

SAMSUNG

UHD TV

Project : HT670U

Chassis : HWP01

Model : HG43NT678UF

HG50NT678UF

HG55NT678UF

HG65NT678UF

SERVICE Manual

Hospitality Displays



HG50NT678UF

Contents

1. Precautions
2. Product specifications
3. Disassembly and Reassembly
4. Troubleshooting
5. Wiring Diagram

Contents

1. Precautions	1-1
1-1. Safety Precautions	1-1
1-1-1. Warnings	1-1
1-1-2. Servicing the LED TV	1-1
1-1-3. Fire and Shock Hazard	1-1
1-1-4. Product Safety Notices	1-2
1-2. Servicing Precautions	1-3
1-2-1. General Servicing Precautions	1-3
1-3. Static Electricity Precautions	1-4
1-4. Installation Precautions	1-5
2. Product Specifications	2-1
2-1. Product Information	2-1
2-2. Other Information	2-3
2-3. Accessories	2-8
2-4. Viewing the Functions	2-9
2-5. About the Buttons on the Remote Control	2-14
2-6. Using the TV Controller	2-16
2-7. Hotel Option menu items	2-17
2-8. Supported subtitles	2-23
3. Disassembly and Reassemble	3-1
3-1. TV Disassembly	3-1
4. Troubleshooting	4-1
4-1. Function/IR	4-1
4-1-1. Function Test	4-1
4-1-2. IR Test	4-1
4-2. Power	4-2
4-2-1. TV POWER STANDBY Test	4-6
4-2-2. TV POWER STANDBY Test	4-7
4-2-3. Backlight Test	4-10
4-3. Video	4-13
4-3-1. Customer Picture Test	4-13
4-3-2. Test Patterns	4-14
4-3-3. MAIN BOARD	4-15
4-4. Audio	4-17
4-5. Factory Mode	4-18
4-6. Replacing Main Board	4-24
4-7. Detail Factory Option	4-29
4-8. Factory Data	4-33
4-9. AV Control Tab	4-46
4-10. Updating the TV's Software	4-53

- 5. Wiring Diagram 5-1**
- 5-1. Wiring Diagram 5-1
- 5-2. Connector..... 5-2
 - 5-2-1. MAIN Board 5-2
 - 5-2-1. DC VSS-PD BOARD 5-6
- 5-3. Cables 5-10

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1. Precautions

1-1. Safety Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1-1. Warnings



For continued safety, do not attempt to modify the circuit board.
Disconnect the AC power and DC power jack before servicing.

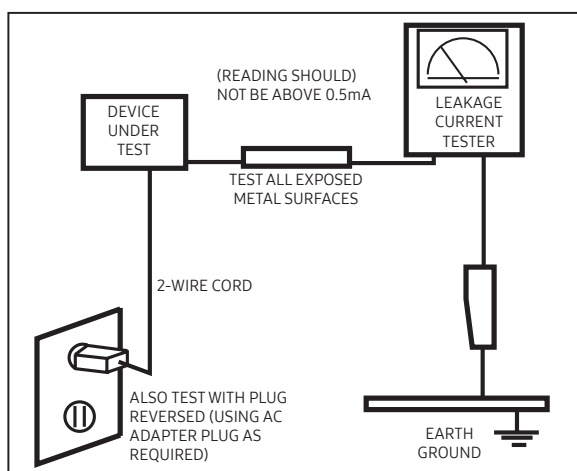
1-1-2. Servicing the LED TV

1. When servicing the LED TV, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3. Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check:




Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by  on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.



Wear protective equipment (gloves, safety goggles, etc) to prevent injuries and electrical shock that may occur during TV product disassembly/repair.

1-2. Servicing Precautions



An electrolytic capacitor installed with the wrong polarity might explode.



Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.



If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1. General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3. Static Electricity Precautions

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

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, 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 body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (0.4m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.
8. If an equipment is provided with a replaceable battery, and if replacement by an incorrect type could result in an explosion (for example, with some lithium batteries), the following applies:



CAUTION



- Risk of explosion if battery is replaced by an incorrect type dispose of used batteries according to the instructions.
- Do not dispose of batteries in a fire.
- Do not short circuit, disassemble or overheat the batteries.
- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- Do not be exposed to excessive heat such as sunshine, fire or the like.

2. Product Specifications

2-1. Product Information

Model	HG**NT678UF		
Front View	 <p>* W : Width H : High D : Depth</p>		
Detail View			
Color	Front : BLACK / Stand : BLACK		
Dimensions (W x H x D)	43"	Body	37.9 x 22.0 x 2.3 inches (963.9 x 558.9 x 59.6 mm)
		With Stand	37.9 x 24.1 x 8.9 inches (963.9 x 610.9 x 226.5 mm)
	50"	Body	44.0 x 25.4 x 2.4 inches (1116.8 x 644.2 x 59.9 mm)
		With Stand	44.0 x 27.4 x 8.9 inches (1116.8 x 696.8 x 226.5 mm)
	55"	Body	48.4 x 27.8 x 2.4 inches (1230.5 x 707.2 x 59.9 mm)
		With Stand	48.4 x 29.9 x 8.9 inches (1230.5 x 759.8 x 226.5 mm)
Weight	43"	Without Stand	19.0 lbs (8.6 kg)
		With Stand	26.0 lbs (11.8 kg)
	50"	Without Stand	26.2 lbs (11.9 kg)
		With Stand	33.3 lbs (15.1 kg)
	55"	Without Stand	31.5 lbs (14.3 kg)
		With Stand	38.6 lbs (17.5 kg)

2. Product specifications

Model	HG65NT678UF		
Front View	 <p>* W : Width H : High D : Depth</p>		
Detail View			
Color	Front : BLACK / Stand : BLACK		
Dimensions (W x H x D)	65"	Body	57.1 x 32.7 x 2.4 inches (1449.4 x 830.3 x 59.9 mm)
		With Stand	57.1 x 35.7 x 11.1 inches (1449.4 x 906.6 x 282.1 mm)
Weight	65"	Without Stand	46.5 lbs (21.1 kg)
		With Stand	47.2 lbs (21.4 kg)

2-2. Other Information



NOTE

Design and specifications are subject to change without prior notice.

Item		HG**NT678UFXZA			
		43	50	55	65
General Information	Product	LED			
	Country	UNITED STATES			
Display	Screen Size	43	50	55	65
	Resolution	3,840 x 2,160			
Video	Picture Engine	UHD Mastering Engine			
	Micro Dimming	N/A			
	Auto Motion Plus	Yes			
	Film Mode	Yes			
	Natural Mode Support	Yes			
	Motion Rate	120			
	PQI (Picture Quality Index)	1300			
	HDR(High Dynamic Range)	HDR			
	HDR10+	Yes			
	HLG (Hybrid Log Gamma)	Yes			
	Contrast	Mega Contrast			
	Color	PurColor			
	Viewing Angle (H/V)	178/178			
	Auto Depth Enhancer	N/A			
	Contrast Enhancer	Yes			
Audio	Dolby Digital Plus	Yes			
	Sound Output (RMS)	20W			
	Speaker Type	2CH			
	Woofers	N/A			
Smart TV	Samsung SMART TV	N/A			
	Voice Interaction	N/A			
	TV Plus	N/A			
	Web Browser	N/A			
	SmartThings App Support	N/A			
	SmartThings	N/A			
	Universal Guide	N/A			

2. Product specifications

Item		HG**NT678UFXZA			
		43	50	55	65
VESA	VESA Mount	200 x 200 mm	200 x 200 mm	200 x 200 mm	400 x 300 mm
	VESA Screw Size	M8			
	VESA Screw Depth	20-22			
Convergence	TV to Mobile - Mirroring	N/A			
	Mobile to TV - Mirroring, DLNA	N/A			
	360 Video Player	N/A			
	360 Camera Support	N/A			
	Easy Setup	N/A			
	Bluetooth Low Energy	N/A			
	WiFi Direct	N/A			
	TV Sound to Mobile	N/A			
	Sound Mirroring	N/A			
General Feature	Accessibility	US English			
	Digital Clean View	Yes			
	Auto Channel Search	Yes			
	Auto Power Off	Yes			
	Caption (Subtitle)	Yes			
	Connect Share™ (HDD)	Yes			
	ConnectShare™ (USB 2.0)	Yes			
	EPG	Yes			
	Game Mode	Yes			
	OSD Language	English, Spanish, French, Estonian, Finnish, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Romanian, Serbian, Slovak, Swedish, Bulgarian, Croatian, Czech, Danish, Dutch, Slovenian, Albanian, Macedonian, Bosnian, Korean			
	Picture-In-Picture	N/A			
	BT HID Built-in	N/A			
	USB HID Support	Yes			
	Teletext (TTX)	N/A			
	Ambient Mode	N/A			
	Ultra Clean View	N/A			
	V-Chip	Yes			
	MBR Support	N/A			
	IPv6 Support	N/A			

Item		HG**NT678UFXZA			
		43	50	55	65
System	Digital Broadcasting	ATSC/ClearQAM			
	Analog Tuner	Yes			
	CI (Common Interface)	N/A			
	Data Broadcasting	N/A			
Hospitality Feature	Samsung LYNK™ HMS Compatibility	N/A			
	H.Browser Compatibility	N/A			
	Samsung LYNK™ REACH (IP)	N/A			
	Samsung LYNK™ REACH (RF)	REACH 4.0			
	Hospitality Home Menu	Home Menu 2017			
	Bluetooth Music Player (Mobile → TV)	N/A			
	Hospitality Plug&Play (Easy Set-up)	Yes			
	Auto Source Mode	Yes			
	Power On Mode	Yes			
	Hotel Channel List	Yes			
	Channel Menu Display	Yes			
	Mixed Channel List (ATSC, DVB-T/T2/C/S2, Analog)	Yes			
	My Channel	Yes			
	Energy Saving Mode (BLU Control)	Yes			
	Logo Display with Time Out Setting (BMP/ Movie)	Yes			
	Welcome Message	Yes			
	RJ12/IR Pass Through	Yes			
	External Clock Compatibility	No			
	Clock Back Up Supply	Yes			
	External Clock Dimming Control	No			
	Software Clock	N/A			
	Multi Code Remote Control	Yes			
	Screwed Remote Battery Cover	Yes			
	Soundbar Compatibility	Yes			
Music Mode (Input: PC/AV/Component/ HDMI)	Yes				
Music Mode Backlight on/off	N/A				
TTX Clock Update (Analogue)	No				
USB Cloning	Yes				

2. Product specifications

Item		HG**NT678UFXZA			
		43	50	55	65
	Smovie Compatibility	Yes			
	Soft AP	N/A			
	On/Off Timer (Schedule)	Yes			
	Wake-up Timer (Alarm)	Yes			
	Samsung LYNK™ DRM	Yes			
	Pro:Idiom HW	Yes			
	bLAN	Yes			
	Security Mode	Yes			
	S/W EPG (Solution EPG)	Yes			
	IP Over Coax	No			
	UL Certification	N/A			
Input & Output	HDMI	3/0			
	USB	2			
	Component In (Y/Pb/Pr)	N/A			
	Composite In (AV)	N/A			
	Ethernet (LAN)	N/A			
	Headphone	N/A			
	Audio Out (Mini Jack / LR)	N/A			
	Digital Audio Out (Optical)	1			
	RF In (Terrestrial / Cable input / Satellite Input)	1/1(Common Use for Terrestrial)/0			
	Ex-Link (Supports RS-232C Gender)	1			
	CI Slot	N/A			
	HDMI A / Return Ch. Support	Yes			
	WiFi	N/A			
	Anynet+ (HDMI-CEC)	Yes			
	Pillow Speaker Jack	No			
	Variable Audio Out	N/A			
	Variable Audio Out Volume Control	N/A			
	Video Out	N/A			
	RJ12	0/1			
	RJP (Remote Jackpack)	N/A			
Headphone ID	N/A				
Door-Eye Control	No				

Item		HG**NT678UFXZA			
		43	50	55	65
	Door-Eye Video In	No			
	PC In (D-sub) (Side./Rear)	No			
	PC/DVI Audio In (Mini Jack)	No			
	Ethernet Bridge (LAN-Out)	N/A			
Design	Front Color	BLACK			
	Stand Type	SQUARE	SQUARE	SQUARE	SLIM FEET
	Swivel (Left/Right)	Yes			
	Bezel Type	3 Bezel-less			
	Light Effect (Deco)	N/A			
Eco	ENERGY STAR (Latest effective version)	Yes			
	Eco Sensor	Yes			
Power	Power Supply (V)	AC110-120V 50/60Hz			
	Power Consumption (Max)	105 W	135 W	135 W	190 W
	Power Consumption (Energy Saving Mode)	N/A			
	Power Consumption (Stand-by)	0.5 W			
	Power Consumption (Typical)	51 W	61 W	62 W	80 W

2-3. Accessories



NOTE

- The items' colours and shapes may vary depending on the models.
- Cables not included can be purchased separately.
- Check for any accessories hidden behind or in the packing materials when opening the box.
- The code number can be changed, see "**Exploded Views**" provided on the site.
- The provided accessories may vary depending on the model.



Remote Control/Batteries (AAA x 2)
(Not available in some locations)
AA59-00817A/4301-000103



Power Cord
3903-001117



Quick Setup Guide
(Not available in some locations)
BN68-11047P



Regulatory Guide
(Not available in some locations)
BN68-09367A



Hotel Mount Kit (43"-55")
BN96-23066A



Cable Guide (43"-55")
BN61-08370A

2-4. Viewing the Functions

■ Create a premium guest experience

Samsung's HT690U displays enable premium hotel operators to meet guests' rising expectations while improving their own efficiency. Through brilliant UHD picture quality and convenient room management, guests can enjoy the comforts of home and seamless two-way communication through their display.



■ Crisp and vivid color expression

Crystal Display ensures optimized color expression so guests can experience every subtle detail, immersing themselves in any content with a wider range of colors.



■ UHD-quality content delivery

Samsung's hospitality displays offer hotel guests the vivid picture quality of home entertainment systems. Through UHD upscaling technology, these refined displays showcase all content at UHD resolution (3,840 x 2,160), with four times the pixels of the FHD standard.



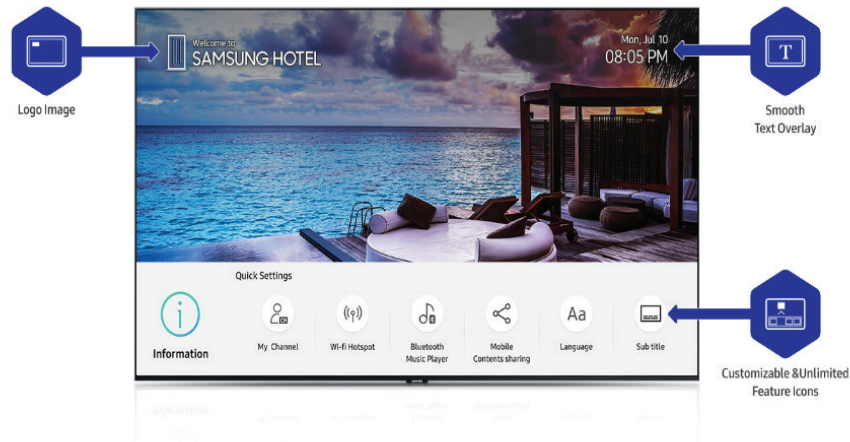
■ Refined picture quality

Beyond consistent UHD quality, Samsung's displays bring the power of High Dynamic Range (HDR10+) picture refinement to any hotel room. Using dynamic metadata that fine-tunes each frame within a given program, HDR10+ technology delivers an optimal, detail-rich and memorable viewing experience.



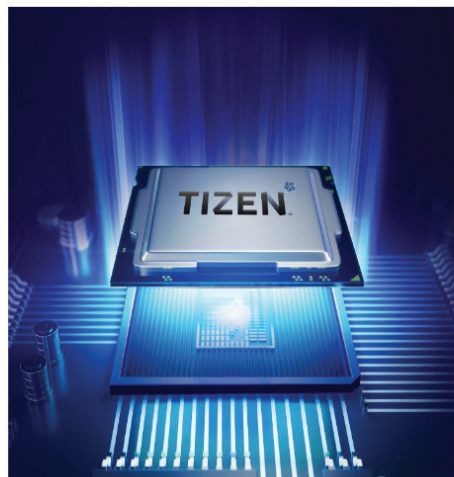
■ A tailored home menu

Each Samsung hospitality display includes an intuitive, customizable home menu that streamlines content exchange between hotels and guests. Content managers can easily incorporate images, logos and feature icons specific to guest needs while reinforcing special offers and hotel branding.



■ Powerful performance, enhanced security

Backed by the powerful TIZEN operating system, Samsung hospitality displays ensure secure content delivery across the application, platform and system layers.



■ A tailored home menu

Beyond its advanced graphics capabilities, Samsung's H.Browser empowers smooth application development. All apps can be stored within the TIZEN OS and are supported by Web Simulator and Remote Web Inspector tools that further refine app performance and security.



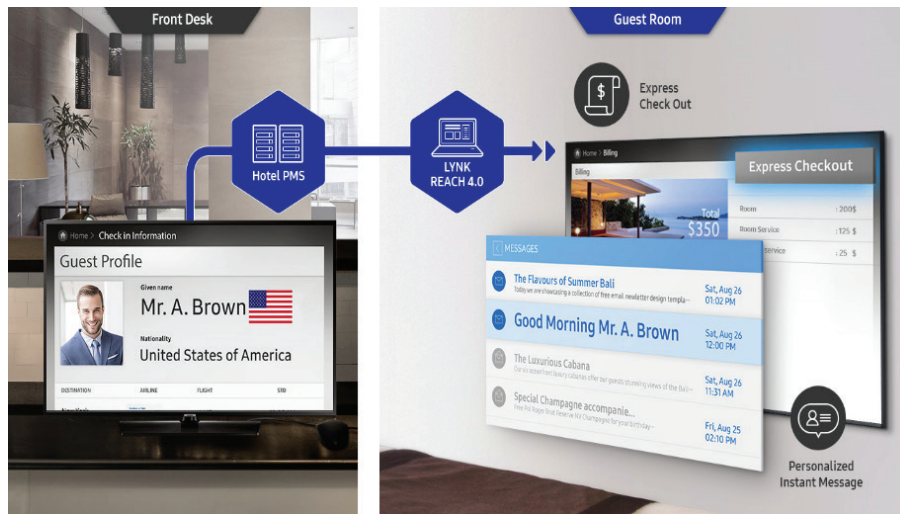
■ Centralized, real-time management

Compatible with existing LAN, Wi-Fi and coaxial infrastructures, Samsung's LYNK REACH 4.0 content platform centralizes and streamlines overall hotel maintenance. Hotel managers now can remedy issues across single displays or display groups before they escalate.




■ End-to-end personalized service

Hotels additionally can use LYNK REACH 4.0 to deliver customized guest messaging. Upon arrival, guests can receive a personalized greeting along with information about promotions or on-site amenities relevant to their stay. LYNK REACH 4.0 also provides express check-out for added convenience.



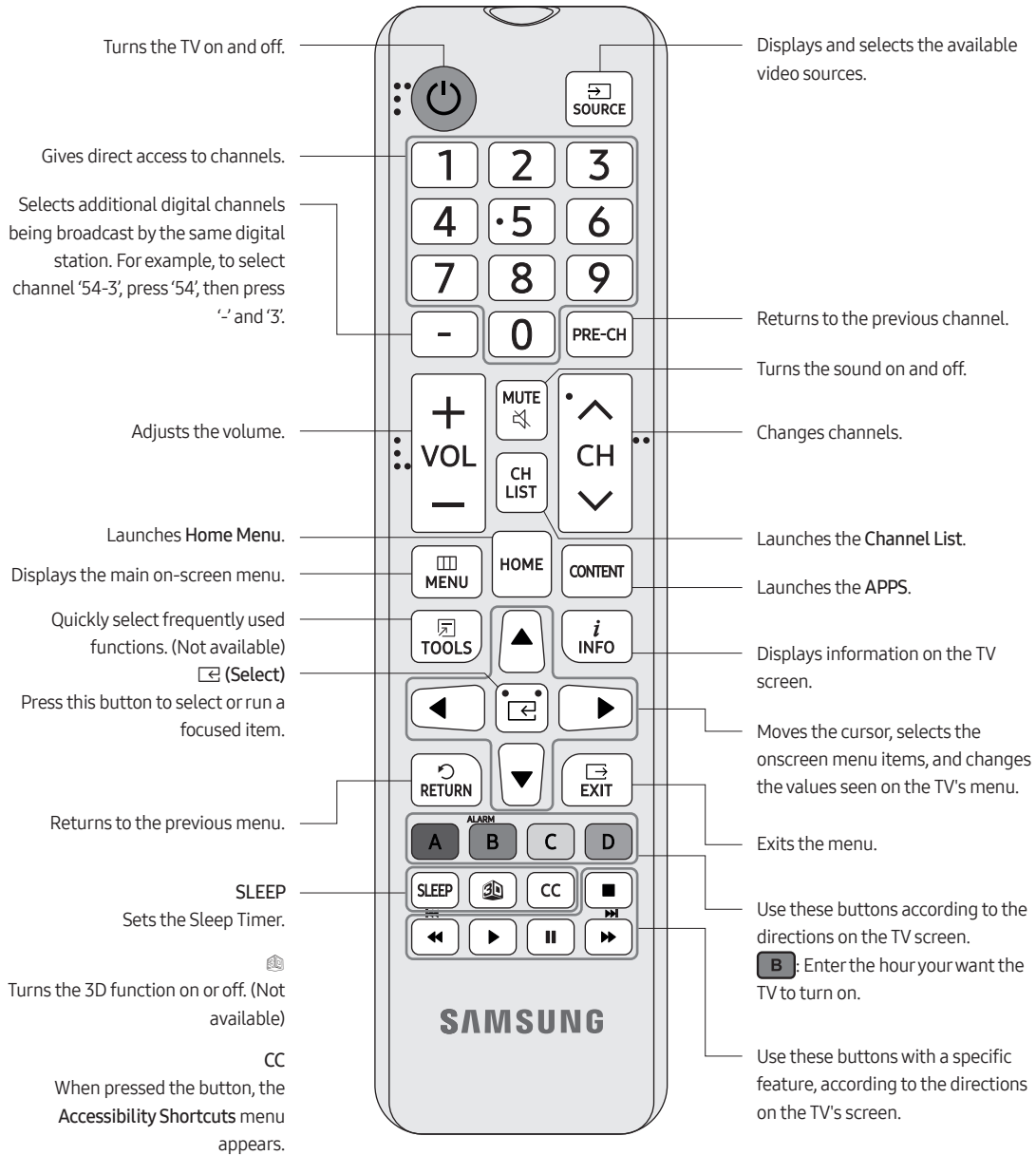
- 
 Swivel Stand
- 
 Plug and Play
- 
 Security Mode
- 
 LYNK DRM
- 
 Sound Bar Compatibility
- 
 SI Compatibility
- 
 ISTA

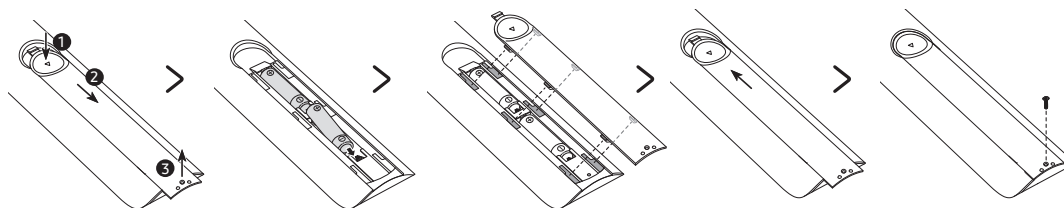
 Swivel stand feature may vary based on screen size specification.

2-5. About the Buttons on the Remote Control

■ The Remote Control

- The images, buttons, and functions of the remote control may differ depending on the model.
- The remote control has Braille points on the Power, Channel, Volume, and Select buttons and can be used by visually impaired persons.
- If you use the remote control that comes with your TV to control another TV, some functions may not operate normally.



■ Installing batteries into the remote control (Battery size: AAA)

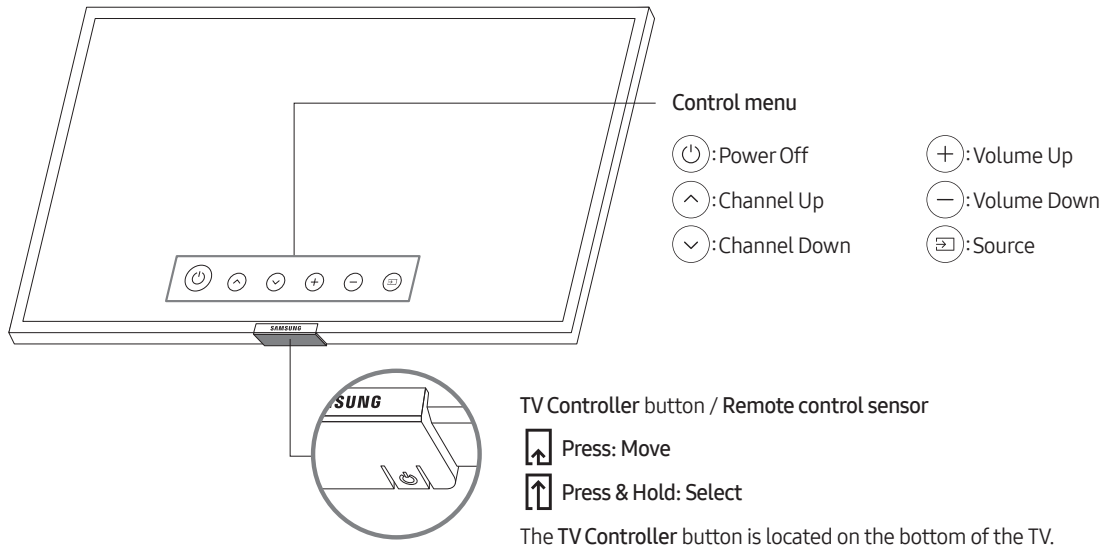
Match the polarity of the batteries to the symbols in the battery compartment.

- Use the remote control within 7 m of the TV.
- Bright light may affect the performance of the remote control. Avoid using near bright fluorescent lights or neon signs.
- The colour and shape of the remote may vary depending on the model.

2-6. Using the TV Controller

You can turn on the TV with the TV Controller button at the bottom of the TV, and then use the Control menu. The Control menu appears when the TV Controller button is pressed while the TV is On. For more information about its usage, refer to the figure below.

- The screen may dim if the protective film on the SAMSUNG logo or the bottom of the TV is not removed. Please remove the protective film.



2-7. Hotel Option menu items

To enter this menu, press the **MUTE > 1 > 1 > 9 > Select** buttons on the remote control in order.

To exit from this menu, turn off (or turn off and unplug the power cable if you have changed SI vendor) the TV, and then turn on again. Any changes you made are saved.

- The menu items may not be supported depending on the models and SI vendor.

Hotel Option menu Item	Description																		
Hospitality Mode	Select Hospitality Mode. <ul style="list-style-type: none"> Interactive: TV works with an SI STB or SBB. Standalone: TV works alone, without an SI STB or SBB. 																		
SI Vendor	<ul style="list-style-type: none"> Interactive: Samsung / OCC / MTI / Nstreams / Enseio / Cardinal / Guestek / SeaChange / MDC / Innvue / EBL Standalone: OFF / Smoovie / SSCP 																		
PowerOn	<table border="1"> <tr> <td data-bbox="389 680 691 848">Power On Channel</td> <td data-bbox="691 680 1441 848"> Set the channel to display when the TV is turned on. <ul style="list-style-type: none"> User Defined: Lets you set the channel number manually. See Power On Channel Num or Power On Channel Type below. Last Saved: If you select this item, when the TV is turned on, it displays the channel it was displaying when it was turned off. </td> </tr> <tr> <td data-bbox="389 848 691 898">Power On Channel Num</td> <td data-bbox="691 848 1441 898">When the TV is turned on, it switches automatically to this channel.</td> </tr> <tr> <td data-bbox="389 898 691 1043">Power On Channel Type</td> <td data-bbox="691 898 1441 1043"> Select the type of the channel will be displayed when the TV is turned on. ATV (analog air band), DTV (digital air band), CATV (analog cable band), CDTV (digital cable band). </td> </tr> <tr> <td data-bbox="389 1043 691 1151">Power On Volume</td> <td data-bbox="691 1043 1441 1151"> <ul style="list-style-type: none"> User Defined: Lets you set volume level manually. Last Saved: When the TV is turned on, it returns to the volume that had been set when the power had been turned off. </td> </tr> <tr> <td data-bbox="389 1151 691 1200">Power On Volume Num</td> <td data-bbox="691 1151 1441 1200">The TV turns on with set volume level in Standalone mode.</td> </tr> <tr> <td data-bbox="389 1200 691 1249">Min Volume</td> <td data-bbox="691 1200 1441 1249">The minimum volume level the user can set in Standalone mode.</td> </tr> <tr> <td data-bbox="389 1249 691 1299">Max Voume</td> <td data-bbox="691 1249 1441 1299">The maximum volume level the user can set in Standalone mode.</td> </tr> <tr> <td data-bbox="389 1299 691 1348">Power On Source</td> <td data-bbox="691 1299 1441 1348">Select the input source to display when the TV is turned on.</td> </tr> <tr> <td data-bbox="389 1348 691 1556">Power On Option</td> <td data-bbox="691 1348 1441 1556"> Determines the TV's state when power returns after a power failure or after you have unplugged the TV and then plugged it in again. <ul style="list-style-type: none"> Last Option: Returns to its last power state. If it was in standby mode, it returns to standby mode. If it was on, it turns on. PowerON: When the power returns, the TV turns on. Standby: When the power returns, the TV enters the standby mode. </td> </tr> </table>	Power On Channel	Set the channel to display when the TV is turned on. <ul style="list-style-type: none"> User Defined: Lets you set the channel number manually. See Power On Channel Num or Power On Channel Type below. Last Saved: If you select this item, when the TV is turned on, it displays the channel it was displaying when it was turned off. 	Power On Channel Num	When the TV is turned on, it switches automatically to this channel.	Power On Channel Type	Select the type of the channel will be displayed when the TV is turned on. ATV (analog air band), DTV (digital air band), CATV (analog cable band), CDTV (digital cable band).	Power On Volume	<ul style="list-style-type: none"> User Defined: Lets you set volume level manually. Last Saved: When the TV is turned on, it returns to the volume that had been set when the power had been turned off. 	Power On Volume Num	The TV turns on with set volume level in Standalone mode.	Min Volume	The minimum volume level the user can set in Standalone mode.	Max Voume	The maximum volume level the user can set in Standalone mode.	Power On Source	Select the input source to display when the TV is turned on.	Power On Option	Determines the TV's state when power returns after a power failure or after you have unplugged the TV and then plugged it in again. <ul style="list-style-type: none"> Last Option: Returns to its last power state. If it was in standby mode, it returns to standby mode. If it was on, it turns on. PowerON: When the power returns, the TV turns on. Standby: When the power returns, the TV enters the standby mode.
Power On Channel	Set the channel to display when the TV is turned on. <ul style="list-style-type: none"> User Defined: Lets you set the channel number manually. See Power On Channel Num or Power On Channel Type below. Last Saved: If you select this item, when the TV is turned on, it displays the channel it was displaying when it was turned off. 																		
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Power On Option	Determines the TV's state when power returns after a power failure or after you have unplugged the TV and then plugged it in again. <ul style="list-style-type: none"> Last Option: Returns to its last power state. If it was in standby mode, it returns to standby mode. If it was on, it turns on. PowerON: When the power returns, the TV turns on. Standby: When the power returns, the TV enters the standby mode. 																		
Channel	<table border="1"> <tr> <td data-bbox="389 1556 691 1664">Channel Setup</td> <td data-bbox="691 1556 1441 1664">Gives you direct, immediate access to some of the channel menu functions on the Broadcasting menu such as Auto Program, Audio Options, etc.</td> </tr> <tr> <td data-bbox="389 1664 691 1886">Channel Editor</td> <td data-bbox="691 1664 1441 1886"> Lets you edit the channels stored in the TV's memory. <ul style="list-style-type: none"> Change the channel numbers and names, manage genre and language groups and delete channels. Apply the Screen Off to channels you select. The Screen Off blanks out the video from a channel and outputs only audio. Lets you view information about each channel easily, without your having to display each channel directly. </td> </tr> </table>	Channel Setup	Gives you direct, immediate access to some of the channel menu functions on the Broadcasting menu such as Auto Program, Audio Options, etc.	Channel Editor	Lets you edit the channels stored in the TV's memory. <ul style="list-style-type: none"> Change the channel numbers and names, manage genre and language groups and delete channels. Apply the Screen Off to channels you select. The Screen Off blanks out the video from a channel and outputs only audio. Lets you view information about each channel easily, without your having to display each channel directly. 														
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2. Product specifications

Hotel Option menu Item		Description
	Channel Bank Editor	Edits channels, with 3 different Bank options. There are specific channels customers can enjoy, depending on the Bank card. <ul style="list-style-type: none"> This function is only available when set to Hospitality Mode: Standalone, SI Vendor: Smoovie.
	Mixed Channel Map	Enables showing/browsing all antenna type (Air/Cable) channels at the same time. <ul style="list-style-type: none"> ON: When set to on, guests can access the complete channel map irrespective of the selected antenna type. The Channel List/Channel Editor will also populate Air as well Cable type channels. OFF: When set to off, guest can access the channel map corresponding to the selected antenna type (Air/Cable) only. The Channel List/Channel Editor will only show the selected antenna type channels.
	Dynamic SI	<ul style="list-style-type: none"> ON: Do not check the DTV program channel number. OFF: Check the DTV program channel number.
	MyChannel	Enable or disable the My Channel function. <ul style="list-style-type: none"> This function is not available when set to Hospitality Mode: Standalone, SI Vendor: Smoovie.
Menu OSD	Picture Menu Lock	Enable or disable the Picture menu.
	Menu Display	<ul style="list-style-type: none"> ON: The main menu is displayed. OFF: The main menu is not displayed.
	Channel Menu Display	<ul style="list-style-type: none"> OFF: Broadcasting menu is disable for guest. ON: Broadcasting menu is enable for guest.
	Panel Button Lock	Turning the TV Controller button operations on or off. <ul style="list-style-type: none"> Unlock: Unlocks TV Controller button. Lock: Locks TV Controller button. OnlyPower: Locks TV Controller button except the power off function.
Clock	Local Time	Select the wayto update the clock data <ul style="list-style-type: none"> Standalone: Manual / Time Channel Interactive: Manual / Auto / Time Channel <ul style="list-style-type: none"> Manual: The clock is set automatically from the DTV channel or manually by the userwhen the TV is in Standalone mode. Time Channel: The clock is set from the selected channel.
	Timer Type	Enable or disable the alarm function. <ul style="list-style-type: none"> WakeUp: Enable the alarm function to turn on the device at the specified time. OnOff: Disable the alarm function and enable on or off timer.
	Time Channel Type	Select the type of the channel to update the clock data. <ul style="list-style-type: none"> This function is only available when Local Time set to Time Channel.
	Time Channel Num	Select the number of the channel to update the clock data. <ul style="list-style-type: none"> This function is only available when Local Time set to Time Channel.
Remote Jack Pack	Priority HDMI	Lets you set the priority of the 7610 RJP HDMI jack. You can choose 1, 2, with 1 being the highest and 2 the lowest. The TV automatically displays the source with the higher priority.
	HDMI Option	Select which HDMI source of the TV is connected to the RJP jack. (HDMI1/HDMI2/HDMI3)

Hotel Option menu Item		Description
	HDMI Music Mode	<p>Allows music output from an mp3/audio player connected to an HDMI input source. When set to on, you can hear sound from the player through an HDMI input of the RJP whether there is a video signal or not.</p> <ul style="list-style-type: none"> • This option is only compatible with the Guest link RJP.
External Source	USB Pop-up Screen	<p>When USB is connected to the TV :</p> <ul style="list-style-type: none"> • Default: A popup window appears. • Automatic: This enters the USB content menu automatically. • Disable: Neither the popup window nor the menu appears.
	External Source Banner	<p>If set to on, the TV displays the External Source Banner (information) when you change the TV source to another external input, press the SOURCE button on the remote control, or turn on the TV.</p> <ul style="list-style-type: none"> • ON: The External Source Banner (information) is displayed on the TV screen. • OFF: The External Source Banner (information) is not displayed on the TV screen.
	Auto Source	<ul style="list-style-type: none"> • ON: When an external input source is connected to the TV, the TV identifies the input source, and then automatically switches to that input source. • OFF: Auto Source function is disabled.
	Anynet+ Return Source	<p>Select the source to return after stopping an Anynet+ (HDMI-CEC) connection.</p> <ul style="list-style-type: none"> • This function is especially useful for the Guestlink RJP.
Eco Solution	Power Saving Mode	<p>Adjusts the brightness of the TV to reduce power consumption.</p> <ul style="list-style-type: none"> • OFF: Turns off the energy saving function. • Low: Sets the TV to low energy saving mode. • Medium: Sets the TV to medium energy saving mode. • High: Sets the TV to high energy saving mode.
Logo/ Message	Welcome Message	<p>Displays the welcome message for 60 seconds when the TV turns on.</p>
	Edit Welcome Message	<p>Edits the welcome message.</p>
	Hospitality Logo	<p>Turns the Hospitality Logo function is set to OFF, BMP, AVI, BOTH. If the function is not set to OFF, the TV is turned on, the logo is displayed, before the signal from the initial source, for the amount of time set in Logo Display Time.</p> <ul style="list-style-type: none"> • The DivX codec is not supported."
	Hospitality Logo DL	<p>You can download the startup logo from the connected USB flash drive. Hospitality logo file requirements:</p> <ul style="list-style-type: none"> • Image or video files only. • The image file is supported up to 2 MB. • The video file is supported up to 50 MB. • File can only be named "samsung_image.*," "samsung_video.*"
	Logo Display Time	<p>Set the time displayed Hospitality Logo. (3/5/7 seconds).</p>
Cloning	Clone TV to USB	<p>Clone the current TV options to a USB memory device.</p>
	Clone USB to TV	<p>Clone the saved TV options on a USB memory device to the TV.</p>
	Setting Auto Initialize	<p>If you set Setting Auto Initialize to On, the TV menu items are restored again to their values cloned initially when the TV turns off and then on.</p>

2. Product specifications

Hotel Option menu Item	Description																
System Manager	Gives you direct and immediate access to System Manager menu such as Time, Language, Change PIN, etc. System Manager allow you to adjust your TV's system and customize settings for your viewing environment.																
Security	<table border="1"> <tr> <td data-bbox="379 398 691 521">Factory Lock</td> <td data-bbox="691 398 1442 521">Disable entry to Hotel Option menu. <ul style="list-style-type: none"> • ON: The password is needed before entering Hotel Option menu. • OFF: Disable this function. </td> </tr> <tr> <td data-bbox="379 521 691 656">Password Popup</td> <td data-bbox="691 521 1442 656">Enable or disable password input popup window. If this option is set to off, the TV will not display the password input popup window when entering the Hotel Option menu. If set to on, the password input popup window appears.</td> </tr> <tr> <td data-bbox="379 656 691 824">Password Input</td> <td data-bbox="691 656 1442 824">If this function is enabled, the password input popup window appears which asks for an 8-character security password. The admin must enter a password before applying or updating security preferences. After the correct password is entered, options such as Password Setting, Password Reset and Security Mode are available.</td> </tr> <tr> <td data-bbox="379 824 691 880">Password Setting</td> <td data-bbox="691 824 1442 880">User can change the password.</td> </tr> <tr> <td data-bbox="379 880 691 925">Password Reset</td> <td data-bbox="691 880 1442 925">Password is reset to "00000000."</td> </tr> <tr> <td data-bbox="379 925 691 1093">Security Mode</td> <td data-bbox="691 925 1442 1093">Provides password protected administrative functionality to enable or disable features of hospitality TV, such as USB, HDMI. To use this option, Security Mode set to on. After Security Mode set to on, options such as USB, HDMI are automatically enabled. Clone USB to TV and TV Reset will be disabled in the Hotel Option menu.</td> </tr> <tr> <td data-bbox="379 1093 691 1171">USB</td> <td data-bbox="691 1093 1442 1171">Enable or disable USB access. If this function is set to disable, access to USB media is blocked.</td> </tr> <tr> <td data-bbox="379 1171 691 1272">HDMI</td> <td data-bbox="691 1171 1442 1272">Enable or disable HDMI access. If this function is set to disable, Anynet+, HDMI source, HDMI type external channels will not be accessible to the user.</td> </tr> </table>	Factory Lock	Disable entry to Hotel Option menu. <ul style="list-style-type: none"> • ON: The password is needed before entering Hotel Option menu. • OFF: Disable this function. 	Password Popup	Enable or disable password input popup window. If this option is set to off, the TV will not display the password input popup window when entering the Hotel Option menu. If set to on, the password input popup window appears.	Password Input	If this function is enabled, the password input popup window appears which asks for an 8-character security password. The admin must enter a password before applying or updating security preferences. After the correct password is entered, options such as Password Setting, Password Reset and Security Mode are available.	Password Setting	User can change the password.	Password Reset	Password is reset to "00000000."	Security Mode	Provides password protected administrative functionality to enable or disable features of hospitality TV, such as USB, HDMI. To use this option, Security Mode set to on. After Security Mode set to on, options such as USB, HDMI are automatically enabled. Clone USB to TV and TV Reset will be disabled in the Hotel Option menu.	USB	Enable or disable USB access. If this function is set to disable, access to USB media is blocked.	HDMI	Enable or disable HDMI access. If this function is set to disable, Anynet+, HDMI source, HDMI type external channels will not be accessible to the user.
Factory Lock	Disable entry to Hotel Option menu. <ul style="list-style-type: none"> • ON: The password is needed before entering Hotel Option menu. • OFF: Disable this function. 																
Password Popup	Enable or disable password input popup window. If this option is set to off, the TV will not display the password input popup window when entering the Hotel Option menu. If set to on, the password input popup window appears.																
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Password Setting	User can change the password.																
Password Reset	Password is reset to "00000000."																
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USB	Enable or disable USB access. If this function is set to disable, access to USB media is blocked.																
HDMI	Enable or disable HDMI access. If this function is set to disable, Anynet+, HDMI source, HDMI type external channels will not be accessible to the user.																
DRM	<table border="1"> <tr> <td data-bbox="379 1272 691 1485">DRM Mode</td> <td data-bbox="691 1272 1442 1485">Configures DRM support. <ul style="list-style-type: none"> • OFF: Turns off DRM support. • LYNK DRM: Select to turn on S-LYNK DRM CAS support only. • Pro:idiom: Select to turn on Pro:Idiom CAS support only. • LYNK DRM, PI: Select when there are S-LYNK DRM CAS and Pro:Idiom CAS channels at the same time. </td> </tr> <tr> <td data-bbox="379 1485 691 1597">PI AES Data</td> <td data-bbox="691 1485 1442 1597">Displays the current state of Pro:Idiom AES. This function is only available DRM Mode set to Pro:idiom or LYNK DRM, PI.</td> </tr> </table>	DRM Mode	Configures DRM support. <ul style="list-style-type: none"> • OFF: Turns off DRM support. • LYNK DRM: Select to turn on S-LYNK DRM CAS support only. • Pro:idiom: Select to turn on Pro:Idiom CAS support only. • LYNK DRM, PI: Select when there are S-LYNK DRM CAS and Pro:Idiom CAS channels at the same time. 	PI AES Data	Displays the current state of Pro:Idiom AES. This function is only available DRM Mode set to Pro:idiom or LYNK DRM, PI.												
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PI AES Data	Displays the current state of Pro:Idiom AES. This function is only available DRM Mode set to Pro:idiom or LYNK DRM, PI.																
System	<table border="1"> <tr> <td data-bbox="379 1597 691 1818">Self Diagnosis for TV</td> <td data-bbox="691 1597 1442 1818">Enter Self Diagnosis Menu. <ul style="list-style-type: none"> • Start Picture Test: Use this test when you experience a problem with your TV's picture. • Start Sound Test: Use this test when you experience a problem with your TV's sound. • Signal Information: Show digital broadcasting signal information. • Reset: Restore all TV settings, to the factory defaults. (Not available) </td> </tr> </table>	Self Diagnosis for TV	Enter Self Diagnosis Menu. <ul style="list-style-type: none"> • Start Picture Test: Use this test when you experience a problem with your TV's picture. • Start Sound Test: Use this test when you experience a problem with your TV's sound. • Signal Information: Show digital broadcasting signal information. • Reset: Restore all TV settings, to the factory defaults. (Not available) 														
Self Diagnosis for TV	Enter Self Diagnosis Menu. <ul style="list-style-type: none"> • Start Picture Test: Use this test when you experience a problem with your TV's picture. • Start Sound Test: Use this test when you experience a problem with your TV's sound. • Signal Information: Show digital broadcasting signal information. • Reset: Restore all TV settings, to the factory defaults. (Not available) 																

Hotel Option menu Item	Description
Self Diagnosis for HTV	Lets you check the state of Pro:Idiom and its communication with the SI STB or SBB. If you have any problems with the Pro:idiom encryption channel or the communications with the SI STB or SBB, use this diagnosis function. If PI DTV Channel Key Loss (Pro:Idiom DTV Channel Key Loss) appears to have failed and the Pro:Idiom encryption channel has failed to play content, first check the broadcasting systems related to Pro:Idiom encryption. If your broadcasting system does not have a problem, contact Samsung Service. If STB SI Vendor Setting appears to have failed and communication with the SI STB or SBB has failed, first check your SI STB or SBB. If your SI STB or SBB does not have a problem, contact to Samsung Service.
Software Update	Lets you upgrade the TV Software with a USB flash dirve.
Sound Bar Out	If the Samsung Sound Bar device is connected to this TV, this item lets you to select where the TV sound is outputted when the TV is turned on. <ul style="list-style-type: none"> • ON: When the TV is turned on, the TV sound is automatically outputted in the Sound Bar device only. • OFF: When the TV is turned on, the TV sound is automatically outputted in the TV speaker device.
Contact Samsung	Display the web site of related Samsung service center, software version, and Mac address information.
Standby LED	When the TV is in standby mode, you can configure the settings of the power indicator. <ul style="list-style-type: none"> • ON: The LED is on. • OFF: The LED is off.
Boot Logo	To enable or disable displaying the Samsung logo when the TV turns on.
TV Reset	Returns all settings on the TV to theirfactory defaults.
BLAN Power	BLAN Power Turns the built-in BLAN module functions on or off. <ul style="list-style-type: none"> • This function is only available when Hospitality Mode is set to Interactive Mode and SI Vendor is set to EBL.
Home menu	<p>Home Menu Display</p> <p>Activate Home Menu in Standalone mode for user.</p> <ul style="list-style-type: none"> • ON: Home Menu enabled. • OFF: Home Menu disabled. <p>In Standalone mode, you can quickly access to various features such as Source, Media Play etc and settings such as Picture Size, Language, etc.</p> <p>Home Menu Editor</p> <p>Edit and manage TV functions to be used from Home Menu.</p> <p>Home Menu Auto Start</p> <p>This option allows you to set Home Menu as first screen for user.</p> <ul style="list-style-type: none"> • ON: Home Menu is shown as first screen. • OFF: Do not show Home Menu as first screen.
REACH Solution	<p>REACH RF Mode</p> <p>Turn on or off the REACH RF Mode. When set to on, the TV can operate with the REACH Server (Modulator) through the RF cable.</p> <p>REACH Channel</p> <p>This is a DTV cable channel PTC number for receiving REACH data when the REACH RF Mode set to on. The value must be same as the value set on the REACH Server (Modulator).</p>

2. Product specifications

Hotel Option menu Item		Description
	Group ID	You can set the TV's group ID to manage TVs in groups on the REACH Server (Modulator).
	REACH Update Time	You can set the specific time to receive and update REACH data from the REACH Server (Modulator). (Operates when the AC power cord is plugged in and the power is off.) <ul style="list-style-type: none"> • OFF: You can turn off the REACH Update Time function. • 12:00 am: 12:00 am everyday • 2:00 am: 2:00 am everyday • 12:00 pm: 12:00 pm everyday • 2:00 pm: 2:00 pm everyday
	REACH Update Immediate	When set to on, the TV will receive and update REACH data from the REACH Server (Modulator) right after the power is off. (Operates when the AC power cord is plugged in and the power is off.)
	REACH Config Version	Displays the TV configuration data version received from the REACH Server.
Room Number		You can set the room number of the TV's location.

- Refer to the manual of each solution for details about functions and settings of the solutions such as REACH, HMS, and H.Browser.
- REACH (Remote Enhanced Active Control for Hospitality) is a professional, interactive remote controller that lets you deliver TV firmware updates, cloning data, channel mapping changes, REACH contents, and TICKER contents through RF cable to several hundred hospitality TVs simultaneously. The REACH functions are available only in Standalone mode. The REACH Server is sold separately. Refer to the REACH Server manual enclosed with the REACH Server product for more operating information.

2-8. Supported subtitles

■ Supported external subtitles


Name	Format
MPEG-4 Timed text	.txt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
SMPTE-TT Text	.xml

■ Supported internal subtitles

Name	Format
Xsub	AVI
SubStation Alpha	MKV
Advanced SubStation Alpha	MKV
SubRip	MKV
VobSub	MKV
MPEG-4 Timed text	MP4
TTML in smooth streaming	MP4
SMPTE-TT Text	MP4
SMPTE-TT PNG	MP4

■ Supported image formats and resolutions

File extension	Format	Resolution
*jpg *jpeg	JPEG	15360 x 8640
*png	PNG	4096 x 4096
*bmp	BMP	4096 x 4096
*mpo	MPO	15360 x 8640

 The MPO format is supported partly.

■ Supported music formats and codecs

File extension	Format	Codec	Note
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a *.mpa *.aac	MPEG4	AAC	
*.flac	FLAC	FLAC	Supports up to 2 channels
*.ogg	OGG	Vorbis	Supports up to 2 channels
*.wma	WMA	WMA	WMA is supported up to 10 Pro 5.1 channels. WMA lossless audio is not supported.
*.wav	wav	wav	
*.mid *.midi	midi	midi	Supports type 0 and type 1. Seek is not supported. Supports USB device only.
*.ape	ape	ape	
*.aif *.aiff	AIFF	AIFF	
*.m4a	ALAC	ALAC	

■ Other Restrictions


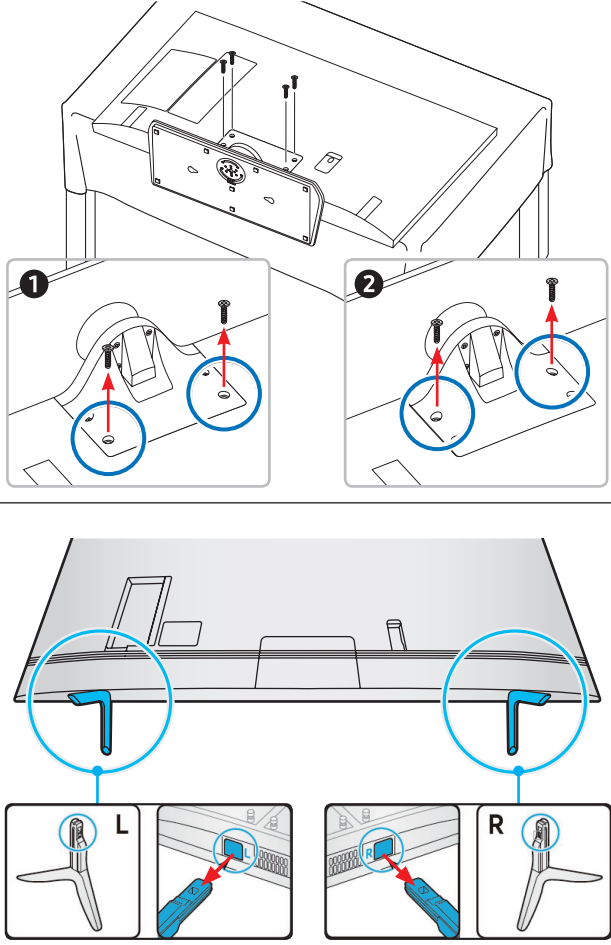


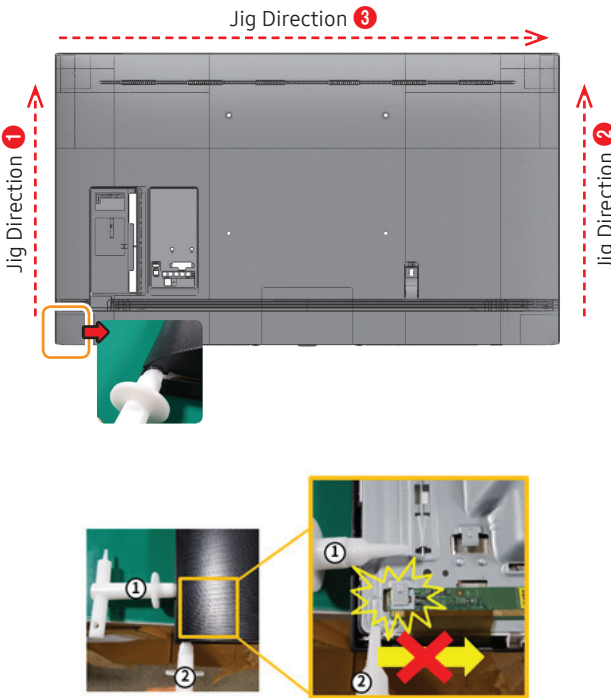
- Codecs may not function properly if there is a problem with the content.
- Video content does not play or does not play correctly if there is an error in the content or container.
- Sound or video may not work if they have standard bit rates/frame rates above the TV's compatibility ratings.
- If the Index Table is has an error, the Seek (Jump) function will not work.
- When playing video over a network connection, the video may not play smoothly because of data transmission speeds.
- Some USB/digital camera devices may not be compatible with the TV.
- HEVC codec is only available in MKV / MP4 / TS containers.
- The MVC codec is supported partly.

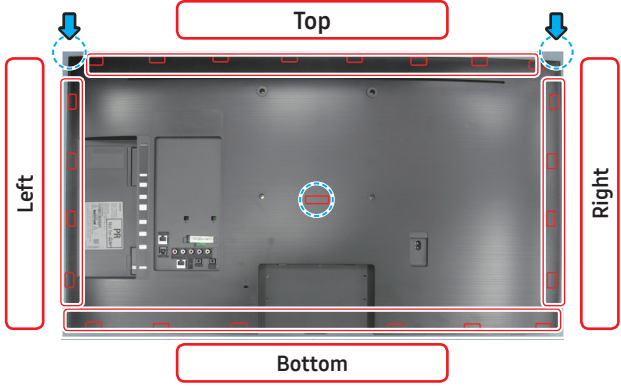
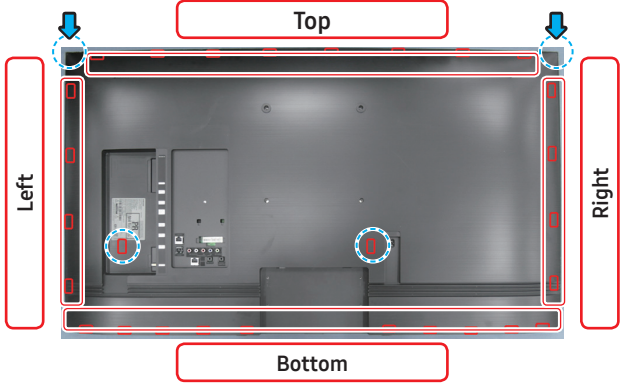
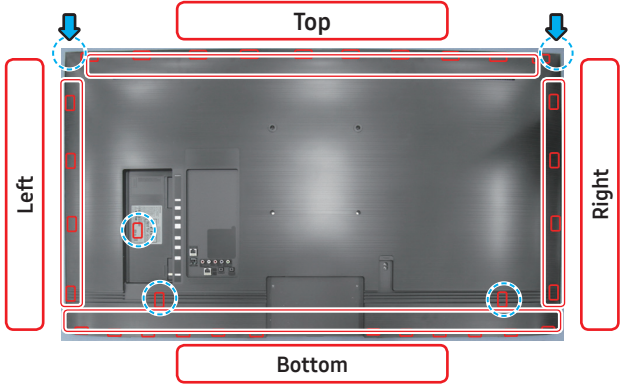
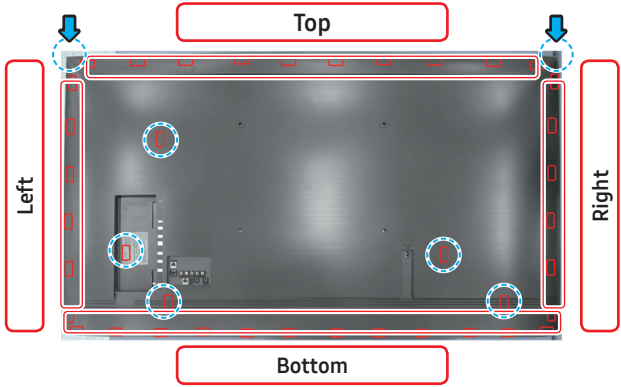
■ Video decoders

- H.264 UHD is supported up to Level 5.1, and H.264 FHD is supported up to Level 4.1. (TV does not support FMO / ASO / RS)
- HEVC UHD is supported up to Level 5.2, and HEVC FHD is supported up to Level 4.1. (QLED TV, The Serif, The Frame)
- VC1 AP L4 is not supported.
- GMC 2 or above is not supported.


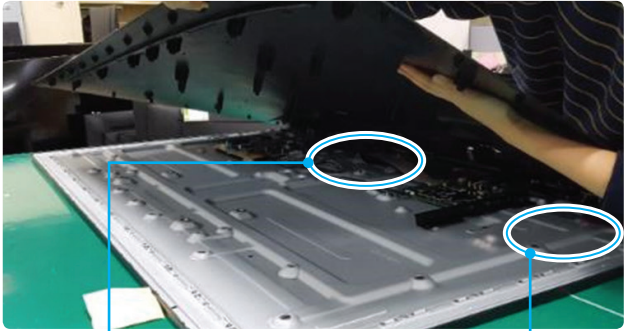
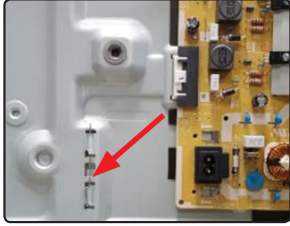
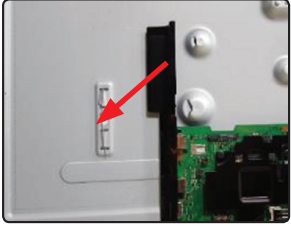
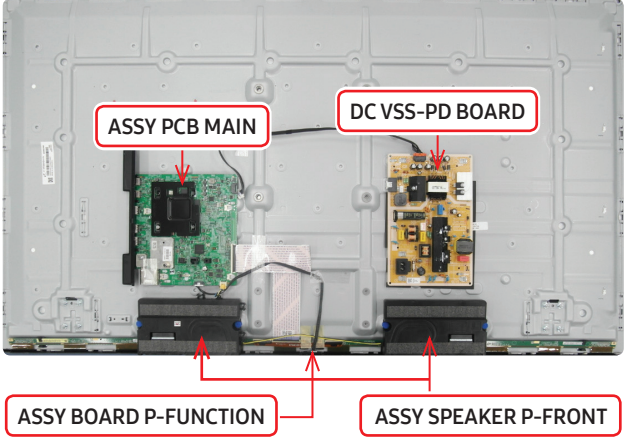

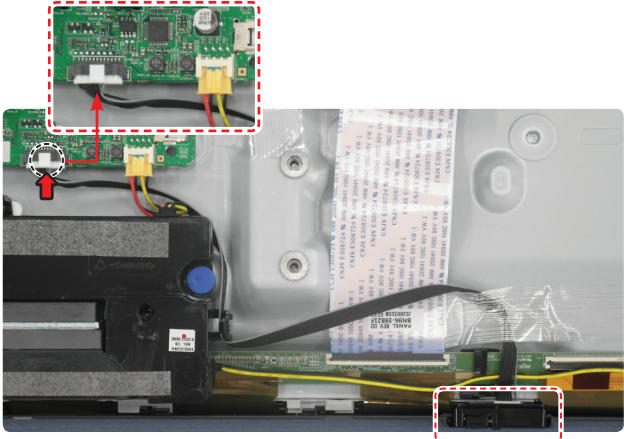
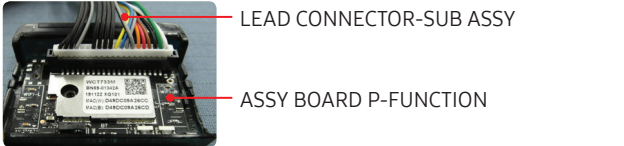
■ Audio decoders


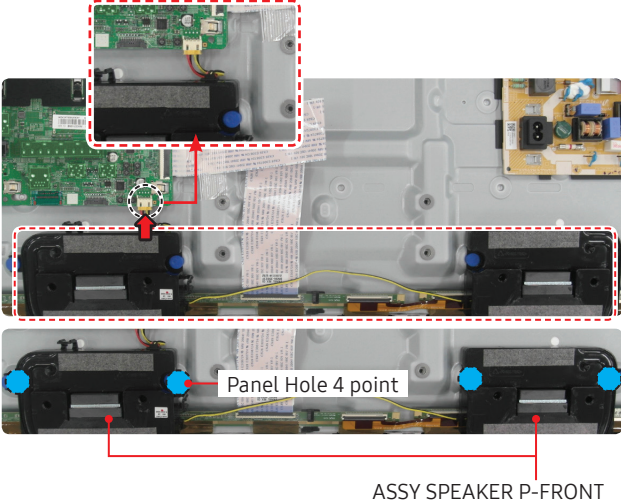


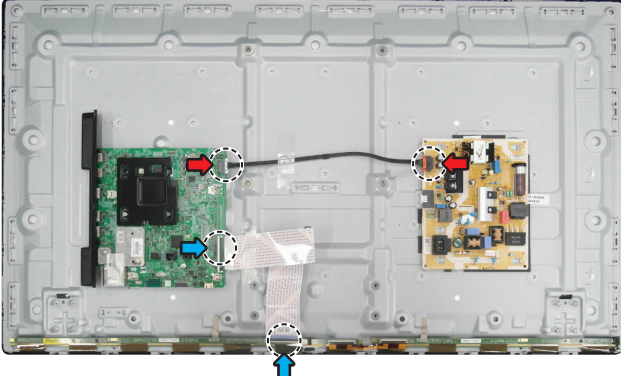
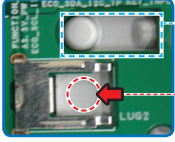




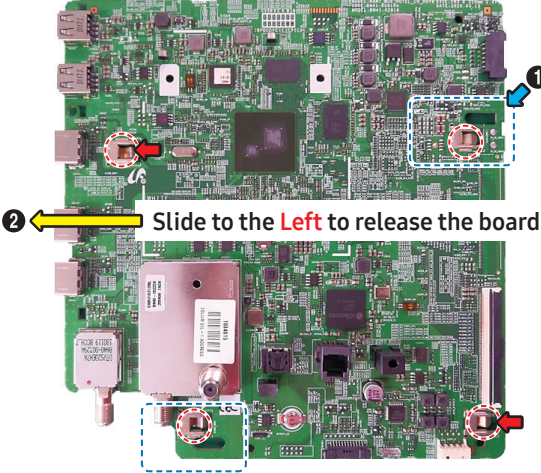
- WMA is supported up to 10 Pro 5.1 channels.
- WMA1, WMA lossless / Voice are not supported.
- QCELP and AMR NB / WB are not supported.
- Vorbis is supported for up to 5.1 channels.
- Dolby Digital Plus is supported for up to 5.1 channels.
- The supported sample rates are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, and 48 KHz, and differ with the codec.


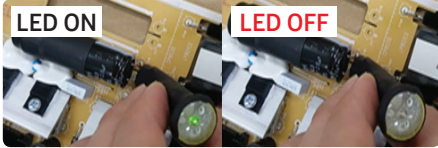
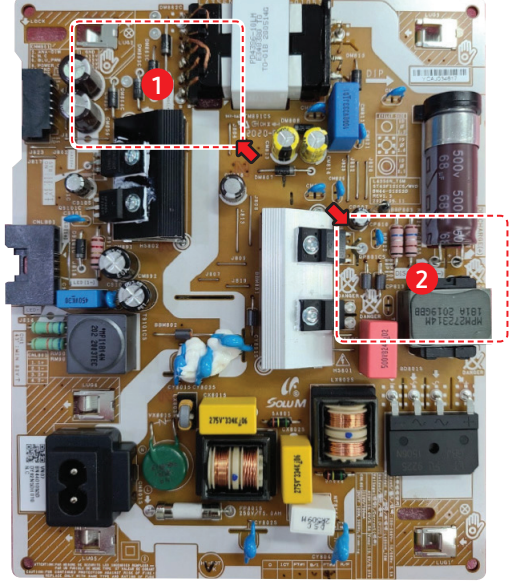
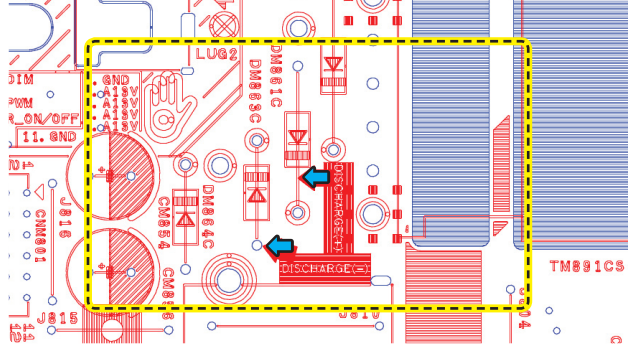
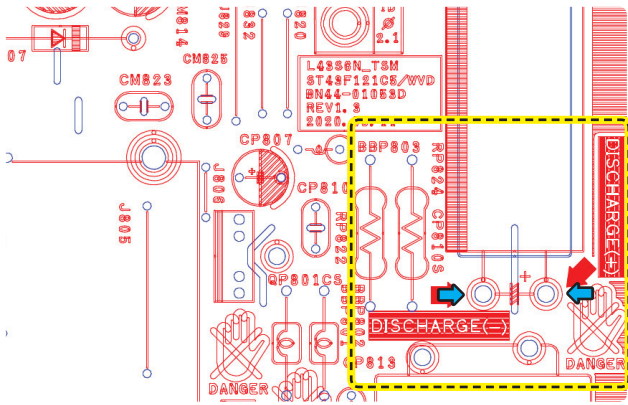
Description & Screws	Picture Description
<p>2 [ASSY STAND] Remove the ASSY STAND P-GUIDE.</p> <ul style="list-style-type: none"> 43/50/55 inches <p>Remove the 4 screws.</p> <p>ASSY ACCESSORY-SCREW</p> <p> 6003-001907 SCREW-TATYPE : M4 x L14, ZPC(BLK)</p> <ul style="list-style-type: none"> SET + STAND <p>Remove the ASSY STAND P-COVER TOP (R/L) with pulling down.</p> <ul style="list-style-type: none"> 65 inches 	
<p>3 [ASSY COVER REAR] Remove the ASSY COVER P-REAR.</p> <p>Insert the Open Jig completely into the tab of the rear cover's left side bottom corner and following directions 1→2→3.</p> <p>Assembly Misc P-jig-2017</p> <p> BN81-14946A</p> <p> NOTE</p> <ul style="list-style-type: none"> Caution for panel SOURCE BOARD damage! <p>Insert the Open Jig 1 5cm depart from the bottom Watch out not to move the Open Jig 2 in the middle of the TV .</p>	

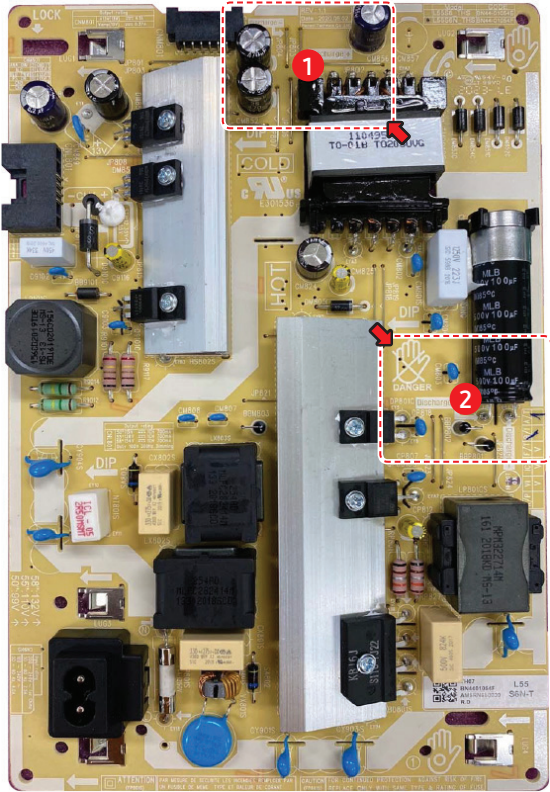
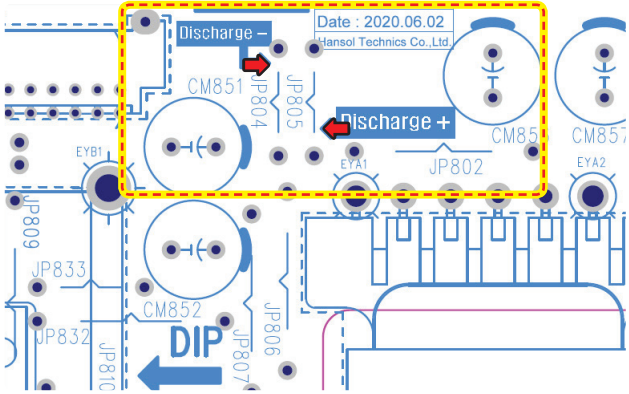
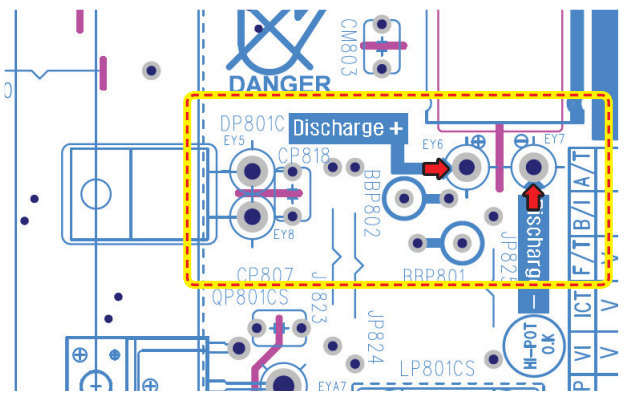
Description & Screws	Picture Description
<p>Locking Part</p> <ul style="list-style-type: none"> • 43 inches <ul style="list-style-type: none"> - Top Corner : 2 point (Snap Hook) - Top : 8 point - Left/Right :4 point - Bottom : 6 point - Cover Rear : 1 Point 	
<ul style="list-style-type: none"> • 50 inches <ul style="list-style-type: none"> - Top Corner : 2 point (Snap Hook) - Top : 8 point - Left/Right :4 point - Bottom : 10 point - Cover Rear : 2 Point 	
<ul style="list-style-type: none"> • 55 inches <ul style="list-style-type: none"> - Top Corner : 2 point (Snap Hook) - Top : 10 point - Left/Right :4 point - Bottom : 12 point - Cover Rear : 3 Point 	
<ul style="list-style-type: none"> • 65 inches <ul style="list-style-type: none"> - Top Corner : 2 point (Snap Hook) - Top : 10 point - Left/Right :6 point - Bottom : 12 point - Cover Rear : 5 Point 	

3. Disassembly and Reassemble

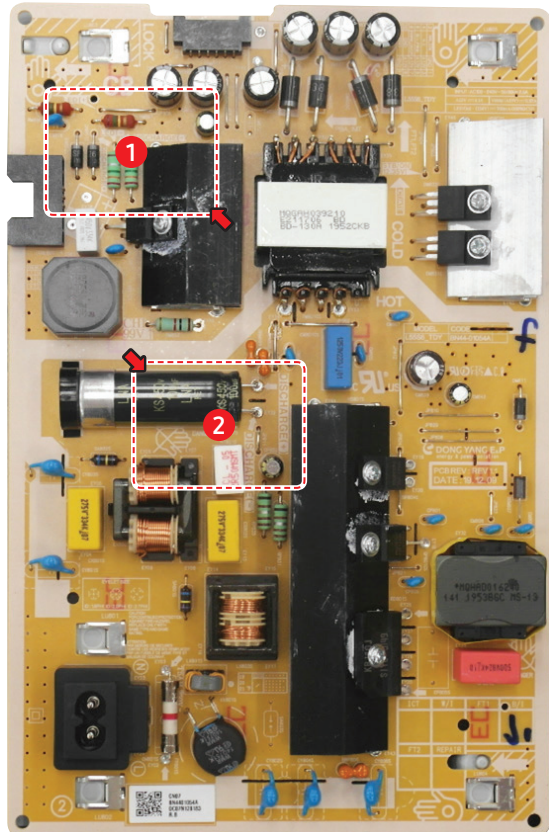
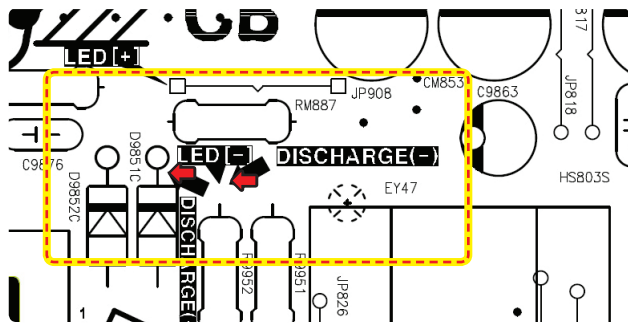
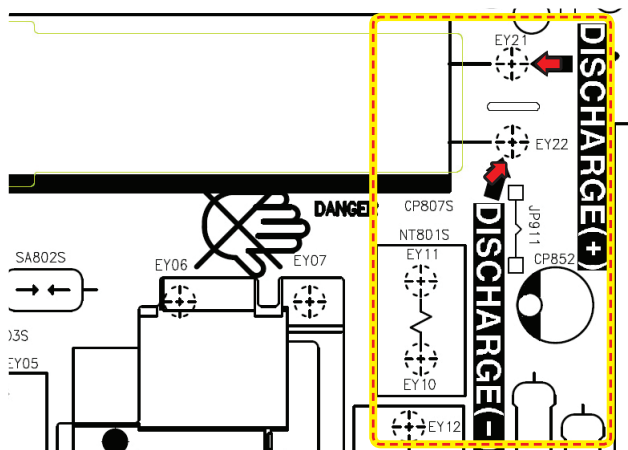
Description & Screws	Picture Description
<p>Gently lift up the rear cover from the middle to prevent inside clips damaged.</p> <p> NOTE</p> <ul style="list-style-type: none"> • Straighten ALL Locking Wires before reattaching cover. 	   
<p>4 [ASSY BOARD P-FUNCTION] Remove the ASSY BOARD P-FUNCTION.</p> <ol style="list-style-type: none"> 1 Remove the cable from ASSY PCB MAIN. <ul style="list-style-type: none"> -  LEAD CONNECTOR-SUB ASSY 	  <p>LEAD CONNECTOR-SUB ASSY</p> <p>ASSY BOARD P-FUNCTION</p>

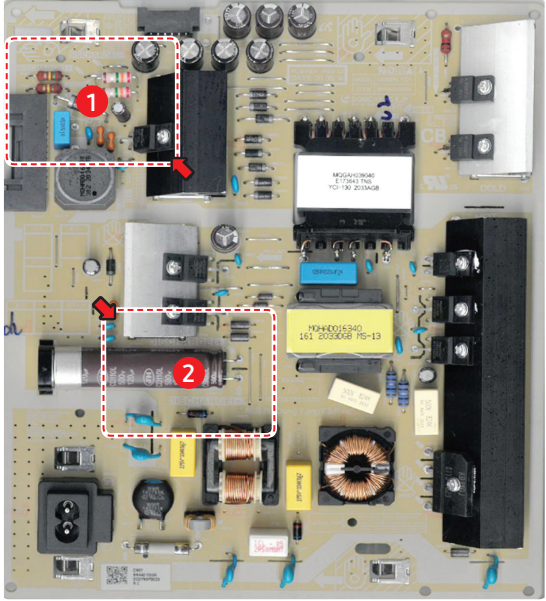
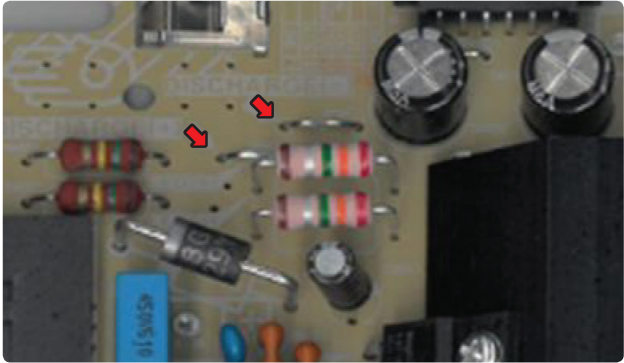
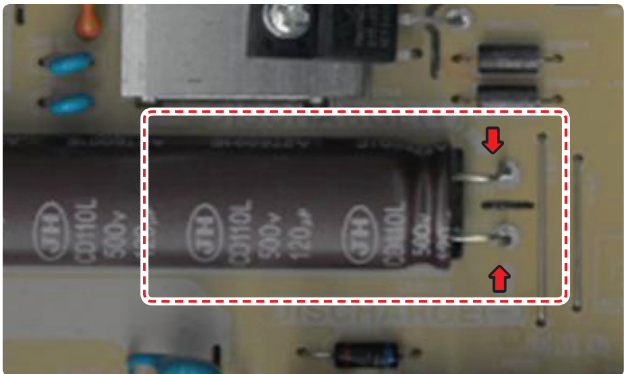
Description & Screws	Picture Description
<p>5 [ASSY SPEAKER P-FRONT] Remove the ASSY SPEAKER P-FRONT.</p> <ol style="list-style-type: none"> Remove the cable from ASSY PCB MAIN. Remove from the displayed Panel Hole. <ul style="list-style-type: none">  : Assy SPK to Panel Hole 4 Points 	
<p>6 [Cables] Remove the Cables.</p> <ol style="list-style-type: none"> Remove the cable from ASSY PCB MAIN and DC VSS-PD BOARD. <ul style="list-style-type: none">  LEAD CONNECTOR-POWER (ASSY PCB MAIN + DC VSS-POWER BOARD) Remove the cable from ASSY PCB MAIN and Panel. <ul style="list-style-type: none">  FFC CABLE (ASSY PCB MAIN + Panel) 	
<p>7 [ASSY PCB MAIN] Remove the ASSY PCB MAIN BOARD.</p> <ol style="list-style-type: none"> Gently lift up to release the lock. <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p> Lift up (2EA) Locking </p> <p> Mounting slots (4EA) Fixing Hole </p> </div> </div> Use both hands to hold the board and slide to the Left to release the board. 	

Description & Screws	Picture Description
<p>8 [DC VSS-POWER BOARD] Remove the DC VSS-PD BOARD.</p> <p>1 You have to discharge the SMPS by using Discharge JIG across leads of Large Capacitors as pictured side.</p> <p>Service Jig-Capacitor Discharge</p> <ul style="list-style-type: none"> If LED ON > LED OFF discharge is completed.  <p>BN81-16292A</p>  <p><Before discharging> <After discharging></p> <ul style="list-style-type: none"> 43 inches 	<p>Measurement point - 43 inches</p> 
<ul style="list-style-type: none"> Measurement point : 1 	
<ul style="list-style-type: none"> Measurement point : 2 	

Description & Screws	Picture Description
<ul style="list-style-type: none"> • 50 inches 	<p style="text-align: center; background-color: red; color: white; padding: 2px;">Measurement point - 50 inches</p> 
<ul style="list-style-type: none"> - Measurement point : ❶ 	 <p style="text-align: right; font-size: small;">Date : 2020.06.02 Hansol Technics Co., Ltd.</p>
<ul style="list-style-type: none"> - Measurement point : ❷ 	

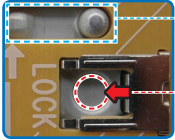



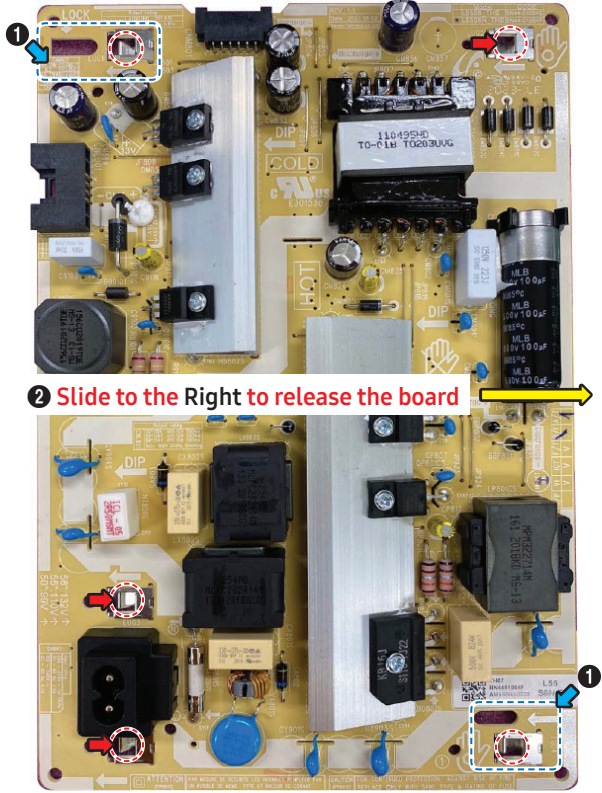

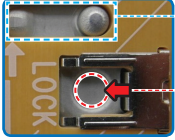



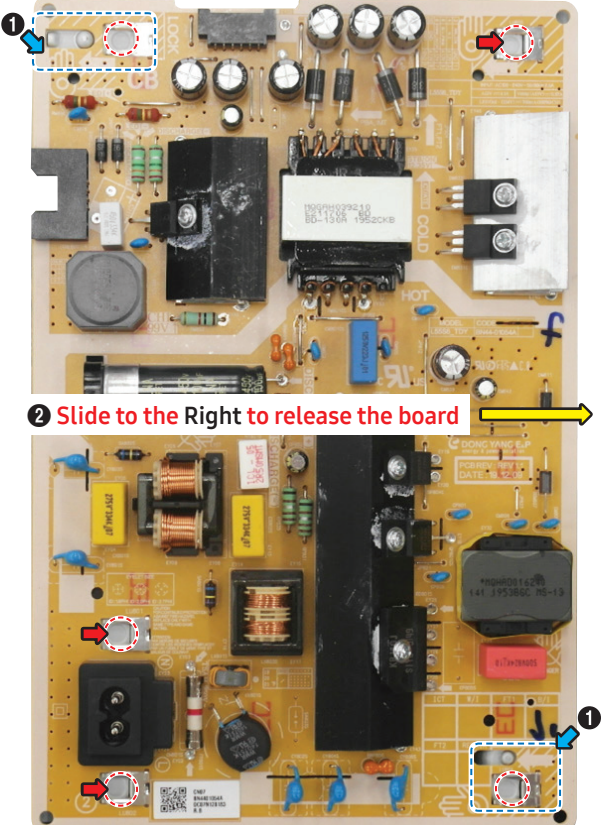

3. Disassembly and Reassemble

Description & Screws	Picture Description
<ul style="list-style-type: none"> • 55 inches <ul style="list-style-type: none"> - Measurement point : ① <ul style="list-style-type: none"> - Measurement point : ② 	<div style="background-color: red; color: white; text-align: center; padding: 2px;">Measurement point - 55 inches</div>   

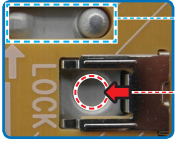
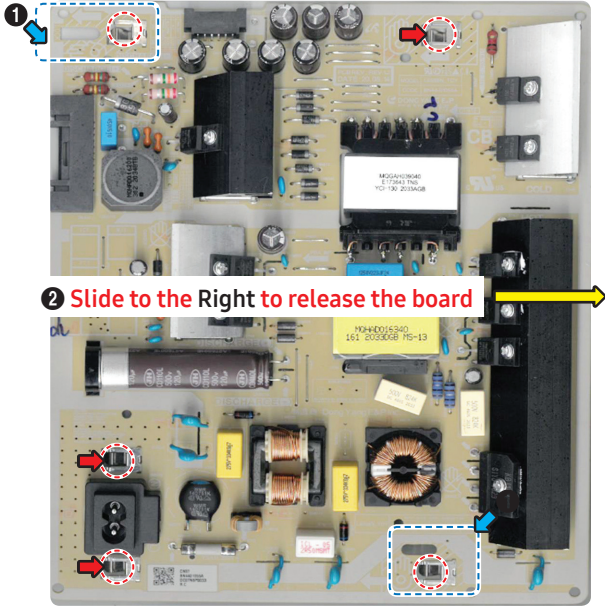
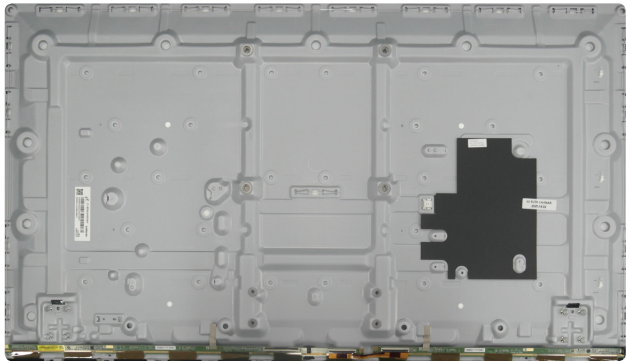
Description & Screws	Picture Description
<ul style="list-style-type: none"> • 65 inches 	<p style="background-color: red; color: white; text-align: center; padding: 2px;">Measurement point - 65 inches</p> 
<ul style="list-style-type: none"> - Measurement point : ❶ 	
<ul style="list-style-type: none"> - Measurement point : ❷ 	

3. Disassembly and Reassemble

Description & Screws	Picture Description
<p> 2 Push and hold down BLU connector tab to release it's panel lock connection. 3 Lift to release the lock tab on upper left side of Board. (Step 4 will assist) 4 Locate a notch in insulation sheet. (not all models) 5 Use Open Jig in notch to help release & smoothly slide SMPS to the Right. (While pushing BLU Tab & Releasing Lock Tab) </p>	
<ul style="list-style-type: none"> 43 inches <p>Gently lift the 1 edge to unlock the SMPS board.</p> <p>Remove the board by holding it with both hands and sliding it to the Right (2 →).</p>	

Description & Screws	Picture Description
<ul style="list-style-type: none"> 50 inches <p>Gently lift the 1 edge to unlock the SMPS board.</p>  <ul style="list-style-type: none"> 1 Lift up (2EA) Locking  1 Mounting slots (5EA) Fixing Hole  <p>Remove the board by holding it with both hands and sliding it to the Right (2 ).</p>	 <p>2 Slide to the Right to release the board </p>
<ul style="list-style-type: none"> 55 inches <p>Gently lift the 1 edge to unlock the SMPS board.</p>  <ul style="list-style-type: none"> 1 Lift up (2EA) Locking  1 Mounting slots (5EA) Fixing Hole  <p>Remove the board by holding it with both hands and sliding it to the Right (2 ).</p>	 <p>2 Slide to the Right to release the board </p>

3. Disassembly and Reassemble

Description & Screws	Picture Description
<ul style="list-style-type: none"> 65 inches <p>Gently lift the 1 edge to unlock the SMPS board.</p>  <p>Remove the board by holding it with both hands and sliding it to the Right (2 →).</p>	
<p>9 Completed the disassembly.</p>	

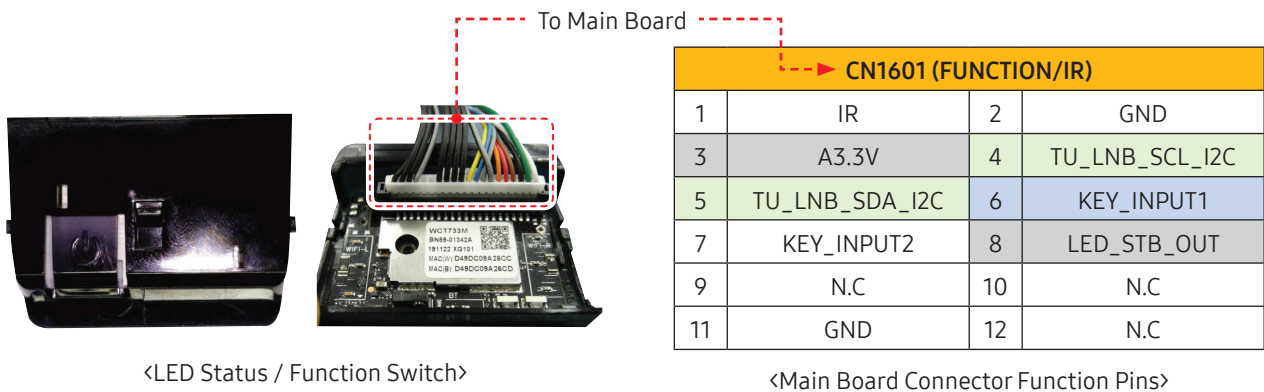


NOTE

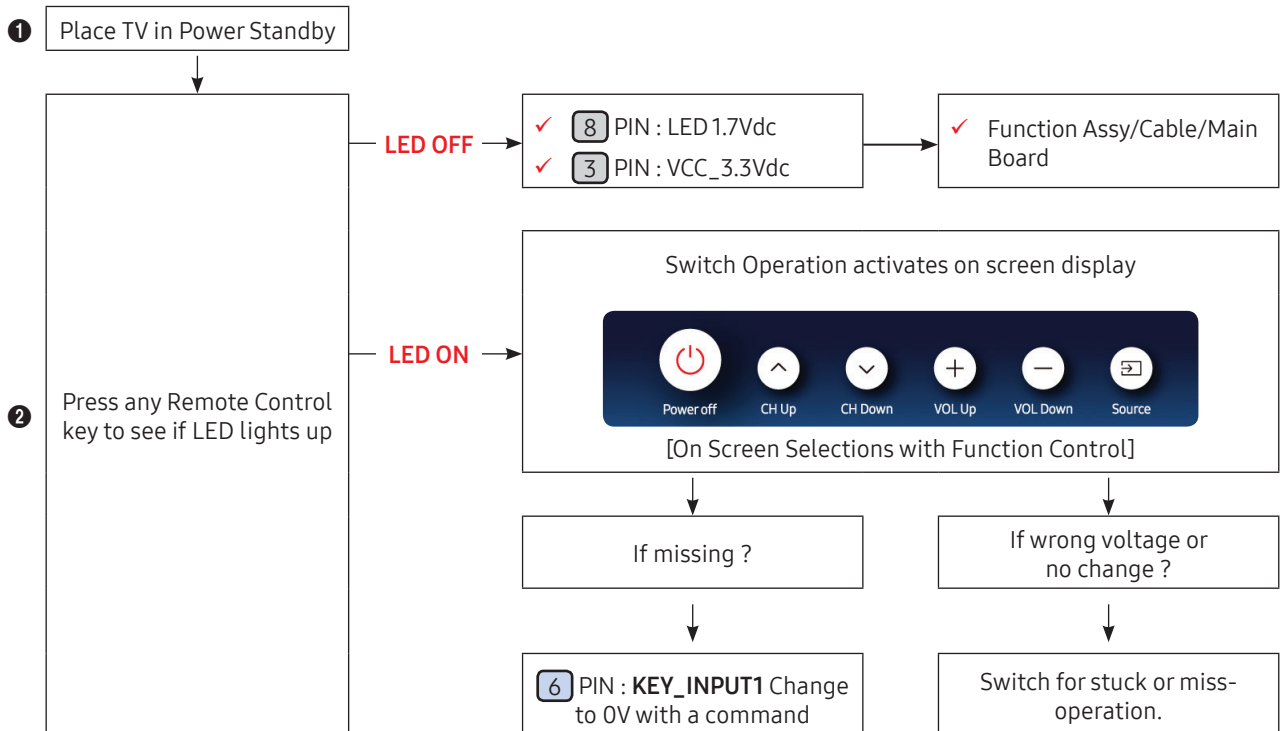
Reassembly procedures are in the reverse order of disassembly procedures.

4. Troubleshooting

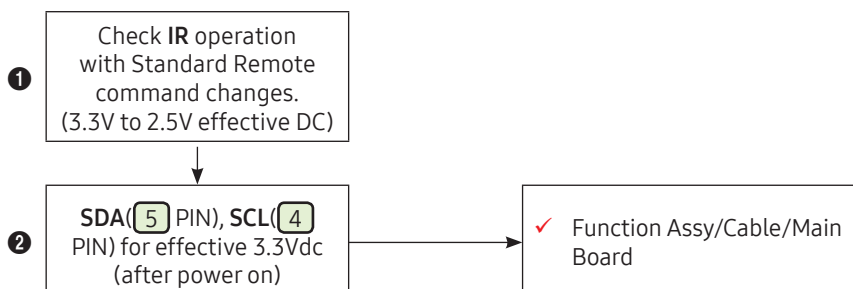
4-1. Function/IR



4-1-1. Function Test

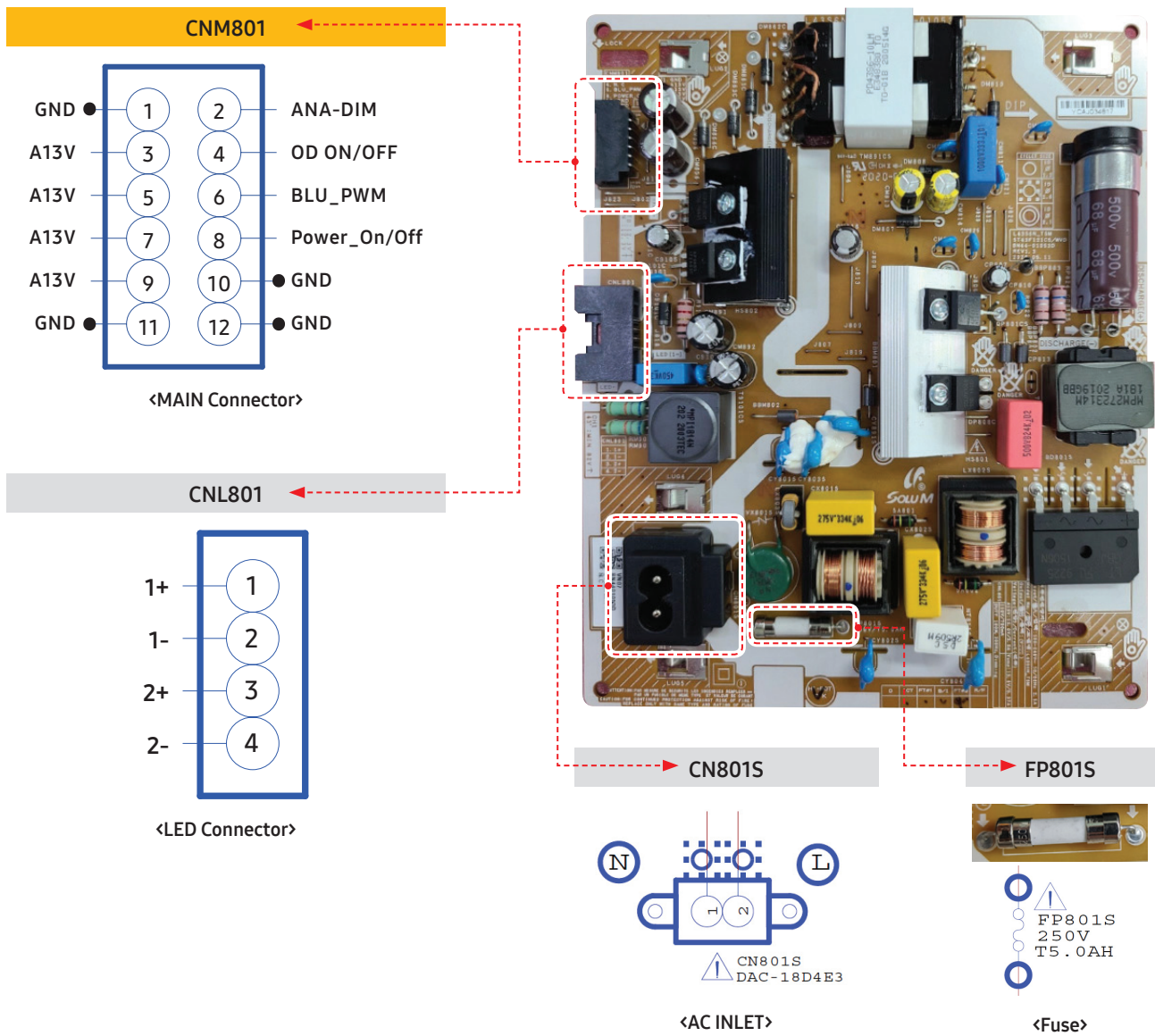


4-1-2. IR Test

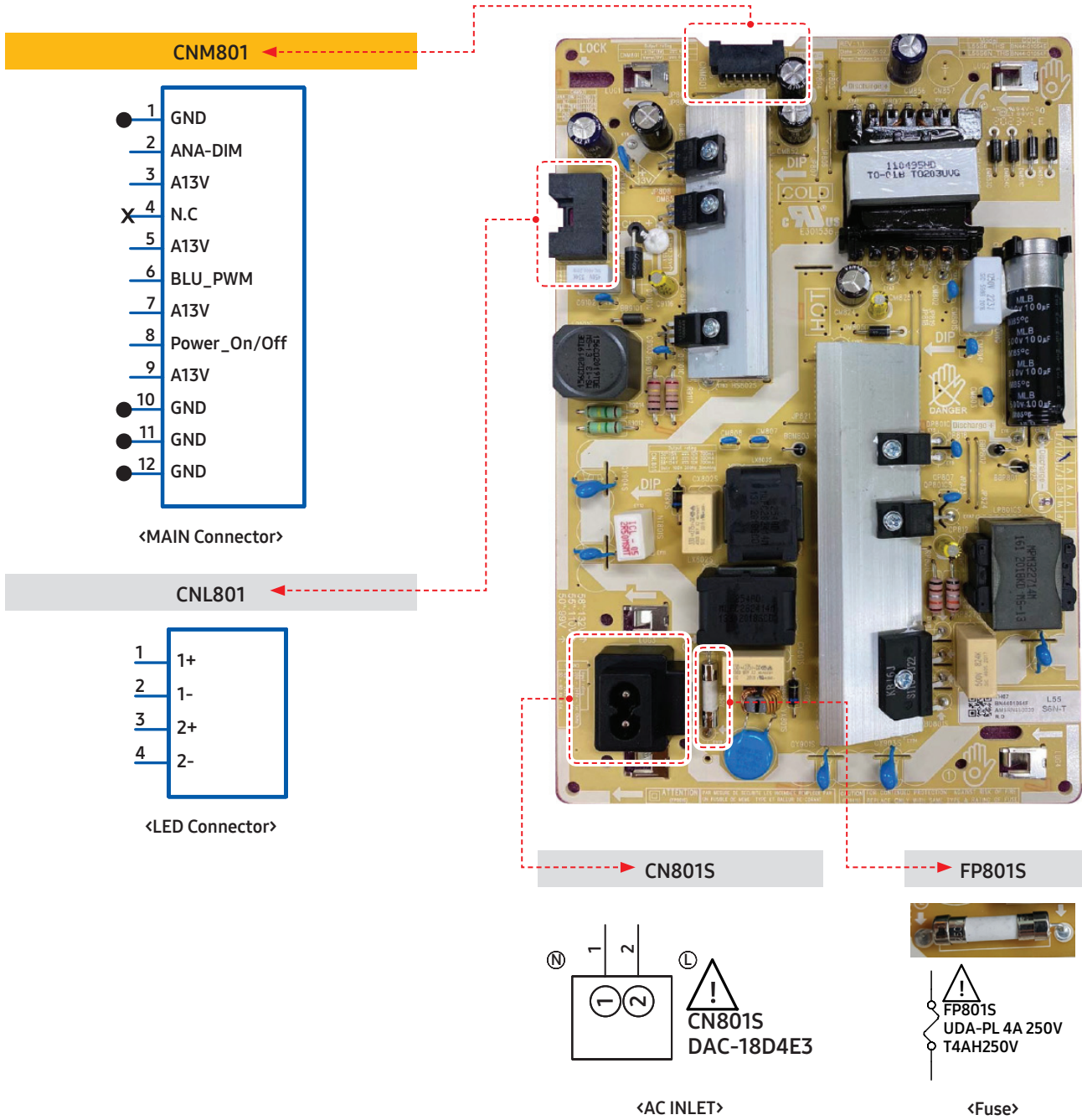


4-2. Power

- 43 inches

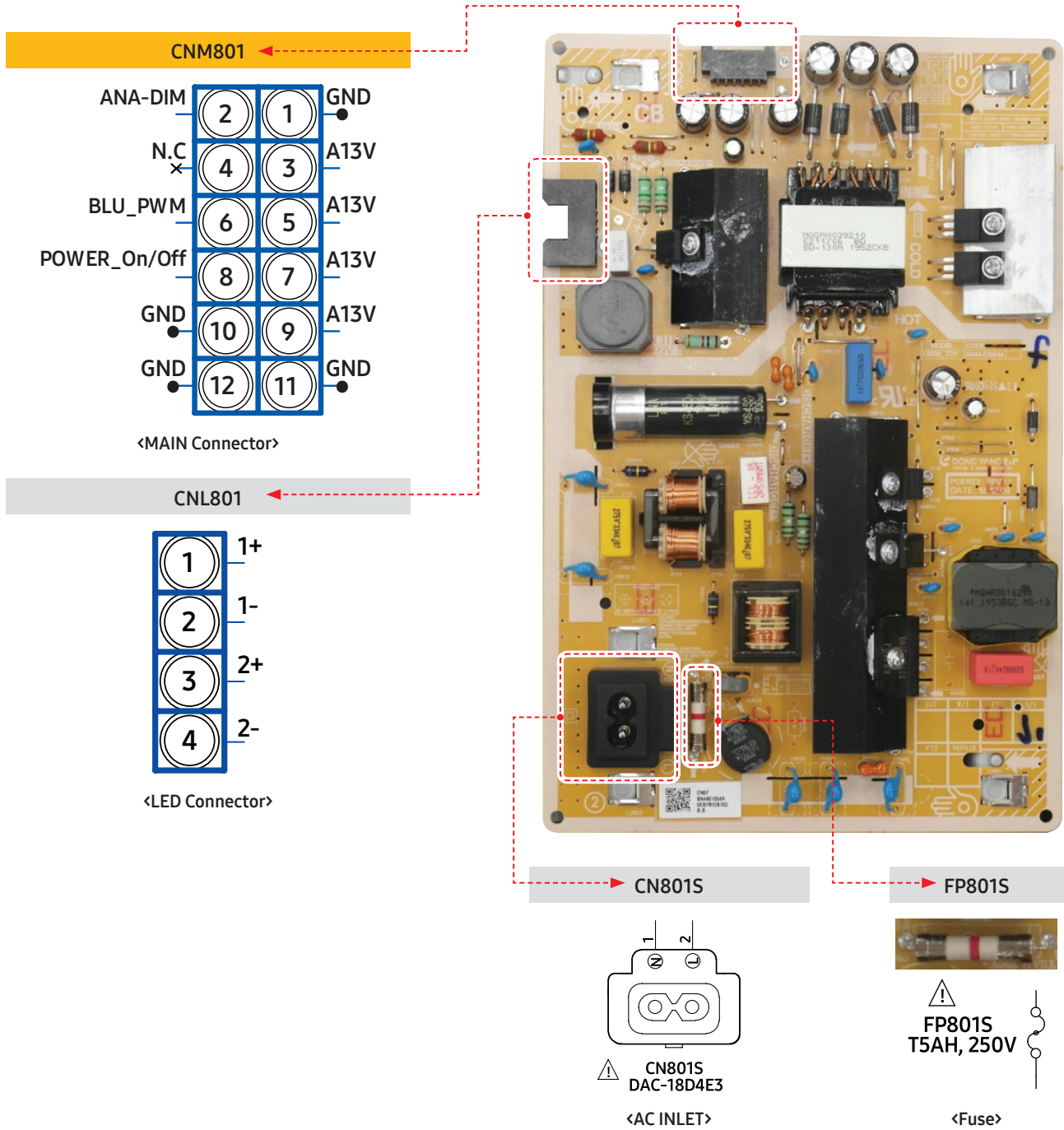


- 50 inches

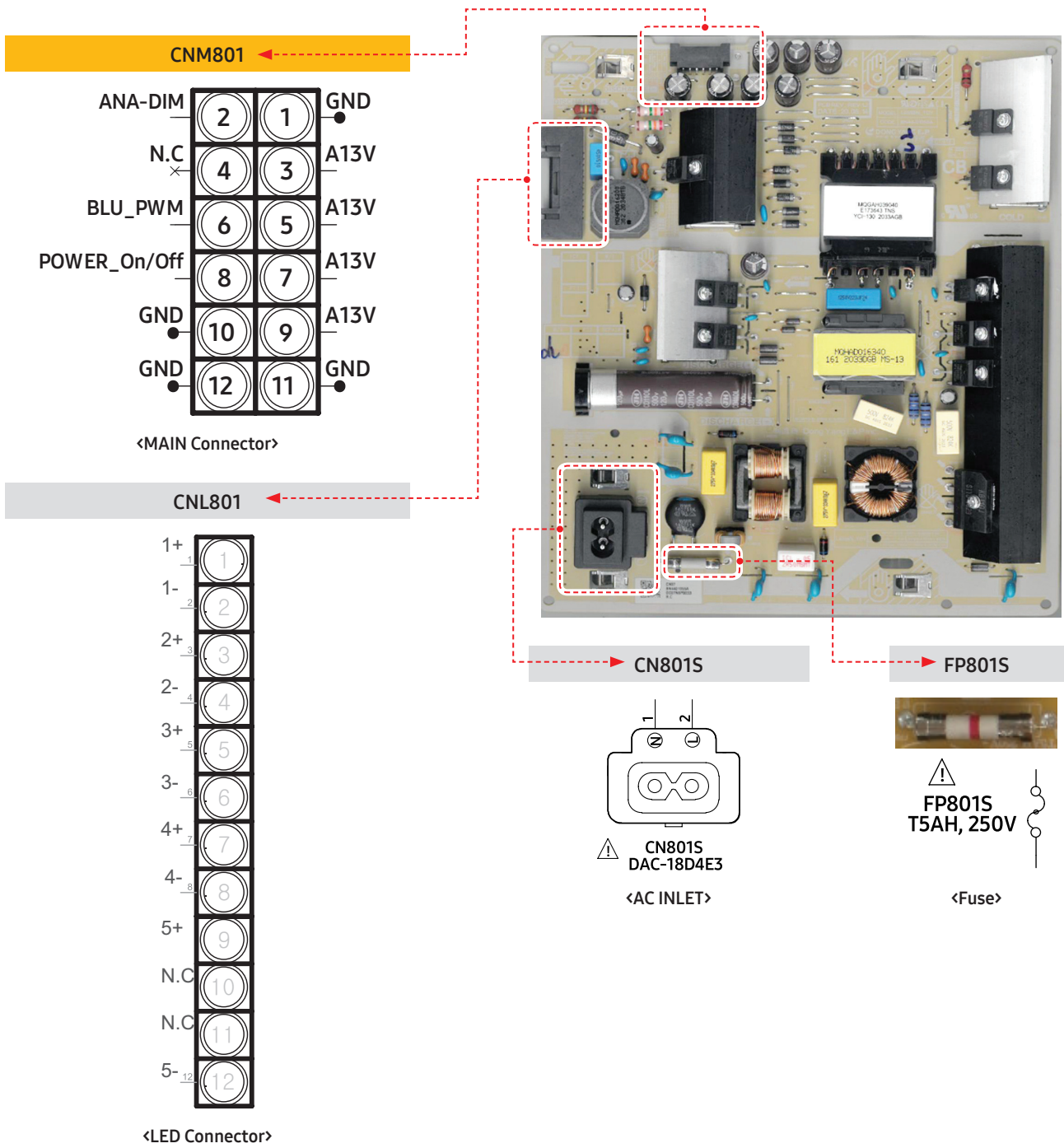


4. Troubleshooting

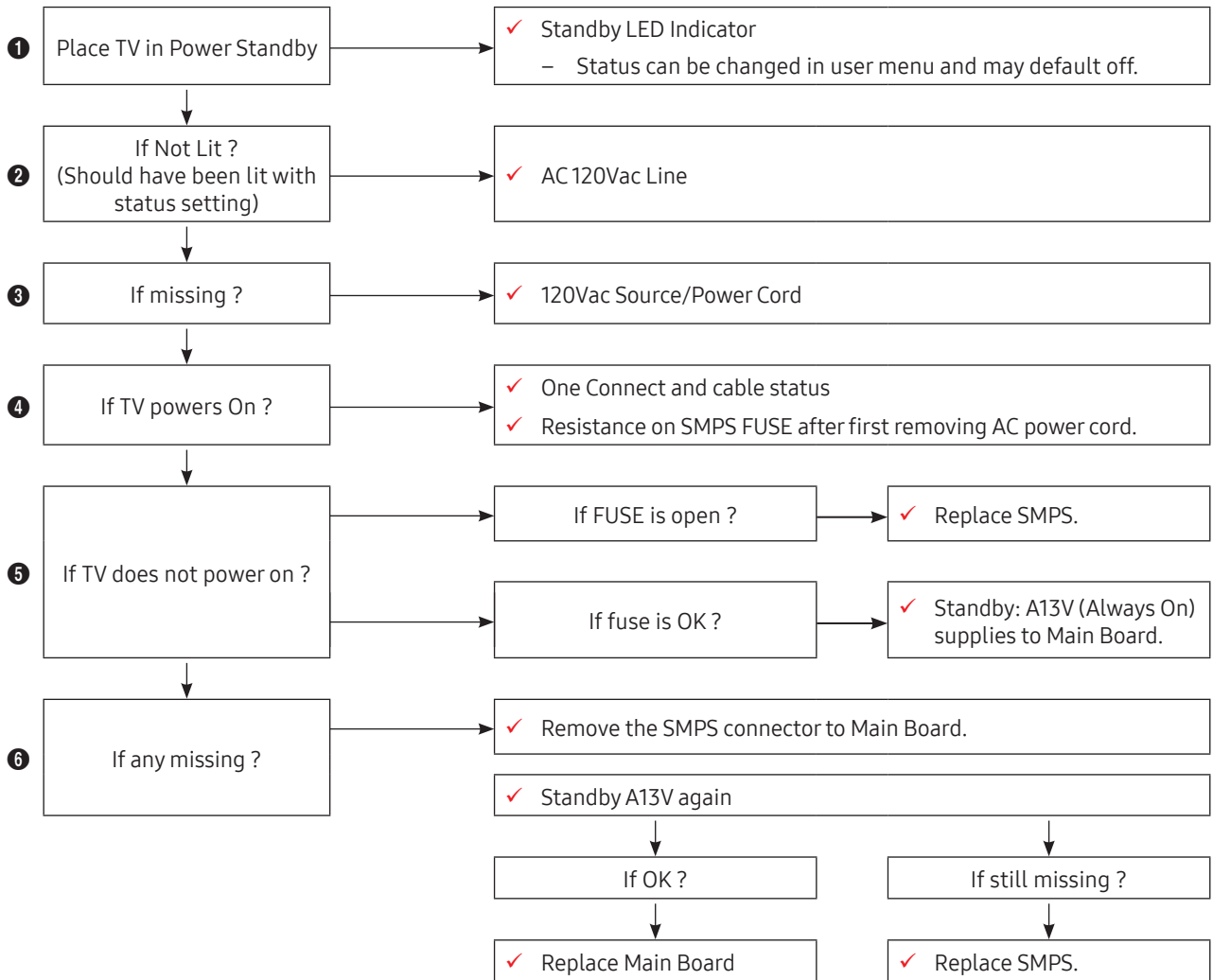
- 55 inches



- 65 inches

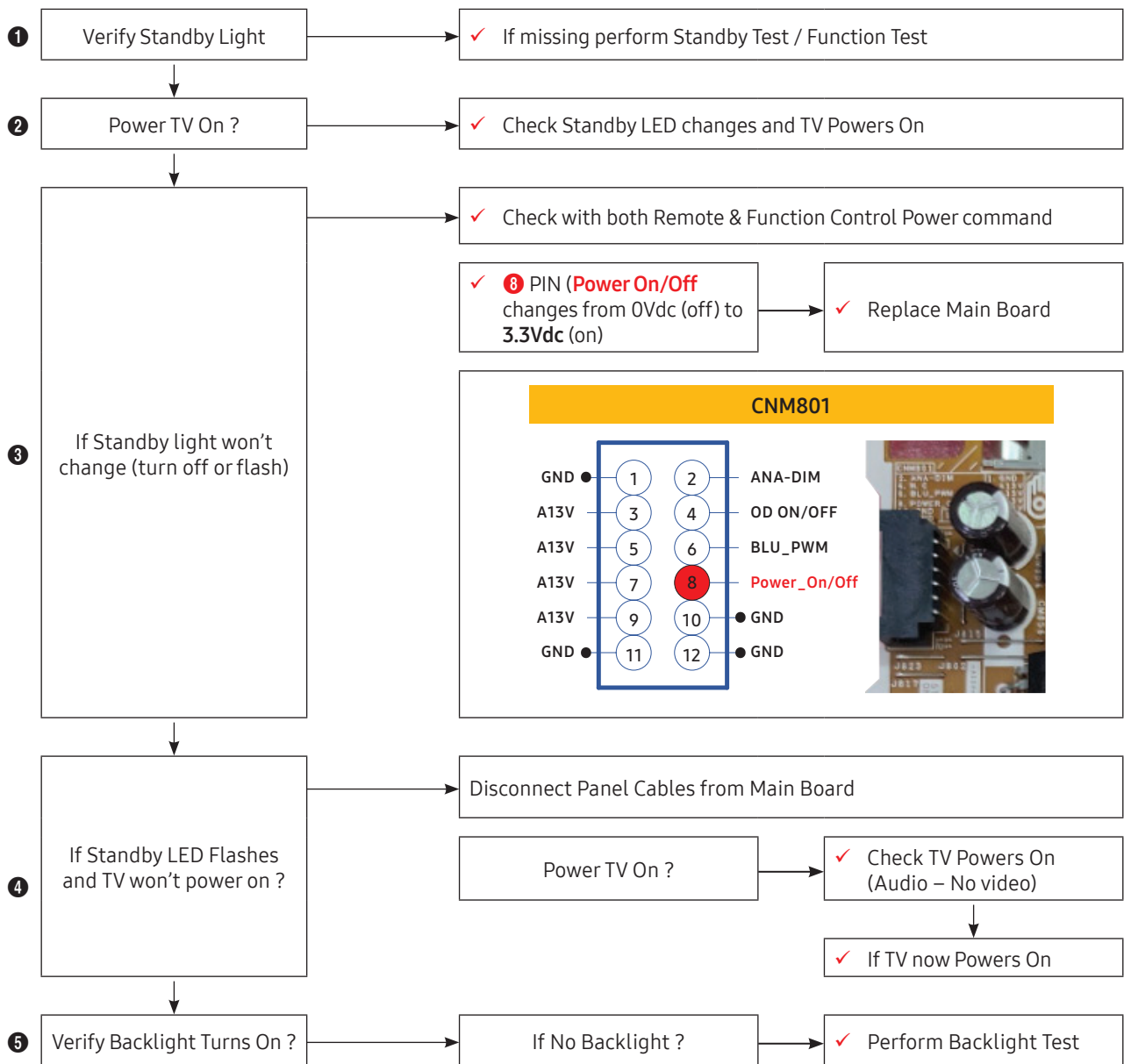


4-2-1. TV POWER STANDBY Test

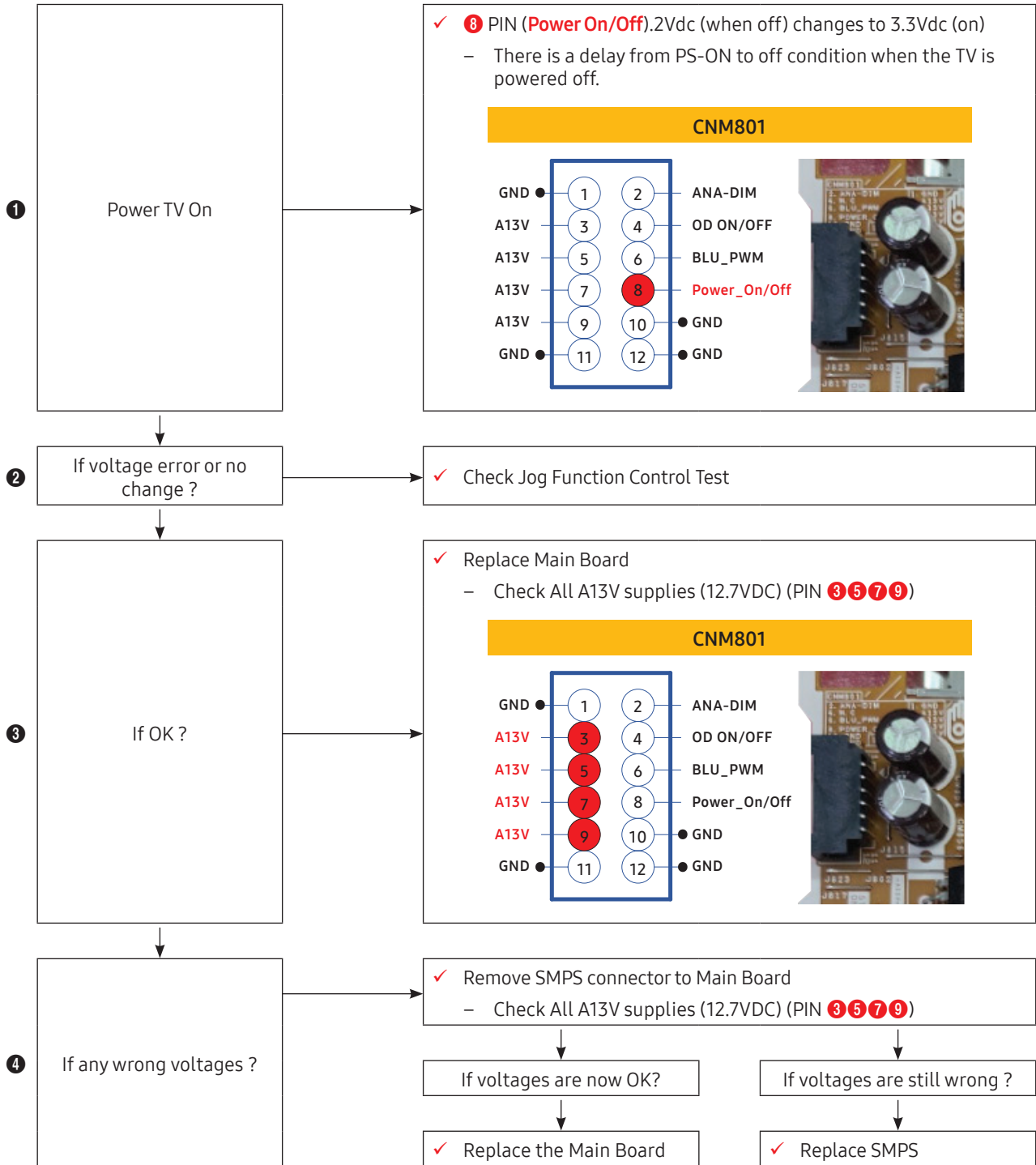


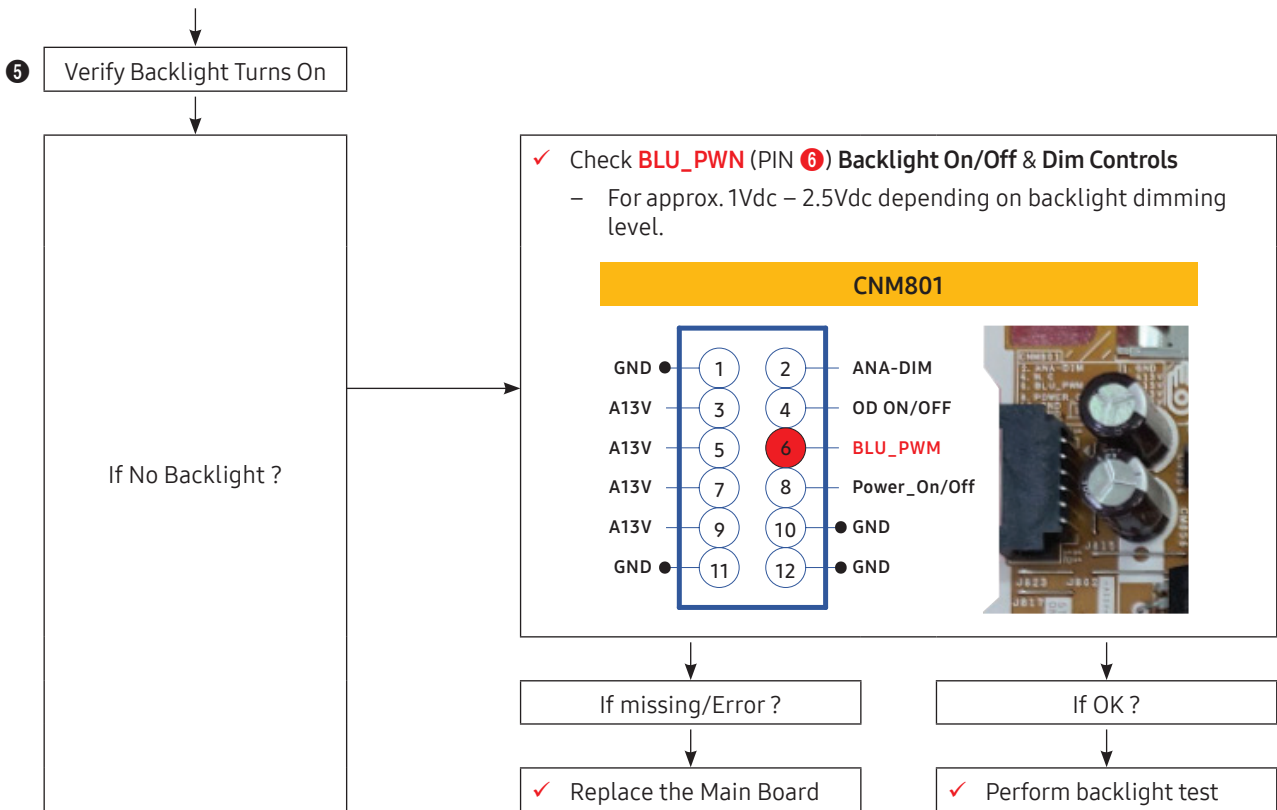
4-2-2. TV POWER STANDBY Test

■ Simplified Version

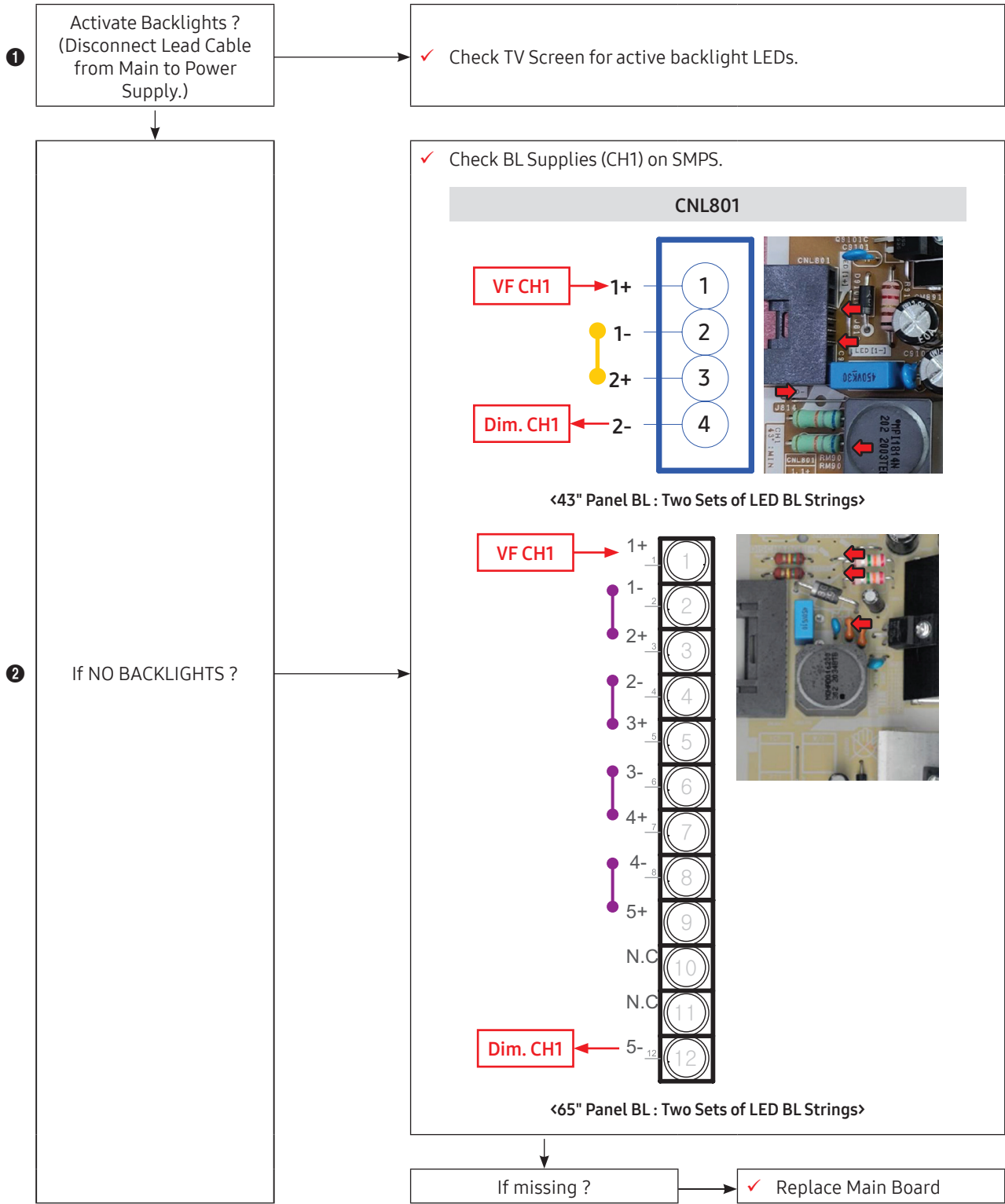


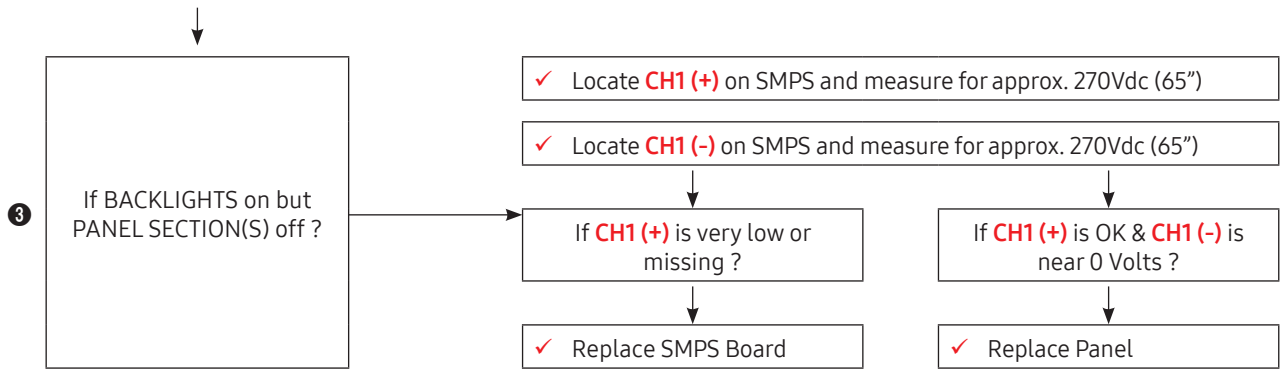
Extended Version



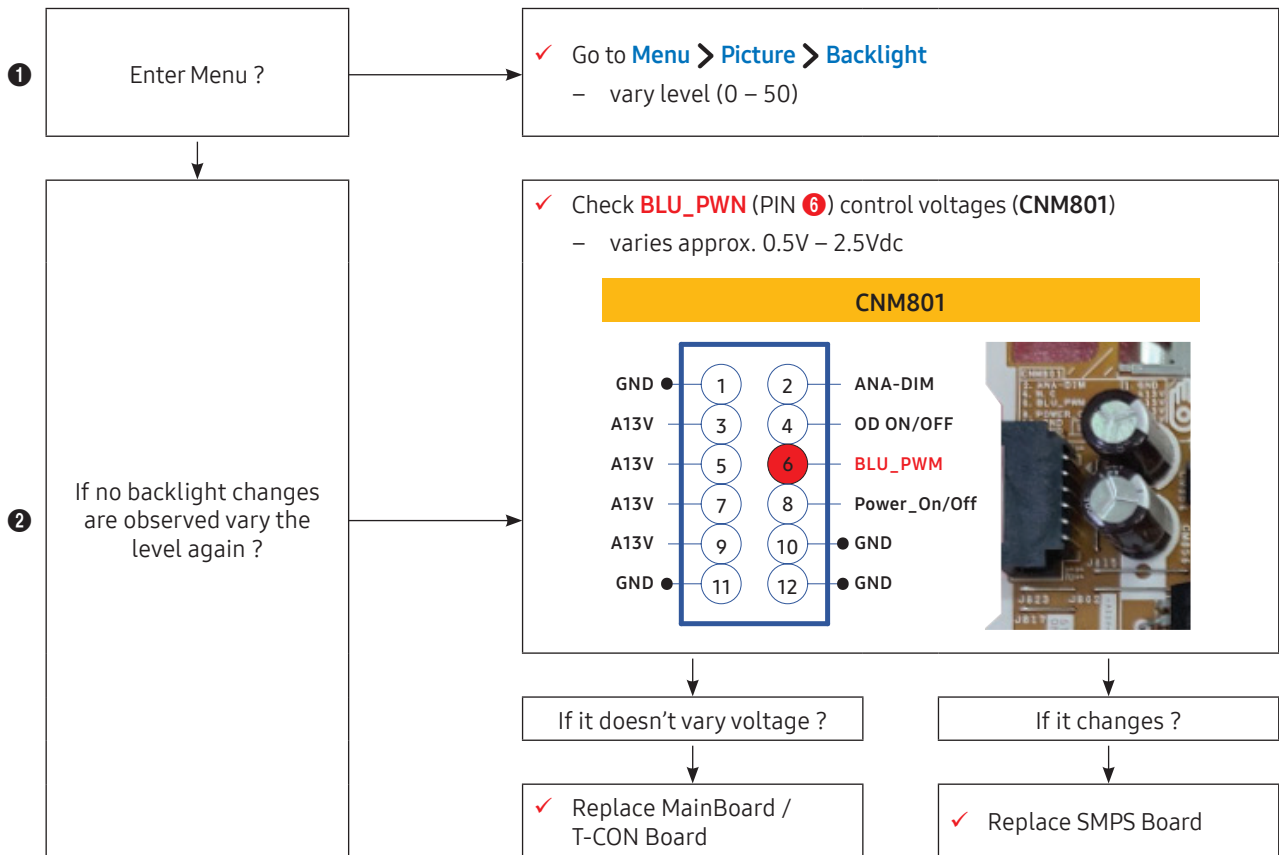


4-2-3. Backlight Test





■ BACKLIGHT DIMMING PROBLEMS




 **NOTE**

New is PWM1 Blue & PWM2 White that changes with backlight level (if Blue is 0V - "Yellow" if "white" 0V "Blue" Backlight error would appear)

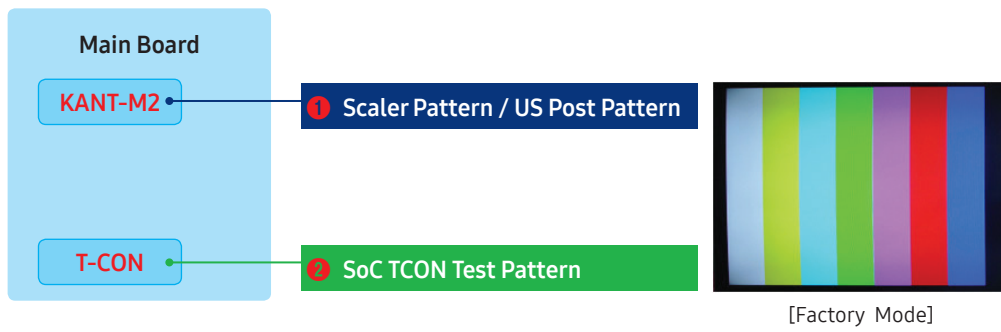
4-3. Video

4-3-1. Customer Picture Test

■ MAIN/T-CON BOARD

Main Section	Test Results	Problem						
								
Pass	<p>Picture Test Complete</p> <p>If the Self Diagnosis Picture Test is OK, your TV may not have a problem. Please follow steps below:</p> <ul style="list-style-type: none"> - Check your external devices and connections. - Try picture reset by selecting Settings > Picture > Expert Settings > Reset Picture. - Update to the latest software version by selecting Settings > Support > Software Update. <p>Close</p>	<ul style="list-style-type: none"> • Check Signal Source and other inputs 						
Fail	<p>Picture Test Complete</p> <table border="1"> <thead> <tr> <th>Test 1</th> <th>Test 2</th> <th>Test 3</th> </tr> </thead> <tbody> <tr> <td>ⓘ Failed</td> <td>ⓘ Failed</td> <td>ⓘ Failed</td> </tr> </tbody> </table> <p>Please try to contact the Samsung Call Center. Be ready to provide this information to the support agent. - Model Code : XXXXXX - Software Version : XXXXXX The serial and version numbers can be found on the sticker on the back or right side of your TV.</p> <p>Close</p>	Test 1	Test 2	Test 3	ⓘ Failed	ⓘ Failed	ⓘ Failed	<ul style="list-style-type: none"> • Replace Main/T-CON Board or Panel
Test 1	Test 2	Test 3						
ⓘ Failed	ⓘ Failed	ⓘ Failed						

4-3-2. Test Patterns



■ Check Test Patterns

- ENTER : [Factory mode](#) > [SVC](#) > [Test Pattern](#)

1. Verify "Scaler Pattern" and "US Post Pattern".
2. Verify "SoC TCON Test Pattern".

4-3-3. MAIN BOARD

- Main Section > T-CON Section > PANEL

■ Main Section



Video Operation

Generated on Main Section.

- **If OK:**
 - ✓ Source & Input Cables
 - ✓ Other inputs
- **If Noisy:**
 - ✓ Pre FRC Section Test Patterns

■ T-CON Section



[May not be available for Larger models over 70 inches.]

Video Operation

Generated at T-CON Section.

1. **If OK:**
 - ✓ Replace Main/T-Con Board
2. **If Noisy:**
 - ✓ Main/T-Con Board
 - ✓ Panel

■ PANEL



43/50/55 inches



65 inches

- Check Panel





1. If Noisy Video:

- ✓ Soc T-CON Pattern in Factory Mode
 - Use type of Noise observed (Bars, single lines, video distortion, etc to help.)
 - If noise is only on one half of screen check / swap panel cables.
 - Verify Defective Panel Cables, TV Main/T-CON or Panel.

4-4. Audio

- Source > Main Board > Speakers

■ Source

- **The picture is good but there is no sound.**
 - ✓ Set Sound Output to TV Speaker.
 -  >  **Settings** > **Sound** > **Sound Output**
- **The speakers are making an odd sound.**
 - ✓ Run Sound Test.
 -  >  **Settings** > **Support** > **Self Diagnosis** > **Start Sound Test**
- **If Sound Test Fails (Missing/Noisy Audio)**
 - ✓ Speakers (compare resistance/quality)
 - ✓ Main Board /Connector/Cable
 - ✓ With external Audio Generator (device or App)
 - ✓ Compare audio level out to speakers with multi meter.
 - Replace defective Speakers or Main Board or Cable
- **If Sound Test OK**
 - ✓ Audio Source & External Cables
 - ✓ Other Inputs
- **Optical Digital Out Errors**
 - ✓ Red light from Optical Digital Out.
 - If missing replace Main Board

■ Main Board

- **No HDMI Audio**
 - ✓ Source / HDMI Cable
 - Swap with other HDMI Inputs/Sources.
 - Perform **EDID Write** in Factory Mode (Can restore missing HDMI Audio).
 - ✓ Bulletins and Latest firmware on TV.
 - If not restored replace Main Board
 - Check Audio Format PCM/Dolby based on external Receiver
- **ARC Issues**
 - ✓ HDMI Cable is input to the ARC Designated HDMI port.
 - ✓ ARC (HDMI Control) is enabled on the external Receiver.
- **Bluetooth Audio "Sound Share" Connection Issues**
 - ✓ Sound Bar is in TV Mode.
 - To Connect, Press & Hold Play Button until Sound Bar pairing mode begins.

4-5. Factory Mode

■ Setting TV into Factory Mode



AA81-00243A
(Service Remotes)

Factory Remote

1. Power TV ON.
2. Select TV Source.
3. **Info** → **Factory**.
4. Use **MENU** for return.



AA81-00243B
(Recommended)

Samsung IR Remote

1. TV Power Standby.
2. Press as follows.
 - Remote Button

NTSC	MUTE → 1 → 8 → 2 → POWER
PAL	INFO → MENU → MUTE → POWER

■ Important Items

- **Option** (must set Option Bytes when replacing Main Board.)
- **Option** → **Factory Reset** (returns TV to out of box condition.)
 - Must perform when replacing Main Board or Full One Connect)
- SVC → Info → **ER Count** (Important to check for errors.)
 - Resets to 0 with Factory Reset.
 - ✓ Check before resetting TV
- SVC → **Test Patterns** (Use to check / troubleshoot) videos errors.
- Control → **EDID** (Use to Reset HDMI Operational Errors)

Setting Option Bytes

1. Enter Factory Mode with **Service Remote** (only).
2. Check Option Byte Table located on **GSPN** (Fast Track or Tips).
3. Select **Option**.
4. Select each item to change.
5. Can Use new **Writing Type** to enter model. (if entered wrong it will not change.)
6. Soft power TV Off to load.

Factory Reset	
Type	50C6AU0GT
Writing Type	
Local Set	US
SW Model	HT678U
Front Color	U-F-NU71-50
Writing Front Color	
Model Code	HG50NT678UFXZA
TUNER	-
Ch Table	NONE

Performing Factory Reset

1. Enter Factory Mode.
2. Select **Option** > **Factory Reset**
3. TV will power off.
4. Perform ALL TV Settings. (New out of box condition)

First Screen Appearing in Factory Mode

- Sample : QN65Q60TAFXZA

The screenshot shows the Factory Mode menu with the following sections highlighted by numbered callouts:

- 1:** T-NKLAJUC-0002.40
T-NLTVTV-0011_D
T-NKEFP-20078034.19123001
- 2:** BT Version: BLD0E1001H-VER-191128ZU
E-Manual: NIKATSCT-0.1.4
Blaster Version: Not Support
E-POP Version: MUSEUHD-1.0.0
EDID SUCCESS
HDCP SUCCESS
CALIB: AV / COMP / PC / HDMI /
- 3:** FRC-[NIKE-L USJT][60Hz][HW-03]
DIMMING-[GLOBAL][FF]
LD FW1 : ----
LD FW2 : ----
TCON-[NIKE-L] FW[A107] DATA[T65S6U0M10]
- 4:** Model: Q
Wired MAC SUCCESS
Wireless MAC SUCCESS
WiFi Version: mt7668u-MTKv4.1.3 20191230
CIP: FAIL / CIP ECP: ----
CO NI/ W/ HX PO AD O WS/ DI/ I/ MO D/ S/ N/ RO P/ Co/SIO UX
O0
NS//1100
Factory Data Ver: 20078 / Fixed Ver: 19000
EERC Version: 34 / WB Ver: 2
PEQ Version: 19123001
- 5:** SmartControl: 00000001/000000
Board Info: 2019/11/01/PV/1/BN41-0275
Factory Reset In Production: ----
SID: others
Date of purchase: --/--/----

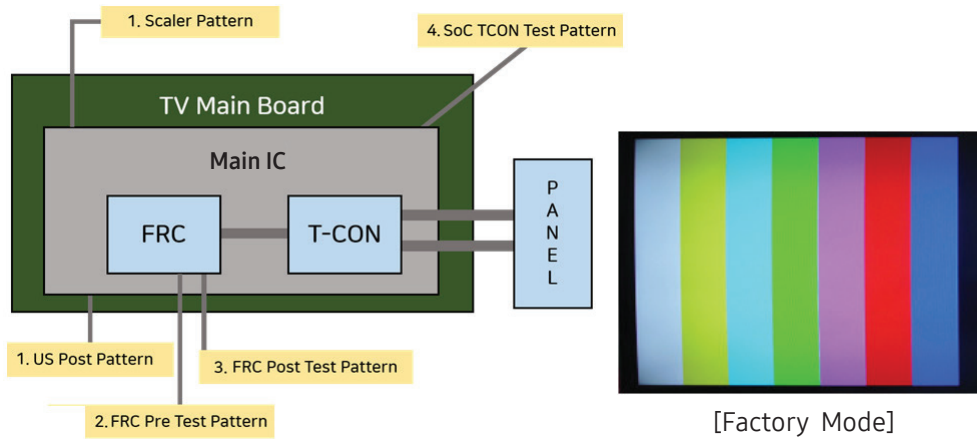
QUICK TIPS:-

- * Set value of HV Flip from shell prompt without launching factory app. For detail check Updates window
- * Launch Factory:- "org.tizen.factory"
- * Get value of any item from shell prompt without launching factory app. For detail check Updates window
- * Launch Factory:- "org.tizen.factory"
- * Set value of type localset model and front color from shell prompt along with factory reset:-
"launch_app org.tizen.factory type value localset value model value color value"
- * Use channel up/down to toggle items when at last depth
- * Use arrow right/left to toggle values when at last depth
- * Home button can be used to jump directly to home screen of factory app from any level
- * Exit button can be used to Exit factory app without launching aging app

■ Important Screen Info

- | | |
|--|---|
| <p>1</p> <p>T-NKLAKUC-0002.40
 T-NLTVTV-0011_D
 T-NKEFP-20078034.19123001</p> <p>TIZEN-ONEMAIN-NiKeL-RELEASE_20200102.4
 (Debug)</p> | <ul style="list-style-type: none"> • Micom Version • Sub Micom
 • Tizen Platform info |
| <p>2</p> <p>BT Version : BLUETOOTH-VER-19112820
 E-Manual : NIKATSCT-0.1.4
 Blaster Version : Not Support
 E-POP Version : MUSEUHD-1.0.0
 EDID SUCCESS
 HDCP SUCCESS</p> | <ul style="list-style-type: none"> • BT Version • E-Manual • Blaster Version • E-POP Version • EDID Success (Status) • HDCP Success (Status) |
| <p>3</p> <p>FRC-[NIKE-L USIT][60Hz][HW:03]
 DIMMING-[GLOBAL][FF]
 LD FW1 : ----
 LD FW2 : ----
 TCON-[NIKE-L] FW[A107] DATA[T65S6U0M10]</p> | <ul style="list-style-type: none"> • FRC • Dimming
 • T-CON |
| <p>4</p> <p>Model : 0
 Wired MAC SUCCESS
 Wireless MAC SUCCESS
 WIFI Version : mt7668u-MTKv4.1.3 20191230
 CIP: FAIL / CIP ECP : ----
 CO Nf/ W/ HX PO AO O WS/ DI/ I/ MO D/ S/ N/ RO F
 (X)
 NS//,1100
 Factory Data Ver : 20078 / Fixed Ver : 19000
 EERC Version : 34 / WB Ver : 2
 PEQ Version : 19123001</p> | <ul style="list-style-type: none"> • Model • Wired MAC Success • Wireless MAC Success • WiFi Version
 • CO Status ("O" Operational)
 • Factory Data Version • EERC Version |
| <p>5</p> <p>SmartControl : 00000000/000000
 Board Info : 2019/11/01/PV/1/BN41-02756A
 Factory Reset In Production : ----
 SID : others
 Date of purchase : --/--/----</p> | <ul style="list-style-type: none"> • Date of Purchase - Initial set up date
 (Resets with Factory Reset) |

■ SVC > Test Patterns



1. Verify "Scaler Pattern" and "US Post Pattern".
2. Verify "FRC Pre Test Pattern".
3. Verify "FRC Post Test Pattern".
4. Verify "SoC TCON Test Pattern".

Scaler Pattern	OFF
US Post Pattern	OFF
FRC Pre Pattern	0
FRC Post Pattern	0
SOC TCON Pattern	0
SOC TCON Pattern Level	255
FRC OSD Pre Pattern	0
FRC OSD Post Pattern	0
FRC2 Pre Pattern	0
FRC2 Post Pattern	0
SOC TCON2 Pattern	0
SOC TCON2 Pattern Level	255
SOC TCON3 Pattern	0
SOC TCON3 Pattern Level	255

■ Factory Mode > Control > EDID

1. Remove ALL **HDMI** connections.
2. Factory Mode > Control > **EDID**. (→ Enter Key)

Option	EDID
Control	Sub Option
Debug	Hotel Option
SVC	Shop Option
FMS	Asia Option
ADC/WB	Sound
Advanced	

3. Select **EDID/OFF** to ON. (→ Right Arrow Key)

EDID ON/OFF	ON
--------------------	-----------

4. Select **EDID WRITE ALL**. (→ Enter Key)

EDID WRITE ALL	Success
-----------------------	----------------

5. Wait to Success. (→ Right Arrow Key)

EDID WRITE ALL	Wait
-----------------------	-------------

6. Confirm EDID WRITE ALL Success. (→ Menu Key)

EDID WRITE ALL	Success
-----------------------	----------------

■ SVC > Info > ER Count

Check each item listed.

WD Count	0	FRC3D Emergency Reboot On/OffON	7915 DETACHMENT COUNT	0
AR Count	0	FRC3D ER Count		0
RS Count	0	TCON PMIC Fault Count		0
RS-FG Count	0	Fan Error Count		0
RS-Launch Count	0	TV20C Serdes Reset Count		0
RS-BG Count	0	OC2TV Serdes Reset Count		0
WiFi NO DETECTION COUNT	0	AOC Diagnosis		
WiFi DETACHMENT COUNT	0	Serdes Hlstory		
BT NO DETECTION COUNT	0	Serdes Hlstory Reset		
BT DETACHMENT COUNT	0	Serdes WatchDog On/Off	OFF	
BT MGT OPEN FAIL COUNT	0	Vcc Fall Count	0	
BT MGT DISCONNECT COUNT	0	HDMI No Signal		
BT TV AUDIO DROP	0	HDMI Blinking		
BT AUDIO TIMER EXP	0	HDMI Color Space		
Camera ER Count	0	7915 NO DETECTION COUNT	0	

■ Important Items

- ✓ **WD Count:** Watch Dog
→ Hardware related issue.
- ✓ **AR Count:** Auto Reset
→ Software (i.e. Apps) related.
- ✓ **WiFi Count:** Check all listed items
- ✓ **BT Count:** Check all listed items
- ✓ **VCC Fail Count**
→ Check all listed items.

4-6. Replacing Main Board

When replacing Main Board, certain values needs to be manually input in Factory menu to complete the replacement.

■ Steps to Replace Main Board

1. Enter Factory Menu (Use Factory Remote only).
 - Power TV on : Select **TV Source** > **Info/Factory** > **Option**
2. Change Each value according to the TV Model.
 - **Type**, **Writing Type**, **Local Set**, **SW Model**, **Front Color**, **Model Code** must be set to correct value.

- Sample Model : HG50NT678UFXZA

Type

- Check Panel label (located in the back chassis of panel) and choose same Type code from the list.



<Panel Label>

Home	Updates	Exit
Factory Reset		
Type		50C6AU0GT
Writing Type		
Local Set		US
SW Model		HT678U
Front Color		U-F-NU71-50
Writing Front Color		
Model Code		HG50NT678UFXZA
TUNER		

55A1QU7QN	55L1QU7QN
75L1QU7QN	55A1QU8XN
55L1QU7QN	55A1QU7QN
65A1QU9TR	50C6AU0GT
65L1QU9TR	65L1QU7QN
65A1QU8XN	65L1QU8XN
55A6AU0NN	82A1QU9TR

<Type list in the Factory Menu>

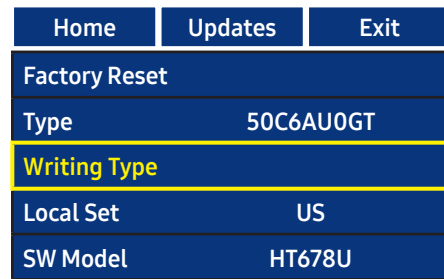
Writing Type

- For Quick Entry of Type.
 - Confirm **Type** from Option Byte Table for your TV.
 - Select **Writing Type**.
 - "Set Panel Type" appears.
 - Enter exact Model Type using cursors.
 - Select **OK**.
 - Writing Type Success** appears in the Option Table.
 - If the model Type you entered doesn't exist it will not load.
 - If you entered over 10 digits an Information screen box is full appears.
 - Complete rest of Option Byte Table info.
 - Press soft power off with remote to enter settings.

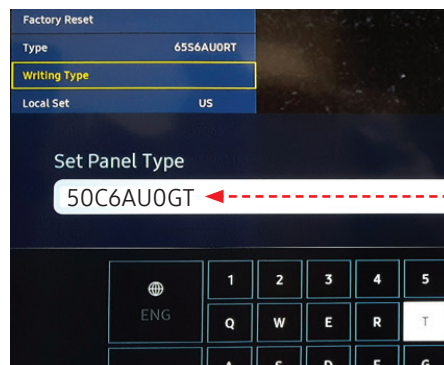


NOTE

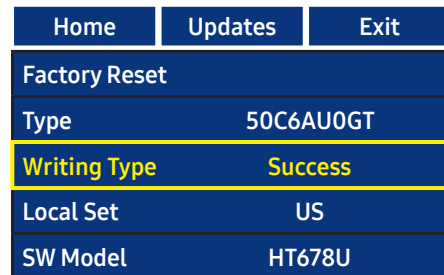
If you made a mistake you can unplug the TV to prevent info from changing options.



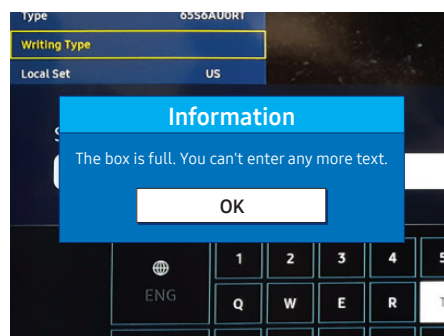
<Select Writing Type>



<Set Writing Type>



<Writing Type Success>



<Writing Type digits exceeded>

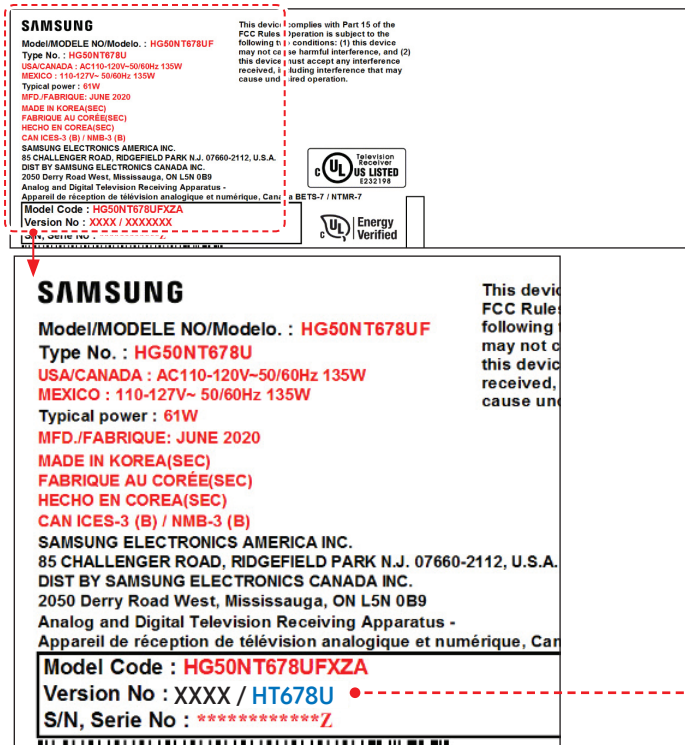
Local Set

- Set according to Local region(country).

4. Troubleshooting

SW Model

- Check Label Rating of the TV (located on the **Rear Cover**).
 - SW Model is digits **after "/"** in **Version No.**
 - Choose same SW Model code from the list.



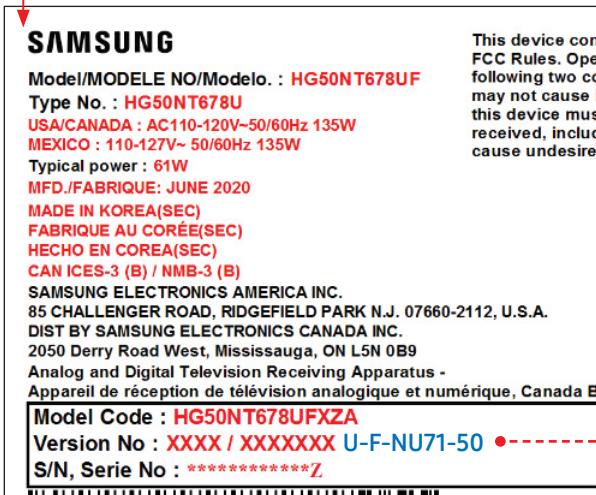
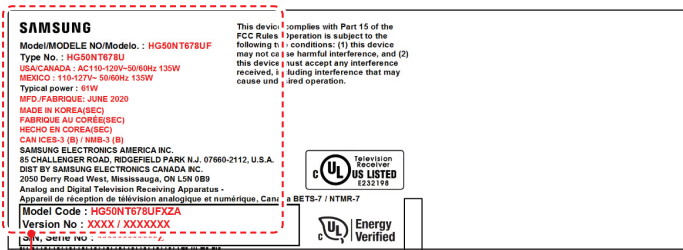
<"SW Model" in Label Rating>

Home	Updates	Exit
Factory Reset		
Type	50C6AU0GT	
Writing Type		
Local Set	US	
SW Model	HT678U	
Front Color	U-F-NU71-50	
Writing Front Color		
Model Code	HG50NT678UFXZA	
TUNER		
URU7300R	QNQ6F	
QRQ60T	QNQ75C	
URU8000F	QRQ80C	
QRQ70D	HT678U	
QNQ8FB	QNQ7F	
URU7000JJ	QRQ900Z	
URU7100H	QRQ90B	

<SW Model list in the Factory Menu>

Front Color

- Check Label Rating of the TV (located on the Rear Cover).



<"Front Color" in Label Rating>

Home	Updates	Exit
Factory Reset		
Type	50C6AU0GT	
Writing Type		
Local Set	US	
SW Model	HT678U	
Front Color	U-F-NU71-50	
Writing Front Color		
Model Code	HG50NT678UFXZA	
TUNER		
QTQ80D-Q49TD1	QTQ950SA-Q85TA1	
QTQ80D-Q55TD1	QTQ800B-Q65TB1	
QTQ80D-Q65TD1	QTQ800B-Q75TB2	
QTQ80D-Q75TD1	U-F-NU71-50	
QTQ80D-Q85TD1	QTQ60F-Q43TF1	
QTQ90C-Q55TC1	QTQ60F-Q50TF1	
QTQ90C-Q65TC1	QTQ60F-Q55TF1	

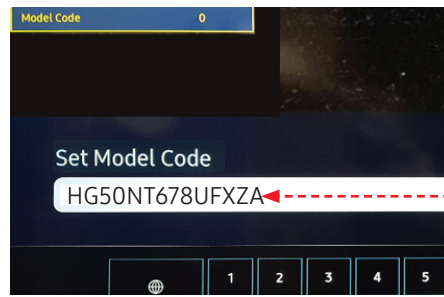
<Front Color list in the Factory Menu>

Model Code

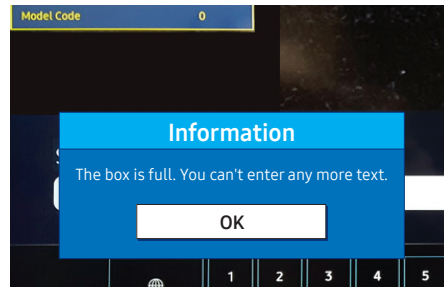
- For Quick Entry of Model Code.
 1. Confirm **Model Code** from Option Byte Table for your TV.
 2. Select **Model Code**.
 3. "**Set Model Code**" appears.
 4. Enter exact Model Code using cursors.
 5. If you entered over 19 digits an **Information** screen **box is full** appears.
 - **IMPORTANT:** It will accept wrong model code, be sure to enter correct code
 6. Complete rest of Option Byte Table info.
 7. Press soft power off with remote to enter settings.

Home	Updates	Exit
Factory Reset		
Type	50C6AU0GT	
Writing Type		
Local Set	US	
SW Model	HT678U	
Front Color	U-F-NU71-50	
Writing Front Color		
Model Code	HG50NT678UFXZA	
TUNER		

<Select Model Code>



<Set Model Code>



<Model Code digits exceeded>

Home	Updates	Exit
Factory Reset		
Type	50C6AU0GT	
Writing Type		
Local Set	US	
SW Model	HT678U	
Front Color	U-F-NU71-50	
Writing Front Color		
Model Code	HG50NT678UFXZA11	
TUNER		

<Wrong Model Code Entry>

4-7. Detail Factory Option



NOTE

If you replace the main board with new one, please change the factory option as well.
The options you must change are "Type".

■ HG43NT678UFXZA

- PANEL / SMPS / MAIN Information

Ver	PANEL			SMPS		MAIN	
	Vendor	Code/Spec	Type	Vendor	Code/Spec	ASSY CHASSIS	ASSY PCB MAIN
BA01	BOE	BN95-06367K	43B6AU0GT	SOLUM	BN44-01053C	BN91-22708D	BN94-16306U
		CY-BT043HGEV6H/V			L43S6_TSM		

- MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
US	678	U-F-NU71-43	HT678U

- PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
00GD00020	US	HT678U	Follow S/W Model

■ HG50NT678UFXZA

• PANEL / SMPS / MAIN Information

Ver	PANEL			SMPS		MAIN	
	Vendor	Code/Spec	Type	Vendor	Code/Spec	ASSY CHASSIS	ASSY PCB MAIN
YA01	CEC	BN95-06369M	50C6AU0GT	HANSOE	BN44-01054E	BN91-22709M	BN94-16306V
		CY-BT050HGPV7H/V			L55S6_THS		

• MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
US	678	U-F-NU71-50	HT678U

• PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
00GD00020	US	HT678U	Follow S/W Model

■ HG55NT678UFXZA

- PANEL / SMPS / MAIN Information

Ver	PANEL			SMPS		MAIN	
	Vendor	Code/Spec	Type	Vendor	Code/Spec	ASSY CHASSIS	ASSY PCB MAIN
CB01	CSOT	BN95-06371M	55S6AU0GT	DYREL	BN44-01054A	BN91-22709N	BN94-16306W
		CY-BT055HGHV7H/V			L55S6_TDY		

- MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
US	678	U-F-NU71-55	HT678U

- PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
00GD00020	US	HT678U	Follow S/W Model

■ HG65NT678UFXZA

• PANEL / SMPS / MAIN Information

Ver	PANEL			SMPS		MAIN	
	Vendor	Code/Spec	Type	Vendor	Code/Spec	ASSY CHASSIS	ASSY PCB MAIN
BA01	BOE	BN95-06377A	65B6AU0GT	DYREL	BN44-01055A	BN91-22709P	BN94-16306X
		CY-BT065HGEV1V/H			L65S6N_TDY		

• MAIN Factory Option

Local Set	BOM Model	Front Color	S/W Model
US	678	U-F-NU71-65	HT678U

• PBA Factory Option

Panel Type	Local Set	S/W Model	BOM Model
00GD00020	US	HT678U	Follow S/W Model

4-8. Factory Data

■ Option

Factory Menu Name	Data	Range
Factory Reset	-	
Type	50C6AU0GT	<ul style="list-style-type: none"> Refer to "4-10. Detail Factory Option".
Writing Type		
Local set	US	
SW Model	HT678U	
Front Color	U-F-NU71-50	
Writing Front Color		
Model Code	HG50NT678UFXZA	<ul style="list-style-type: none"> 43/50/55/65
TUNER	-	<ul style="list-style-type: none"> NTSC/ATSC
Ch Table	NONE	
MRT Option		
Production Option		
Engineer Option		

■ Control

Factory Menu Name	Data	Range
EDID		
EDID ON/OFF	OFF	
EDID WRITE ALL	...	
EDID WRITE HDMI	...	
EDID WRITE PC	...	
HDMI EDID Ver	...	
HDMI EDID Port	...	
Sub Option		
RS-232 Jack	UART	
EXT Link Support	ON	
Serial Log On/Off	OFF	
Watchdog	ON	
FRC Monitoring	OFF	
Checksum	0x0000	
Fast Boot In Production	ON	
USB Serial	OFF	

4. Troubleshooting

Factory Menu Name	Data	Range
ECO IC TYPE	NOT_DETECT	
COLOR IC TYPE	RISG315	
Info Link Server Type	development	
Info Link Country	None	
TTX Group	UserOSD	
OPTION_SWU		
RF Remocon Support	OFF	
CDD mode	...	
DPMS Support	OFF	
T-CON Device	Kant-M2e	
RM Server Type	Operating	
LMF LEAVE THRESHOLD	160	
LMF TRIM THRESHOLD	120	
LMF TERM THRESHOLD	80	
EOS Click	OFF	
BP PMS Reset	1	
FAnet Thread	2	
CI CPLD Version	1	
ACM_MC	ON	
UNIQUE TRIPLET	ON	
FS_FAV	OFF	
Private Range USE	ON	
SCSA Support	OFF	
OCM Reboot	ON	
SPI Protection		
FKP Server Type	Default	
OCM Support	ON	
Preloading Support	ON	
Multitasking Support	ON	
Browser preloading Support	FULL	
EXT IR Boot Support	OFF	
APP BOOTING SUPPORT	ON	
NagSam Support	OFF	
EWBS Support	OFF	
MVPD MBR Provider	COMCAST	
cloudscan Always Upload	OFF	

Factory Menu Name	Data	Range
FirstScreen Cach Size	300	
Hotel Option		
Hospitality Mode	OFF	
Power On		
Menu OSD		
Operation		
Music Mode		
External Source		
Eco Solution		
Cloning		
Shop Option		
Exhibition Mode	OFF	
Peak Mode	ON	
Metadata	ON	
Shopmode Picture Reset	ON	
Asia Option		
Unbalance	OFF	
AF Level adjust	0	
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	0	
SOUND		
High Devi	OFF	*If the broadcast signal is not good, TV will complement the characteristics of the signal (most use when weak signal comes from the growing area countries)
Carrier_Mute	ON	*If the noise comes from weakness-electromagnetic field, TV will be set Mute automatically(Only default on in North America)
Pilot Level High Thld	0x20h	* The High threshold value of stereo signal(If Pilot level is greather than High threshold value, recognize Stereo signal)
Pilot Level Low THLD	0x10h	* The Low threshold value of stereo signal(If Pilot level is less than Low threshold value, recognize Mono signal)
Carrier2 Amp High ThLD	9	
Carrier2 Amp Low THLD	6	
Amp Volume	0xc4h	
Amp Scale	0x3ch	
Amp EQ Check Sum	0x000057B5	

4. Troubleshooting

Factory Menu Name	Data	Range
Subwoofer Support	3	
Woofer Type	0	
Woofer Volume	0xc7h	
Woofer Scale	0x3fh	
Woofer Check sum	0x0000A273	
PEQ Inx	76	
PEQ Test	Ready	
Speaker EQ	ON	
Bottom Checksum	NONE	
Wall Filter Type	3	
SRS Tuning Parm	0	
SPDIF PCM Gain	-9	
AudioDock BT Delay	90	
3D_Glass BT delay	50	
Mic Scale	OFF	
India Sound	0	
Speaker Delay Normal	0	
NTV CU Delay	NORMAL	
Lipsync Inx	1	
Lipsync Checksum	0x4972	
Lipsync USB Test	Ready	
Lipsync BT Checksum	0x0000	
TP volume	0xc4h	
TP Scale	0x6ch	
TP EQ CheckSum	NONE	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		
LVDS Spread	0	
DDR Spread	0	
Period	0	
Amplitude	0	
HD DDR SSC ON OFF	OFF	
HD DDR SSC Value	0	

Factory Menu Name	Data	Range
FHD DDR SSC ON OFF	OFF	
FHD DDR SSC Value	4	
UHD DDR SSC ON OFF	ON	
UHD DDR SSC Value	0	
PeBus SSC ON/OFF	OFF	
PeBus Value	0	
LVDS SSC ON/OFF	OFF	
LVDS SSC Value	0	
AP Vx1 SSC ON/OFF	ON	
AP Vx1 Value	12	
N Vx1 SSC ON/OFF	ON	
N Vx1 Value	0	
FRC Vx1 SSC ON/OFF	OFF	
FRC Vx1 SSC Period	0	
FRC Vx1 SSC Modulation	0	
FRC LVDS ON/OFF	ON	
FRC LVDS SSC MFR	3	
FRC LVDS SSC MRR	2	
FRC DDR SSC ON/OFF	ON	
FRC DDR SSC Period	1	
FRC DDR SSC Modulation	2	
ADV7619 Data strength	1	
ADV7619 Clock strength	1	
ADV7619 H_V_DE strength	1	
AP DDR SSC ON/OFF	OFF	
AP DDR SSC Value	0	
AP USIT SSC ON/OFF	ON	
AP USIT SSC Value	13	
OCM Vx1 SSC ON/OFF	OFF	
OCM Vx1 SSC Value	0	
TCON USIT SSC ON/OFF	BYPASS	
DDR Margin		
A CTRL_OFFSET_0_3	0	
A CTRL_OFFSET_D	0	
B CTRL_OFFSET_0_3	0	
B CTRL_OFFSET_D	0	

4. Troubleshooting

Factory Menu Name	Data	Range
BT_ON_OFF	ON	
RF Mute Time	600ms	
Tuner Margin	3	European specifications
FRC		
FRC FDISPLAY ON/OFF	OFF	
3D FDISPLAY ON/OFF	OFF	
PC Mode ON/OFF	OFF	
FRC VX1 RX EQ SETTING	OFF	
FRC VX1 TX Pre_emphasis setting	0	
Netflix OSD Threshold	179	
TCON		
TCON_TEMPREAD	34	
TEMP LAST	6000	
DCC VERSION	0x0	
TCON Demura Bypass	OFF	
TCON FDisplay	OFF	
Panel Code 1		
Panel Code 2		
Panel Revision		
Panel Menu Week		
Panel S/N 1		
Panel S/N 2		
Panel S/N 3		
Panel S/N 4		
MPEG Margin		
H.264 Margin		
CAM Wait Time		
Voice Debug		
Power Management		
Cert Option		
RM_BIST_DTV		
RM_BIST_ATV		
RM_BIST_CABLE		
SerDES Check		
SerDES Tuner		

Factory Menu Name	Data	Range
HDMI SW	Failure	
HDMI Rx	Failure	
MP Failure		
Main SerDES	Failure	
Jack SerDES	Failure	
Stress Mode		
Log Analyzer		
Error Popup On/Off		
DeadLock KILL		
CES Option		
CES Convergence Option		
CES ATSC 3_0		
CES OOBE MVPD SUPPORT		
BT DUT		
BT Throughput		
Reproduce Module		
21_9		
L-DETECT STABLE TIME	7	
L-DETECT UNSTABLE TIME	3	
L-DETECT CAPTION THRESHOLD	720	
L-DETECT RAGION THRESHOLD	720	
L-DETECT B-LEVEL THRESHOLD	32	
L-DETECT USB SUPPORT	0	
DB Download		
MRT Option Dump	Failure	
Picture Data Dump	Failure	
VCONF Dump	Failure	
Read Eco Sensor Data		
No Signal Power OFF		
Alert Option		
Default HDMI1 Booting		

■ SVC

Factory Menu Name	Data	Range
Self Test(for HW)		* the Output of test pattern from each IC
Info		
Reset		
Apps Reset		
SVC Reset		
SPI Flash Reset		
Data Sync Reset		
Factory Data Reset		
OPTION_HDMI		
DVI/HDMI SOUND	Auto	
HDMI HOT PLUG	Disable	
HOTPLUG SWITCHING	Auto	
HOT PLUG DURATION	800ms	
CLK TERM DURATION	300ms	
HDMI FLT CNT SIG	0ms	
HDMI FLT CND SIG2		
HDMI FLT CNT LOS	0ms	
UNSTABLE BAN CNT	1250ms	
HDMI ROBIN	0	
HDMI Callback	ON	
HDMI CTS Thld	0	
HDMI CTS Cnt1	0	
HDMI EQ	0	
HDMI Write Type	0	
HDMI Switch	0	
DVI SET TIME	0	
H Write	0	
HDMI Sync	0	
HDMI 3D DET	1	
HOT PLUG OFF HOLD TIME	600ms	
HDMI MUTE TIME	0ms	
HDMI NFST UNMUTE TIME	800ms	
HDMI FST UNMUTE TIME	0ms	
REPEA AUDIO PKT	OFF	
HDMI Stable Count	3	

Factory Menu Name	Data	Range
HDMI HDCP EN	OFF	
HDMI HDCP EN FLAG	85	
POWER ON FLT CNT LOS		
HDCP UPDATE SPI	READY	
SPI VERSION	0	
HdmiRx EQ	0	
HDMI TMDS ERR DET	1	
DVB CI		
TS Clock delay TC	0	
TS Clock delay S	0	
CI Control Buf ON	ON	
TS Clock delay CPU	1	
TS Clock delay TC2	0	
TS Clock delay S2	0	
CI Control Buf ON2	1	
TS Clock delay CPU2	0	
Test Pattern		
Scaler Pattern	OFF	
US Post Pattern	OFF	
FRC Pre Pattern	0	
FRC Post Pattern	0	
SOC TCON Pattern	0	
SOC TCON Pattern Level	255	
FRC OSD Pre Pattern	0	
FRC OSD Post Pattern	0	
FRC2 Pre Pattern	0	
FRC2 Post Pattern	0	
SOC TCON2 Pattern	0	
SOC TCON2 Pattern Level	255	
Upgrade		
T-CON DATA UPGRADE		
T-CON FW UPGRADE		
T-CON CheckSum		
T-CON2 Usb Download		
T-CON2 CheckSum		
PANEL EEPROM UPGRADE		

4. Troubleshooting

Factory Menu Name	Data	Range
PANEL FLASH UPGRADE		
Logic Usb D/L		
SUBMICOM UPGRADE		* Upgrade Sub-Micom Program
SUBMICOM JP USB UPGRADE		
BT UPGRADE		
BT FREPAIRING		
Function Upgrade		
FRC3D FW UPGRADE		
FRC3D SRP UPGRADE		
FRC3D LD UPGRADE		
FRC2 3D FW UPGRADE		
Camera Upgade		* Upgarde Camera module(There is upgrade program in Main-Image)
Mic Upgrade		* Upgarde MIC in Camera module(There is upgrade program in Main-Image)
Jump UPGRADE		
IR Blaster Upgrade		
IR Blaster delay time		
NTV CU UPDATE		
UD LDC PROFILE UPGRADE		
Pic Data USB Update		
Audio Data USB Update		
Eco Data USB Update		
CI CPLD Upgrade		
SC ADK Upgrade		
Other Setting		
Delete S/N		
IPERF	Stopped	
Expert		
CAL Data Backup	...	
CAL Data Restore		
MICOM POWER OFF	ON	
NTV CU FW VER	0	
ATV IF AGC SPEED	0	
Upgrade UHD OSD Test	0	
Main USB Path		
JackP USB Path		

Factory Menu Name	Data	Range
Source Direct On/Off	OFF	
Apps Update		
Auto Power	LAST POWER	
SMCE Control		
Motor Test		
Cube Test		
V APP	OFF	
Picture Direct On/Off	OFF	
SVC Panel	ORIGINAL	
S/N		
Serial number		
Writing S/N		

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibration		
Comp Calibration		
PC Calibration		
HDMI Calibration		
ADC Result		
1st_Y_GH	0	
1st_Y_GL	0	
1st_Cb_BH	0	
1st_Cb_BL	0	
1st_Cr_RH	0	
1st_Cr_RL	0	
2nd_R_L	128	
2nd_G_L	128	
2nd_B_L	128	
2nd_R_H	69	
2nd_G_H	69	
2nd_B_H	69	
White Balance		
R-Offset	128	

4. Troubleshooting

Factory Menu Name	Data	Range
G-Offset	128	
B-Offset	128	
R-Gain	128	
G-Gain	128	
B-Gain	128	
WB-W2_R_Offset	128	
WB_W2_B_Offset	128	
WB_W2_R_Gain	136	
WB_W2_B_Gain	76	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	131	
WB_N_B_Gain	119	
MGA		
MGA On/Off	OFF	
R1_Gain		
G1_Gain		
B1_Gain		
R2_Gain		
G2_Gain		
B2_Gain		
R3_Gain		
G3_Gain		
B3_Gain		
R4_Gain		
G4_Gain		
B4_Gain		
R5_Gain		
G5_Gain		
B5_Gain		
R6_Gain		
G6_Gain		
B6_Gain		
R7_Gain		
G7_Gain		
B7_Gain		

Factory Menu Name	Data	Range
R8_Gain		
G8_Gain		
B8_Gain		
R9_Gain		
G9_Gain		
B9_Gain		
R10_Gain		
G10_Gain		
B10_Gain		
SPI White Balance		
SPI White Balance On/Off		
SPI R-Offset		
SPI G-Offset		
SPI B-Offset		
SPI R-Gain		
SPI G-Gain		
SPI B-Gain		
SPI N Rgain		
SPI N Bgain		
SPI N Roffset		
SPI N Boffset		
SPI W2 Rgain		
SPI W2 Bgain		
SPI W2 Roffset		
SPI W2 Boffset		
SPI MGA		
WB Data to SPI		

■ Advanced

4-9. AV Control Tab

Control Item		Cmd1	Cmd2	Cmd3	Value		
General	Power	Power	0x00	0x00	0x00	0x00	
		Off				0x01	
		On				0x02	
	Volume	Direct	0x01	0x00	0x00	(0~100)	
		Up			0x01	0x00	
		Down			0x02	0x00	
	Mute		0x02	0x00	0x00	0x00	
	Ch.	Direct	0x04	-			
		Continuous	Up	0x03	0x00	0x01	0x00
			Down			0x02	0x00
Input	Source List	TV	TV	0x0a	0x00	0x00	0x00
		AV	AV1			0x01	0x00
			AV2				0x01
			AV3				0x02
		S-Video	S-Video1			0x02	0x00
			S-Video2				0x01
			S-Video3				0x02
		Component	Component1			0x03	0x00
			Component2				0x01
			Component3				0x02
		PC	PC1			0x04	0x00
			PC2				0x01
			PC3				0x02
		HDMI	HDMI1			0x05	0x00
			HDMI2				0x01
			HDMI3				0x02
			HDMI4				0x03
		DVI	DVI1			0x06	0x00
			DVI2				0x01
			DVI3				0x02
RVU	RVU			0x07	0x00		
PICTURE	Mode	Dynamic(Entertain)		0x0b	0x00	0x00	0x00
		Standard					0x01
		Movie					0x02
		Natural					0x03
		CAL-NIGHT					0x04
		CAL-DAY					0x05
		BD Wise					0x06
		Relax					0x07

Control Item				Cmd1	Cmd2	Cmd3	Value	
PICTURE	BackLight(CellLight)		0~20		0x01	0x00	(0~20)	
	Contrast		0~100		0x02	0x00	(0~100)	
	Brightness		0~100		0x03	0x00	(0~100)	
	Sharpness		0~100		0x04	0x00	(0~100)	
	Color		0~10		0x05	0x00	(0~100)	
	Tint	G/R			0x06	0x00	(0~100)	
	Advanced Settings	Black Tone	Off			0x07	0x00	0x00
			Dark					0x01
			Darker					0x02
			Darkest					0x03
		Dynamic Contrast	Off				0x01	0x00
			Low					0x01
			Medium					0x02
			Hlgh					0x03
		Gamma		-3 ~ 3			0x03	(-3~3)
		RGB Only Mode	Off				0x05	0x00
			Red					0x01
			Green					0x02
			Blue					0x03
		Color Space	Auto				0x06	0x00
			Native					0x01
			Custom					0x02
		White Balance	R-Offset(LCD)				0x07	(-50~50)
			G-Offset(LCD)				0x08	(-50~50)
			B-Offset(LCD)				0x09	(-50~50)
			R-Gain(LCD)				0x0a	(-50~50)
			G-Gain(LCD)				0x0b	(-50~50)
			B-Gain(LCD)				0x0c	(-50~50)
			Reset(LCD)				0x0d	0x00
		Flesh Tone		-15 ~ 15			0x0e	(-15~15)
		xvYCC	Off				0x10	0x00
			On					0x01
		Motion Lighting	Off				0x11	0x00
			On					0x01
		Color Space Custom Color	Red				0x12	0x00
			Green					0x01
			Blue					0x02
			Yellow					0x03

Control Item				Cmd1	Cmd2	Cmd3	Value	
PICTURE	Advanced Settings	Color Space Custom Color	Cyan				0x04	
			Magenta				0x05	
		Color Space Custom Color Red Value	0~100			0x13	0~100	fixed command
		Color Space Custom Color Green Value	0~100			0x14	0~100	fixed command
		Color Space Custom Color Blue Value	0~100			0x15	0~100	fixed command
		Color Space Custom Reset				0x1c	0x00	fixed command
		LED Motion Plus	Off		0x0a	0x07	0x00	
			On(Normal)				0x01	
			Cinema				0x02	
			Ticker				0x03	
		10p White Balance	Off		0x07	0x16	0x00	fixed command
			On		0x07	0x16	0x01	fixed command
			Interval		0x07	0x17	(1~10)	fixed command
			Red		0x07	0x18	(-50~50)	fixed command
			Green		0x07	0x19	(-50~50)	fixed command
	Blue			0x07	0x1a	(1~10)	fixed command	
	Reset			0x00	0x1b	0x00	fixed command	
	Picture Option	Color Tone	Cool		0x0a	0x00	0x00	
			Standard				0x01	
			Warm1				0x02	
			Warm2				0x03	
		Digital Noise Filter	Off			0x02	0x00	
			Low				0x01	
			Medium				0x02	
			High				0x03	
			Auto				0x04	
			Auto Visualization				0x05	
		MPEG Noise Filter	Off			0x03	0x00	
			Low				0x01	
			Medium				0x02	
High						0x03		
Auto						0x04		
HDMI Black Level		Normal			0x04	0x00		
		Low				0x01		
Film Mode		Off			0x05	0x00		
		Auto1				0x01		

Control Item				Cmd1	Cmd2	Cmd3	Value	
PICTURE		Film Mode	Auto2				0x02	
			Cinema Smooth				0x03	
		Auto Motion Plus	Off			0x06	0x00	
			Clear				0x01	
			Standard				0x02	
			Smooth				0x03	
			Custom				0x04	
			Blur Reduction			0x0b	0x01	value
		Judder Reduction				0x02	value	fixed command
		LED Clear Motion	Off			0x03	0x00	fixed command
		LED Clear Motion	On				0x01	fixed command
		HDMI1 UHD Color Mode	Off			0x04	0x00	fixed command
			On				0x01	fixed command
		HDMI2 UHD Color Mode	Off			0x05	0x00	fixed command
			On				0x01	fixed command
		HDMI3 UHD Color Mode	Off			0x06	0x00	fixed command
			On				0x01	fixed command
		HDMI4 UHD Color Mode	Off			0x07	0x00	fixed command
			On				0x01	fixed command
		Analog Clean View	On			0x08	0x00	fixed command
	Screen Adjustment	Picture Size	16:9	0x0b	0x0a	0x01	0x00	
			Zoom1				0x01	
			Zoom2				0x02	
			Wide Fit				0x03	
			4:3				0x04	
			Screen Fit				0x05	
			Smart View I				0x06	
			Smart View II				0x07	
			Auto Wide				0x08	
			Wide Zoom				0x09	
			Zoom				0x0a	
			Fit to Screen	Off		0x0b	0x00	0x00
		Zoom	Zoom1		0x0c	0x00	0x00	
Zoom2						0x01		
Zoom3						0x02		
Zoom4						0x03		
Position		Position1			0x01	0x00		
		Position2				0x01		

Control Item				Cmd1	Cmd2	Cmd3	Value	
PICTURE	Screen Adjustment	Position	Position3				0x02	
			Position4				0x03	
	Reset Picture	Reset Picture	0x0d	0x0b	0x00	0x00		
	3D	3D Mode	Off	0x0e	0x0c	0x00	0x00	
			2D->3D				0x01	
			Side By Side				0x02	
			Top Bottom				0x03	
			Line By Line				0x04	
			Vertical Line				0x05	
			Checker BD				0x06	
			Frame Sequence				0x07	
		3D → 2D	Off			0x01	0x00	
			On				0x01	
		3D View Point				0x02	(-5~5)	
		Depth				0x03	(1~10)	
		3D Auto View	Off			0x05	0x00	
			Message Notice				0x01	
			On				0x02	
			Auto1				0x03	
			Auto2				0x04	
		3D Light Control	Low			0x06	0x00	
			High				0x01	
		L/R Change	L to R			0x07	0x00	
	R to L					0x01		
	3D Perspective				0x08	value		
	Optimize				0x09	value		
	Factory-SVB	Expert-N/D Adj	On	0x0b	0x0d	0x00	0x00	
			Off				0x01	
			Fix				0x02	
	Apply Picture Mode	All Sources		0x0f	0x00	0x00	0x00	fixed command
		Current Source					0x01	
	Pip	PIP	Off	0x0b	0x08	0x00	0x00	fixed command
			On				0x01	fixed command
			Antenna			0x01	0xff	fixed command
			Size			0x02	0xff	fixed command
			Position			0x03	0xff	fixed command
			Sound_Select_Main			0x04	0x00	fixed command

Control Item				Cmd1	Cmd2	Cmd3	Value		
PICTURE	Pip		Sound_Select_Sub				0x01	fixed command	
			Channel_Up			0x05	0x00	fixed command	
			Channel_Down				0x01	fixed command	
Sound	Sound Mode	Standard		0x0c	0x00	0x00	0x00		
		Music					0x01		
		Movie					0x02		
		Clear Voice					0x03		
		Amplify					0x04		
	Equalizer	Balance				0x01	0x00	(0~20)	
		100hz					0x01	(0~20)	
		300hz					0x02	(0~20)	
		1khz					0x03	(0~20)	
		3khz					0x04	(0~20)	
		10khz					0x05	(0~20)	
		Reset					0x06	0x00	
	SRS TruSurround HD	Off				0x02	0x00	0x00	
	Virtual Surrond	On						0x01	
	SRS TruDialog	Off				0x03	0x00	0x00	
	Dialog Clarify	On						0x01	
	Preferred Language	English				0x04	0x00	0x00	
		Spanish						0x01	
		French						0x02	
		Korean						0x03	
		Japanese						0x04	
	Multi-Track Sound	Mono				0x05	0x00	0x00	
		Stereo						0x01	
		SAP						0x02	
	Auto Volume	Off				0x06	0x00	0x00	
		Normal						0x01	
		Night						0x02	
	Speaker Select	TV Speaker				0x07	0x00	0x00	
		External Speaker						0x01	
		Audio Out						0x01	
	Sound Select	Main				0x08	0x00	0x00	
		Sub						0x01	
	Sound Reset	Sound Reset				0x09	0x00	0x00	
3D Audio	Off				0x0a	0x00	0x00		
	Low						0x01		
	Medium						0x02		

4. Troubleshooting

Control Item				Cmd1	Cmd2	Cmd3	Value
		High					0x03
Sound	TV Installation Type	Stand			0x0c	0x00	0x00
		Wallmount					0x01
	Audio Delay	Dealy Value (0~250)			0x0d	0x00	0~250 (0x00~0xFA)
KEY	Key Generation			0x0d	0x00	0x00	*Refer for Table
OSD	Show/Hide Control	Show		0x0e	0x00	0x00	0x00
		Hide					0x01
Get Status	Power (On/Off)			0xf0	0x00	0x00	0x00
	Volume(0~100)			0xf0	0x01	0x00	0x00
	Mute (On/Off)			0xf0	0x02	0x00	0x00
	Channel Number			0xf0	0x03	0x00	0x00
	Source (TV/AV/.../HDMI/...)			0xf0	0x04	0x00	0x00
	Picture Size			0xf0	0x05	0x00	0x00
	3D (On/Off)			0xf0	0x06	0x00	0x00
	Picture Mode			0xf0	0x07	0x00	0x00
	Sound Mode			0xf0	0x08	0x00	0x00

* Refer for Table

KEY	Value
Up	96 (0x60)
Down	97 (0x61)
Left	101 (0x65)
Right	98 (0x62)
Menu	26 (0x1A)
Enter(OK)	104 (0x68)
EXIT	45 (0x2D)

4-10. Updating the TV's Software

View your TV's software version and update it if necessary.



CAUTION

DO NOT turn off the TV's power until the update is complete. The TV will turn off and on automatically after completing the software update. Video and audio settings will be reset to their defaults after a software update.

-  >  **Settings** > **Support** > **Software Update**

■ Updating through the Internet

-  >  **Settings** > **Support** > **Software Update** > **Update Now**



Updating from the Internet requires an active Internet connection.

■ Updating through a USB device

-  >  **Settings** > **Support** > **Software Update** > **Update Now**

After downloading the update file from the Samsung website and storing it on a USB device, connect the USB device to the TV to update.



To update using a USB device, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.

■ Updating the TV automatically

-  >  **Settings** > **Support** > **Software Update** > **Auto Update**

If the TV is connected to the Internet, you can have the TV update its software automatically while you are watching the TV. When the background update is completed, it is applied the next time the TV is turned on.

If you agree to the Smart Hub terms and conditions, **Auto Update** is set to **On** automatically. If you want this function disabled, use the Select button to turn it off.



This function may take a longer time if another network function is running concurrently.

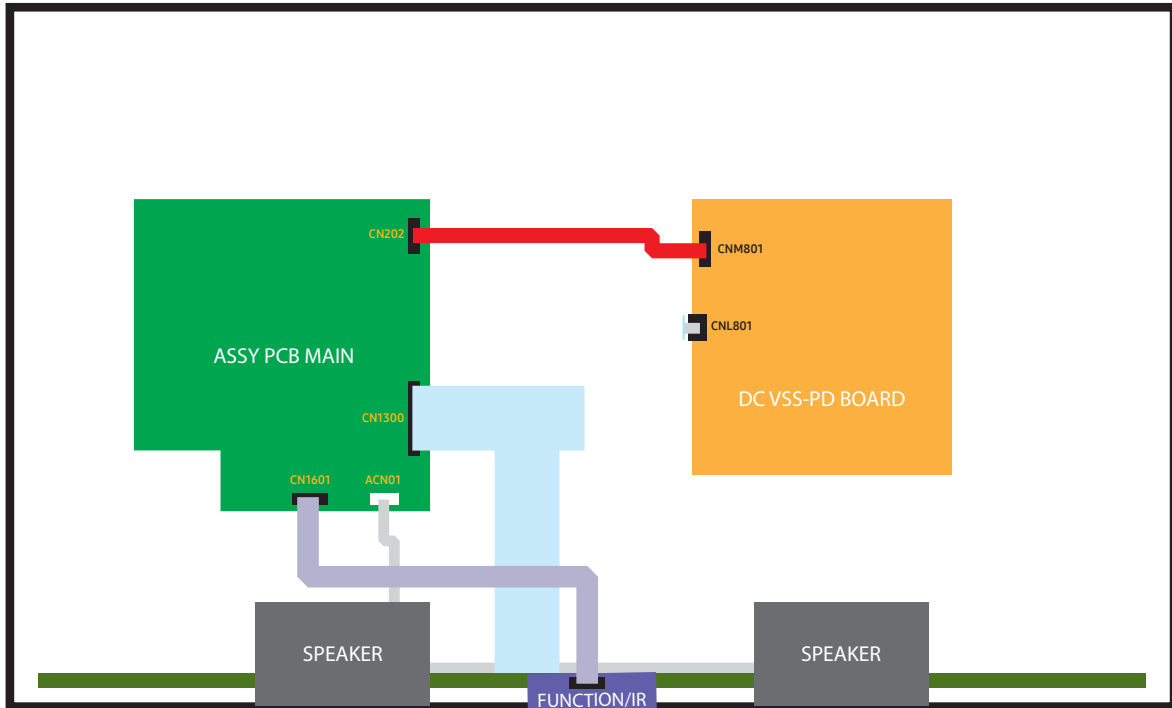


This function requires an Internet connection.

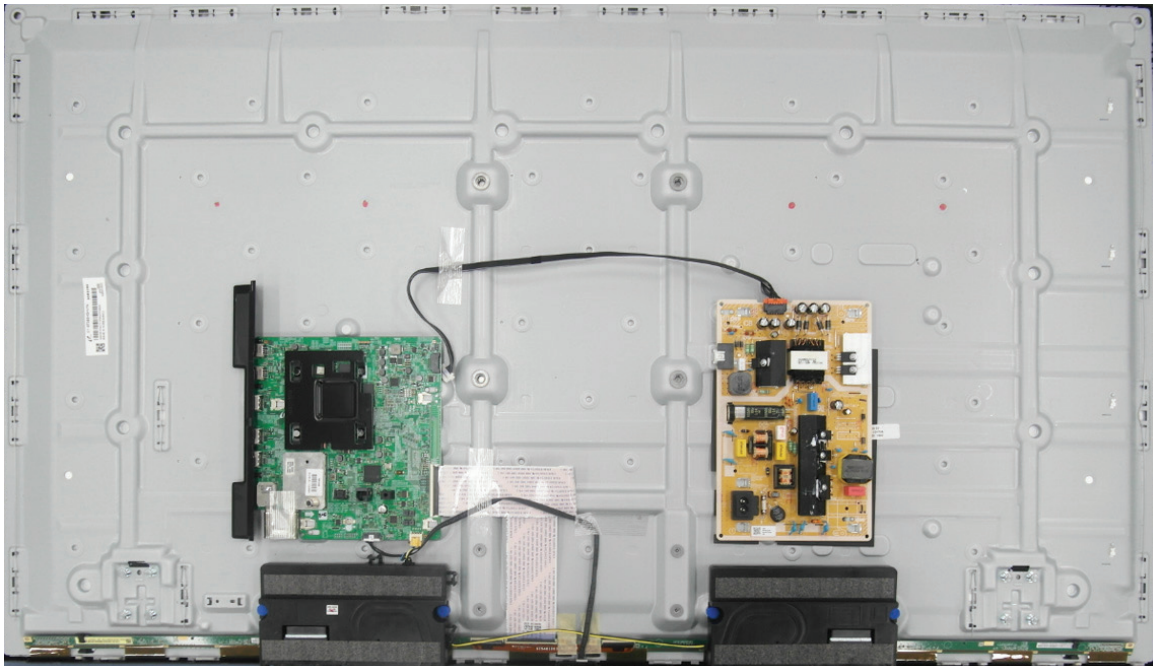
5. Wiring Diagram

5-1. Wiring Diagram

- 43/50/55/65 inches



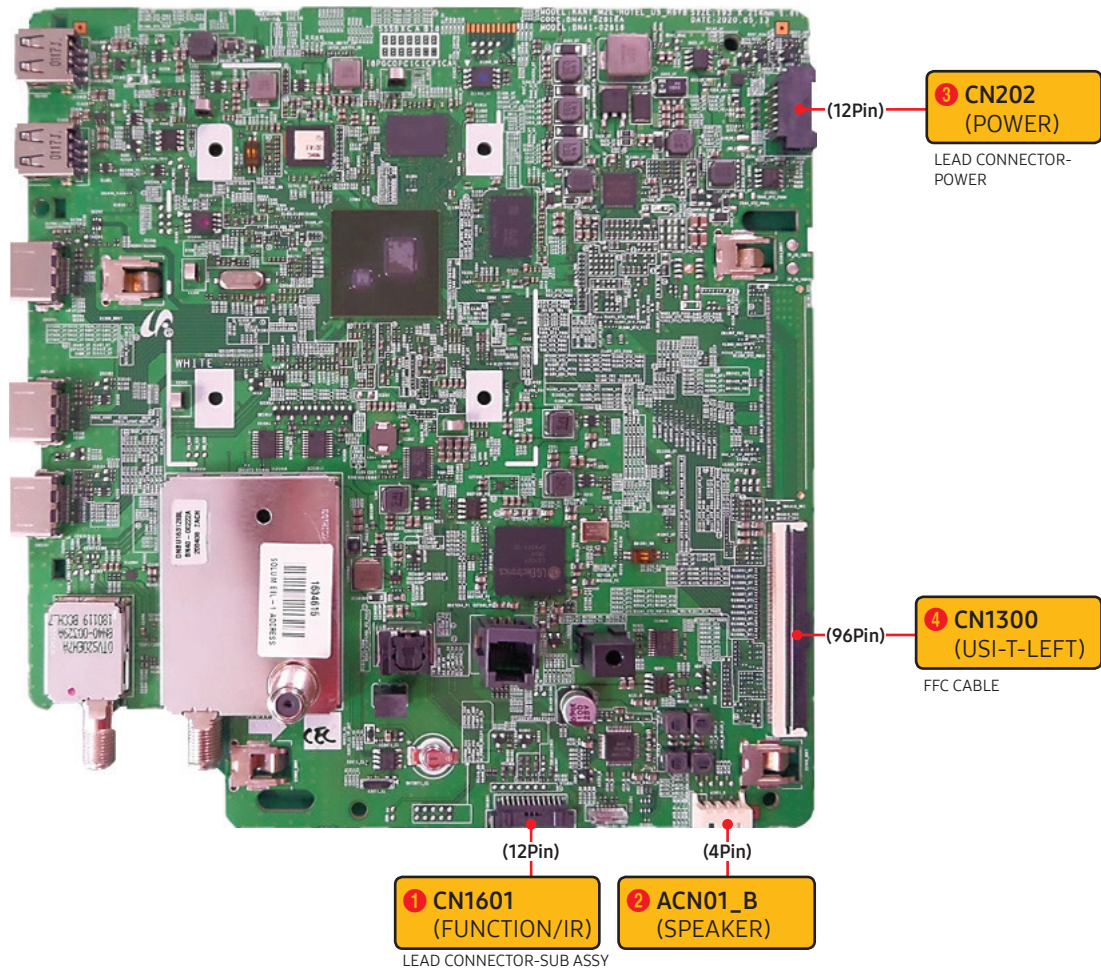
- 43/50/55/65 inches_inner



5-2. Connector

5-2-1. MAIN Board

- External Connector (For Engineers)



MAIN Board Pin Map

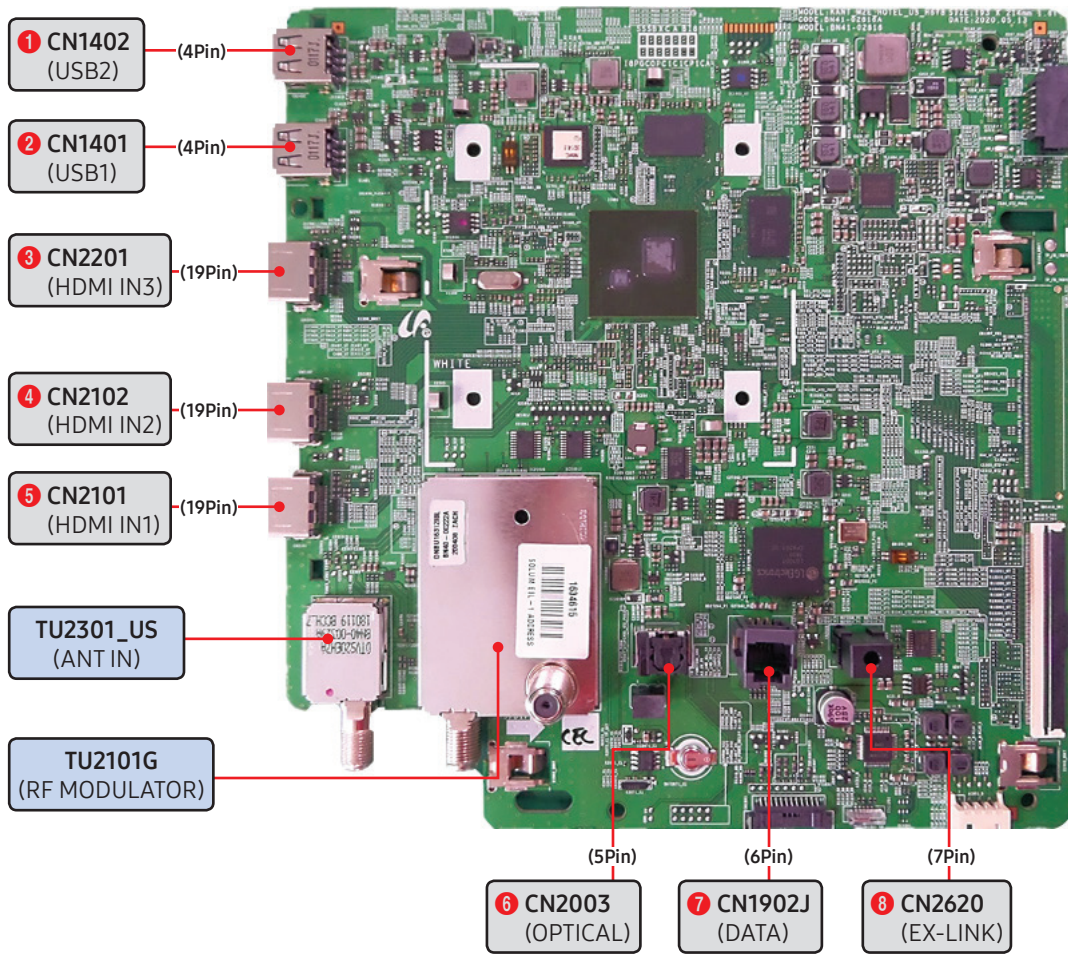
1 CN1601 (FUNCTION/IR)				3 CN202 (POWER)			
1	IR	2	GND	1	GND	2	GND
3	A3.3V	4	TU_LNB_SCL_I2C	3	A13V_PW	4	GND
5	TU_LNB_SDA_I2C	6	KEY_INPUT1	5	A13V_PW	6	SW_POWER_OUT
7	KEY_INPUT2	8	LED_STB_OUT	7	A13V_PW	8	PWM_DIMMING_OUT1
9	N.C	10	N.C	9	A13V_PW	10	NC
11	GND	12	N.C	11	SMPS_FET_FAIL_DETECT	12	ANA_DIMMING

2 ACN01_B (SPEAKER)			
1	MID_R+	2	MID_R-
3	MID_L+	4	MID_L-

④ CN1300 (USI-T-LEFT)							
1	FB_TRDY_1	2	GND	3	PANEL_3.3V_PW	4	PANEL_3.3V_PW
5	FB_VCOM1_2_CELL	6	VCOM1_CELL	7	VCOM2_CELL	8	VCOM3_CELL
9	VSS_OUT1_CELL	10	VOFF_-11V_PW	11	VGHD	12	CKV1_GOA
13	CKV2_GOA	14	CKV3_GOA	15	CKV4_GOA	16	CKVB1_GOA
17	CKVB2_GOA	18	CKVB3_GOA	19	CKVB4_GOA	20	STVP1_GOA
21	LC1_VGP1_GOA	22	ST_GOA	23	DEMURA_SSPFRM_SPI	24	DEMURA_SSPCLK_SPI
25	DEMURA_SSPHOLD_SPI	26	DEMURA_SSPWP_SPI	27	DEMURA_SSPRXD_SPI	28	DEMURA_SSPTXD_SPI
29	DEMURA_SSPFRM_SPI	30	SFC	31	DEMURA_SSPWP_SPI	32	DEMURA_SSPRXD_SPI
33	DEMURA_SSPTXD_SPI	34	DEMURA_SSPFRM_SPI	35	DEMURA_SSPCLK_SPI	36	DEMURA_SSPHOLD_SPI
37	GND	38	VCCA_1.9V_PW	39	VCCB_1.8V_PW	40	GND
41	N.C	42	PI_DSF_MON	43	GND	44	TX_CH0_A+_USIT1
45	TX_CH0_A-_USIT1	46	GND	47	TX_CH1_A+_USIT	48	TX_CH1_A-_USIT
49	GND	50	TX_CH2_A+_USIT	51	TX_CH2_A-_USIT	52	GND
53	TX_CH3_A+_USIT	54	TX_CH3_A-_USIT	55	GND	56	TX_CH4_A+_USIT
57	TX_CH4_A-_USIT	58	GND	59	TX_CH5_A+_USIT	60	TX_CH5_A-_USIT
61	GND	62	TX_CH6_A+_USIT	63	TX_CH6_A-_USIT	64	GND
65	TX_CH7_A+_USIT	66	TX_CH7_A-_USIT	67	GND	68	TX_CH8_A+_USIT
69	TX_CH8_A-_USIT	70	GND	71	TX_CH9_A+_USIT	72	TX_CH9_A-_USIT
73	GND	74	TX_CH10_A+_USIT	75	TX_CH10_A-_USIT	76	GND
77	TX_CH11_A+_USIT	78	TX_CH11_A-_USIT	79	GND	80	SFC
81	GND	82	PI_DSF_MON	83	PORTNUM	84	VCCA_1.9V_PW
85	VCCB_1.8V_PW	86	LL_CELL	87	LH_CELL	88	HAVDD_8.5V_PW
89	UL_CELL	90	UH_CELL	91	AVDD_17V_PW	92	AVDD_17V_PW
93	AVDD_17V_PW	94	AVDD_17V_PW	95	N.C	96	FB_TRDY_2

5. Wiring Diagram

Internal Connector (For Customers)



MAIN Board Pin Map

1 CN1402 (USB2)			
1	USB2_VCC_5V_PW	2	D-
3	D+	4	GND

2 CN1401 (USB1)			
1	USB1_VCC_5V_PW	2	D-
3	D+	4	GND

3 CN2201 (HDMI IN3)			
1	HDMI3_RX2+_HDMI	2	GND
3	HDMI3_RX2-_HDMI	4	HDMI3_RX1+_HDMI
5	GND	6	HDMI3_RX1-_HDMI
7	HDMI3_RX0+_HDMI	8	GND
9	HDMI3_RX0-_HDMI	10	HDMI3_RXC+_HDMI
11	GND	12	HDMI3_RXC-_HDMI
13	CEC	14	N.C
15	HDMI3_SCL_DDC	16	HDMI3_SDA_DDC
17	HDMI3_CABLE_DET	18	HDMI3_5V_PW
19	HDMI3_HPD		

4 CN2102 (HDMI IN2)			
1	HDMI2_RX2+_HDMI	2	GND
3	HDMI2_RX2-_HDMI	4	HDMI2_RX1+_HDMI
5	GND	6	HDMI2_RX1-_HDMI
7	HDMI2_RX0+_HDMI	8	GND
9	HDMI2_RX0-_HDMI	10	HDMI2_RXC+_HDMI
11	GND	12	HDMI2_RXC-_HDMI
13	CEC	14	N.C
15	HDMI2_SCL_DDC	16	HDMI2_SDA_DDC
17	HDMI2_CABLE_DET	18	HDMI2_5V_PW
19	HDMI2_HPD		

5 CN2101 (HDMI IN1)			
1	HDMI1_RX2+_HDMI	2	GND
3	HDMI1_RX2-_HDMI	4	HDMI1_RX1+_HDMI
5	GND	6	HDMI1_RX1-_HDMI
7	HDMI1_RX0+_HDMI	8	GND
9	HDMI1_RX0-_HDMI	10	HDMI1_RXC+_HDMI
11	GND	12	HDMI1_RXC-_HDMI
13	CEC	14	N.C
15	HDMI1_SCL_DDC	16	HDMI1_SDA_DDC
17	HDMI1_CABLE_DET	18	HDMI1_5V_PW
19	HDMI1_HPD		

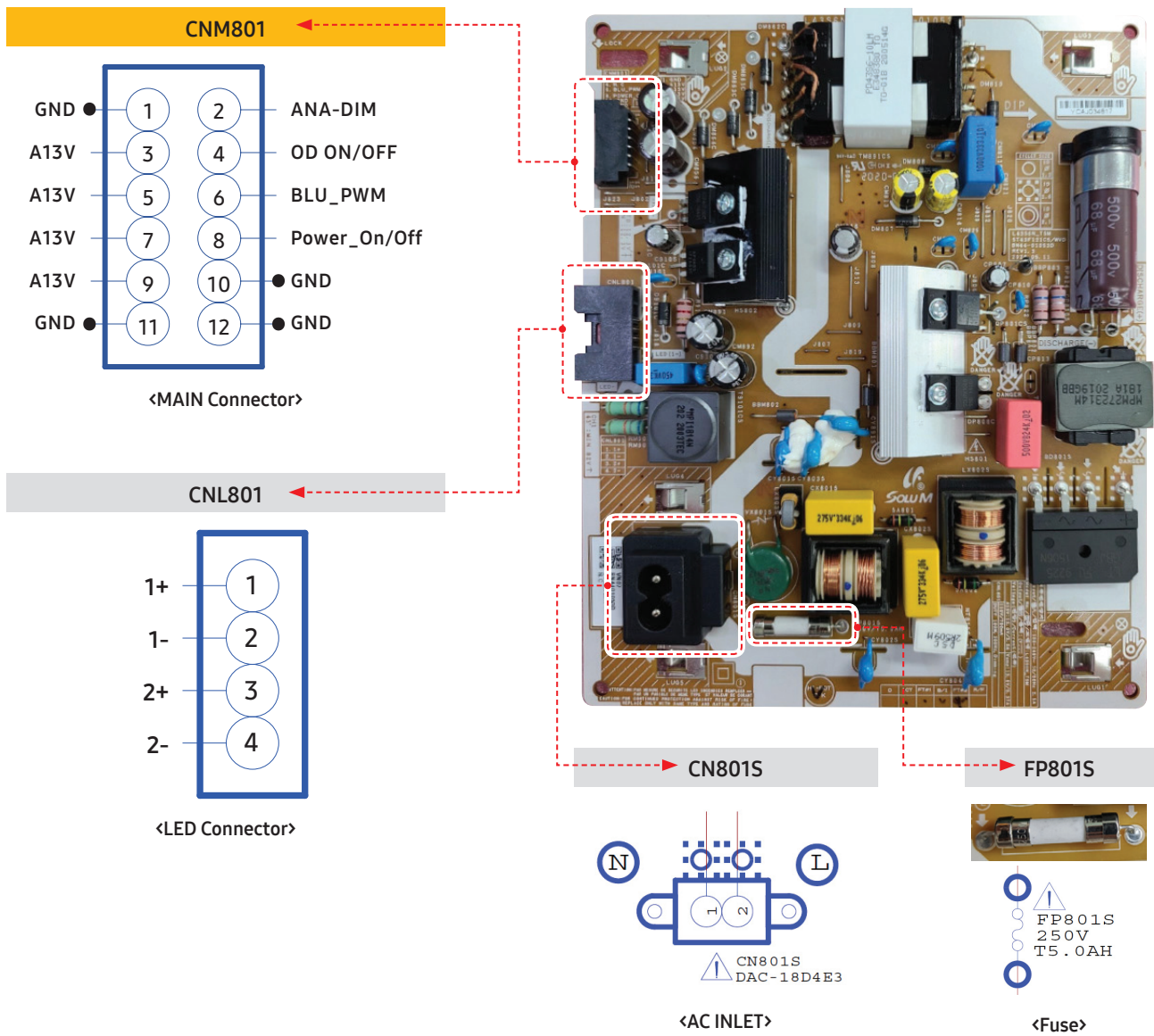
6 CN2003 (OPTICAL)			
1	SPDIF_OUT	2	B5V_PW
3	GND	4	IDENT_SPDIF
5	GND		

7 CN1902J (DATA)			
1	RJ12_CLK	2	RJ12_RX
3	BLAN_A12V_PW	4	RJ12_TX
5	GND	6	RJ12_IR

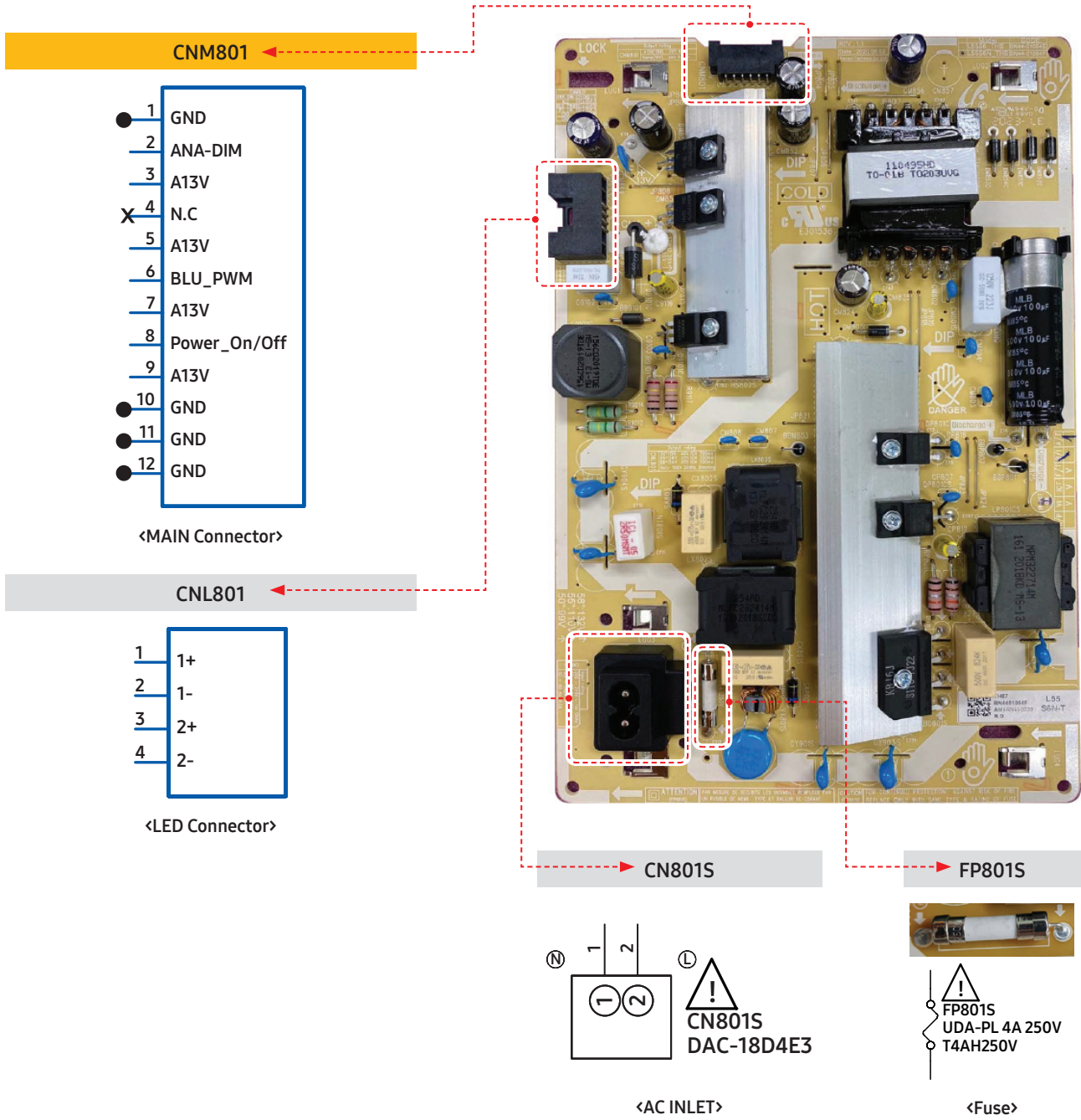
8 CN2620 (EX-LILNK)			
1	GND	2	FANET_TX
3	FANET_RX	4	N.C
5	N.C	6	N.C
7	N.C		

5-2-1. DC VSS-PD BOARD

- 43 inches

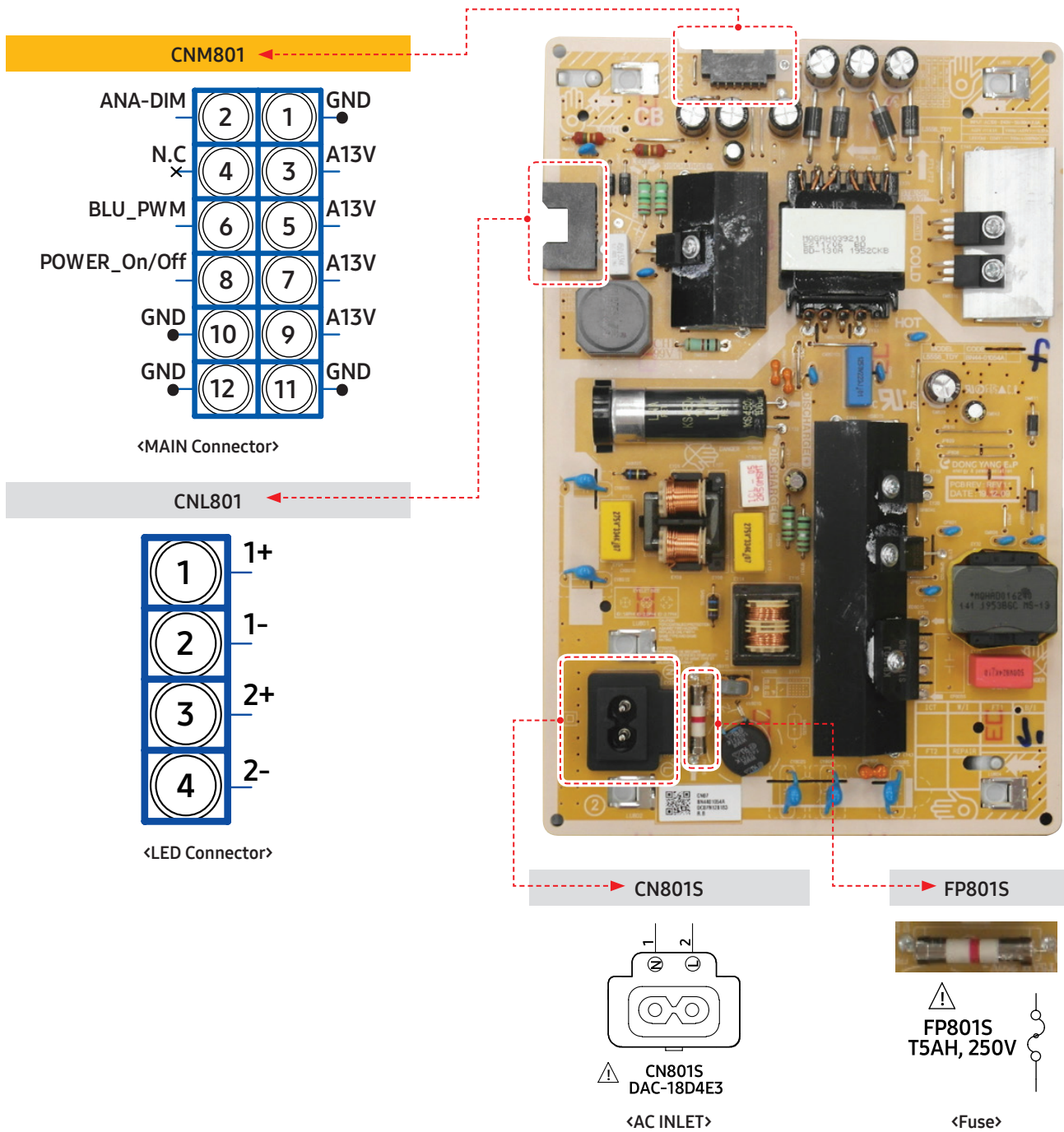


- 50 inches

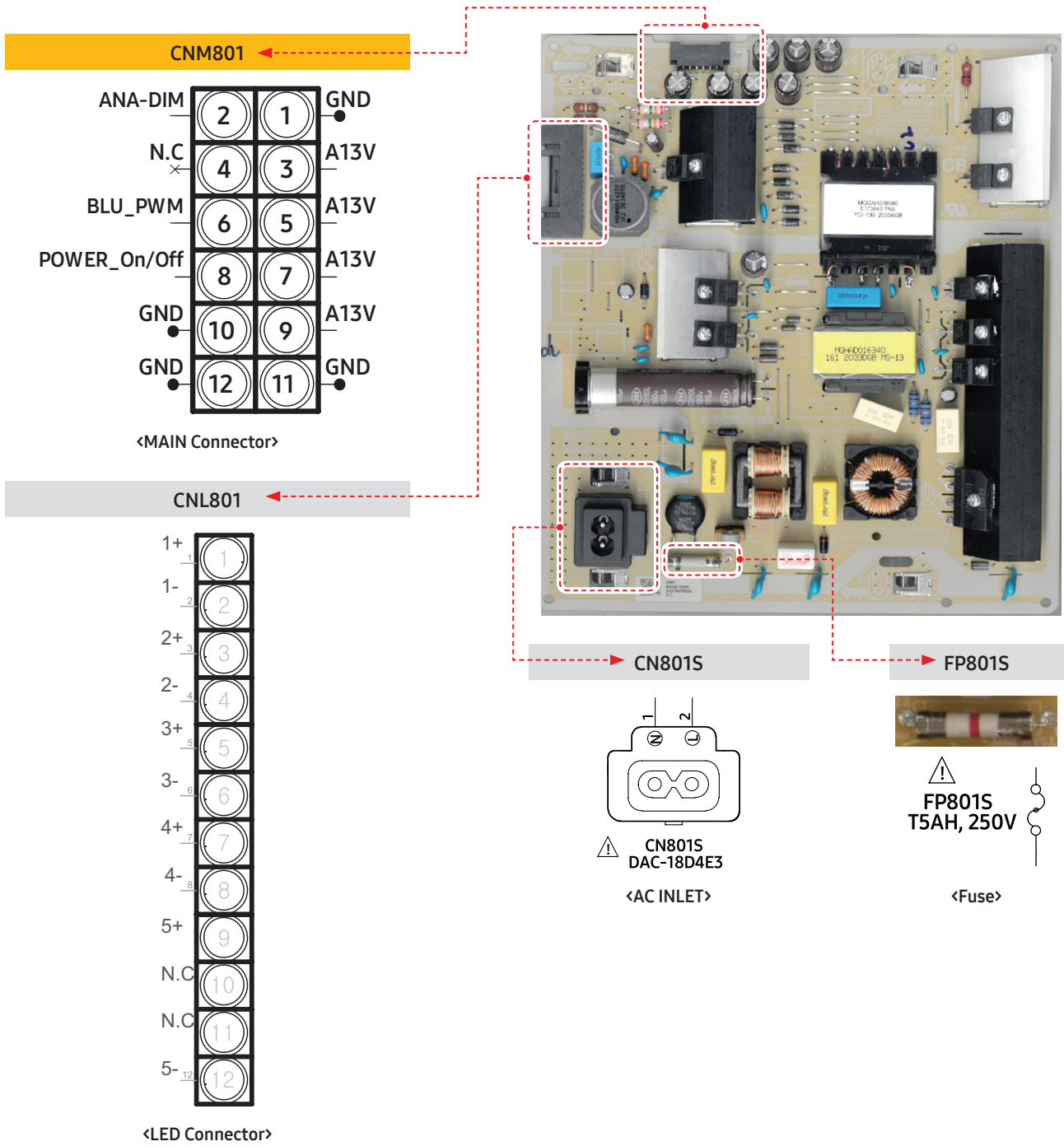


5. Wiring Diagram

- 55 inches



- 65 inches

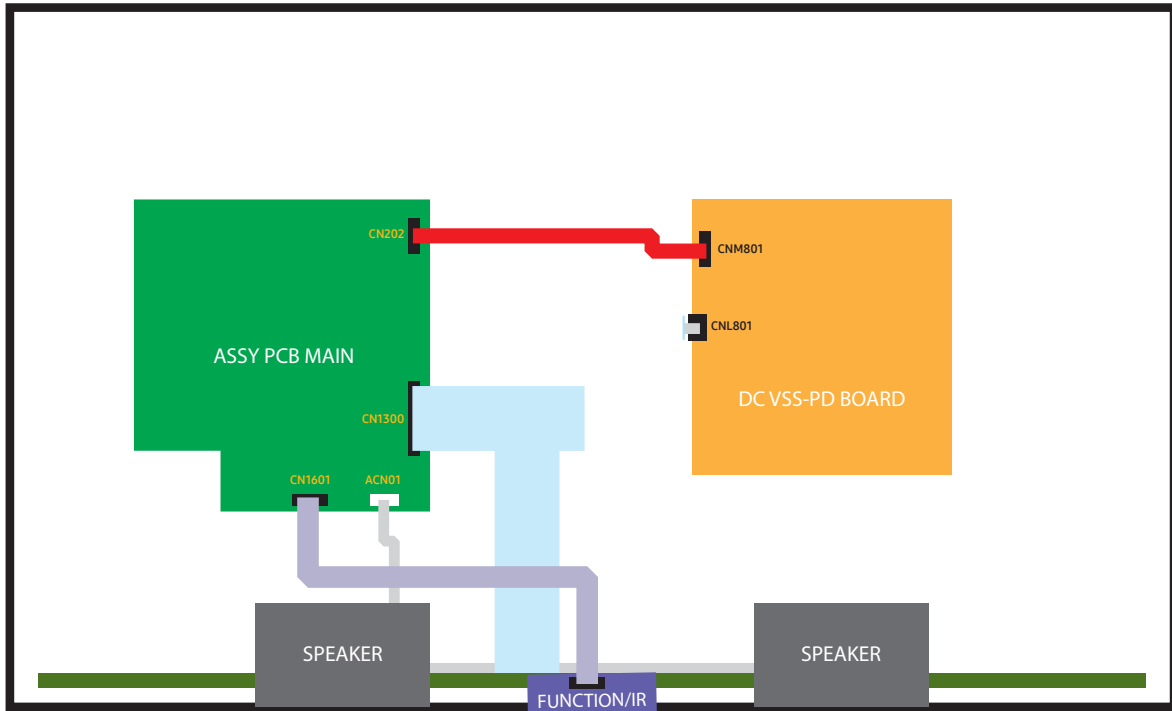


5-3. Cables

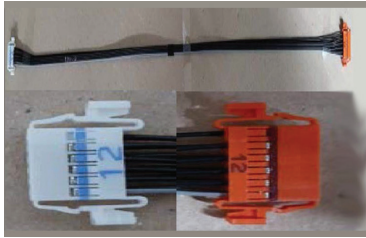
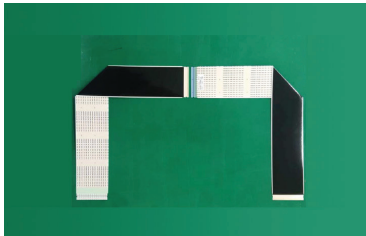
 **NOTE**


- The image may differ with the specific model and area.
- The code number can be changed, see "**Exploded Views**" provided on the site.

- 43/50/55/65 inches



■ Cable information

Part Name & Connection		Part Spec		Part Code	
1	LEAD CONNECTOR-SUB ASSY MAIN - SMPS		12P/L300	43"	BN39-02217D
			12P/L500	50"	BN39-02217E
				55"	BN39-02217E
			12P/L600	65"	BN39-02217F
2	FFC CABLE MAIN - T-CON		96P/L350	43"	BN96-39821F
				50"	BN96-39821F
				55"	BN96-39821F
			96P/L500	65"	BN96-39820H

Part Name & Connection		Part Spec		Part Code	
③	LEAD CONNECTOR-SUB ASSY MAIN - FUNCTION/IR		12P/L300	43"	BN39-02231D
			12P/L400	50"	BN39-02231C
				55"	BN39-02231C
12P/L500	65"	BN39-02231B			