



LED TV

Chassis : U85A

Model : UN32F5500AF

UN40F5500AF

UN46F5500AF

UN50F5500AF

UN32F4300AF

SERVICE Manual

LED TV



UN**F5500AF

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
1-2. 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. Accessories	2-13
3. Disassembly and Reassembly	3-1
3-1. Disassembly and Reassembly	3-1
3-2. Assy Board P-Jog Switch & Ir	3-6
3-3. Disassembly(PTC)	3-8
4. Troubleshooting	4-1
4-1. Troubleshooting	4-1
4-2. How to Check Fault Symptom	4-4
4-3. Factory Mode Adjustments	4-24
4-4. White Balance	4-40
4-5. White Ratio (Balance) Adjustment	4-43
4-6. Detail Specifications	4-45
4-7. AV Control Table	4-72
4-8. Software Upgrade	4-78
4-9. Rear Cover Dimension	4-81
5. Wiring Diagram	5-1
5-1. Wiring Diagram	5-1
5-2. Connector	5-2
5-3. Connector Functions	5-6
5-4. Cables	5-7



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1. Precautions

1-1. Safety Precautions

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

1-1-1. Warnings



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

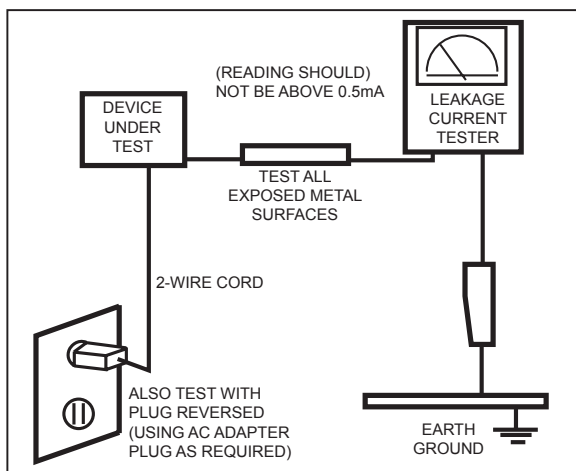
1-1-2. Servicing the LED TV

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

1-1-3. Fire and Shock Hazard

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

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




Do not use an isolation transformer during this test.

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

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

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special 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:


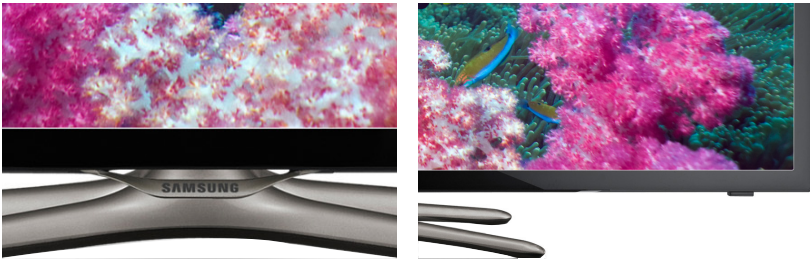
**CAUTION**

- 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

2-1-1. Model Comparison

Model	UN**F5500		
Front View	 <p>* W : Width H : High D : Depth</p>		
Detail View			
Front Color	Black (Panel)		
Dimensions (W x H x D)	32"	Set with Stand	738.0 x 509.6 x 265.0 mm / 29.1 x 20.1 x 10.4 inches
		Set without Stand	738.0 x 445.4 x 49.0 mm / 29.1 x 17.5 x 1.9 inches
	40"	Set with Stand	928.2 x 615.5 x 265.0 mm / 36.5 x 24.2 x 10.4 inches
		Set without Stand	928.2 x 552.3 x 49.4 mm / 36.5 x 21.7 x 1.9 inches
	46"	Set with Stand	1059.6 x 700.0 x 307.3 mm / 41.7 x 27.6 x 12.1 inches
		Set without Stand	1059.6 x 626.2 x 49.4 mm / 41.7 x 24.7 x 1.9 inches
	50"	Set with Stand	1135.4 x 741.8 x 307.3 mm / 44.7 x 29.2 x 12.1 inches
		Set without Stand	1135.4 x 668.0 x 49.8 mm / 44.7 x 26.3 x 2.0 inches

2. Product specifications

Weight	32"	Set with Stand	5.7 kg / 12.6 lbs
		Set without Stand	5.0 kg / 11.0 lbs
	40"	Set with Stand	8.9 kg / 19.6 lbs
		Set without Stand	8.0 kg / 17.6 lbs
	46"	Set with Stand	11.5 kg / 25.4 lbs
		Set without Stand	10.8 kg / 23.8 lbs
	50"	Set with Stand	14.7 kg / 32.4 lbs
		Set without Stand	13.0 kg / 28.7 lbs
Panel Type	Anti Glare		
Internal Memory	512 Mbyte		
DDR	512 Mbyte		
Feature	SMART HUB		

2-1-2. Feature & Specifications

Model	UN32F5500AF	
Feature		
<ul style="list-style-type: none">• Digital-TV, RF, 3-HDMI, 1-Component, 1-A/V, 2-USB2.0, LAN• Brightness : 300 cd/m²• Dynamic Contrast Ratio : Mega DCR• Response Time : 8 ms• CMR : 120		
Specifications		
Item	Description	
LCD Panel	32 inch FHD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7M colors	
Maximum Resolution	Horizontal : 1920 Pixels Vertical : 1080 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display (H x V)* * Horizontal x Vertical	698.4(H) X 392.9(V) (mm) / 27.5(H) X 15.5(V) (inches)	
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	86 W (Under 0.3 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	738.0 x 509.6 x 265.0 mm / 29.1 x 20.1 x 10.4 inches
	Set without Stand	738.0 x 445.4 x 49.0 mm / 29.1 x 17.5 x 1.9 inches
Weight	Set with Stand	5.7 kg / 12.6 lbs
	Set without Stand	5.0 kg / 11.0 lbs
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5% ~ 95%, non-condensing	

2. Product specifications

Specifications	
Item	Description
Audio Specifications	MAX Internal Audio Output Power : Each 10 W(Left/Right) Equalizer : 5 Band Output Frequency : <ul style="list-style-type: none">• RF : 20 Hz ~ 15.4 kHz• AV/Componet/HDMI : 20 Hz ~ 20 kHz
Note : Dolby Digital Plus/Pulse, USB2.0, Film mode, Energy Saving, Eco sensor	

Model	UN40F5500AF	
Feature		
<ul style="list-style-type: none">• Digital-TV, RF, 3-HDMI, 1-Component, 1-A/V, 2-USB2.0, LAN• Brightness : 300 cd/m²• Dynamic Contrast Ratio : Mega DCR• Response Time : 8 ms• CMR : 120		
Specifications		
Item	Description	
LCD Panel	40 inch FHD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 M colors	
Maximum Resolution	Horizontal : 1920 Pixels Vertical : 1080 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display (H x V)* * Horizontal x Vertical	885.6(H) X 498.2(V) (mm) / 34.9(H) X 19.6(V) (inches)	
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	117 W (Under 0.3 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	928.2 x 615.5 x 265.0 mm / 36.5 x 24.2 x 10.4 inches
	Set without Stand	928.2 x 552.3 x 49.4 mm / 36.5 x 21.7 x 1.9 inches
Weight	Set with Stand	8.9 kg / 19.6 lbs
	Set without Stand	8.0 kg / 17.6 lbs
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M

2. Product specifications

Specifications	
Item	Description
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5% ~ 95%, non-condensing
Audio Specifications	MAX Internal Audio Output Power : Each 10 W(Left/Right) Equalizer : 5 Band Output Frequency : <ul style="list-style-type: none">• RF : 20 Hz ~ 15.4 kHz• AV/Componet/HDMI : 20 Hz ~ 20 kHz
Note : Dolby Digital Plus/Pulse, USB2.0, Film mode, Energy Saving, Eco sensor	

Model	UN46F5500AF	
Feature		
<ul style="list-style-type: none">• Digital-TV, RF, 3-HDMI, 1-Component, 1-A/V, 2-USB2.0, LAN• Brightness : 300 cd/m²• Dynamic Contrast Ratio : Mega DCR• Response Time : 8 ms• CMR : 120		
Specifications		
Item	Description	
LCD Panel	46 inch FHD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7M colors	
Maximum Resolution	Horizontal : 1920 Pixels Vertical : 1080 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display (H x V)* * Horizontal x Vertical	1018.1(H) X 572.7(V) (mm) / 40.1(H) X 22.5(V) (inches)	
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	119 W (Under 0.3 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	1059.6 x 700.0 x 307.3 mm / 41.7 x 27.6 x 12.1 inches
	Set without Stand	1059.6 x 626.2 x 49.4 mm / 41.7 x 24.7 x 1.9 inches
Weight	Set with Stand	11.5 kg / 25.4 lbs
	Set without Stand	10.8 kg / 23.8 lb
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5% ~ 95%, non-condensing	

2. Product specifications

Specifications	
Item	Description
Audio Specifications	MAX Internal Audio Output Power : Each 10 W(Left/Right) Equalizer : 5 Band Output Frequency : <ul style="list-style-type: none">• RF : 20 Hz ~ 15.4 kHz• AV/Componet/HDMI : 20 Hz ~ 20 kHz
Note : Dolby Digital Plus/Pulse, USB2.0, Film mode, Energy Saving, Eco sensor	

Model	UN50F5000AF	
Feature		
<ul style="list-style-type: none">• Digital-TV, RF, 3-HDMI, 1-Component, 1-A/V, 2-USB2.0, LAN• Brightness : 300 cd/m²• Dynamic Contrast Ratio : Mega DCR• Response Time : 8 ms• CMR : 120		
Specifications		
Item	Description	
LCD Panel	50 inch FHD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7M colors	
Maximum Resolution	Horizontal : 1920 Pixels Vertical : 1080 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display (H x V)* * Horizontal x Vertical	1023.0(H) X 577.6(V) (mm) / 40.3(H) X 22.7(V) (inches)	
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	138 W (Under 0.3 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	1135.4 x 741.8 x 307.3 mm / 44.7 x 29.2 x 12.1 inches
	Set without Stand	1135.4 x 668.0 x 49.8 mm / 44.7 x 26.3 x 2.0 inches
Weight	Set with Stand	14.7 kg / 32.4 lbs
	Set without Stand	13.0 kg / 28.7 lbs
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5% ~ 95%, non-condensing	

2. Product specifications

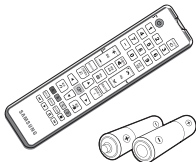


Specifications	
Item	Description
Audio Specifications	MAX Internal Audio Output Power : Each 10 W(Left/Right) Equalizer : 5 Band Output Frequency : <ul style="list-style-type: none">• RF : 20 Hz ~ 15.4 kHz• AV/Componet/HDMI : 20 Hz ~ 20 kHz
Note : Dolby Digital Plus/Pulse, USB2.0, Film mode, Energy Saving, Eco sensor	

Model	UN32F4300AF	
Feature		
<ul style="list-style-type: none">• Digital-TV, RF, 3-HDMI, 1-Component, 1-A/V, 2-USB2.0, LAN• Brightness : 250 cd/m²• Dynamic Contrast Ratio : Mega DCR• Response Time : 8 ms• CMR : 120		
Specifications		
Item	Description	
LCD Panel	32 inch HD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7M colors	
Maximum Resolution	Horizontal : 1366 Pixels Vertical : 768 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	74.25 MHz	
Active Display (H x V)* * Horizontal x Vertical	703.4H) X 397.8(V) (mm) /28.7(H) X 16.2V) (inches)	
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz	
Power Consumption	65 W (Under 0.3 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	737.9 x 512.9 x 265.0 mm / 29.1 x 20.2 x 10.4 inches
	Set without Stand	737.9 x 435.8 x 49.5 mm / 29.1 x 17.2 x 1.9 inches
Weight	Set with Stand	6.3 kg / 13.9 lbs
	Set without Stand	5.2 kg / 11.5 lbs
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5% ~ 95%, non-condensing	

2. Product specifications

Specifications	
Item	Description
Audio Specifications	MAX Internal Audio Output Power : Each 10 W(Left/Right) Equalizer : 5 Band Output Frequency : <ul style="list-style-type: none">• RF : 20 Hz ~ 15.4 kHz• AV/Componet/HDMI : 20 Hz ~ 20 kHz
Note : Dolby Digital Plus/Pulse, USB2.0, Film mode	

2-2. Accessories

Product	Description	Code. No	Remark
	Remote Control & Batteries (AAA x 2)	AA59-00784A(ZC/ZA) AA59-00809A(ZX/ZP)	Samsung Electronics Service center
	Power Cord	3903-000853	
	Owners Manual	BN68-04791A	

3. Disassembly and Reassembly

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



This LED TV contains electrostatically sensitive devices. Use caution when handling these components.

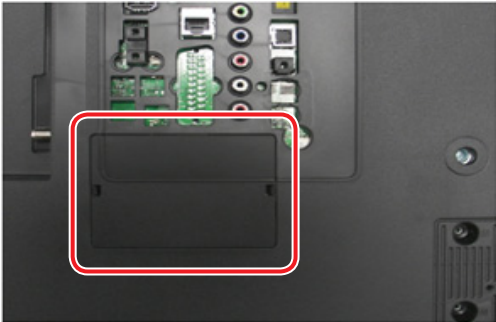
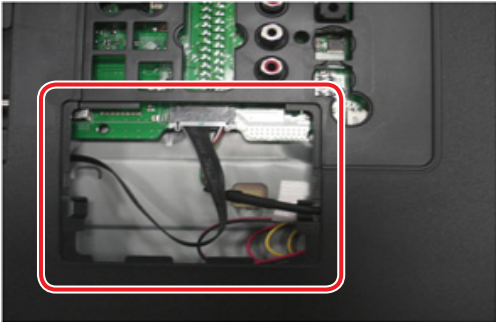

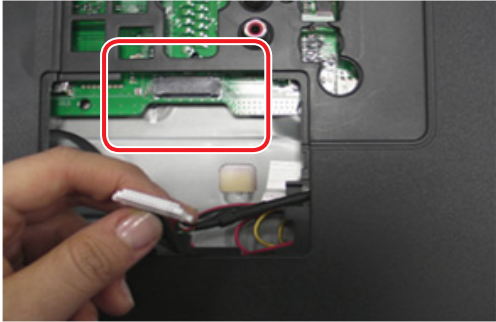

3-1. Disassembly and Reassembly

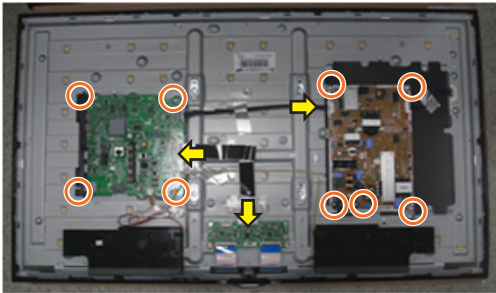

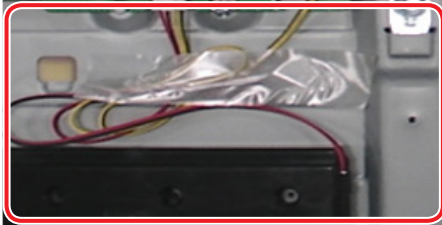

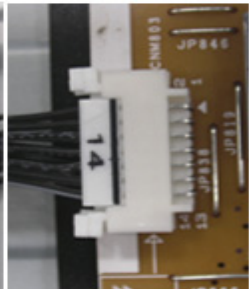
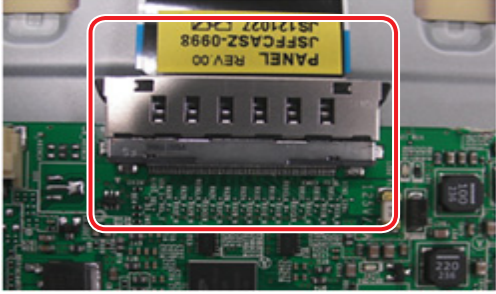
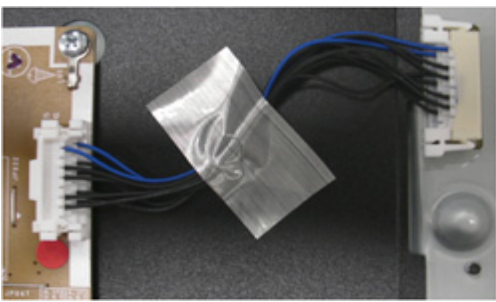


1. Disconnect the LED TV from the power source before disassembly.
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
3. If there is no additional coment, it is same for all inches.

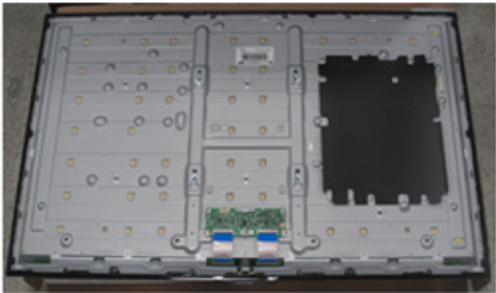
Description	Picture Description	Screws
1 Place TV face down on cushioned table.		
2 Remove 4 screws from the Stand and Remove Stand. <ul style="list-style-type: none"> • 32" : 3EA • 40/46/50" : 4EA 		 6003-001782
3 Remove screws of Rear Cover. <ul style="list-style-type: none"> • 32" 5500 : 10 / 2 EA • 32" 4300 : 8 / 2 EA • 40" : 11 / 4 EA • 46" : 16 / 4 EA • 50" : 16 / 4 EA 		 6003-001782 6003-002755


3. Disassembly and Reassemble

Description	Picture Description	Screws
4 Remove the Cover Jack.		
		
5 Lift up Rear Cover slightly from the bottom.		
6 Disconnect the Function Assy Cable.		
7 Remove the Rear Cover.		

Description	Picture Description	Screws
8 Remove 9 screws of Main Board and Power Board.		 6001-003016
9 Remove the Speakers and Power Cables.	  	
10 Remove the LVDS Cable and Panel Drive Cable.	 	

3. Disassembly and Reassemble

Description	Picture Description	Screws
9 Completed disassembly.		

 **NOTE**

Reassembly procedures are in the reverse order of disassembly procedures.

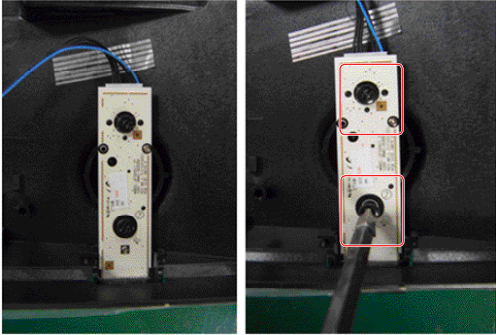
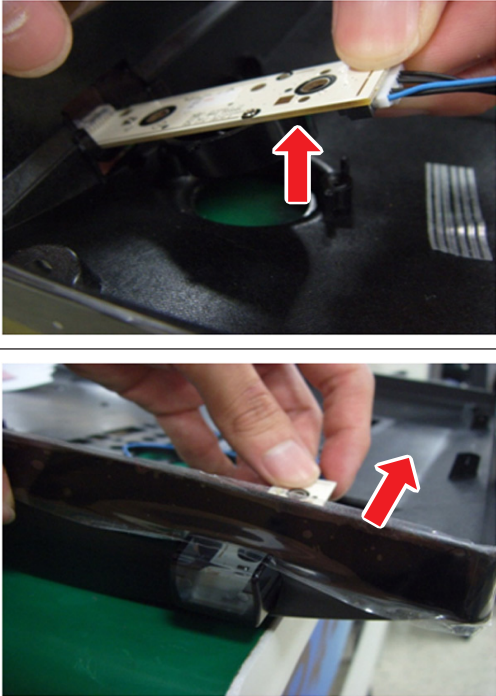
■ Screw Size

Code No.	COLOR	A (mm)	B (mm)	C (mm)	D (mm)
6003-001782	BLACK	7.80~8.20	1.85~1.95	3.81~3.91	11.4~12.0
6001-002755	BLACK	7.1~7.5	1.9~2.0	2.98~3.02	5.7~6.0
6001-003016	WHITE	5.6~6.0	1.15~1.25	2.92~2.98	3.7~4.0

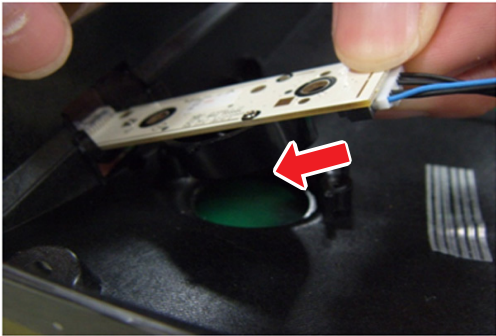
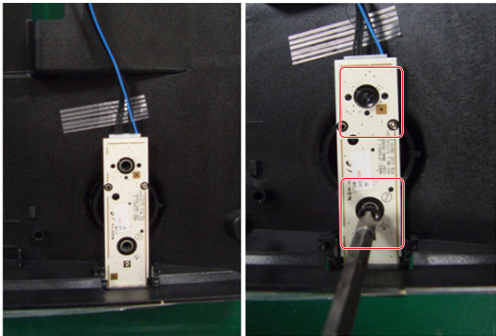

Code No.	E (mm)	Q'ty		Screw Image
6003-001782	-	"32" 5500 : 10EA, 32"" 4300 : 8EA 40" : 17EA, 46" :20EA, 50" :20EA"	Stand, Rear Cover, Cover jack	
6001-002755	4.4~5.4	32" : 2EA, 40"/46"/50": 4EA	Rear cover	
6001-003016	2.4~3.4	9EA	Main board, Smps, Wall bracket	

3-2. Assy Board P-Jog Switch & Ir

■ How to disassembly

Description	Picture Description	Refer
1 Loosen 2 screws.		
2 Pull out a jog function.		

■ How to assembly


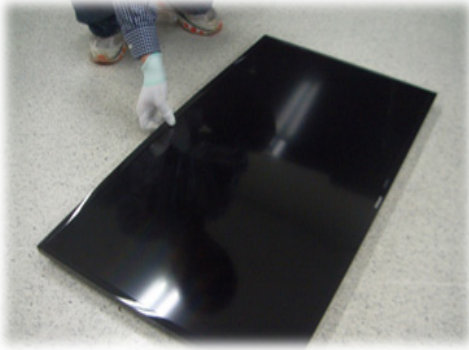

Description	Picture Description	Refer
1 Insert a jog function.		
2 Put 2 screws.		
3 Press the function assy into the cabinet until locked.		

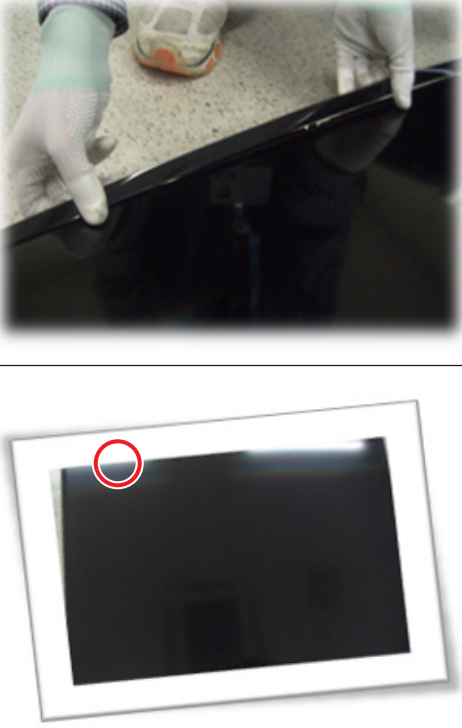
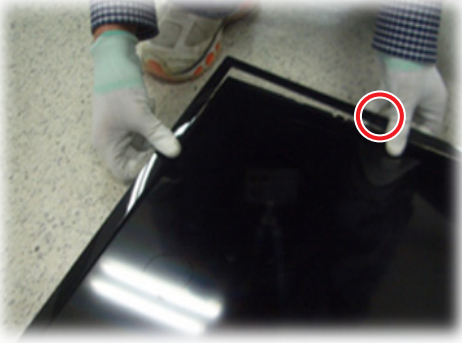
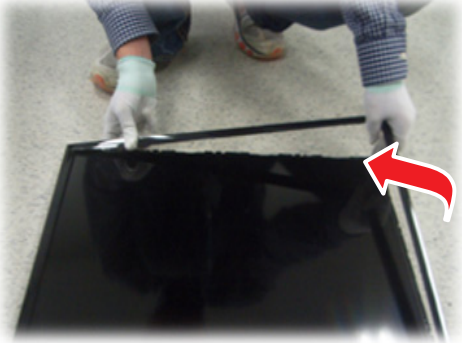
When you want to ignore the funtion key actions

Option	Config Option	Navigation Key Func	0 way : New Function (Naviagtion) Key ➡ [Default]
Control			1 : Old Function (Touch) Key
Debug			2 : Do not work Function key
SVC			
ADC/WB			
Advanced			





3-3. Disassembly(PTC)

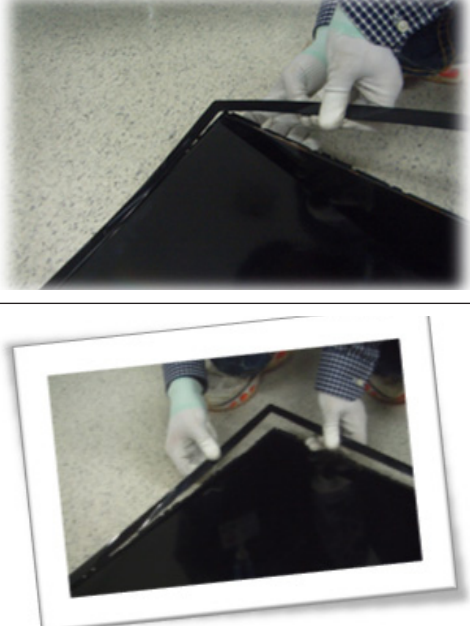
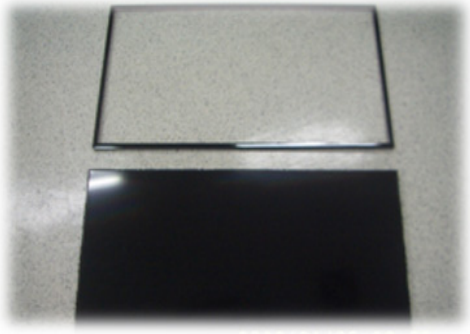

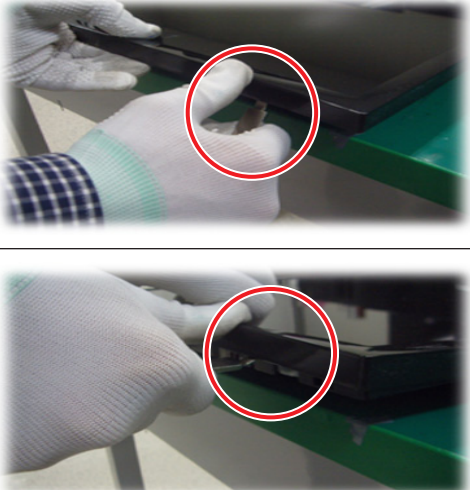
■ How to disassembly

Description	Picture Description	Refer
1 Place TV face up on cushioned table.		
2 Products at the top of the central TOP-CHASSIS is rotated by 45 degrees outward and pulls.		
		

Description	Picture Description	Refer
3 Pull in the same way from the center of the top.		
4 Pull the left part of the product as shown while holding the raised portion on figure 3.		
5 Pull the bottom part of the product as figure 2 while holding the raised portion on figure 4.		

3. Disassembly and Reassemble

Description	Picture Description	Refer
<div data-bbox="177 286 686 342"><div>6</div><div>As shown in the picture, Lift the bottom of the TOP-CHASSIS.</div></div>	<div data-bbox="740 300 1212 645"></div> <div data-bbox="746 703 1206 1025"></div>	
<div data-bbox="177 1075 689 1131"><div>7</div><div>Pull the products at the bottom of the right side of the chassis.</div></div>	<div data-bbox="740 1088 1212 1433"></div> <div data-bbox="746 1491 1206 1814"></div>	

Description	Picture Description	Refer
8 Lift the bottom of the chassis with one hand and holding the bottom of the product after you pull the right side of the product chassis.		
9 Disassembly is complete.		
<div data-bbox="245 1339 421 1388">  CAUTION </div> <div data-bbox="245 1397 676 1464"> To use JIG : Does not lift the chassis by hand, JIG using the lift. </div>		

**NOTE**

Reassembly procedures are in the reverse order of disassembly procedures.

4. Troubleshooting

4-1. Troubleshooting

■ Previous Check

1. Check the various cable connections first.
 - Check to see if there is a burnt or damaged cable.
 - Check to see if there is a disconnected or loose cable connection.
 - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.
3. How to distinguish if the problem is caused by Main Board or T-Con Board.
 - **No Video** : If the problem is No Video but BLU is on and Indication LED is blinking repeatedly and faster than normal booting, replace the T-Con Board.
 - **Distorted Picture** : Check the inner patterns.

For All mode

X12	FOX_FT1 FRC Post	Picture	Problem
OK	OK	NG	Main Board or Signal Source
NG	OK	NG	Main Board
NG	NG	NG	Main or LVDS cable or T-con or Panel

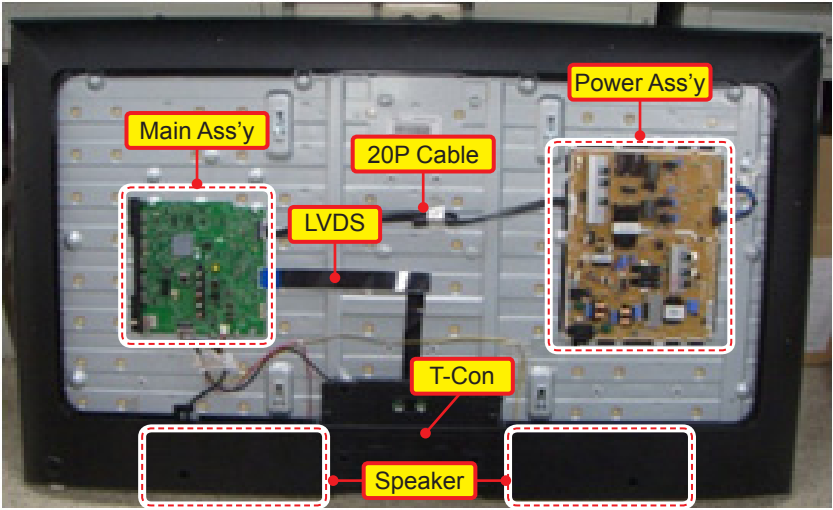
Only for HDMI mode (additional check)

HDMI	Picture	Problem
OK	NG	There is no problems after HDMI IC check HDMI source or HDMI jack.
NG	NG	There is no problems before HDMI IC check GenoaS pattern or LVDS cable or T-con.

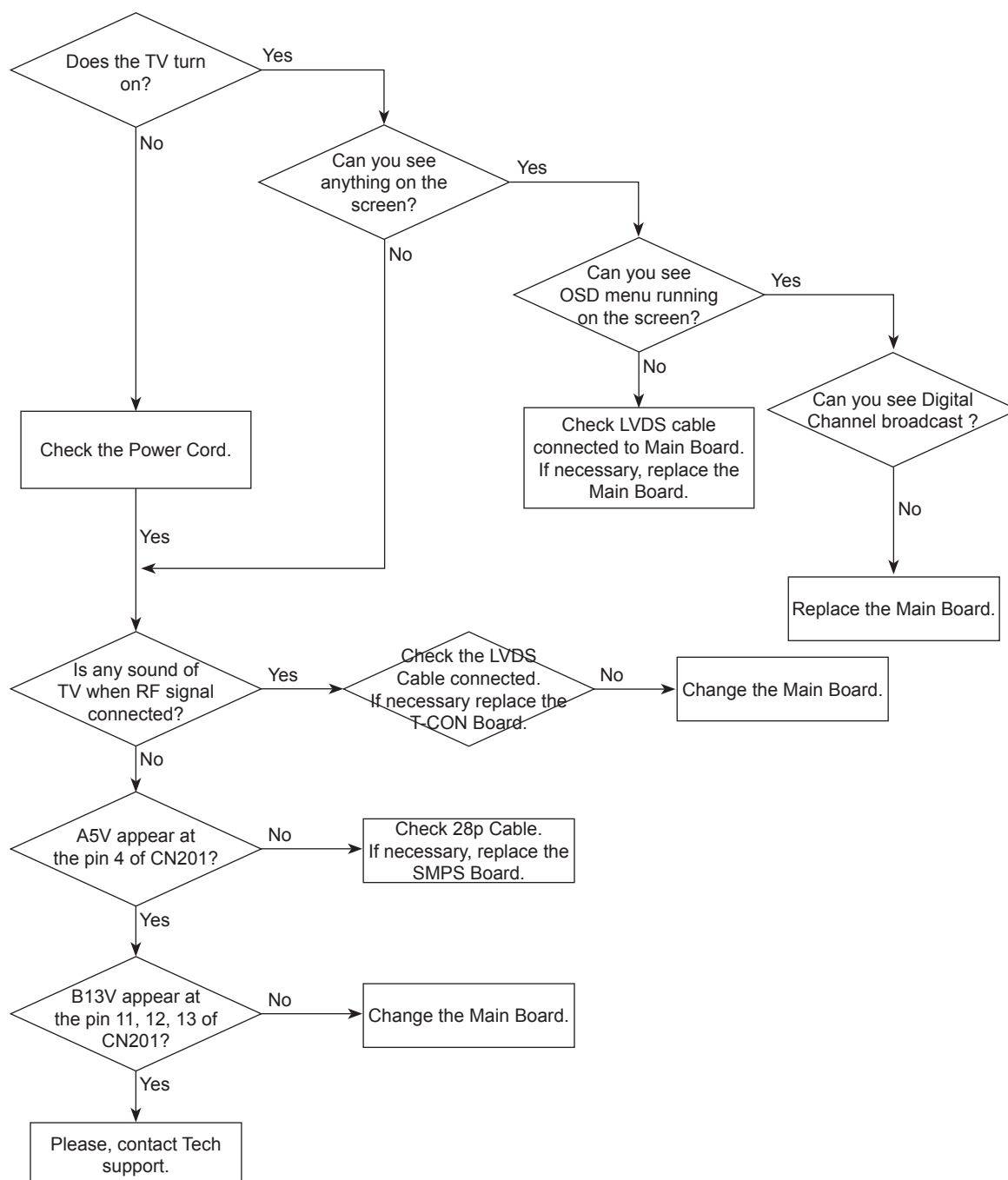
■ How to check inner pattern?

1. Factory mode. (1 → 8 → 2 → Power on when TV is in 'stand-by mode')
2. Move to SVC menu.
3. Move to Test Pattern.
4. Check inner patterns.

■ Inside View



■ Simple flow chart of malfunction



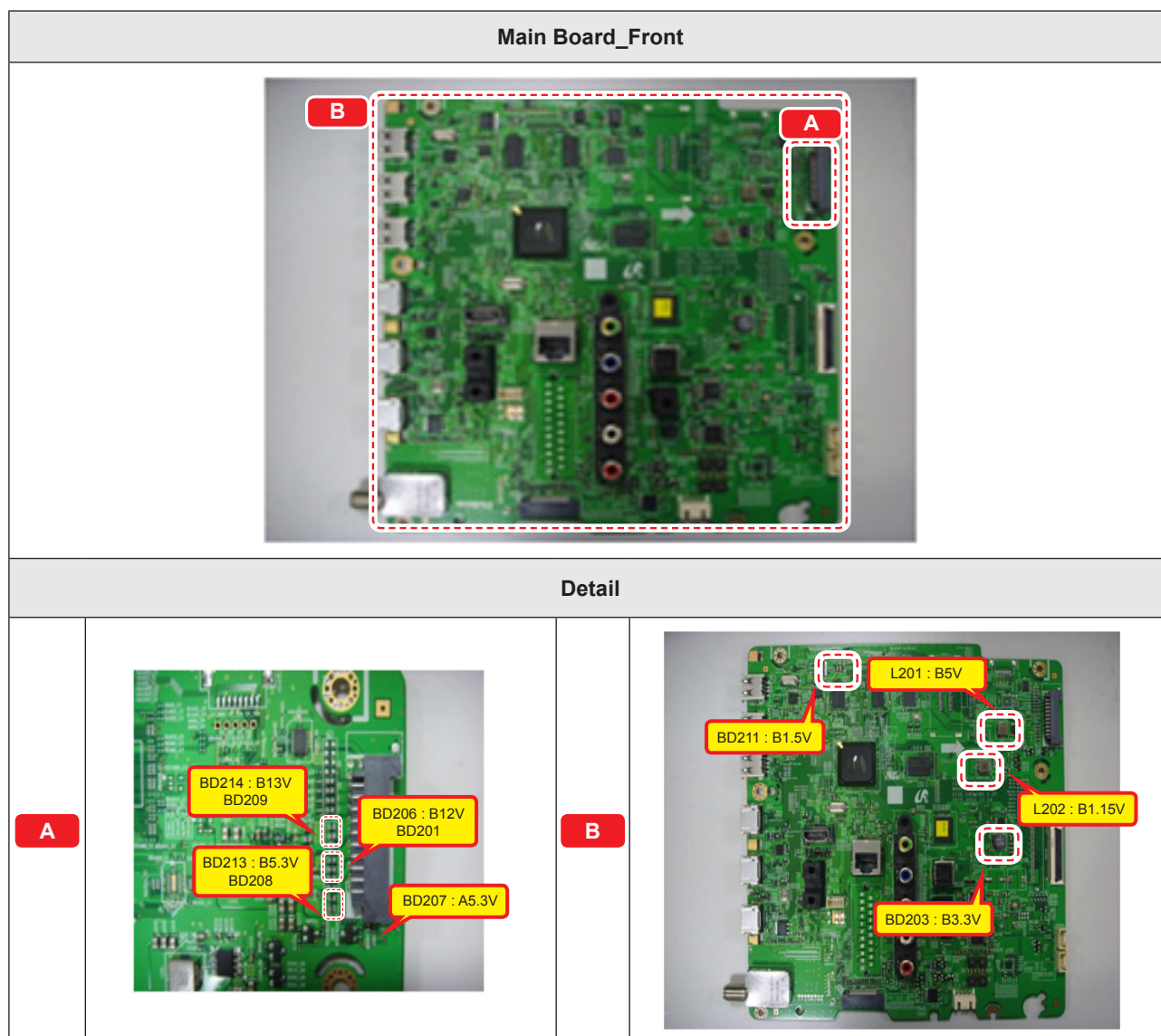
4-2. How to Check Fault Symptom

■ NO Power

*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> The LEDs on The front panel do not work when connecting The power cord. The SMPS relay does not work when connecting The power cord. The units appears to be dead.
Major checkpoints	<p>The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following:</p> <ul style="list-style-type: none"> Check the internal cable connection status inside the unit. Check the fuses of each part. Check the output voltage of SMPS. Replace the Main Board.
Diagnostics	<pre> graph TD Q1[Power indicator LED is on?] -- No --> A1[Check a connetion power code.] Q1 -- Yes --> Q2[Check the backlight on, when 20p cable unconnected ?] Q2 -- No --> A2[Change 20p cable. Change Main Power Ass'y.] Q2 -- Yes --> Q3[Check 'Stand-By 5V' ? No - BD207 : A5.3V] Q3 -- No --> A2 Q3 -- Yes --> Q4[Check 'Power input of Main Ass'y' ? - BD206/BD201 : B12VS - BD214/209 : B13V - BD208/BD213 : B5V] Q4 -- No --> A2 Q4 -- Yes --> Q5[Check 'Power IC output of Main Ass'y' ? IC202 : A3.3V L202 : B1.15V / L201 : B5V L203 : B3.3V / BD211 : B1.5V] Q5 -- No --> A3[Change the Main Ass'y.] Q5 -- Yes --> Q6[Check Input power of 'T-con board' ? - F1(T-CON) : B13V] Q6 -- No --> A4[Reconnect or Change. the LVDS cable.] Q6 -- Yes --> Q7[Check Power of 'T-con board'. - BD1(T-CON) : Panel_12V - B1.1V(T-CON-TP) : FT1_1.1V_PW] Q7 -- No --> A5[Change the T-con Board] Q7 -- Yes --> A6[Please, Contact tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts

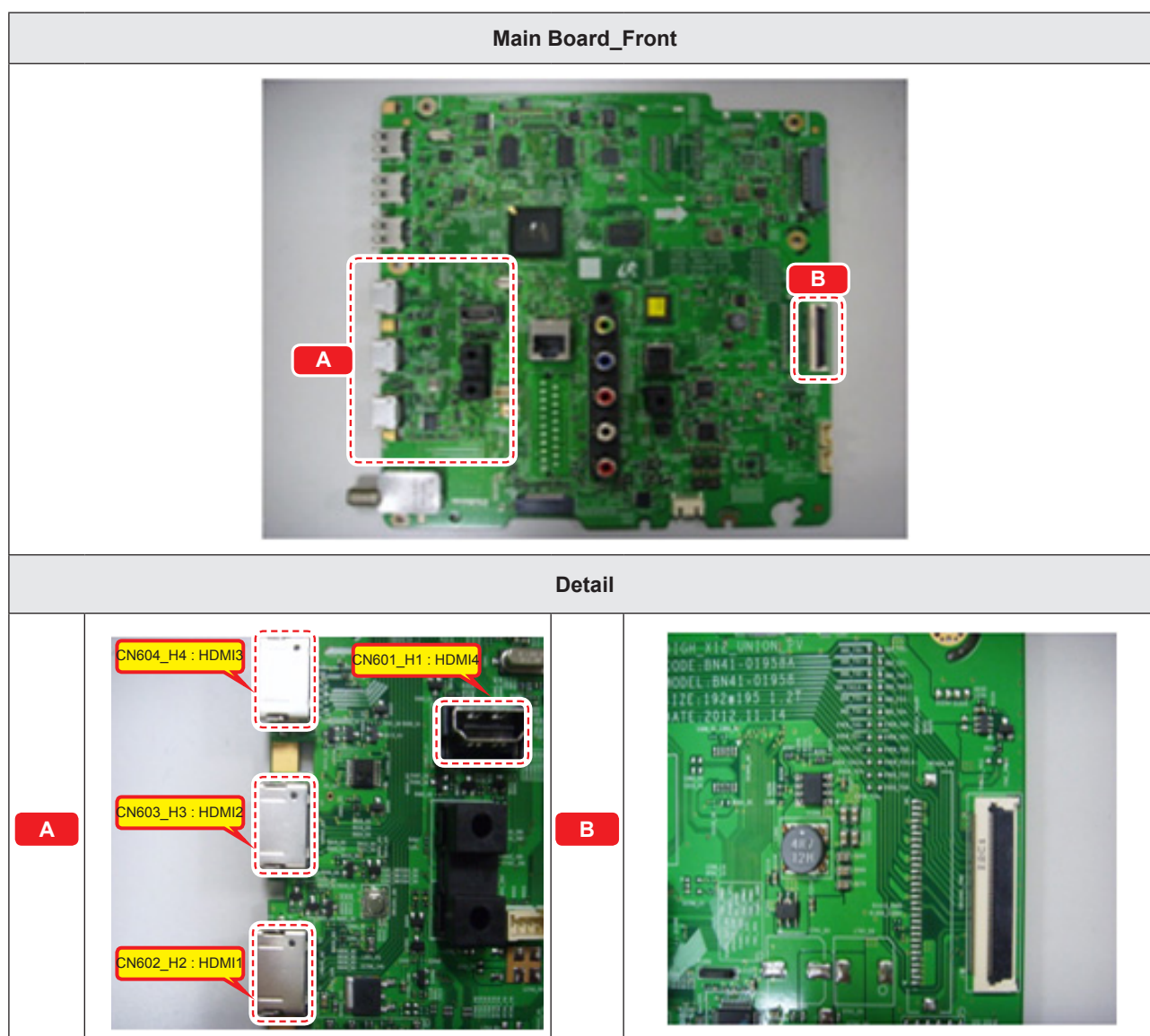


■ No Video (HDMI 1, 2, 3 - Digital Signal)

*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

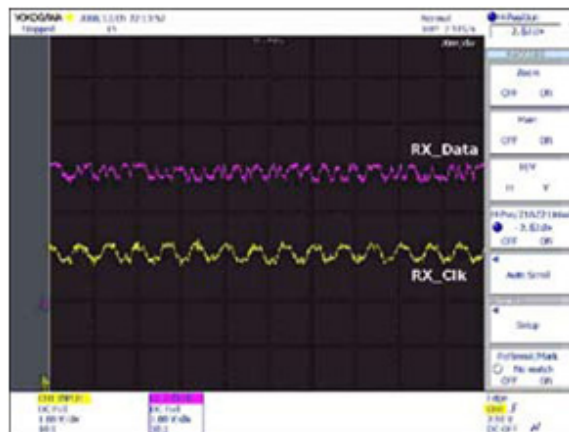
Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the HDMI source. Check the HDMI switch. This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	<pre> graph TD Q1[Power indicator LED is off. Lamp(Backlight) on, no video ?] -- No --> A1[Check a set in the 'Stand-by mode'.] Q1 -- Yes --> Q2[Check the HDMI source and check the connection of HDMI cable ?] Q2 -- No --> A2[Input the HDMI signal properly.] Q2 -- Yes --> Q3[Check the signal at Input of Main board ? HDMI1 Clk : Pin #10, #12 of CN602_H2 DATA : Pin #7, #9, #4, #6, #1, #3 of CN602_H2 HDMI2 Clk : Pin #10, #12 of CN603_H3 DATA : Pin #7, #9, #4, #6, #1, #3 of CN603_H3 HDMI3 Clk : Pin #10, #12 of CN604_H4 DATA : Pin #7, #9, #4, #6, #1, #3 of CN604_H4 HDMI4 Clk : Pin #10, #12 of CN601_H1 DATA : Pin #7, #9, #4, #6, #1, #3 of CN601_H1] Q3 -- No --> A3[Check CN601~4. Check HDMI cable. Change the Main Ass'y or Check IC1001(X12). Change the Main Ass'y.] Q3 -- Yes --> Q4[Check the LVDS clk signal at output of Main board.(TX) TX2_CLK : ODD_TXCLK_DN/DP TX4_CLK : EVEN_TXCLK_DN/DP] Q4 -- No --> A4[Check IC1001(X12). Change the Main Ass'y.] Q4 -- Yes --> Q5[Check the LVDS cable? Replace the T-con / LCD panel?] Q5 -- No --> A5[Please, Contact Tech support.] </pre> <p>The flowchart starts with a decision box: "Power indicator LED is off. Lamp(Backlight) on, no video ?". If "No", the action is "Check a set in the 'Stand-by mode'". If "Yes", it proceeds to "Check the HDMI source and check the connection of HDMI cable ?". If "No", the action is "Input the HDMI signal properly.". If "Yes", it proceeds to a detailed signal check box (labeled 1) for HDMI1, HDMI2, HDMI3, and HDMI4. This box lists clock and data pins for each. If "No", the action is to check CN601~4, the HDMI cable, change the main assembly, or check IC1001(X12) and change the main assembly. If "Yes", it proceeds to a signal check box (labeled 2) for LVDS clk signal at output of Main board (TX), listing TX2_CLK and TX4_CLK. If "No", the action is to check IC1001(X12) and change the main assembly. If "Yes", it proceeds to "Check the LVDS cable? Replace the T-con / LCD panel?". If "No", the final action is "Please, Contact Tech support.".</p>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts

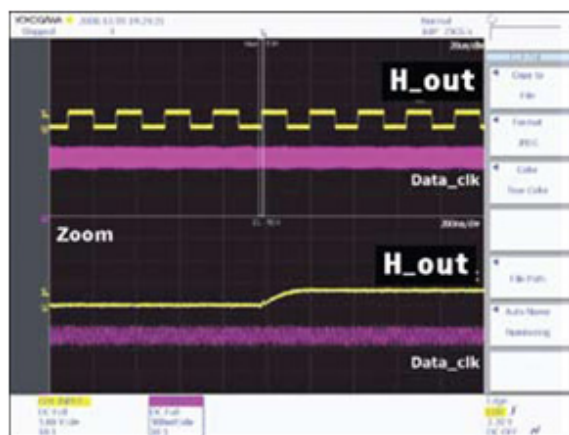


1	HDMI input (RX_Data, RX_Clk)
---	------------------------------

HDMI input (RX_Data, RX_Clk)



LVDS output

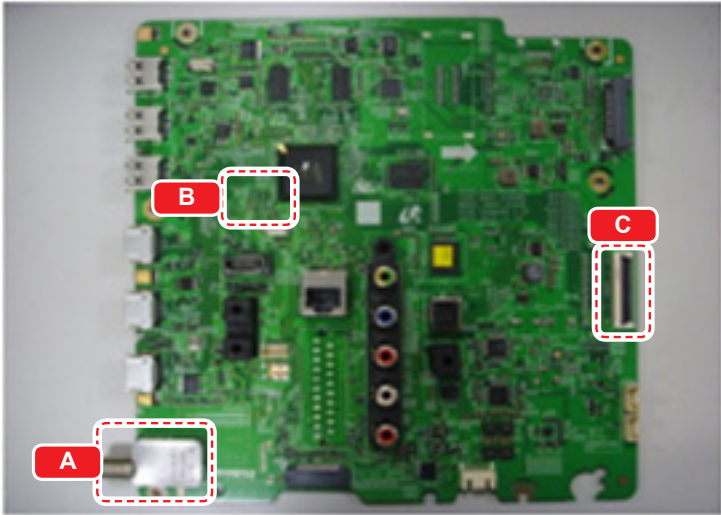
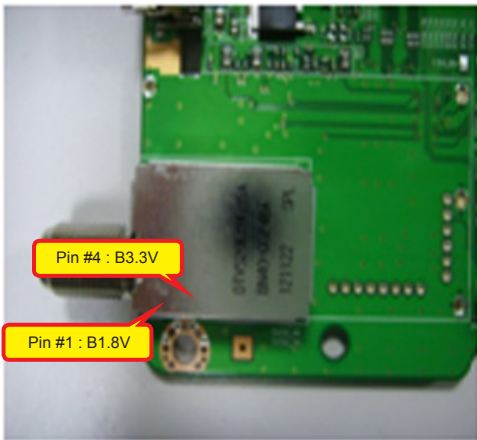
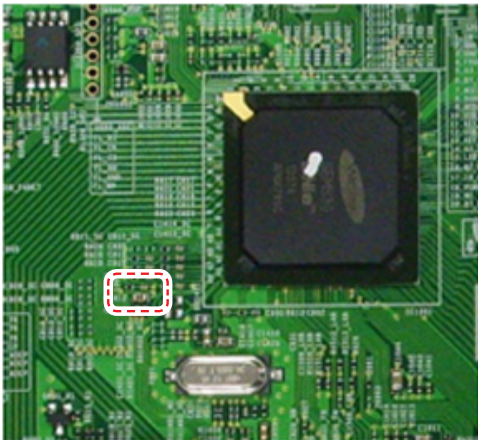



■ No Video (Tuner_CVBS)

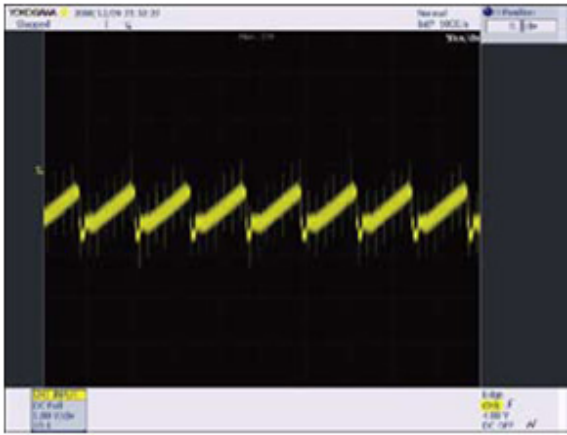
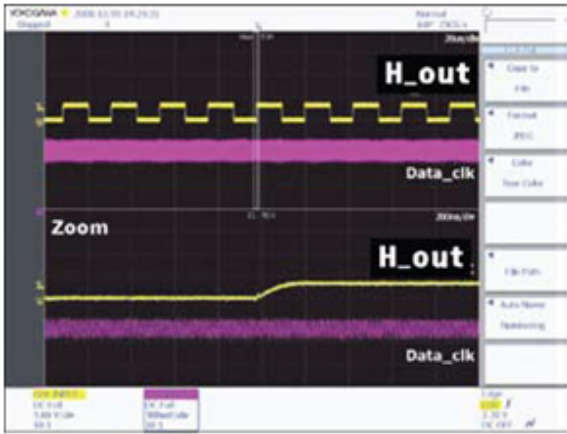
*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the Tuner CVBS source. Check the Tuner. This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	<pre> graph TD Q1[Power indicator LED is off. Lamp(Backlight) on, no video ?] -- No --> A1[Check a set in the 'Stand-by mode'.] Q1 -- Yes --> Q2[Check the RF source and check the connection of RF cable ?] Q2 -- No --> A2[Input the RF source properly.] Q2 -- Yes --> Q3[1 Check the Power of Tuner ? Pin #4 of Tuner : B3.3V_Tuner Pin #1 of Tuner : B1.8V_Tuner] Q3 -- No --> A3[Change the Main Ass'y.] Q3 -- Yes --> Q4[2 Check the CVBS data out of IC1001 ? C807 : Tuner CVBS] Q4 -- No --> A4[Check IC1001(X12). Change the Main Ass'y.] Q4 -- Yes --> Q5[3 Check the LVDS clk signal at output of Main board.(TX) TX2_CLK : ODD_TXCLK_DN/DP TX4_CLK : EVEN_TXCLK_DN/DP] Q5 -- No --> A5[Check IC1001(X12). Change the Main Ass'y.] Q5 -- Yes --> Q6[Check the LVDS cable? Replace the T-con / LCD panel?] Q6 -- No --> A6[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts

Main Board_Front			
			
Detail			
A		B	
			

■ WAVEFORMS

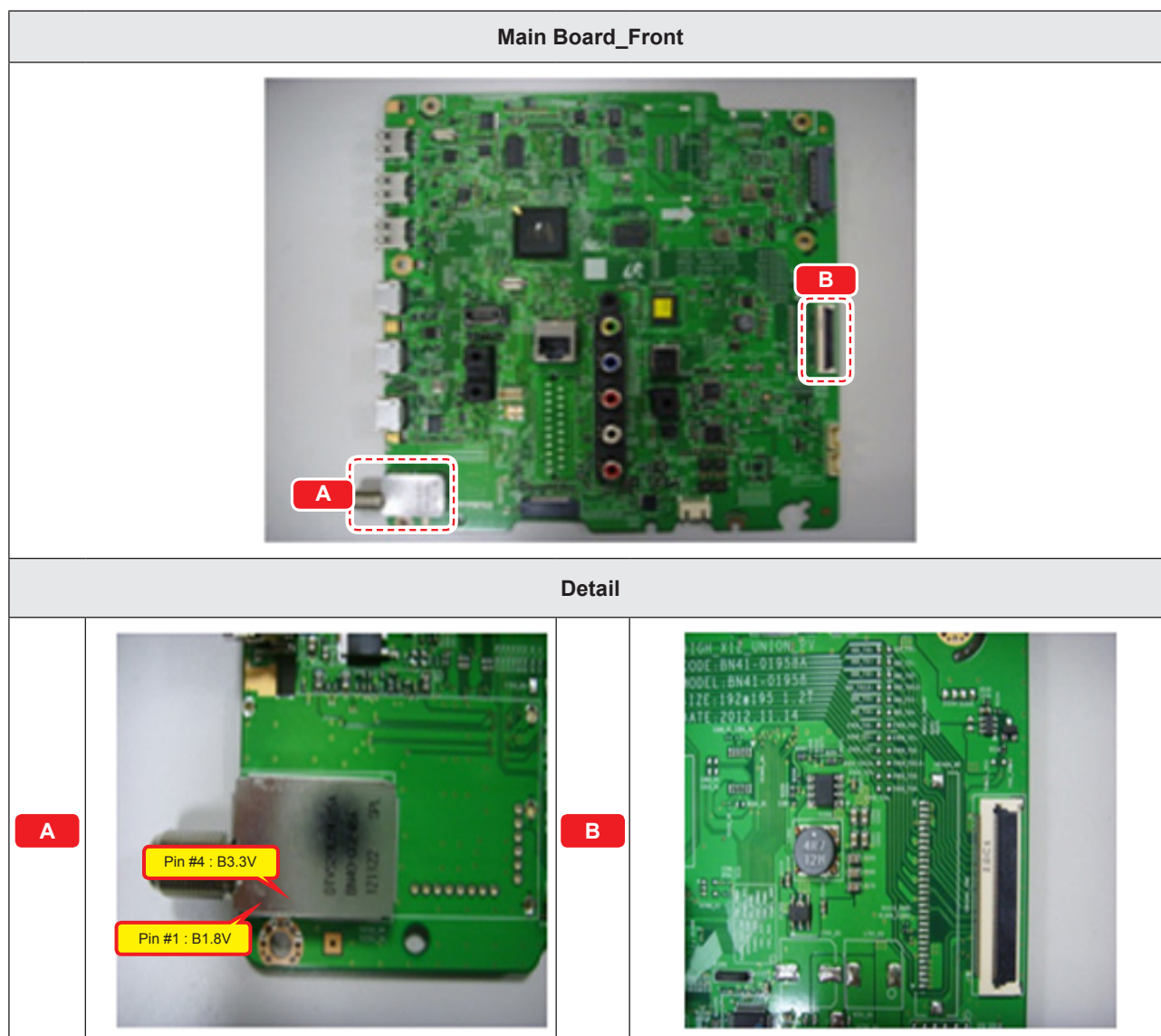
1	CVBS OUT (Grey Bar)
	
2	LVDS output
	

■ No Video (Tuner DTV)

*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the DTV source. Check the Tuner. This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	<pre> graph TD Q1[Power indicator LED is off. Lamp(Backlight) on, no video ?] -- No --> A1[Check a set in the 'Stand-by mode'.] Q1 -- Yes --> Q2[Check the RF source and check the connection of RF cable ?] Q2 -- No --> A2[Input the RF source properly.] Q2 -- Yes --> Q3[1 Check the 'signal strength' in Self Diagnosis menu Strength is enough ?] Q3 -- No --> A3[Check the D-TV source.] Q3 -- Yes --> Q4[2 Check the Power of Tuner ? Pin #4 of Tuner : B3.3V_Tuner Pin #1 of Tuner : B1.8V_Tuner] Q4 -- No --> A4[Change the Main Ass'y.] Q4 -- Yes --> Q5[2 Check the LVDS clk signal at output of Main board.(TX) TX2_CLK : ODD_TXCLK_DN/DP TX4_CLK : EVEN_TXCLK_DN/DP] Q5 -- No --> A5[Check IC1001(X12) Change the Main Ass'y.] Q5 -- Yes --> Q6[Check the LVDS cable? Replace the T-con / LCD panel?] Q6 -- No --> A6[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts



■ WAVEFORMS

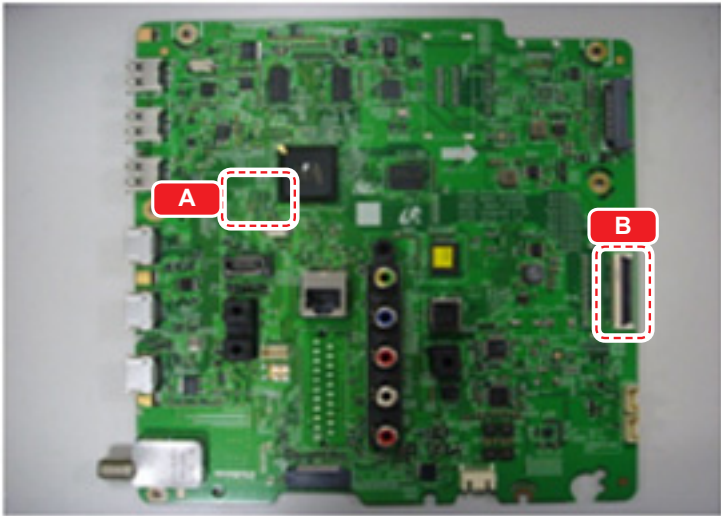
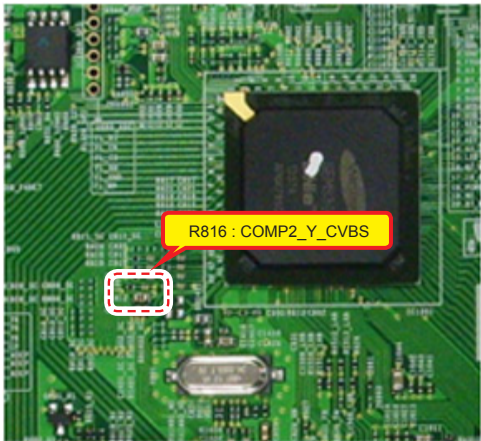
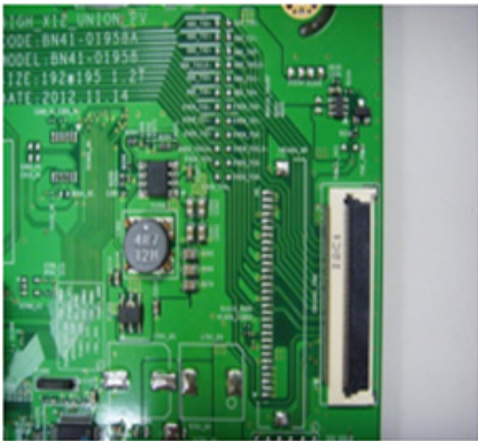
1	LVDS output
	
2	CH_CLK, CH_VALID
<div></div> <div></div>	

■ No Video (Video AV)

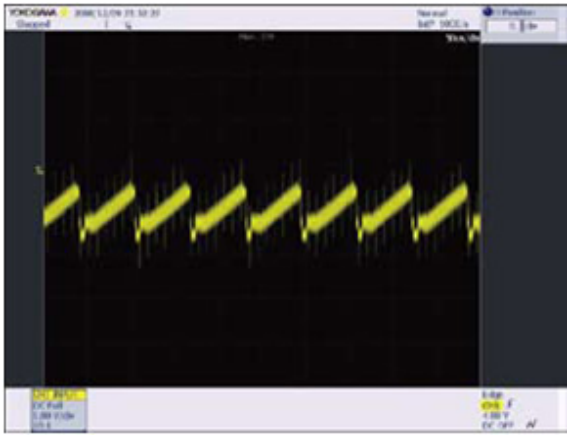
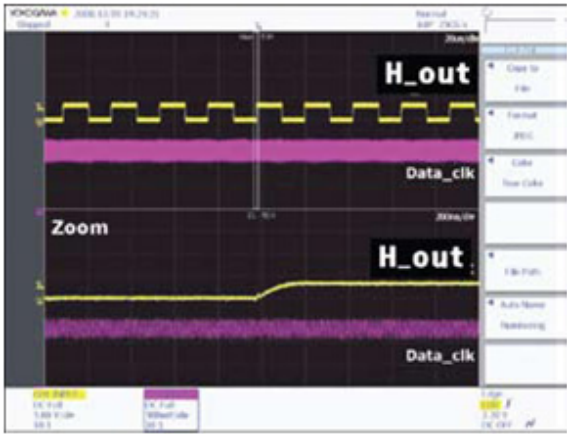
*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the Video CVBS source This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	<pre> graph TD Q1[Power indicator LED is off. Lamp(Backlight) on, no video ?] -- No --> A1[Check a set in the 'Stand-by mode'.] Q1 -- Yes --> Q2[Check the video source and check the connection of video cable?] Q2 -- No --> A2[Input the video source properly.] Q2 -- Yes --> Q3[Check the LVDS clk signal at output of Main board.(TX) TX2_CLK : ODD_TXCLK_DN/DP TX4_CLK : EVEN_TXCLK_DN/DP] Q3 -- No --> A3[Check IC1001(X12). Change the Main Ass'y.] Q3 -- Yes --> Q4[Check the LVDS cable? Replace the T-con / LCD panel?] Q4 -- No --> A4[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts

Main Board_Front		
		
Detail		
<div>A</div> 	<div>B</div> 	

■ WAVEFORMS

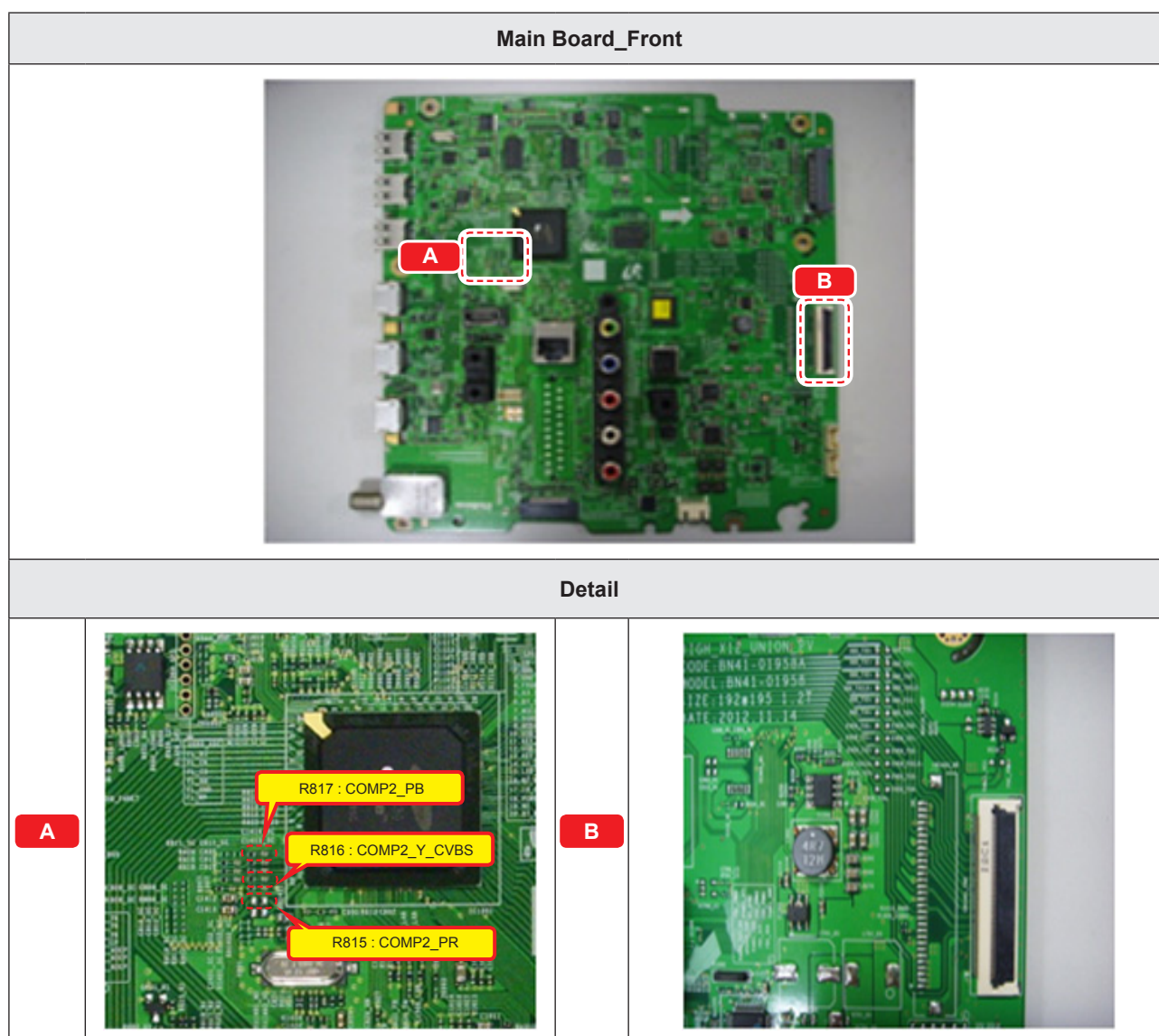
1	CVBS OUT (Grey Bar)
	
2	LVDS output
	

■ No Video (Component)

*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the Component source. This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	<pre> graph TD Q1[Power indicator LED is off. Lamp(Backlight) on, no video ?] -- No --> A1[Check a set in the 'Stand-by mode'.] Q1 -- Yes --> Q2[Check the component source and check the connection of component cables(Y,Pb,Pr) ?] Q2 -- No --> A2[Input the component source properly.] Q2 -- Yes --> Q3[Does the component data appear at ? COMP2_Y_CVBS : R816 Pb : R817 Pr : R815] Q3 -- No --> A3[Check CN502. Change the Main Assy] Q3 -- Yes --> Q4[Check the LVDS clk signal at output of Main board.(TX) TX2_CLK : ODD_TXCLK_DN/DP TX4_CLK : EVEN_TXCLK_DN/DP] Q4 -- No --> A4[Check IC1001(X12). Change the Main Ass'y.] Q4 -- Yes --> Q5[Check the LVDS cable? Replace the T-con / LCD panel?] Q5 -- No --> A5[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

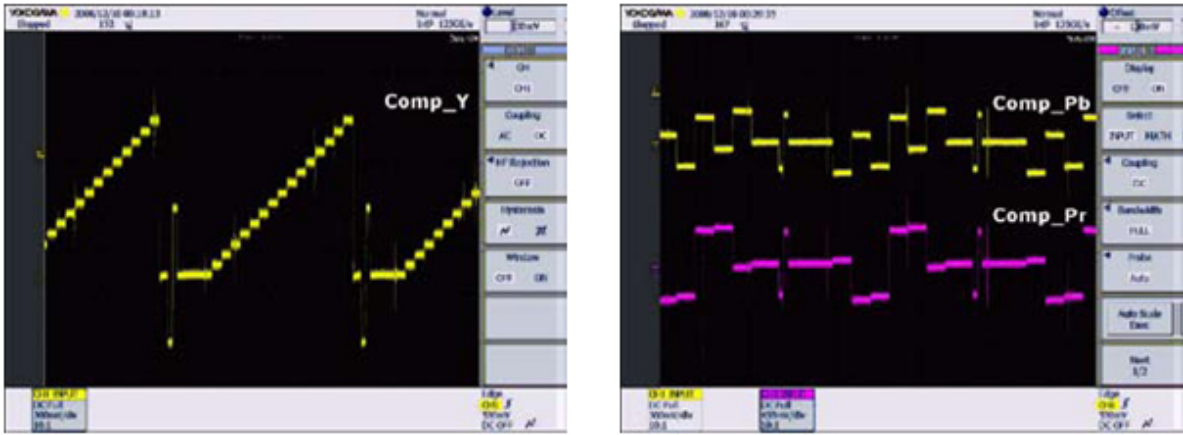
■ Location of Parts



■ WAVEFORMS

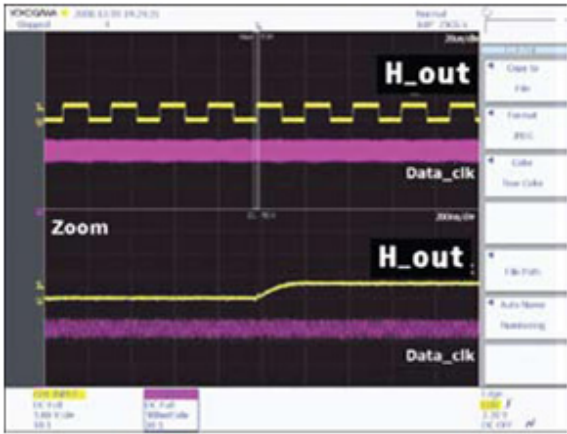
1

Compnent_Y (Gray scale) / Pb / Pr (Color bar)



2

LVDS output

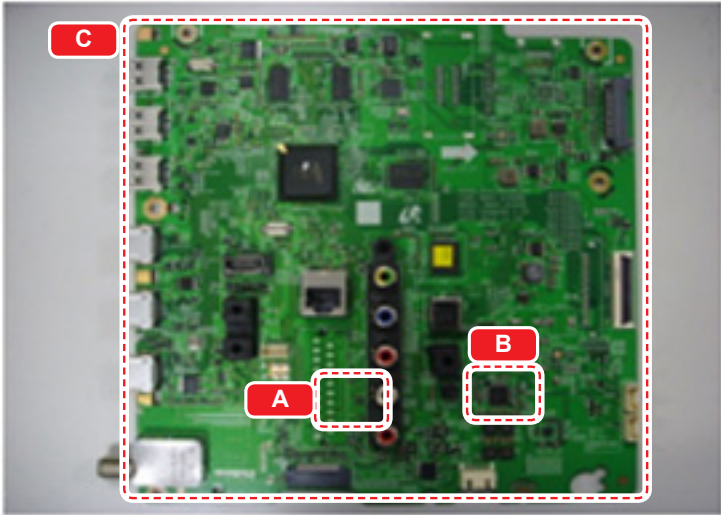
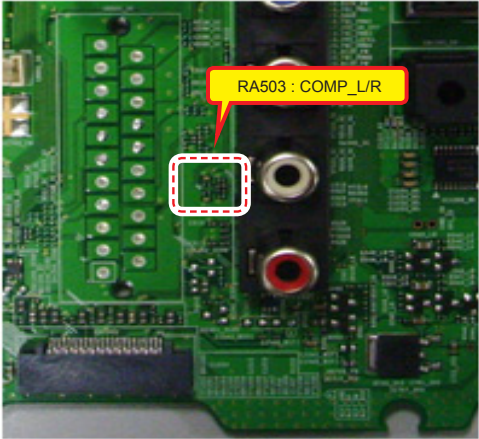
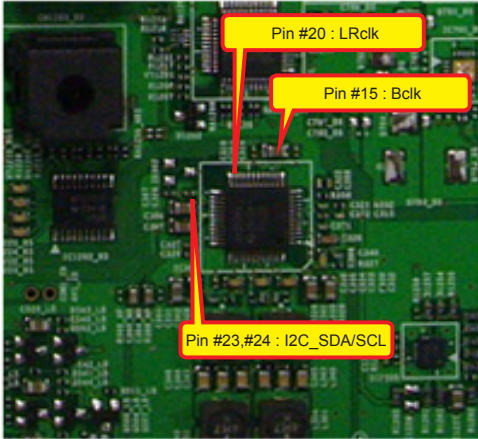
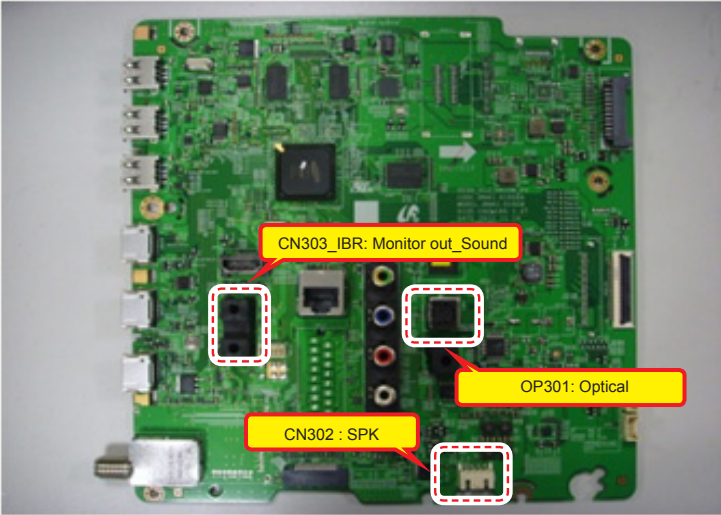


■ No Sound (1.Speaker 2.Monitor_out, 3.Optical)_X12

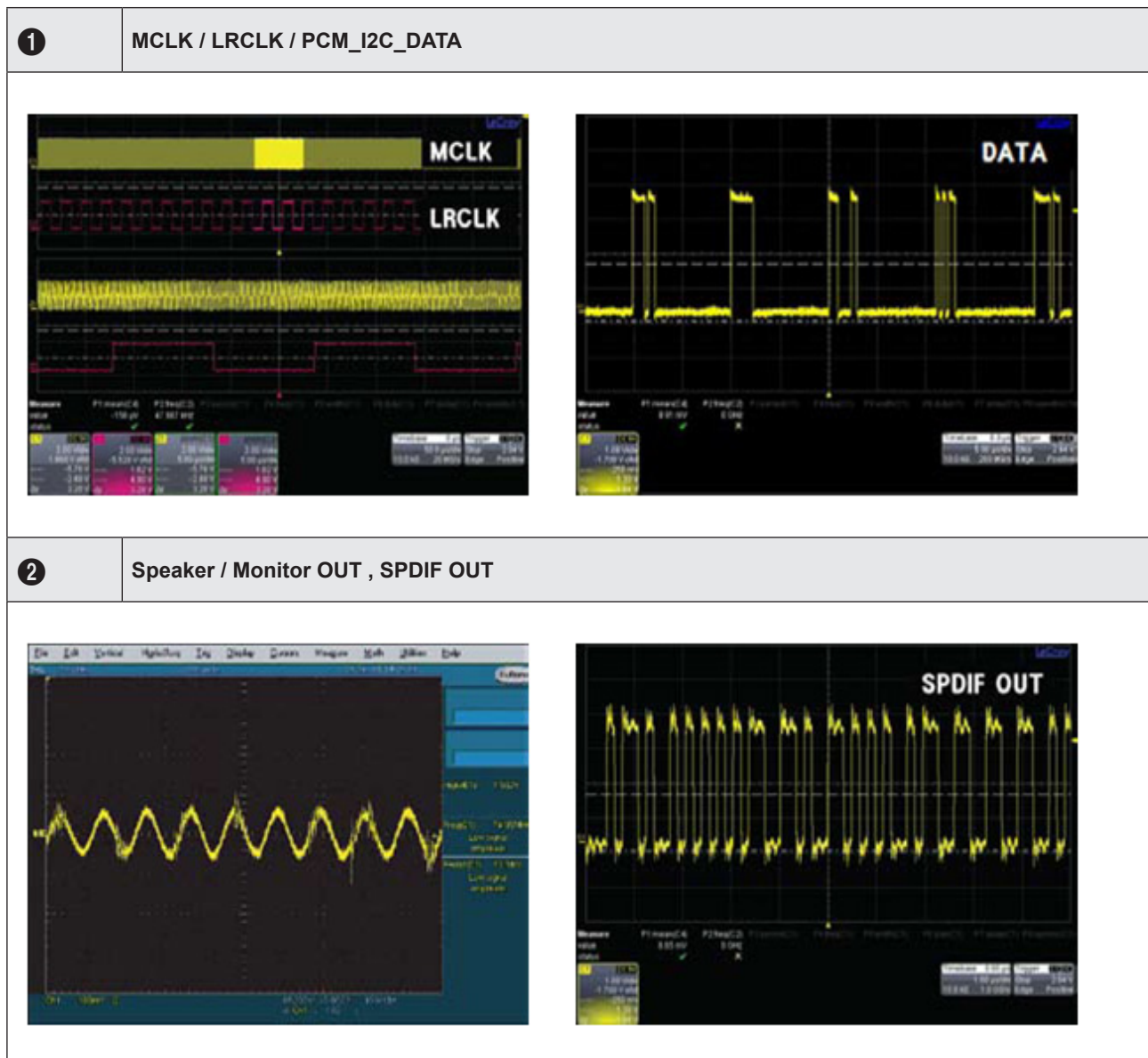
*Refer to the next page to check the location such a CN201 or IC201 SVC Manual mentioned.

Symptom	<ul style="list-style-type: none"> Video is normal but there is no sound.
Major checkpoints	<ul style="list-style-type: none"> When the speaker connectors are disconnected or damaged. When the sound processing part of the Main Board is not functioning. Speaker defect.
Diagnostics	<pre> graph TD Q1[Check the source and check the connection of sound cable (Comp) ?] -- No --> A1[Input the sound source properly.] Q1 -- Yes --> Q2[Check the signal at input of Main board? AV, COMP L/R : RA503] Q2 -- No --> A2[Check CN502. Change the Main Assy.] Q2 -- Yes --> Q3[Check the DATA between the Audio IC's ? Pin #15 of IC301 : Bclk Pin #20 of IC301 : LRclk Pin #23,#24 of IC301 : I2C_SDA/SCL] Q3 -- No --> A3[Check IC301. Change the Main Assy.] Q3 -- Yes --> Q4[1. Check the Speaker sound data at CN302 2. Check the Monitor out sound data at CN303_IBR 3. Does the SODIF OUT sound data appear at ? OP301] Q4 -- No --> A4[Check IC301. Change the Main Assy.] Q4 -- Yes --> Q5[Replace speaker ?] Q5 -- No --> A5[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

■ Location of Parts

Main Board_Front	
	
Detail	
<div>A</div> 	<div>B</div> 
<div>C</div> 	

■ WAVEFORMS



4-3. Factory Mode Adjustments

4-3-1. 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".

■ 5500

Model Name		UN32F5500AF	UN40F5500AF	UN46F5500AF	UN50F5500AF
Panel	Vendor	SDC	SDC	SDC	CMI
	Code	BN95-00883A	BN95-00887A	BN95-00891A	BN07-01269A
	Spec.	LSF320HN02	LSF400HM02	LSF460HN02	HF500BGM-C1
SMPS	Vendor	SEM	SEM	SEM	HANSOL
	Code	BN44-00605A	BN44-00645A	BN44-00611A	BN44-00612B
	Spec.	L32SF_DSM	L42S1_DSM	L46S1_DSM	L55S1_DHS
MAIN ASSY	Chassis Ass'y	BN91-10320A	BN91-10320B	BN91-10320C	BN91-10320D
	PBA Ass'y code	BN94-06175A	BN94-06175B	BN94-06175C	BN94-06175D
Byte	Item				
0	Factory Reset	-	-	-	-
1	Type	32A6AF0S	40A6AF0S	46A6AF0S	50P6AF0S
2	Model	F5500	F5500	F5500	F5500
3	SVC Model	5500	5500	5500	5500
4	Local Set	US	US	US	US
5	Tuner	SI_ADI	SI_ADI	SI_ADI	SI_ADI
6	Ch Table	NONE	NONE	NONE	NONE
7	Country	-	-	-	-
8	Front Color	U-S-C-5K	U-S-C-5K	U-S-C-5K	U-S-C-5K

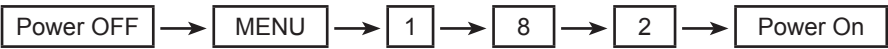
■ 4300

Model Name		UN32F4300
Panel	Vendor	SDC
	Code	BN95-00882A
	Spec.	HF320AGLV1
SMPS	Vendor	SEM
	Code	BN44-00604A
	Spec.	L32S0_DSM
MAIN ASSY	Chassis Ass'y	BN91-10318V
	PBA Ass'y code	BN94-06174V
Byte	Item	
0	Factory Reset	-
1	Type	32A6AH0S
2	Model	F4300
3	SVC Model	4300
4	Local Set	US
5	Tuner	SI_ADI
6	Ch Table	NONE
7	Country	-
8	Front Color	N/A

4-3-2. Entering Factory Mode

To enter 'Service Mode' Press the remote -control keys in this sequence :

- If you do not have Factory remote control



- If you have Factory remote control



- If you don't have Factory remote control, can't control some menus

■ Initial SERVICE MODE DISPLAY State

Option	T-MST12AKUC-xxxx T-MST12AKUS-xxxx BT Version : xxxx Camera Version : xxxx E-Manual : xxxx EDID SUCCESS CALIB : AV/COMP/PC/HDMI/ Option : xxxx,US,6400,NONE USB RS232C : OFF
Control	
Debug	
SVC	
ADC/WB	
Advanced	SDAL-X12-MAIN-xxxx-xxxx RFS : "X12 0071" KER/201x-xx-xx KERNEL : 8.0837, D / Onboot :xxxx.x Backend IC[x], Data Ver : xxxx TCON Version : xxxx DTP-DTVTD-xxxx Model : UN32F5500 Wired MAC SUCCESS Wireless MAC SUCCESS DRM : Crt O, Nf O, Wv O, Hc O, Dc O, Mx O, MI O Factory Data Ver : 97 EERC Version : 51 DTP-BP-HAL-3183 DTP-AP-CNC-3151 DTP-AP-MM-3145 DTP-AP-WP-3148 DTP-BP-MW-3156 DTP-BP-APP-3156 POP-FLA-13-TEMP Date of purchase : mm/dd/yyyy

4-3-3. Factory Data



Note

- Version of the software is written in 0002.
- Black : I should not be possible to adjust or change that does not require a change item
- Blue : Adjustment Services for the corresponding
- Red : Items that are secured

■ Option

Factory Menu Name	Data	Range	Remark	Key
Factory Reset	-			
Type		32A6AF0S/40A6AF0S/46A6AF0S/50P6AF0S		
Local Set	US	US/KOR/SD_MEXICO/SD_CANADA/CARRIBE		
SW Model		UF5500/UF4300		
BOM Model		5500/4300		
TUNER	SI_ADI	Do not change		
Ch Table	NONE			
MRT Option				
Front Color		NONE/U-S-C-5K		
LVDS FORMAT	JEIDA			
Language_Arabic	US			
Region	USA			
PnP Language	ENG_US			
WIFI REGION	S			
OTN Support	ON			
OTA Support	OFF			
TTX	OFF			
China HD	OFF			
NT Conversion	OFF			
Num of DTV	1			
Num of AV	1			
Num of COMP	1			
Num of HDMI	4			
Num of SCART	0			
Num of USB Port	3			
Num of HeadPhone	0			
Num of RVU	1			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
Num of Display	2			
Num of IPTV	0			
Num of RUI	0			
Num of PVR RECORD	0			
TOOLS Support	40			
LNA Support	OFF			
24Px4 Support	OFF			
BD Wise Support	ON			
Data Service Support	OFF			
PVR Support	OFF			
CI Support	OFF			
LEDMotionPlus Support	ON			
Natural Mode Support	ON			
Relax Mode Support	OFF			
HDMI/DVI SEL	4			
Select LCD/PDP	LCD			
Wall Mount	OFF			
HV Flip		HV Flip / H Filp / OFF		
Light Effect	OFF			
e-Pop Default	1			
CAMERA Support	OFF			
NETWORK Support	3			
EcoSensor Support	ON			
3D Support	ON			
BT Support	ON			
BT ADDRESS				
Engineer Option				
Auto Power	MEMORY			
Type Of PANEL KEY	None			
5 Way Function Key	R BACK			
Contents Bar	OFF			
Cable Modulation	QAM			
Standby led on/off	OFF			
Recognition Support				
IF AGC	0			

Factory Menu Name	Data	Range	Remark	Key
D AGC	0			
PH BW	0			
FQ BW	0			
PH RATE	0			
PD EN	0			
PEQ Inx	0			
WF Scale				
WF Type	0			
Nu of Network Stream	1			
DP V Size	0			
Backend Device	FOX-FT1			
BT_AUDIO_ON_OFF	OFF			
Config_AV_PATH				
ECO Standby	OFF			
Fast Logo Delay	0			
Num of PANEL KEY	6			

■ Control

Factory Menu Name	Data	Range	Remark	Key
EDID				
EDID ON/OFF	OFF			
EDID WRITE ALL	...			
EDID WRITE HDMI	...			
EDID Ver	...	HDMI 1.3/HDMI1.2		
EDID Port				
Sub Option				
RS-232 Jack	UART	Debug/UART		
Watchdog	OFF			
Checksum	0x0000			
Fast Boot in Production	OFF			
USB Serial	OFF			
Eeprom Reset				
ECO IC TYPE	NONE			
Info Link Server Type	development			
Info Link Country	None			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
TTX Group	-			
Visual Test	-			
MediaPlayDB	-			
OPTION_SWU				
OTN Server Type	operating			
OTN Test Server	OFF			
SWU Reset				
SWU Duration	OFF			
SWU Fail Test	OFF			
OPTION_NUM				
Num of ATV	1			
Num of SVIDEO	0			
Num of PC	0			
Num of DVI	0			
Num of OPTICAL Link	1			
Num of MEDIA	1			
Num of Tuner	1			
Num of ISP	1			
RF Remocon Support	OFF			
CDD mode	-			
DPMS Support	OFF			
Num of IPTV CIP	0			
Num of CI	0			
Num of DECODER	0			
T-CON Device				
BOARD CONTROL	OFF			
HP LINE	LineOut			
RM				
Server Type	Operating			
RTS Mode	OFF			
PSA				
FKP Download1	0			
FKP Download2	0			
LMK threshold	3			
Low threshold	10			
High threshold	15			
CSB	ON			

Factory Menu Name	Data	Range	Remark	Key
CLB	ON			
PDP Option				
Pixel Shift Test	OFF			
Logic SW	0			
Panel Temperature	0			
LOGIC Waveform Day	0			
Logic CheckSum	0			
MRT	0			
SAPC Timer				
APC Speed				
Hotel Option				
Hospitality Mode	OFF			
Power On	...			
Menu OSD	...			
Operation	...			
Music Mode	...			
External Source	...			
Eco Solution	...			
Cloning	...			
Shop Option				
Shop Mode	OFF			
Exhibition Mode	OFF			
3D Cube	OFF			
Asia Option				
Unbalance	OFF			
AF Level adjust	3			
TX Power Level	0			
Mono Last Memory	OFF			
H Shaking	OFF			
Sound				
Carrier_Mute	OFF			
High Devi	OFF			
Speaker Delay Normal	0x6Eh			
SPDIF PCM Gain	-9dB			
FM M Prescale	0x30h			
FM Prescale	0x00h			
AM Prescale	0x32h			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
NICAM Prescale	0x48h			
BTSC Mono Prescale	0x19h			
BTSC stereo Prescale	0x2Fh			
BTSC SAP Prescale	0x2Bh			
A2Ident High THID	31			
A2Ident Low THID	0			
Pilot Level High Thld	0x28h			
Pilot Level Low Thld	0x10h			
Carrier2 Amp High THID	4			
Carrier2 Amp Low THID	3			
Carrier2 SNR High THR	16			
Carrier2 SNR Low THR	80			
Sig Error On	35			
Sig Error Off	41			
Amp Model	TAS5745			
Amp Volume	0xcbh			
Amp Scale	0x35h			
Amp Check Sum	0x000821B2			
Woofer Type	0			
Woofer Scale	0			
Woofer Check Sum	0x8ah			
Woofer Local EQ Checksum	0			
Speaker EQ	ON			
PEQ Test	Ready			
Local Speaker EQ	0			
Local EQ Checksum	0			
Speaker cut-off Ferq	4			
Audio-IP Test				
SRS Tuning Parm	0			
TruBass-Checksum	0			
Mic Scale	0			
Subwoofer Support	0			
India Sound	OFF			
AudioDock BT delay	50			
Wall Filter Type	0			

Factory Menu Name	Data	Range	Remark	Key
Wiselink Delay Menu	90			

■ Debug

Factory Menu Name	Data	Range	Remark	Key
Spread Spectrum				
LVDS Spread	ON			
DDR Spread	1.0% Spectrum			
Period	30K			
Amplitude	1			
HD SSC ON/Off	ON			
HD SSC Value	1			
LVDS SSC ON/Off	ON			
LVDS SSC Value	0			
DDR SSC ON/Off	ON			
DDR SSC Value	1			
FRC LVDS SSC ON/OFF	ON			
FRC LVDS SSC MRR	10			
FRC LVDS SSC MFR	1			
FRC LVDS SSC Period	1			
FRC LVDS SSC Modulation	1			
FRC DDR SSC ON/OFF	ON			
FRC DDR SSC MRR	15			
FRC DDR SSC MFR	1			
FRC DDR SSC Period	1			
FRC DDR SSC Modulation	1			
DDR Margin				
A CTRL_OFFSET_0_3	0x0			
A CTRL_OFFSET_D	0x0			
B CTRL_OFFSET_0_3	0x0			
B CTRL_OFFSET_D	0x0			
ND ADJ Support	OFF			
MICOM POWER OFF	OFF			
RF Mute Time	6ms			
CI+1.3	OFF			
FRC				
FRC FDISPLAY ON/OFF	0			
3D FDISPLAY ON/OFF	OFF			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
PC Mode ON/OFF	OFF			
Tuner Margin	10			
MPEG Margin	1000			
H.264 Margin	8			
CAM Wait Time				
TS Clock deldy	0			
TCON_TEMP READ	0			
TEMP LAST	60			
DCC VERSION	0x0			
DCC CHK SEL	0			
DCC CHECK LOCAL	0x0			
DCC CHECK TOTAL	0x0			
MultACC Checksum	0			
IIC Bus stop	OFF			
Tuner Status				
DVB				
SNR				
BER				
Signal Strength				
Bandwidth				
Frequency				
LNA Status				
FFT				
Modulation				
Code Rate				
GI				
Hier Modulation				
Frequency offset				
Timing offset				
AGC				
UCB				
PLL Type				
DEMOD Type				
TPS Lock				
RS Lock				
SSI				
SQI				

Factory Menu Name	Data	Range	Remark	Key
Firmware Version				
ISDB-T				
FFT Size_1				
Guard Interval_1				
Freq. Offset_1				
SNR_1				
IF AGC_1				
TMCC Lock_1				
TS Packer_1				
Master Lock_1				
A_Modulation_1				
A_Code Rate_1				
A_Timer InterLeave_1				
A_Segments Num_1				
A_BER_1				
B_Modulation_1				
B_Code Rate_1				
B_Timer InterLeave_1				
B_Segments Num_1				
B_BER_1				
C_Modulation_1				
C_Code Rate_1				
C_Timer InterLeave_1				
C_Segments Num_1				
C_BER_1				

■ SVC

Factory Menu Name	Data	Range	Remark	Key
Test Pattern				
Pattern Sel	OFF			
Logic Pattern Sel	...			
Logic Level Sel	...			
FRC Pre Test Pattern	0			
FRC Post Test Pattern	0			
FRC3D Fdisplay	OFF			
FRC3D PC Mode	OFF			
SOC TCON Test Pattern	0			

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
SOC TCON Pattern Level	255			
SOC TCON FRC Pattern	0			
HDMI WB Pattern	OFF			
HDMI Pattern Sel	0			
Parma Pre Test Pattern	0			
Parma Post Test Pattern	0			
Panel Display Time	0Hr			
SVC Info	0			
Delete S/N	0			
Upgrade				
T-CON Usb Download	Failute			
T-CON CheckSum	Error			
Logic Usb D/L	...			
SUBMICOM UPGRADE	Failute			
BT UPGRADE				
BT FREEPAIRING	ON			
Function Upgrade	Failute			
FRC3D FW Upgrade				
Camera Upgrade				
Mic Upgrade				
CPLD USB Download				
JP MICOM UPGRADE	Failute			
DP MICOM UPGRADE	Failute			
Jump Upgrade	Failute			
Smart Hub Reset	0			
ER Count				
WD Count	0			
AR Count	0			
WIFI ER Count	0			
BT ER Count	0			
HDMI Err Cnt	0			
Camera ER Count	0			
LOG(View Log)				
Select Log Type	NVRAM			
Log View	0			
Delete Log				
Debug Log Down				

Factory Menu Name	Data	Range	Remark	Key
Emergency Log Copy				
Self Diagnosis				
Loop Back				
LAN Test				
AV Audio Test				
DVIN Audio Test				
CVBS Test				
COMP Test				
USB HUB Test				
HDMI Test				
SCART Audio Test				
SCART CVBS Test				
SCART RGB Test				
CPU				
DDR				
FLASH				
EEPROM				
Sound AMP				
HDMI Switch IC				
USB HUB IC				
WIFI				
LVDS				
T-CON/FRC				
PCB Test				
MOIP				
App Self Test				
Device self Test				
Voltage				
EcoSensor				
BT				
EXT Sound Inspection				
Woofer Sound Inspection	NONE			
ATV CH Inspection				
DTV CH Inspection				
Satellite CH Inspection				
ATV CH Inspection				
DTV CH Inspection				

4. Troubleshooting

Factory Menu Name	Data	Range	Remark	Key
Satellite CH Inspection				
IPERF	Stopped			
OPTION HDMI				
Expert				
DVB CI				
CAL Data Backup				
CAL Data Restore				

■ ADC/WB

Factory Menu Name	Data	Range	Remark	Key
ADC				
AV Calibration	Success			
Comp Calibration	Success			
PC Calibration	Success			
HDMI Calibration	Success			
ADC Result				
1st_Y_GH	258			
1st_Y_GL	128			
1st_Cb_BH	...			
1st_Cb_BL	...			
1st_Cr_RH	...			
1st_Cr_RL	...			
2nd_R_L	132			
2nd_G_L	132			
2nd_B_L	132			
2nd_R_H	70			
2nd_G_H	70			
2nd_B_H	70			
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			

Factory Menu Name	Data	Range	Remark	Key
WB_W2_R_Gain	164			
WB_W2_B_Gain	63			
WB_N_R_Offset	128			
WB_N_B_Offset	128			
WB_N_R_Gain	151			
WB_N_B_Gain	108			
MGA				
MGA On/Off	OFF			
R1_Gain	...			
B1_Gain	...			
G1_Gain	...			
R2_Gain	...			
B2_Gain	...			
G2_Gain	...			
R3_Gain	...			
B3_Gain	...			
G3_Gain	...			
R4_Gain	...			
B4_Gain	...			
G4_Gain	...			
R5_Gain	...			
B5_Gain	...			
G5_Gain	...			
R6_Gain	...			
B6_Gain	...			
G6_Gain	...			
R7_Gain	...			
B7_Gain	...			
G7_Gain	...			
R8_Gain	...			
B8_Gain	...			
G8_Gain	...			
R9_Gain	...			
B9_Gain	...			
G9_Gain	...			
R10_Gain	...			
B10_Gain	...			
G10_Gain	...			

4-4. White Balance

4-4-1. Calibration

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



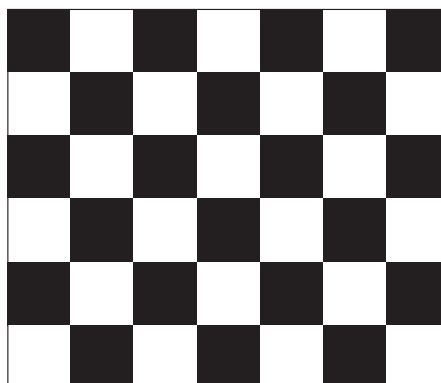
4-4-2. Service Adjustment

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 (N0. 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)

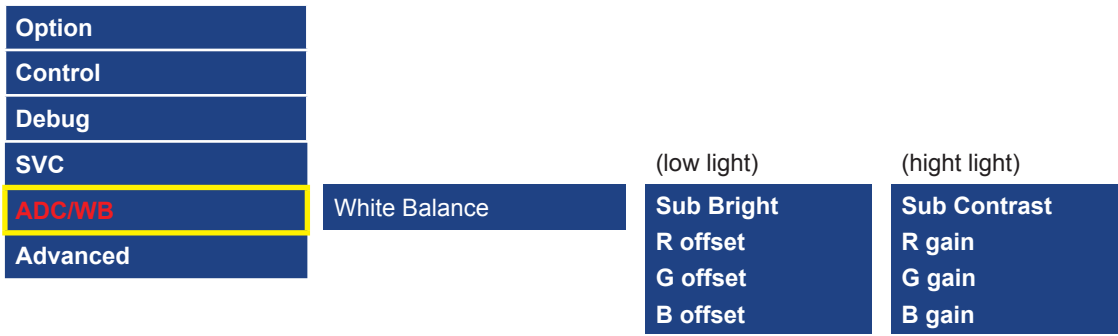
1. Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port.
2. Press the Source key to switch to "Component1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "Comp Calibration" menu.
6. In "Comp Calibration Off" status, press the "▶" key to perform Calibration.
7. 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 (HDMI)

1. Apply the 720p Lattice (N0. 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.

4-4-3. Adjustment

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



4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).
2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.
3. The optimal values for each mode are configured by default. It varies with Panel's size and Specification.
 - Equipment : CS-210
 - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
 - Alternate Equipment : CA200& anyone Master supported pattern#92(refer to right photo)
 - Use other Equipment only after comparing the result with that of the Master equipment.
 - Set Aging time : 60 min



Calibration and Manual setting for WB adjustment

- HDMI : Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (720p)
- COMP: Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (720p)
- CVBS: Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (NTSC)



Note

If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.

White Balance Manual adjustment

- UN32F5500AF

P-Mode Input source	Section		Adjustment Coordinate CA-210					
HDMI COMP VIDEO	W/B High		Hx	264	Hy	274	HY	-
	W/B Low		Lx	-	Ly	-	LY	-
MOVIE	W/B High		Hx	318	Hy	340	HY	-
	W/B Low		Lx	-	Ly	-	LY	-

Sub Contrast	135	Sub Bright	128		
R-Gain	128	G-Gain	128	B-Gain	128
R-Offset	128	G-Offset	128	B-Offset	128

4. Troubleshooting

- UN40F5500AF

P-Mode Input source	Section	Adjustment Coordinate CA-210					
HDMI COMP VIDEO	W/B High	Hx	264	Hy	274	HY	-
	W/B Low	Lx	-	Ly	-	LY	-
MOVIE	W/B High	Hx	318	Hy	340	HY	-
	W/B Low	Lx	-	Ly	-	LY	-

Sub Contrast	135	Sub Bright	128		
R-Gain	128	G-Gain	128	B-Gain	128
R-Offset	128	G-Offset	128	B-Offset	128

- UN46F5500AF

P-Mode Input source	Section	Adjustment Coordinate CA-210					
HDMI COMP VIDEO	W/B High	Hx	264	Hy	274	HY	-
	W/B Low	Lx	-	Ly	-	LY	-
MOVIE	W/B High	Hx	318	Hy	340	HY	-
	W/B Low	Lx	-	Ly	-	LY	-

Sub Contrast	135	Sub Bright	128		
R-Gain	128	G-Gain	128	B-Gain	128
R-Offset	128	G-Offset	128	B-Offset	128

- UN50F5500AF

P-Mode Input source	Section	Adjustment Coordinate CA-210					
HDMI COMP VIDEO	W/B High	Hx	264	Hy	274	HY	-
	W/B Low	Lx	-	Ly	-	LY	-
MOVIE	W/B High	Hx	318	Hy	340	HY	-
	W/B Low	Lx	-	Ly	-	LY	-

Sub Contrast	135	Sub Bright	128		
R-Gain	128	G-Gain	128	B-Gain	128
R-Offset	128	G-Offset	128	B-Offset	128

4-6. Detail Specifications

4-6-1. UN**F5500AF - 1

• General Information

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Product	LED	LED	LED
Cabinet Basic Code	FK	FK	FK
Series	5	5	5
Series Name	LED F5500	LED F5500	LED F5500
Country	CANADA,UNITED STATES	CANADA,UNITED STATES	CANADA,UNITED STATES
Tools Support	N/A	N/A	N/A
Platform(TV)	Mstar X12	Mstar X12	Mstar X12

• Display

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Inch	32	40	46
Resolution	1,920 x 1,080	1,920 x 1,080	1,920 x 1,080
Ultra Clear Panel	No	No	No
Cell Light Series	N/A	N/A	N/A
Real Black Pro Panel	N/A	N/A	N/A
Clear Image Panel	N/A	N/A	N/A
Lvds Format	JEIDA	JEIDA	JEIDA
HV Flip	ON	ON	ON

• Video

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Picture Engine	HyperReal Engine	HyperReal Engine	HyperReal Engine
OLED Motion Rate	N/A	N/A	N/A
Clear Motion Rate	120	120	120
600Hz Subfield Motion	N/A	N/A	N/A
Dynamic Contrast Ratio	Mega Contrast	Mega Contrast	Mega Contrast
New Picture Differentiation	N/A	N/A	N/A
Micro Dimming	No	No	No
Cinema Smooth	N/A	N/A	N/A
Precision Black (Local Dimming)	No	No	No
Wide Color Enhancer (Plus)	Yes	Yes	Yes
Auto Motion Plus 120/240Hz	No	No	No
Motion Judder Canceller	N/A	N/A	N/A
Film Mode	Yes	Yes	Yes
Brightness	300nits	300nits	300nits
Contrast Ratio	5000:1	5000:1	5000:1

4. Troubleshooting

Picture	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level
Detail Resolution	60Hz	60Hz	60Hz
Response Time	8ms	8ms	8ms
Viewing Angle (H/V)	178/178	178/178	178/178
Natural Mode Support	Yes	Yes	Yes
Relax Mode Support	N/A	N/A	N/A

• Audio

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Dolby	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse
SRS / DNSe+	SRS TheaterSound HD	SRS TheaterSound HD	SRS TheaterSound HD
dts 2.0+Digital Out / DTS Premium Audio	DTS Premium Audio	DTS Premium Audio	DTS Premium Audio
3D Sound	No	No	No
Sound Customizer	No	No	No
Speaker Type	Down Firing + Full Range	Down Firing + Full Range	Down Firing + Full Range
Sound Output (RMS)	10W X 2	10W X 2	10W X 2
Woofer	No	No	No
Sound	Mono,Stereo,Auto volume	Mono,Stereo,Auto volume,SRS TheaterSound HD	Mono,Stereo,Auto volume
Sound Amp IC	TI TAS5745	TI TAS5745	TI TAS5745
Speaker Volume	10W x 2	10W x 2	10W x 2
Woofer Speaker Volume	No	No	No
Analog	2Ch	2Ch	2Ch
Digital	Optical	Optical	Optical

• SMART TV Functionality

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Samsung SMART TV	N/A	N/A	N/A
Smart Guide	Yes	Yes	Yes
Family Story	Yes	Yes	Yes
Movie & TV Shows	Yes (US)	Yes (US)	Yes (US)
Fitness	Yes	Yes	Yes
Apps	Yes	Yes	Yes
Kids	Yes	Yes	Yes
Social	Yes	Yes	Yes
Automated Content Recognition (ACR)	N/A	N/A	N/A
Music, Photos & Clip	Yes	Yes	Yes
Samsung SMART View	Yes (Clone View only)	Yes (Clone View only)	Yes (Clone View only)
Smart Hub	Yes	Yes	Yes

Search All	N/A	N/A	N/A
Your Video	No	No	No
Social TV	N/A	N/A	N/A
Samsung Sports Experience (SSE)	N/A	N/A	N/A
Samsung Apps	N/A	N/A	N/A
Smart Scene	No	No	No
Skype™ on Samsung TV	N/A	N/A	N/A
Web Browser	Yes	Yes	Yes
AllShare Control	No	No	No
Recommendation Bar	Yes	Yes	Yes

- VESA Standard**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Samsung SMART TV	M8	M8	M8

- Smart Interaction**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Camera Built-in	No	No	No
Face Recognition	Ready	Ready	Ready
Hand Gesture Recognition	Ready	Ready	Ready
Voice Recognition (Embedded)	No	No	No
Voice Recognition (Server)	No	No	No
VM App	N/A	N/A	N/A
NLU (Natural Language Understanding)	No	No	No
Camera App	No	No	No
HM App	N/A	N/A	N/A
Samsung TV Apps supported	Yes	Yes	Yes

- Feature**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Samsung 3D	No	No	No
3D Converter	No	No	No
Dual View	N/A	N/A	N/A
Samsung One Line	N/A	N/A	N/A
History	Yes	Yes	Yes
MultiTasking	N/A	N/A	N/A
Smart Phone Remote support	Yes	Yes	Yes
Smart Evolution Support	No	No	No
Extended PVR	No	No	No
Time Shift	No	No	No

4. Troubleshooting

AllShare Play	Yes	Yes	Yes
AllShare Cloud Storage	N/A	N/A	N/A
ConnectShare™ (USB2.0)	Movie	Movie	Movie
AllShare Cast	Yes	Yes	Yes
RUI	No	No	No
RVU	Yes (DirecTV ready)	Yes (DirecTV ready)	Yes (DirecTV ready)
WiFi Direct	Yes	Yes	Yes
Wireless LAN Built-in	Yes	Yes	Yes
Wireless LAN Adaptor Support	No	No	No
ISP Bound Service	No	No	No
BT HID Built-in	Yes	Yes	Yes
USB HID Support	Yes	Yes	Yes
OSD Language	English, Spanish, French	English, Spanish, French	English, Spanish, French
Samsung IR Blaster Support	Yes	Yes	Yes
User Interface	Golden Bridge	Golden Bridge	Golden Bridge
Digital Noise Filter	Yes	Yes	Yes
Analog Signal Booster	N/A	N/A	N/A
Network Speaker Support	N/A	N/A	N/A
MHL	No	No	No
Sound Share	Yes	Yes	Yes
WiDi	N/A	N/A	N/A
Regional EQ	N/A	N/A	N/A
InstaPort S (HDMI quick switch)	No	No	No
HDMI 1.4 3D Auto Setting	No	No	No
HDMI 1.4 A/Return Ch. Support	No	No	No
EPG	Yes	Yes	Yes
Analog Clean View	N/A	N/A	N/A
HbbTV	N/A	N/A	N/A
Teletext (TTX)	No	No	No
Triple Protector	N/A	N/A	N/A
Miracast	No	No	No
Anynet+ (HDMI-CEC)	Yes	Yes	Yes
BD Wise Plus	No	No	No
Auto Channel Search	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes
Auto Volume Leveler	Yes	Yes	Yes
Caption (Subtitle)	Yes	Yes	Yes
2 Tuner	No	No	No
Clock&On/Off Timer	Yes	Yes	Yes

Game Mode	Yes	Yes	Yes
Battery Ready	N/A	N/A	N/A
Picture-In-Picture	Yes	Yes	Yes
Sleep Timer	Yes	Yes	Yes
Screen Burn Protection	N/A	N/A	N/A
Channel List USB-Clone	N/A	N/A	N/A
V-Chip	Yes	Yes	Yes
Embedded POP	Yes	Yes	Yes
Calibration Mode	N/A	N/A	N/A
Channel	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune
Plug&Play	Yes	Yes	Yes
Child Lock	Yes	Yes	Yes
Sports Mode	No	No	No
Paratal Lock	Yes	Yes	Yes
Kids Lock	N/A	N/A	N/A
Media Play(USB & DLNA)	Yes	Yes	Yes
Bluetooth	Yes	Yes	Yes
Home Network Centre	N/A	N/A	N/A
Zero Stand-By Power	N/A	N/A	N/A
USB Copy	N/A	N/A	N/A
ACS	No	No	No
IP Video Closed Caption	No	No	No

- Additional Feature**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Self Diagnosis	Yes	Yes	Yes
Software Upgrade	Yes	Yes	Yes
HD Connection Guide	Yes	Yes	Yes
Contact Samsung	Yes	Yes	Yes

- S/W**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
MCU	X12	X12	X12
OS	Linux	Linux	Linux

- System**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
DTV Tuner	ATSC / Clear QAM	ATSC / Clear QAM	ATSC / Clear QAM
Analog Tuner	Yes	Yes	Yes
CI/CI+	N/A	N/A	N/A

4. Troubleshooting

MHP / MHEG (version) / ACAP	N/A	N/A	N/A
NTSC 3.58	Yes	Yes	Yes
NTSC 4.43, VIT	N/A	N/A	N/A
PAL-B/G, D/K, I, I/I'	N/A	N/A	N/A
Scan Type	N/A	N/A	N/A
SECAM-B/G, D/K	N/A	N/A	N/A
SECAM-B/G, D/K, L/L'	N/A	N/A	N/A
Trinorma (PAL M,N)	N/A	N/A	N/A
Broadcast System	ATSC/Clear QAM	ATSC/Clear QAM	ATSC/Clear QAM
ATV Sound System	M	M	M
DTV Video System	ATSC	ATSC	ATSC
DTV Sound System	Dolby	Dolby	Dolby
Tuner Vendor & Model	SEM DTVS20EIL035B	SEM DTVS20EIL035B	SEM DTVS20EIL035B

• Core Component

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
DDR SDRAM	Samsung	Samsung	Samsung
Nand Flash Memory	Samsung	Samsung	Samsung
OneNand Flash Memory	N/A	N/A	N/A
FlexOneNand Flash Memory	N/A	N/A	N/A
Serial Flash Memory	N/A	N/A	N/A
HDMI Switch	N/A	N/A	N/A
Display Device Vender	SDC	SDC	SDC

• Input & Output

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
HDMI	3	3	3
Resolution	1920 x 1080	1920 x 1080	1920 x 1080
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz
MHL Port	N/A	N/A	N/A
HDMI/DVI SEL	N/A	N/A	N/A
USB	2	2	2
Port 1 Type	Host	Host	Host
Port 2 Type	Host	Host	Host
Port 3 Type	Host	Host	Host
Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
OS	Linux	Linux	Linux
Component In (Y/Pb/Pr)	1	1	1

Composite In (AV)	1 (Common Use for Component Y)	1 (Common Use for Component Y)	1 (Common Use for Component Y)
Ethernet (LAN)	1	1	1
Headphone	No	No	No
Digital Audio Out (Optical)	1	1	1
Audio Out (Mini Jack / LR)	1	1	1
PC In (D-sub)	No	No	No
PC Audio In (Mini Jack)	No	No	No
DVI Audio In (Mini Jack)	0	0	0
RF In (Terrestrial/Cable Input)	1	1	1
RF In (Satellite Input)	No	No	No
RS232C (AV CONTROL)	1	1	1
CI Slot	N/A	N/A	N/A
Scart	N/A	N/A	N/A
Port 1 Type	N/A	N/A	N/A
Port 2 Type	N/A	N/A	N/A
Port 3 Type	N/A	N/A	N/A
Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
Coaxial	No	No	No
EX-Link	Yes	Yes	Yes
Monitor Output	No	No	No
DVI			
Resolution	1920 x 1080i 60	1920 x 1080i 60	1920 x 1080i 60
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz
D-Sub Resolution	N/A N/A	N/A N/A	N/A N/A

• Design

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Design	Logo Deco	Logo Deco	Logo Deco
Bezel Type	NNB	NNB	NNB
Slim Type	Slim 1	Slim 1	Slim 1
Front Color	Black	Black	Black
Light Effect (Deco)	No	No	No
Stand Type	Quad	Quad	Quad
Swivel (Left/Right)	Yes	Yes	Yes
Push & Pull Camera	N/A	N/A	N/A
Design Name	N/A	N/A	N/A
Design	Steam Mold	Steam Mold	Steam Mold

4. Troubleshooting

Front Resin	PC+ABS+GF15%	PC+ABS+GF15%	PC+ABS+GF15%
Stand Packing Type	Bundle	Bundle	Bundle

• Eco

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Energy star 6.0	Energy Star	Energy Star	Energy Star
Eco Label	N/A	N/A	N/A
Eco Sensor	Yes	Yes	Yes

• Power

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Power Supply (V)	AC110-120V 60Hz	AC100-240V 50/60Hz	AC110-120V 60Hz
Power Consumption (Max)	86 W	117 W	118 W
Power Consumption (Stand-by)	0.3W	0.3W	0.3W
Power Consumption (IEC 62087 Edition 2)	N/A	N/A	N/A
Peak Luminance Ratio	N/A	N/A	N/A
Yearly Power Consumption (EU standard)	N/A	N/A	N/A
AC Power Voltage & Frequency	60Hz	60Hz	60Hz
SMPS/IP Board	SEM	SEM	SEM

• Security

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Kensington Lock	Yes	Yes	Yes

• Dimension (WxHxD)

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Set Size without Stand (mm)	738.2*445.4*49.0	928.2*552.3*49.4	1059.6*626.2*49.4
Set Size with Stand (mm)	738*509.6*265	928.2*615.5*265	1059.6*700.0*307.3
Package Size (mm)	985*596*143	1190*616*147	1343*723*158

• Weight

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Set Weight without Stand (kg)	5.8	8.7	12.5
Set Weight with Stand (kg)	7	10	14.3
Package Weight (kg)	8.5	12.5	16.4

- **Loading Quantity**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
20/40Ft	240/504	198/396	165/345

- **Accessory**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
3D Active Glasses (Included)	No	No	No
IR Blaster (Included)	Yes	Yes	Yes
Wireless LAN Adaptor (Included)	0	0	0
Network Speaker (Included)	No	No	No
MOIP Camera (Included)	0	0	0
Wireless Keyboard (Included)	0	0	0
Battery Pack (for Battery Ready TV)	N/A	N/A	N/A
Remote Controller Model	TM1250A	TM1250A	TM1250A
Battery (for Remote Control)	Yes	Yes	Yes
Mini Wall Mount Support	Yes	Yes	Yes
Ultra Slim Wall Mount Support	No	No	No
VESA Wall Mount Support	Yes	Yes	Yes
Electric Wall Mount Support	No	No	No
Electric Stand Support	N/A	N/A	N/A
Slim Gender Cable	0	0	0
ANT-Cable	0	0	0
Power Cable	Yes	Yes	Yes
User Manual	Yes	Yes	Yes
E-Manual	Yes	Yes	Yes
Floor Stand Support	No	No	No

- **License**

Item	UN32F5500AFXZA	UN40F5500AFXZA	UN46F5500AFXZA
Oracle JAVA	NO	NO	NO
Universal Remote Control	YES	YES	YES
MS DRM	NO	NO	NO
Movie Codec	DivX	DivX	DivX

4-6-2. UN**F5500AF - 2

- **General Information**

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Product	LED	LED	LED
Cabinet Basic Code	FK	FK	FK
Series	5	5	5
Series Name	LED F5500	LED F5500	LED F5500

4. Troubleshooting

Country	MEXICO,PANAMA	MEXICO,PANAMA	MEXICO,PANAMA
Tools Support	N/A	N/A	N/A
Platform(TV)	Mstar X12	Mstar X12	Mstar X12

• Display

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Inch	32	40	46
Resolution	1,920 x 1,080	1,920 x 1,080	1,920 x 1,080
Ultra Clear Panel	No	No	No
Cell Light Series	N/A	N/A	N/A
Real Black Pro Panel	N/A	N/A	N/A
Clear Image Panel	N/A	N/A	N/A
Lvds Format	JEIDA	JEIDA	JEIDA
HV Flip	ON	ON	ON

• Video

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Picture Engine	HyperReal Engine	HyperReal Engine	HyperReal Engine
OLED Motion Rate	N/A	N/A	N/A
Clear Motion Rate	120	120	120
600Hz Subfield Motion	N/A	N/A	N/A
Dynamic Contrast Ratio	Mega Contrast	Mega Contrast	Mega Contrast
New Picture Differentiation	N/A	N/A	N/A
Micro Dimming	No	No	No
Cinema Smooth	N/A	N/A	N/A
Precision Black (Local Dimming)	No	No	No
Wide Color Enhancer (Plus)	Yes	Yes	Yes
Auto Motion Plus 120/240Hz	No	No	No
Motion Judder Canceller	N/A	N/A	N/A
Film Mode	Yes	Yes	Yes
Brightness	300nits	300nits	300nits
Contrast Ratio	5000:1	5000:1	5000:1
Picture	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level
Detail Resolution	60Hz	60Hz	60Hz
Response Time	8ms	8ms	8ms
Viewing Angle (H/V)	178/178	178/178	178/178
Natural Mode Support	Yes	Yes	Yes
Relax Mode Support	N/A	N/A	N/A

Audio

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Dolby	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse
SRS / DNSe+	SRS TheaterSound HD	SRS TheaterSound HD	SRS TheaterSound HD
dts 2.0+Digital Out / DTS Premium Audio	DTS Premium Audio	DTS Premium Audio	DTS Premium Audio
3D Sound	No	No	No
Sound Customizer	No	No	No
Speaker Type	Down Firing + Full Range	Down Firing + Full Range	Down Firing + Full Range
Sound Output (RMS)	10W X 2	10W X 2	10W X 2
Woofer	No	No	No
Sound	Mono,Stereo,Auto volume	Mono,Stereo,Auto volume	Mono,Stereo,Auto volume
Sound Amp IC	TI TAS5745	TI TAS5745	TI TAS5745
Speaker Volume	10W x 2	10W x 2	10W x 2
Woofer Speaker Volume	No	No	No
Analog	2Ch	2Ch	2Ch
Digital	Optical	Optical	Optical

SMART TV Functionality

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Samsung SMART TV	N/A	N/A	N/A
Smart Guide	No	No	No
Family Story	Yes	Yes	Yes
Movie & TV Shows	No	No	No
Fitness	Yes	Yes	Yes
Apps	Yes	Yes	Yes
Kids	Yes	Yes	Yes
Social	Yes	Yes	Yes
Automated Content Recognition (ACR)	N/A	N/A	N/A
Music, Photos & Clip	Yes	Yes	Yes
Samsung SMART View	Yes (Clone View only)	Yes (Clone View only)	Yes (Clone View only)
Smart Hub	Yes	Yes	Yes
Search All	N/A	N/A	N/A
Your Video	No	No	No
Social TV	N/A	N/A	N/A
Samsung Sports Experience (SSE)	N/A	N/A	N/A
Samsung Apps	N/A	N/A	N/A
Smart Scene	No	No	No
Skype™ on Samsung TV	N/A	N/A	N/A
Web Browser	Yes	Yes	Yes

4. Troubleshooting

AllShare Control	N/A	N/A	N/A
Recommendation Bar	No	No	No

• VESA Standard

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Samsung SMART TV	M8	M8	M8

• Smart Interaction

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Camera Built-in	No	No	No
Face Recognition	Ready	Ready	Ready
Hand Gesture Recognition	Ready	Ready	Ready
Voice Recognition (Embedded)	No	No	No
Voice Recognition (Server)	No	No	No
VM App	N/A	N/A	N/A
NLU (Natural Language Understanding)	No	No	No
Camera App	No	No	No
HM App	N/A	N/A	N/A
Samsung TV Apps supported	Yes	Yes	Yes

• Feature

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Samsung 3D	No	No	No
3D Converter	No	No	No
Dual View	N/A	N/A	N/A
Samsung One Line	N/A	N/A	N/A
History	Yes	Yes	Yes
MultiTasking	N/A	N/A	N/A
Smart Phone Remote support	Yes	Yes	Yes
Smart Evolution Support	No	No	No
Extended PVR	No	No	No
Time Shift	No	No	No
Allshare Play	Yes	Yes	Yes
AllShare Cloud Storage	N/A	N/A	N/A
ConnectShare™ (USB2.0)	Movie	Movie	Movie
AllShare Cast	Yes	Yes	Yes
RUI	Yes	Yes	Yes
RVU	Yes	Yes	Yes

WiFi Direct	Yes	Yes	Yes
Wireless LAN Built-in	Yes	Yes	Yes
Wireless LAN Adaptor Support	No	No	No
ISP Bound Service	No	No	No
BT HID Built-in	No	No	No
USB HID Support	No	No	No
OSD Language	English, Spanish, French	English, Spanish, French	English, Spanish, French
Samsung IR Blaster Support	Yes	Yes	Yes
User Interface	Golden Bridge	Golden Bridge	Golden Bridge
Digital Noise Filter	Yes	Yes	Yes
Analog Signal Booster	N/A	N/A	N/A
Network Speaker Support	N/A	N/A	N/A
MHL	No	No	No
Sound Share	No	No	No
WiDi	N/A	N/A	N/A
Regional EQ	N/A	N/A	N/A
InstaPort S (HDMI quick switch)	No	No	No
HDMI 1.4 3D Auto Setting	No	No	No
HDMI 1.4 A/Return Ch. Support	No	No	No
EPG	Yes	Yes	Yes
Analog Clean View	N/A	N/A	N/A
HbbTV	N/A	N/A	N/A
Teletext (TTX)	No	No	No
Triple Protector	N/A	N/A	N/A
Miracast	No	No	No
Anynet+ (HDMI-CEC)	Yes	Yes	Yes
BD Wise Plus	No	No	No
Auto Channel Search	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes
Auto Volume Leveler	Yes	Yes	Yes
Caption (Subtitle)	Yes	Yes	Yes
2 Tuner	No	No	No
Clock&On/Off Timer	Yes	Yes	Yes
Game Mode	Yes	Yes	Yes
Battery Ready	N/A	N/A	N/A
Picture-In-Picture	Yes	Yes	Yes
Sleep Timer	Yes	Yes	Yes
Screen Burn Protection	N/A	N/A	N/A
Channel List USB-Clone	N/A	N/A	N/A
V-Chip	Yes	Yes	Yes

4. Troubleshooting

Embedded POP	Yes	Yes	Yes
Calibration Mode	N/A	N/A	N/A
Channel	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune
Plug&Play	Yes	Yes	Yes
Child Lock	Yes	Yes	Yes
Sports Mode	Basic	Basic	Basic
Paratal Lock	Yes	Yes	Yes
Kids Lock	N/A	N/A	N/A
Media Play(USB & DLNA)	Yes	Yes	Yes
Bluetooth	Yes	Yes	Yes
Home Network Centre	N/A	N/A	N/A
Zero Stand-By Power	N/A	N/A	N/A
USB Copy	N/A	N/A	N/A
ACS	No	No	No
IP Video Closed Caption	No	No	No

• Additional Feature

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Self Diagnosis	Yes	Yes	Yes
Software Upgrade	Yes	Yes	Yes
HD Connection Guide	Yes	Yes	Yes
Contact Samsung	Yes	Yes	Yes

• S/W

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
MCU	X12	X12	X12
OS	Linux	Linux	Linux

• System

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
DTV Tuner	ATSC / Clear QAM	ATSC / Clear QAM	ATSC / Clear QAM
Analog Tuner	Yes	Yes	Yes
CI/CI+	N/A	N/A	N/A
MHP / MHEG (version) / ACAP	N/A	N/A	N/A
NTSC 3.58	Yes	Yes	Yes
NTSC 4.43, VIT	N/A	N/A	N/A
PAL-B/G, D/K, I, I'	N/A	N/A	N/A
Scan Type	N/A	N/A	N/A
SECAM-B/G, D/K	N/A	N/A	N/A
SECAM-B/G, D/K, L/L'	N/A	N/A	N/A

Trinorma (PAL M,N)	N/A	N/A	N/A
Broadcast System	ATSC/Clear QAM	ATSC/Clear QAM	ATSC/Clear QAM
ATV Sound System	M	M	M
DTV Video System	ATSC	ATSC	ATSC
DTV Sound System	Dolby	Dolby	Dolby
Tuner Vendor & Model	SEM DTVS20EIL035B	SEM DTVS20EIL035B	SEM DTVS20EIL035B

• Core Component

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
DDR SDRAM	Samsung	Samsung	Samsung
Nand Flash Memory	Samsung	Samsung	Samsung
OneNand Flash Memory	N/A	N/A	N/A
FlexOneNand Flash Memory	N/A	N/A	N/A
Serial Flash Memory	N/A	N/A	N/A
HDMI Switch	N/A	N/A	N/A
Display Device Vender	SDC	SDC	SDC

• Input & Output

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
HDMI	3	3	3
Resolution	1920 x 1080	1920 x 1080	1920 x 1080
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz
MHL Port	N/A	N/A	N/A
HDMI/DVI SEL	N/A	N/A	N/A
USB	2	2	2
Port 1 Type	Host	Host	Host
Port 2 Type	Host	Host	Host
Port 3 Type	Host	Host	Host
Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
OS	Linux	Linux	Linux
Component In (Y/Pb/Pr)	1	1	1
Composite In (AV)	1 (Common Use for Component Y)	1 (Common Use for Component Y)	1 (Common Use for Component Y)
Ethernet (LAN)	1	1	1
Headphone	No	No	No
Digital Audio Out (Optical)	1	1	1
Audio Out (Mini Jack / LR)	1	1	1
PC In (D-sub)	No	No	No

4. Troubleshooting

PC Audio In (Mini Jack)	No	No	No
DVI Audio In (Mini Jack)	0	0	0
RF In (Terrestrial/Cable Input)	1	1	1
RF In (Satelite Input)	No	No	No
RS232C (AV CONTROL)	1	1	1
CI Slot	N/A	N/A	N/A
Scart	N/A	N/A	N/A
Port 1 Type	N/A	N/A	N/A
Port 2 Type	N/A	N/A	N/A
Port 3 Type	N/A	N/A	N/A
Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
Coaxial	No	No	No
EX-Link	Yes	Yes	Yes
Monitor Output	No	No	No
DVI			
Resolution	1920 x 1080i 60	1920 x 1080i 60	1920 x 1080i 60
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1920 x 1080 60 Hz
D-Sub Resolution	N/A N/A	N/A N/A	N/A N/A

• Design

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Design	Logo Deco	Logo Deco	Logo Deco
Bezel Type	NNB	NNB	NNB
Slim Type	Slim 1	Slim 1	Slim 1
Front Color	Black	Black	Black
Light Effect (Deco)	No	No	No
Stand Type	Quad	Quad	Quad
Swivel (Left/Right)	Yes	Yes	Yes
Push & Pull Camera	N/A	N/A	N/A
Design Name	N/A	N/A	N/A
Design	Steam Mold	Steam Mold	Steam Mold
Front Resin	PC+ABS+GF15%	PC+ABS+GF15%	PC+ABS+GF15%
Stand Packing Type	Bundle	Bundle	Bundle

• Eco

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Energy star 6.0	Energy Star	Energy Star	Energy Star
Eco Label	N/A	N/A	N/A

Eco Sensor	Yes	Yes	Yes
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• Power

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Power Supply (V)	AC110-120V 60Hz	AC100-240V 50/60Hz	AC110-120V 60Hz
Power Consumption (Max)	86 W	117 W	118 W
Power Consumption (Stand-by)	0.3W	0.3W	0.3W
Power Consumption (IEC 62087 Edition 2)	N/A	N/A	N/A
Peak Luminance Ratio	N/A	N/A	N/A
Yearly Power Consumption (EU standard)	N/A	N/A	N/A
AC Power Voltage & Frequency	60Hz	60Hz	60Hz
SMPS/IP Board	SEM	SEM	SEM

• Security

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Kensington Lock	Yes	Yes	Yes

• Dimension (WxHxD)

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Set Size without Stand (mm)	738.2*445.4*49.0	928.2*552.3*49.4	1059.6*626.2*49.4
Set Size with Stand (mm)	738*509.6*265	928.2*615.5*265	1059.6*700.0*307.3
Package Size (mm)	985*596*143	1190*616*147	1343*723*158

• Weight

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Set Weight without Stand (kg)	5.8	8.7	12.5
Set Weight with Stand (kg)	7	10	14.3
Package Weight (kg)	8.5	12.5	16.4

• Loading Quantity

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
20/40Ft	240/504	198/396	165/345

• Accessory

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
3D Active Glasses (Included)	No	No	No
IR Blaster (Included)	Yes	Yes	Yes
Wireless LAN Adaptor (Included)	0	0	0
Network Speaker (Included)	No	No	No
MOIP Camera (Included)	0	0	0

4. Troubleshooting

Wireless Keyboard (Included)	0	0	0
Battery Pack (for Battery Ready TV)	N/A	N/A	N/A
Remote Controller Model	TM1250A	TM1250A	TM1250A
Battery (for Remote Control)	Yes	Yes	Yes
Mini Wall Mount Support	Yes	Yes	Yes
Ultra Slim Wall Mount Support	No	No	No
VESA Wall Mount Support	Yes	Yes	Yes
Electric Wall Mount Support	No	No	No
Electric Stand Support	N/A	N/A	N/A
Slim Gender Cable	0	0	0
ANT-Cable	0	0	0
Power Cable	Yes	Yes	Yes
User Manual	Yes	Yes	Yes
E-Manual	Yes	Yes	Yes
Floor Stand Support	No	No	No

• License

Item	UN32F5500AFXZX	UN40F5500AFXZX	UN46F5500AFXZX
Oracle JAVA	NO	NO	NO
Universal Remote Control	YES	YES	YES
MS DRM	NO	NO	NO
Movie Codec	DivX	DivX	DivX

4-6-3. UN**F5500AF - 3_UN32F4300AF

• General Information

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Product	LED	LED	LED
Cabinet Basic Code	FK	FK	FK
Series	5	5	4
Series Name	LED F5500	LED F5500	LED F4300
Country	CANADA,UNITED STATES	MEXICO,PANAMA	MEXICO,PANAMA
Tools Support	N/A	N/A	N/A
Platform(TV)	Mstar X12	Mstar X12	Mstar X12

• Display

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Inch	50	50	32
Resolution	1,920 x 1,080	1,920 x 1,080	1,366 x 768
Ultra Clear Panel	No	No	No
Cell Light Series	N/A	N/A	N/A

Real Black Pro Panel	N/A	N/A	N/A
Clear Image Panel	N/A	N/A	N/A
Lvds Format	JEIDA	JEIDA	JEIDA
HV Flip	ON	ON	ON

• Video

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Picture Engine	HyperReal Engine	HyperReal Engine	HyperReal Engine
OLED Motion Rate	N/A	N/A	N/A
Clear Motion Rate	120	120	120
600Hz Subfield Motion	N/A	N/A	N/A
Dynamic Contrast Ratio	Mega Contrast	Mega Contrast	Mega Contrast
New Picture Differentiation	N/A	N/A	N/A
Micro Dimming	No	No	No
Cinema Smooth	N/A	N/A	N/A
Precision Black (Local Dimming)	No	No	No
Wide Color Enhancer (Plus)	Yes	Yes	Yes
Auto Motion Plus 120/240Hz	No	No	No
Motion Judder Canceller	N/A	N/A	N/A
Film Mode	Yes	Yes	Yes
Brightness	300nits	300nits	250nits
Contrast Ratio	5000:1	5000:1	3000:01:00
Picture	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level	Film Mode,HDMI Black Level
Detail Resolution	60Hz	60Hz	60Hz
Response Time	8ms	8ms	6.5ms
Viewing Angle (H/V)	178/178	178/178	178/178
Natural Mode Support	Yes	Yes	N/A
Relax Mode Support	N/A	N/A	N/A

• Audio

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Dolby	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse	Dolby Digital Plus / Dolby Pulse
SRS / DNSe+	SRS TheaterSound HD	SRS TheaterSound HD	SRS Studio Sound
dts 2.0+Digital Out / DTS Premium Audio	DTS Premium Audio	DTS Premium Audio	DTS Premium Audio 5.1
3D Sound	No	No	No
Sound Customizer	No	No	No
Speaker Type	Down Firing + Full Range	Down Firing + Full Range	Down Firing + Full Range
Sound Output (RMS)	10W X 2	10W X 2	10W X 2
Woofer	No	No	No

4. Troubleshooting

Sound	Mono,Stereo,Auto volume	Mono,Stereo,Auto volume	Mono,Stereo,Auto volume
Sound Amp IC	TI TAS5745	TI TAS5745	TI TAS5745
Speaker Volume	10W x 2	10W x 2	10W x 2
Woofer Speaker Volume	No	No	No
Analog	2Ch	2Ch	2Ch
Digital	Optical	Optical	Optical

• SMART TV Functionality

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Samsung SMART TV	N/A	N/A	N/A
Smart Guide	Yes	No	No
Family Story	Yes	Yes	No
Movie & TV Shows	Yes (US)	No	No
Fitness	Yes	Yes	Yes
Apps	Yes	Yes	Yes
Kids	Yes	Yes	Yes
Social	Yes	Yes	Yes
Automated Content Recognition (ACR)	N/A	N/A	N/A
Music, Photos & Clip	Yes	Yes	Yes
Samsung SMART View	Yes (Clone View only)	Yes (Clone View only)	Yes (Clone View only)
Smart Hub	Yes	Yes	Yes
Search All	N/A	N/A	N/A
Your Video	No	No	No
Social TV	N/A	N/A	N/A
Samsung Sports Experience (SSE)	N/A	N/A	N/A
Samsung Apps	N/A	N/A	N/A
Smart Scene	No	No	No
Skype™ on Samsung TV	N/A	N/A	N/A
Web Browser	Yes	Yes	Yes
AllShare Control	No	N/A	N/A
Recommendation Bar	Yes	No	No

• VESA Standard

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Samsung SMART TV	M8	M8	M8

• Smart Interaction

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Camera Built-in	No	No	No

Face Recognition	Ready	Ready	Ready
Hand Gesture Recognition	Ready	Ready	Ready
Voice Recognition (Embedded)	No	No	No
Voice Recognition (Server)	No	No	No
VM App	N/A	N/A	N/A
NLU (Natural Language Understanding)	No	No	No
Camera App	No	No	No
HM App	N/A	N/A	N/A
Samsung TV Apps supported	Yes	Yes	Yes

• **Feature**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Samsung 3D	No	No	No
3D Converter	No	No	No
Dual View	N/A	N/A	N/A
Samsung One Line	N/A	N/A	N/A
History	Yes	Yes	Yes
MultiTasking	N/A	N/A	N/A
Smart Phone Remote support	Yes	Yes	Yes
Smart Evolution Support	No	No	No
Extended PVR	No	No	No
Time Shift	No	No	No
Allshare Play	Yes	Yes	Yes
AllShare Cloud Storage	N/A	N/A	N/A
ConnectShare™ (USB2.0)	Movie	Movie	Movie
AllShare Cast	Yes	Yes	Yes
RUI	No	Yes	No
RVU	Yes (DirecTV ready)	Yes	No
WiFi Direct	Yes	Yes	Yes
Wireless LAN Built-in	Yes	Yes	No
Wireless LAN Adaptor Support	No	No	Yes
ISP Bound Service	No	No	No
BT HID Built-in	Yes	No	No
USB HID Support	Yes	No	No
OSD Language	English, Spanish, French	English, Spanish, French	English, Spanish, French
Samsung IR Blaster Support	Yes	Yes	No
User Interface	Golden Bridge	Golden Bridge	Golden Bridge
Digital Noise Filter	Yes	Yes	Yes
Analog Signal Booster	N/A	N/A	N/A

4. Troubleshooting

Network Speaker Support	N/A	N/A	N/A
MHL	No	No	No
Sound Share	Yes	No	No
WiDi	N/A	N/A	N/A
Regional EQ	N/A	N/A	N/A
InstaPort S (HDMI quick switch)	No	No	No
HDMI 1.4 3D Auto Setting	No	No	No
HDMI 1.4 A/Return Ch. Support	No	No	No
EPG	Yes	Yes	Yes
Analog Clean View	N/A	N/A	N/A
HbbTV	N/A	N/A	N/A
Teletext (TTX)	No	No	No
Triple Protector	N/A	N/A	N/A
Miracast	No	No	No
Anynet+ (HDMI-CEC)	Yes	Yes	Yes
BD Wise Plus	No	No	No
Auto Channel Search	Yes	Yes	Yes
Auto Power Off	Yes	Yes	Yes
Auto Volume Leveler	Yes	Yes	Yes
Caption (Subtitle)	Yes	Yes	Yes
2 Tuner	No	No	No
Clock&On/Off Timer	Yes	Yes	Yes
Game Mode	Yes	Yes	Yes
Battery Ready	N/A	N/A	N/A
Picture-In-Picture	Yes	Yes	Yes
Sleep Timer	Yes	Yes	Yes
Screen Burn Protection	N/A	N/A	N/A
Channel List USB-Clone	N/A	N/A	N/A
V-Chip	Yes	Yes	Yes
Embedded POP	Yes	Yes	Yes
Calibration Mode	N/A	N/A	N/A
Channel	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune	Auto Store,Signal Level,Fine Tune
Plug&Play	Yes	Yes	Yes
Child Lock	Yes	Yes	Yes
Sports Mode	No	Basic	Basic
Paratal Lock	Yes	Yes	Yes
Kids Lock	N/A	N/A	N/A
Media Play(USB & DLNA)	Yes	Yes	Yes
Bluetooth	Yes	Yes	Yes

Home Network Centre	N/A	N/A	N/A
Zero Stand-By Power	N/A	N/A	N/A
USB Copy	N/A	N/A	N/A
ACS	No	No	No
IP Video Closed Caption	No	No	No

- Additional Feature**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Self Diagnosis	Yes	Yes	Yes
Software Upgrade	Yes	Yes	Yes
HD Connection Guide	Yes	Yes	Yes
Contact Samsung	Yes	Yes	Yes

- S/W**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
MCU	X12	X12	X12
OS	Linux	Linux	Linux

- System**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
DTV Tuner	ATSC / Clear QAM	ATSC / Clear QAM	ATSC / Clear QAM
Analog Tuner	Yes	Yes	Yes
CI/CI+	N/A	N/A	N/A
MHP / MHEG (version) / ACAP	N/A	N/A	N/A
NTSC 3.58	Yes	Yes	Yes
NTSC 4.43, VIT	N/A	N/A	N/A
PAL-B/G, D/K, I, I/I'	N/A	N/A	N/A
Scan Type	N/A	N/A	N/A
SECAM-B/G, D/K	N/A	N/A	N/A
SECAM-B/G, D/K, L/L`	N/A	N/A	N/A
Trinorma (PAL M,N)	N/A	N/A	N/A
Broadcast System	ATSC/Clear QAM	ATSC/Clear QAM	ATSC/Clear QAM
ATV Sound System	M	M	M
DTV Video System	ATSC	ATSC	ATSC
DTV Sound System	Dolby	Dolby	Dolby
Tuner Vendor & Model	SEM DTVS20EIL035B	SEM DTVS20EIL035B	SEM DTVS20EIL035B

- Core Component**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
DDR SDRAM	Samsung	Samsung	Samsung

4. Troubleshooting

Nand Flash Memory	Samsung	Samsung	Samsung
OneNand Flash Memory	N/A	N/A	N/A
FlexOneNand Flash Memory	N/A	N/A	N/A
Serial Flash Memory	N/A	N/A	N/A
HDMI Switch	N/A	N/A	N/A
Display Device Vender	SDC	SDC	SDC

• Input & Output

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
HDMI	3	3	3
Resolution	1920 x 1080	1920 x 1080	1360 x 768
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1360 x 768 60Hz
MHL Port	N/A	N/A	N/A
HDMI/DVI SEL	N/A	N/A	N/A
USB	2	2	2
Port 1 Type	Host	Host	Host
Port 2 Type	Host	Host	Host
Port 3 Type	Host	Host	Host
Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
OS	Linux	Linux	Linux
Component In (Y/Pb/Pr)	1	1	1
Composite In (AV)	1 (Common Use for Component Y)	1 (Common Use for Component Y)	1 (Common Use for Component Y)
Ethernet (LAN)	1	1	1
Headphone	No	No	No
Digital Audio Out (Optical)	1	1	1
Audio Out (Mini Jack / LR)	1	1	1
PC In (D-sub)	No	No	No
PC Audio In (Mini Jack)	No	No	No
DVI Audio In (Mini Jack)	0	0	0
RF In (Terrestrial/Cable Input)	1	1	1
RF In (Satellite Input)	No	No	No
RS232C (AV CONTROL)	1	1	1
CI Slot	N/A	N/A	N/A
Scart	N/A	N/A	N/A
Port 1 Type	N/A	N/A	N/A
Port 2 Type	N/A	N/A	N/A
Port 3 Type	N/A	N/A	N/A

Port 4 Type	N/A	N/A	N/A
Port 5 Type	N/A	N/A	N/A
Coaxial	No	No	No
EX-Link	Yes	Yes	Yes
Monitor Output	No	No	No
DVI			
Resolution	1920 x 1080i 60	1920 x 1080i 60	1360 x 768p 60
DVI Port	Port1 Type	Port1 Type	Port1 Type
PC Resolution	1920 x 1080 60 Hz	1920 x 1080 60 Hz	1360 x 768 60Hz
D-Sub Resolution	N/A N/A	N/A N/A	N/A N/A

• Design

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Design	Logo Deco	Logo Deco	RHCM
Bezel Type	NNB	NNB	NNB
Slim Type	Slim 1	Slim 1	Slim 1
Front Color	Black	Black	Black
Light Effect (Deco)	No	No	No
Stand Type	Quad	Quad	Quad
Swivel (Left/Right)	Yes	Yes	Yes
Push & Pull Camera	N/A	N/A	N/A
Design Name	N/A	N/A	N/A
Design	Steam Mold	Steam Mold	Steam Mold
Front Resin	PC+ABS+GF15%	PC+ABS+GF15%	PC+ABS+GF15%
Stand Packing Type	Bundle	Bundle	Bundle

• Eco

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Energy star 6.0	Energy Star	Energy Star	Energy Star
Eco Label	N/A	N/A	N/A
Eco Sensor	Yes	Yes	No

• Power

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Power Supply (V)	AC110-120V 60Hz	AC110-120V 60Hz	AC110-120V 60Hz
Power Consumption (Max)	138 W	138 W	65W
Power Consumption (Stand-by)	0.3W	0.3W	0.3W
Power Consumption (IEC 62087 Edition 2)	N/A	N/A	N/A
Peak Luminance Ratio	N/A	N/A	N/A

4. Troubleshooting

Yearly Power Consumption (EU standard)	N/A	N/A	N/A
AC Power Voltage & Frequency	60Hz	60Hz	60Hz
SMPS/IP Board	SEM	SEM	SEM

• Security

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Kensington Lock	Yes	Yes	Yes

• Dimension (WxHxD)

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Set Size without Stand (mm)	1135.4*668*49.8	1135.4*668*49.8	737.9*435.8*49.5
Set Size with Stand (mm)	1135.4*741.8*307.3	1135.4*741.8*307.3	737.9*512.9*265.0
Package Size (mm)	1427*771*163	1427*771*163	985*596*143

• Weight

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Set Weight without Stand (kg)	15.7	15.7	5.2
Set Weight with Stand (kg)	17.5	17.5	5.7
Package Weight (kg)	20.9	20.9	8.1

• Loading Quantity

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
20/40Ft	96/192	96/192	320/672

• Accessory

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
3D Active Glasses (Included)	No	No	No
IR Blaster (Included)	Yes	Yes	No
Wireless LAN Adaptor (Included)	0	0	0
Network Speaker (Included)	No	No	No
MOIP Camera (Included)	0	0	0
Wireless Keyboard (Included)	0	0	0
Battery Pack (for Battery Ready TV)	N/A	N/A	N/A
Remote Controller Model	TM1250A	TM1250A	TM1250A
Battery (for Remote Control)	Yes	Yes	Yes
Mini Wall Mount Support	Yes	Yes	Yes
Ultra Slim Wall Mount Support	No	No	No
VESA Wall Mount Support	Yes	Yes	Yes
Electric Wall Mount Support	No	No	No
Electric Stand Support	N/A	N/A	N/A

Slim Gender Cable	0	0	0
ANT-Cable	0	0	0
Power Cable	Yes	Yes	Yes
User Manual	Yes	Yes	Yes
E-Manual	Yes	Yes	Yes
Floor Stand Support	No	No	No

- **License**

Item	UN50F5500AFXZA	UN50F5500AFXZX	UN32F4300AF***
Oracle JAVA	NO	NO	NO
Universal Remote Control	YES	YES	NO
MS DRM	TBD	TBD	TBD
Movie Codec	TBD	TBD	TBD

4-7. AV Control Table

Control Item				Cmd1	Cmd2	Cmd3	Value
General	Power	Power		0x00	0x00	0x00	0x00
		Off					0x01
		On					0x02
	Volume	Direct		0x01	0x00	0x00	(0~100)
		Up				0x01	0x00
		Down				0x02	0x00
	Mute			0x02	0x00	0x00	0x00
		Ch.	Direct	0x04	-		
			Continuous	0x03	0x00	0x01	0x00
			Down			0x02	0x00

Control Item				Cmd1	Cmd2	Cmd3	Value
Input	Source List	TV		0x0a	0x00	0x00	0x00
		AV	AV1			0x01	0x00
			AV2				0x01
			AV3				0x02
		S-Video	S-Video1			0x02	0x00
			S-Video2				0x01
			S-Video3				0x02
		Component	Component1			0x03	0x00
			Component2				0x01
			Component3				0x02
		PC	PC1			0x04	0x00
			PC2				0x01
			PC3				0x02
		HDMI	HDMI1			0x05	0x00
			HDMI2				0x01
			HDMI3				0x02
			HDMI4				0x03
		DVI	DVI1			0x06	0x00
			DVI2				0x01
			DVI3				0x02

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE	Mode	Dynamic(Entertain)		0x0b	0x00	0x00	0x00
		Standard					0x01
		Movie					0x02
		Natural					0x03
		CAL-NIGHT					0x04

Control Item				Cmd1	Cmd2	Cmd3	Value
		CAL-DAY					0x05
		BD Wise					0x06
		Relax					0x07
	BackLight (CellLight)		0~20		0x01	0x00	(0~20)
	Contrast		0~100		0x02	0x00	(0~100)
	Brightness		0~100		0x03	0x00	(0~100)
	Sharpness		0~100		0x04	0x00	(0~100)
	Color		0~10		0x05	0x00	(0~100)
	Tint	G/R			0x06	0x00	(0~100)
	Advanced Settings	Black Tone	Off		0x07	0x00	0x00
			Dark				0x01
			Darker				0x02
			Darkest				0x03
		Dynamic Contrast	Off			0x01	0x00
			Low				0x01
			Medium				0x02
			High				0x03
		Shadow Detail	-2 ~ 2			0x02	(-2~2)
		Gamma	-3 ~ 3			0x03	(-3~3)
		RGB Only Mode	Off			0x05	0x00
			Red				0x01
			Green				0x02
			Blue				0x03
		Color Space	Auto			0x06	0x00
			Native				0x01
			Custom				0x02
		White Balance	R-Offset(LCD)			0x07	(0~50)
		White Balance	G-Offset(LCD)			0x08	(0~50)
		White Balance	B-Offset(LCD)			0x09	(0~50)
		White Balance	R-Gain(LCD)			0x0a	(0~50)
		White Balance	G-Gain(LCD)			0x0b	(0~50)
		White Balance	B-Gain(LCD)			0x0c	(0~50)
		White Balance	Reset(LCD)			0x0d	0x00
		Flesh Tone	-15 ~ 15			0x0e	(-15~15)
		Edge Enhancement	Off			0x0f	0x00
			On				0x01
		xvYCC	Off			0x10	0x00

New function
of 12" (only
PDP TV)

Control Item				Cmd1	Cmd2	Cmd3	Value
			On				0x01
		Motion Lighting	Off			0x11	0x00
			On				0x01
		LED Motion Plus	Off		0x0a	0x07	0x00
			On(Normal)				0x01
			Cinema				0x02
			Ticker				0x03
	Picture Option	Color Tone	Cool		0x0a	0x00	0x00
			Standard				0x01
			Warm1				0x02
			Warm2				0x03
		Digital Noise Filter	Off			0x02	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
			Auto Visualization				0x05
		MPEG Noise Filter	Off			0x03	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
		HDMI Black Level	Normal			0x04	0x00
			Low				0x01
		Film Mode	Off			0x05	0x00
			Auto1				0x01
			Auto2				0x02
			Cinema Smooth				0x03
		Auto Motion Plus	Off			0x06	0x00
			Clear				0x01
			Standard				0x02
			Smooth				0x03
			Custom				0x04
			Demo				0x05

change
Normal →
standard
mode

New function
of 12" (only
PDP TV)

Control Item				Cmd1	Cmd2	Cmd3	Value
	Screen Adjustment	Picture Size	16:9	0x0b	0x0a	0x01	0x00
			Zoom1				0x01
			Zoom2				0x02
			Wide Fit				0x03
			4:3				0x04
			Screen Fit				0x05
			Smart View I				0x06
			Smart View II				0x07
			Auto Wide				0x08
			Wide Zoom				0x09
			Zoom				0x0a
	Reset Picture	Reset Picture		0x0b	0x0b	0x00	0x00
	3D	3D Mode	Off	0x0b	0x0c	0x00	0x00
			2D ↔ 3D				0x01
			Side By Side				0x02
			Top Bottom				0x03
			Line By Line				0x04
			Vertical Line				0x05
			Checker BD				0x06
			Frame Sequence				0x07
		3D ↔ 2D	Off			0x01	0x00
			On				0x01
		3D View Point				0x02	(-5~5)
		Depth				0x03	(1~10)
		3D Auto View	Off			0x05	0x00
			Message Notice				0x01
			On				0x02
Control Item				Cmd1	Cmd2	Cmd3	Value
Sound	Sound Mode	Standard		0x0c	0x00	0x00	0x00
		Music					0x01
		Movie					0x02
		Clear Voice					0x03
		Amplify					0x04
	Equalizer	Balance			0x01	0x00	(0~20)

New function of 12" (only DVB TV)

New function of 12" (only DVB TV)

4. Troubleshooting

Control Item				Cmd1	Cmd2	Cmd3	Value	
		100hz				0x01	(0~20)	
		300hz				0x02	(0~20)	
		1khz				0x03	(0~20)	
		3khz				0x04	(0~20)	
		10khz				0x05	(0~20)	
		Reset				0x06	0x00	
	SRS TruSurround HD (echo)	Off			0x02	0x00	0x00	
	Virtual Surround (echo)	On					0x01	
	SRS TruDialog (echo)	Off			0x03	0x00	0x00	
	Dialog Clarify (X9)	On					0x01	
	Preferred Language	English			0x04	0x00	0x00	
		Spanish					0x01	
		French					0x02	
		Korean					0x03	
		Japanese					0x04	
	Multi-Track Sound	Mono			0x05	0x00	0x00	
		Stereo					0x01	
		SAP					0x02	
	Auto Volume	Off			0x06	0x00	0x00	
		ON					0x01	
		Night					0x02	
	Speaker Select	TV Speaker			0x07	0x00	0x00	
		External Speaker					0x01	
	Sound Select	Main			0x08	0x00	0x00	
		Sub					0x01	
	Sound Reset	Sound Reset			0x09	0x00	0x00	
	3D Audio	Off			0x0a	0x00	0x00	New function of 12"
		Low					0x01	
		Medium					0x02	
		High					0x03	

Control Item			Cmd1	Cmd2	Cmd3	Value
KEY	Key Generation		0x0d	0x00	0x00	refer to table
OSD	Show/Hide Control	Show	0x0e	0x00	0x00	0x00
		Hide				0x01
Get Status	Power (On/Off)		0xf0	0x00	0x00	0x00
	Volume(0~100)		0xf0	0x01	0x00	0x00
	Mute (On/Off)		0xf0	0x02	0x00	0x00
	Channel Number		0xf0	0x03	0x00	0x00
	Source (TV/AV/.../HDMI/...)		0xf0	0x04	0x00	0x00
	Picture Size		0xf0	0x05	0x00	0x00
	3D (On/Off)		0xf0	0x06	0x00	0x00
	Picture Mode		0xf0	0x07	0x00	0x00
	Sound Mode		0xf0	0x08	0x00	0x00

New function of 12"

Key value	Value
Up	96 (0x60)
Down	97 (0x61)
Left	101 (0x65)
Right	98 (0x62)
Menu	26 (0x1A)
Internet	147 (0x93)
Enter(OK)	104 (0x68)
EXIT	45 (0x2D)

4-8. Software Upgrade

Software Upgrade can be performed by downloading the latest firmware from samsung.com to a USB memory device.

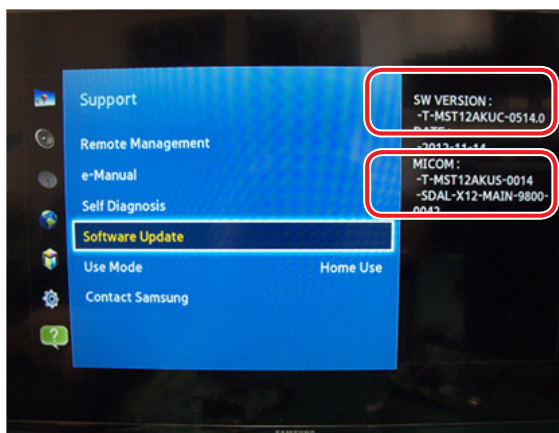
- Current Version - The software already installed in the TV.

Software is represented as 'Year/Month/Day_Version'.

4-8-1. How to Check the Software Version

■ Use the Main Menu

1. Click the "MENU" key in remote controller.
2. Select "Support" menu.
3. Locate the menu cursor "Software Upgrade" menu.
4. Click the "INFO" key.
 - Check the Main SW and Micom version.



■ Use the Factory Mode

Access the factory mode

Option	T-MST12AKUC-xxxx
Control	T-MST12AKUS-xxxx
Debug	BT Version : xxxx
SVC	Camera Version : xxxx
ADC/WB	E-Manual : xxxx
Advanced	EDID SUCCESS
	CALIB : AV/COMP/PC/HDMI/
	Option : xxxx,US,6400,NONE
	USB RS232C : OFF
	SDAL-X12-MAIN-xxxx-xxxx
	RFS : "X12 0071" KER/201x-xx-xx
	KERNEL : 8.0837, D / Onboot :xxxx.x
	Backend IC[x], Data Ver : xxxx
	TCON Version : xxxx
	DTP-DTVTD-xxxx
	Model : UN32F5500
	Wired MAC SUCCESS
	Wireless MAC SUCCESS
	DRM : Crt O, Nf O, Wv O, Hc O, Dc O, Mx O, MI O
	Factory Data Ver : 97
	EERC Version : 51
	DTP-BP-HAL-3183
	DTP-AP-CNC-3151
	DTP-AP-MM-3145
	DTP-AP-WP-3148
	DTP-BP-MW-3156
	DTP-BP-APP-3156
	POP-FLA-13-TEMP
	Date of purchase : mm/dd/yyyy

4-8-2. How to Upgrade Software and Micom

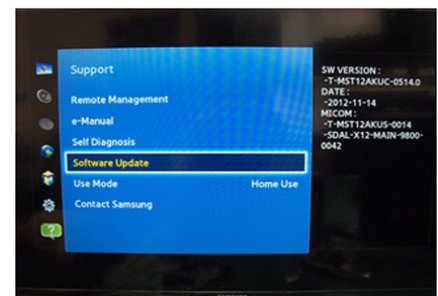
Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the TV. Please be careful not to disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version). When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings before beginning firmware update. After update is completed, restore your previous settings.

■ Main Software Upgrade

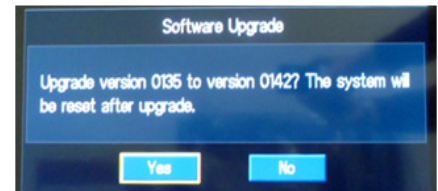
1. Store the sw program named "T-MST12AKUC" in USB memory stick.
 - Connect the USB.



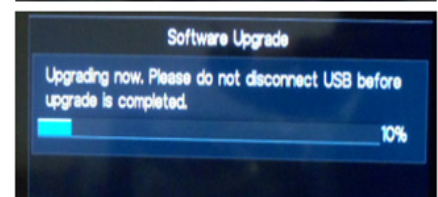
2. Click the "MENU" key in Remote Controller.
3. Select "Support" menu.
Locate the menu cursor "Software Update" menu



4. Click the "ENTER" key.



5. Click the "ENTER" key.
 - Wait for upgrade complete.
 - Check the Software Version.



4-9. Rear Cover Dimension

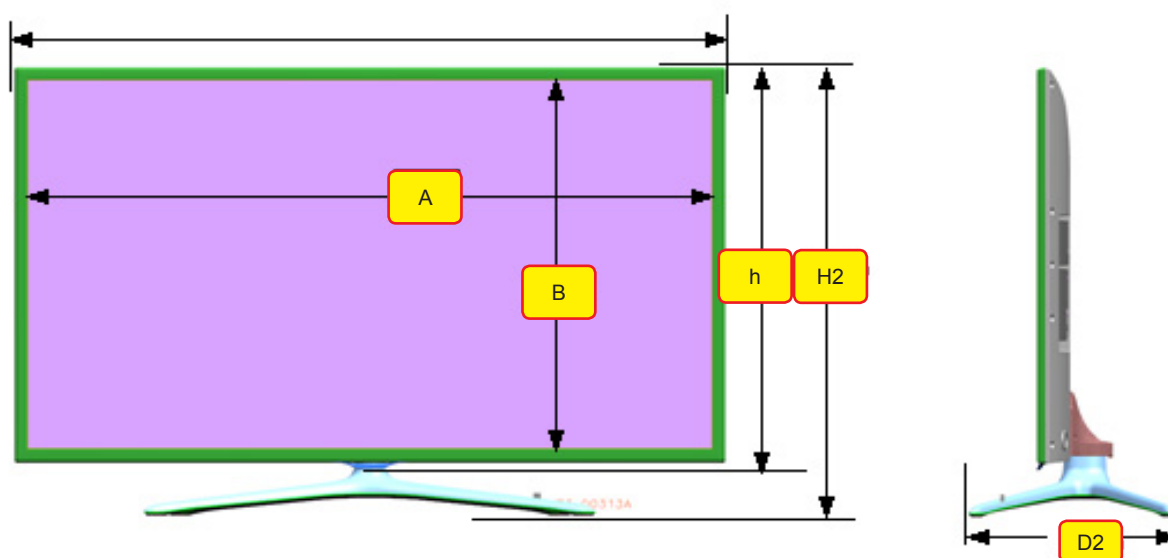
■ UN**F55**AF

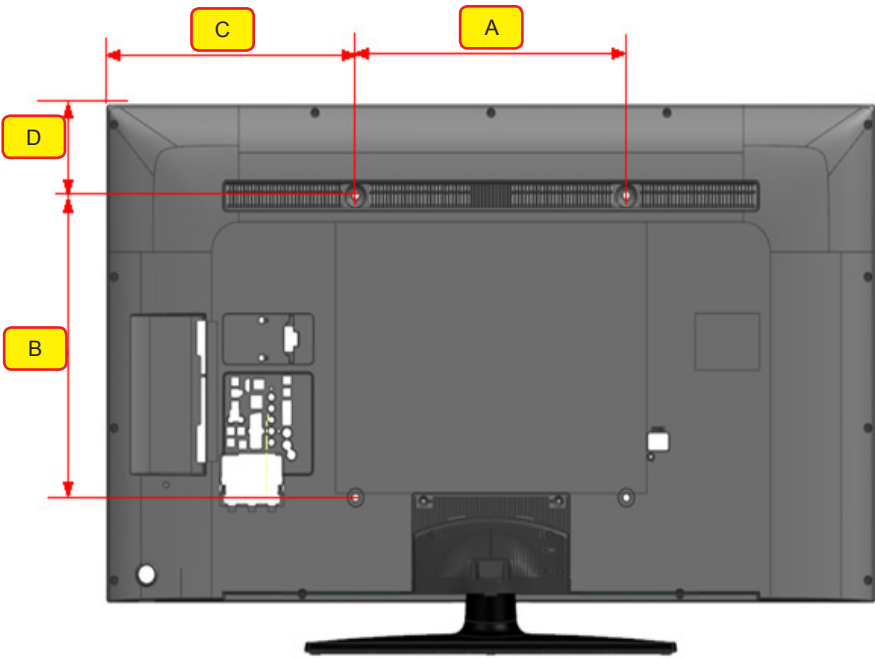
32", 40"

Item		32"	40"
SET (W/Quad Stand) mm (W * H2 * D2)		738.0 * 509.6 * 265	928.2 * 615.5 * 265
SET (W/O Stand) mm (W * h * d)		738.2 * 445.4 * 49.0	928.2 * 552.3 * 49.4
Packing (out) mm (W * H * D)		985 * 596 * 143	1190 * 616 * 147
Packing (out) HQ mm (W * H * D)		-	-
SET Depth mm (d)		49	49.4
Screen Size (A * B) (Diagonal)		703.4 * 397.8 (807.4)	890.6 * 503.2 (1022.2)
Loading Q' ty (BOX) 20ft / 40ft / 40ft-HC / 45ft / 53ft	USA / EUR	240 / 504	198 / 396
	HQ (8 Ton / 11 Ton)	-	-

46", 50"

Item		46"	50"
SET (W/Quad Stand) mm (W * H2 * D2)		1059.6 * 700.0 * 307.3	1135.4 * 741.8 * 307.3
SET (W/O Stand) mm (W * h * d)		1059.6 * 626.2 * 49.4	1135.4 * 668 * 49.8
Packing (out) mm (W * H * D)		1343 * 718 * 158	1427 * 771 * 163
Packing (out) HQ mm (W * H * D)		-	-
SET Depth mm (d)		49.4	49.8
Screen Size (A * B) (Diagonal)		1021.4 * 576 (1171.9)	1098.8 * 619.4 (1260.6)
Loading Q' ty (BOX) 20ft / 40ft / 40ft-HC / 45ft / 53ft	USA / EUR	165 / 345	96 / 192
	HQ (8 Ton / 11 Ton)	-	-

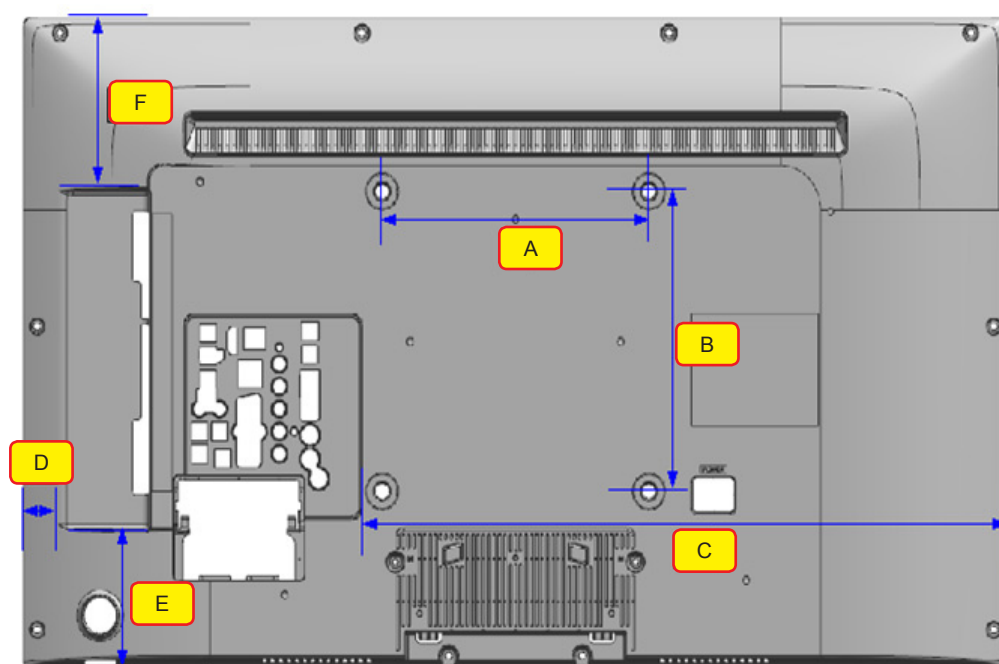




UF5000	32"	40"	46"	50"
WALL MOUNT (A X B)	200 X 200	200 X 200	400 X 400	400 X 400
C	269	364.1	329.8	367.7
D	116.2	170.4	78.1	120

UN32F4300AF

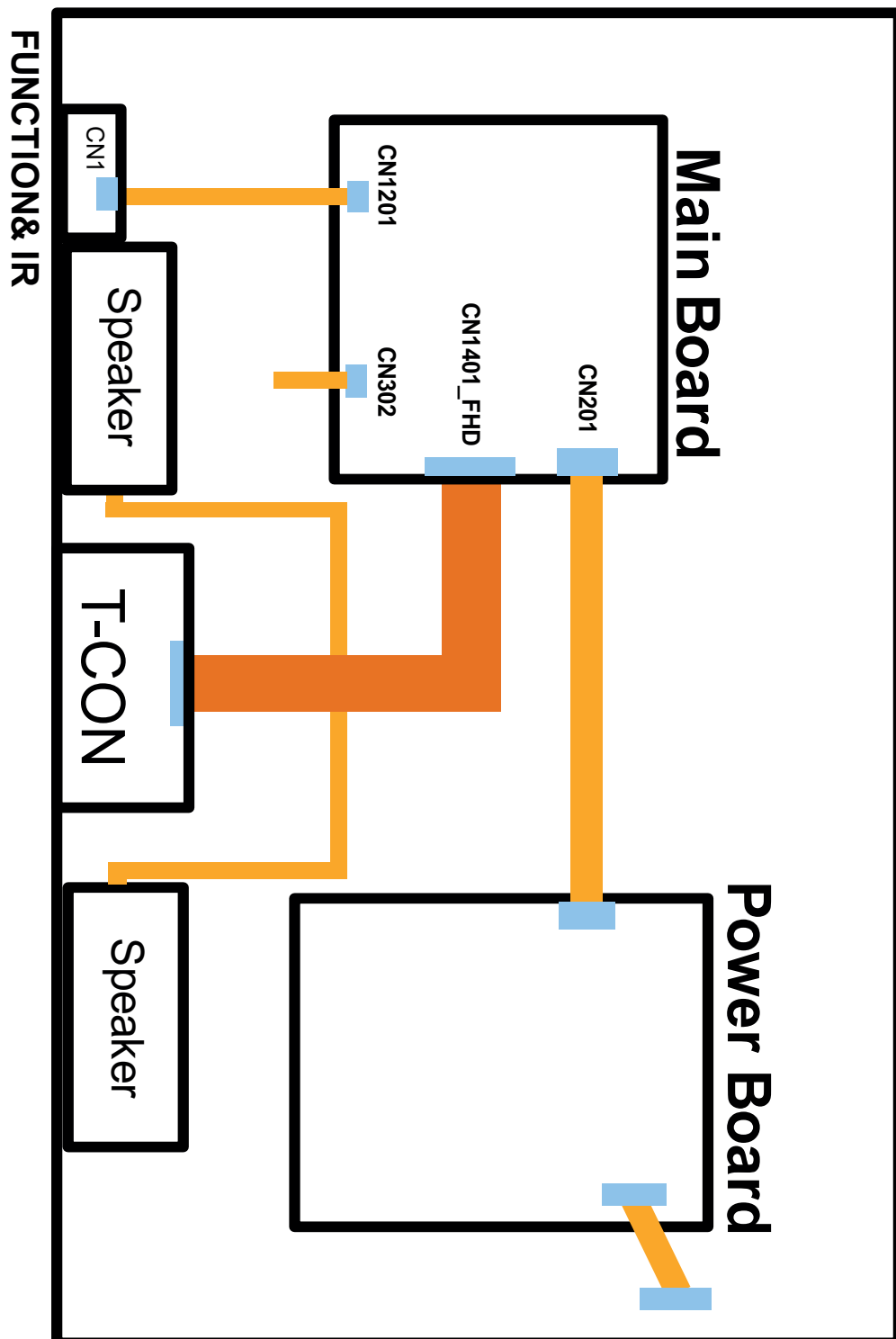
Item		32"
SET Size (With Stand)		737.9 * 512.9 * 265
SET Size (Without Stand)		737.9 * 435.8 * 49.5
Packing Size	W / W	985 * 596 * 143
NET (SET) Weight (With Stand)		6.3
NET (SET) Weight (Without Stand)		5.2
Gross Weight (After Packing)		8.1



4300	A	B	C	D	E	F
mm	200	200	483.5	25.8	112.4	93.8

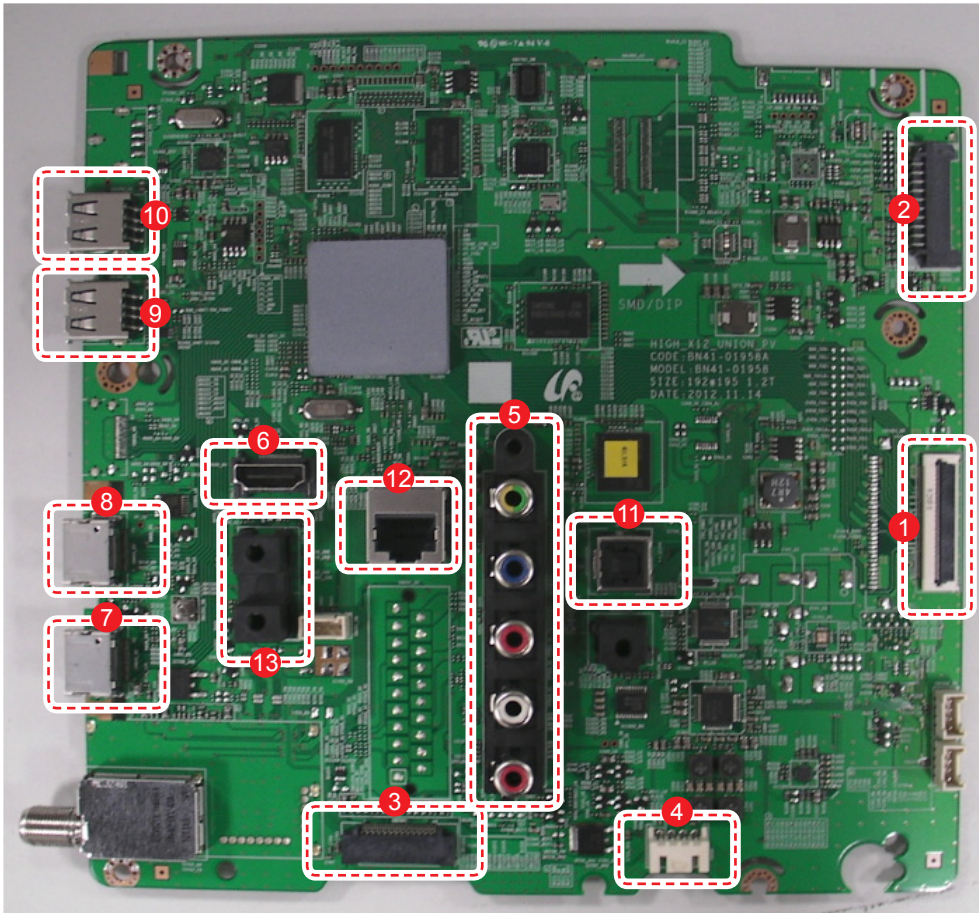
5. Wiring Diagram

5-1. Wiring Diagram



5-2. Connector

■ Main Board



① CN1401_FHD

1	NC	16	EVEN_TX3+
2	GND	17	EVEN_TX3-
3	FRC_SDA	18	GND
4	FRC_PWM1	19	EVEN_TXCLK-
5	FRC_SCL	20	EVEN_TXCLK+
6	FRC_PWM3	21	GND
7	FRC_PWM2	22	EVEN_TX2+
8	TCON_SDA	23	EVEN_TX2-
9	PANEL_I2C_EN	24	EVEN_TX1+
10	BT_SYNC	25	EVEN_TX1-
11	UPDATE_CHK	26	EVEN_TX0+
12	TCON_SCL	27	EVEN_TX0-
13	GND	28	GND
14	EVEN_TX4+	29	ODD_TX4+
15	EVEN_TX4-	30	ODD_TX4-

① CN1401_FHD

31	ODD_TX3+	42	ODD_TX0-
32	ODD_TX3-	43	GND
33	GND	44	GND
34	ODD_TXCLK+	45	GND
35	ODD_TXCLK-	46	FRC_PWM4
36	GND	47	PANEL_13V_PW
37	ODD_TX2+	48	PANEL_13V_PW
38	ODD_TX2-	49	PANEL_13V_PW
39	ODD_TX1+	50	PANEL_13V_PW
40	ODD_TX1-	51	PANEL_13V_PW
41	ODD_TX0+		

② CN201 (to Powr board)

1	B5V	11	B13V
2	SW_POWER	12	B13V
3	B5V	13	B13V
4	A5V	14	PWM_DIMM
5	GND	15	NC
6	GND	16	NC
7	B13VS	17	NC
8	GND	18	NC
9	B13VS	19	NC
10	SW_INVERTER	20	NC

③ CN1201 (FUNCTION)

1	IR	14	A5.3V
2	GND	15	LED_STB
3	GND	16	BT_WAKE
4	FRAME_SYNC_IN	17	IR_GND
5	A3.3V	18	POWER_DET
6	BT_SYNC	19	NC
7	MSCL	20	BT_RESET
8	GND	21	NC
9	MSDA	22	NC
10	USB_BT_DP	23	GND
11	KEY_INPUT1	24	WIFI_DP
12	USB_BT_DM	25	WIFI_DM
13	KEY_INPUT2	26	B5V_DC_PW

④ CN302 (SPEAKER)

1	R+	3	L+
2	R-	4	L-

⑤ CN502 (COMPONENT)

1	GND	9	TEST_PR
2	COMP2_Y_CVBS	10	GND
3	IDENT_VIDEO2	11	COMP2_AV2_SR_IN
4	GND	12	TEST_SL
5	COMP2_PB	13	GND
6	IDENT_COMP2	14	COMP2_AV2_SR_IN
7	GND	15	TEST_SR
8	COMP2_PR		

⑥ CN601 (HDMI3)

1	HDMI1_RX2+	11	GND
2	GND	12	HDMI1_RXCLK-
3	HDMI1_RX2-	13	CEC
4	HDMI1_RX1+	14	NC
5	GND	15	HDMI1_SCL_DDC
6	HDMI1_RX1-	16	HDMI1_SDA_DDC
7	HDMI1_RX0+	17	GND
8	GND	18	HDMI1_5V
9	HDMI1_RX0-	19	HDMI1_HOT_PLUG
10	HDMI1_RXCLK+		

⑦ CN602 (HDMI1)

1	HDMI2_RX2+	11	GND
2	GND	12	HDMI2_RXCLK-
3	HDMI2_RX2-	13	CEC
4	HDMI2_RX1+	14	ARC2_SIGLE
5	GND	15	HDMI2_SCL_DDC
6	HDMI2_RX1-	16	HDMI2_SDA_DDC
7	HDMI2_RX0+	17	GND
8	GND	18	HDMI2_5V
9	HDMI2_RX0-	19	HDMI2_HOT_PLUG
10	HDMI2_RXCLK+		

⑧ CN603 (HDMI2)

1	HDMI3_RX2+	11	GND
2	GND	12	HDMI3_RXCLK-
3	HDMI3_RX2-	13	CEC
4	HDMI3_RX1+	14	NC
5	GND	15	HDMI3_SCL_DDC
6	HDMI3_RX1-	16	HDMI3_SDA_DDC
7	HDMI3_RX0+	17	GND
8	GND	18	HDMI3_5V
9	HDMI3_RX0-	19	HDMI3_HOT_PLUG
10	HDMI3_RXCLK+		

⑨ CN1501 (USB1)

1	B5V_USB1_PW	3	USB1_DP
2	USB2_DM	4	GND

5. Wiring Diagram

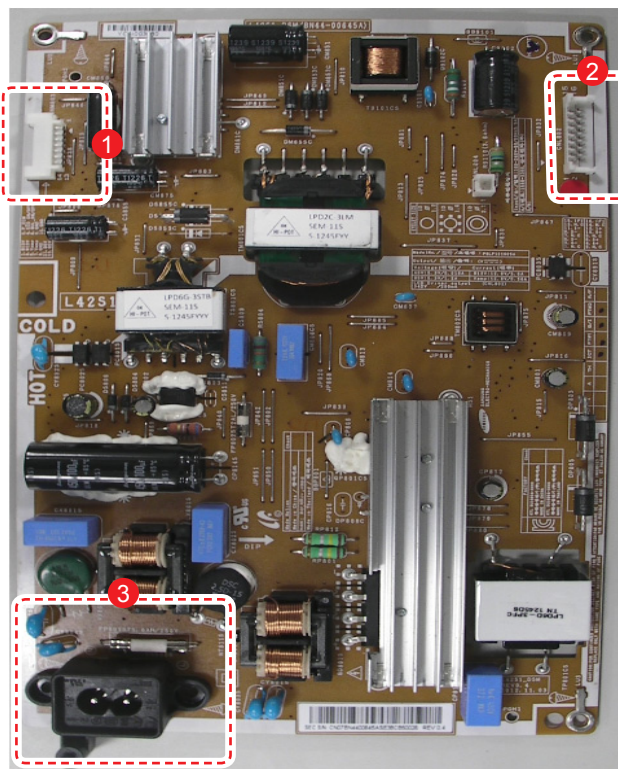
⑩ CN1502 (USB2)			
1	B5V_USB2_PW	3	USB2_DP
2	USB2_DM	4	GND

⑪ OP301 (OPTICAL)			
1	SPDIF_OUT	3	GND
2	B5V_DC_PW		

⑫ CN301 (MONITOR OUT)			
1	LAN_TXD+	5	B2.5V
2	B2.5V	6	LAN_RXD-
3	LAN_TXD-	7	NC
4	LAN_RXD+	8	GND

⑬ CN304_NIRB / CN303_IBR			
1	GND	5	TEST_SR
2	HP_LINE_SL_OUT	6	IDENT_HP
3	HP_LINE_SR_OUT	7	GND
4	TEST_SL	8	GND
9	IRB	12	NC
10	IRB	13	IPR_JACK_ID
11	NC	14	GND

■ SMPS



① CNM803 (to MAIN board)

1	B13V	8	GND
2	PWM_DIM	9	GND
3	B13V	10	GND
4	ECO_ON/OFF	11	B5V
5	Vamp	12	A5V
6	BLU_ON/OFF	13	B5V
7	Vamp	14	PS ON/OFF

② CNL802

1	NC	9	2-
2	NC	10	2+
3	4-	11	1-
4	4+	12	1+
5	3-	13	NC
6	3+	14	NC
7	NC	15	IF2
8	NC	16	IF1

③ CN801S

1	N	2	L
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5-3. Connector Functions

Connector	Function
CN201 ↔ IP CN	Supply main power and dimming signal from IP board to Main Board.
CN1401_FHD ↔ T-CON CNF1	The LVDS signal transferred from Main Board to Panel.

5-4. Cables

Use	LEAD (Main-IP 14P)	LVDS CALBE (Main - Panel 30P)
Code No.	UN32F5500AF : BN39-01652S UN40F5500AF : BN39-01652T UN46F5500AF : BN39-01652D UN50F5500AF : BN39-01652U UN32F4300AF : BN39-01652S	UN32F5500AF : BN96-24278U UN40F5500AF : BN96-24278X UN46F5500AF : BN96-24278V UN50F5500AF : BN96-26699B UN32F4300AF : BN96-26659C
Image		

TV Factory Menu Guide as Diagnostic tool

1) How to access the Factory Menu

[Using Factory Remote]

Press the Info and Factory Buttons sequentially on a Factory Remote.
(Part Number: AA81-00243A)

※ If the TV has the Universal Remote setup implemented, the Info button works as an Info button for the connected device.



[Using regular IR Remote]

Press the Mute - 1 - 8 - 2 - Power On buttons sequentially on a normal Remote while the TV is off.

※ If you access the Factory Menu with a normal Remote, some menus are deactivated.

[Factory Main Menu]

Current Source Info	Status of Current Source
MODE : HDMI1	RES : NOSIGNAL
Option	T-FXPAKUC-1117.① T-FOXAUS2-1003② BT Version : 2.1.14.25③ E-Manual : FPATSCF-2.100④ Camera Version : 1.30.00⑤ Mic Version : 2.89.00⑥ Blaster-Version : 3.03⑦ EDID SUCCESS⑧ CALIB : AV / COMP / PC / HDMI ⑨ Option : 46A2UF7E.SD_CANADA,7450,NONE⑩ CPLD/LD : 0006 / NONE
Control	
Debug	
SVC	
ADC/WB	
Advanced	DTP-SDAL-FOXP-ATSC-0031-1520-REL RFS:"Fox.P 0169" K/ 2013-12-21 KERNEL : 153.1133, / Onboot : 0078 DTP-DTVD-3608-FOX-ATSC-021 Backend IC[6], FW: 003D, Data: 0039 TCON Version: F46A2F703⑪ Model : UN46F7450⑫ Wired MAC SUCCESS ⑬ Wireless MAC SUCCESS DRM:CrT O,Nf O,Wv O,Hc X,Dc /,Mx O,Mi ⑭ Factory Data Ver : 199 EERC Version : 151 DTP-BP-HAL-TV_RC-015-FoxP.ATSC-014 DTP-BP-MW-3608-13-11 DTP-BP-APP-3608-23-37 POP-FLF-2013-0031 Date of purchase : 1/24/2014⑮

① TV SW version

② Sub Micom Version

③ Bluetooth Module Version

④ E-Manual Version

⑤ Built-in Camera Version

⑥ Built-in Mic. Version

⑦ IR Extender/Blaster Version

⑧ HDMI EDID Result

⑨ Available Input Sources

⑩ Option Bytes List

- Panel Type/Local Set/Model/Ch Table

⑪ T-Con. Board Version

⑫ Basic Model Code

⑬ Wired/Wireless MAC address Status

- If Wired MAC displays Fail, replace the Mainboard
- If Wireless MAC displays Fail, replace the Wi-Fi Module

⑭ Security(DRM) Key

- CrT X: Replace the Mainboard
- Nf X or Wv X: Factory Reset → Reconnect Network → Run Smart Hub

⑮ Customer Purchase Date

TV can obtain the date from any of the following:

- Air/Cable DTV Signal
- Internet Connection
- Manual Clock Setting

[Factory Menu > Option]

<p>MAIN : Option, MODE : HDMI1</p> <table><tr><td>Factory Reset ①</td><td></td></tr><tr><td>Type ②</td><td>46A2UF7E</td></tr><tr><td>Local Set ③</td><td>SD_CANADA</td></tr><tr><td>SW Model ④</td><td>UF7450</td></tr><tr><td>BOM Model ⑤</td><td>7450</td></tr><tr><td>TUNER ⑥</td><td>SI2190</td></tr><tr><td>Ch Table</td><td>NONE</td></tr><tr><td>MRT Option ⑦</td><td></td></tr><tr><td>Engineer Option</td><td></td></tr></table>	Factory Reset ①		Type ②	46A2UF7E	Local Set ③	SD_CANADA	SW Model ④	UF7450	BOM Model ⑤	7450	TUNER ⑥	SI2190	Ch Table	NONE	MRT Option ⑦		Engineer Option		<p>① Factory Reset</p> <ul style="list-style-type: none">- Resets the TV to its initial state. Inform the customer that the items below will be reset to their factory defaults:▶ Picture Calibration setting▶ Network setting and SmartHub applications <p>② Type</p> <ul style="list-style-type: none">- TV Panel type. Can be changed. <p>③ Local Set</p> <ul style="list-style-type: none">- Language and features based on Country <p>④ SW Model</p> <ul style="list-style-type: none">- Features based on model series <p>⑤ BOM Model</p> <ul style="list-style-type: none">- SW Model <p>⑥ Tuner : Tuner Type</p> <p>⑦ MRT Option</p> <ul style="list-style-type: none">- Local Set and SW Model
Factory Reset ①																			
Type ②	46A2UF7E																		
Local Set ③	SD_CANADA																		
SW Model ④	UF7450																		
BOM Model ⑤	7450																		
TUNER ⑥	SI2190																		
Ch Table	NONE																		
MRT Option ⑦																			
Engineer Option																			

[Factory Menu > Control]

MAIN : Control, MODE : HDMI1, RES : NOSIGNAL

EDID ①

Sub Option ②

PDP Option

Hotel Option ③

Shop Option

Asia Option

Sound

① EDID

- Rewrite HDMI EDID data.

② Sub Option

- Do not change the values.

③ Hotel Option

- Menu for Hotel use. Do not change any settings.

[Factory Menu > SVC]

<div>MAIN : SVC, MODE : HDMI1,</div> <div>Test Pattern ①</div> <div>Panel Display Time ② 4Hr</div> <div>SVC Info ③ 0</div> <div>Delete S/N Failure</div> <div>Upgrade ④</div> <div>Apps Reset ⑤</div> <div>ER Count ⑥</div> <div>LOG(View Log) ⑦</div> <div>Self Test(for HW) ⑧</div> <div>IPERF Stopped</div> <div>OPTION_HDMI</div> <div>SVC Reset ⑨</div> <div>Expert</div> <div>DVB CI</div>	<div>① Test Pattern</div> <div>- Display Test Pattern from each component. (Mainboard, Pre/Post FRC of T-Con. Board)</div> <div>② Panel Display Time</div> <div>- Display Panel Display Time.</div> <div>③ SVC Info</div> <div>- Display basic repair related information.</div> <div>④ Upgrade</div> <div>- Update the modules (SubMicom/Logic/Wi-Fi/Bluetooth).</div> <div>⑤ Apps Reset</div> <div>- Reset App, Smart Hub, and Network settings.</div> <div>⑥ ER Count</div> <div>- Displays Error Count number.</div> <div>⑦ LOG (View Log)</div> <div>- Download TV LOG.</div> <div>⑧ Self Test (for HW)</div> <div>- Run Self Test for H/W components.</div> <div>⑨ SVC Reset</div> <div>- Reset all settings except App, Smart Hub, and Network.</div>
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[Factory Menu > SVC > SVC Info]

<div>SVC Info</div> <div>1. Model Code : UN46F7450</div> <div>2. Serial Number : YO853CE5006302A</div> <div>3. Pre Software Version : T-FXPAKUC-1116.2(USB)</div> <div>4. Software Version : T-FXPAKUC-1117.1</div> <div>4. Panel Display Time : 270 min</div> <div>5. Last Mode(Connection) : HDMI1</div> <div>6. Pairing : 3D Glasses : X, 11' Remote : X, 12' Smart Contr</div> <div>7. SmartHub Used : Smart Hub 4.5028.1 / YONED5D5H28E</div> <div>8. Watchdog Count : 0</div>	<div>1. Model Code: Basic Model Code</div> <div>2. Serial Number: If R/B mainboard, it will display 'FAIL'</div> <div>3. Pre Software Version: Previous Software version. Also shows how software was updated (USB or OTN).</div> <div>4. Software Version: Current Software version</div> <div>5. Last Mode (Connection): The last Source info</div> <div>6. Pairing : Paring Info. for 3D Glasses and Smart Control</div> <div>7. SmartHub Used: Smart Hub version and DUID info</div> <div>8: Watchdog: Watchdog Count Number</div>
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2) How to check Error Count (ER Count)

- ER Count should be checked first. This will help you troubleshoot intermittent power cycle issues and Wi-Fi/BT/MOIP module issues.

- Go to Factory Menu > SVC > ER Count menu.

1) 2012 Smart TV

- WD/AR Count: Factory Menu>Control>Sub Control
- WIFI/BT ER Count: Factory Menu>SVC>ER Count

2) 2013 Smart TV

- All Error Count: Factory Menu>SVC>ER Count

MAIN : SVC, MODE : HDMI1, RE

WD Count	0
AR Count	4
WIFI ER Count	0
BT ER Count	0
Camera ER Count	0

1. WD Count (Watch Dog Count):

- TV turns off and on to protect itself from a Micom crash.

2. AR Count (Auto Reset Count):

- TV turns off and on to protect itself from a Main CPU crash

3. WIFI ER Count

- Wi-Fi Module error count. If Wireless MAC is missing on Menu>Support>Contact Samsung and WIFI ER Count is high, replace the Wi-Fi module.

4. BT ER Count(Bluetooth Error Count):

- Bluetooth module error count. If BT MAC address is missing on Menu>Support>Contact Samsung and BT ER Count is high, replace the Bluetooth module.

5. Camera ER Count:

- Built-In Camera or Mic.(MOIP) error count. If the Camera version number is empty on Menu>Support>Contact Samsung, replace the Camera & Mic module (MOIP).

3) How to resolve the Picture Flip issue

After Panel/Main board replacement, the picture can be flipped even if the Panel Type is set correctly. To fix this, follow these steps:

- Smart Hub TVs: Go to Factory Menu > MRT Option, and then select HV Flip.
- Non SmartHub TVs : Go to Factory Menu > Control > Sub Option, and then select Mirror.

1. Go to MRT Option.

MAIN : Option, MODE : HDMI1,

Engineer Option
MRT Option
Ch Table
NONE
TUNER
52190
BOM Model
7450
SW Model
UF7450
Local Set
SD.CANADA
Type
46A2UF7E
Factory Reset

2. Select HV Flip.

LED Motion Plus Support	OFF
Natural Mode Support	OFF
Relax Mode Support	OFF
HDMI/DVI SEL	2
Select LCD/PDP	LCD
Wall Mount	OFF
HV Flip	ON
Light Effect	ON
e-Pop Default	ON
CAMERA Support	OFF

3. Change On to Off.

MAIN : Option, MODE : HDMI1,

HV Flip	ON
---------	----



MAIN : Option, MODE : HDMI1,

HV Flip	OFF
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4. TV Power Off->ON

4) How to check Test Patterns

For any video issues, Test Patterns generated from Mainboard and Pre/Post FRC of T-Con Board should be verified in the Factory menu.

For 2013 TVs, some test patterns are also available in the TV menu (Menu>Support>Self Diagnosis>Picture Test).

1. Go to Factory Menu > SVC and select Test Pattern



2. Select a Test Pattern, and then press the Right arrow button to View/Change patterns.

Pattern Sel ①	OFF
Logic Pattern Sel	---
Logic Level Sel	---
FRC Pre Test Pattern ②	0
FRC Post Test Pattern ③	0
SOC TCON Test Pattern ④	0
SOC TCON Pattern Level	255
SOC TCON FRC Pattern	0
HDMI WB Pattern	OFF
HDMI Pattern Sel	0

★ The Pattern menu is shared by all products and models. However, some patterns do not work or are not available in some models. The following patterns should be used for LED TV video troubleshooting.

① Pattern Sel

- Test Pattern from the Mainboard.

② FRC Pre Test Pattern

- Test Pattern from the Pre-component of the FRC module in the T-Con Board

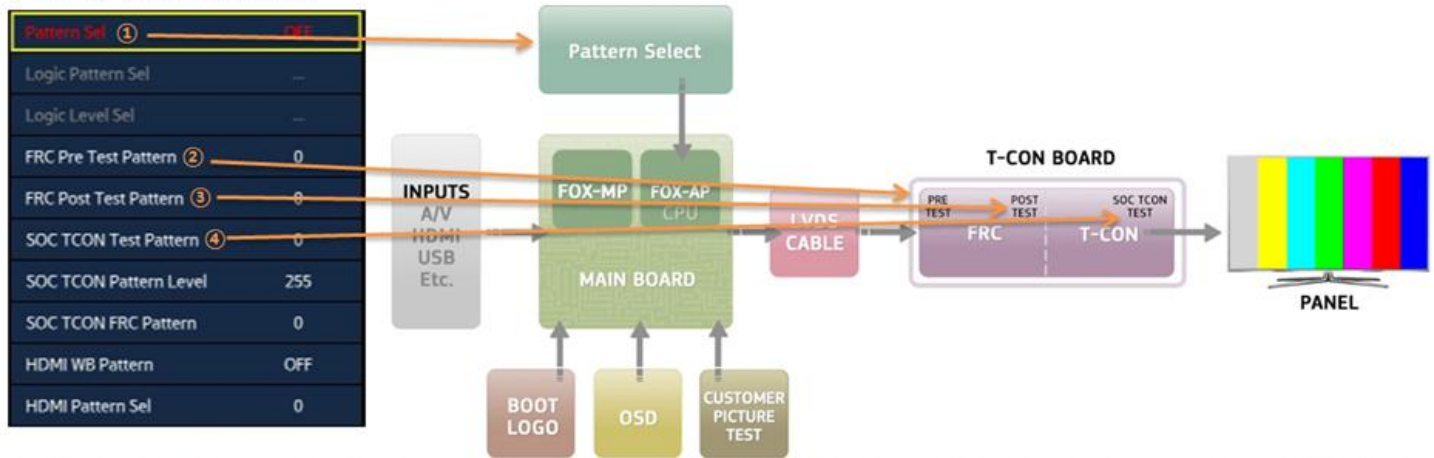
③ FRC Post Test Pattern

- Test Pattern from the Post-component of the FRC module in the T-Con Board

④ SOC TCON Test Pattern

- Test Pattern from the Timing Control module in the T-Con Board






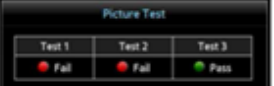

★ LED TV Video Signal Path



The Mainboard sends an important Processed Video Signal through the LVDS to the FRC/T-CON Board and then to the Panel. To troubleshoot any video issue, follow these steps:

- Verify "Pattern Sel" (Main Board)
- Verify "FRC Pre Test Pattern" (beginning of FRC in T-CON)
- Verify FRC Post Test Pattern" (end of FRC in T-CON)
- Verify "SoC TCON Test Pattern" (at T-CON Processor)

✳ The same functions are embedded in the Self Diagnosis Picture Test
(Menu - Support - Self Diagnosis).

Mainboard [Pattern1] 	T-Con. Pre [Pattern2] 	T-Con. Post [Pattern3] 	Test Result	Problem
Pass	Pass	Pass		Signal Source / Cable Connection
Fail	Pass	Pass		Mainboard
Fail	Fail	Pass		T-Con. Board / LVDS Cable
Fail	Fail	Fail		Panel

5) How to run a Hardware Self Diagnosis

You can see the results of Hardware self diagnosis tests through the Self Test (for HW) menu. This Menu is only available for 2013 and later TVs.

- Go to Factory Menu > SVC > Self Test (for HW)

Select the hardware item you believe is defective. The TV displays the test results.

MAIN : Option, MODE : HDMI1, RES : NOSIGNAL

Loop Back	EcoSensor	
CPU	Voltage	0
DDR	Chip Test	0
FLASH	Module Test	
EEPROM	ATV CH Inspection	
Tuner X-TAL	DTV CH Inspection	
Tuner1	Satellite CH Inspection	
HDMI Switch IC	EXT Sound Inspection	
USB HUB IC	Woofer Sound Inspection	NONE
WIFI	DP Test	
LVDS	DP CRC Result	OK/Default
T-CON/FRC	Voltage Result	OK/Default
PCB Test		
MOIP		
BT		

Example 1. Eco Sensor Test

Eco Sensor

Eco Sensor : OK
Back Light Step : 0

Example 2. Voltage Test

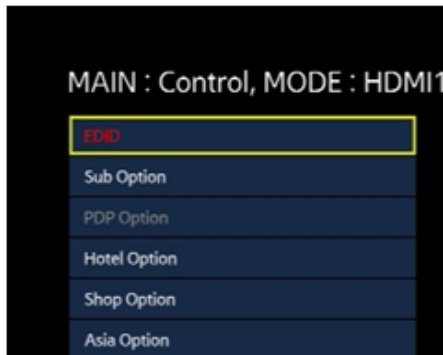
Voltage

A5V : (0) OK
B5V : (0) OK
B12V : (0) OK
Audio Amp(B13V-B18V) : (0) OK
INVERTER ON/OFF : (0) OK
A3.3V : (0) OK
PANEL B+(13V) : (0) OK
LNB(13V-18V) : NOT SUPPORT
LNB_13V18V_SUB : NOT SUPPORT
DECODER 1.1V : (0) OK
USB/WIFI/CI 5V : (0) OK
CPU 1.1V : (0) OK

6) How to rewrite HDMI EDID Data

If the TV fails to identify an HDMI device correctly or does not have Audio/Video from the HDMI device, follow these steps to rewrite HDMI EDID.

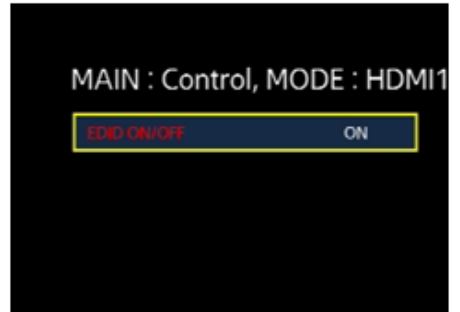
1. Remove ALL HDMI connections.
2. Factory Mode → Control → EDID.



3. Select EDID On/Off.



4. Press Right Arrow Key to change EDID OFF to ON.



5. Press Return (Menu). Select EDID Write All, and then press Enter.



6. Press the Right Arrow Key to Rewrite. Screen changes from Wait to Success.



7. Press the Menu button, and then verify that EDID WRITE HDMI shows "Success".

