



UHD TV

Project : UNU7100X

Chassis : UWX80

Model : UE49NU7172U

UE55NU7172U

UE58NU7172U

UE65NU7172U

UE75NU7172U

SERVICE Manual

UHD TV



UE**NU7172U

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. Product specification.....	2-3
2-3. Accessories.....	2-19
2-4. Viewing the Functions.....	2-20
2-5. The Remote Control.....	2-24
3. Disassembly and Reassemble	3-1
3-1. Disassembly	3-1
4. Troubleshooting	4-1
4-1. Power.....	4-1
4-1-1. Function Control Operation Test	4-1
4-1-2. TV POWER STANDBY TEST.....	4-2
4-1-3. TV POWER ON SEQUENCE TEST.....	4-4
4-1-4. SMPS/PANEL BACKLIGHT TEST (Parallel Wired SMPS Panel Connections)	4-6
4-2. Video	4-8
4-2-1. Customer Picture Test.....	4-8
4-2-2. Check Test Patterns	4-9
4-2-3. MAIN/T-CON BOARD.....	4-10
4-3. Audio	4-13
4-4. Network.....	4-14
4-5. Smart Hub	4-15
4-6. Factory Mode	4-17
4-7. Factory Mode Adjustments	4-23
4-7-1. Entering Factory Mode.....	4-23
4-7-2. Detail Factory Option.....	4-24
4-7-3. Factory Data	4-30
4-8. Replacing Main Board.....	4-43
4-9. White Balance.....	4-45
4-9-1. Calibration	4-45
4-9-2. Service Adjustment	4-45
4-9-3. Adjustment	4-47

4-10. LED Indicator Test	4-48
4-10-1. Diagnostic Methods - Flashing Symptom Codes	4-48
4-11. Updating the TV's Software	4-49
4-11-1. By USB.....	4-49
4-11-2. By Online.....	4-49
4-11-3. Stanby mode upgrade(Off/On).....	4-49
5. Wiring Diagram.....	5-1
5-1. Wiring Diagram	5-1
5-2. Connector	5-4
5-2-1. Main Board.....	5-4
5-2-2. SMPS Board.....	5-8



This Service Manual is a property of Samsung Electronics Co.,Ltd.
Any unauthorized use of Manual can be punished under applicable
International and/or domestic law.

© 2018 Samsung Electronics Co.,Ltd.
All rights reserved.
Printed in Korea

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.

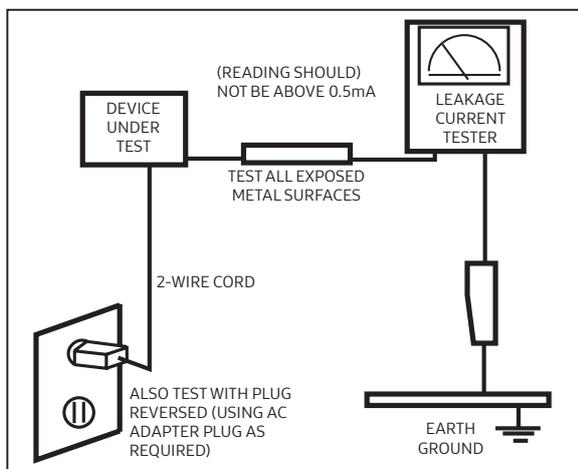
1-1-2. Servicing the LED TV

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 safetyrelated 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.

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.



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	UE**NU7172U		
Front View	 <p data-bbox="619 869 919 896">* W : Width H : High D : Depth</p>		
Detail View			
Color	Front : CHARCOAL BLACK / Stand : SHADOW BLACK		
Dimensions (W x H x D)	49"	Body	1102.8 x 637.8 x 59.7 mm
		With Stand	1102.8 x 716.4 x 261.3 mm
	55"	Body	1238.6 x 714.2 x 59.2 mm
		With Stand	1238.6 x 792.8 x 261.3 mm
	58"	Body	1301.4 x 756.8 x 60.3 mm
		With Stand	1301.4 x 835.2 x 261.3 mm
	65"	Body	1457.5 x 837.3 x 59.7 mm
		With Stand	1457.5 x 917.3 x 312.8 mm
75"	Body	1684.6 x 966.4 x 60.6 mm	
	With Stand	1684.6 x 1056.5 x 356.1 mm	

2. Product specifications

Model	UE**NU7172U		
Weight	49"	Without Stand	13.2 kg
		With Stand	13.5 kg
	55"	Without Stand	17.3 kg
		With Stand	17.7 kg
	58"	Without Stand	20.2 kg
		With Stand	20.5 kg
	65"	Without Stand	25.0 kg
		With Stand	25.5 kg
75"	Without Stand	37.0 kg	
	With Stand	37.5 kg	

2-2. Product specification



NOTE

Design and specifications are subject to change without prior notice.

	Item	UE49NU7172UXXH
General Information	Product	LED
	Cabinet Basic Code	U49NY1
	Series	7
	Country	HUNGARY
	Platform(TV)	SoC Kant-M2e
Display	Screen Size	49"
	Resolution	3,840 x 2,160
	Ultra Black	N/A
	Screen Curvature	N/A
	Billion Colors	N/A
Video	Picture Engine	UHD Engine
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	HDR10+	Yes
	HLG (Hybrid Log Gamma)	Yes
	Contrast	Mega Contrast
	Color	Pur Color
	Viewing Angle	N/A
	Micro Dimming	UHD Dimming
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Natural Mode Support	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W
	Speaker Type	2CH
	Woofer	N/A
	Multiroom Link	Yes
	Bluetooth Audio	N/A
Smart Service	Voice Interaction	N/A
	Samsung SMART TV	Smart

2. Product specifications

Item		UE49NU7172UXXH
Smart Service	TV Plus	Yes (GB,FR,DE,ES,IT)
	Web Browser	Yes
	SmartThings App Support	Yes
	SmartThings	N/A
	Universal Guide	YES (GB/FR/DE/IT/ES ONLY)
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	Yes
	360 Video Player	Yes
	360 Camera Support	Yes
	Bluetooth Low Energy	N/A
	WiFi Direct	Yes
	TV Sound to Mobile	N/A
	Sound Mirroring	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-T2CS2
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.4)
	Data Broadcasting	HbbTV 2.0.1(IT)/ HbbTV 1.5(CZ,S K,DE,AT,FR,ES,FI,EE,GR)/ HbbTV 1.0(PL,HU,CH,BE,NL,LU,PT,DK)/ MHEG 5(GB,IE)
	TV Key	Yes
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common Use for Component Y)
	Ethernet (LAN)	Yes
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/1
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes
Anynet+ (HDMI-CEC)	Yes	
Design	Design	New Edge (Skinny Bezel)
	Bezel Type	VNB

	Item	UE49NU7172UXXH
Design	Slim Type	Slim
	Front Color	Charcoal Black
	Light Effect (Deco)	N/A
	Stand Type	Simple Luminus
	Swivel (Left/Right)	N/A
Additional Feature	Art Mode (The Frame)	N/A
	Motion Detection (The Frame)	N/A
	Ambient Mode	N/A
	Processor	Quad-Core
	Accessibility	Voice guide&Learn menu screen(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/ Enlarge/ High contrast/ Learn TV Remote(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/Negative colors/Grayscale/ SeeColors
	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
	Extended PVR	N/A
	Game Mode	Yes (Basic)
	OSD Language	27 European Languages + Russian(only when connecting to Network in EE,LV,LT)
	Picture-In-Picture	N/A
	BT HID Built-in	N/A
	USB HID Support	Yes
	Teletext (TTX)	Yes
	Time Shift	N/A
IPv6 Support	Yes	
MBR Support	N/A	
Ultra Clean View	N/A	
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A

2. Product specifications

Item		UE49NU7172UXXH
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	140 W

	Item	UE55NU7172UXXH
General Information	Product	LED
	Cabinet Basic Code	U55NY1
	Series	7
	Country	HUNGARY
	Platform(TV)	SoC Kant-M2e
Display	Screen Size	55"
	Resolution	3,840 x 2,160
	Ultra Black	N/A
	Screen Curvature	N/A
	Billion Colors	N/A
Video	Picture Engine	UHD Engine
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	HDR10+	Yes
	HLG (Hybrid Log Gamma)	Yes
	Contrast	Mega Contrast
	Color	Pur Color
	Viewing Angle	N/A
	Micro Dimming	UHD Dimming
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Natural Mode Support	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W
	Speaker Type	2CH
	Woofer	N/A
	Multiroom Link	Yes
	Bluetooth Audio	N/A
Smart Service	Voice Interaction	N/A
	Samsung SMART TV	Smart
	TV Plus	Yes (GB,FR,DE,ES,IT)
	Web Browser	Yes
	SmartThings App Support	Yes
	SmartThings	N/A
	Universal Guide	YES (GB/FR/DE/IT/ES ONLY)

2. Product specifications

	Item	UE55NU7172UXXH
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	Yes
	360 Video Player	Yes
	360 Camera Support	Yes
	Bluetooth Low Energy	N/A
	WiFi Direct	Yes
	TV Sound to Mobile	N/A
	Sound Mirroring	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-T2CS2
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.4)
	Data Broadcasting	HbbTV 2.0.1(IT)/ HbbTV 1.5(CZ,S K,DE,AT,FR,ES,FI,EE,GR)/ HbbTV 1.0(PL,HU,CH,BE,NL,LU,PT,DK)/ MHEG 5(GB,IE)
	TV Key	Yes
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common Use for Component Y)
	Ethernet (LAN)	Yes
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/1
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes
	Anynet+ (HDMI-CEC)	Yes
Design	Design	New Edge (Skinny Bezel)
	Bezel Type	VNB
	Slim Type	Slim
	Front Color	Charcoal Black
	Light Effect (Deco)	N/A
	Stand Type	Simple Luminus
	Swivel (Left/Right)	N/A

	Item	UE55NU7172UXXH
Additional Feature	Art Mode (The Frame)	N/A
	Motion Detection (The Frame)	N/A
	Ambient Mode	N/A
	Processor	Quad-Core
	Accessibility	Voice guide&Learn menu screen(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/ Enlarge/ High contrast/ Learn TV Remote(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/Negative colors/Grayscale/ SeeColors
	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
	Extended PVR	N/A
	Game Mode	Yes (Basic)
	OSD Language	27 European Languages + Russian(only when connecting to Network in EE,LV,LT)
	Picture-In-Picture	N/A
	BT HID Built-in	N/A
	USB HID Support	Yes
	Teletext (TTX)	Yes
	Time Shift	N/A
IPv6 Support	Yes	
MBR Support	N/A	
Ultra Clean View	N/A	
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	150 W

2. Product specifications

	Item	UE58NU7179UXZG
General Information	Product	LED
	Cabinet Basic Code	U58NY1
	Series	7
	Country	HUNGARY
	Platform(TV)	SoC Kant-M2e
Display	Screen Size	58"
	Resolution	3,840 x 2,160
	Ultra Black	N/A
	Screen Curvature	N/A
	Billion Colors	N/A
Video	Picture Engine	UHD Engine
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	HDR10+	Yes
	HLG (Hybrid Log Gamma)	Yes
	Contrast	Mega Contrast
	Color	Pur Color
	Viewing Angle	N/A
	Micro Dimming	UHD Dimming
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Natural Mode Support	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W
	Speaker Type	2CH
	Woofer	N/A
	Multiroom Link	Yes
	Bluetooth Audio	N/A
Smart Service	Voice Interaction	N/A
	Samsung SMART TV	Smart
	TV Plus	Yes (GB,FR,DE,ES,IT)
	Web Browser	Yes
	SmartThings App Support	Yes
	SmartThings	N/A
	Universal Guide	YES (GB/FR/DE/IT/ES ONLY)

	Item	UE58NU7179UXZG
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	Yes
	360 Video Player	Yes
	360 Camera Support	Yes
	Bluetooth Low Energy	N/A
	WiFi Direct	Yes
	TV Sound to Mobile	N/A
	Sound Mirroring	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-T2CS2
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.4)
	Data Broadcasting	HbbTV 2.0.1(IT)/ HbbTV 1.5(CZ,S K,DE,AT,FR,ES,FI,EE,GR)/ HbbTV 1.0(PL,HU,CH,BE,NL,LU,PT,DK)/ MHEG 5(GB,IE)
	TV Key	Yes
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common Use for Component Y)
	Ethernet (LAN)	Yes
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/1
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes
	Anynet+ (HDMI-CEC)	Yes
Design	Design	New Edge (Skinny Bezel)
	Bezel Type	VNB
	Slim Type	Slim
	Front Color	Charcoal Black
	Light Effect (Deco)	N/A
	Stand Type	Simple Luminus
	Swivel (Left/Right)	N/A

2. Product specifications

	Item	UE58NU7179UXZG
Additional Feature	Art Mode (The Frame)	N/A
	Motion Detection (The Frame)	N/A
	Ambient Mode	N/A
	Processor	Quad-Core
	Accessibility	Voice guide&Learn menu screen(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/ Enlarge/ High contrast/ Learn TV Remote(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/Negative colors/Grayscale/ SeeColors
	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
	Extended PVR	N/A
	Game Mode	Yes (Basic)
	OSD Language	27 European Languages + Russian(only when connecting to Network in EE,LV,LT)
	Picture-In-Picture	N/A
	BT HID Built-in	N/A
	USB HID Support	Yes
	Teletext (TTX)	Yes
	Time Shift	N/A
IPv6 Support	Yes	
MBR Support	N/A	
Ultra Clean View	N/A	
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	TB W

	Item	UE65NU7172UXXH
General Information	Product	LED
	Cabinet Basic Code	U65NY1
	Series	7
	Country	HUNGARY
	Platform(TV)	SoC Kant-M2e
Display	Screen Size	65"
	Resolution	3,840 x 2,160
	Ultra Black	N/A
	Screen Curvature	N/A
	Billion Colors	N/A
Video	Picture Engine	UHD Engine
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	HDR10+	Yes
	HLG (Hybrid Log Gamma)	Yes
	Contrast	Mega Contrast
	Color	Pur Color
	Viewing Angle	N/A
	Micro Dimming	UHD Dimming
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Natural Mode Support	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W
	Speaker Type	2CH
	Woofer	N/A
	Multiroom Link	Yes
	Bluetooth Audio	N/A
Smart Service	Voice Interaction	N/A
	Samsung SMART TV	Smart
	TV Plus	Yes (GB,FR,DE,ES,IT)
	Web Browser	Yes
	SmartThings App Support	Yes
	SmartThings	N/A
	Universal Guide	YES (GB/FR/DE/IT/ES ONLY)

2. Product specifications

	Item	UE65NU7172UXXH
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	Yes
	360 Video Player	Yes
	360 Camera Support	Yes
	Bluetooth Low Energy	N/A
	WiFi Direct	Yes
	TV Sound to Mobile	N/A
	Sound Mirroring	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-T2CS2
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.4)
	Data Broadcasting	HbbTV 2.0.1(IT)/ HbbTV 1.5(CZ,S K,DE,AT,FR,ES,FI,EE,GR)/ HbbTV 1.0(PL,HU,CH,BE,NL,LU,PT,DK)/ MHEG 5(GB,IE)
	TV Key	Yes
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common Use for Component Y)
	Ethernet (LAN)	Yes
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/1
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes
	Anynet+ (HDMI-CEC)	Yes
Design	Design	New Edge (Skinny Bezel)
	Bezel Type	VNB
	Slim Type	Slim
	Front Color	Charcoal Black
	Light Effect (Deco)	N/A
	Stand Type	Simple Luminus
	Swivel (Left/Right)	N/A

	Item	UE65NU7172UXXH
Additional Feature	Art Mode (The Frame)	N/A
	Motion Detection (The Frame)	N/A
	Ambient Mode	N/A
	Processor	Quad-Core
	Accessibility	Voice guide&Learn menu screen(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/ Enlarge/ High contrast/ Learn TV Remote(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/Negative colors/Grayscale/ SeeColors
	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
	Extended PVR	N/A
	Game Mode	Yes (Basic)
	OSD Language	27 European Languages + Russian(only when connecting to Network in EE,LV,LT)
	Picture-In-Picture	N/A
	BT HID Built-in	N/A
	USB HID Support	Yes
	Teletext (TTX)	Yes
	Time Shift	N/A
IPv6 Support	Yes	
MBR Support	N/A	
Ultra Clean View	N/A	
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A+
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	190 W

2. Product specifications

	Item	UE75NU7172UXXH
General Information	Product	LED
	Cabinet Basic Code	U75NY1
	Series	7
	Country	HUNGARY
	Platform(TV)	SoC Kant-M2e
Display	Screen Size	75"
	Resolution	3,840 x 2,160
	Ultra Black	N/A
	Screen Curvature	N/A
	Billion Colors	N/A
Video	Picture Engine	UHD Engine
	PQI (Picture Quality Index)	1300
	HDR (High Dynamic Range)	HDR
	HDR10+	Yes
	HLG (Hybrid Log Gamma)	Yes
	Contrast	Mega Contrast
	Color	Pur Color
	Viewing Angle	N/A
	Micro Dimming	UHD Dimming
	Auto Depth Enhancer	N/A
	Contrast Enhancer	Yes
	Auto Motion Plus	Yes
	Film Mode	Yes
	Natural Mode Support	Yes
Audio	Dolby Digital Plus	Yes
	DTS Codec	N/A
	Sound Output (RMS)	20W
	Speaker Type	2CH
	Woofer	N/A
	Multiroom Link	Yes
	Bluetooth Audio	N/A
Smart Service	Voice Interaction	N/A
	Samsung SMART TV	Smart
	TV Plus	Yes (GB,FR,DE,ES,IT)
	Web Browser	Yes
	SmartThings App Support	Yes
	SmartThings	N/A
	Universal Guide	YES (GB/FR/DE/IT/ES Only)

	Item	UE75NU7172UXXH
Convergence	TV to Mobile - Mirroring	N/A
	Mobile to TV - Mirroring, DLNA	Yes
	360 Video Player	Yes
	360 Camera Support	Yes
	Bluetooth Low Energy	N/A
	WiFi Direct	Yes
	TV Sound to Mobile	N/A
	Sound Mirroring	N/A
Tuner/Broadcasting	Digital Broadcasting	DVB-T2CS2
	Analog Tuner	Yes
	2 Tuner	N/A
	CI (Common Interface)	CI+(1.4)
	Data Broadcasting	HbbTV 2.0.1(IT)/ HbbTV 1.5(CZ,S K,DE,AT,FR,ES,FI,EE,GR)/ HbbTV 1.0(PL,HU,CH,BE,NL,LU,PT,DK)/ MHEG 5(GB,IE)
	TV Key	Yes
Connectivity	HDMI	3
	USB	2
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common Use for Component Y)
	Ethernet (LAN)	Yes
	Audio Out (Mini Jack)	N/A
	Digital Audio Out (Optical)	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/1
	Ex-Link (RS-232C)	N/A
	CI Slot	1
	HDMI A / Return Ch. Support	Yes
	HDMI Quick Switch	Yes
	Wireless LAN Adapter Support	N/A
	Wireless LAN Built-in	Yes
	Anynet+ (HDMI-CEC)	Yes
Design	Design	New Edge (Skinny Bezel)
	Bezel Type	VNB
	Slim Type	Slim
	Front Color	Charcoal Black
	Light Effect (Deco)	N/A
	Stand Type	Simple Luminus
	Swivel (Left/Right)	N/A

2. Product specifications

	Item	UE75NU7172UXXH
Additional Feature	Art Mode (The Frame)	N/A
	Motion Detection (The Frame)	N/A
	Ambient Mode	N/A
	Processor	Quad-Core
	Accessibility	Voice guide&Learn menu screen(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/ Enlarge/ High contrast/ Learn TV Remote(UK English, German, French, Spanish, Italian, Dutch, Polish, Danish, Swedish, Finnish, Norwegian, Portuguese, Russian(only when connecting to Network in EE,LV,LT))/Negative colors/Grayscale/ SeeColors
	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
	Extended PVR	N/A
	Game Mode	Yes (Basic)
	OSD Language	27 European Languages + Russian(only when connecting to Network in EE,LV,LT)
	Picture-In-Picture	N/A
	BT HID Built-in	N/A
	USB HID Support	Yes
	Teletext (TTX)	Yes
	Time Shift	N/A
IPv6 Support	Yes	
MBR Support	N/A	
Ultra Clean View	N/A	
Eco Feature	Eco Sensor	Yes
	Energy Efficiency Class	A+
Power	Power Supply	AC220-240V 50/60Hz
	Power Consumption (Max)	215 W

2-3. Accessories



NOTE

- The items' colors and shapes may vary depending on the model.
- Cables not included in the package contents can be purchased separately.
- The part code for some accessories may differ depending on your region.
- The provided accessories may vary depending on the model.

Product	Code. No	Product	Code. No
• Remote Control	BN59-01303A	• Power Cord	3903-001118
• Batteries (AAA x 2)	4301-000121	• User Manual	BN68-09167C
• Regulatory Guide	BN68-04972E	• Wall Mount Adapter	BN96-43169A
• Warranty Card	BN68-03548J	• CI Card Adapter	3709-001791
• AV IN Adapter	BN39-02189A	• Component In	BN39-02190A

2-4. Viewing the Functions

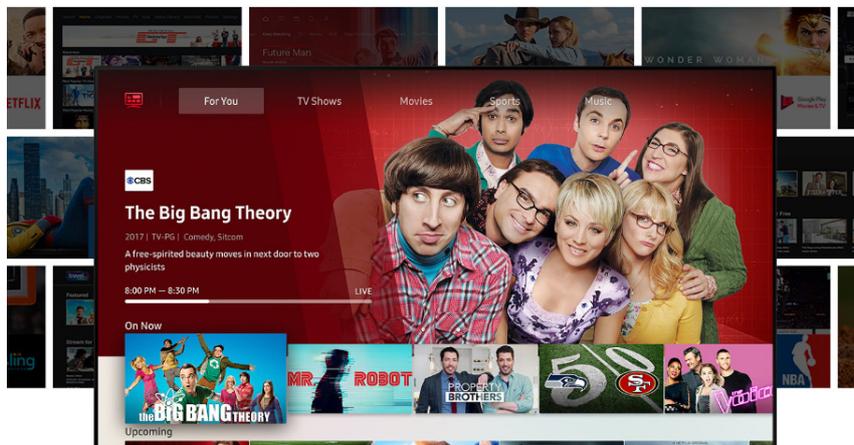
■ An intelligent way to enjoy the smart TV

Get to your entertainment the faster, easier, and intelligent way. One Depth gathers a variety of content for you on one screen. Get easy access to different content providers and check out the thumbnail previews before diving in.



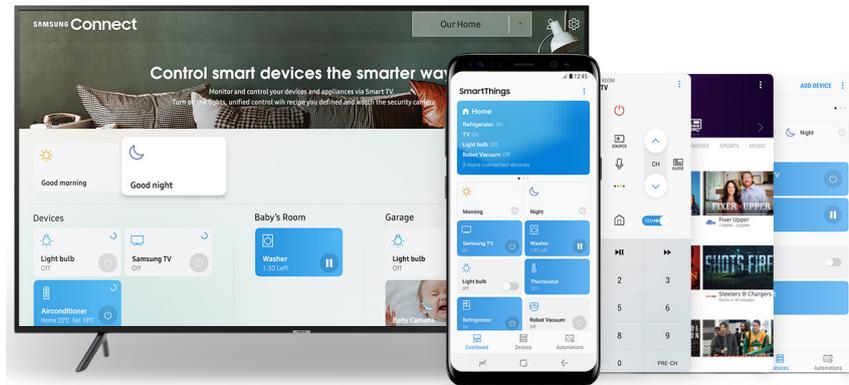
■ Universal Guide

Don't waste time worrying about what to watch next. Universal Guide not only shows you popular shows and content, it recommends content specifically to your viewing preference by analyzing your viewing pattern over the past few months.



■ SmartThings App, just one app for all

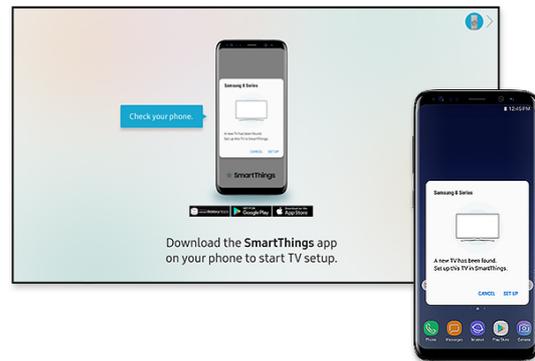
The SmartThings app offers features such as Universal Guide, Remote Control, and Mirror Screen.



■ Mobile Set-up

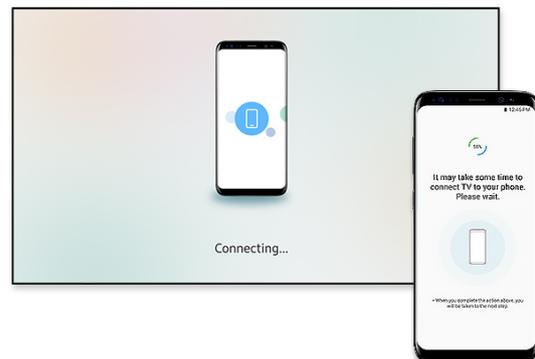
Step 1

Download SmartThings App to set up Smart TV.



Step 2

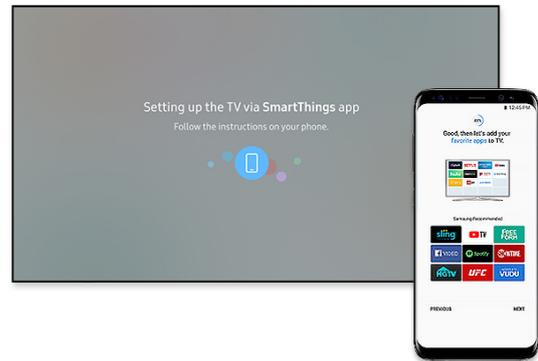
If your mobile is connected to Wi-Fi, the network information will be shared with your TV.



2. Product specifications

Step 3

If your mobile is linked to a Samsung Account, the account information will automatically be shared with your TV.**



Step 4

Select the apps you want to enjoy and add them to the Smart Hub. That's it! Now, just kick back and enjoy your Smart TV!***



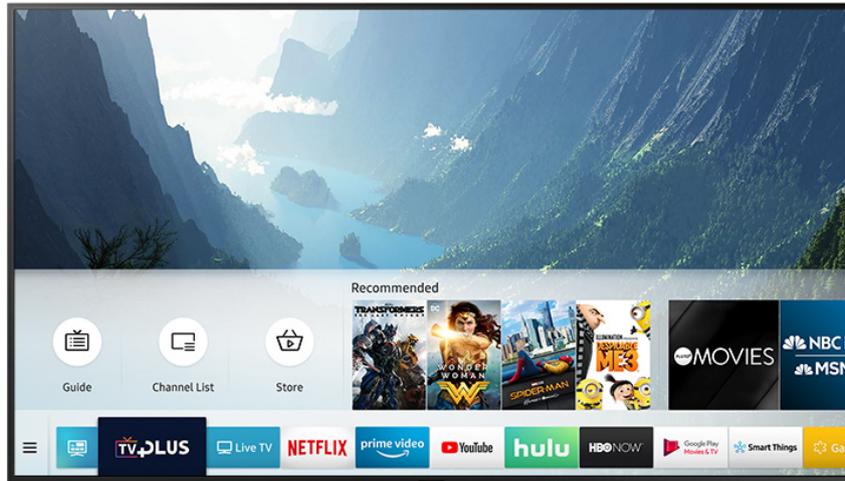
■ Content Sync & Share

Take full advantage of the Samsung Cloud. Seamlessly connect your Samsung smart devices to sync photos. Now you can share your mobile pictures and enjoy it on the TV or refrigerator screen.



■ TV Plus

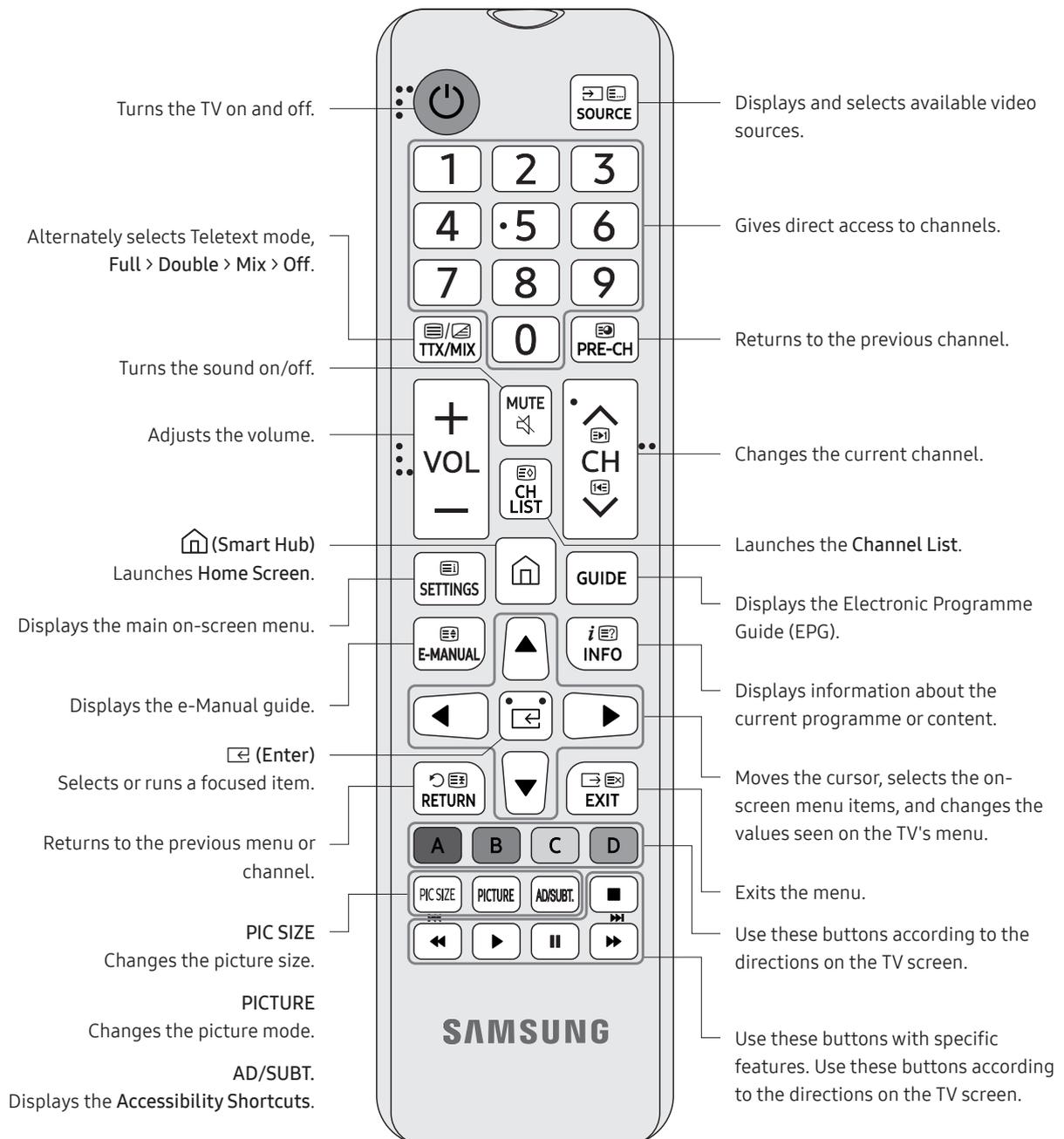
Get access to a wide range of 4K UHD and HDR content. TV Plus offers latest content and movies in amazing resolution so you enjoy a cinematic experience at the comfort of your own home.



2-5. The Remote Control

■ About the Buttons on the Remote Control

- This remote control has Braille points on the Power, Channel, Volume, and Enter buttons and can be used by visually impaired persons.
- The images, buttons, and functions of the remote control may differ depending on the model.

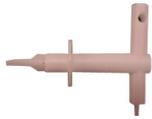


3. Disassembly and Reassemble

This section of the service manual describes the disassembly and reassembly procedures for the LED TV.



1. Disconnect the LED TV from the power source before disassembly.
2. Follow these directions carefully.
 - Use the Samsung Open Jig and Cushion to remove the Rear Cover.
 - Open Jig Tool, Protection Cushion (curved models Only)
 - Recommended Torque for Cabinet/Stand screws : 22.0 ~ 26.5lbf
 - A strength of Torque can be changed depending on the situation.

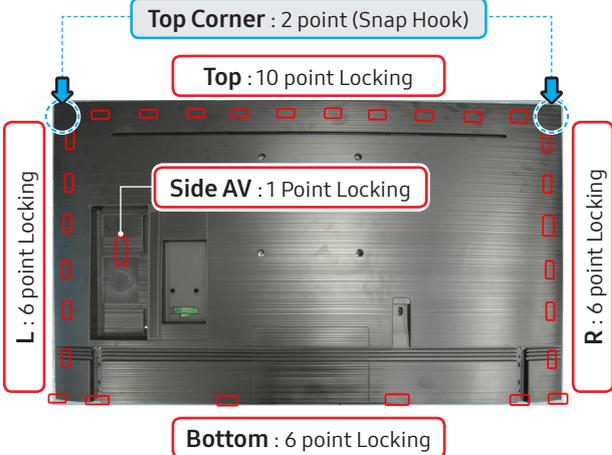
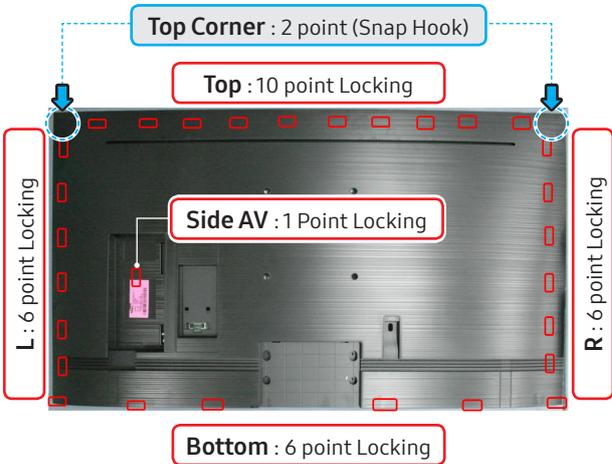
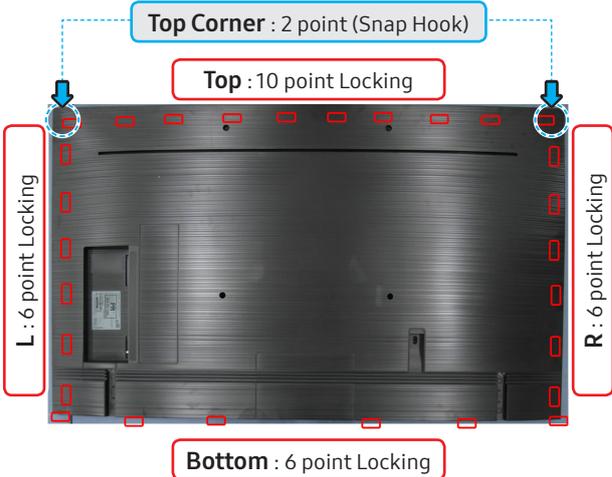
Open Jigs		
Please Use Lower Open Jig, for opening of Screwless rear cover.		
		
BN81-12844A	BN81-14946A	BN81-14946B

3-1. Disassembly

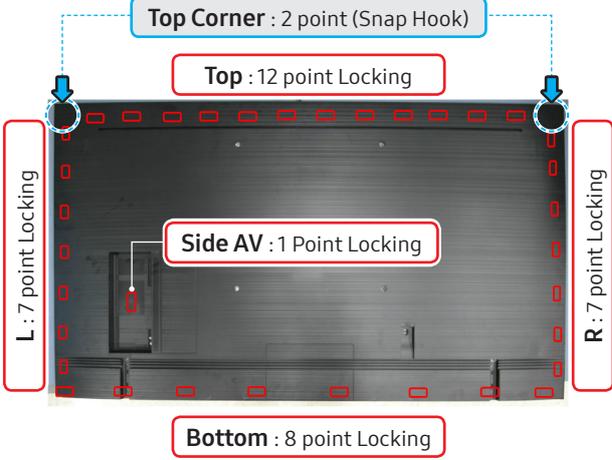
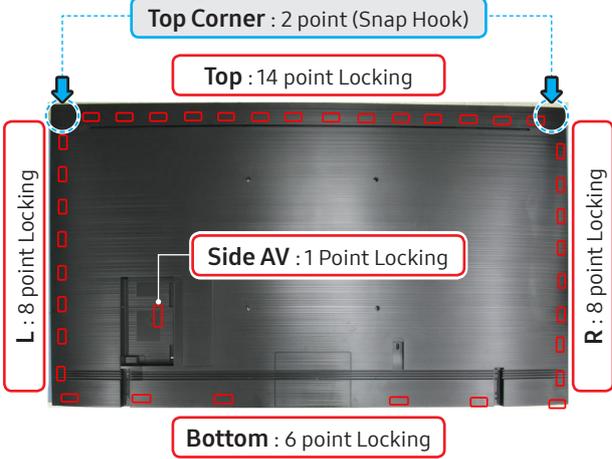
Description & Screws	Picture Description
<p>1 Carefully position the TV so that the screen is facing downwards.</p> <ul style="list-style-type: none"> • Make sure to place the TV upon a soft cushion or any material that will prevent damage to the screen. 	
<p>2 Remove the screws connecting the stand to the TV. Then carefully remove the stand.</p> <ul style="list-style-type: none"> • 49" : 4 EA • 55" : 4 EA • 58" : 4 EA • 65" : 4 EA • 75" : 4 EA <p>Screws</p> <p> 6003-001334 SCREW-TATYPE : M4 x L14, ZPC(BLK)</p> <ul style="list-style-type: none"> • SET + STAND 	

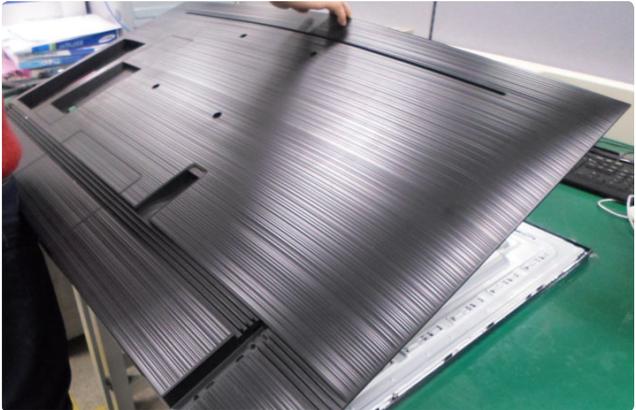
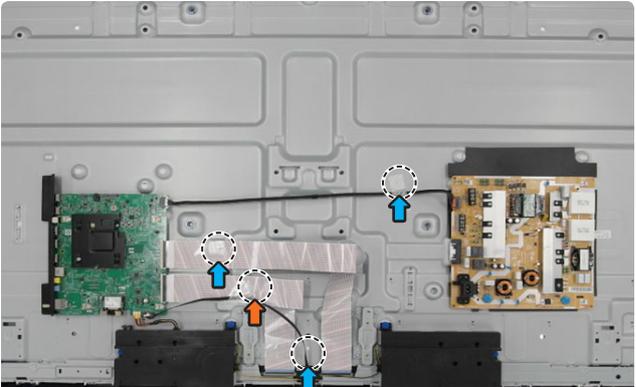
3. Disassembly and Reassemble

Description & Screws	Picture Description
<p>3-1 Removing the 'ASSY REAR COVER'. (Please follow 8 sequence on right.)</p>	 <ol style="list-style-type: none"> 1. Ready to insert open jig adjust jig edge to hole. 2. Insert open jig till red line. 3. Rotate open jig to 90-degree. 4. Lift jig to unlock wire hook on bottom. 5. Insert hand and retain gap. 6. Take out jig and insert in side gap. 7. Insert open jig till red line. 8. Disassemble Hooks of Cover Rear along the side.
<p>3-2 Disassemble all Hooks of Cover Rear along the three side.</p>	

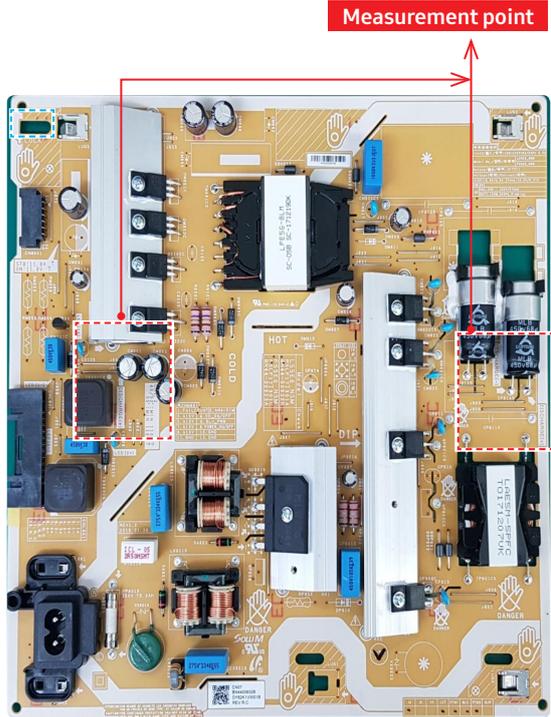
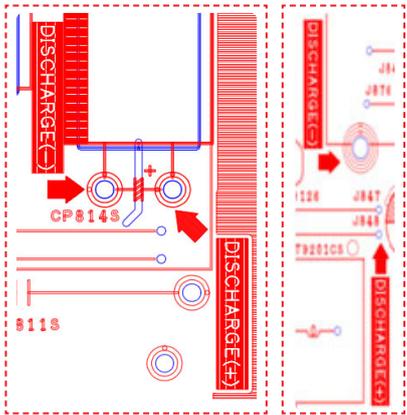
Description & Screws	Picture Description
<p>Locking tabs locations</p> <ul style="list-style-type: none"> • 49" 	 <p>The diagram shows the back of a 49-inch device with various locking points indicated by red dashed boxes and labels. At the top corners, there are blue arrows pointing to 'Top Corner : 2 point (Snap Hook)'. Along the top edge, there are ten red boxes labeled 'Top : 10 point Locking'. On the left and right sides, there are six red boxes each labeled 'L : 6 point Locking' and 'R : 6 point Locking' respectively. In the center, there is one red box labeled 'Side AV : 1 Point Locking'. At the bottom edge, there are six red boxes labeled 'Bottom : 6 point Locking'.</p>
<ul style="list-style-type: none"> • 55" 	 <p>The diagram shows the back of a 55-inch device with various locking points indicated by red dashed boxes and labels. At the top corners, there are blue arrows pointing to 'Top Corner : 2 point (Snap Hook)'. Along the top edge, there are ten red boxes labeled 'Top : 10 point Locking'. On the left and right sides, there are six red boxes each labeled 'L : 6 point Locking' and 'R : 6 point Locking' respectively. In the center, there is one red box labeled 'Side AV : 1 Point Locking'. At the bottom edge, there are six red boxes labeled 'Bottom : 6 point Locking'.</p>
<ul style="list-style-type: none"> • 58" 	 <p>The diagram shows the back of a 58-inch device with various locking points indicated by red dashed boxes and labels. At the top corners, there are blue arrows pointing to 'Top Corner : 2 point (Snap Hook)'. Along the top edge, there are ten red boxes labeled 'Top : 10 point Locking'. On the left and right sides, there are six red boxes each labeled 'L : 6 point Locking' and 'R : 6 point Locking' respectively. In the center, there is one red box labeled 'Side AV : 1 Point Locking'. At the bottom edge, there are six red boxes labeled 'Bottom : 6 point Locking'.</p>

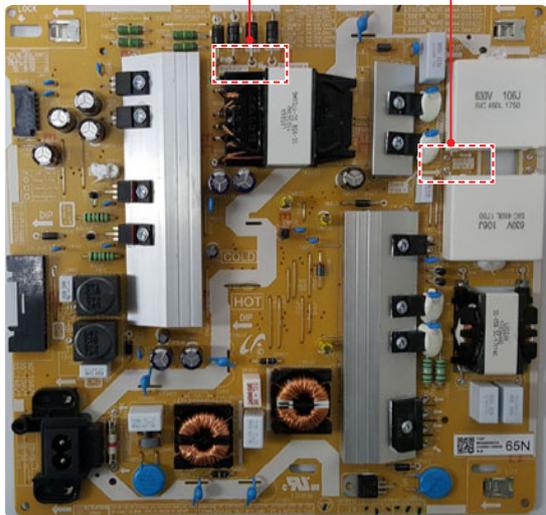
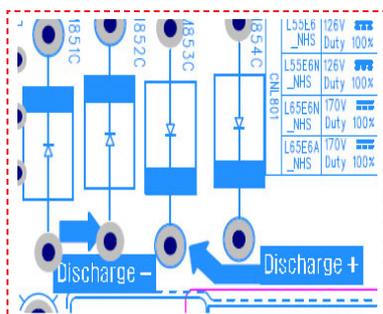
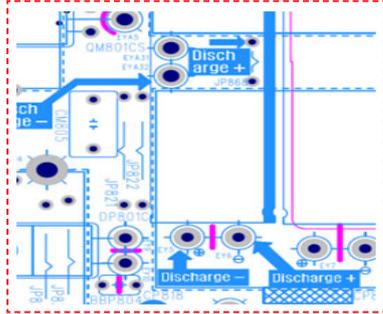
3. Disassembly and Reassemble

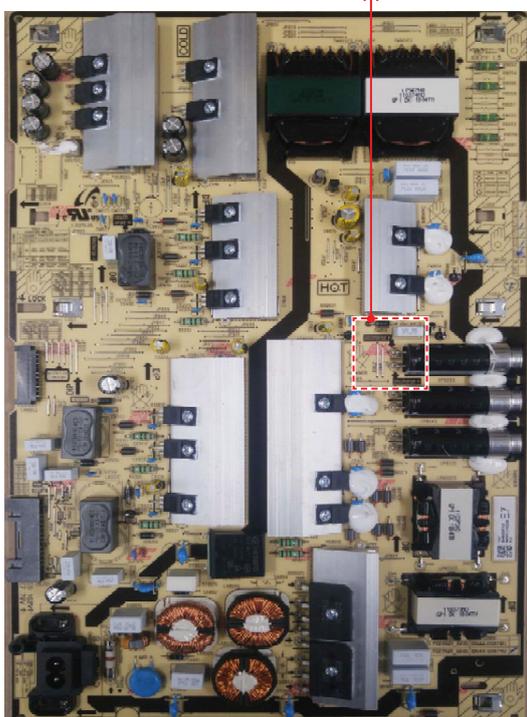
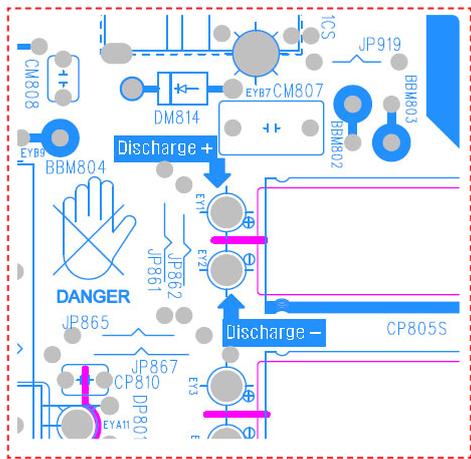
Description & Screws	Picture Description
<ul style="list-style-type: none"> 65" 	 <p>The diagram shows a 65-inch panel with the following locking configurations: <ul style="list-style-type: none"> Top Corner: 2 point (Snap Hook) Top: 12 point Locking Side AV: 1 Point Locking Bottom: 8 point Locking L (Left): 7 point Locking R (Right): 7 point Locking </p>
<ul style="list-style-type: none"> 75" 	 <p>The diagram shows a 75-inch panel with the following locking configurations: <ul style="list-style-type: none"> Top Corner: 2 point (Snap Hook) Top: 14 point Locking Side AV: 1 Point Locking Bottom: 6 point Locking L (Left): 8 point Locking R (Right): 8 point Locking </p>

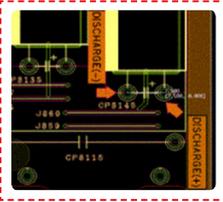
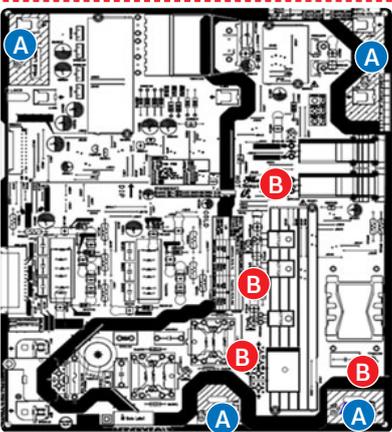
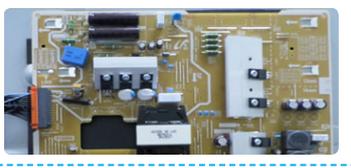
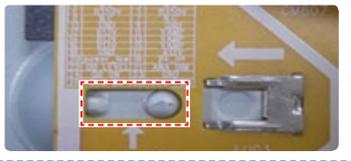
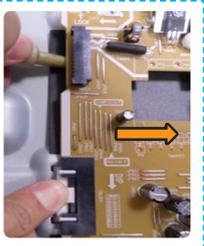
Description & Screws	Picture Description
<p>3-3 Lift top side then pull back to remove the back cover.</p>	
<p>4 Remove the Electric tapes shown on the images.</p> <ul style="list-style-type: none">•  EMI Filament Tape (Dressing)•  Safety Tape(Dressing) <p> NOTE</p> <ul style="list-style-type: none">• When assembling the TV, the electric tapes must be applied on the same locations. Please remember to take a picture of where the tapes were first applied.	

3. Disassembly and Reassemble

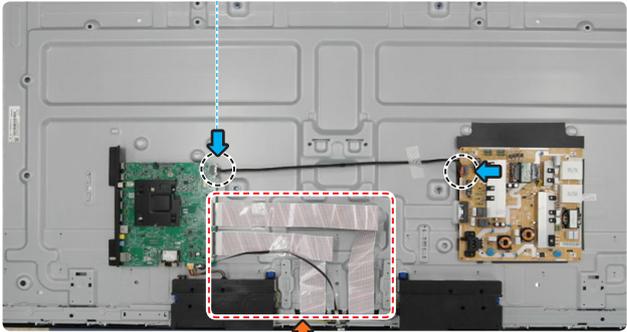
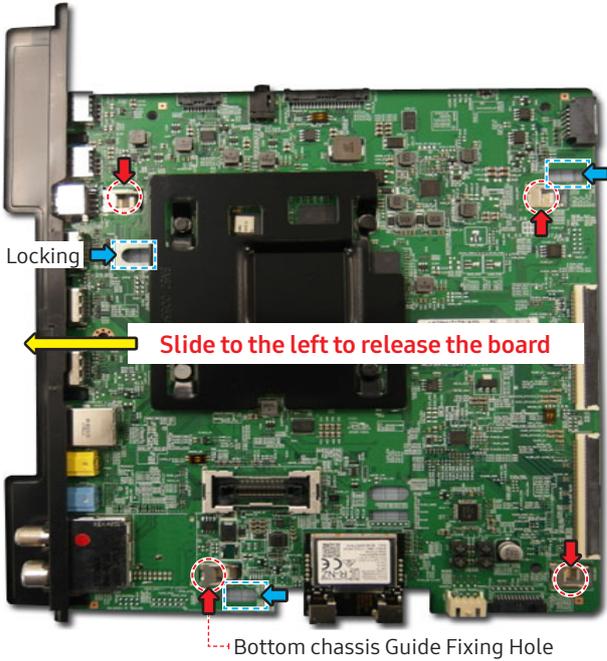
Description & Screws	Picture Description
<p>5-1 Discharge Capacitors.</p> <ul style="list-style-type: none"> • 49" / 55" / 58" • Before remove SMPS, Must discharge capacitors for your safety. • Check discharge point(1st, 2nd block) and then, discharge with discharge-Jig. <p>A/S-DISCHARGE-JIG</p>  <p>BN81-16292A</p>	 <p>Measurement point</p>  <p>Measurement point</p>  <p>LED ON LED OFF</p> <p><Before discharging> <After discharging></p>

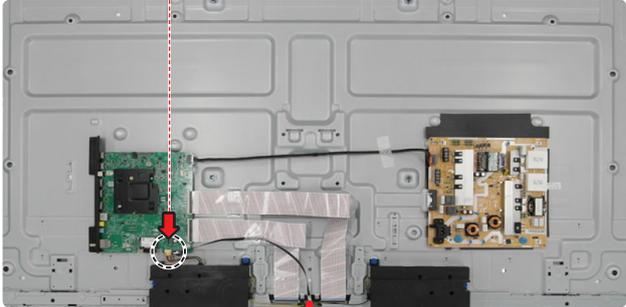
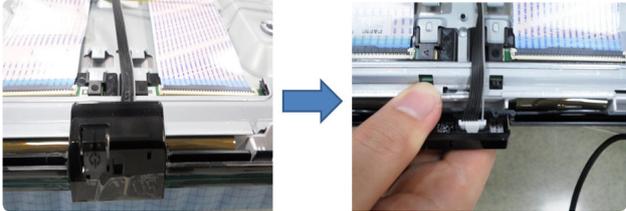
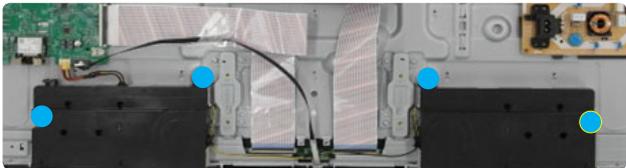
Description & Screws	Picture Description
<p>5-2 Discharge Capacitors.</p> <ul style="list-style-type: none"> 65" Before remove SMPS, Must discharge capacitors for your safety. Check discharge point(1st, 2nd block) and then, discharge with discharge-Jig. <p>A/S-DISCHARGE-JIG</p>  <p>BN81-16292A</p>	<p>Measurement point</p>  <p>Measurement point</p>    <p><Before discharging> <After discharging></p>

Description & Screws	Picture Description
<p>5-3 Discharge Capacitors.</p> <ul style="list-style-type: none"> • 75" • Before remove SMPS, Must discharge capacitors for your safety. • Check discharge point(1st, 2nd block) and then, discharge with discharge-Jig. <p>A/S-DISCHARGE-JIG</p>  <p>BN81-16292A</p>	<p>Measurement point</p>  <p>Measurement point</p>  <p>LED ON LED OFF</p>  <p><Before discharging> <After discharging></p>

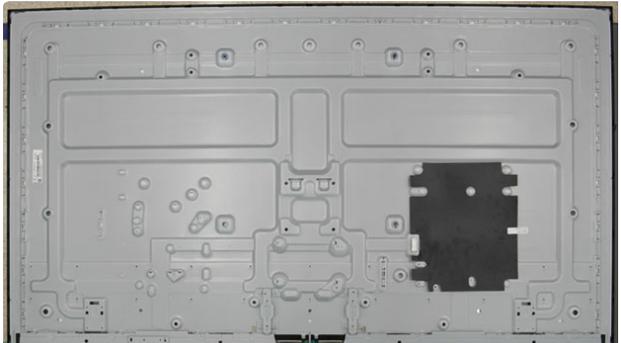
Description & Screws	Picture Description
<p>6 Remove the DC VSS-PD BOARD. (Please follow 5 sequence on right.)</p> <p>CAUTION Plz discharge SMPS before disconnect SMPS. And Refer to available touch point.</p>  <p>Before SMPS disconnect, Use discharge Jig on this point for SMPS discharge.</p>  <p><You can see  silk for touch></p> <p> Point A : Can touch (2nd GND & NO materials)</p> <p> Point B : Don't touch (1st Important materials)</p> <p>DANGER</p>	<ol style="list-style-type: none"> 1. Remove power connector.  2. Push and hold down BLU Connector Tab to release its panel lock connection.  3. Lift to Release the Lock Tab on Upper left side of Board (Step 5 will assist).  4. Locate a notch in insulation sheet (not all models).  5. Use Open Tool in notch to help release & smoothly slide SMPS Board to the Right. (While pushing BLU Tab & Releasing Lock Tab) 

3. Disassembly and Reassemble

Description & Screws	Picture Description
<p>7 Remove the Cables.</p> <ul style="list-style-type: none"> ➡ LEAD CONNECTOR-POWER (SMPS - MAIN) ➡ FFC Cables 	<p>LEAD CONNECTOR-POWER Cables</p>  <p>FFC Cables</p>
<p>8 Remove the ASSY PCB MAIN BOARD.</p> <ul style="list-style-type: none"> Use both hands to hold the 'Main Board' and gently lift up 1 point marked. Slide the board to the Left side to release the board. Then carefully remove the 'ASSY PCB MAIN BOARD'. 	 <p>Locking</p> <p>Slide to the left to release the board</p> <p>Bottom chassis Guide Fixing Hole</p>

Description & Screws	Picture Description
<p>9 Remove the ASSY IR/JOG unit.</p> <ul style="list-style-type: none"> ➡ LEAD CONNECTOR-SUB ASSY (MAIN - Function) 	<p>LEAD CONNECTOR-SUB ASSY Cable</p>  <p>Assy IR/JOG</p> 
<p>10 Remove the ASSY SPEAKER P-FRONT.</p> <ul style="list-style-type: none"> ➡ ASSY SPEAKER P-FRONT Cable ● : Assy SPK to Panel Hole 4 Points 	<p>ASSY SPEAKER P-FRONT Cable</p>  <p>ASSY SPEAKER P-FRONT</p>  <p><Hole 4 Points></p>

3. Disassembly and Reassemble

Description & Screws	Picture Description
11 Completed the disassembly.	



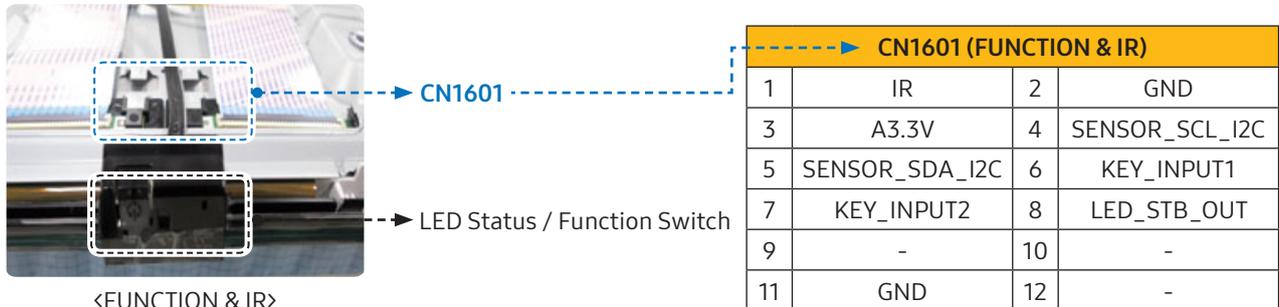
NOTE

Reassembly procedures are in the reverse order of disassembly procedures.

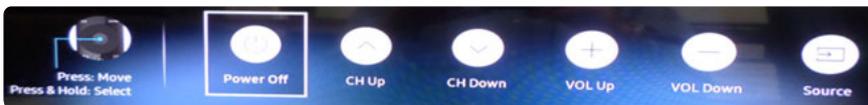
4. Troubleshooting

4-1. Power

4-1-1. Function Control Operation Test



1. TV in Standby
2. Check **LED Status**.
3. If **LED** is **OFF**
 - ✓ LED 1.7Vdc (pin 8) and VCC for 3.3Vdc (pin 3)
 - If missing suspect Function Assy/Cable/Main board.
4. If **LED** is **ON**
 - ✓ Switch Operation activates on screen display.

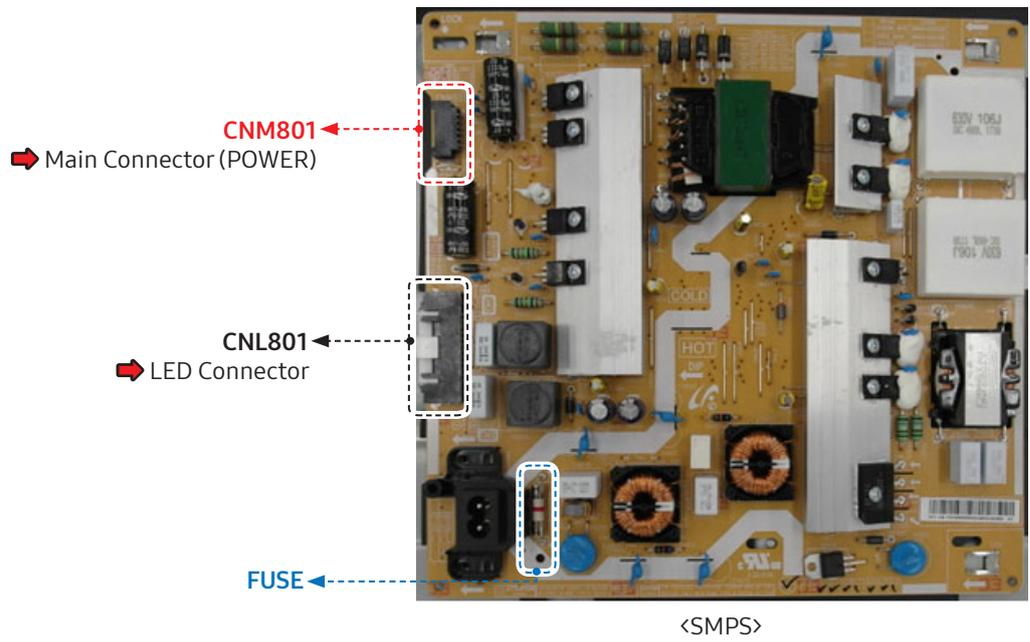


[On Screen Selections with Function Control]

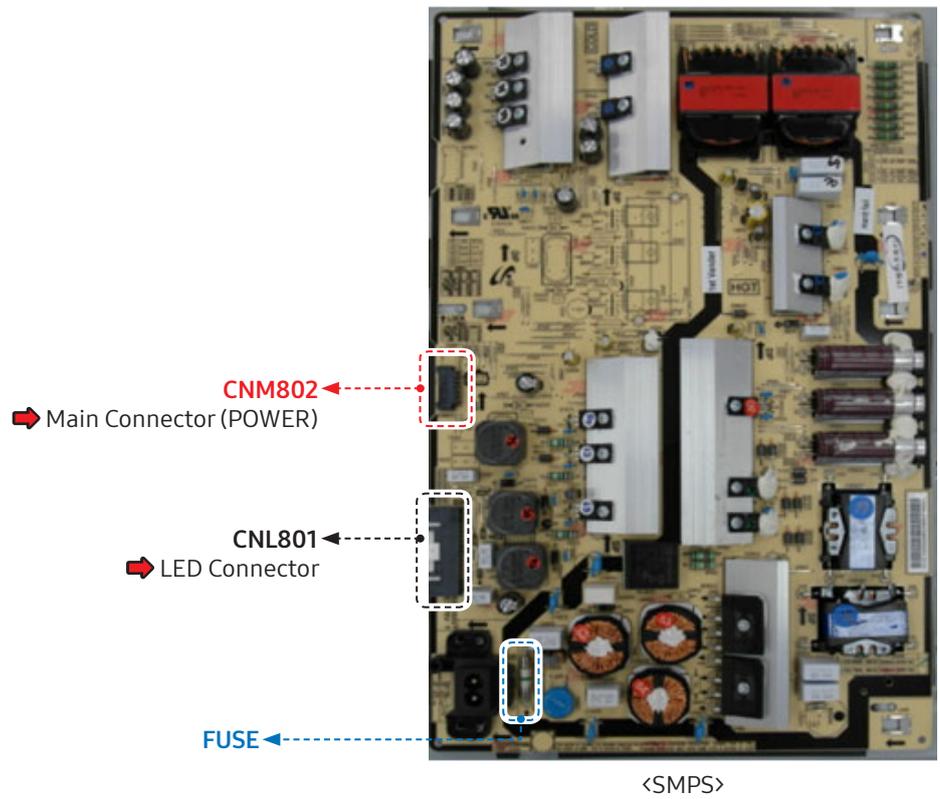
- If missing:
 - ✓ **Key_Input1 Pin 6** change to 0V with a command.
 - If wrong voltage or no change:
 - ✓ Switch for stuck or miss-operation.
5. Check **IR** operation with Standard Remote command changes. (3.3V to 2.5V effective DC)
 6. **SDA, SCL** for effective 3.3Vdc (after power on)
 - If missing suspect Function Assy/Cable Assy./Main Assy.

4-1-2. TV POWER STANDBY TEST

- 49 / 55 / 58 / 65 inches



- 75 inches



CNM801 (MAIN Connector) - 49/55/58/65 inches											
1	FAIL COUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

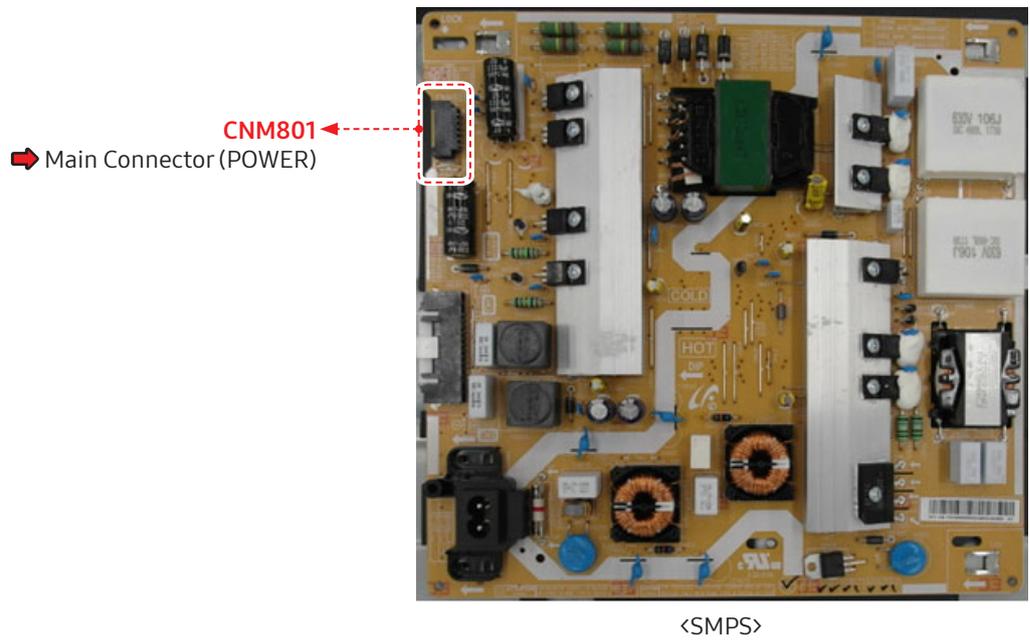
CNM802 (MAIN Connector) - 75 inches											
1	FAIL COUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

CNL801 (LED Connector)											
1	1+	2	1-	3	2+	4	2-	5	3+	6	3-
7	4+	8	4-	9	N.C	10	N.C	11	N.C	12	N.C

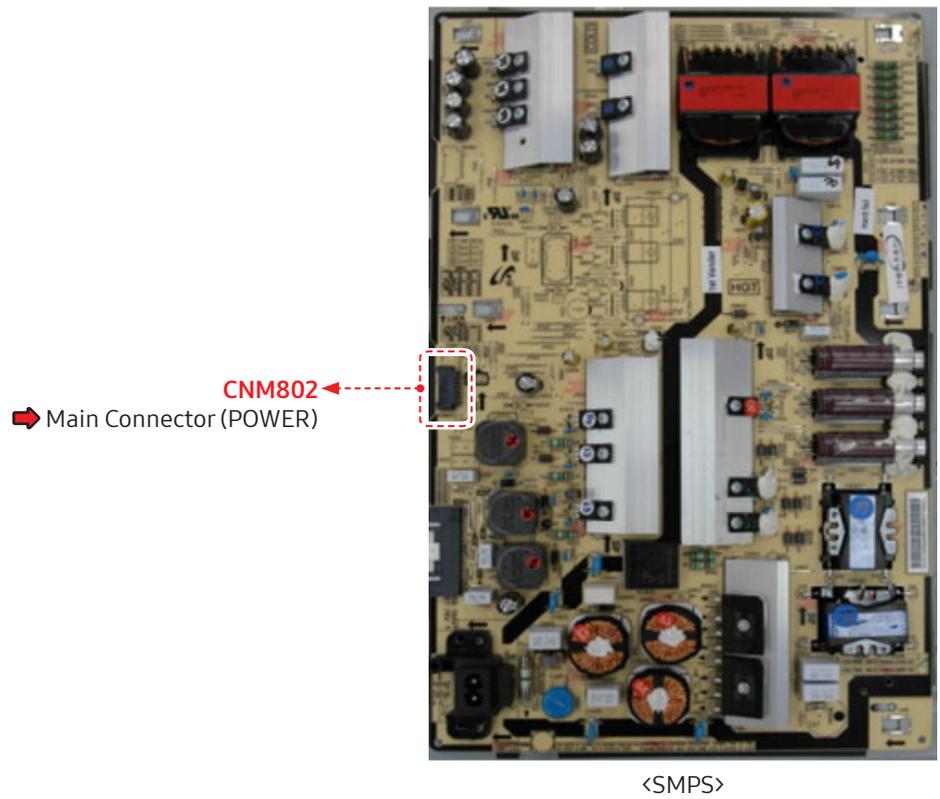
1. TV in Standby
 - ✓ Standby LED Indicator
2. If Not Lit:
 - ✓ AC 120Vac Line
3. If missing:
 - ✓ 120Vac Source/Power Cord
4. If OK:
 - ✓ Resistance on SMPS FUSE after first removing AC power cord.
5. If fuses are open : replace SMPS
6. If fuses are OK:
 - ✓ Standby: A13V (Always On) to Main Board.
7. If any missing remove the SMPS connector to the Main Board.
 - ✓ Standby A13V again.
 - If OK replace the Main Board.
 - If still missing replace SMPS.

4-1-3. TV POWER ON SEQUENCE TEST

- 49 / 55 / 58 / 65 inches



- 75 inches



CNM801 (MAIN Connector) - 49/55/58/65 inches											
1	FAIL COUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

CNM802 (MAIN Connector) - 75 inches											
1	FAIL COUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

1. Power TV On

- ✓ **POWER ON/OFF** .2Vdc (when off) changes to **3.3Vdc** (on)

**NOTE**

- There is an approx 20 second delay from PS-ON to off condition when the TV is powered off, and approx a 2 minute delay when the TV is first plugged into AC Power.

2. If voltage error or no change:

- ✓ Jog Function Control Test

3. If OK replace Main Board

- ✓ All **A13V** supplies for approx. **12.7VDC** (see **SMPS label**)

4. If any wrong voltages, remove SMPS connector to Main Board

- ✓ All **A13V** again for **12.7VDC** (see **SMPS STBY/ON label**)

5. If OK replace **Main Board**

6. If still wrong voltage replace SMPS

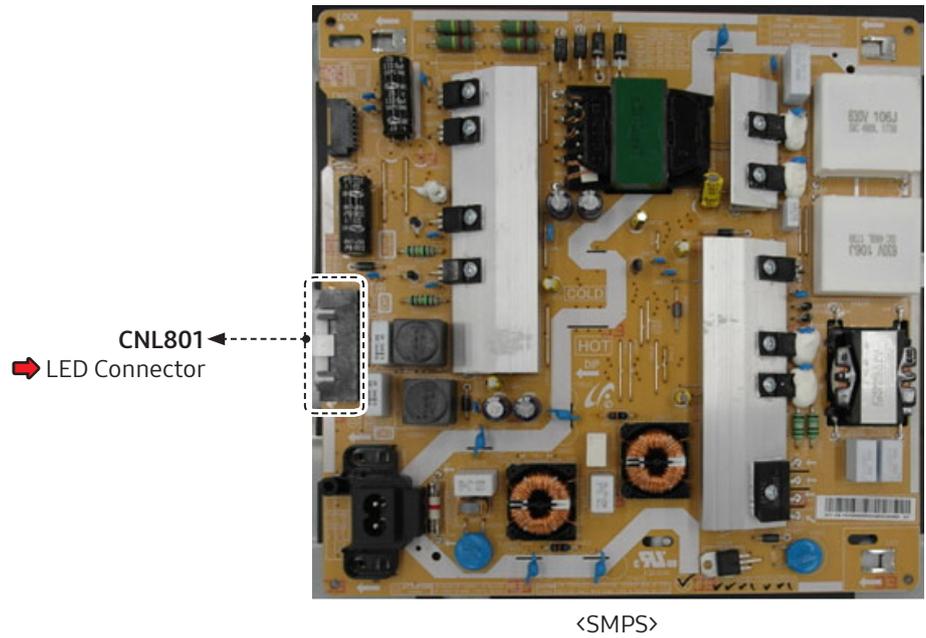
- ✓ **OD_ON/OFF** (Over Voltage Detect) 3.3Vdc : Operating Normal

7. If 0V or changing, an SMPS or Panel error exists. Perform Backlight Test.

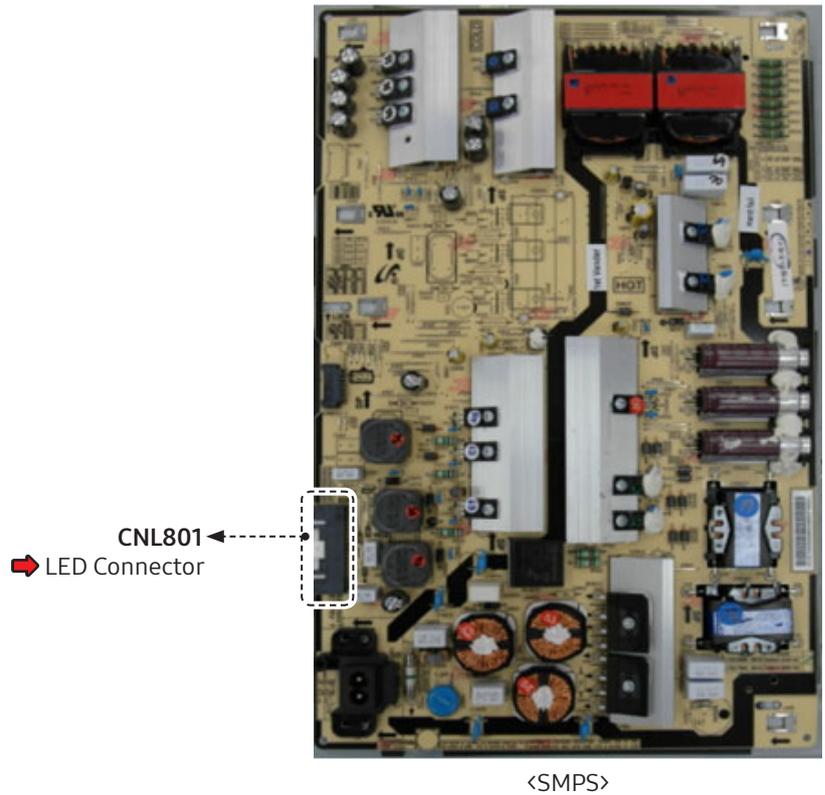
- ✓ **BLU_PWM** Backlight On/Off & Dim Control: **1Vdc – 3.3 Vdc** depending on backlight dimming level for video.
 - If missing or error : Replace Main Board.

4-1-4. SMPS/PANEL BACKLIGHT TEST (Parallel Wired SMPS Panel Connections)

- 49 / 55 / 58 / 65 inches



- 75 inches



CNL801 (LED Connector)											
1	1+	2	1-	3	2+	4	2-	5	3+	6	3-
7	4+	8	4-	9	N.C	10	N.C	11	N.C	12	N.C

1. **Activate Backlights Test** : Disconnect Lead Cable from Main to Power Supply.
 - ✓ TV Screen for active backlight LEDs.
2. **If No BACKLIGHTS**
 - ✓ Minus (Control) pins & Plus (Supply) pins voltages on the Panel Connector. (**with fine test probe on left side of connector only for safety**)
 - If no pin voltages replace **SMPS**.
3. **If BACKLIGHTS ON BUT PANEL SECTION(S) OFF**
 - ✓ The Supply Drive (+) pins and (-) pins. All should measure same.
 - If a Minus (-) pin measures low (near 0 volts), a string(s) of LEDs are likely open.
 - **Replace Panel.**
 - If a (+) pin measures low voltage and it's minus pin is low but not 0V.
 - Check for Defective **SMPS**

BACKLIGHT DIMMING PROBLEMS

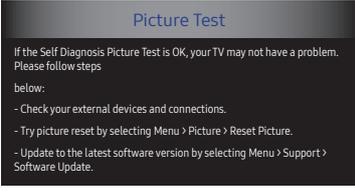
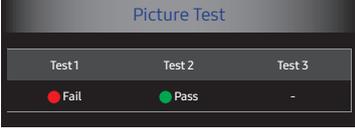
- Go to **Menu > Picture > Expert Settings > Backlight** and vary level (0 – 50)
- If no backlight changes observed:
 - ✓ Panel Connector **CNL801** minus (-) pin voltages and PWM_BLU voltages **CNM801** while changing backlight level.
 - If **minus (-) pin voltages** don't change, and **PWM_BLU** changes, replace **SMPS**.
 - If **PWM_BLU** doesn't change replace **Main/T-Con Board**.

Use: MUTE > 4 > 1 > 9 > EXIT to test Panel Vertical Backlight Sections in normal operation mode.

4-2. Video

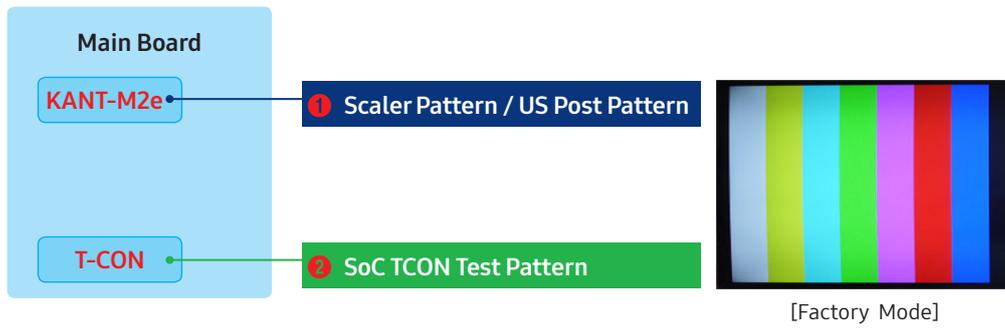
4-2-1. Customer Picture Test

■ MAIN/TCON BOARD

Main Section	Pre-FRC (T-CON)	Post FRC (T-CON)	Results	Problem
				
Pass	Pass	Pass		<ul style="list-style-type: none"> Check Signal Source and other inputs
Fail	Pass	Pass		<ul style="list-style-type: none"> Replace Main/T-CON Board
Fail	Fail	Pass		<ul style="list-style-type: none"> Replace Main/T-CON Board
Fail	Fail	Fail		<ul style="list-style-type: none"> Replace Main/T-CON Board or Panel

4-2-2. Check Test Patterns

- ENTER : **Factory mode** > **SVC** > **Test Pattern**

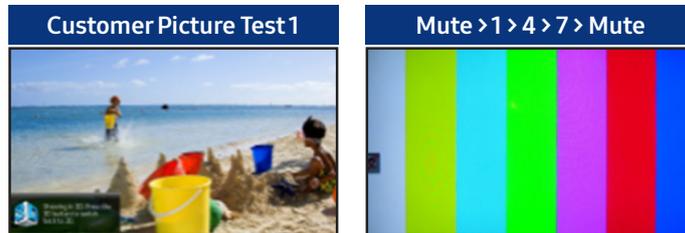


1. Verify "Scaler Pattern" and "US Post Pattern"
2. Verify "SoC TCON Test Pattern"

4-2-3. MAIN/T-CON BOARD

- Main Section > PRE FRC Section > POST FRC Section > T-CONSection > PANEL

■ Main Section



Video Operation

Generated on Main Section.

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

■ PRE FRC Section



Video Operation

Generated at Pre FRC Section.

- **If OK:**
 - ✓ Replace Main/T-Con Board
- **If Noisy:**
 - ✓ Post FRC Section

■ POST FRC Section



Video Operation

Generated at Post FRC Section.

- **If OK:**
 - ✓ Replace Main/T-Con Board
- **If Noisy:**
 - ✓ Mute > 3 > 6 > 9 > Mute

■ 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



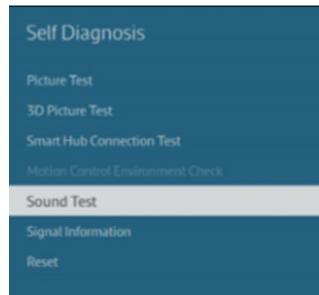
- Check Panel
1. **If Noisy Video:**
 - ✓ Soc T-CON Pattern in Factory Mode
 - Use type of Noise observed (Bars, single lines, video distortion, etc to help.)
 - If noise is only on one half of screen check / swap panel cables.
 - Verify Defective Panel Cables, TV Main/T-CON Board or Panel.

4-3. Audio

- Source (One Connect Mini) > Main Board > Speakers

■ Source (One Connect Mini)

- **No TV Sound**
 - ✓ Menu > Audio > Speaker Settings set to **TV Speaker**
- **Noisy / Distorted TV Audio**
 - ✓ Customer Menu > Support > **Sound Test**



- **If Sound Test FAILS : (Missing / Noisy Audio)**
 - ✓ Speakers (compare resistance/quality)
 - 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
 - ✓ With external Audio Generator (device or App)
 - ✓ Other Inputs
 - ✓ One Connect Mini
- **Optical Digital Out Errors**
 - ✓ Red light from Optical Digital Out.
 - If missing replace One Connect Mini

■ Main Board

- **No HDMI Audio**
 - ✓ Source / HDMI Cable & One Connect Mini Connectors
 - 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 One Connect
 - 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.

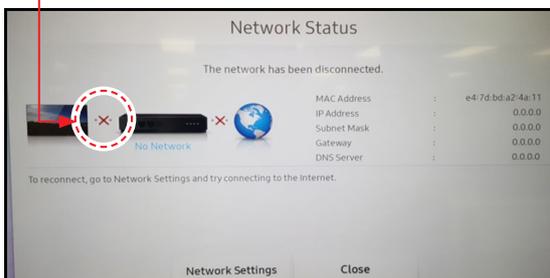
4-4. Network



■ TV to Router "Failure"

- ✓ **Check** Network Status

Check Network Status (TV ~~→~~ Router ~~→~~ Internet)



- ✓ **Wired & Wireless MAC Address** in Customer Support Menu.
 - **No Wired MAC Address:** Replace **Main Board**.
 - **No Wireless MAC Address:**
- ✓ **Module cabling & voltages** from Main Board.
 - If operating voltages are OK but signal missing.
 - ✓ Replace **WiFi Module** (WiFi/Bluetooth Module).
- ✓ **Proper security passcode**
- ✓ **Check** Wi-Fi signal strength at TV (use WiFi Analyzer or similar App).
 - Try another source (Hot spot or Test Router)
- ✓ **Check** related Bulletins.
- ✓ **Check Factory Mode** → **SVC** → **Info** → **WiFi Error Count** (replace module for high error counts).

■ Router to Network "Failure"

- ✓ **Check** Network Status

Check Network Status (TV → Router ~~→~~ Internet)



- Instruct the customer the TV has proper connection to the router and is likely OK.
- ✓ **Check** other devices using network are OK. If they test OK this does not mean the TV should be working.
 - Try another source (Hotspot) to test/show TV Network operation.

4-5. Smart Hub

- [Network Test/Gateway Test](#) > [DNS Test](#) > [ISP Blocking](#) > [Samsung Server Test](#) > [Samsung Apps Test](#)



Go to [Menu](#) > [Support](#) > [Self Diagnosis](#) > [Smart Hub Connection Test](#)

■ Network / Gateway

- If it Fails:
 - ✓ TV to Router Connection Test in "[Network Trouble shooting](#)"

■ DNS Test

- If it Fails:
 - ✓ DNS setting in "Network Settings"
- If DNS is set manually:
 - ✓ Settings are correct (may be set to 8.8.8.8 to prevent Netflix issues)
- If it still fails:
 - ✓ DNS Test with setting to Auto Mode
- If it fails both Manual & Auto problem is ISP or Router.

■ ISP Blocking

- If it Fails:
 - ✓ Internet Service Provider is Active.
 - ✓ With DNS setting at 8888.
 - ✓ With Hot Spot.

■ Samsung Server Test

- If it Fails:
 - ✓ Network Status.
- If OK:
 - ✓ Reset Smart Hub.
 - ✓ Terms of Agreement are accepted.

■ Samsung Apps

- If it Fails:
 - ✓ **Reset** Smart Hub.
 - ✓ Samsung Apps load correctly.
 - ✓ Perform "**Apps Reset**" in Factory Mode.
 - ✓ Go to Smart Hub and complete Terms of Agreement and set up information.
 - ✓ Samsung Apps load correctly.
 - ✓ Before selecting an App, allow Apps to load or failure wilre-occur.

4. Troubleshooting

For Netflix Operation/Connection Issues:

- ✓ **Check** Certificate & Netflix ESN Status in Factory Mode.



- If Certificate and ESN exists, "CO", "Nfo", change the DNS to **8.8.8.8**
- If Certificate is missing, "C/" replace the TV's Main Board.
- If ESN number is missing: **NF/** do not replace the Main Board.
 - Reset TV Clock and check for correct Time & Date. Netflix relies on correct settings.
 - Reset Smart Hub. / Reset Apps In Factory Mode.

For Streaming Issues:

- Go to TV Web Browser / Go to speedof.me / testmy.net
 - ✓ **Check Speed** for at least 5 Mbps(HD streaming) / 25 Mbps (4K Streaming).
 - ✓ **Check Latency** for less than 50ms.

4-6. Factory Mode

■ Setting TV into Factory Mode



AA81-00243A

Factory Remote

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

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. Does not reset Apps.)
 - **Factory Reset** : Select Factory Reset

Factory Reset	
Type	65D6AU0NN
Local Set	EU
SW Model	UNU7100
BOM Model	7172
TUNER	-
Ch Table	NONE

← Ex. Sample Model

- SVC → **Test Patterns**
- SVC → Info → **ER Count** (Important to check for errors.)
 - Resets to 0 with Factory Reset.

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 each item to change.
4. Soft power TV Off to load.

First Screen Appearing in Factory Mode

- Ex. Sample Model

Home	Updates	Exit
Option		
Control		
Debug		
SVC		
ADC/WB		
Advanced		

T-KTMAKUC-0604.10
T-KTMINTV-0045

TIZEN-3.0-MAIN2017-KantM-RELEASE_20170104.1 (Debug)

Main SPI version : 0
OCM SPI version : 0
BT Version : BLUE100TH-VER-0653
E-Manual : KTMAISCL-0.0.5
Blaster Version : A61206-U61001-170201
E-POP Version : KANTMUD-12.28.3
EDID SUCCESS
HDCP SUCCESS
CALIB : AV / COMP / PC / HDMI /
Option : 55A1AU0SM,US,8000,NONE

FRC-[KANT-M USIT][120Hz][HW:0x0F]
DIMMING-[EDGE-8X1][03]
TCN-[KANT-M] FW[801B] DATA[M55ABU0F15]

Model : UN55MU8000
Wired MAC SUCCESS
Wireless MAC SUCCESS
WiFi Version : 4.5.30.015.046.fw4646

CO NIO WO M/ D/ H2 PO AO O S/ N/ RO SC/ SIO WS/ DI/ UO I/ (T)
NS//
Factory Data Ver: 17063 / Fixed Ver: 1706
EERC Version : 82 / WB Ver: 1

CPLD/LD: N/A
SmartControl : A0700200
Board Info : 2016/12/19/PVR/1/BN41-02570A
Factory Reset In Production : ----
SID : ?
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 and model from shell prompt along with factory reset :-
"launch_app org.tizen.factory type value localset value model 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

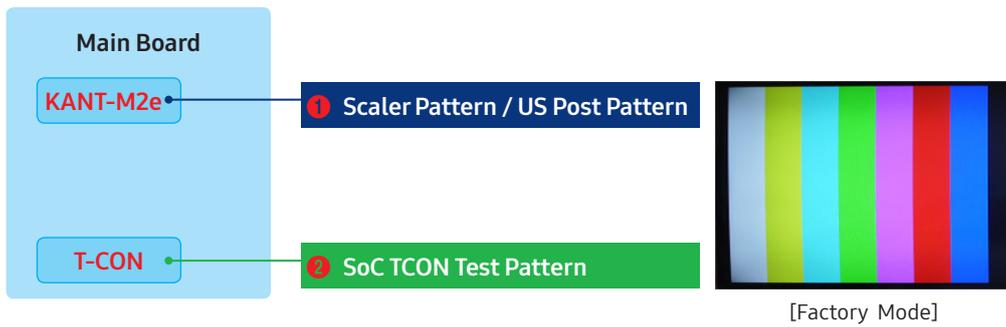
Slide Details

- Sample Model : UE65NU7172UXXH

Home	Updates	Exit
Option		
Control		
Debug		
SVC		
ADC/WB		
Advanced		

<p>T-KTM2LDEUC-XXXX.XX T-KTM2INTV-XXXX TIZEN-X.X.-MAIN201*-KANT-M2-RELEASE_XXXXXXXX.X (Debug) BT Version : BLUETOOTH-VER-XXXX E-Manual:---- Blaster Version : Not support E-POP Version : KANTMUD-XX.XX.X EDID SUCCESS HDCP SUCCESS CALIB : AV/COMP/PC/HDMI/ Option : 65D6AU0NN,EU,7172,NONE FRC-[KANT-M2 xxx][120Hz][HW:0x0F] DIMMING-[EDGE-xx1][03] TCON Version:[Kant-M2] FW[xxxx] DATA[xxxx] TCON Version:[KANT-N2] FW[xxxx] DATA[xxxx] SPL Flash S/N: xxxxxxxxxxxxxxxx Model : UE65NU7172U Wired MAC SUCCESS Wireless MAC SUCCESS WIFI Version : x.x.xx.xxx.xxx.xxxxxx CO NfO WO MO D/ HX P/ AO O S/ N/ RO SC/ SiO(P) NS// Factory Data Ver : XXX / Fixed Ver : XX SID : ---- Date of purchase : --/------</p>	<p>✓ Testing Items</p> <p>✓ Micom Version</p> <p>✓ Sub Micom</p> <p>✓ Tizen</p> <p>✓ BT Version</p> <p>✓ E-Manual</p> <p>✓ Blaster Version</p> <p>✓ E-Pop Version</p> <p>✓ Wired MAC Success</p> <p>✓ Wireless MAC Success</p> <p>✓ CO Status ("O" Operational)</p>
---	--

■ SVC > Test Patterns



1. Verify "Scaler Pattern" and "US Post Pattern".
2. 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

■ SVC > Info > ER Count

WD Count	0	Serdes Error Count	0
Power Fail Count	0	Serdes Reset Count	0
AR Count	0	Serdes WatchDog On/Off	ON
RS Count	3	SMPS FET Fail Detect	0
WIFI NO DETECTION COUNT	0		
WIFI DETACHMENT COUNT	0		
BT ER Count	0		
BT NO DETECTION COUNT	0		
BT DETACHMENT COUNT	0		
BT MGT OPEN FAIL COUNT	0		
BT MGT DISCONNECT COUNT	0		
Camera ER Count	0		
FRC3D Emergency Reboot On/Off	ON		
FRC3D ER Count	0		
Fan Error Count	0		

- **WD Count:** Watch Dog (Hardware related issue).
- **AR Count:** Auto Reset (software (i.e. Apps) related).
- ✓ **important ErrorCount** Status Screen.
- Verify each item listed.

■ 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
ADC/WB	Asia Option
Advanced	Sound

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
----------------	---------

4-7. Factory Mode Adjustments

4-7-1. Entering Factory Mode

1. To enter [Service Mode] press the remote-control keys in this sequence :

- With Consumer Remote (IR Remote)

✓ Remote Button :

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

- With Factory Remote



2. The following screen appears.

- Please refer to "Detail Factory Option page" for details.

The screenshot shows the TV's Factory Mode interface. On the left is a navigation menu with options: Home, Updates, Exit, Option, Control, Debug, SVC, ADC/WB, and Advanced. The main display area shows various system parameters and a 'Detail Factory Option' window. The 'Option' field in this window is highlighted with a red box and contains the text 'Option : 65L1MUB00M,US,BCAM,NONE'. A red arrow points from the 'Option' label in the 'Detail Factory Option' window to the highlighted text. The background text includes technical details such as 'T-KTMAGJC-0510.30', 'T-KTHOCTV-0043', 'T-KTHOCP-0043', 'TIZEN-3.0-MAIN2017-KantM-RELEASE_20161210.3 (Perf)', 'BT Version : BLUETOOTH-VER-0647', 'E-Manual : KTMATSC-03.3', 'Blaster Version : A61170-U61001-170201', 'E-POP Version : KANTMUD-12.06.1', 'EDID SUCCESS', 'HDCP SUCCESS', 'CALIB : AV / COMP / PC / HDMI / Option : 65L1MUB00M,US,BCAM,NONE', 'FRC-[KANT-M Vx1][120Hz][DC][HW-0u04]', 'DIMMING-(EDGE-24X1)[03]', 'TCON-[KANT-M] FW[B014] DATA[M65LBUQF13]', 'TCON-[KANT-N] FW[B224] DATA[M65LBUNFB]', 'SPI Flash S/N: 1UR033AHC00061A', 'Model : QN65QB3CAM', 'Wired MAC SUCCESS', 'Wireless MAC SUCCESS', 'WiFi Version : 4.5.30.014.031.FC8', 'CO N/I/ W/ M/ D/ H2 PO AO O S/ N/ RO SC/ SIO WS/ DU/ UO IT) NS//', 'Factory Data Ver : 17031 / Fixed Ver: 1706', 'EERC Version : 61 / WB Ver : 1', 'CPLD/AD : N/A', 'SmartControl : 0', 'Board Info : NA/RIC/1/NA', 'Factory Reset In Production : 0', 'SID : 7', and 'Date of purchase : 3/26/2012'. There are also 'QUICK TIPS' listed on the right side of the screen.

4-7-2. 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".

■ UE49NU7172UXXH

• PANEL / SMPS / MAIN Information

Multi BOM	PANEL			SMPS		MAIN	
FA01	Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774A	CY-NN049HGLV2V	49A6AU0NN	BN44-00932B	L55E6_NSM	BN91-19727E	BN94-12798E
BA02	Vendor	BOE		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04775B	CY-NN049HGEV3V	49B6AU1NN	BN44-00932B	L55E6_NSM	BN91-19728E	BN94-12799E
FB03	Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774F	CY-NN049HGLV5V	49A6AU1NN	BN44-00932B	L55E6_NSM	BN91-19727R	BN94-12798R
FC04	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774A	CY-NN049HGLV2V	49A6AU0NN	BN44-00932C	L55E6_NHS	BN91-19727E	BN94-12798E
FD05	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774F	CY-NN049HGLV5V	49A6AU1NN	BN44-00932C	L55E6_NHS	BN91-19727R	BN94-12798R
BB06	Vendor	BOE		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04775B	CY-NN049HGEV3V	49B6AU1NN	BN44-00932C	L55E6_NHS	BN91-19728E	BN94-12799E
FA07	Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774A	CY-NN049HGLV2V	49A6AU0NN	BN44-00932B	L55E6_NSM	BN91-19727E	BN94-12798E
FC08	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04774A	CY-NN049HGLV2V	49A6AU0NN	BN44-00932C	L55E6_NHS	BN91-19727E	BN94-12798E

• Factory Option

Local Set	BOM Model	Front Color	S/W Model
EU	7172	U-F-NU71-49	UNU7100

■ UE55NU7172UXXH

• PANEL / SMPS / MAIN Information

Multi BOM	PANEL			SMPS		MAIN	
FA01	Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04767A	CY-NN055HGLV2V	55A6AU0NN	BN44-00932B	L55E6_NSM	BN91-19731E	BN94-12802E
AA02	Vendor	AUO		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04768A	CY-NN055HGAV2V	55L6AU0NN	BN44-00932B	L55E6_NSM	BN91-19732E	BN94-12803E
AB03	Vendor	AUO		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04768A	CY-NN055HGAV2V	55L6AU0NN	BN44-00932C	L55E6_NHS	BN91-19732E	BN94-12803E
FB04	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04767A	CY-NN055HGLV2V	55A6AU0NN	BN44-00932C	L55E6_NHS	BN91-19731E	BN94-12802E
FA05	Vendor	SDC		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04767A	CY-NN055HGLV2V	55A6AU0NN	BN44-00932B	L55E6_NSM	BN91-19731E	BN94-12802E
FB06	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04767A	CY-NN055HGLV2V	55A6AU0NN	BN44-00932C	L55E6_NHS	BN91-19731E	BN94-12802E
BA07	Vendor	BOE		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04771A	CY-NN055HGEV1V	55B6AU0NN	BN44-00932B	L55E6_NSM	BN91-19731S	BN94-13269P
BB08	Vendor	BOE		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04771A	CY-NN055HGEV1V	55B6AU0NN	BN44-00932C	L55E6_NHS	BN91-19731S	BN94-13269P
CA09	Vendor	CSOT		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04769C	CY-NN055HGHV3V	55S6AU1NN	BN44-00932B	L55E6_NSM	BN91-19732S	BN94-13275V
CB10	Vendor	CSOT		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04769C	CY-NN055HGHV3V	55S6AU1NN	BN44-00932C	L55E6_NHS	BN91-19732S	BN94-13275V

4. Troubleshooting

- **Factory Option**

Local Set	BOM Model	Front Color	S/W Model
EU	7172	U-F-NU71-55	UNU7100

■ UE58NU7172UXXH

- PANEL / SMPS / MAIN Information

Multi BOM	PANEL			SMPS		MAIN	
	Vendor	INX		Vendor	SOLUM	ASSY CHASSIS	ASSY PCB MAIN
DA01	Code	Spec	Type	Code	Spec		
	BN95-05198A	CY-NN058HGNV1V	58D6AU0NN	BN44-00932B	L55E6_NSM	BN91-20024F	BN94-13065F

- Factory Option

Local Set	BOM Model	Front Color	S/W Model
EU	7172	U-F-NU71-58	UNU7100

■ UE65NU7172UXXH

• PANEL / SMPS / MAIN Information

Multi BOM	PANEL			SMPS		MAIN	
DA01	Vendor	INX		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04764A	CY-NN065HGNV2V	65D6AU0NN	BN44-00932A	L65E6N_NHS	BN91-19733E	BN94-12804E
FA02	Vendor	SDC		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04762A	CY-NN065HGLV2V	65A6AU0NN	BN44-00932A	L65E6N_NHS	BN91-19819E	BN94-12864E
BA05	Vendor	BOE		Vendor	HANSOE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04766A	CY-NN065HGGEV1V	65B6AU0NN	BN44-00932A	L65E6N_NHS	BN91-20338E	BN94-13309E

• Factory Option

Local Set	BOM Model	Front Color	S/W Model
EU	7172	U-F-NU71-65	UNU7100

■ UE75NU7172UXXH

- PANEL / SMPS / MAIN Information

Multi BOM	PANEL			SMPS		MAIN	
AA01	Vendor	AUO		Vendor	HANSOLE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04760A	CY-NN075HGAV	75L6AU0NN	BN44-00874C	L75E6NR	BN91-19820E	BN94-12865E
FA03	Vendor	SDC		Vendor	HANSOLE	ASSY CHASSIS	ASSY PCB MAIN
	Code	Spec	Type	Code	Spec		
	BN95-04759A	CY-NN075HGLV1V	75A6AU0NN	BN44-00874C	L75E6NR	BN91-20261E	BN94-13208E

- Factory Option

Local Set	BOM Model	Front Color	S/W Model
EU	7172	U-F-NU71-75	UNU7100

4-7-3. Factory Data

■ Option

Factory Menu Name		Data	Range
Factory Reset		-	
Type	49"	49A6AU0NN, 49B6AU1NN, 49A6AU1NN	
	55"	55A6AU0NN, 55L6AU0NN, 55B6AU0NN, 55S6AU1NN	
	58"	58D6AU0NN	
	65"	65D6AU0NN, 65A6AU0NN, 65B6AU0NN	
	75"	75L6AU0NN, 75A6AU0NN	
Local set		EU	
SW Model		UNU7100	
BOM Model		7172	
TUNER		-	-
Ch Table		NONE	
MRT 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	

Factory Menu Name	Data	Range
ECO IC TYPE	MC8121	
Info Link Server Type	development	
Info Link Country	None	
TTX Group	UserOSD	
Visual Test	Diabile	
OPTION_SWU		
RF Remocon Support	OFF	
CDD mode	...	
DPMS Support	OFF	
T-CON Device	KANT-M2	
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	
FirstScreen Cach Size	300	

4. Troubleshooting

Factory Menu Name	Data	Range
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 greater 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	
Subwoofer Support	3	
Woofer Type	0	

Factory Menu Name	Data	Range
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	
FHD DDR SSC ON OFF	OFF	
FHD DDR SSC Value	4	
UHD DDR SSC ON OFF	ON	
UHD DDR SSC Value	0	

4. Troubleshooting

Factory Menu Name	Data	Range
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	
BT_ON_OFF	OFF	
RF Mute Time	600ms	
Tuner Margin	3	European specifications
FRC		
FRC FDISPLAY ON/OFF	OFF	

Factory Menu Name	Data	Range
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_TEMP READ	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	20	
H.264 Margin	15	
CAM Wait Time	15	
Voice Debug	OFF	
Power Management		
Cert Option	Waiting	
RM_BIST_DTV	0	
RM_BIST_ATV	0	
RM_BIST_CABLE	0	
SerDES Check		
SerDES Tuner	Failure	
HDMI SW	Failure	
HDMI Rx	Failure	
MP	Failure	
Main SerDES	Failure	
Jack SerDES	Failure	
Stress Mode	OFF	
Log Analyzer	ON	

4. Troubleshooting

Factory Menu Name	Data	Range
Error Popup On/Off	OFF	
DeadLock KILL	OFF	
CES Option	OFF	
CES Convergence Option	OFF	
CES ATSC 3_0	OFF	
CES OOBE MVPD SUPPORT	OFF	
BT DUT	OFF	
BT Throughput	Failure	
Reproduce Module	ON	
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	0	
No Signal Power OFF	ON	
Alert Option	ON	
Default HDMI1 Booting	OFF	

■ 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		

Factory Menu Name	Data	Range
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	
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	

4. Troubleshooting

Factory Menu Name	Data	Range
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		
PANEL FLASH UPGRADE		
Logic Usb D/L		
SUBMICOM UPGRADE		* Upgrade Sub-Micom Program
SUBMICOM JP USB UPGRADE		
BT UPGRADE		
BT FREEPAIRING		
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)

Factory Menu Name	Data	Range
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		
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

4. Troubleshooting

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	
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		

Factory Menu Name	Data	Range
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		
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		

4. Troubleshooting

Factory Menu Name	Data	Range
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

4-8. Replacing Main Board

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

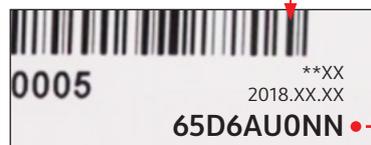
■ Steps to Replace Main Board

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

- Sample Model : UE65NU7172UXXH

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		65D6AU0NN
Local Set		EU
SW Model		UNU7100
BOM Model		7172
TUNER		-
Ch Table		-
MRT Option		
Production Option		
Engineer Option		
55A1QU7QN	55L1QU7QN	
75L1QU7QN	55A1QU8XN	
55L1QU7QN	55A1QU7QN	
65D6AU0NN	65D6AU0NN	
65A1QU7QN	65L1QU7QN	
65A1QU8XN	65L1QU8XN	
55A6AU0NN	55L6AU0NN	

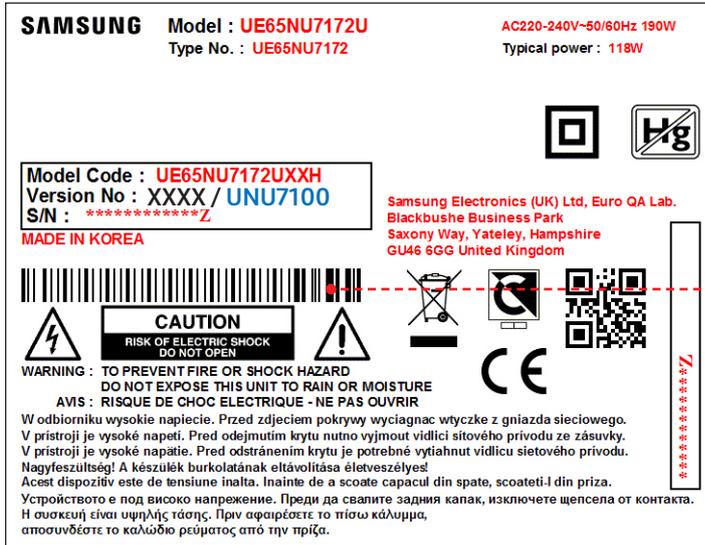
<Type list in the Factory Menu>

Local Set

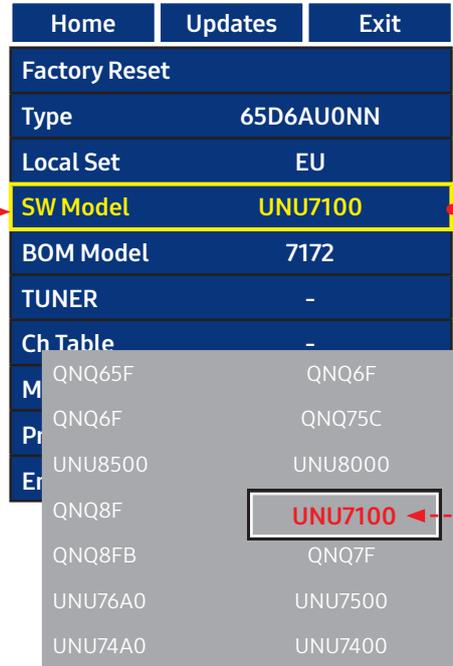
- Set according to Local region(country).

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>



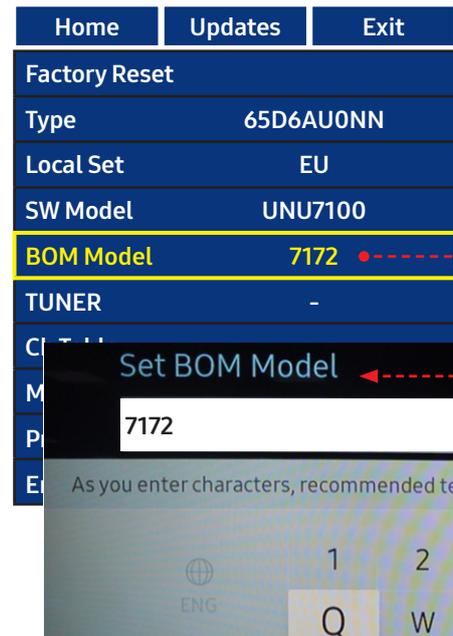
<SW Model list in the Factory Menu>

BOM Model

- 6th~9th Digit of Model Code.
 - Check 6th~9th digit of Model code and type in.
 - e.g.) Model Code : **UE65NU7172UXXH** then BOM Model : **7172**



<"BOM Model" in Label Rating>



<BOM Model input in Factory Menu>

4-9. White Balance

4-9-1. Calibration

1. Into the Factory Mode.
2. Select **ADC/WB** menu.
3. Select **ADC** menu.

Option	AV Calibration
Control	Comp Calibration
Debug	PC Calibration
SVC	HDMI Calibration
ADC/WB	
Advanced	

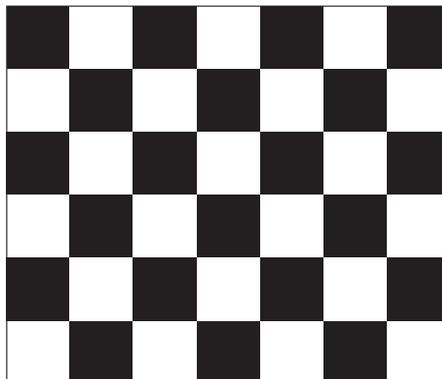
4-9-2. Service Adjustment

You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

- Adjust Specification

Source	Setting Mode	Pattern	Use Equipment
HDMI	1280 x 720@60 Hz	Pattern #24 (Chess Pattern)	CA210 & Master MSPG925 Generator



(Chess Pattern)

- Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#1)	Perform in NTSC B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024x768) B&W Pattern #24	Lattice
HDMI IN	Perform in 720p B&W Pattern #24	Lattice

Method of Color Calibration (AV)

1. Apply the NTSC Lattice (NO. 3) pattern signal to the AV IN 1 port.
2. Press the Source key to switch to "AV1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "AV Calibration" menu.
6. In "AV Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "AV Calibration" status from Failure to Success.

Method of Color Calibration (Component)

1. Apply the 720p Lattice (NO. 6) pattern signal to the Component IN 1 port.
2. Press the Source key to switch to "Component1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "Comp Calibration" menu.
6. In "Comp Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "Comp Calibration" status from Failure to Success.

Method of Color Calibration (PC)

1. Apply the VESA XGA Lattice (NO. 21) pattern signal to the PC IN port.
2. Press the Source key to switch to "PC" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "PC Calibration" menu.
6. In "PC Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "PC Calibration" status from Failure to Success.

Method of Color Calibration (HDMI)

1. Apply the 720p Lattice (NO. 6) pattern signal to the HDMI1/DVI IN port.
2. Press the Source key to switch to "HDMI1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "HDMI Calibration" menu.
6. In "HDMI Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "HDMI Calibration" status from Failure to Success.

4-9-3. Adjustment

1. Into the Factory Mode.
2. Select **ADC/WB** menu.
3. Select **White Balance** menu.

Option			
Control			
Debug			
SVC			
ADC/WB	White Balance	(Low Light) Sub Brightness R offset G offset B offset	(Hight Light) Sub Contrast R gain G gain B gain
Advanced			

4-10. LED Indicator Test

4-10-1. Diagnostic Methods - **Flashing** Symptom Codes

After TV is "COLD BOOTED" (AC Power Re-Cycled), Flashing symptom codes will operate and show the defect block with number of LED flash.

Place a mirror or phone directly under Standby LED to observe flashing.

■ Defect type and Number of LED flash

Defect Block	Detection Method	Number of LED Flash
OCB	-	LED off
Main Board	<ul style="list-style-type: none"> WDC -> Reboot -> Flash Error -> Flash 	1 time
Panel	<ul style="list-style-type: none"> Error -> Reboot -> Flash Error -> Flash(after 10cm) 	2 time
SMPS	<ul style="list-style-type: none"> Error ->Reboot -> Flash Error -> Flash 	3 time
Bluetooth / WIFI	<ul style="list-style-type: none"> Cold Boot -> 30 sec after module starts 	4 time
AOC	<ul style="list-style-type: none"> Cold Boot -> 30 sec after module starts Signal level below threshold 	5 time

No Blinking
 Blinks 1 time when cold boot
 1 set 4 sec x 5 time
 4 sec
 4 sec(10min) x 5 time
 4 sec
 4 sec x 5 time
 20~30sec
 4 sec(30sec) x 5 time
 ↑ Cold Boot

How to COLD BOOT the TV

- Method 1) Unplug and re-plug in the power cord.
- Method 2) While TV is on, Press & Hold Power Button of TV remote for 4 seconds. TV will turn off and on by itself.

4-11. Updating the TV's Software

Software Upgrade can be performed by network connection or downloading the latest firmware from "www.samsung.com." to a USB memory device.

4-11-1. By USB

Download the firmware image and save it in a folder on the root directory of the USB flash drive. The folder name must be "firmware name".

Insert a USB drive containing the firmware upgrade file, downloaded from "www.samsung.com," into the TV. Please be careful not to disconnect the power or remove the USB drive until upgrades are complete. The TV will be turned off and on automatically after completing the firmware upgrade. When software is upgraded, video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.



4-11-2. By Online

Upgrades the software using the Internet.

- First, configure your network. For detailed procedures on using the Network Setting, refer to the 'Setting the Network' instructions.
- If The internet connection doesn't operate properly, connection can be broken, please retry downloading.

If the problem still happens, download by USB and upgrade.

4-11-3. Stanby mode upgrade(Off/On)

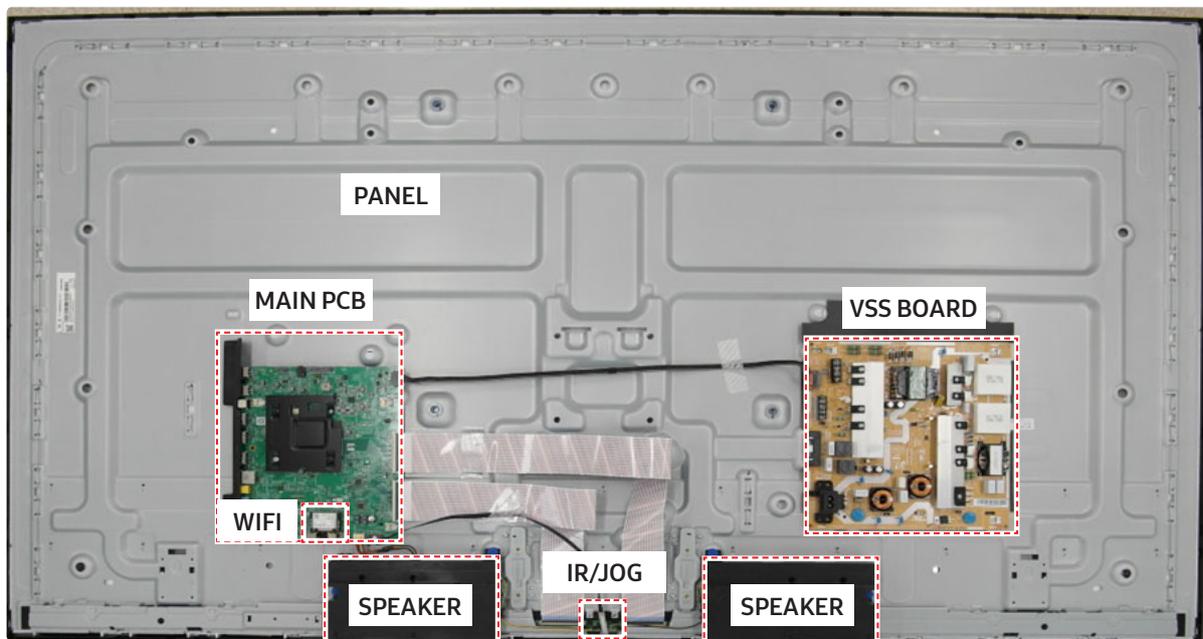
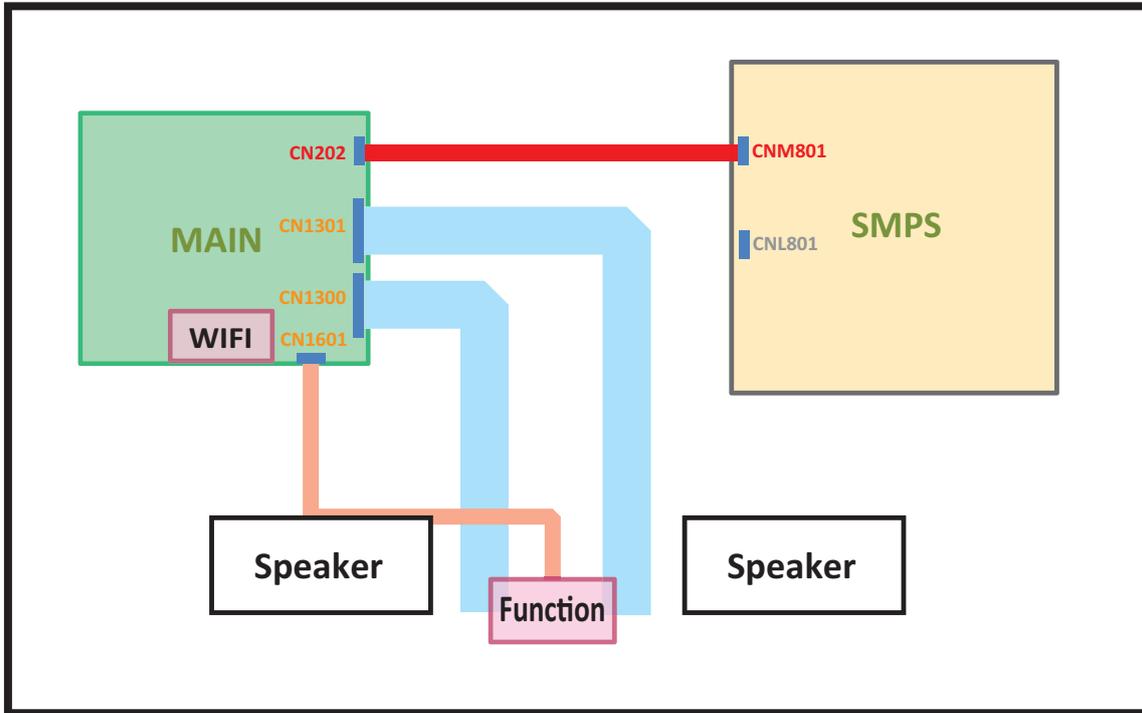
A manual upgrade will be automatically performed at selected time.

Since the power of the unit is turned on internally, the screen may be turned on slightly for the LED product. This phenomenon may continue for more than 1 hour until the software upgrade is complete.

5. Wiring Diagram

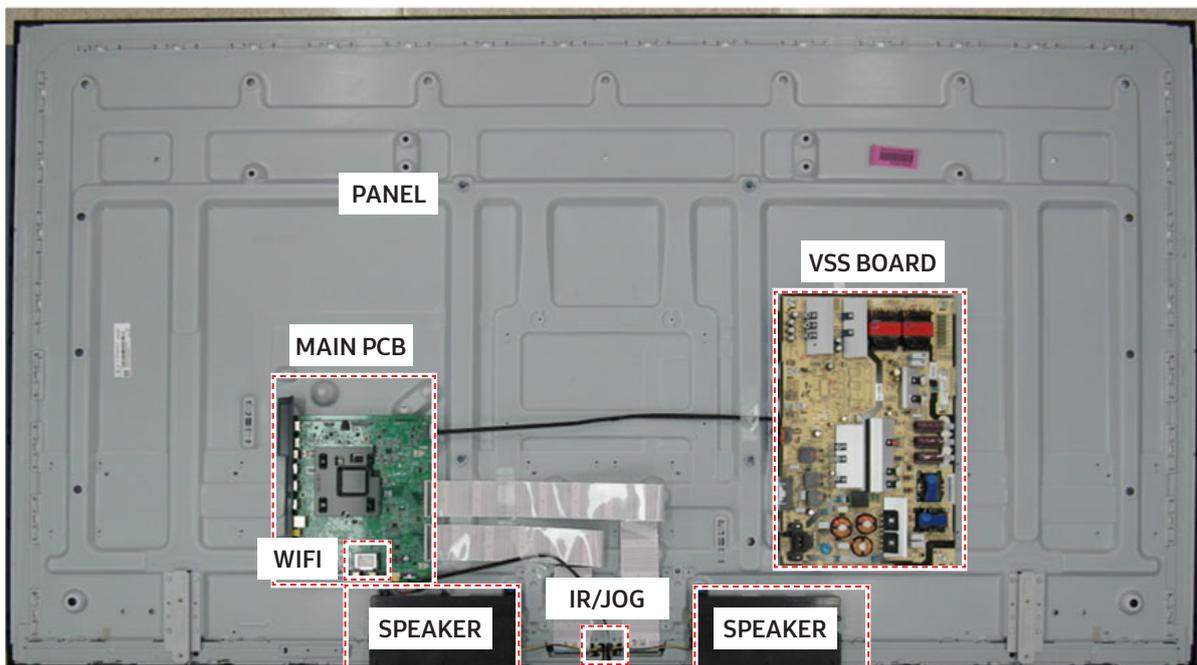
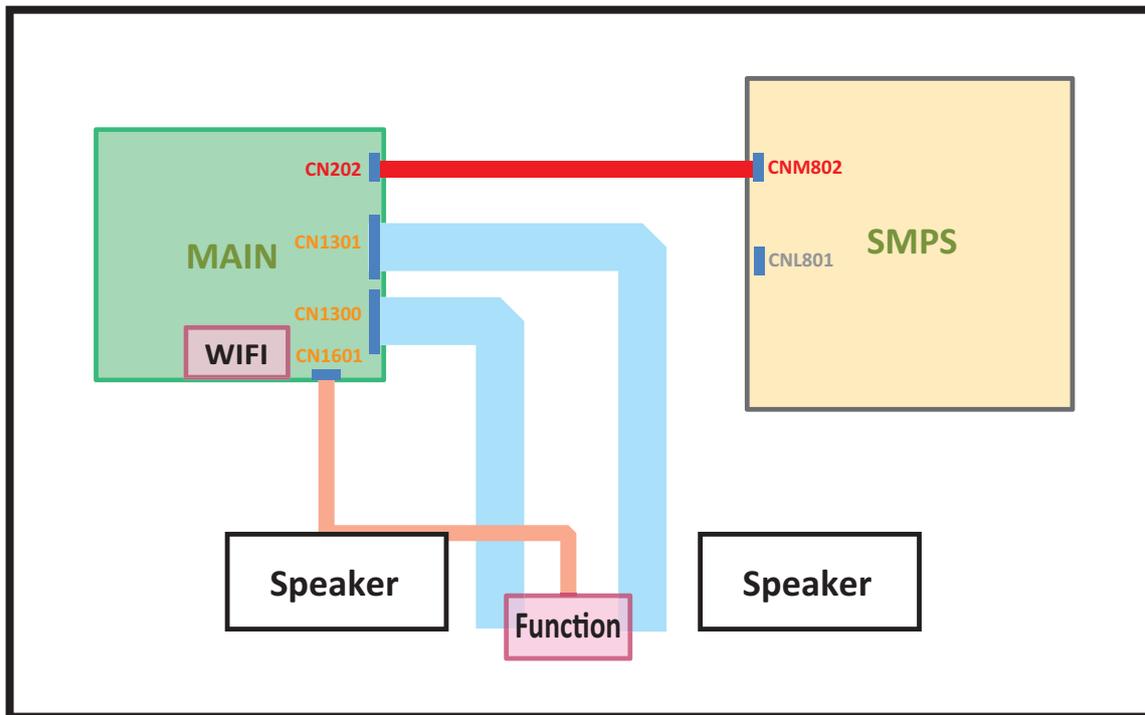
5-1. Wiring Diagram

- 49 / 55 / 58 / 65 inches

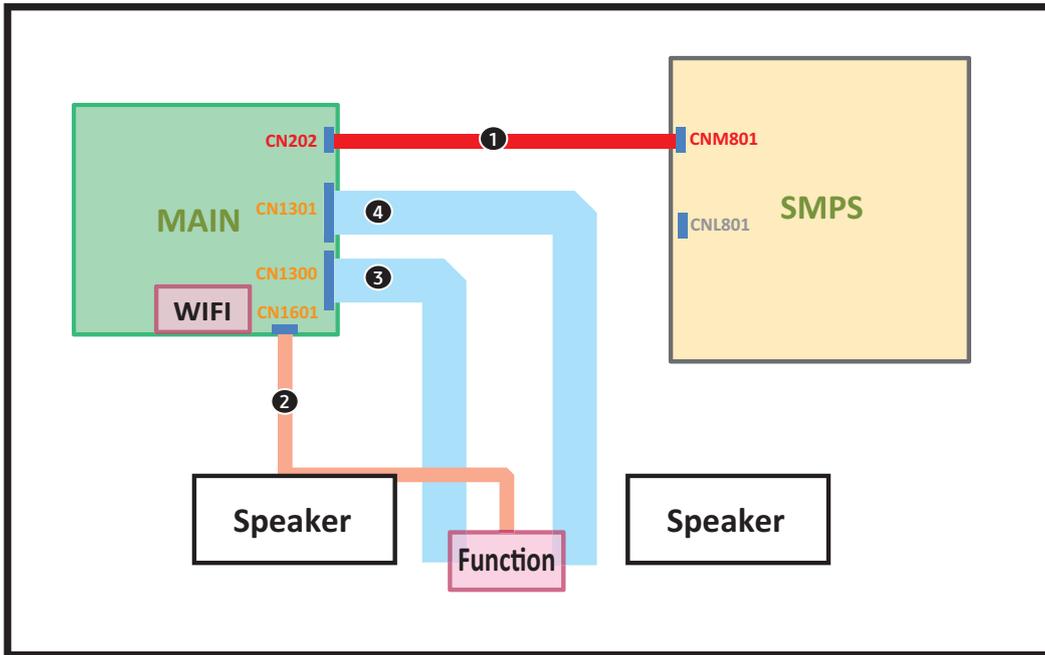


5. Wiring Diagram

- 75 inches



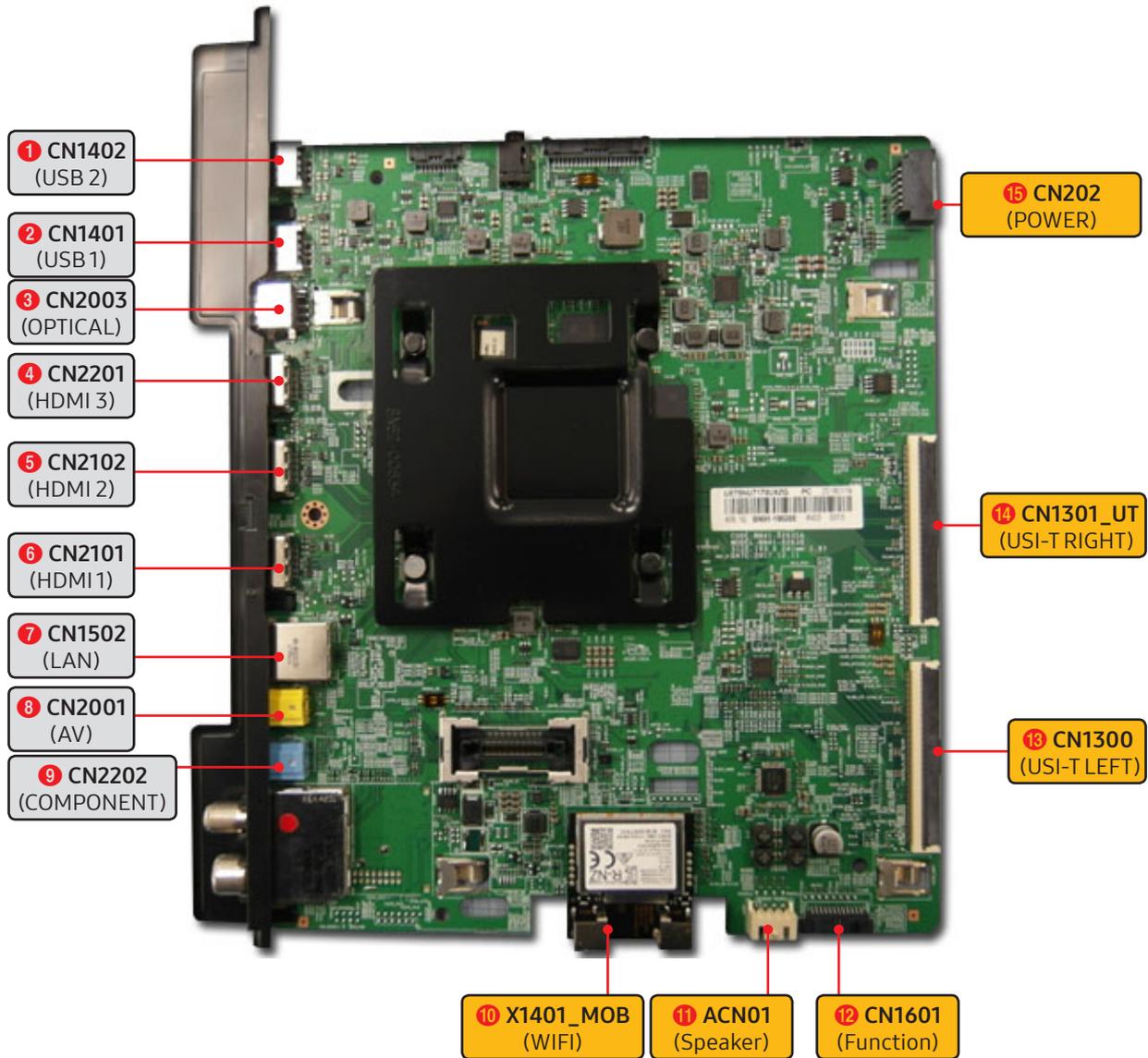
■ Cables



Part Name &		Connection	Part Spec	Code No.	
①	LEAD CONNECTOR-POWER	SMPS - MAIN		49"	BN39-02217D
				55"	
				58"	
				65"	BN39-02217E
				75"	
②	LEAD CONNECTOR-SUB ASSY	Main - FUNCTION		49"	BN39-02231D
				55"	
				58"	
				65"	BN39-02231C
				75"	
③	FFC CABLE	Main - Source B		49"	BN96-39821F
				55"	
				58"	
				65"	BN96-39820H
				75"	
④	FFC CABLE	Main - Source B		49"	BN96-39820F
				55"	
				58"	
				65"	BN96-39903C
				75"	

5-2. Connector

5-2-1. Main Board



■ Main Board Pin Map

1 CN1402 (USB2)				3 CN2003 (OPTICAL)			
1	USB1_VCC_5V_PW	2	D-	1	SPDIF_OUT	2	B5V_PW
3	D+	4	GND	3	GND		
2 CN1401 (USB1)							
1	USB1_VCC_5V_PW	2	D-				
3	D+	4	GND				

4 CN2201 (HDMI IN3)			
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_RX_CLK+_IN_HDMI
11	GND	12	HDMI1_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI1_SCL_DDC	16	HDMI1_SDA_DDC
17	HDMI1_INS_DET	18	HDMI1_5V_PW
19	HDMI1_HPD		

5 CN2102 (HDMI2)			
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_RX_CLK+_IN_HDMI
11	GND	12	HDMI2_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI2_SCL_DDC	16	HDMI2_SDA_DDC
17	HDMI2_INS_DET	18	HDMI2_5V_PW
19	HDMI2_HPD		

6 CN2101 (HDMI1)			
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_RX_CLK+_IN_HDMI
11	GND	12	HDMI3_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI3_SCL_DDC	16	HDMI3_SDA_DDC
17	HDMI3_INS_DET	18	HDMI3_5V_PW
19	HDMI3_HPD		

7 CN1502 (LAN)			
1	EPHY_TXP_LAN	2	GND
3	EPHY_TXN_LAN	4	EPHY_RXP_LAN
5	GND	6	EPHY_RXN_LAN
7	N.C.	8	GND

8 CN2001 (AV)			
1	GND	2	AV_IN_CVBS/COMP_Y
3	COMP_AV_SR_IN	4	IDENT_AV/TEST_CVBS_Y
5	TEST_SR	6	TEST_SL
7	COMP_AV_SL_IN		

9 CN2202 (COMPONENT)			
1	GND	2	COMP_PB
3	COMP_PR	4	TEST_PB/IDENT_COMP
5	TEST_PR	6	GND
7	GND		

10 X1401_MOB (WIFI)			
1	Uart_Tx	2	GND
3	WAKE_UP	4	GND
5	nRESET	6	GND
7	USB_DP	8	USB_DM
9	GND	10	5V
11	USB_SUSPEND		

11 ACN01 (Speaker)			
1	MID_R+	2	MID_R-
3	MID_L+	4	MID_L-

12 CN1601 (Function)			
1	IR	2	GND
3	A3.3V	4	SENSOR_SCL_I2C
5	SENSOR_SDA_I2C	6	KEY_INPUT1
7	KEY_INPUT2	8	LED_STB_OUT
9	-	10	-
11	GND	12	-

15 CN202 (Power)			
1	GND	2	GND
3	A13V_PW	4	GND
5	A13V_PW	6	SW_POWER_OUT
7	A13V_PW	8	PWM_DIMMING_OUT1
9	A13V_PW	10	OVD_ONOOF_LD_SDA_I2C
11	SMPS_FET_FAIL_DETECT	12	ANA_DIMMING

5. Wiring Diagram

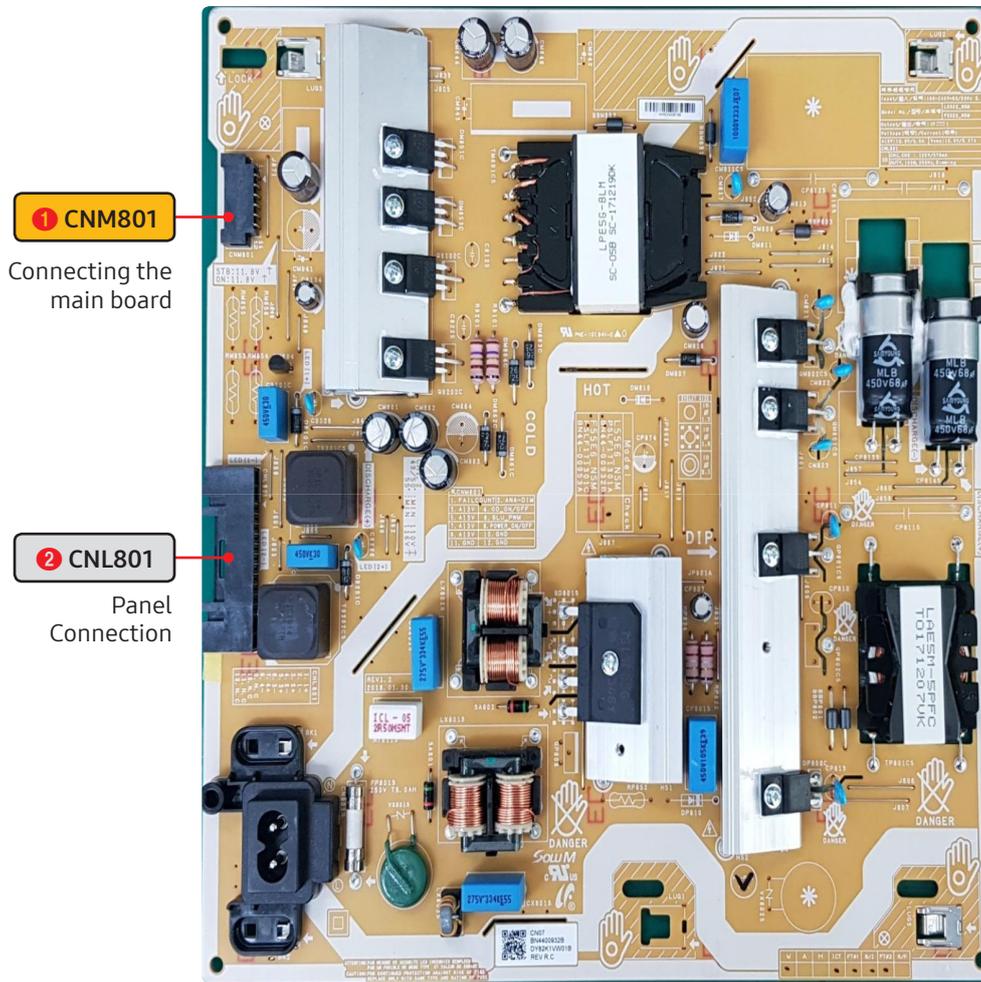
13 CN1300 (USI-T LEFT)							
1	FB_TRDY_1	2	GND	3	PANEL_3.3V_PW	4	PANEL_3.3V_PW
5	FB_VCOM1_2_CELL	6	VCOM1_CELL	7	VCOM2_CELL	8	VCOM3_CELL
9	VSS_OUT1_CELL	10	VOFF_-11V_PW	11	VGHD_30V_PW	12	CKV1_GOA
13	CKV2_GOA	14	CKV3_GOA	15	CKV4_GOA	16	CKVB1_GOA
17	CKVB2_GOA	18	CKVB3_GOA	19	CKVB4_GOA	20	STVP1_GOA
21	STVP1_GOA	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	SFC2	31	GND	32	TX_CH0_A+_VX1
33	TX_CH0_A-_VX1	34	GND	35	TX_CH0_B+_VX1	36	TX_CH0_B-_VX1
37	GND	38	TX_CH1_A+_VX1	39	TX_CH1_A-_VX1	40	GND
41	TX_CH1_B+_VX1	42	TX_CH1_B-_VX1	43	GND	44	TX_CH2_A+_USIT
45	TX_CH2_A-_USIT	46	GND	47	TX_CH2_B+_USIT	48	TX_CH2_B-_USIT
49	GND	50	TX_CH3_A+_USIT	51	TX_CH3_A-_USIT	52	GND
53	TX_CH3_B+_USIT	54	TX_CH3_B-_USIT	55	GND	56	TX_CH4_A+_USIT
57	TX_CH4_A-_USIT	58	GND	59	TX_CH4_B+_USIT	60	TX_CH4_B-_USIT
61	GND	62	TX_CH5_A+_USIT	63	TX_CH5_A-_USIT	64	GND
65	TX_CH5_B+_USIT	66	TX_CH5_B-_USIT	67	GND	68	TX_CH6_A+_USIT
69	TX_CH6_A-_USIT	70	GND	71	TX_CH6_B+_USIT	72	TX_CH6_B-_USIT
73	GND	74	TX_CH7_A+_USIT	75	TX_CH7_A-_USIT	76	GND
77	TX_CH7_B+_USIT	78	TX_CH7_B-_USIT	79	GND	80	SFC1
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

14 CN1301_UT (USI-T RIGHT)							
1	FB_TRDY_2	2	N.C.	3	AVDD_17V_PW	4	AVDD_17V_PW
5	AVDD_17V_PW	6	AVDD_17V_PW	7	UH_CELL	8	UL_CELL
9	HAVDD_8.5V_PW	10	LH_CELL	11	LL_CELL	12	VCCB_1.8V_PW
13	VCCA_1.9V_PW	14	PI_DSF_MON	15	PORTNUM	16	GND
17	N.C.	18	N.C.	19	N.C.	20	GND
21	SFC1	22	GND	23	TX_CH8_A+_USIT	24	TX_CH8_A-_USIT
25	GND	26	TX_CH8_B+_USIT	27	TX_CH8_B-_USIT	28	GND
29	TX_CH9_A+_USIT	30	TX_CH9_A-_USIT	31	GND	32	TX_CH9_B+_USIT
33	TX_CH9_B-_USIT	34	GND	35	TX_CH10_A+_USIT	36	TX_CH10_A-_USIT
37	GND	38	TX_CH10_B+_USIT	39	TX_CH10_B-_USIT	40	GND
41	TX_CH11_A+_USIT	42	TX_CH11_A-_USIT	43	GND	44	TX_CH11_B+_USIT
45	TX_CH11_B-_USIT	46	GND	47	TX_CH12_A+_USIT	48	TX_CH12_A-_USIT
49	GND	50	TX_CH12_B+_USIT	51	TX_CH12_B-_USIT	52	GND
53	TX_CH13_A+_USIT	54	TX_CH13_A-_USIT	55	GND	56	TX_CH13_B+_USIT
57	TX_CH13_B-_USIT	58	GND	59	TX_CH14_A+_USIT	60	TX_CH14_A-_USIT
61	GND	62	TX_CH14_B+_USIT	63	TX_CH14_B-_USIT	64	GND
65	TX_CH15_A+_USIT	66	TX_CH15_A-_USIT	67	GND	68	TX_CH15_B+_USIT
69	TX_CH15_B-_USIT	70	GND	71	SFC2	72	GND
73	ST_GOA	74	LC1_VGP1_GOA	75	STVP1_GOA	76	CKVB4_GOA
77	CKVB3_GOA	78	CKVB2_GOA	79	CKVB1_GOA	80	CKV4_GOA
81	CKV3_GOA	82	CKV2_GOA	83	CKV1_GOA	84	N.C.
85	VOFF_-11V_PW	86	VSS_OUT2_CELL	87	N.C.	88	VCOM3_CELL
89	FB_VCOM3_CELL	90	VCOM2_CELL	91	VCOM1_CELL	92	BLINK_O
93	PANEL_3.3V_PW	94	PANEL_3.3V_PW	95	FB_TRDY_3	96	FB_TRDY_3

5. Wiring Diagram

5-2-2. SMPS Board

- 49 / 55 / 58 inches

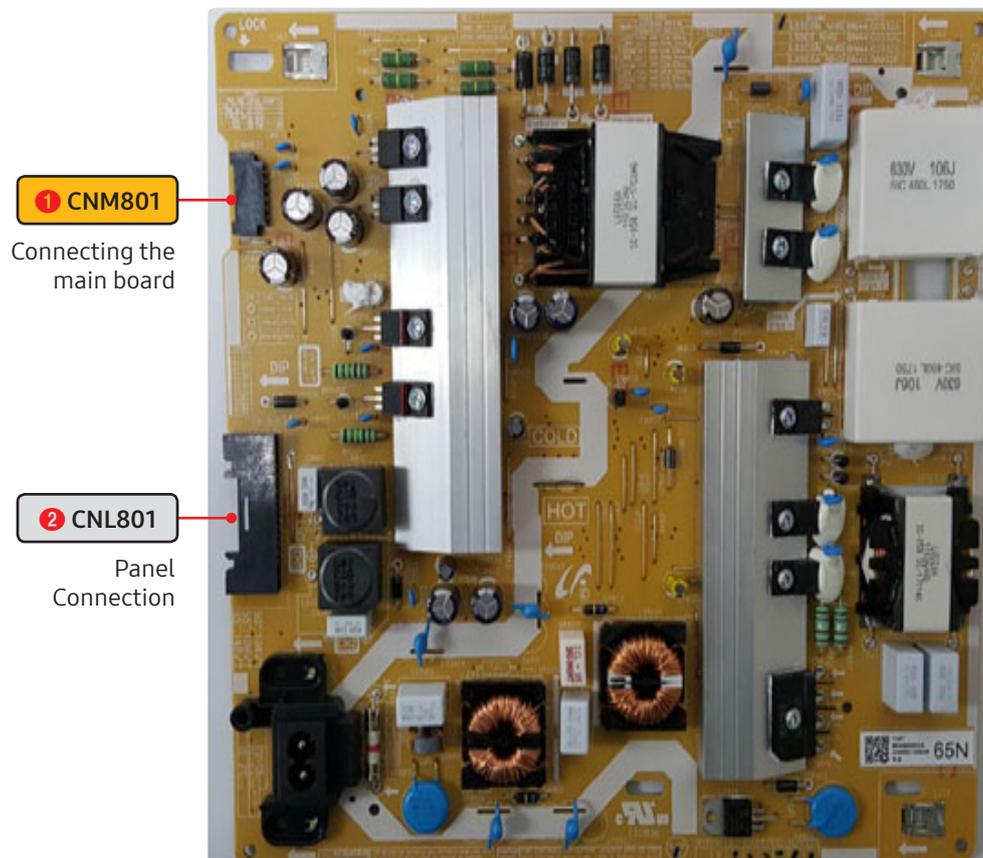


■ SMPS Board Pin Map

CNM801 (MAIN Connector)											
1	FAIL COUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

CNL801 (LED Connector)											
1	1+	2	1-	3	2+	4	2-	5	3+	6	3-
7	4+	8	4-	9	N.C	10	N.C	11	N.C	12	N.C

- 65 inches



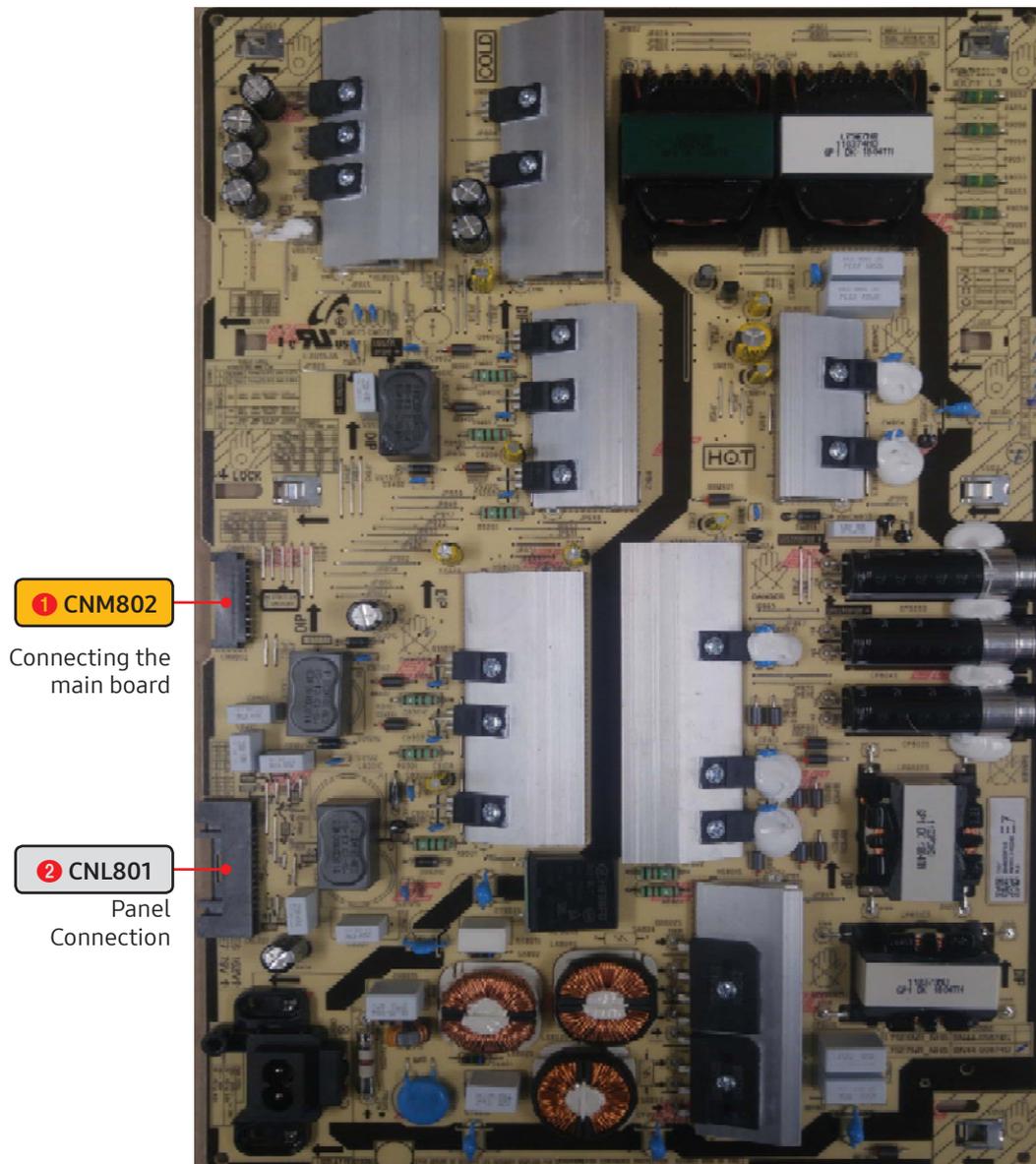
■ SMPS Board Pin Map

CNM801 (MAIN Connector)											
1	FAILCOUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

CNL801 (LED Connector)											
1	1+	2	1-	3	2+	4	2-	5	3+	6	3-
7	4+	8	4-	9	N.C	10	N.C	11	N.C	12	N.C

5. Wiring Diagram

- 75 inchs



■ SMPS Board Pin Map

CNM802 (MAIN Connector)											
1	FAILCOUNT	2	ANA-DIM	3	A13V	4	OD ON/OFF	5	A13V	6	PWM_BLU
7	A13V	8	Power On/Off	9	A13V	10	GND	11	GND	12	GND

CNL801 (LED Connector)											
1	1+	2	1-	3	2+	4	2-	5	3+	6	3-
7	4+	8	4-	9	N.C	10	N.C	11	N.C	12	N.C