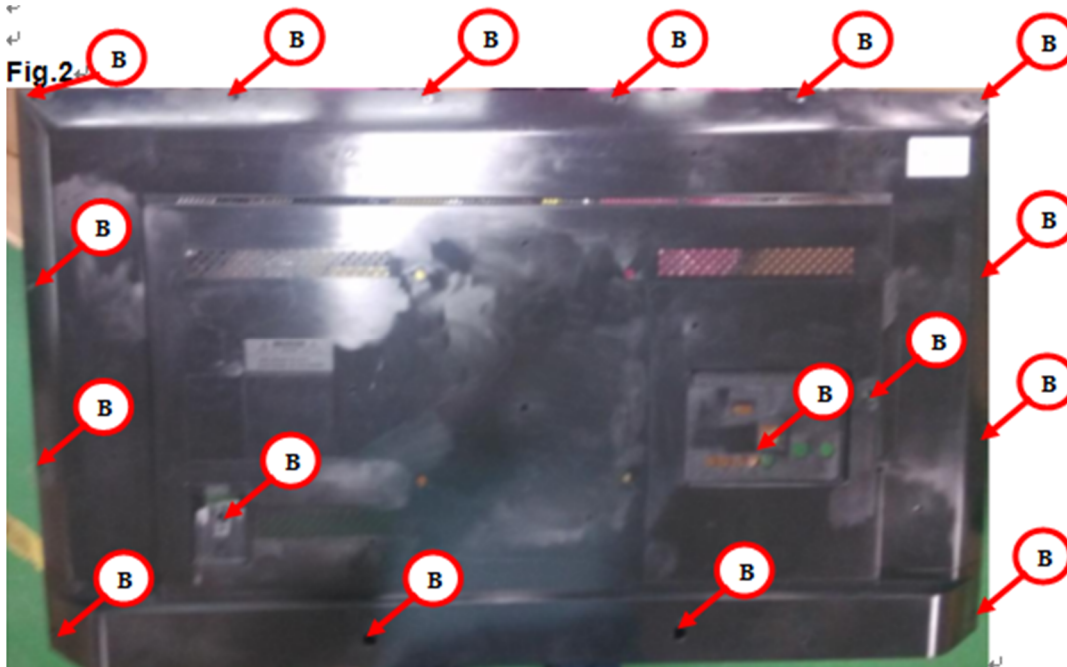


Fig.3↵

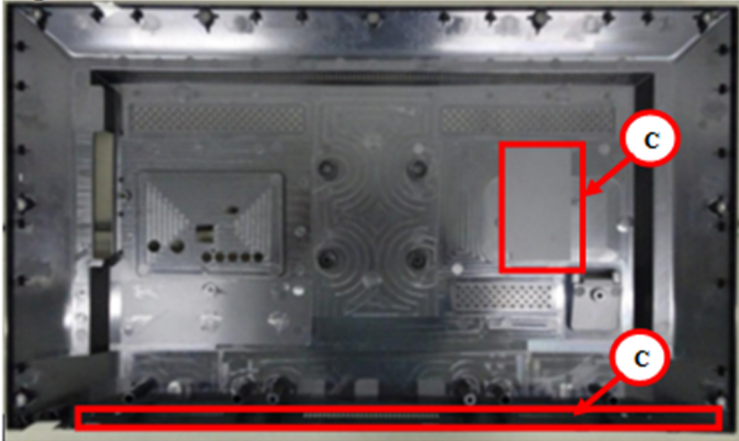


Fig.4↵

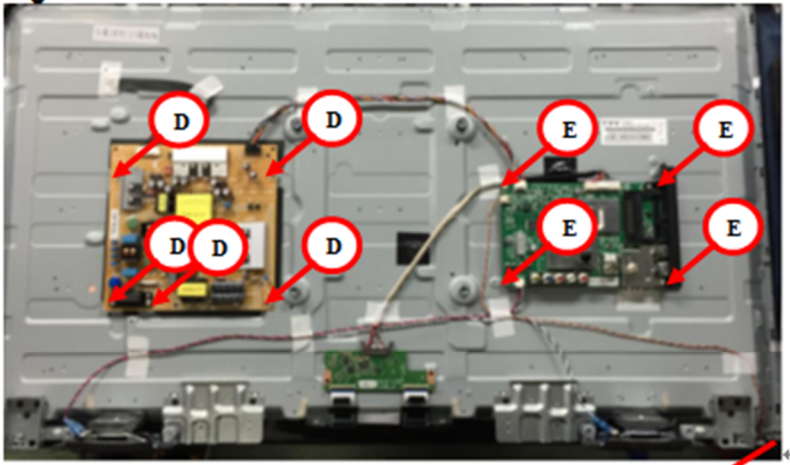


Fig.5↵



Contents of LED TV Standard Repair Process

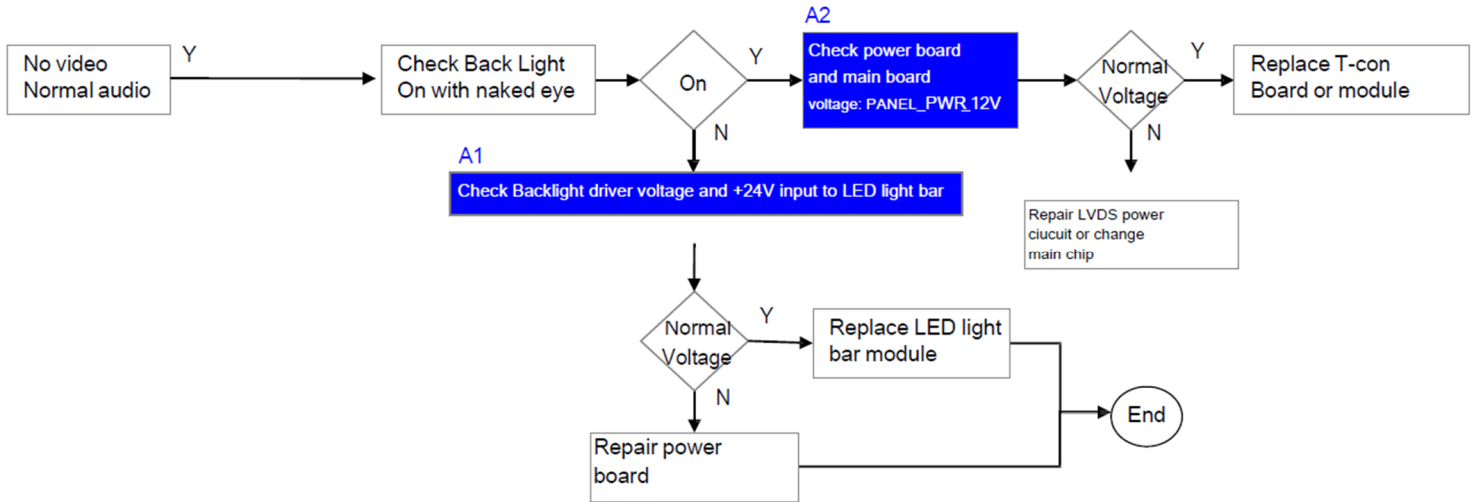
No.	Error symptom (High category)	Error symptom (Mid category)	Page	Remark
1	Video error	No video/Normal audio	1	
2		No video/No audio	2	
3		Tuning fail	3	
4		Color error	4	
5		Vertical/Horizontal bar, residual image, light spot, external device color error	5	
6	Power error	No power	6	
7		Off when on, off while viewing, power auto on/off	7	
8	Audio error	No audio	8	
9		Wrecked audio/discontinuation/noise	9	
10	Function error	Remote control & Local switch checking	10	
11	Noise	Circuit noise, mechanical noise	11	
12	Exterior error	Exterior defect	12	

Contents of LED TV Standard Repair Process Detail Technical Manual

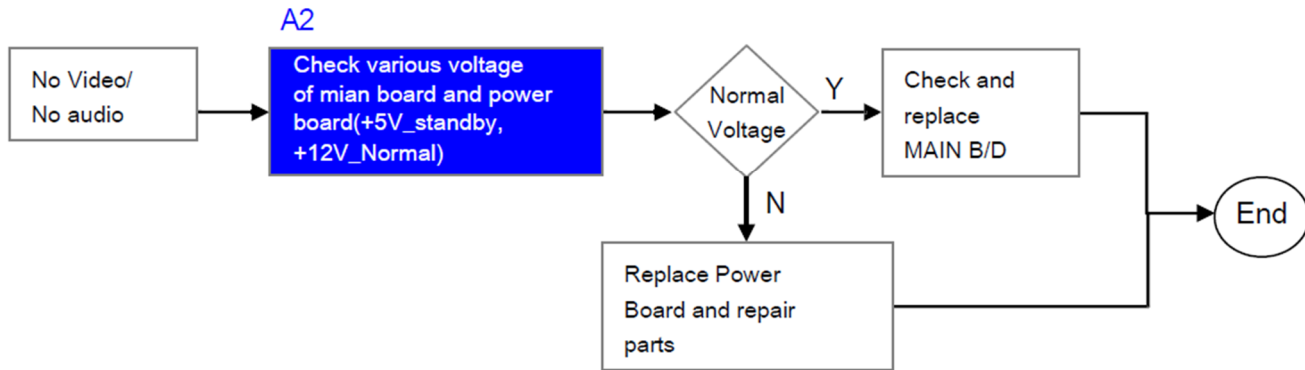
No.	Error symptom	Content	Page	Remarks
1	Video error_No video /Normal audio	Backlight converter measuring method	A1	
2		Main Board voltage measuring method	A2	
3	Video error_Color error	LED TV connection diagram	A3	
4		Check Link Cable (LVDS) reconnection condition	A4	
5		Check test pattern	A10	
6	Video error_Vertical/ Horizontal bar, residual image, light spot	Check Link Cable (LVDS) reconnection condition	A4	
7	<Appendix> Defected Type caused by T-Con/ Inverter/ Module	Exchange T-Con Board (1)	A-1/4	
8		Exchange T-Con Board (2)	A-2/4	
9		Exchange Module itself (1)	A-3/4	
10		Exchange Module itself (2)	A-4/4	
11	Power error_No power	Check front display LED	A5	
12		Check power input voltage and ST-BY 5V	A6	
13		Checking method when power is ON	A7	
14		Power board and main board voltage measuring method	A2	
15	Audio error_No audio/Normal video	Voltage and speaker checking method when there is no audio	A8	
16	Audio error_ Wrecked audio/discontinuation	Voltage and speaker checking method in case of audio error	A8	
17	Function error_No response in remote controller, key error	Remote controller operation checking method	A9	

LED TV	Error symptom	A. Video error	Established date	
		No video/ Normal audio	Revised date	1/12

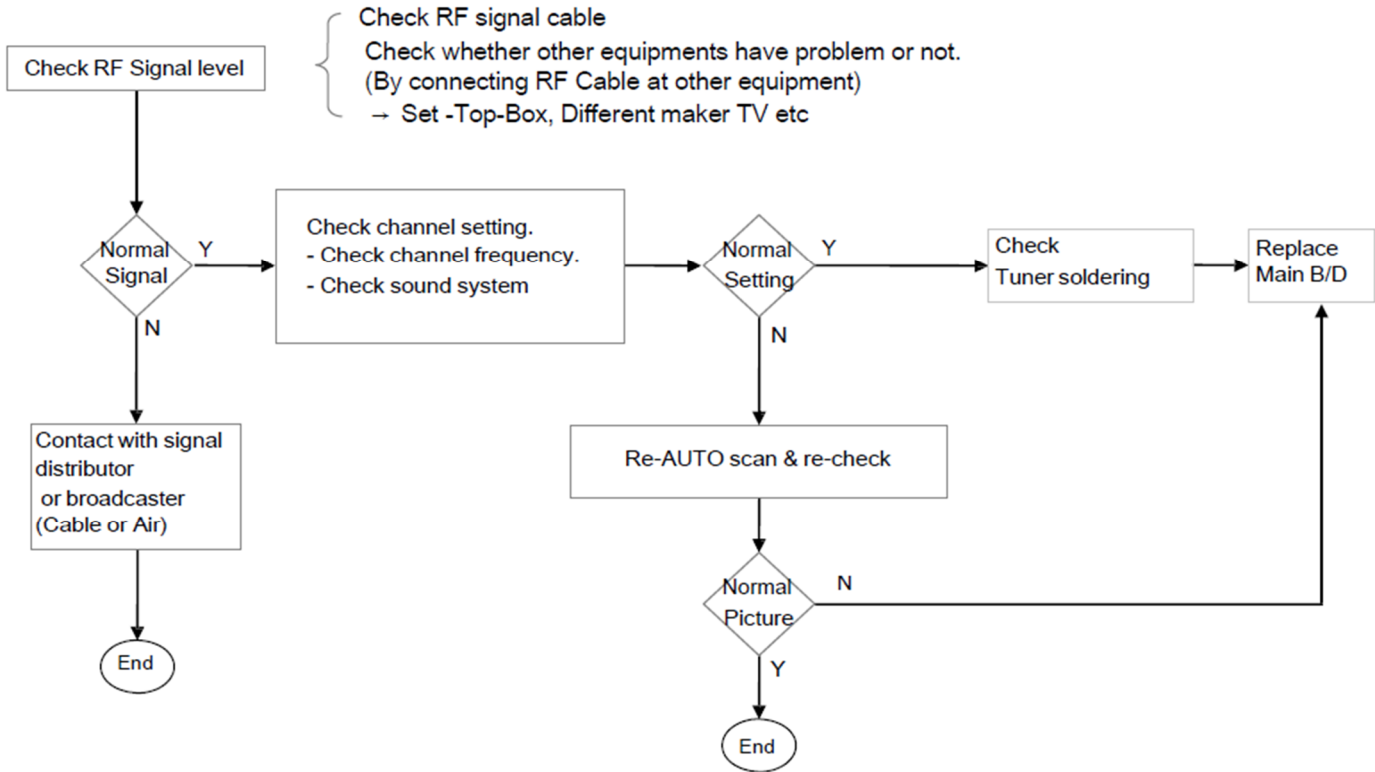
First of all, Check whether all of cables between board is inserted properly or not.
(Main B/D ↔ Power B/D, LVDS, Speaker Cable, IR B/D Cable)



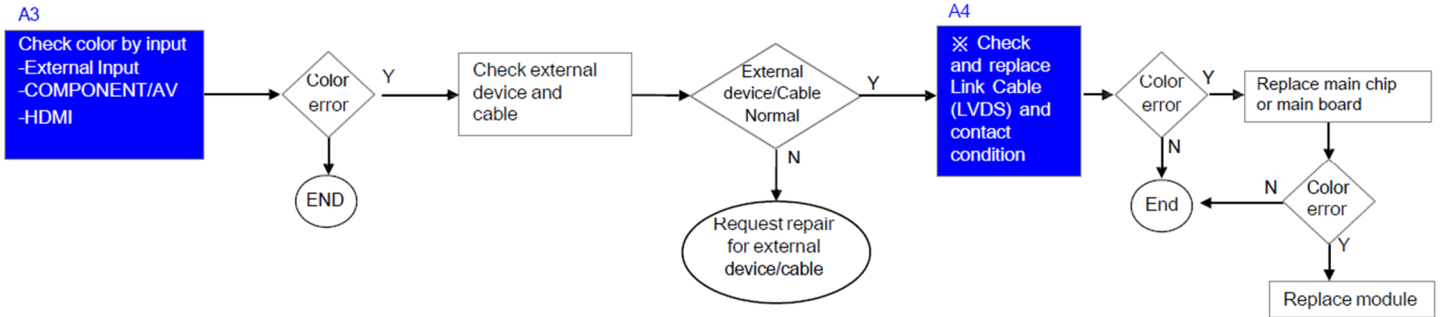
LED TV	Error symptom	A. Video error	Established date		
		No video/ No audio	Revised date		2/12



LED TV	Error symptom	A. Video error	Established date		
		Tuning fail	Revised date		3/12



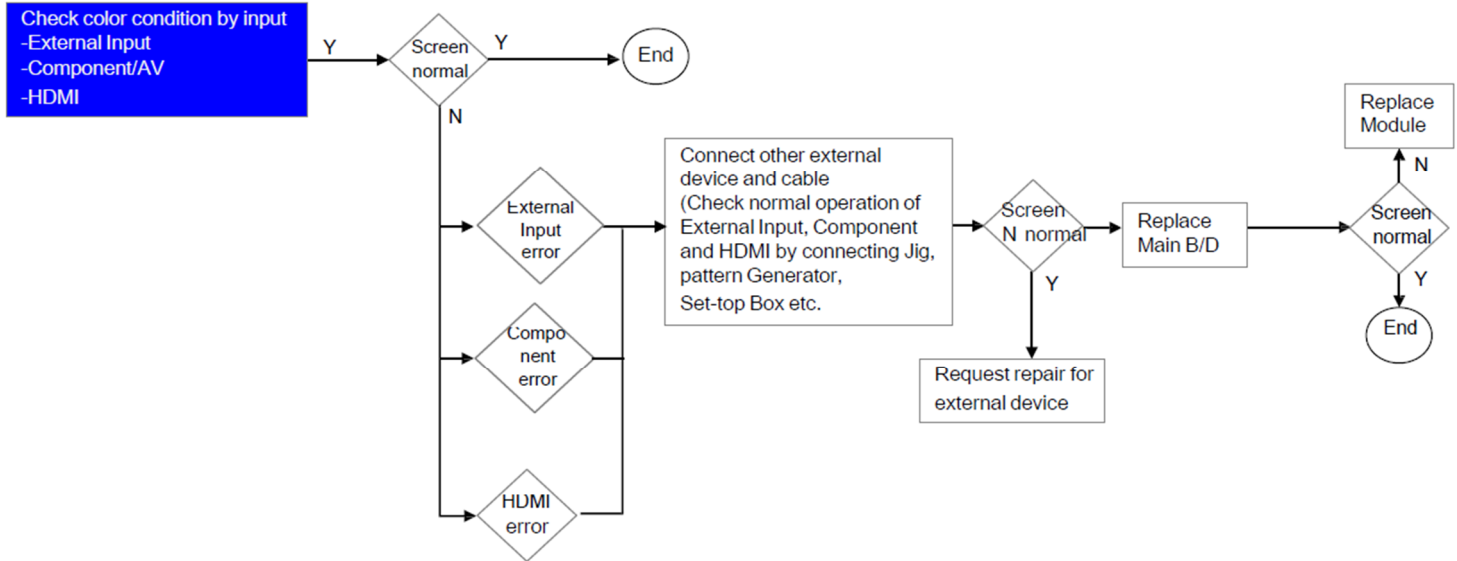
LED TV	Error symptom	A. Video error	Established date		
		Color error	Revised date		4/12



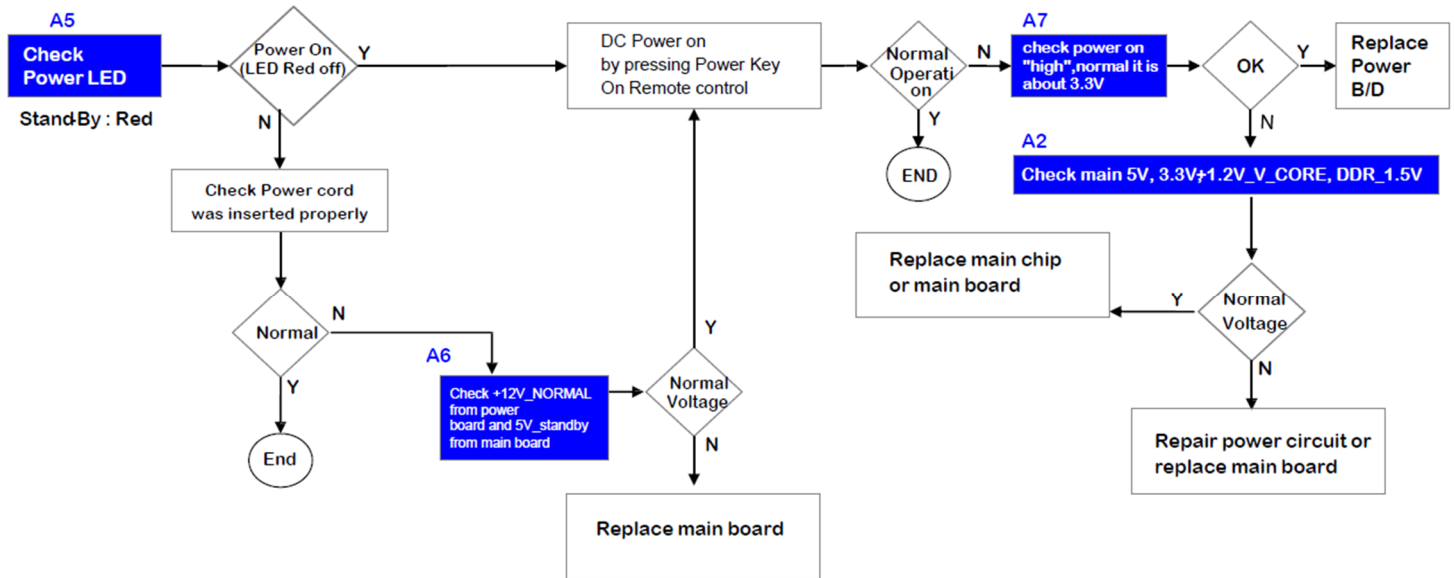
LED TV	Error symptom	A. Video error	Established date		
		Vertical/Horizontal bar,residual image, light spot, external device color error	Revised date		5/12

Vertical/Horizontal bar, residual image, light spot

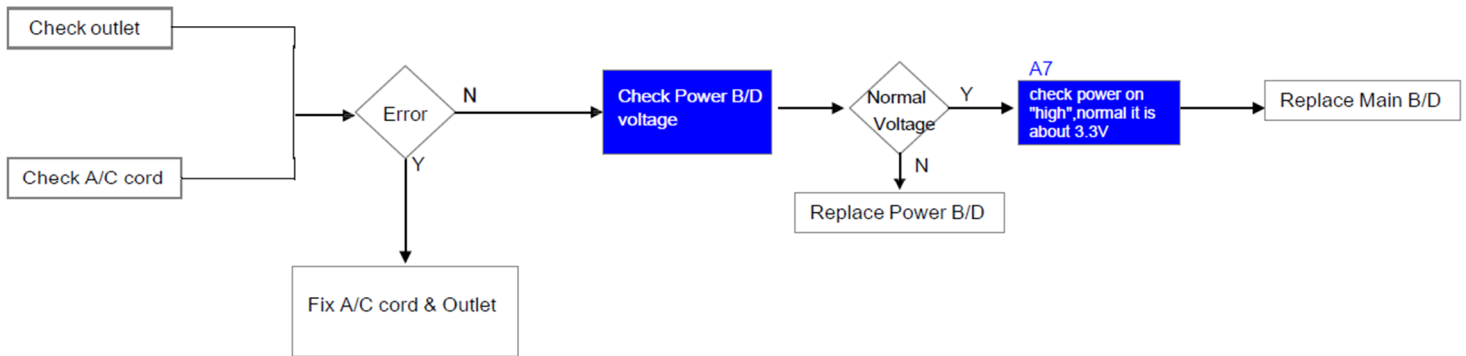
A3



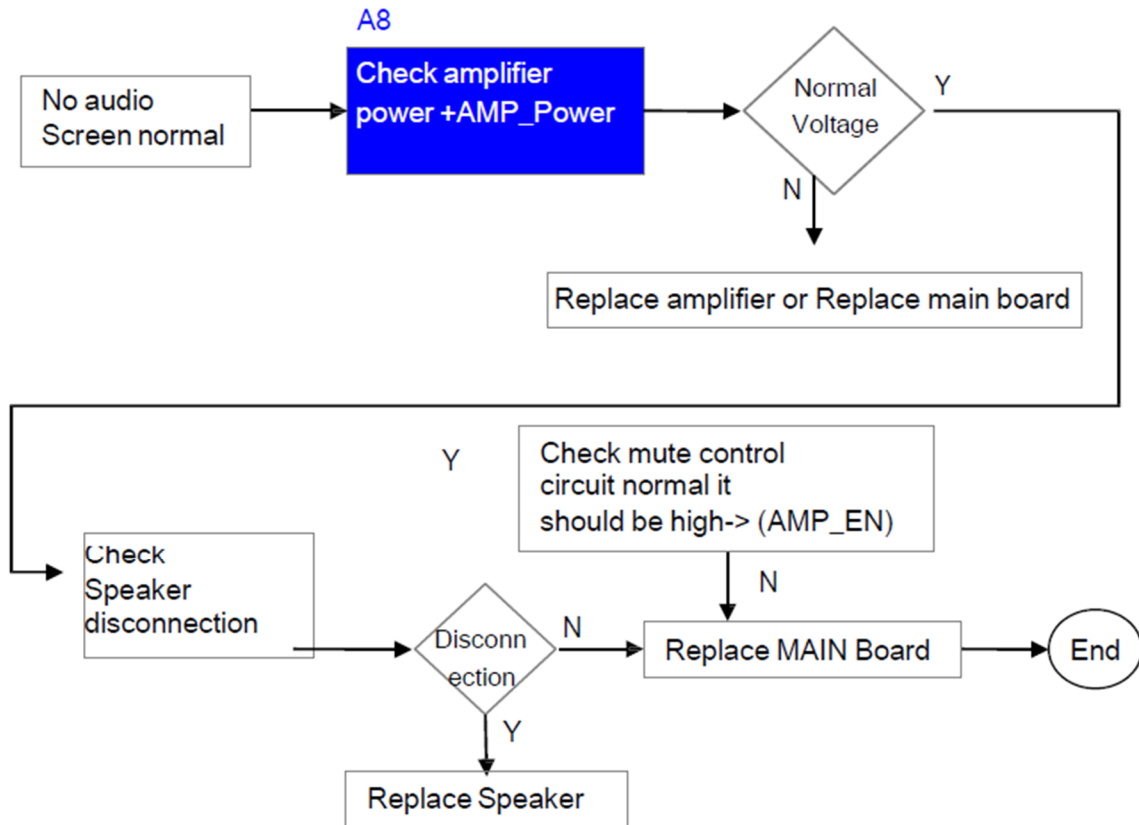
LED TV	Error symptom	Power error	Established date	
		No power	Revised date	6/12



LED TV	Error symptom	Power error	Established date		
		Off when on, off while viewing, power auto on/off	Revised date		7/12

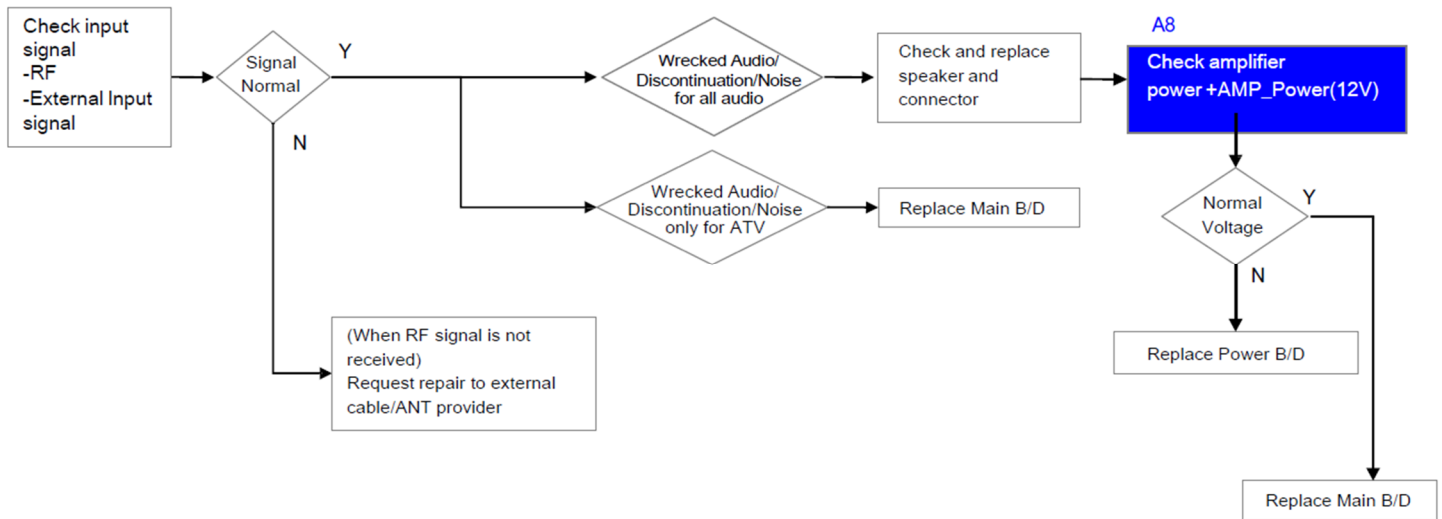


LED TV	Error symptom	Audio error	Established date		
		No audio	Revised date		8/12



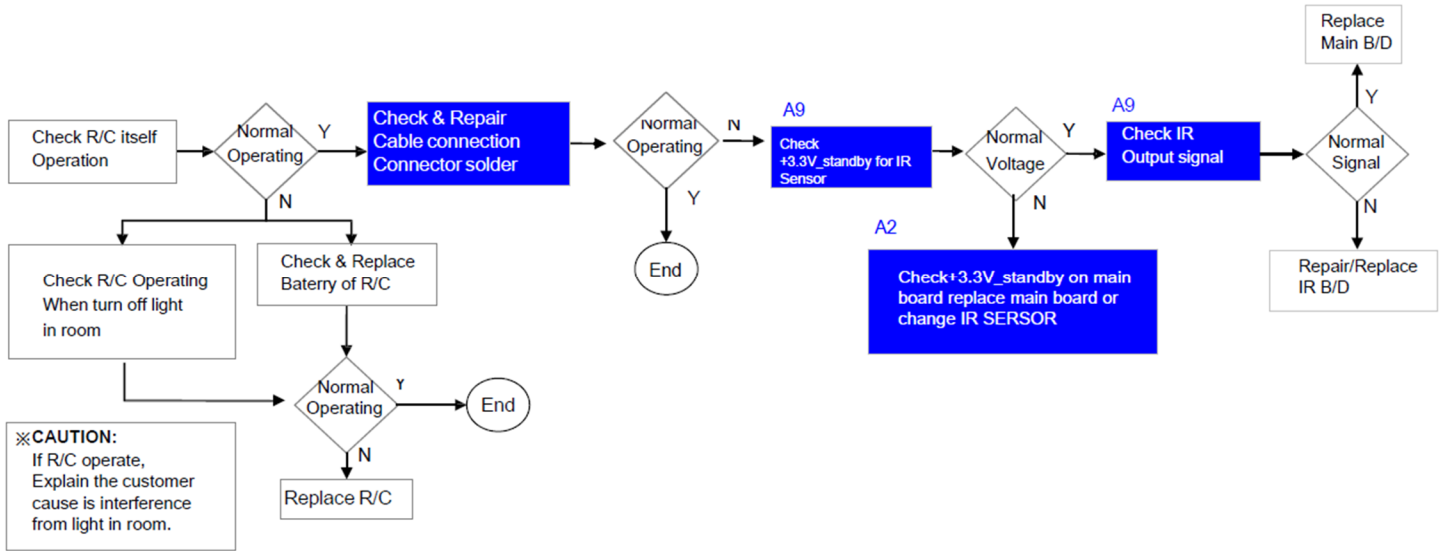
LED TV	Error symptom	Audio error	Established date		
		Wrecked audio/discontinuation/noise	Revised date		

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

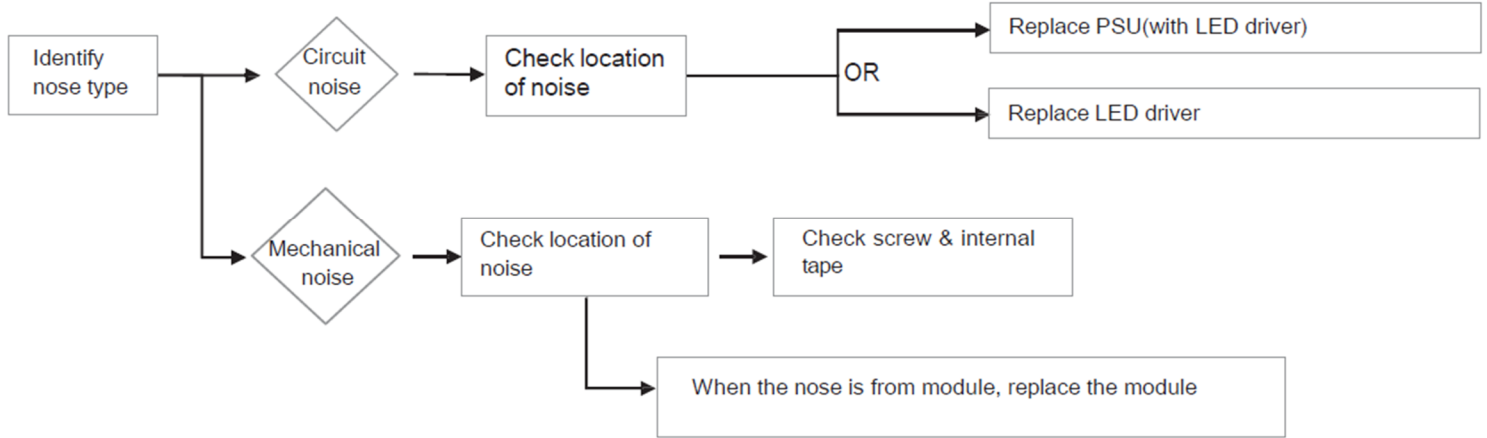


LED TV	Error symptom	Function error	Established date	
		Remote control & Local switch checking	Revised date	10/12

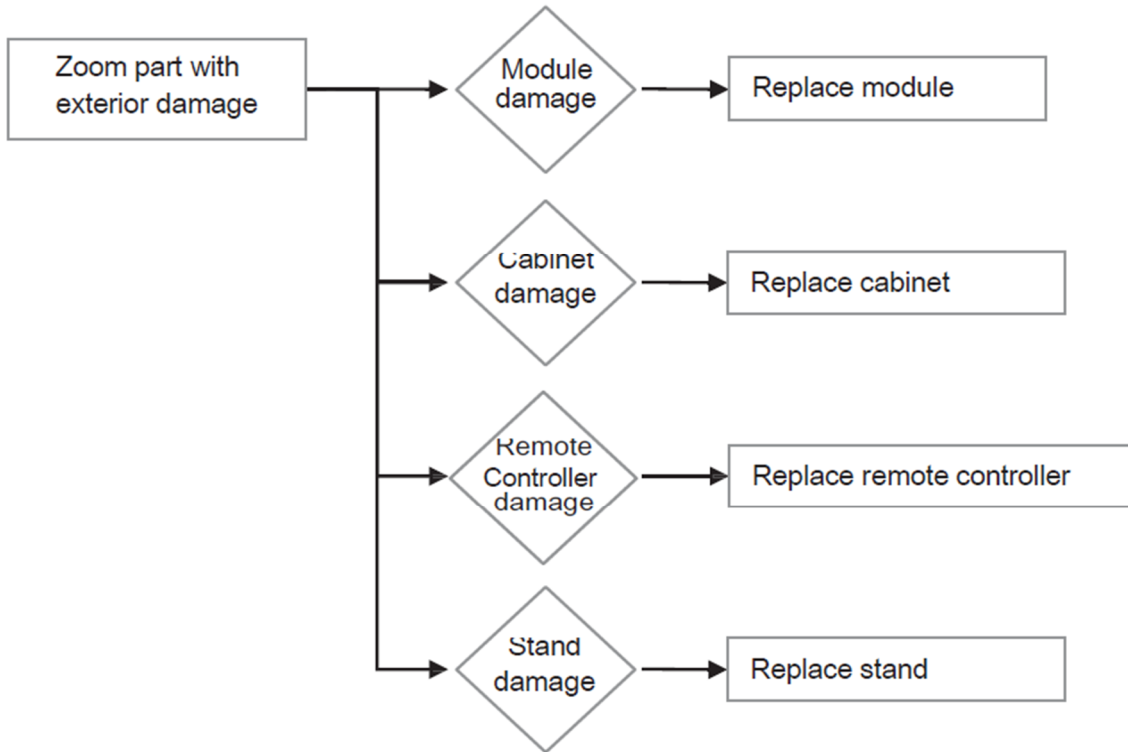
1. Remote control(R/C) operating error



LED TV	Error symptom	Noise	Established date		
		Circuit noise, mechanical noise	Revised date		11/12



LED TV	Error symptom	Exterior defect	Established date		
		Exterior defect	Revised date		12/12



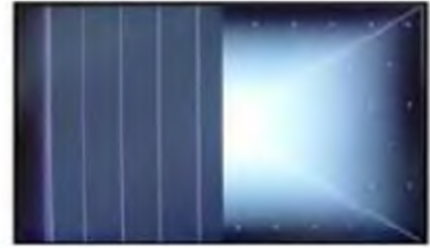
Appendix : Exchange T-Con Board (1)



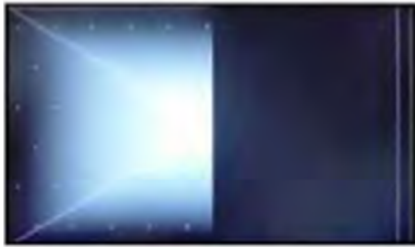
Solder defect, CNT Broken



Solder defect, CNT Broken



Solder defect, CNT Broken



Solder defect, CNT Broken



Solder defect, CNT Broken



Abnormal Power Section



Solder defect, Short/Crack

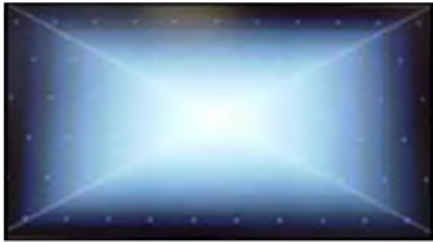


Abnormal Power Section



Solder defect, Short/Crack

Appendix : Exchange T -Con Board (2)



Abnormal Power Section



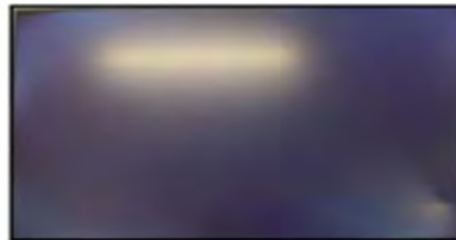
Abnormal Power Section



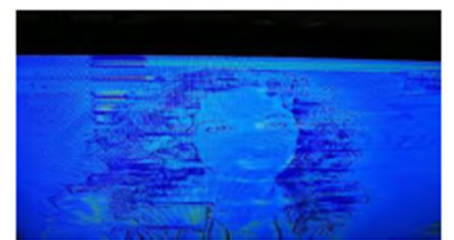
Solder defect, Short/Crack



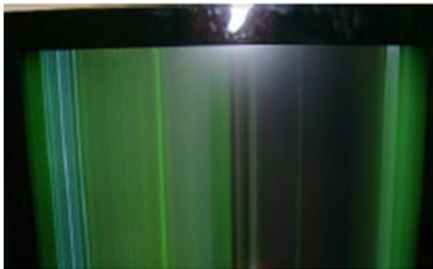
Solder defect, Short/Crack



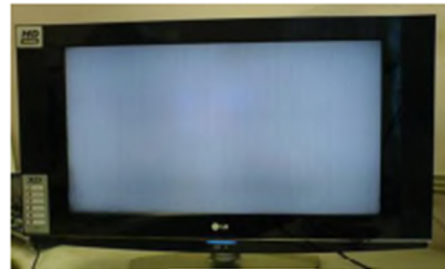
Fuse Open, Abnormal power section



Abnormal Display



GRADATION



Noise



GRADATION

Appendix : Exchange the Module (1)



Press damage



Crosstalk



Press damage



Crosstalk

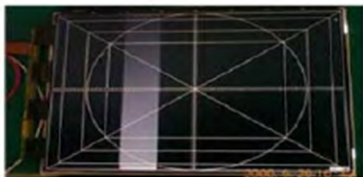


Press damage

Un-repairable Cases

In this case please exchange the module.

Appendix : Exchange the Module (2)



Vertical Block
Source TAB IC Defect



Vertical Line
Source TAB IC Defect



Vertical Block
Source TAB IC Defect



Horizontal Block
Gate TAB IC Defect



Horizontal Block
Gate TAB IC Defect



Horizontal line
Gate TAB IC Defect

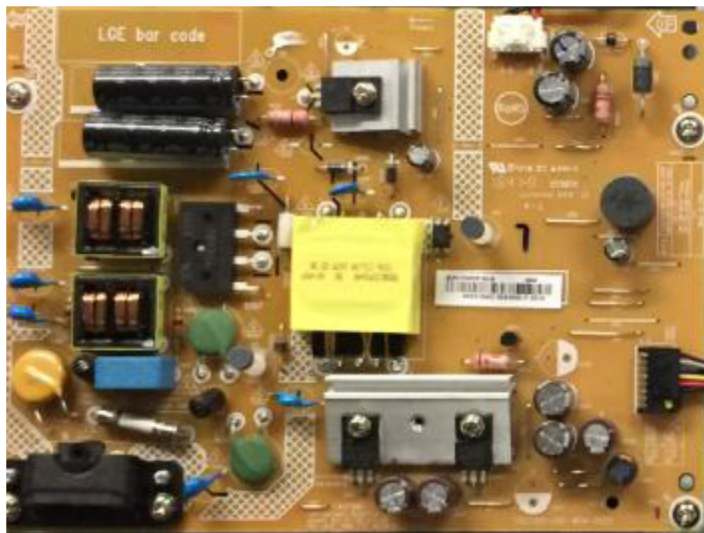


Horizontal Block
Gate TAB IC Defect

Un-repairable Cases

In this case please exchange the module.

LED TV	Error symptom	Video error_No video/Normal audio	Established date		
	Content	Backlight converter measuring method	Revised date		A1



1. Measure DC ~15V applying to Backlight module section, Check the C9122.
2. Output DC~24V from Backlight module to Light bar module, Check the Pin1/2 of CN8601. Check Pin contacting statement and connection statement.

LED TV	Error symptom	Video error_No video/Normal audio	Established date		
	Content	Main Board voltage measuring method	Revised date		A2

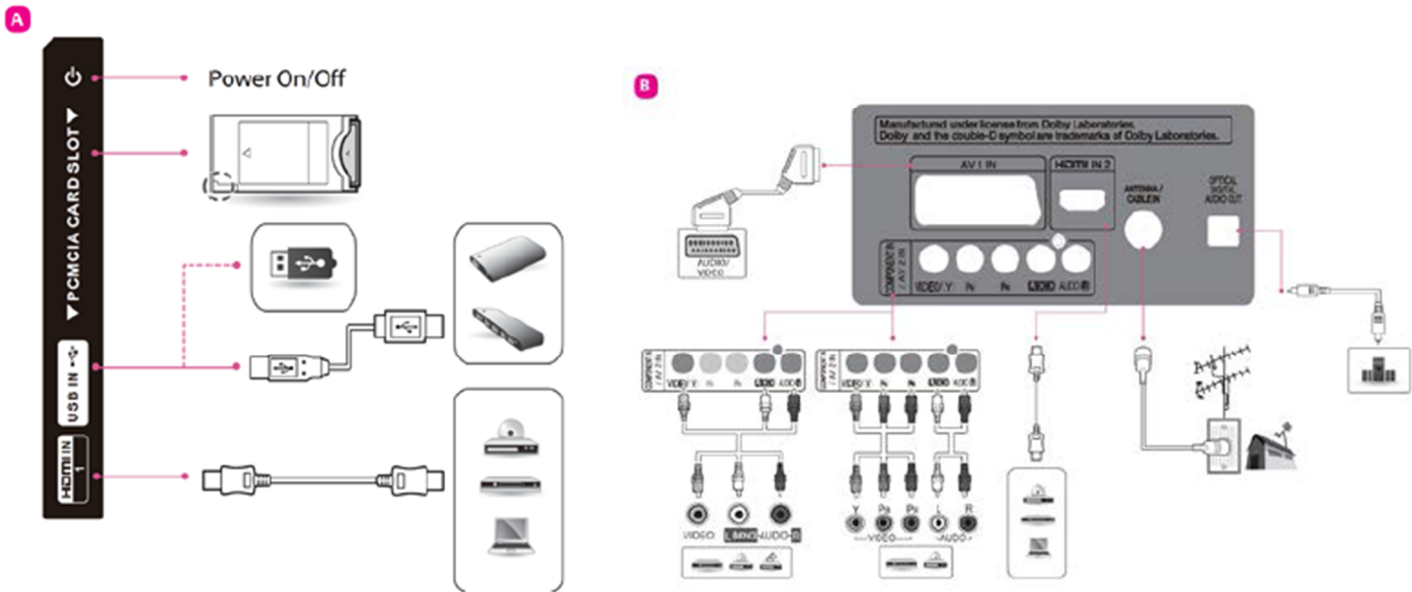
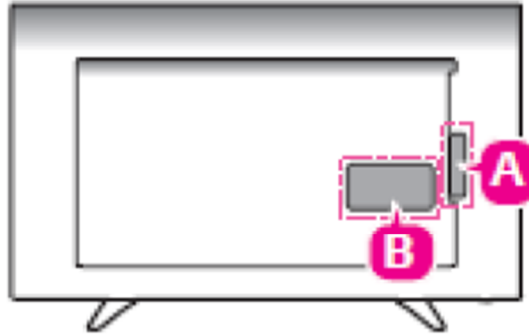
Check all power point



Check main 5V,3.3V ,V_CORE(1.15V),DDR_1.5V

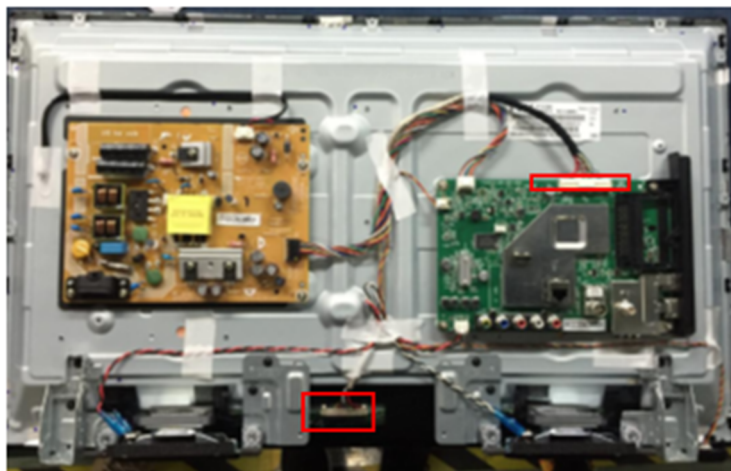
No.	Parts	Net	Test point
1	Q701	+5V_SW	R707
2	U702	+3.3V_SW	C717
3	U703	+1.5V_SW	C751
4	U715	+MAIN2V5	R752
5	U707	+12V_PANEL	C754
6	U713	+0.95V_DV10	C738
7	U712	+3.3V_SB	C780
8	Q703	PS_ON	R701
9	U706	+5V_SB	C706
10	U601	+12V_AUD	C601

LED TV	Error symptom	Video error_Vertical/Horizontal bar, residual image, light spot	Established date		
	Content	LED TV connection diagram (1)	Revised date		A3



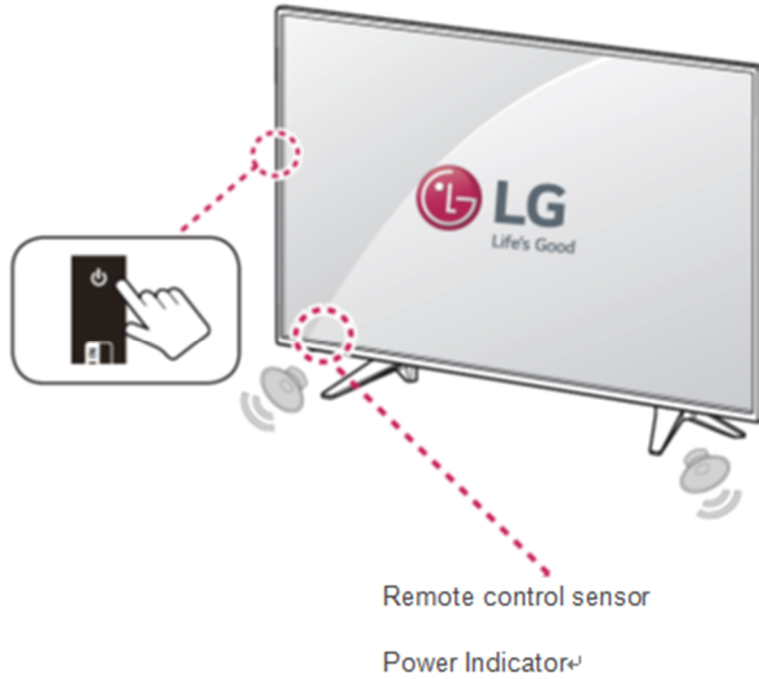
As the part connecting to the external input, check the screen condition by signal

LED TV	Error symptom	Video error_Color error	Established date		
	Content	Check and replace Link Cable (LVDS) and contact condition	Revised date		A4



1. Check and replace LVDS Cable.
2. Check LVDS connection condition.

LED TV	Error symptom	Power error_No power	Established date		
	Content	Check front display LED	Revised date		A5



LED TV	Error symptom	Power error_No Power	Established date		
	Content	Check power input voltage and ST-BY 5V	Revised date		A6



Check “12V (CN701-1/2)” pin is high (about 12V)

C706	+5V_STB
C780	+3.3V_DV33SB
CN701-1/2	+12V

LED TV	Error symptom	Power error_No Power	Established date		
	Content	Check method when power is ON	Revised date		A7



Check “3.3V(R704)” pin is high (about 3.3V)

CN701-1/2	+12V
C717	+3.3V_DV33
R707	+5V_SW
R701	+3.3 PWR_ON

LED TV	Error symptom	Audio error_No audio	Established date		
	Content	Voltage and speaker checking method when there is no audio	Revised date		A8



Checking order

1. Check the 12V for amplifier from C601.
2. Connect the tester CN601 to the speaker terminal and if you hear the Chik Chik sound when you touch the GND and output terminal, the speaker is normal.

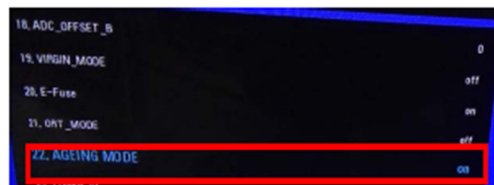
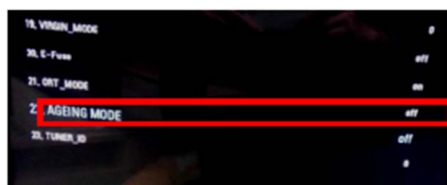
LED TV	Error symptom	Function error_ No response in	Established date		
	Content	Remote controller operation checking method	Revised date		A9



Checking order

1. Check the 3.3V for IR power from CN401 PIN5 3.3V.
2. Connect IR wire cable CN401 to the IR Board and check for CN401 PIN3 signal.

LED TV	Error symptom	Video error_Color error	Established date		
	Content	Check test pattern	Revised date		A10



Red pattern



Green pattern



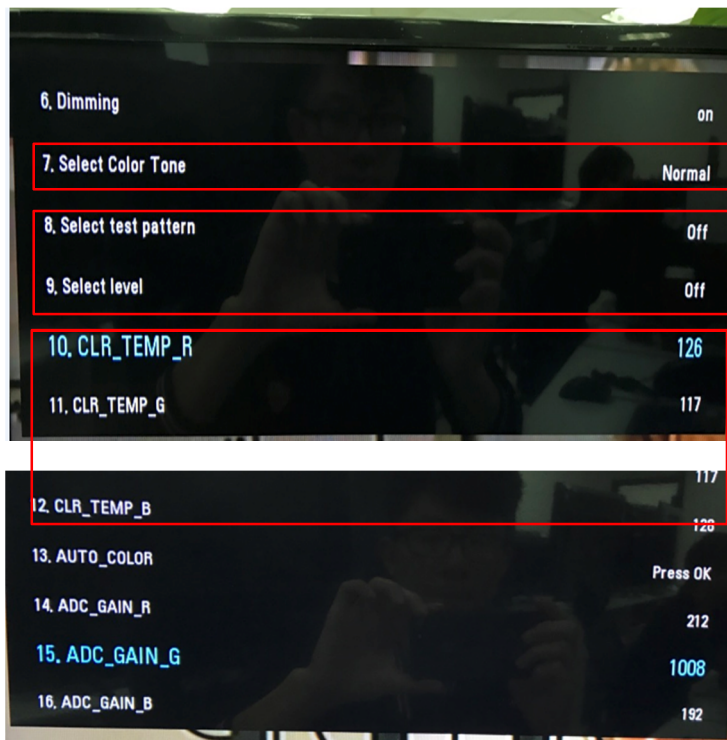
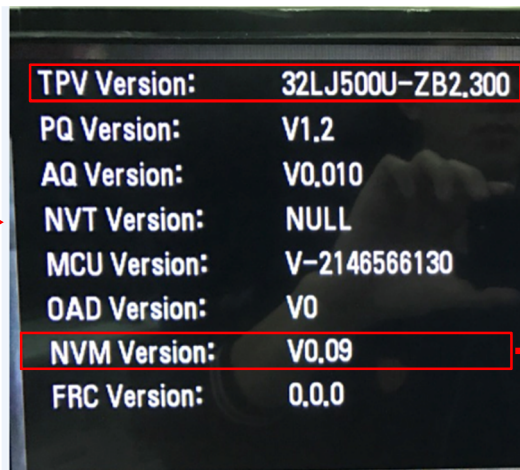
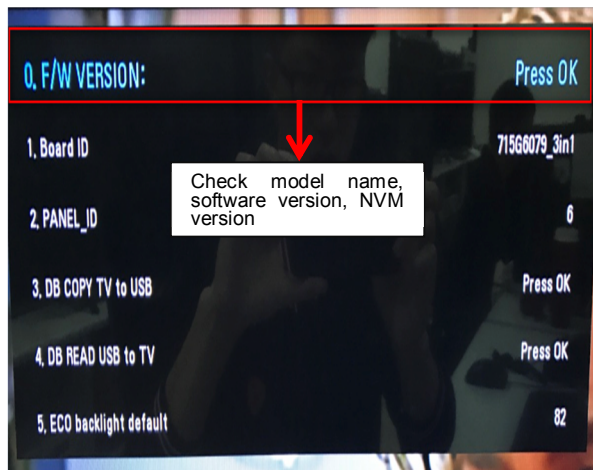
Blue pattern

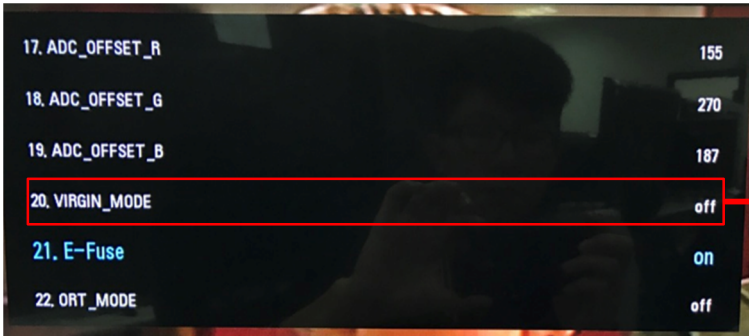
Press "SETTINGS + 1999+Q.VIEW" to enter into factory mode, select "AGEING MODE" item to switch different color pattern. NOTE:"AGEING MODE" item value change from off to on.

ADJUSTMENT INSTRUCTION

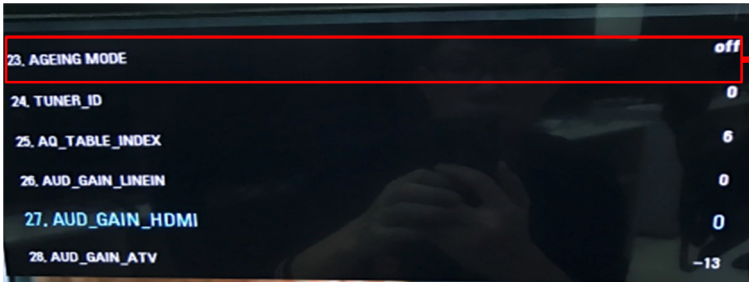
[1] How to ENTER FACTORY MODE

Please click “SETTINGS+1+9+9+9+Q.VIEW” to enter the factory mode.

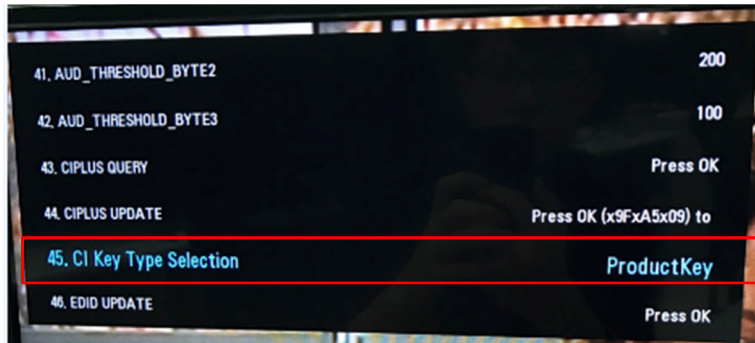




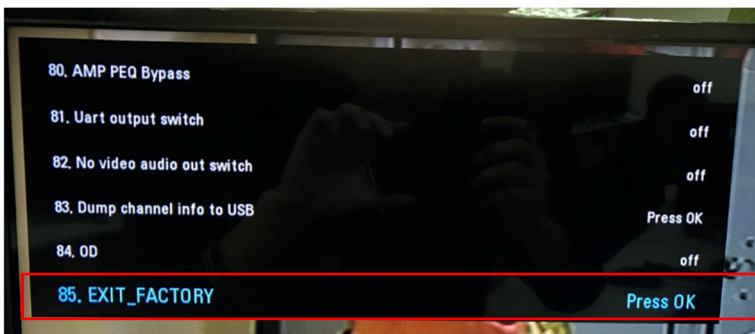
Don't use. if reset, follow [2] outgoing condition configuration



Burn in on/off.



Check CI+KEY, don't change



Exit factory model

[2] Outgoing condition configuration

Please click "SETTINGS" and select the "OPTION" and press OK, then select the "Factory Reset" and press OK, go to "Reset" and press OK.

