SAMSUNG

LED-TV

Chassis :   U81A

Model :   UA40ES7500*
            UA46ES7500*
            UA55ES7500*

SERVICE *MANUAL*

LED TV	Contents

UA**ES7500*

1. **Precautions**

2. **Product Specifications**

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Contents

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

⚠️ **WARNING**
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 resistorcapacitor networks, mechanical insulators, etc.

3. Leakage Current Hot Check:
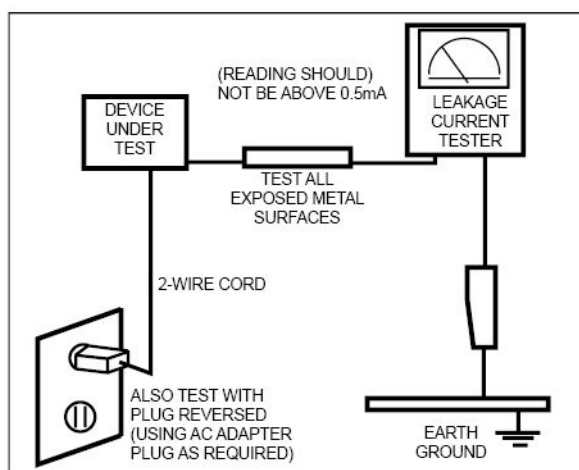
⚠️ **WARNING**
Do not use an isolation transformer during this test.
Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

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

WARNING — An electrolytic capacitor installed with the wrong polarity might explode.

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

NOTE — 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 theblades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1.3. Static Electricity Precautions

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

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.

2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.

3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.

4. Use only a grounded-tip soldering iron to solder or desolder ESDs.

5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.

6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

> ⚠️ **CAUTION** Be sure no power is applied to the chassis or circuit and observe all other safety precautions.

8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1.4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.

2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.

3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.

4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.

5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.

6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.

7. When installing the product, leave enough space (0.4m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

2. Product Specifications

2.1. Product Information

2-1-1. Model Comparison

Model		UA**ES7500*	
Front View		* W : Width H : High D : Depth	
Detail View			
Front Color		U-MOIP	
Dimensions (W x H x D)	40"	Set with Stand	914.4 x 611.2 x 241.3 mm
		Set without Stand	914.4 x 545.7 x 29.7 mm
	46"	Set with Stand	1046.8 x 691.2 x 276.7 mm
		Set without Stand	1046.8 x 620.2 x 29.7 mm
	55"	Set with Stand	1238.4 x 790.4 x 276.7 mm
		Set without Stand	1238.4 x 728.0 x 29.7 mm
Weight	40"	Set with Stand	10.9 kg
		Set without Stand	9.5 kg
	46"	Set with Stand	13.8 kg
		Set without Stand	11.9 kg
	55"	Set with Stand	18.3 kg
		Set without Stand	16.4 kg
Panel Type		TFT LCD PANEL 240 Hz	
Internal Memory		128 Mbtye	
DDR		768 Mbtye	
Feature		3D, MoIP, SMART HUB, Allshare, Internet TV, Built-in Wi-Fi, Full Browser, Bluetooth	

2-1-2. Feature & Specifications

Model	UA40ES7500*

Feature
•   Digital-TV, RF, 3-HDMI, 1-Component, 2-A/V(1 Component-AV), 3-USB2.0(Media Play), LAN, HML(HDMI3) •   Brightness : Mega Contrast •   PIP(in HDMI 1, 2, 3, Component 1, PC Mode and Sub picture is available only in TV mode(DTV/ATV)) •   Dolby Digital+, DNSe, DNIe

Specifications		
Item	**Description**	
LCD Panel	40 inch HD 240 Hz	
Scanning Frequency	Horizontal : 67.5 KHz (TYP) Vertical : 60 Hz (TYP)	
Display Colors	Wide Color Enhancer Plus	
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	160 MHz	
Active Display (H x V)* * Horizontal x Vertical	885.6 (H) x 498.15 (V) mm / 34.867 (H) x 19.613 (V) inches	
AC Power Voltage & Frequency	AC 110V ~ 230 V, 50 / 60 Hz	
Power Consumption	130 W (Under 0.1 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	914.4 x 611.2 x 241.3 mm
	Set without Stand	914.4 x 545.7 x 29.7 mm
Weight	Set with Stand	10.9 kg
	Set without Stand	9.5 kg
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	Asia/Africa : 1 PAL/SECAM/NIM/QAM/Cable/T2 tuner
	Sound	Dolby Digital+, DNSe
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -13°F ~ 113°F (-25°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 : • RF : 20 Hz ~ 15.4 kHz • AV/Componet/HDMI : 20 Hz ~ 20 kHz	
Note : 3D, MoIP, Media Bridge, Allshare, Internet TV, Built-in Wi-Fi, Full Browser, Bluetooth, Smart Interaction		

Model	UA46ES7500*

Feature
• Digital-TV, RF, 3-HDMI, 1-Component, 2-A/V(1 Component-AV), 3-USB2.0(Media Play), LAN, HML(HDMI3) • Brightness : Mega Contrast • PIP(in HDMI 1, 2, 3, Component 1, PC Mode and Sub picture is available only in TV mode(DTV/ATV)) • Dolby Digital+, DNSe, DNIe

Specifications		
Item	Description	
LCD Panel	46 inch HD 240 Hz	
Scanning Frequency	Horizontal : 67.5 KHz (TYP) Vertical : 60 Hz (TYP)	
Display Colors	Wide Color Enhancer Plus	
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	160 MHz	
Active Display (H x V)* * Horizontal x Vertical	1018.08 (H) x 572.67 (V) mm / 40.08189 (H) x 25.46063 (V) inches	
AC Power Voltage & Frequency	AC 110V ~ 230 V, 50 / 60 Hz	
Power Consumption	150 W (Under 0.1 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	1046.8 x 691.2 x 276.7 mm
	Set without Stand	1046.8 x 620.2 x 29.7 mm
Weight	Set with Stand	13.8 kg
	Set without Stand	11.9 kg
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	Asia/Africa : 1 PAL/SECAM/NIM/QAM/Cable/T2 tuner
	Sound	Dolby Digital+, DNSe
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -13°F ~ 113°F (-25°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 : • RF : 20 Hz ~ 15.4 kHz • AV/Componet/HDMI : 20 Hz ~ 20 kHz	
Note : 3D, MoIP, Media Bridge, Allshare, Internet TV, Built-in Wi-Fi, Full Browser, Bluetooth, Smart Interaction		

Model	UA55ES7500*

Feature
• Digital-TV, RF, 3-HDMI, 1-Component, 2-A/V(1 Component-AV), 3-USB2.0(Media Play), LAN, HML(HDMI3) • Brightness : Mega Contrast • PIP(in HDMI 1, 2, 3, Component 1, PC Mode and Sub picture is available only in TV mode(DTV/ATV)) • Dolby Digital+, DNSe, DNIe

Specifications		
Item	**Description**	
LCD Panel	55 inch HD 240 Hz	
Scanning Frequency	Horizontal : 67.5 KHz (TYP) Vertical : 60 Hz (TYP)	
Display Colors	Wide Color Enhancer Plus	
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	160 MHz	
Active Display (H x V)* * Horizontal x Vertical	1209.6 (H) x 680.4 (V) mm / 47.622047 (H) x 26.787402 (V) inches	
AC Power Voltage & Frequency	AC 110V ~ 230 V, 50 / 60 Hz	
Power Consumption	160 W (Under 0.1 W, Stand by)	
Dimensions Set (W x H x D)* * Width x High x Depth	Set with Stand	1238.4 x 790.4 x 276.7 mm
	Set without Stand	1238.4 x 728.0 x 29.7 mm
Weight	Set with Stand	18.3 kg
	Set without Stand	16.4 kg
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	Asia/Africa : 1 PAL/SECAM/NIM/QAM/Cable/T2 tuner
	Sound	Dolby Digital+, DNSe
Environmental Considerations	Operating Temperature : 50°F ~ 104°F (10°C ~ 40°C) Operating Humidity : 10% ~ 80%, non-condensing Storage Temperature : -13°F ~ 113°F (-25°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 : • RF : 20 Hz ~ 15.4 kHz • AV/Componet/HDMI : 20 Hz ~ 20 kHz	
Note : Smart Integrated, 3D, MoIP, Allshare, Built-in Wi-Fi, Full Browser, Bluetooth, Smart Hub (12')		

2-1-3. Specification Comparison to Old Models

Model	UE7X(UA**ES7500*)	UD7X(UE**D7*****)
Design		
Diplay Type	LED TV	LED TV
Built-in Tuner	O	O
Resolution	1920 x 1080	1920 x 1080
LCD Panel	TFT LCD Panel 240 Hz	TFT LCD Panel 240 Hz
Screen Size	40"/46"/55"	46"/55"
Picture ratio	16 : 9	16 : 9
Contrast Ratio	MEGA CR	MEGA CR
Picture Enhancer	DNIe	DNIe (X5)
Equalizer	5 Band	5 Band
Auto Volume Control	O	O
Surround Sound	DNSe	SRS Theater Sound
PIP	O	O
Double Window	X	X
Caption	O	O
Enter-tainment Mode	X	X
Game Mode	O	O
Energy Saving	O	O
Anynet+	O	O
Antenna	Asia / Africa - 1(Air)	Asia / Africa - 1(Air)

2.2. Detail Factory Option

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

UA**ES7500_Asia / Africa

Model Name		UA40ES7500*	UA46ES7500*	UE55ES7500*
PANEL	Vendor	AML	AML	AML
	Code	BN95-00620A	BN95-00619A	BN95-00618A
	Spec.	LTJ400HL01-V	LTJ460HQ01-V	LTJ550HQ02-V
SMPS	Vendor	Dong-Yang	Dong-Yang	Dong-Yang
	Code	BN44-00522B	BN44-00522B	BN44-00523B
	Spec.	PD46B2Q_CDY	PD46B2Q_CDY	PD55B2Q_CDY
MAIN Assy	Chassis Ass'y	Depending on Region, Chassis Ass'y is different.		
	PBA Ass'y	Depending on Region, PBA Ass'y is different.		

Byte	Item	-	-	-
0	Factory Reset	-	-	-
1	Type	40A2UF0E	46A2UF0E	55A2UF0E
2	Local Set	- Depending on Region, Local Set is different.		
3	Basic Model	UES7500	UES7500	UES7500
4	SVC Model	7500	7500	7500
5	TUNER	ECHO-TC		
6	Ch Table	-	-	-
7	Front Color	U-MOIP-7K	U-MOIP-7K	U-MOIP-7K

2.3. Accessories

Description	Code. No	Remark
Smart Touch Control & Batteries (AA x 2)	AA59-00641A (Asia / Africa)	Samsung Electronics Service center
	AA59-00638A (Australia / New Zealand / Singapore)	
Remote Control & Batteries (AAA x 2)	AA59-00632A (Asia / Africa)	
	AA59-00631A (Australia / New Zealand / Singapore)	
IR Blaster & Batteries (AA x 4)	BN96-22987A (Ready)	
	BN96-22986A (Australia / New Zealand / Singapore)	
Cleaning Cloth	BN63-01798B	
Warranty Card	6801-001678 (Ready)	
	BP68-00274J (DTV)	
Safety Guide	AA68-03242M	
3D Active Glasses	BN96-22904A (Asia / Africa)	
	BN96-22902A (Australia / New Zealand / Singapore)	
Power Cord	-	
AV Adapter	BN39-01154H	
Holder-Wire stand	BN61-08391A	
Holder-Ring x 4	BN96-18153A	

📝 **NOTE**

The part code for some accessories may differ depending on your region.

2.4. Viewing the Function

2-4-1. SMART HUB

■ Family Story

Concept

Effortless way to access family content.

- To provide an access to family photos, messages and events at anytime and anywhere
- You can share from TV, mobile, tablet or PC with your family
- Store over 1,000 HD-level pictures free of charge
- Real-time chatting with family members while watching photos

Functions

1. Sharing your family's precious moments

- Family story allows consumers to stay connected with their families

2. Enjoy family's moments in everywhere

- Enjoy the service on various Samsung devices like TV, mobile, tablet, PC.
- Also you can upload contents to the free web storage which is big enough to store over 1,000 HD-level pictures.

3. Album, Messages & Events

- You can also upload photos, post messages and share important family events so everyone is kept up to date.

4. Watch Together

- Invite your family member if you want to show or share any family photos.
- Enjoy Live chat with family members while watching family photos.

5. Share contents that could interest other family members

- You can share your Vides movies, Apps, Url etc.

User Scenario

Create Group
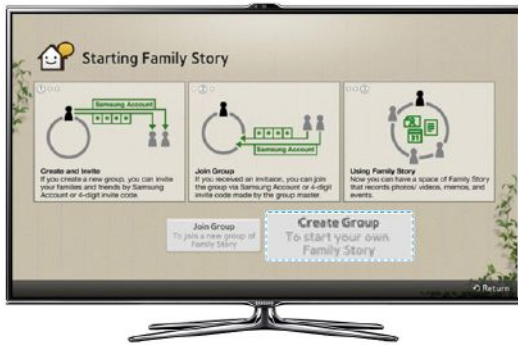
Main Home
(Before Log-in or Activation)

Create Group

Select Group

Invite Members

Join Group

Main Home
(Before Log-in or Activation)

Create Group

Join Group

Invite Code
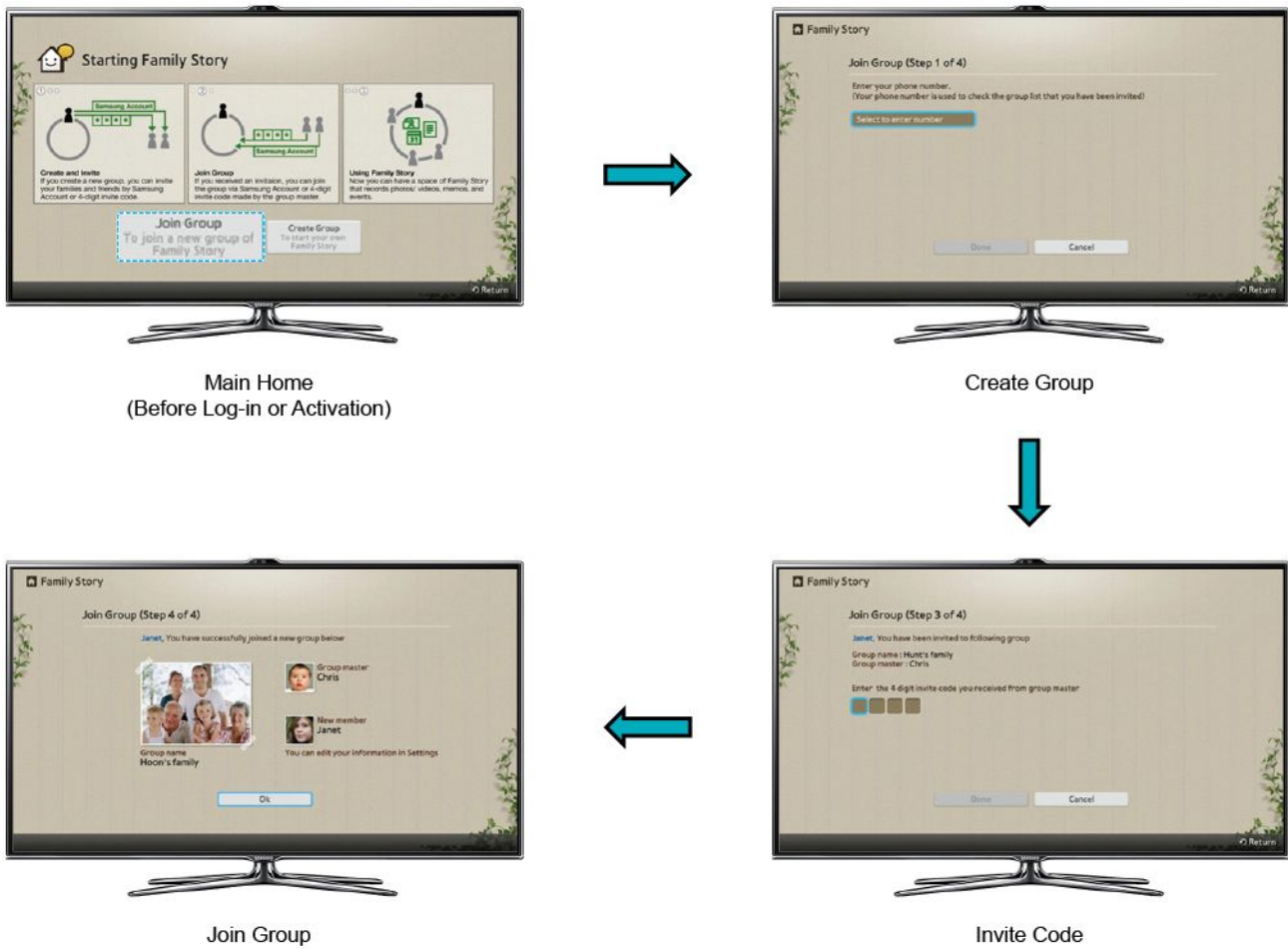
Create Contents

Mobile

Use 'Create' menu in Family Story app

[tab]

Use 'Share' menu in Gallery

[[phone]]

TV

Use 'Create' menu in Family Story app
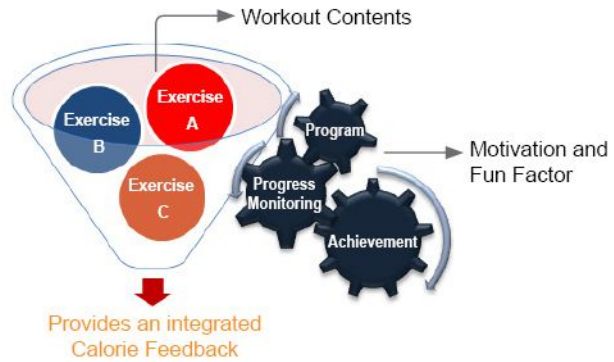

[tab]

You can browse and select USB storage

[[phone]]

■ Fitness

Service Structure

- Calorie Feedback → Unified Integration on 'Fitness Hub'
    - Home Exercise : Exer-VOD, Exer-Guide
    - Outdoor Exercise : Mobile Exer-App
- Achievement based upon mission → Maximization of exercise efficiency by motivation
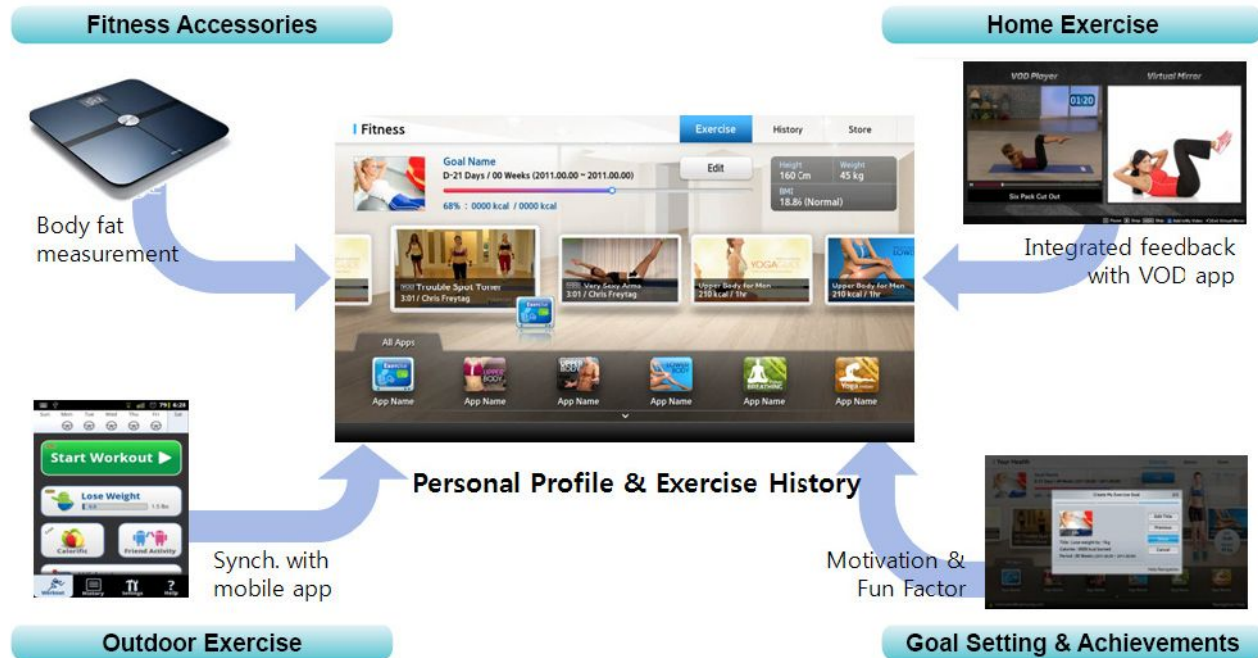
Service Overview

Unified fitness care service with a variety of exercise apps

- Provides fitness contents from various providers with feedback on calorie burn
- Motivates users through goal setting and exercise tracking menu
- Allows synchronization with fitness accessories and mobile apps
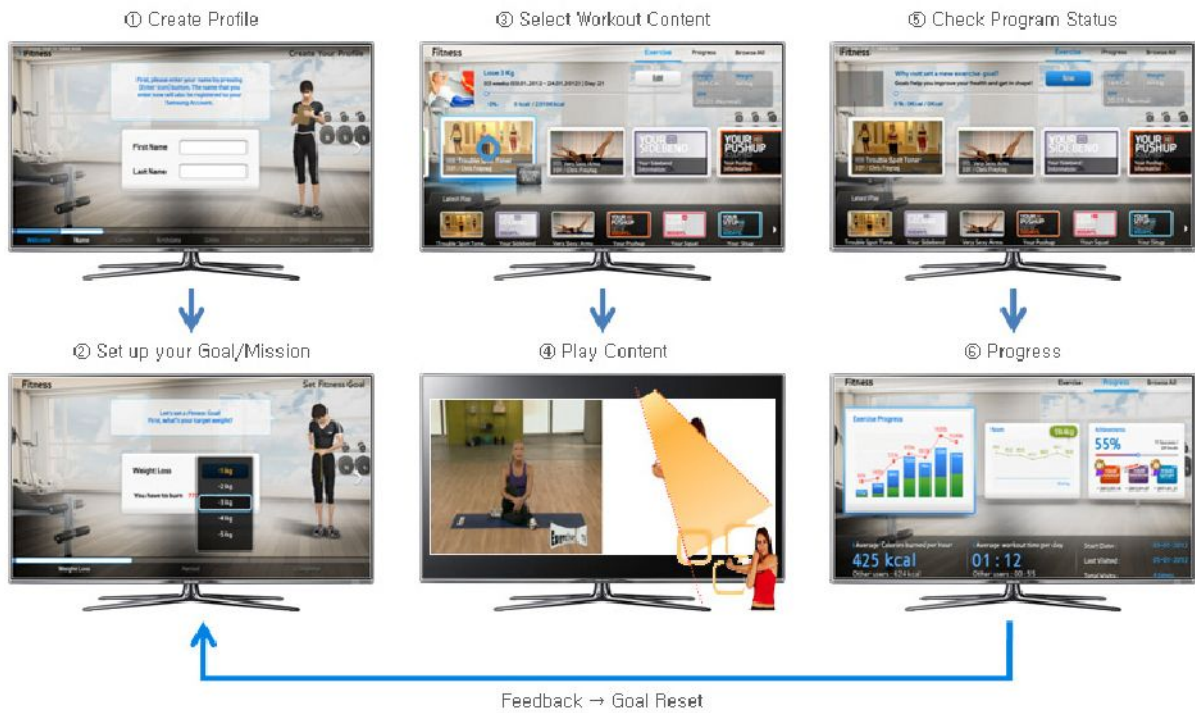
Service Details

Exercise

This screen appears when entering 'Fitness' or selecting the Exercise tab of the 3 categories in main screen of 'Fitness'.
- Exercise Tab

No	Name	Description
1	Goal & Status	Goal image, Goal name, How much weight users want to lose, Status
2	Recommended Contents	The latest played content, and the latest updated contents in the same categories of the latest played content
3	Content Image	Representative screen shot image
4	Content Info	Title, Type, Calories, Time
5	App Icon	Icon of the application including the content
6	Latest Play	6 Latest Play would be exposed

VOD Scenario

① Create Profile

③ Select Workout Content

⑤ Check Program Status

② Set up your Goal/Mission

④ Play Content

⑥ Progress

Feedback → Goal Reset

Progress

This screen appears when selecting History tab of the 3 categories in main screen of 'Fitness'.

- Progress Tab

No	Name	Description
1	Preview Area	Provide preview panels of various history information of History category. • Body Profile, Exercise History, Achievements • It is possible to add new history panel if new service added.
2	Latest play apps/contents list	6 apps/contents information that the user played recently.

- Body Profile : Weight graph, BMI graph
- Exercise History : The graph on User's burned calories, Exercise hour according to user's recent 7 days data.
- Achievements : Success rate of achieving goals, Recent 3 goals information.

■ Kids

What is this Service for?

Kids" service brings kids and parents an easy and safe way to enjoy their favorite contents via 4 major features.

- Provides a wide variety of fun and safe content for children
- Lets parents create custom playlists for their children easily
- Allows parents to check their kids' viewing history and manage their watching time

- 4 Major Features of the Service, "Kids"

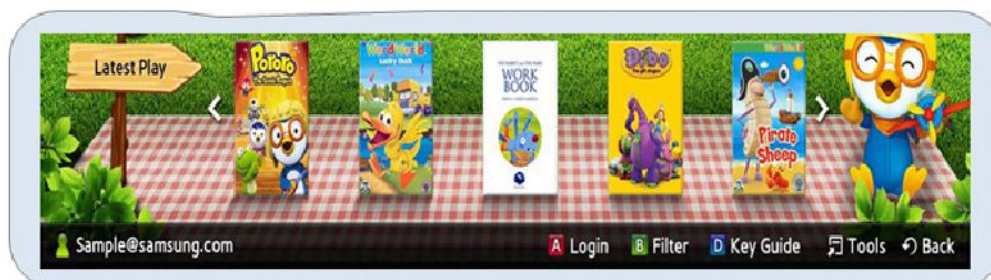Playground

Browse all

Parents

Sticker Book

How to Use "Playground"

Kids can meet the content they must like when they just come in.

- Just pick what to watch among specially recommended

- Play content directly without further navigation

How to Use "Browse All" and "Parents"

Gather my favorites to My Choice and enjoy it anytime.

1. Browse All - Browse all content and add favorites to My Choice

[1] "Browse by Characters"   [2] "Select a Favorite Episodes"   [3] "Add it to My Choice"

2. Parents - My Choice' at Parents menu

[4] "Add to My Choice"   [5] "Play it anytime you want"

How to Use "Sticker book"

*   Give Stickers as a reward and children loves to collect it

[1]   [2]

"Select and Watch a content with a sticker banner on it"   "Select a sticker book"

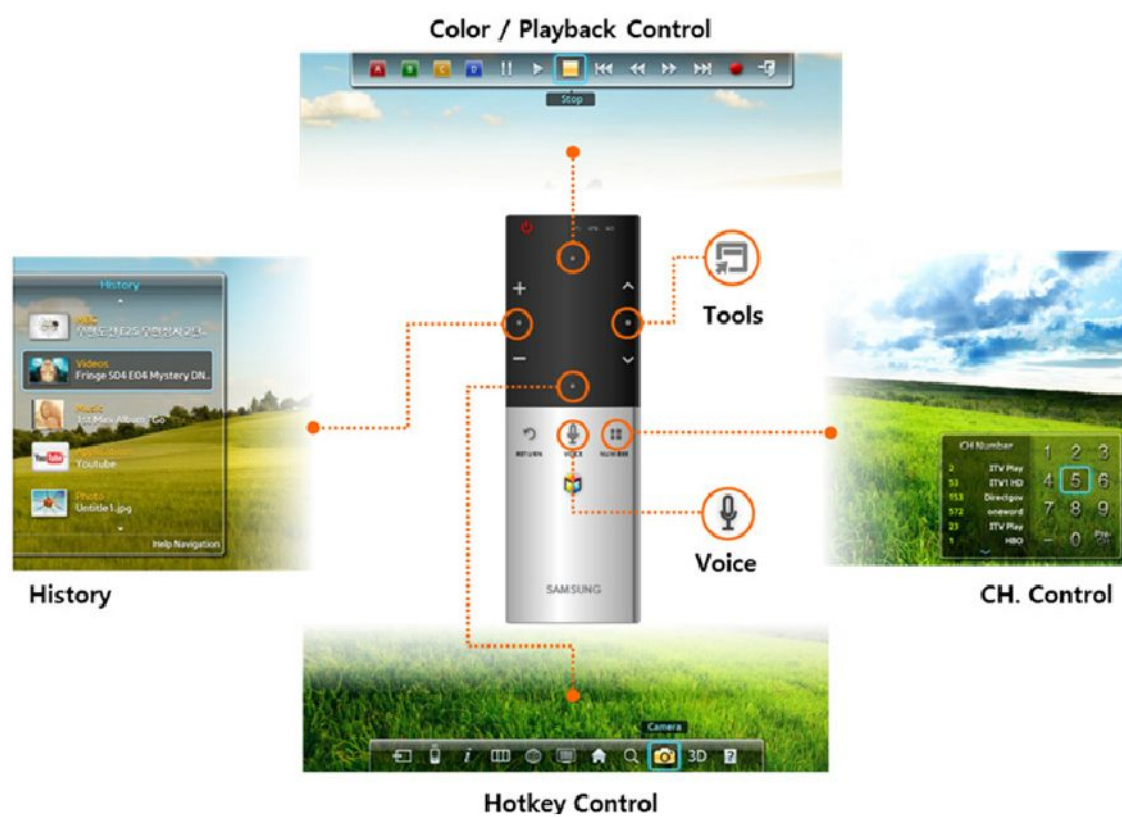[3]   [4]

"A sticker will be added to your sticker book"   "Congratulations!
You've filled your sticker book!"

2-4-2. Hi TV Control

■ Smart Touch Control

Viewing the Control
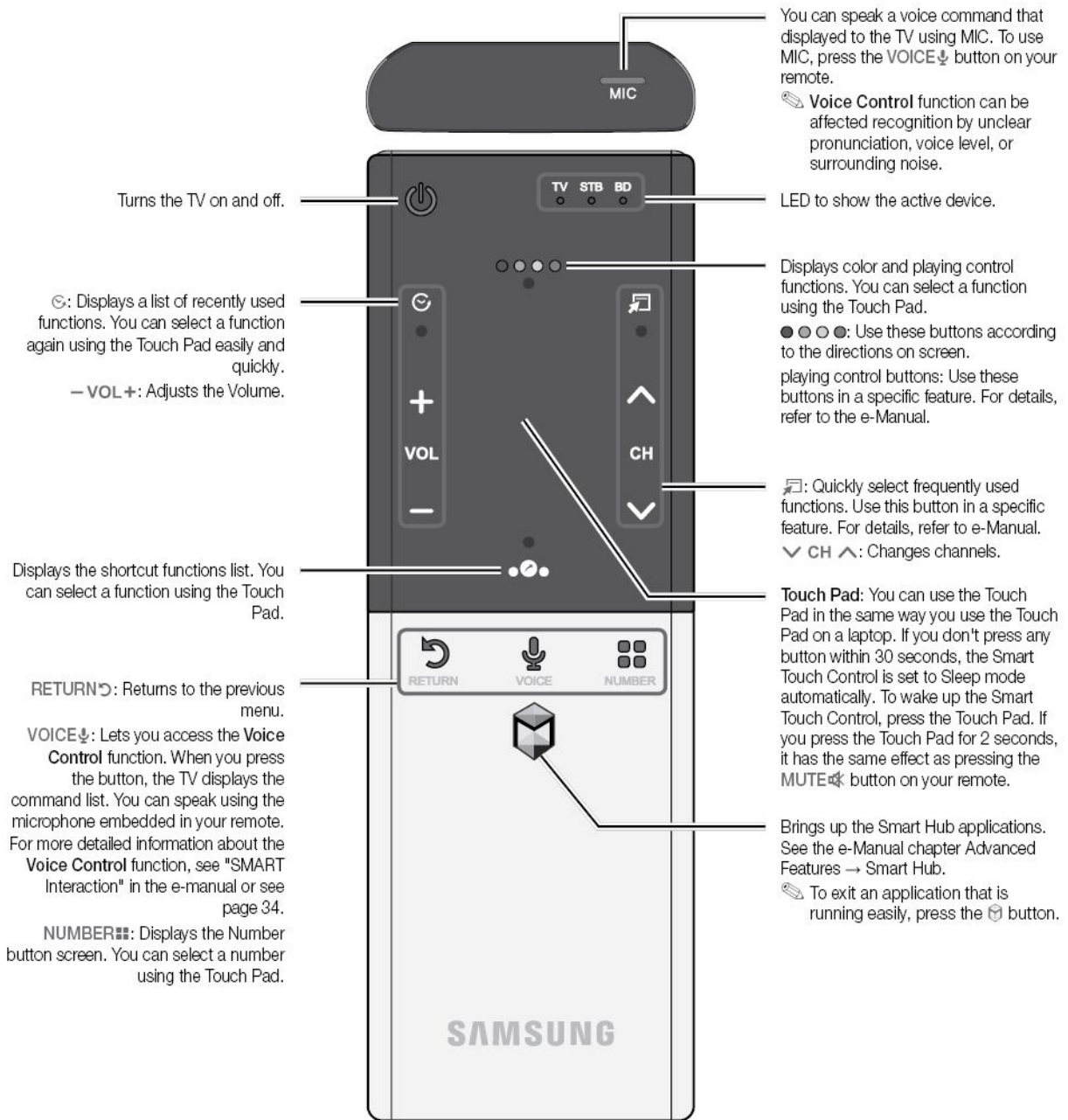
Color / Playback Control

Tools

History

Voice

CH. Control

Hotkey Control

Viewing the Smart Touch Control

For more detailed information about Smart Touch Control, see "Using the Smart Touch Control" in e-Manual.

You can speak a voice command that displayed to the TV using MIC. To use MIC, press the VOICE⬤ button on your remote.

✎ **Voice Control** function can be affected recognition by unclear pronunciation, voice level, or surrounding noise.

Turns the TV on and off.

LED to show the active device.

Displays color and playing control functions. You can select a function using the Touch Pad.

● ● ○ ●: Use these buttons according to the directions on screen.

⏱: Displays a list of recently used functions. You can select a function again using the Touch Pad easily and quickly.

— VOL +: Adjusts the Volume.

playing control buttons: Use these buttons in a specific feature. For details, refer to the e-Manual.

⏟: Quickly select frequently used functions. Use this button in a specific feature. For details, refer to e-Manual.

∨ CH ∧: Changes channels.

Displays the shortcut functions list. You can select a function using the Touch Pad.

Touch Pad: You can use the Touch Pad in the same way you use the Touch Pad on a laptop. If you don't press any button within 30 seconds, the Smart Touch Control is set to Sleep mode automatically. To wake up the Smart Touch Control, press the Touch Pad. If you press the Touch Pad for 2 seconds, it has the same effect as pressing the MUTE⬤ button on your remote.

RETURN↩: Returns to the previous menu.

VOICE⬤: Lets you access the **Voice Control** function. When you press the button, the TV displays the command list. You can speak using the microphone embedded in your remote. For more detailed information about the **Voice Control** function, see "SMART Interaction" in the e-manual or see page 34.

NUMBER⬛: Displays the Number button screen. You can select a number using the Touch Pad.

Brings up the Smart Hub applications. See the e-Manual chapter Advanced Features → Smart Hub.

✎ To exit an application that is running easily, press the ⬡ button.

■ Gesture Control

Volume / Channel Control

Shake your hand in front of TV.

Indicate a menu about CH/VOL in screen.

If your hand let down on the screen, the manu will be a close.

Grabbing hand is a Click.

- If you maintain hand grabbed, TV execute channel up consecutively.

Move a cursor by using hand gesture, move a cursor tochannel up area.

■ Voice Control

Volume / Channel Control

Show a Voice cognition Menu by command "Hi TV".

Control CH by command "Channel UP/DOWN".

Control Volume by command "Volume UP/DOWN".

3. Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the LED TV.
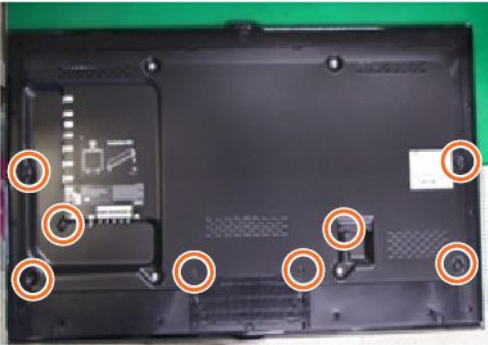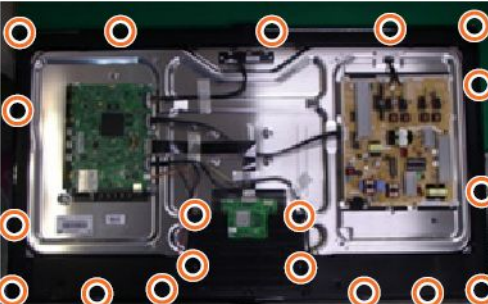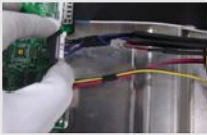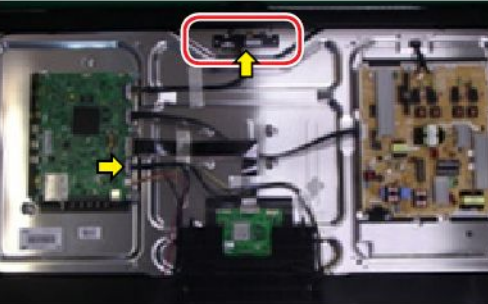
⚠️ **WARNING** This LED TV contains electrostatically sensitive devices. Use caution when handling these components.

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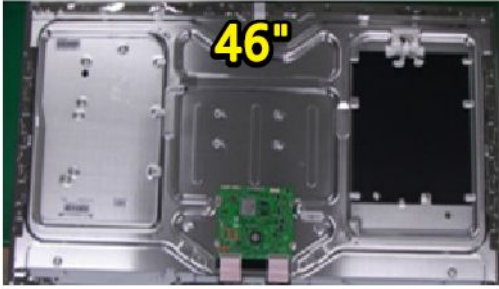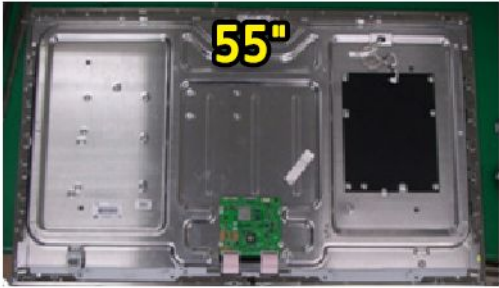
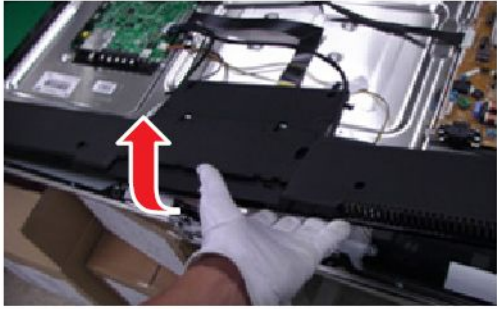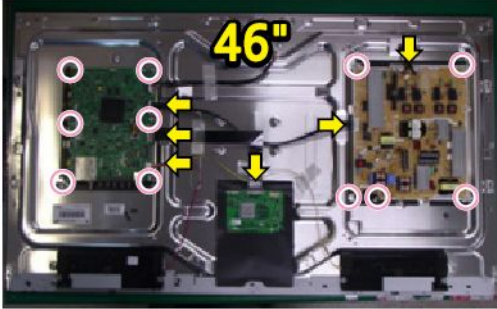⚠️ **CAUTION**
1. Disconnect the LED TV from the power source before disassembly.
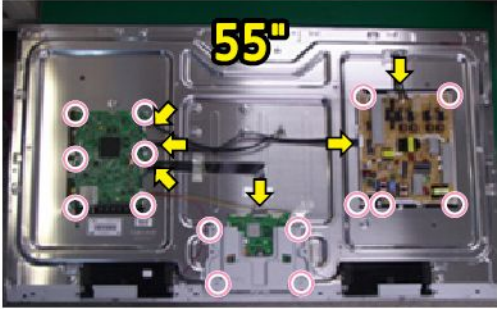2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
3. If there is no additional coment, it is same for all inches.

	Description	Picture Description	Screws
1	Place TV face down on cushioned table.		
2	Remove 4 screws from the Stand.		6003-001783 (M4xL12, Tapping)
3	Remove Stand.		

Description	Picture Description	Screws
4 Remove the screws of Rear-Cover.		 6001-002755 (M3xL6, Tapping)
5 Lift up and remove the Rear-Cover. ⚠️ **CAUTION** Becareful when you lift up the Rear-Cover, it's really sharp (◯).		
6 Remove the screws of Middle-Cover.		 6001-002755 (M3xL6, Tapping)
7 Remove the Function cable and MoIP. 📝 **NOTE** • Function cable • MoIP • Rear view of 46".	 	

Description	Picture Description	Screws
• Rear view of 55".		
8 Remove the Middle - Cover.		
9 Remove the Speakers(R/L).		
10 Remove the screws of Main Board and SMPS Board. 📝 **NOTE** Disconnect all cable connectors before removing any Board. (⬇ Position indicator cable) Remove the screws of Main Board, SMPS Board, T-CON.	 	 6001-002756 (M3xL6, Machine)
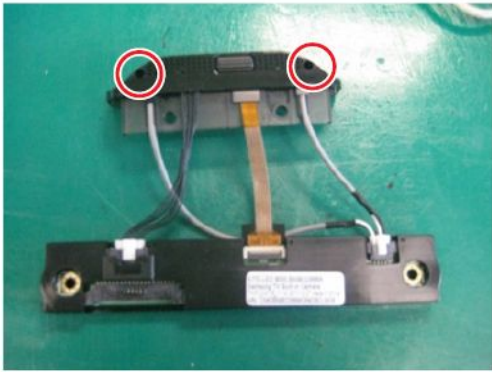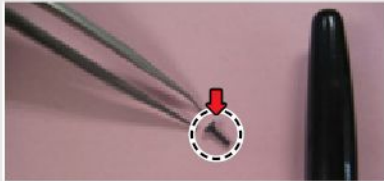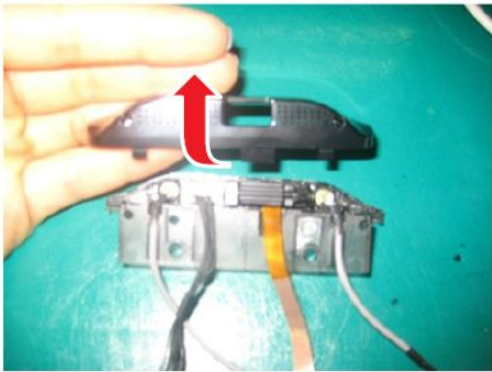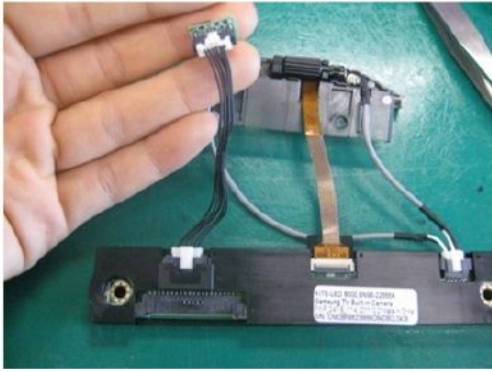
Description	Picture Description	Screws
11 Rear view.	46"	
	55"	

> 📝 **NOTE**
>
> Reassembly procedures are in the reverse order of disassembly procedures.

3.2. MoIP Module

Description	Picture Description	Screws
1 Place TV MoIP Module down on cushioned table. Remove screws from Module.		
2 Pull up the back cover of MoIP Module. ⚠️ **CAUTION** This screw is very small. So easy to lose.		
3 Saparate the IR Receiver from the MOIP Module. • You can Change the IR Receiver.		

📝 **NOTE**

Reassembly procedures are in the reverse order of disassembly procedures.

4. Troubleshooting

4.1. Troubleshooting

4-1-1. 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.
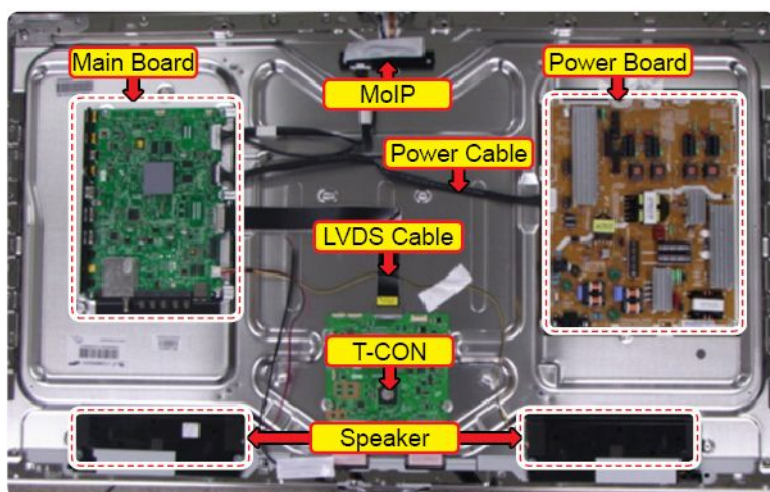
■ **How to distinguish if the problem is caused by Main board or T-CON**

1. No Video : If the problem is No Video but BLU is on and Indication LED is blinking repeatedly and faster than nomal booting, replace the T-CON board.
2. Distorted Picture : Check the inner patterns.
   - For All mode

Echo-P	Echo-FP Pre	Echo-P FP Post	Picture	Problem
OK	OK	OK	NG	Main Board or Signal Source
NG	OK	OK	NG	Main Board
NG	NG	OK	NG	Main Board or FRC Setting
NG	NG	NG	NG	Main Board 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. Enter 'Service Mode.'
   - If you do not have Factory remote control

   | Power OFF | → | INFO | → | MENU | → | MUTE | → | Power On |

   - If you have Factory remote control

   | INFO | → | Factory |

2. Choose 'SVC.'

3. Choose 'Test pattern.'

4. Select the each pattern and then check all pattern is ok or not.

   | Option |
   | Control |
   | SVC |
   | Expert |
   | ADC/WB |
   | Advanced |

   | Test Pattern | | Mstar Test Pattern |

■ Simple flow chart of malfunction

Does the TV turn on? — Yes
No

Can you see anything on the screen? — Yes
No

Can you see OSD menu running on the screen? — Yes
No

Can you see Digital Channel broadcast ?
No

Check the Power Cord.
Yes

Check LVDS cable connected to Main Board. If necessary, replace the Main Board.

Replace the Main Board.

Is any sound of TV when RF signal connected? — Yes
No

Check the LVDS Cable connected. If necessary replace the T-CON Board. — No
Change the Main Board.

A5V appear at the pin 4 of CN201? — No
Check 28p Cable. If necessary, replace the SMPS Board.
Yes

B13V appear at the pin 11, 12, 13 of CN201? — No
Change the Main Board.
Yes

Please, contact Tech support.

4-1-2. Troubleshooting

Picture Quality

First of all, please perform the Picture Test and confirm that your TV is properly displaying test image.
• **MENU → Support → Self Diagnosis → Picture Test**

Problem	Solution
The TV image does not look as good as it did in the store.	• Store displays are all tuned to digital, HD (high definition) channels. • If you have an analog cable/set top box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. • Cable/Satellite subscribers: Try HD channels from the channel line up. • Air/Cable Antenna connection: Try HD channels after performing Auto program. NNMany HD channels are up scaled from SD (Standard Definition) contents. Look for a channel that is broadcasting true HD content. • Adjust the Cable/Sat box video output resolution to 1080i or 720p.
The picture is distorted: macro block error, small block, dots, pixelization	• Compression of video contents may cause picture distortion especially in fast moving pictures such as sports and action movies. • Low signal level or bad quality can cause picture distortion. This is not a TV issue. • Mobile phones used close to the TV (cca up to 1m) may cause noise in picture on analog and digital TV.

There is poor color or brightness.	• Adjust the Picture options in the TV menu.
	  − Picture mode / Color / Brightness / Sharpness
	• Adjust Energy Saving option in the TV menu.
	  − MENU → System → Eco Solution → Energy Saving
	• Try resetting the picture to view the default picture settings.
	  − MENU → Picture → Reset Picture

There is a dotted line on the edge of the screen.	• If the picture size is set to Screen Fit, change it to 16:9. • Change cable/satellite box resolution.
The picture is black and white.	• If you are using an AV composite input, connect the video cable (yellow) to the Green jack of component input 1 on the TV.
When changing channels, the picture freezes or is distorted or delayed.	• If connected to a cable box, please try to reset it. (reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes) • Set the output resolution of the cable box to 1080i or 720p.
Color is wrong or missing.	• If you're using a component connection, make sure the component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen.

3D

Problem	Solution
The 3D Active Glasses may not work properly if there is any other 3D product or electronic devices turned on near the glasses or TV.	• If there is a problem, keep other electronic devices as far away as possible from the 3D Active Glasses.
You may notice a small amount of screen flickering when watching 3D images in poor light conditions (from a strobe light, etc.), or under a fluorescent lamp (50Hz ~ 60Hz) or 3 wavelength lamp.	• If so, dim the light or turn the lamp off.
The ideal viewing distance should be three times or more the height of the screen.	• We recommend sitting with viewer's eyes on a level with the screen.
If you leave 3D glasses on, battery lifespan is shortened.	• Turn off 3D glasses while not using them.

Sound

First of all, please perform the Picture Test and confirm that your TV is properly displaying test image.
• MENU → Support → Self Diagnosis → Picture Test

Problem	Solution
There is no sound or the sound is too low at maximum volume.	• Please check the volume of the device (Cable/Sat Box, DVD, Blu-ray etc) connected to your TV.
The picture is good but there is no sound.	• Set the Speaker Select option to TV Speaker in the Sound menu. • If you are using an external device, make sure the audio cables are connected to the correct audio input jacks on the TV. • If you are using an external device, check the device's audio output option (ex. you may need to change your cable box's audio option to HDMI when you have a HDMI connected to your TV). • If you are using a DVI to HDMI cable, a separate audio cable is required. • If your TV has a headphone jack, make sure there is nothing plugged into it. • Reboot the connected device by reconnecting the device's power cable.
The speakers are making an inappropriate noise.	• Check cable connections. Make sure a video cable is not connected to an audio input. • For antenna or Cable connections, check the signal strength. Low signal level may cause sound distortion. • Perform the Sound Test as explained above.

Others

Problem	Solution
No Picture, No Video	
The TV turns off automatically.	• Ensure the Sleep Timer is set to Off in the System menu. • If your PC is connected to the TV, check your PC power settings. • Make sure the AC power cord is plugged in securely to the wall outlet and the TV. • When watching TV from an antenna or cable connection, the TV will turn off after 10~15 minutes if there is no signal.
RF(Cable/Antenna) Connection	
The TV is not receiving all channels.	• Make sure the coaxial cable is connected securely. • Please try Auto Program to add available channels to the channel list. Go to MENU → Channel → Auto Program then select Auto and make surethe correct Cable TV signal type is set in the menu. There are 3 options (STD, HRC and IRC) • Verify the Antenna is positioned correctly.
No Caption on digital channels.	• Check Caption Setup menu. Try changing Caption Mode Service1 to CC1. • Some channels may not have caption data.
The picture is distorted: macro block error, small block, dots, pixelization.	• Compression of video contents may cause picture distortion, especially with fast moving pictures such as sports and action movies. • A low signal can cause picture distortion. This is not a TV problem.
PC Connection A "Mode Not Supported" message appears.	
"PC" is always shown on the source list, even if a PC is not connected.	• This is normal; "PC" is always shown on the source list, regardless of whether a PC is connected.
The video is OK but there is no audio.	• If you are using an HDMI connection, check the audio output setting on your PC.
Network Connection	

Problem	Solution
The wireless network connection failed.	• The Samsung Wireless USB dongle is required to use a wireless network. • Make sure the Network Connection is set to Wireless. • Make sure the TV is connected to a wireless IP sharer (router).
Software Upgrade over the network fails.	• Try network test in Network menu. • If you have latest SW version, SW upgrade will not proceed.
Others	
Purple/green rolling horizontal bars and buzzing noise from theTV speakers with Component cable connection.	
The picture won't display in full screen.	• HD channels will have black bars on either side of the screen when displaying up scaled SD (4:3) contents. • Black bars on the Top & Bottom will be shown on movies that have aspect ratios different from your TV. • Adjust the picture size options on your external device or TV to full screen.
Caption on TV menu is greyed out.	• Caption can not be selected in the TV menu when connected via HDMI or Component. • Caption must be activated on the external device.
There is a plastic smell from the TV.	• This smell is normal and will dissipate over time.
The TV Signal Information is unavailable in the Self Diagnostic Test menu.	• This function is only available with digital channels from an Antenna / RF / Coax connection.
The TV is tilted to the side.	• Remove the base stand from the TV and reassemble it.
The channel menu is greyed out (unavailable).	• The Channel menu is only available when the TV source is selected.
Your settings are lost after 30 minutes or every time the TV is turned off.	• If the TV is in the Store Demo mode, it will reset audio and picture settings every 30 minutes. Change the settings from Store Demo mode to Home Use mode in the Plug & Play procedure. Press the SOURCE button to select TV mode, and go to MENU → System → Plug & Play → ENTER"
You have intermittent loss of audio or video.	• Check the cable connections and reconnect them. • Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If mounting the TV to a wall, we recommend using cables with 90 degree connectors.
You see small particles when you look closely at the edge of the frame of the TV.	• This is part of the product's design and is not a defect.
The PIP menu is not available.	• PIP functionality is only available when you are using a HDMI, PC or Component source.
POP (TV's internal banner ad) appears on the screen.	• Select Home Use under Plug & Play mode. For details, refer to Plug & Play Feature.
Melody is not played when television is turned off.	• If the Volume is Mute or set to Volume level 0 or Melody mode is off, or in the case of automatic power off due to the 'Sleep timer' function, then no melody will be played at power off.
When the channel is changed, volume gradually gets louder.	• It takes about 2 seconds to adapt to volume levels on different channels.
Even if I change sound mode, monitor out sound is constant.	• The monitor out sound is independent from the main sound output, therefore changes to the audio output will not affect the monitor output.
Even if I set mute on, monitor out is still outputting.	• The monitor out sound is independent from the main Speaker output, therefore to Mute or adjust the volume of monitor out a separate external decoder (AMP) is required.
I set Mute on but sound is still outputting.	• The volume buttons and MUTE buttons do not operate when the Speaker Select is set to External Speaker. Please set the volume on your Home theater.

Problem	Solution

Speaker Settings
 • Speaker Select (External Speaker / TV Speaker)
 A sound echo may occur due to a difference in decoding speed between the main speaker and the audio receiver. In this case, set the TV to External Speaker.
   − When Speaker Select is set to External Speaker, the volume and MUTE buttons will not operate and the sound settings will be limited.
   − When Speaker Select is set to External Speaker.
     • TV Speaker: Off, External Speaker: On
   − When Speaker Select is set to TV Speaker.
     • TV Speaker: On, External Speaker: On
   − If there is no video signal, both speakers will be mute.	

There is a vertical line (red, green, blue) on picture.	• This occurs when TV set has a defect on one line from DATA SOURCE DRIVER IC. Contact Samsung Service centre to resolve this problem.
When I use the unit as a monitor, the image seems blurry.	• Blurry images can occur when the resolution is other than those recommended in the user guide or if the signal is unstable. In order to resolve this, please change the resolution of the PC to one of those which are recommended.
When I changed PC resolution, "Not supported mode" OSD is displayed.	• When the resolution of the input signal exceeds the operating range of the display, "Not supported mode" OSD will displayed. In order to resolve this, please change the resolution of the PC to one supported by the display unit.
I can not hear any sound from speaker in HDMI mode when using a DVI-HDMI conversion cable.	• If the input signal is DVI RGB signal through an HDMI conversion cable, there is no digital sound data, you can not hear any sound. A DVI connection does not carry any sound data. You should connect an audio cable to the appropriate input jack for a seperate audio channel.
Although the TV caption shows HD, the visual quality is not satisfactory.	• The HD caption that appears when switching channels or when pressing the Information button on the remote control means the selected channel is simply a digital channel. If the broadcasting station converts an analog signal into digital and transmits the signal, the visual quality may not be perfect."

The visual qualities of digital channels vary	• The visual qualities of digital channels may vary depending on the original production method (analog or digital)
	   − Grouping displayed information when switching channels.
	   − If the original production method is digital: High visual quality program.
	   − If the original production method is analog: The digital program displayed on the screen is originally an analog program which has been converted. The visual quality is of an SD grade.

HDMI Black Level does not work on HDMI device that is output by YCbCr.	• This function is active only when the an external device (DVD player, STB etc.) is connected to the TV via HDMI(RGB Signal).
There is no sound when using HDMI mode.	• If you use external equipment that support low HDMI version, sound may not be output at TV that support new HDMI version(HDMI1.3). − If sound does not work, use HDMI2 IN for video input and DVI IN(HDMI1) port[R(red) - AUDIO - L(white)] for audio input.

New Functions

Problem	Solution
I lost the 'PC Share Manager' install CD. You can download E-manual and DLNA install program in samsung's web site. (www.samsung.com - support - download cener - enter your model name.	
Sound of HDMI1/DVI	
No sound in HDMI/DVI mode.	• In HDMI/DVI input, set judge source type(HDMI or DVI), and select sound automatically. But a part of PC graphic card transemits HDMI source that doen't contain sound. So, you can select sound input yourself. Refer to below edit name chart. − This table apply to HDMI1/DVI port only.
Auto Motion Plus	

Problem	Solution
Judder / Blur is seen on TV.	• With Auto Motion Plus, you can see more clear image without blur and judder, but there are some side-effect. So, It is available to choose Auto Motion Plus 120Hz mode (Off/ Clear/Standard/Smooth/Custom/Demo). Using custom mode, you can set level(0~10) of 'Judder reduction' and 'Blur reduction' finely. You choose 10, the highest performance of Auto Motino Plus is working.
Even though I set the 'Auto Motion Plus 120' on, display @60Hz in information OSD.	• Displayed frequency in information OSD is information of input source, not of output image Samsung 120Hz model display always 120Hz picture. The method of 'Frequency Rate Conversion'(FRC) is different according to Auto Motion Plus option you select.
Anynet+	
Anynet+ does not work.	• Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only. • Only one receiver (home theater) can be connected. • Check if the Anynet+ device power cord is properly connected. • Check the Anynet+ device's Video/Audio/HDMI cable connections. • Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu. • Check whether the TV remote control is in TV mode. • Check whether the remote control is Anynet+ compatible. • Anynet+ doesn't work in certain situations. (Searching channels, operating Smart Hub or Plug & Play (initial setup), etc.) • When connecting or removing the HDMI cable, please make sure to search devices again or turn your TV off and on again. • Check if the Anynet+ Function of Anynet+ device is set on.
I want to start Anynet+.	• Check if the Anynet+ device is properly connected to the TV and check if the Anynet+ (HDMI-CEC) is set to On in the Anynet+ Setup menu. • Press the TOOLS button to display the Anynet+ menu and select a menu you want.
I want to exit Anynet+.	• Select View TV in the Anynet+ menu. • Press the SOURCE button on the TV remote control and select a non- Anynet+ device. • Press z and PRE-CH to change the TV mode. (Note that the channel button operates only when a tuner-embedded Anynet+ device is not connected.)
The message "Connecting to Anynet+ device..." appears on the screen.	• You cannot use the remote control when you are configuring Anynet+ or switching to a view mode. • Use the remote control when the Anynet+ setting or switching to view mode is complete.
The Anynet+ device does not play.	• You cannot use the play function when Plug & Play (initial setup) is in progress.
The connected device is not displayed.	• Check whether or not the device supports Anynet+ functions. • Check whether or not the HDMI cable is properly connected. • Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu. • Search Anynet+ devices again. • You can connect an Anynet+ device using the HDMI cable only. Some HDMI cables may not support Anynet+ functions. • If connection is terminated because there has been a power interruption or the HDMI cable has been disconnected, please repeat the device scan.
The TV Program cannot be recorded.	• Check whether the antenna jack on the recording device is properly connected.
The TV sound is not output through the receiver.	• Connect the optical cable between TV and the receiver.
AllShare™	
Deleted phone number appear in device list again.	• Because rebooting or trying to access of deleted device. − Move to Message menu, select registed device and set 'denied'.
I find over two same TV names.	• You can change your TV name in 'Home Network Center - Menu'.
Unkown phone number's Message or Media arrived.	• Move to Message menu, Unkown device set 'denied'.
OSD of message is small.	• OSD of message is small except for TV mode.

Problem	Solution
I can not play video file that is available in phone.	• Supported format is same as Media Play(DLNA). Refer to Media Play section.
How to set Ad-hoc setting?	1. Connect wireless usb dongle to TV. 2. Select 'Wireless' in Setup-Network Type menu. 3. Move to Setup-Wireless Network Setup menu. 4. Select between 'Auto' and 'Manual'. 5. In case of Manual setting, input value of IP Address, Subnet Mask, Gateway and DNS Server manually. At this time, IP Address of TV and wireless network device must use same band. 6. In 'Select a network' menu, select registed 'Ad-hoc network', or search a new Ad-hoc device.(Blue key) 7. Set IP, SSID, password in Mobile phone setting, refering SSID, password displayed on TV.
I see no device connected to AllShare.	• To use a device connected to AllShare, the device must be connected to PC Share Manager which is the DLNA server for MediaPlay and to a cell phone that has the Connected Home or Screen Share function which are found on Samsung Smartphones. Check that the PC Share Manager is enabled, the Samsung TV is set to allow connections and the ScreenShare function on the connected cell phone is enabled. To use the cell phone's Connected Home function, check that the shared folder is set and the Share mode is 'On.'
I tried to play a video from my cell phone using the Connected Home function on the Samsung TV but the video would not display on the TV.	• When a video is transmitted from Connected Home to a TV for the first time, the settings screen that allows transfer to a TV is displayed. Check that the transfer was not set to be rejected on this settings screen. If you have set the cell phone to 'Blocked' in the 'Media' options of the AllShare settings, please change the setting to 'Unblocked' and retry.
A video that can be played on my cell phone cannot be played on my TV.	• Please check the resolution and display format provided by MediaPlay of the TV.
I cannot resume playback of a video using Connected Home.	• The resuming function is not supported for a video played on a cell phone.
When I play a video through Connected Home, I get intermittent picture loss.	• An 801.11b/g bandwidth network is used between a cell phone and a sharing device. There may be frequent buffering for HD quality videos, this also depends on the condition of the wireless connection. Please optimize your wireless Internet environment settings (avoid using wireless Internet or bluetooth altogether if possible) or lower the picture quality of the video.
Can all devices with the DLNA function be recognized through Notification?	• Only Samsung software and devices with the DLNA server function can be recognized through Notification.
Can I use all the services related to DLNA?	• Presently, you can only use the services related to ScreenShare and MediaPlay. We will launch a new DLNA service in the future.
The notification screen that appears after a device connects disappears within a few seconds. How can I access this connected device again?	• The DLNA Notification is only displayed when a device is first connected to a TV. To access the device again, please use the AllShare menu.
I cannot find the RUIS on my cell phone.	1. Check that the cell phone is connected to the wireless sharing device correctly. 2. Check that the DTV is connected either using a network cable or wirelessly to the wireless sharing device correctly. 3. Confirm the IP address and subnet mask to ensure that the cell phone and DTV are connected to the same network. 4. Check that the RUIS on the cell phone is enabled. 5. If the RUIS on the cell phone is enabled, please disable it and then enable it again.

Problem	Solution

I cannot find the remote control service provided by the ScreenShare Server from the ScreenShare Client.	1. Check that the ScreenShare Client device is correctly connected to the network of the sharing device that the DTV is connected to.
	
	2. Run network test in the network setup menu and confirm that MAC Address, IP Address, Subnet, Gateway, DNS Server and Gateway Ping each shows a success message.
	
	3. In the network setup menu, check that the ScreenShare Client and ScreenShare Server are on the same subnet. You can confirm they are on the same subnet by checking the IP address, subnet mask and gateway address of the TV and ScreenShare Client as follows:
	   – If the IP address of the DTV is 10.88.83.4 and the subnet mask is 255.255.255.0, the first six digits of the ScreenShare Client's IP address must be the same (10.88.83) as that of the DTV, and the subnet mask and gateway address must be the same as the DTV.
	   – If the IP address of the DTV is 10.88.83.4 and the subnet mask is 255.255.0.0, the first four digits of the ScreenShare Client's IP address must be the same (10.88) as that of the DTV, and the subnet mask and gateway address must be the same as the DTV.
	
	4. Move from the Allshare screen to the Setup screen, and open the Setup menu to check if the ScreenShare Client is connected to the same ScreenShare Server as the TV name shown in the Setup options.
	
	5. Move from the Allshare screen to the Setup screen, and open ScreenShare to check that the device, ScreenShare Client, is found on the list at the right side and is set to"Allowed."

The DTV did not update after pressing buttons on the remote control that uses the remote control service on the ScreenShare Client.	• Check that the TV is turned on. You cannot turn on the TV using the remote control service (on the ScreenShare) when the TV is turned off.
Media Play (USB & DLNA)	
I tried to set up BGM in Media Play. I can select a file but I cannot configure the Mood settings.	• The BGM shuffle and Mood settings are only available when the Music DB configuration is complete. Enter the Music category and compelete the Music DB configuration first.
I cannot enter Photos or Music after running Media Play.	• Check if the USB memory contains MP3 or JPEG files.
Photo thumbnails are not displayed in the Photo category.	• This may occur when the photo format is not supported by the TV or the JPEG files do not include thumbnails.
I don't find 'Color Category' in photo view.	• You can select on/off of 'use color view' menu in Media Play Setup menu. Color view is on, set may be slow. Default value is 'off'.
I can not open photo file.	• Supported resolution is up to '15360 X 8640'
The Photo is not fine.	• If the photo is progresive type and too large size, The photo may not fine.
Video thumbnails are not displayed in the Movie category.	• A video thumbnail is only displayed when the video has been played at least once.
The JPEG files on the USB memory are not in the list.	• Files with a path longer than 256 characters will not be displayed.
I have connected a digital camera, but I cannot browse the folders.	• When a device is connected in PTP mode, a browsing folder is not supported.
I cannot play the currently highlighted file.	• Check if another file is selected (checked). The selected file will be played.
I want to know about supported photo color formats.	• The RGB, YUV, YCbCr, CMYK, YCCK, GRAY formats are supported.
I want to know about the maximum supported photo resolution.	• The maximum resolution is 15360x8640 pixels.
I want to know about supported music sampling frequencies.	• Supported frequencies are 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 Khz

Problem	Solution
I want to know about supported USB devices.	• The TV only supports devices that do not support the Mass Storage Class or PTP Class. Devices are not supported when they are connected to the TV via a USB hub. Supporting USB devices that require external power such as an external-type HDD is not guaranteed. Supporting USB devices that require an additional device driver installation is not guaranteed.
The supported photo play is slow.	• Since the TV does not use caching unlike for a PC, it make take some time to display a high-resolution photo.
I cannot play paid MP3 files.	• If the MP3 file is a DRM (Copy Protected) file, the file will not be played.

I cannot play Divx VOD.	• The DRM protected file that is bought or rented by another people can not be played. You must go through registration procedure to play the file.
	  − The method of registration
	    • Move to [Media Play] → [Setup] → [Get Divx VOD registration code], you can see your registration code.
	    • Regist your code to your account in Divx homepage(www.divx.com), you can download regon VOD file.
	    • After playing this file in your TV, registration is completed.

I cannot play a digital camera that supports PTP.	• Check the PTP mode of the digital camera. It will not work in Printer Connection mode.
I cannot use the morning call function with a digital camera that supports PTP.	• A morning call cannot be set with a PTP device.
I have changed the device settings to MSC connection mode after connecting PTP or during an operation, but the device is not recognized.	• Switching the connection mode between MSC and PTP after a connection is made or during an operation is not supported. You can only change the digital camera connection mode after disconnecting it.
The WLAN does not work.	• The WLAN USB stick supplied by Samsung Electronics work only. And the wireless internet sharer must support IEEE 802.11 a/b/g/n.
Where can I buy the WLAN USB stick?	• The WLAN USB stick supplied by Samsung Electronics work only. (Model name : WIS09ABGN) You can buy it in the Samsung electronics shop or service center.
I cannot find Internet Sharer in the Wlan settings menu.	• If multiple sharers are being used, configure them so that they do not use the same channel. Set up the sharer to not control the ICMP so that it answers the Ping test.
The WLAN data rate is slow.	• If the distance from the sharer is too far, the operation may slow or the sharer may not be found. If there is an obstacle, wall or electronic device between the TV and the sharer, the operation may slow or the sharer may not be found due to a difficulty in communication. We recommend using wireless sharer that support 801.11n.
What is the advantage of IEEE 802.11n	• IEEE 802.11a/g/n is wireless networking standard. IEEE 802.11n is the fastest wireless protocol, and cover the widest range. And following chart is comparison of specifications.
The DLNA server that I could see on the TV has suddenly disappeared. What should I do?	1. Check if the PC is turned off. 2. Check if the Samsung TV is set to reject connections in the access control menu of the Samsung PC Share Manager. If so, change the setting to allow connections. 3. Check if the LAN cable is connected to the PC and the TV.
Although the Samsung PC server is on, a message pops up informs you that the Samsung server is off.	• When the shared folder of the server is reconfigured, the DLNA server function stops temporarily and then resumes after the reconfiguration is completed. When the server is renamed, the DLNA server function also temporarily stops and then resumes .
I have registered a file with the Samsung PC Share Manager to watch it on the TV, but I cannot find the file on the TV. What should I do?	1. The Share function is not provided for every file. Files in a format that is not supported by DLNA are not displayed on the TV even if they are displayed on a PC. Please accept our apologies, we are working on this. 2. Check if the folder with the files registered to Samsung PC Share Manager is shared. The folder should be also shared. 3. Check if you have clicked the Apply button after sharing the folder including the file. If you are unsure about this, please click the button again and recheck if the file is displayed after a while.

Problem	Solution
I can see the folders shared through the PC Share Manager, but I cannot see the files."	• Since it shows only files corresponding to the Image, Music, and Movie categories, files that do not correspond to these categories may not be displayed.
The 2x and 3x Fast Forward video function on the PC connected to the network does not work.	• The function that supports playing a video on a PC connected over the network does not support the 2x and 3x Fast Forward functions.
Video is played intermittently.	• Check if the network is stable. Check if the network cable is properly connected and if the network is not overloaded. If there is a wireless network section between the server and the DTV, the communications environment may be unstable.
Pressing the Pause key while a video or music file is playing does not work. The Seek function does not work either.	• The Pause function may not be supported depending on the content provided by the DLNA server or the server. The Seek function is also. Refer to Question. #60
I cannot move folders and files or cannot copy them by Dragging & Dropping them in the PC Share Manager program.	• The PC Share Manager program provides file sharing with a PC and the TV and does not provide those functions.
I changed DTV replacing older one. However, after changing the DTV, I can not discover PC Server, though I use same IP address which I used before.	• You should set new DTV as "accept" in PC share manager Menu → SHARE → Set Device Policy.
I cannot play a video file. In Media Play (USB & DLNA)	• Only videos recorded by specific Samsung camcorders and digital cameras can be played. Other videos may or may not be played depending on the resolution and format. Refer to 'Play' row of following table.
I can use jump and Seek functions with a USB device, but I cannot use with DLNA.	• There are some technical differences between USB(local play) and DLNA(network play). So DLNA may have some limitations of functions.
I can see visuals but I cannot hear audio when playing a video.	• If the audio format is not supported or the file is a non-interleaved file, only video is played.
I cannot use the 20 second Seek function while playing at 2x Fast Forward.	• To use the Seek function while playing at 2x Fast Forward, press the Play button to first make the playing speed normal. After that, you will be able to use the Seek function.
Although I can play some files, I cannot play others even if they have the same resolution and format.	• For unsupported videos, some videos at a certain resolution and format may be played.
How can I show captions?	• Only the first language of the supported caption file is displayed. – Supported caption file : SMI, SRT, SUB, TXT, TTXT
internet@TV in SMART HUB	

internet@TV or DLNA is not work. (cable)	• Check user's network environment, and select cable in the Setup menu. And select 'Network Status' menu.
	  – 'Mac address' is ff:ff:ff:ff:ff:ff → Main board change to write Mac address.
	  – Check the not connected point, in OSD.

internet@TV or DLNA is not work. (wireless)	• Check user's network environment, and select wireless in the Setup menu. And select 'Network Status' menu.
	  – 'Mac address' is ff:ff:ff:ff:ff:ff → Main board change to write Mac address.
	  – Check the not connected point, in OSD.
	  – Check the nunber of antena strangth of AP in OSD.

Some application contents only appear in English. How can I change the language?	• The Application content language may be different from the application user interface language. The ability to change the language depends on the service provider.

Problem	Solution
Some application services do not work.	• Check with the service provider. Refer to the help website for application service provider information.
"When a network error occurs, I can only use the setting menu."	• If network connection doesn't work, your service might be limited, as all functions except the setting menu are needed to connect to the internet.
I can net play internet@TV function	• If setting of 'Auto Motion Plus 120Hz' is 'Demo', Internet@TV is not working.

How to create a Smart HUB ID	1. Press the Red button.
	   − The Login screen appears.
	2. Select New Account.
	   − The Generate Account screen will appear.
	3. Press the ENTERE button to enter a new Smart Hub ID.
	   − The Keypad screed will appear.
	4. Using the keypad screen, enter a Smart Hub ID.
	   − Smart Hub ID must be created in "sample@sample.com" form.

Pop up OSD of request yahoo ID.	• You can make ID in yahoo homepage.
I can't use flickr widget	• Account of Flickr is different from Yahoo's. So you want to use 'Flickr', make an account of Flickr, separtely.
Navication and loading is very slow using internet@TV.	• Check the environment of network. If the quality of network is not good, TV may response slowly.
I want to get new widget.	• You can add your widget using 'Samsung Apps' in SMART HUB , just choose widget and click 'Add widget My Profile'. Additional widget will be updated continuous.
I forget my profile password.	• It is impossible that reset password only. So reset 'Internet@TV' service. In Profile system setting menu, you can restore factory setting. Note that All of your infomation of 'Internet@TV' is reset.
When I enter internet@TV, the "Connecting to the service..." warning message box appears where I can select either Retry or Cancel, and I cannot enter internet@TV. (The Panel Bar is not displayed.)	• This happens when normal information is not received from the internet@TV after purchasing the TV. In this case, connect the Internet cable and then try again.
Although I can enter internet@TV, I cannot connect to the service.	• This happens when internet@TV has been properly connected at least once but the Internet is not currently connected. In this case, connect the Internet cable and try again.
When the network is connected, I cannot connect to some of the information.	• This happens when the CP sends incomplete information. In this case, reconnect to the Internet and try again.
Photos are not displayed or are displayed intermittently in the Detailed News View.	• This may occur due to a slow Internet speed. Retry and ask your Internet Service Provider about the low data rate problem.
The Mode information of the News changes. (E.g. 'Entertainment' was in the News mode list, but it has been removed from the list.)	• The Mode information of the News is simply displayed as it is provided by the CP and is not relevant to the TV.
The displayed stock price is different from the current price.	• The corresponding information is supplied by CP and is not relevant to the TV. The information provided by the CP is delayed information and the announcement informing the viewer that the information is delayed information is displayed in the service.
I want to select another song in the slideshow.	• Only the default song provided in the widget is available.
The "Recent Photos" change continuously.	• The corresponding information is received from the CP and is irrelevant to your TV. The "Recent Photos" are updated in real time.

Problem	Solution
The same news articles are always shown. (The list of articles is not updated.)	• The corresponding information is received from the CP and is irrelevant to your TV. New data can only be received if the data provided by the CP is updated.
After I have created my account and logged into the system, when I enter My Apps or My Cyber Cash on My Page, the message "Your login account has a problem." is displayed.	• This occurs because you are not connected to your partner account for Samsung Apps. Connect to your partner account on the Settings page using your actual PC-website account and then try again.
The Goods List icons disappear temporarily.	• Since the goods information including the icons is downloaded via the Internet to be displayed on the screen, they may be shown with a delay depending on your network status.
When I select this operation and press "Enter" on my remote control, I am not moved to the proper page and a detailed advert page is displayed.	• To use the Internet@TV normally, you must connect to the Internet and agree to the User License Agreement.
I cannot find the city for which I want to view weather.	• The CP provides weather information for a limited number of cities.
How many cities can I add to My Interest Cities?	• You can add up to 20 cities.
How frequently is weather information updated?	• Weather information is real-time information but there may be a slight time difference. If the Widget is run continually, the weather information is updated every 30 minutes.
No traffic information is shown.	• Traffic information for countries and areas is limited. As of December 2009, traffic information is only provided for the USA, England, France, and China (some big cities).
What are the differences between the map types?	• MAP: Normal street map. Satellite: Satellite photo. Hybrid: Satellite photo + street map
No map is displayed.	1. Check whether the map is magnified too much. Try to change to a middle zoom ratio. 2. There may be no map data for a location in an ocean. Try to use the Search function to search the map using a location name. 3. Connect to the Google Maps website.
What is the difference between when I use the widget after logging in and when I use the widget without logging in?	• When you enter the widget after logging in, you can save the video you are watching in the storage space assigned to your login account. You can also view the videos added as your favorites from the Favorites category or from the favorites of your YouTube
What is the difference between when I use the widget after logging in and when I use the widget without logging in?	• When you enter the widget after logging in, you can zzim (select) the video you are watching and save it in the storage assigned to your login account. From the My Zzim category, you can also view the videos you zzimed (selected) on the KBS zzim website (
How many videos can I save on the TV Box?	• You can save up to 40 videos.
Where can I create my login ID and charge my cyber money?	• You can create your ID and charge your SBS cyber money account on the SBS website (http://www.sbs.co.kr).
I cannot log into Twitter.	• To use Twitter, you must log in to it first. Create your account on the Settings page, register your created account on the Twitter website (www.twitter.com), and then log in to Twitter using your registered ID.
I logged into the system with a different user account. But the interests do not change.	• It is not supported to have different interests for each login user. − You can set up to 20 interests.
The current time does not change.	• The current time is designed to be updated every hour.
How can I view the weather after a week?	• The weather information is only provided for a week from today.
NETWORT SETUP	

Problem	Solution
How do I setup the network?	• Click the [Menu] button and open [Setup] to select [Network]. Configure wired or wireless network settings. For details, please refer to the IB.
How do I check the network status?	• Select [Menu → Setup → Network] and run [Network Test] to see test results and check the network status.
In a network test over a wired connection, the second items which include the IP address, subnet, gateway and DNS server fail.	• If the IP address, subnet mask and gateway address were typed in manually, check that valid values were entered. (For example, 0.0.0.0 is not valid for an IP address, subnet mask or gateway address.) If the IP address the user entered in is invalid, change it to a valid IP address.
In a network test over a wired connection, the third item, gateway ping fails.	1. Check that the network cable is connected to the TV correctly. 2. If the TV is connected correctly, check whether the IP address is automatic or manual. 3. If the IP is automatic and connected to a sharing device, check the settings of the sharing device (AP) that is using a cable connection, or consult the corresponding Internet service provider. 4. If the IP is manual, check if the IP address is entered correctly. (Here, the user should confirm if the manual IP address entered in is valid.)
In a network test over a wired connection, the fourth item, Internet service test fails.	• Please consult the corresponding Internet service provider (an Internet network service provider the user has subscribed to such as KT).
I do not know how to connect to a wireless network.	• Please set up a connection referring to the IB. (Give details in the IB.)

cannot connect to a wireless network.	1. If an encryption key must be entered in to connect to a sharing device, please check that the correct password set for the sharing device is entered.
	2. Search surrounding sharing devices to see if there is a sharing device with the same SSID by selecting [Wireless Network Setup] and [Select Network].
	If there is a sharing device with the same SSID, try to connect to this device.
	3. If the IP address is set to automatic and you cannot connect to the sharing device using option 1 or 2, check the settings of the sharing device to see if the DHCP server function on the sharing device is enabled. If disabled, activate the function. (For details on how to set up the sharing device, see the manual for the corresponding sharing device.)
	4. If you still cannot connect to the sharing device after confirming options 1, 2 and 3, reset the sharing device and try again.
	5. There could be several causes of the connection failure. Check the AP settings to see if the following condition is found:
	  − The Pure high-Throughput 802.11n mode (or Greenfield 802.11n mode) is selected and the Encryption type is set to WEP, TKIP or TKIP-AES.
	  − Under the conditions stated above, Samsung TVs will not support a connection in compliance with new Wi-Fi certification specifications. This is intended to maximize the performance of the AP, TV and TV network.
	  − To connect to the AP, set the Encryption type to AES. If Pure High-Throughput 802.11n mode (or Greenfield 802.11n mode) is selected and the Encryption type is set to AES, your Samsung TV will connect to the AP providing you with optimum performance.

When using a wireless network, the user's wireless sharing device cannot connect to the PBC (WPS).	1. Check if the sharing device of the user supports WPS. (Refer to the manual of the sharing device.) 2. Check if the user pressed the PBC button on the sharing device. 3. If there is another sharing device with WPS running nearby, a connection cannot be made. Please retry after 2 minutes. 4. Reset the sharing device and retry. 5. If the sharing device of the user is not Wi-Fi certified, it may not be able to connect using WPS.

Problem	Solution
The auto-configuring sharing device cannot be connected to automatically through a wireless dongle. (Here, the user's sharing device must support auto-configuration.)	1. Check if the sharing device of the user supports auto configuration. (For a list of sharing devices, refer to the IB or website.) 2. If the sharing device of the user supports auto configuration, place the sharing device as close as possible to the wireless dongle on the TV and try to re-establish the connection. (Must be placed close to the TV to establish a connection.)"
Although the TV is placed close to the AP and the dongle is inserted into the TV, the sharing device cannot be connected to using auto-configuration.	• Select [Menu → Setup → Network] and check if SWL is Off.
Although the TV is placed close to the AP and the dongle is inserted into the TV, the sharing device cannot be connected to using auto-configuration and a message that it is connecting is displayed only.	• Check if the AP is not turned off during connection. If the AP is turned off, the TV will try to re-establish a connection for 2 minutes.
When using a wireless network, the user's sharing device cannot be found in a search. (When [Wireless Network Setup → Select Network] is selected or the Search button is pressed in the Wireless Network Setup screen)	• If Samsung Wireless Link is On, a 5G-bandwidth wireless sharing device may not be found in a search (restriction). If Samsung Wireless Link is Off or the product does not have the Samsung Wireless Link function, please retry searching to find the sharing device. (May not be found in a search depending on the settings of the wireless connection.)
In a network test over a wireless connection, the second items which include the IP address, subnet, gateway and DNS server fail.	• If the IP address, subnet mask and gateway were typed in manually, check that valid values were entered. (For example, 0.0.0.0 is not valid for an IP address, subnet mask or gateway address.) If the IP address the user entered in is invalid, change it to a valid IP address.
In a network test over a wireless connection, the third item, gateway ping fails.	1. If the IP address is automatic and connected to a sharing device, check the settings of the sharing device (AP) that is using a cable connection, or consult the corresponding Internet service provider. 2. If the IP address is manual, check that the IP address is entered in correctly. (Here, the user should confirm if the manual IP entered in is valid.)"
In a network test over a wireless connection, the fourth item, Internet service test fails.	• Please consult the corresponding Internet service provider (an Internet network service provider the user has subscribed to such as KT).
In order to use the Samsung Auto Configuration function, I did as the user manual instructed. I get a message that connecting to an external network has failed.	• The Samsung Auto Configuration feature is designed to establish an auto connection between the TV and the gateway of the AP. It performs a connection test if the AP is connected to an external network. If the AP is not connected to an external network, a message that establishing a connection to an external network has failed is displayed. In this case, connect the AP to an external network. After a connection to the external network is established through a network test, you can use the network without any problem. Check if the AP is connected to an external network. If you perform a test when a connection to an external network is established through a LAN cable, you will obtain successful test results.

ETC

I can see tiny amounts of alien substances when I look at the product edge closely.	• This product has been designed so that the color appears faint by coating the blank edges with transparent matter. The substances you see is due to the design and is not a defect of the product.

Wi-Fi Direct

How to connect a Wi-Fi Direct device?	• Select [Menu → Network → Wi-Fi Direct] on TV. Select Wi-Fi Direct menu on the Wi-Fi Direct device. Try to connect the Wi-Fi Direct device using PBC or PIN.

Problem	Solution
There is no device on the list when Wi-Fi Direct menu on TV is executed.	• TV can search the peer Wi-Fi Direct device when the peer Wi-Fi Direct device is in the Wi-Fi Direct mode. Please run the Wi-Fi Direct function on the peer Wi-Fi Direct device(e.g., run the Wi-Fi Direct menu)."
Connection to this device is not supported." message is displayed while tring to connect a Wi-Fi Direct device.	• TV is always going to be Group Owner after Wi-Fi Direct connection. The peer device is also going to be Group Owner. So, TV cannot connect to this device via Wi-Fi Direct.
The TV is using the ethernet(wired LAN). Can the TV connect to a Wi-Fi Direct device?	• Yes, The TV can connect to a Wi-Fi Direct device while using ethernet.
The TV is using the Wi-Fi. Can the TV connect to a Wi-Fi Direct device?	• Yes. The TV can connect to a Wi-Fi Direct device, but Wi-Fi network is disconnected while the TV is connected to a Wi-Fi Direct device.
Does Wi-Fi Direct support 5GHz?	• No. Wi-Fi Direct supports only 2.4GHz.
How does a Wi-Fi device connect to the TV directly via Soft AP?	• Set the Soft AP to ON. － Select [Menu → Network] → Soft AP]. － Check the Network Name(SSID) and the Security Key of the TV. User can check it on [Soft AP] menu. A Wi-Fi device can connect to the TV directly using the Network Name(SSID) and the Security Key.
Does the Soft AP functionality run while using ethernet or Wi-Fi network?	• Yes, the Soft AP functionality runs while using ethernet network or Wi-Fi network.
What is the Wi-Fi channel of Soft AP?	• If the TV is using the ethernet network, the Wi-Fi channel of Soft AP is channel 11(2.4GHz). If the TV is using the Wi-Fi network(the TV is connected to the Access Point), the channel is same with the channel of the Access Point.
The Network Name(SSID) is DIRECT-xy[TV]-xxxxx on the Soft AP menu. What is "xy"?	• The naming rule of Network Name(SSID) is below. DIRECT-xy{Device Name}, xy = random character. Soft AP is implemented using Group Owner of Wi-Fi Direct. The naming rule obeys Group Owner naming naming rule(Wi-Fi Direct specification).
Fitness	
How is the numbeHow is the number of calories burnt calculated?	• Each exercise content has its own calorie data calculated by the CP, which has a strong expertise in fitness. This data is then reflected on the Progress page after the user performs an exercise
What content is available?	• At launch, We will provide about 75 free VODs and 5 kinds of guide applications. In the future, we will also integrate content from more CPs into our service so the number of videos will expand.
What types of workouts are available?	• VODs in Fitness service will offer 6 workout categories : abs, walking, cardio, yoga, toning, and strength.
How is the body scale connected to the TV?	• Our service will be able to synchronize via Wi-Fi with body scale provided by Withings. Withings body scale allows user to check their weight, fat mass, fat ratio, lean mass, lean ratio, and BMI information.
Which mobile apps will work with the service?	• Fitness provides integrated calorie feedback for both indoor activities, with exercise VOD on TV, and outdoor activities by synchronizing data with mobile exercise application 'Noom'. We partner with Noom Inc, Android top-tier exercise application to allow this. If you jog using your Noom with your mobile phone and synchronize your account, details on how many calories you have burned will be displayed on the Progress page of Fitness.
How does the Achievement / Reward system work?	• If you achieve the goal you have previously set up, you will get a medal and all your achievements will be visible on the Progress board.
What languages are supported?	• Basically more than 7 languages including English, French, German, Italian, Spanish, Portuguese, and Korean will be available in Fitness.
Will the service be the same in conservative countries such as the Muslim countries?	• For religious regions, Iran and Saudi Arabia would be sensitive to this service, especially with regards to the VODs. We are aware of this issue and we will do our best to respect cultural differences. We are making our plans for Fitness in MENA together with our MENA HQ.
Does the service allow you to control your calorie intake on top of the consumption?	• So far it does not allow to control calorie intake. We are making plans to integrate with calorie management mobile applications to provide this feature in the future.

Problem	Solution
Can this service be successful?	• According to the Market Research, 74% of subjects answered that they prefer to exercise at home. However, at the same time they are not satisfied with their home exercise because they lack the motivation, equipment, and fun. Moreover we saw that they expect to do exercise via Exercise VOD and Exergame in the future. Therefore, we are sure that Fitness can help users get more value from they home exercise.

Family Story

Problem	Solution
How can I upload contents?	• You can upload content via TV, mobile, tablets or on the web.
	• On TV, you can upload content via USB.
How can users invite their family members?	• Samsung Account : Users can invite members with Samsung Account. They need to put Samsung Account on the and this invitation will be delivered to other party's email.
	• Device Activation : First the users needs to input the phone number of the family member who they want to invite. This creates an activation number that the user can deliver to the family member.
How many family groups can be created on one device?	• Only 1 group can be created per device.
How many members can be invited to one family group?	• Up to 20 members can be registered.
Can families living apart in different countries use this service?	• Yes, since the service is available worldwide and internet-based.
Ref. 'Watch Together' feature.	• Only available on TV at the moment and to be supported on mobile and tab in 2H of 2012.

Kids

Problem	Solution
What types and how many contents will be available?	• At launching time, we are expecting around 100 global contents. A high number of local contents and global contents with high brand value will be continuously added in the future.
What languages are supported?	• Menu language of Kids service will follow the TV OSD languages and content language will vary depending on the Contents Provider.
	• However, there will be around 70 contents which support English, French, German, Italian, Spanish, Brazilian Portuguese at launching time.
What are your plans to support more localized contents?	• Kids service can easily be integrated with local contents. In order to source local popular contents, HQ will provide local sourcing guideline to subsidiaries at Feb. of 2012.
How does the recommendation work?	• We use Customized Recommendation based on the popular / latest contents and user's watching history.
Is the content free or paid?	• Kids service is composed of free and paid contents. However, most of contents will be provided with free of charge at the launching time.
What types of content are available?	• Short clip video, e-Book, and simple games for preschoolers are available.
Is there some kind of reward for collecting the stickers?	• A certificate is provided when kids complete a sticker book. The goal of the sticker book service is for both kids and parents to have fun and interact with each other while collecting stickers. Sticker-book share feature through Family Story service is planned to add later of 2012.

4-1-3. Camera Module (MOIP Module)

Can not use voice control or too low the volume in skype

1. Mute + 5 + 6 + 9 + Exit
   - It is Camera inspection mode.
2. Check the sound.
   - In case of no sound : It is a MOIP module problem.
     Please reconnect the module or change the module.
   - The sound is ok : MOIP module is ok.
     Please check FW and noise of surroundings.

Cannot use gesture or no image when you use a skype

1. Mute + 5 + 6 + 9 + Exit
2. Check the image of camera.
   - The image of camera is ok : Please check the angle of camera.
   - In case of no image : Please check FPCB cable of MOIP Module or change the MOIP Module.

4-1-4. Using the Smart Touch Control with an IR Blaster

When you connect an IR Blaster with your TV, you can control connected external devices with your TV using the Smart Touch Control.
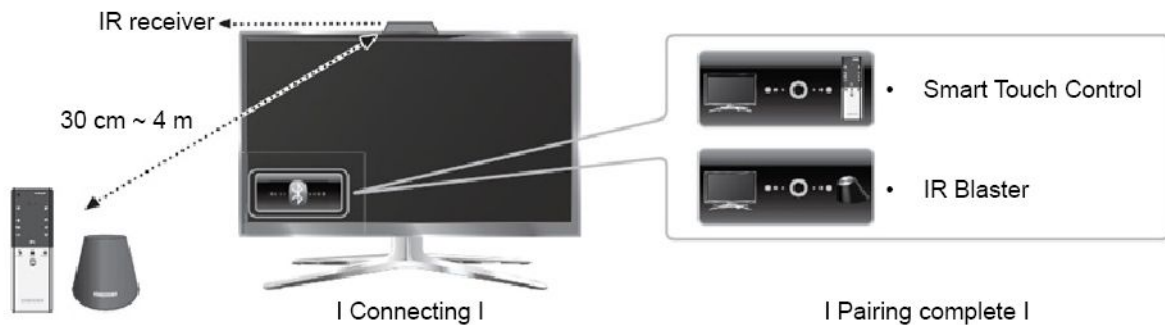
Initial Pairing for Smart Touch Control

After you have run the Initial Setup on your TV, you should connect your Smart Touch Control to your TV.

1. Turn the TV off, and then press the P button on the Smart Touch Control.

2. The TV will turn on and the connection icon appears on the bottom left of the screen. The TV will connect to your Smart Touch Control automatically. It can take a minute or two.

> **NOTE**
>
> If you want to perform the pairing process again, press the reset button in the center of the back cover using a pin or the tip of an unbent paper clip. The Smart Touch Control will be initialized.
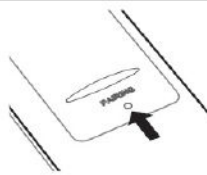
	• Smart Touch Control PAIRING Reset button.

IR Blaster Pairing

1. Turn on the IR Blaster.

2. Move the IR Blaster to the direction of your TV's IR receiver, and then press the PAIRING button on the bottom of the IR Blaster.

3. The TV will connect your IR Blaster and Smart Touch Control automatically.

> **NOTE**
>
> If the connection process failed, try again from Step 2.

	• IR Blaster PAIRING Reset button.

4.2. Factory Mode Adjustments

4-2-1. Entering Factory Mode

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

- If you do not have Factory remote control

| Power OFF | → | INFO | → | MENU | → | MUTE | → | Power On |

- If you have Factory remote control

| INFO | → | Factory |

- If you don't have Factory remote control, can't control some menus. (Expert, Advanced menu)

Option	T-ECPUABC-xxxx
Control	T-ECOAUSS3-xxxx
SVC	E-Manual : EPISDB-xxxx
Expert	Camera Version : x.xx
ADC/WB	Mic Version : x.xx
Advanced	EDID SUCCESS

T-ECPUABC-xxxx
T-ECOAUSS3-xxxx
E-Manual : EPISDB-xxxx
Camera Version : x.xx
Mic Version : x.xx
EDID SUCCESS
CALIB : AV / COMP / PC / HMDI /
Option : xxxx xxxx xxx
FactoryCS : xxxxxxxxxx

DTP-SDAL-ECHOP-xxxx
RFS : "Echo.P 00xx" / 201x-xx-xx
Backend IC[1], Data Ver : xxxx
Backend FW : CORE[xxxx], LUT[xxxx]

Bluetooth:x.x.xx.xxx
Type : xxxxxxxx
Model : UNxxES8000
Wired MAC----
Wireless MAC----

DRM : Cert P Netflix X Widevine X
Factory Data Ver : xx
EERC Version : 20
DTP-AP-COMP-xxx
DTP-BP-HAL-xxxx
DTP-BP-xxxx
POP-FLA-12-xxxx
Date of purchase : mm/dd/yyyy

- How to enter the hidden factory mode.
1. Into the factory mode.
2. Move the tap to Advanced.
3. Key input : 0 + 0 + 0 + 0.

📝 **NOTE**

hidden menu : Advanced

4-2-2. Factory Data

■ Option

Factory Menu Name	Data	Range
Factory Reset	-	
Type	40A2UF0E/46A2UF0E/55A2UF0E	
Local set	-	Depending on Region, Local Set is different.
Basic Model	UES7500	
SVC Model	7500	
TUNER	ECHO-TC (Asia/Africa)	ECHO-TC(Asia/Africa)
Ch table	NONE	
Front Color	U-MoIP-7K	

■ Control

Factory Menu Name	Data	Range
EDID		
EDID ON/OFF	Off	
EDID WRITE ALL	…	
EDID WRITE HDMI	…	
EDID WRITE PC	…	
HDMI EDID Ver	…	
HDMI EDID Port	…	
Sub Option		
Region	-	
PnP Language	-	
RF Mute Time	600ms	
RS-232 Jack	Debug	
Watchdog	OFF	
WD COUNT	0	
AR COUNT	0	
LVDS FORMAT	VESA	
Language_Arabic	US	
Auto Power	LAST POWER	
TOOLS Support	95	
LNA Support	OFF	
NETWORK Support	Int-Wifi	
IPERF	Stopped	
Info Link Country	None	
Info Link Server Type	development	

Factory Menu Name	Data	Range
TTX List	Flof	
TTX Group	UserOSD	
ND ADJ Support	ON	
24Px4 Support	OFF	
Power Indicator Support	ON	
BD Wise Support	ON	
RF Remocon Support	OFF	
Data Service Support	OFF	
PVR Support	OFF	
3D Support	EchoFp	
WSS Support	…	
ColorSpace Support	RGB Type	
OTA Support	OFF	
OTA Duration Test	OFF	
Alternate Del	OFF	
SWU		
OTA Support	OFF	
OTN Server Type	operating	
OTN Test Server	OFF	
OTN Support	ON	
SWU Reset	-	
SWU Duration	OFF	
SWU Fail Test	0	
Cable Modulation	QAM	
IIC BUS STOP	OFF	
Visual Test	Diable	
Emergency Log Copy		
View Log		
Select Log Type	IR KEY	
Log View		
Delete Log		
Spread Spectrum		
HD SSC ON/OFF	ON	
HD SSC Value	1	
LVDS SSC ON/OFF	ON	
LVDS SSC Value	0	
DDR SSC ON/Off	ON	

Factory Menu Name	Data	Range
DDR SSC Value	1	
Napoli DDR SSC ON/OFF	OFF	
Napoli DDR SSC MFR	0	
Napoli DDC SSC MRR	26	
EchoFP LVDS SSC On/Off	ON	
EchoFP LVDS SSC MFR	3	
EchoFP LVDS SSC MRR	2	
EchoFP DDR SSC On/Off	ON	
EchoFP DDR SSC MFR	3	
EchoFP DDR SSC MRR	4	
DDR Margin	PN	
A CTRL_OFFSET_0_3	0	
A CTRL_OFFSET_D	0	
B CTRL_OFFSET_0_3	0	
B CTRL_OFFSET_D	0	
H.264 Margin	15	
MPEGMargin	20	
TunerMargin	10	
SST		
Y0 TH	218	
Y1 TH	150	
Y2 TH	122	
Y3 TH	105	
Y4 TH	78	
Y5 TH	62	
Y6 TH	34	
Y7 TH	113	
Cb0 TH	127	
Cb1 TH	51	
Cb2 TH	152	
Cb3 TH	79	
Cb4 TH	177	
Cb5 TH	103	
Cb6 TH	204	
Cb7 TH	128	
Cr0 TH	127	
Cr1 TH	139	

Factory Menu Name	Data	Range
Cr2 TH	54	
Cr3 TH	66	
Cr4 TH	189	
Cr5 TH	201	
Cr6 TH	116	
Cr7 TH	128	
S.DEV0	100	
S.DEV1	80	
EEPROM RESET		
EER RESET		
NVR All Clear	OFF	
FANET ON/OFF	OFF	
Fast USB Booting ON/OFF	OFF	
Panel Key		
Type If PANEL KEY	Horizontal	
Num of PANEL KEY	…	
PK LOCATION	R_BACK	
WIFI Region	S	
CAM Wait Time	1500	
POP Default	ON	
ENERGY STAR	ON	
All Share Support	ON	
CI+1.3	OFF	
Light Effect	ON	
DPMS Support	OFF	
Checksum	0x0000	
POP Option		
Hospitality Option		
HOSPITALITY MODE	Off	
POWER ON SOURCE	…	
POWER ON CHANNEL EN	…	
POWER ON CHANNEL	…	
CHANNEL TYPE	…	
POWER ON VOLUME EN	…	
POWER ON VOLUME	…	
MIN VOLUME	…	
MAX VOLUME	…	

Factory Menu Name	Data	Range
Menu Display	…	
Picture Menu Lock	…	
PANEL BUTTON LOCK	…	
Energy Saving	…	
Power on Option	…	
Auto Source	…	
Music Mode AV	…	
Msic Mode PC	…	
Music Mode Comp	…	
Music Mode Backlight	…	
Clone TV to USB	…	
Clone USB to TV	…	
Setting Auto Initialize	…	
Shop Option		
Shop Mode	OFF	
Exhibition Mode	OFF	
3D_Emiton	ON	
3D_EmitShowMode	OFF	
3D_GLASS PULSE_S	5	
3D_GLASS PULSE_H	3	
3D CUBE	OFF	
Asia Option		
	OFF	
TTX	OFF	
China HD	OFF	
NT Conversion	OFF	
Mono Last Memory	OFF	
Unbalance	7	
IF AGC	0	
D AGC	3	
PHBW	3	
FQ BW	4	
PH RATE	1	
SOUND		
High Devi	OFF	
Carrier Mute	ON	
Pilot Level High Thld	0x30h	

Factory Menu Name	Data	Range
Pilot Level Low Thld	0x10h	
Amp Volume	0xCBh	
Amp Scale	0x35h	
AMP Speaker EQ	ON	
AMP EQ CheckSum	0x0181D0	
AMP PEQ Test	Ready	
SPDIF PCM Level	-9	
PEQ Inx	5	
WF EQ CheckSum		
WF Type	0	
Tuner Status		
2173_tcint		
2173_rssilint		
2173_rssihint		
2173_tc		
2173_rssil		
2173_rssih		
2173_freq		
2173_mode		
Frequency		
Bandwidth		
Demod_lock		
FEC_Lock		
SNR		
BER		
Config Option		
Num of ATV	1	
Num of DTV	2	
Num of AV	0	
Num of SVIDEO	1	
Num of COMP	4	
Num of HDMI	1	
Num of PC	0	
Num of SCART	0	
Num of DVI	0	
Num of OPTICAL Link	1	
Num of MEDIA	6	

Factory Menu Name	Data	Range
Num of PANEL KEY	2	
Num of USB Port	0	
MFT Offset	62.5	
Select LCD/PDP	LCD	
Num of DECODER	2	
Num of TUNER	1	
HDMI/DVI SEL	1	
Indicator Led	ON	
Wall Mount	OFF	
HV Flip	ON	
Num Of Display	2	
DVI/HDMI SOUND	Auto	
HDMI HOT PLUG	Disable	
HOTPLUG SWITCHING	Boot	
CLK TERMDURATION	300ms	
HOT PLUG OFF HOLD TIME	1200ms	
HDMI FLT CNT SIG	100ms	
HDMI FLT CNT LOS	100ms	
UNSTABLE BAN CNT	1250ms	
HDMI Err Cnt	1	
HDMI ROBIN	ON	
HDMI Callback	ON	
HDMI CTS Thld	0	
HDMI CTS Cnt1	0	
HDMI 3D Det	1	
TMDS_EQ2_Boost	1	
TMDS_EQ2_Gain	0	
TMDS_PLL_Loop	3	
TMDS_CPREG_BLEED	1	
HDMI EQ	AUTO	
HDMI EDID CTRL Type	Combine	
DVI SET TIME	300ms	
Type Of PANEL KEY	Vertical	
LD CTRL SELECT	FULL_CTRL	
PVR Record NUM	1	
BackendDevice	NAPOLI	
ENCORDER	NXC1000	

Factory Menu Name	Data	Range
SCC		
SCC Mode	Dynamic	
SCC ON/OFF	Off	
SCC Input Data		
Hx	272	
Hy	;278	
Lx	272	
Ly	278	
sSCC Const		
sSCC Hx	545	
sSCC Hy	571	
sSCC Lx	544	
sSCC Ly	572	
pSCC Const		
pSCC Hx	545	
pSCC Hy	571	
pSCC Lx	544	
pSCC Ly	572	
SCC Source Data	PBA	
SWAP	PBA	

■ SVC

Factory Menu Name	Data	Range
Test Pattern		
LOGIC Pattern Sel	0	
LOGIC Level Sel	255	
LDAsic Pattern Sel	0	
GenaoP Pattern Sel	0	
GenoaS Pattern Sel	0	
Napoli Pre Test Pattern	0	
Napoli Post Test Pattern	0	
Napoli FDISPLAY ON/OFF	OFF	
Napoli PC Mode ON/OFF	OFF	
HDMI WB Pattern	OFF	
HDMI Pattern Sel	0	
GenoaS FRC Post Test Pattern	0	
GenoaS FRC FDISPLAY ON/OFF	OFF	
GenoaS FRC PC Mode ON/OFF	OFF	

Factory Menu Name	Data	Range
Panel Auto Setting		
PANEL DISPLAY TIME	3Hr	
T-CON USB Download		
T-CON CheckSum		
CPLD USB Download		
REMOCON PAIRING		
TC905x7		
TC90507		
FFT Size_0	0	
Guard Interval_0	0	
Freq. Offset_0	0	
SNR_0	0	
IF AGC_0	0	
TMCC Lock_0	0	
TS Packet_0	0	
Master Lock_0	0	
A_Modulation_0	0	
A_Code Rate_0	0	
A_Timer InterLeave_0	0	
A_Segments Num_0	0	
A_BER_0	0	
B_Modulation_0	0	
B_Code Rate_0	0	
B_Timer InterLeave_0	0	
B_Segments Num_0	0	
B_BER_0	0	
C_Modulation_0	0	
C_Code Rate_0	0	
C_Timer InterLeave_0	0	
C_Segments Num_0	0	
C_BER_0	0	
MICOM UPGRADE		
Temp Last		
Temp Read		
DDC Version	0x40519	
DDC_CHK_SEL	0	
DDC_Check_Total	0x0	

Factory Menu Name	Data	Range
IR_ON_OFF	0xaa	
BT ADDRESS	ON	
BT UPGRADE		
SVC Reset		

■ Expert

Factory Menu Name	Data	Range
N/D ADJ		
Source		

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibration		
Comp Calibraion		
PC Calibration		
HDMI Calibration		
ADC Target		
1st_AV_Low	64	
1st_AV_High	880	
1st_AV_Delta	2	
1st_COMP_Y_Low	64	
1st_COMP_Cb_Low	512	
1st_COMP_Cr_Low	512	
1st_COMP_Y_High	940	
1st_COMP_Cb_High	512	
1st_COMP_Cr_High	512	
1st_COMP_Delta	2	
1st_PC_Low	16	
1st_PC_High	1004	
2nd_AV_Low	4	
2nd_AV_High	940	
2nd_PC_Low	4	
2nd_PC_High	940	
2nd_Delta	2	
ADC Result		
1st_Y_GH	248	
1st_Y_GL	245	

Factory Menu Name	Data	Range
1st_Cb_BH		
1st_Cb_BL		
1st_Cr_RH		
1st_Cr_RL		
2nd_R_L	131	
2nd_G_L	131	
2nd_B_L	131	
2nd_R_H	107	
2nd_G_H	107	
2nd_B_H	107	
White Balance		
Sub Brightness	128	
R-Offset	128	
G-Offset	128	
B-Offset	128	
Sub Contrast	128	
R-Gain	128	
G-Gain	128	
B-Gain	128	
Movie R-Offset		
Movie B-Offset		
Movie R-Gain		
Movie B-Gain		

4.3. White Balance

4-4-1. Calibration

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

Option
Control
SVC
Expert
ADC/WB
Advanced

ADC

AV Calibration
Comp Calibration
PC Calibration
HDMI Calibration
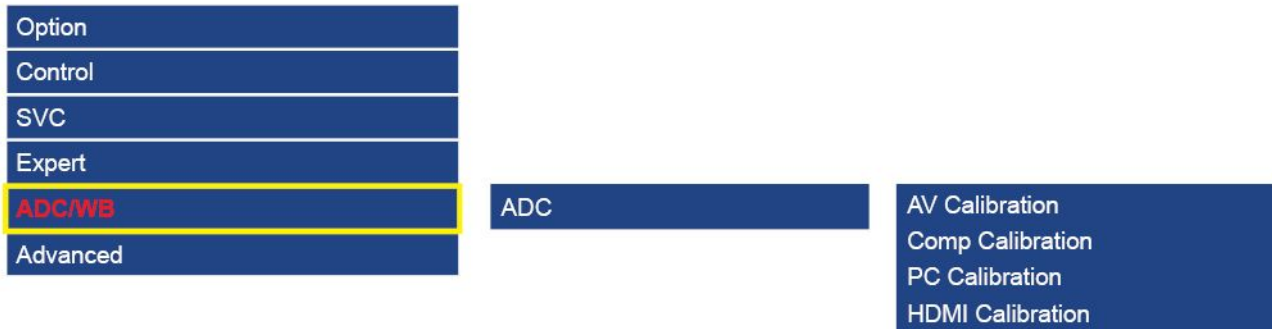
4-4-2. Service Adjustment

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
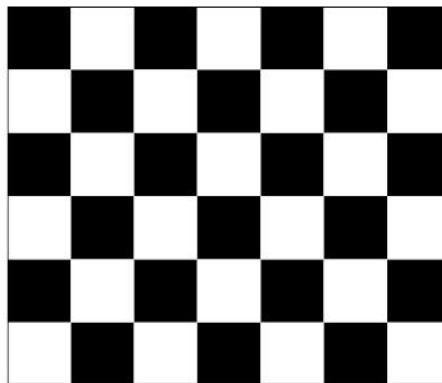
(Chess Pattern)

– 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 (PC)

1. Apply the VESA XGA Lattice (N0. 21) pattern signal to the PC IN port.

2. Press the Source key to switch to "PC" mode.

3. Enter Service mode.

4. Select the "ADC" menu.

5. Select the "PC Calibration" menu.

6. In "PC Calibration Off" status, press the " ►" key to perform Calibration.

7. When Calibration is complete, it returns to the high-level menu.

8. You can see the change of the "PC Calibration" status from Failure to Success.

■ Method of Color Calibration (HDMI)

1. Apply the 720p Lattice (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.

Option
Control
SVC
Expert
ADC/WB
Advanced

White Balance

(low light)	(hight light)
Sub Bright	**Sub Contrast**
R offset	**R gain**
G offset	**G gain**
B offset	**B gain**
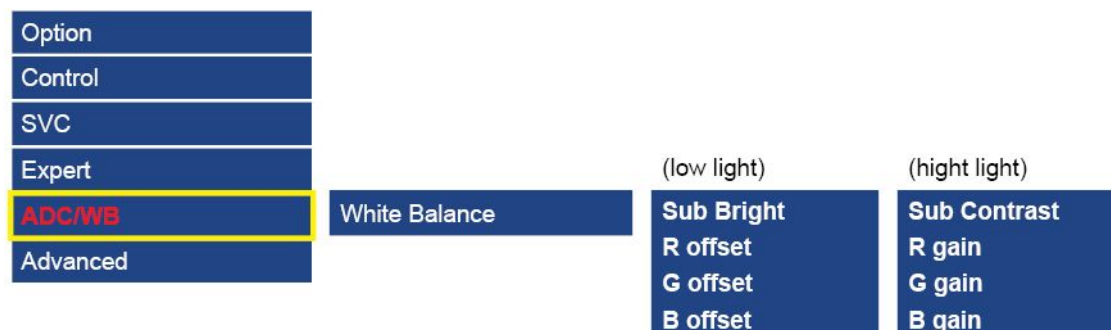
4.4. White Ratio (Balance) Adjustment

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
- Altenate Equipmet : 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
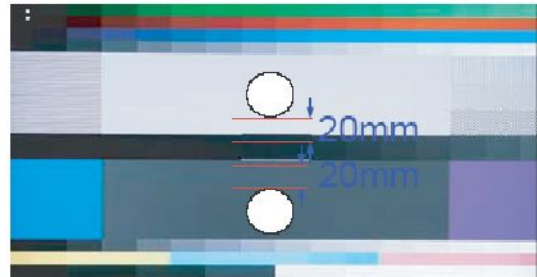
Calibration and Manual setting for WB adjustment

- 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.

4.5. 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'.

4-5-1. 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.
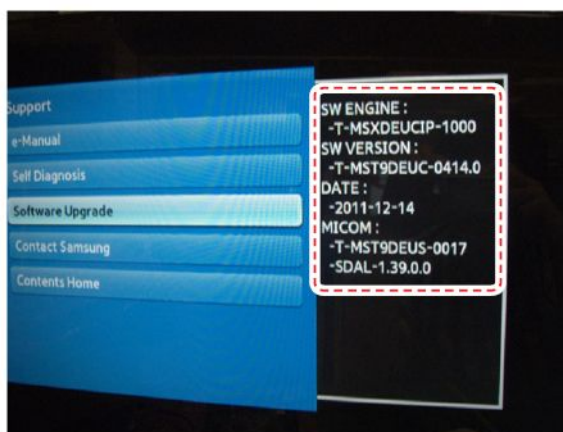
■ Use the Factory Mode

Option	T-ECPUABC-xxxx
Control	T-ECOAUSS3-xxxx
SVC	E-Manual : EPISDB-xxxx
	Camera Version : x.xx
Expert	Mic Version : x.xx
ADC/WB	EDID SUCCESS
Advanced	CALIB : AV / COMP / PC / HMDI /
	Option : xxxx xxxx xxx
	FactoryCS : xxxxxxxxxx

4-5-2. How to Upgade Software

1. Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the TV.

> **✎ NOTE**
>
> Please be careful not to disconnect the power or remove the USB drive while upgrades are being applied.

2. The TV will turn off and turn on automatically after completing the firmware upgrade.
3. Please check the firmware version after the upgrades are complete.
   - the new version will have a higher number than the older version.

> **✎ NOTE**
>
> • 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.

4. After update is completed, restore your previous settings.

■ Main Software Upgrade

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

2. Click the "MENU" key in Remote Controller.
3. Select "Support - Software Upgrade - By USB" menu.

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

5. Wiring Diagram

5.1. Wiring Diagram

5.2. Connector

CN401 (MoIP_IR_ECO Senseor)

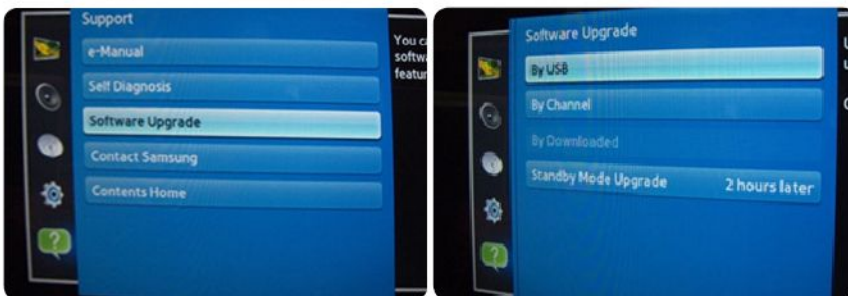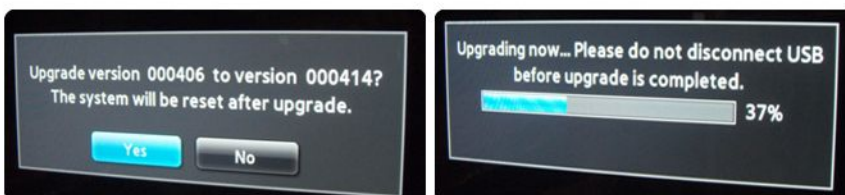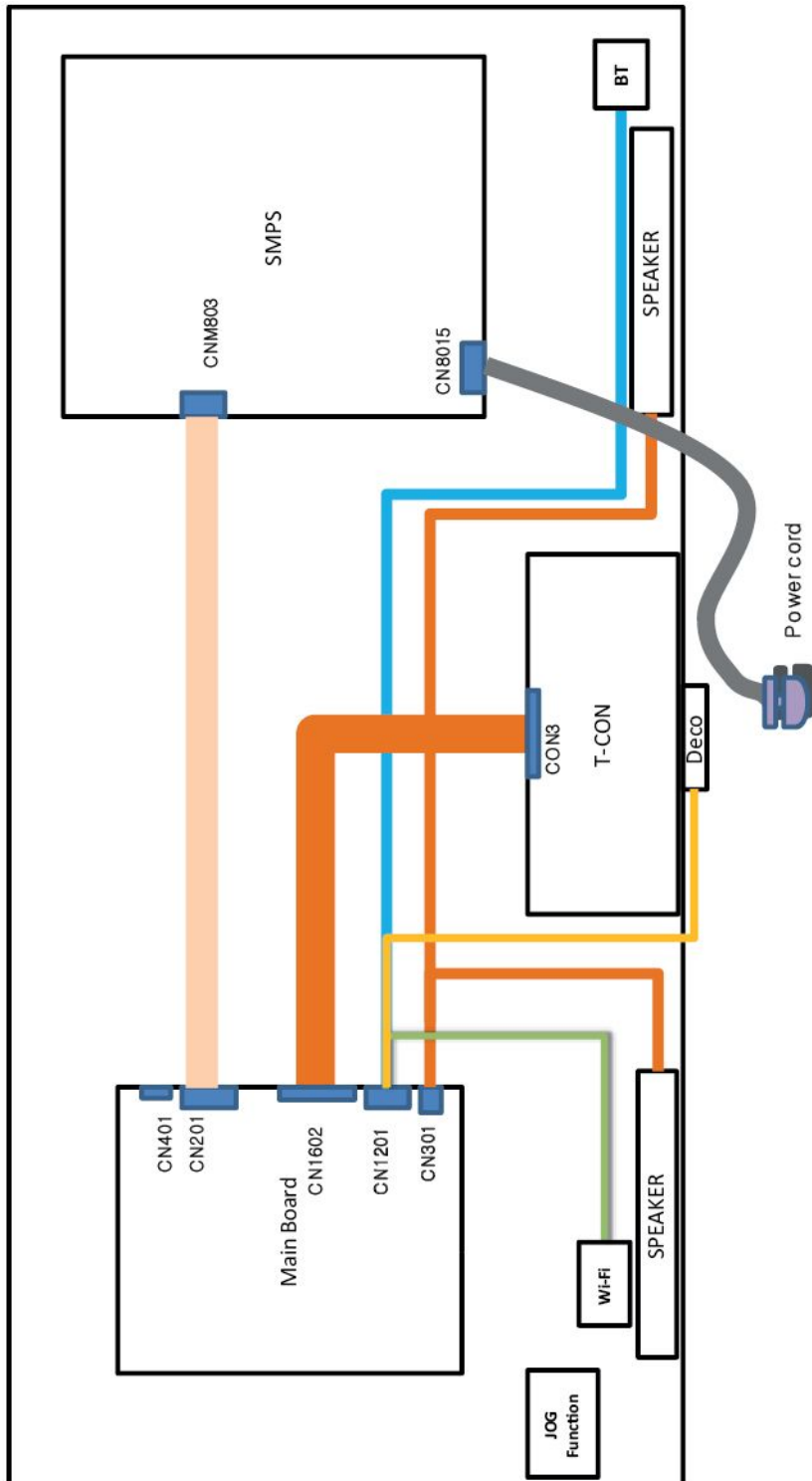|			
1	NC	12	A3.3V_PW
2	NC	13	DSCL_3.3V
3	NC	14	DSDA_3.3V
4	NC	15	DGND
5	NC	16	A3.3V_PW
6	KITE I2STX DATA	17	IR
7	KITE I2STX LRCLK	18	A5V_MOIP_DP
8	KITE I2STX BCLK	19	DGND
9	DGND	20	USB_MOIP_DP
10	AIT_RESET	21	DGND
11	WOV	22	USB_MOIP_DM

CN201(POWER)

1	B5V_PW	11	B13V_PW
2	SW_POWER_OUT	12	B13V_PW
3	B5V_PW	13	B13V_PW
4	A5V_PW	14	PWM_DIMMING_TCON1_BUFF
5	GND	15	GND
6	GND	16	PWM_DIMMING_TCON2_BUFF
7	B13VS_PW	17	OVD_ON_OFF
8	GND	18	PWM_DIMMING_TCON3_BUFF
9	B13VS_PW	19	OVD_LEVEL
10	B5V_PW_1	20	PWM_DIMMING_TCON4_BUFF

CN1602 (LVDS)

1	NC	27	LVDS_EVEN_TX0-
2	DGND	28	DGND
3	SDA_3D_FRC	29	LVDS_ODD_TX4+
4	PWM_DIMMING_TCON1	30	LVDS_ODD_TX4-
5	SCL_3D_FRC	31	LVDS_ODD_TX3+
6	PWM_DIMMING_TCON3	32	LVDS_ODD_TX3-
7	PWM_DIMMING_TCON2	33	DGND
8	SDA_PANEL	34	LVDS_ODD_TXCLK+
9	PANEL_I2C_SW	35	LVDS_ODD_TXCLK-
10	EMITTER_BT_SYNC_OUT	36	DGND
11	REF_SYNC_IN	37	LVDS_ODD_TX2+
12	SCL_PANLE	38	LVDS_ODD_TX2-
13	DGND	39	LVDS_ODD_TX1+
14	LVDS_EVEN_TX4+	40	LVDS_ODD_TX1-
15	LVDS_EVEN_TX4-	41	LVDS_ODD_TX0+
16	LVDS_EVEN_TX3+	42	LVDS_ODD_TX0-
17	LVDS_EVEN_TX3-	43	DGND
18	DGND	44	DGND
19	LVDS_EVEN_TXCLK+	45	DGND
20	LVDS_EVEN_TXCLK-	46	PWM_DIMMING_TCON4
21	DGND	47	PANEL_VCC_13V
22	LVDS_EVEN_TX2+	48	PANEL_VCC_13V
23	LVDS_EVEN_TX2-	49	PANEL_VCC_13V
24	LVDS_EVEN_TX1+	50	PANEL_VCC_13V
25	LVDS_EVEN_TX1-	51	PANEL_VCC_13V
26	LVDS_EVEN_TX0+		

CN1201(KEY FUNCTION & BLUETOOTH & Wi-Fi)

1	POWER_DET	10	EMITTER_BT_SYNC_OUT
2	A5V_PW	11	A3.3V_PW
3	WAKE_BT	12	REF_SYNC_IN
4	USB_BT_DM	13	LDC_CNTR
5	KEY_INPUT1	14	NC
6	USB_BT_DP	15	B5V_WIFI_CI_PW
7	KEY_INPUT2	16	USB_WIFI_DP_HUB2
8	DGND	17	DGND
9	DGND	18	USB_WIFI_DM_HUB2

CN301 (SPEAKER)

1	DGND	3	OUT_B
2	OUT_D	4	DGND

CN1701 (LAN)

1	TX+	5	DGND
2	DGND	6	RX-
3	TX-	7	NC
4	RX+	8	LAN_GND

CN404 (COMPONENT)

1	DGND	9	COMP_PR
2	COMP_AVI_SR_IN	10	DGND
3	COMP_AVI_SL_IN	11	COMP_PB
4	DGND	12	IDENT_COMP
5	COMP_AVI_SL_IN	13	DGND
6	COMP_AVI_SR_IN	14	COMP_Y_AV1
7	DGND	15	IDENT_AV1
8	COMP_PR		

CN507 (AV-LINK)

1	DGND	5	NC
2	TDB	6	NC
3	NC	7	AUTOSTAND_B5V
4	RDB		

CN302 (HEADPHONE)

1	DGND	4	IDENT_HP
2	HP_AUD_SL_OUT	5	DGND
3	HP_SUD_SR_OUT	6	HP_AUD_SL_OUT

CN506_UBA (CVBS)

1	DGND	5	NC
2	SCL_AV2_CVBS	6	SCL_AV2_ID
3	SCL_AV2_SR_IN	7	SCL_AV2_SL_IN
4	NC		

CN402 (PC, DVI_S_IN)

1	DGND	4	NC
2	PC_SL_IN(DVI)	5	NC
3	PV_SR_IN(DVI)	6	NC

CN602 (HDMI 1)

1	HDMI1_RX2+	11	DGND
2	DGND	12	HDMI1_RXCLK-
3	HDMI1_RX2-	13	HDMI_CEC
4	HDMI1_RX1+	14	DGND
5	DGND	15	HDMI1_DDC_SCL
6	HDMI1_RX2-	16	HDMI1_DDC_SDA
7	HDMI1_RX0+	17	DGND
8	DGND	18	HDMI1_5V
9	HDMI1_RX0-	19	HDMI1_HPD
10	HDMI1_RXCLK+		

CN603 (HDMI 2)

1	HDMI2_RX2+	11	DGND
2	DGND	12	HDMI2_RXCLK-
3	HDMI2_RX2-	13	HDMI_CEC
4	HDMI2_RX1+	14	DGND
5	DGND	15	HDMI2_DDC_SCL
6	HDMI2_RX2-	16	HDMI2_DDC_SDA
7	HDMI2_RX0+	17	DGND
8	DGND	18	HDMI2_5V
9	HDMI2_RX0-	19	HDMI2_HPD
10	HDMI2_RXCLK+		

CN604 (HDMI 3)

1	HDMI3_RX2+	11	DGND
2	DGND	12	HDMI3_RXCLK-
3	HDMI3_RX2-	13	HDMI_CEC
4	HDMI3_RX1+	14	DGND
5	DGND	15	HDMI3_DDC_SCL
6	HDMI3_RX2-	16	HDMI3_DDC_SDA
7	HDMI3_RX0+	17	DGND
8	DGND	18	HDMI3_5V
9	HDMI3_RX0-	19	HDMI3_HPD
10	HDMI3_RXCLK+		

CN1503 (USB 1)

1	USB1_VCC_5V_PW	3	USB_DP
2	USB3_DM	4	DGND

OP301 (OPTICAL)

1	ECHO-SPDIF	3	DGND
2	B5V_USB1_2_OP_PW		

CN1502 (USB 2)			
1	USB2_VCC_5V_PW	3	USB_DP
2	USB3_DM	4	DGND

CN1501 (USB 3)			
1	USB3_VCC_5V_PW	3	USB_DP
2	USB3_DM	4	DGND

CN1901 (UPGRADE TV MODULE)			
1	B13V_UP_PW	34	HUB2CPU_USB_DM
2	B13V_UP_PW	35	DGND
3	NC	36	CPU2CPU_USB_DP
4	ECHO_ODD_TX0-	37	CPU2CPU_USB_DM
5	ECHO_ODD_TX0+	38	DGND
6	ECHO_ODD_TX1-	39	EXT_UART_RX
7	ECHO_ODD_TX1+	40	EXT_UART_TX
8	ECHO_ODD_TX2-	41	B13V_UP_PW
9	ECHO_ODD_TX2+	42	B13V_UP_PW
10	DGND	43	NC
11	ECHO_ODD_TXCLK-	44	LVDS_ODD_TX0-
12	ECHO_ODD_TXCLK+	45	LVDS_ODD_TX0+
13	DGND	46	LVDS_ODD_TX1-
14	ECHO_ODD_TX3-	47	LVDS_ODD_TX1+
15	ECHO_ODD_TX3+	48	LVDS_ODD_TX2-
16	ECHO_ODD_TX4-	49	LVDS_ODD_TX2+
17	ECHO_ODD_TX4+	50	DGND
18	ECHO_EVEN_TX0-	51	LVDS_ODD_TXCLK-
19	ECHO_EVEN_TX0+	52	LVDS_ODD_TXCLK+
20	ECHO_EVEN_TX1-	53	DGND
21	ECHO_EVEN_TX1+	54	LVDS_ODD_TX3-
22	ECHO_EVEN_TX2-	55	LVDS_ODD_TX3+
23	ECHO_EVEN_TX2+	56	LVDS_ODD_TX4-
24	DGND	57	LVDS_ODD_TX4+
25	ECHO_EVEN_TXCLK-	58	LVDS_EVEN_TX0-
26	ECHO_EVEN_TXCLK+	59	LVDS_EVEN_TX0+
27	DGND	60	LVDS_EVEN_TX1-
28	ECHO_EVEN_TX3-	61	ECHO_EVEN_TX1+
29	ECHO_EVEN_TX3+	62	ECHO_EVEN_TX2-
30	ECHO_EVEN_TX4-	63	ECHO_EVEN_TX2+
31	ECHO_EVEN_TX4+	64	DGND
32	DGND	65	LVDS_EVEN_TXCLK-
33	HUB2CPU_USB_DP	66	LVDS_EVEN_TXCLK+

CN1901 (UPGRADE TV MODULE)			
67	DGND	74	ECHO_I2STX1_SPK_MOIP
68	LVDS_EVEN_TX3-	75	UP_MODULE_SYNC
69	LVDS_EVEN_TX3+	76	EXT_GPI0_NRESET
70	LVDS_EVEN_TX4-	77	B3.3V_PW
71	LVDS_EVEN_TX4+	78	EXT_GPIO1_WAKEUP
72	ECHO_I2STX1_LRCLK	79	UP_MODULE_SPDIF
73	ECHO_I2STX1_BCLK	80	A5V_PW

CN1220 (DEBUG)			
1	DGND	3	SDA_DOWN
2	SCL_DOWN	4	DNGD

CN1202 (JTAG)			
1	B3.3V_PW	5	A_TCK
2	A_NTRST	6	A_TDO
3	A_TDI	7	NC
4	A_TMS	8	DGND

5.3. Connector Functions

Connector	Function
CN201 ↔ IP CNM803	Supply main power and dimming signal from IP board to Main Board.
CN401 ↔ MoIP	Control Moip & IR from Main Board.
CN1602 ↔ CON3	The LVDS signal transfered from Main Board to Panel.

GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, MENA, CIS, Africa	https://gspn1.samsungcsportal.com
E.Asia, W.Asia, China, Japan	https://gspn2.samsungcsportal.com
N.America, S.America	https://gspn3.samsungcsportal.com