Training Manual

For LED TV D7000 Series

UE40D7000L
UE46D7000L
UE55D7000L

Contents
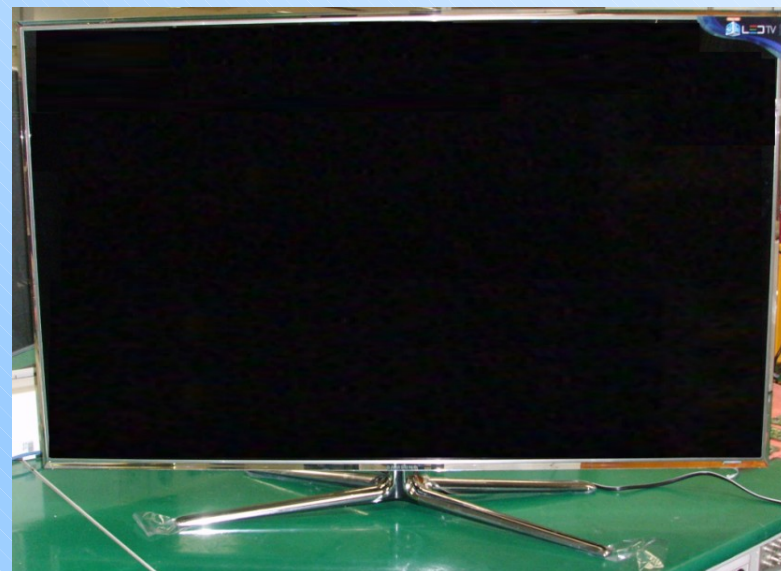
Ⅰ. Product Concept

- New Design for maximizing 3D immersion
- Web Browsing - Internet@ TV
  Satisfy the Unmet Needs to enjoy Various
  Multimedia function
- 3D Dimming for the Highest picture quality

- 1080P FULL HD
- 4HDMI, HDMI CEC support
- 240Hz Auto Motion Plus
- Media Play
- All Share
- Smart Hub
- Full browser
- Built-in Wifi

UD7L

- Vesel: (Factory Option: W-milky)

- Panel:46",55", Super Clear

- memory: 2G (internet TV & ACAP service)

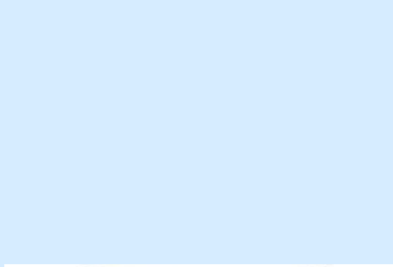- power consumtion: 46": 150W /55":160W /Standby <0.1W

SAMSUNG

Specification

| Items	Specification
	UE40D7000L/UE46D7000L/UE55D7000L
Size (W*D*H) with Stand	40" : 908.6 X 29.7 X 524.9 mm 46" : 1041.1 X 29.7 X 599.4 mm 55" : 1232.6 X 29.7 X 707.2 mm
Weight with Stand	40" : 12.0 kg 46" : 14.3 kg 55" : 18.6 kg
Panel Resolution	1920*1080
A/V	EU : 1 Component-AV
S-VIDEO	No
component	1 component-AV (480i/p,720p,1080i/p)
SCART	EU : 2 SCART / ASIA, Aus : No SCART
PC	1 Dsub
HDMI	4 HDMI
Tuner	□ UD8000 U.K. & Nordic :1 PAL/SECAM/NIM/QAM/Cable/T2/S2 tuner □ UD8000 other EU :1 PAL/SECAM/NIM/QAM/Cable/S2 tuner
USB	3 USB
Sound Output	40":10W/ 46":10W/ 55":15W
DNIe	Yes
PIP	Yes
Sound option	ThearterSurround HD
Headphone	1 H/P
Response time	3ms
Luminance [cd/m2, typical]	450
C/R	Mega CR (1,000,000:1)
Anynet+(hdmi cec)	Yes
View Angle(H/V)	178/178
Power Supply	AC 110~220V,60Hz
Power Consumption	40": 130W/46": 150W/55": 160W
Stand-by Power consumption	0.1W

Ⅲ. Specification

Spec. Comparison

Model		D7000	C7000
Design			
Display type		LED TV	LED TV
LCD panel		TFT LCD PANEL 240Hz	TFT LCD PANEL 240Hz
Dimensions (W x H x D)	40"	908.6 X 29.7 X 524.9 mm with stand 908.6 X 241.3 X 600 mm without stand	957.4 X 26.5 X 578.7 mm with stand 957.4 X 267.7 X 648.4 mm without stand
	46"	1041.1 X 29.7 X 599.4 mm with stand 1041.1 X 276.5 X 607.5 mm without stand	1092.3 X 653.2 X 26.5 mm with stand 1092.3 X 302.9 X 724.3 mm without stand
	55"	1232.6 X 29.7 X 707.2 mm with stand 1232.6 X 309.3 X 789.7 mm without stand	1283.4 X 26.5 X 762.3 mm with stand 1283.4 X 302.2 X 833.4 mm without stand
Weight		40" : 10.0kg_without stand 12.0kg_with stand 40" : 12.4kg_without stand 14.3kg_with stand 55" : 16.2kg_without stand 18.6kg_with stand	40" : 13.2kg_without stand 15.4kg_with stand 40" : 16.8kg_without stand 19.1kg_with stand 55" : 22.2kg_without stand 24.5kg_with stand
Contrast Ratio		Mega CR	Mega CR
AUTO MOTION PLUS 240HZ		O (Napoli)	O (Reading)
Speaker out		40",46" : 10W +10W/ 55" :15W+15W	40",46" : 10W +10W/ 55" :15W+15W
Surround Sound		SRS Theater Sound	SRS Theater Sound
Function		3D,MOIP,Media Bridge, AllShare,Internet TV, Built-in WiFi, Full Browser,Bluetooth	3D,MOIP,Media Bridge, AllShare,Internet TV
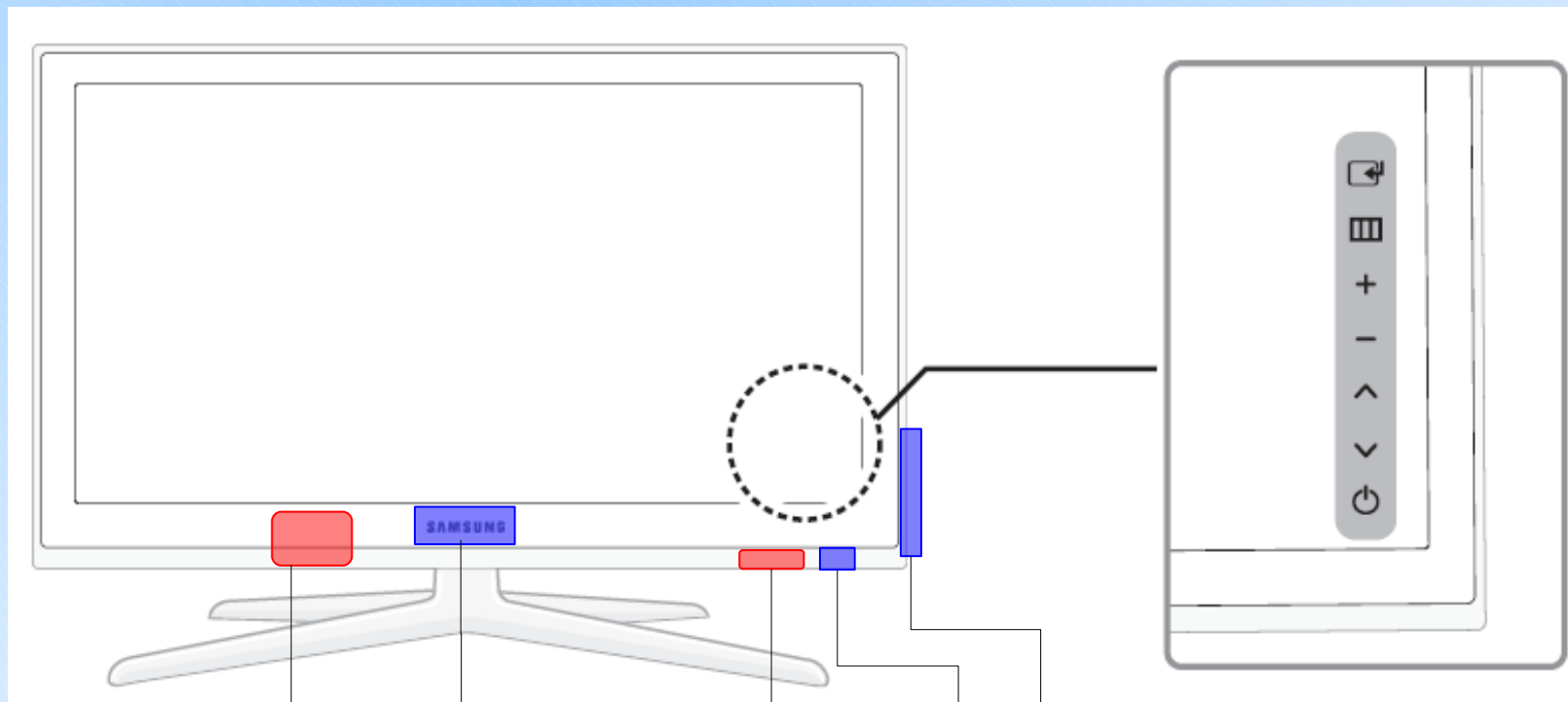
Viewing Front (40")

Samsung Logo : Light up (Light Effect)

Built In Wi-Fi

Touch Key : OSD Pop-up
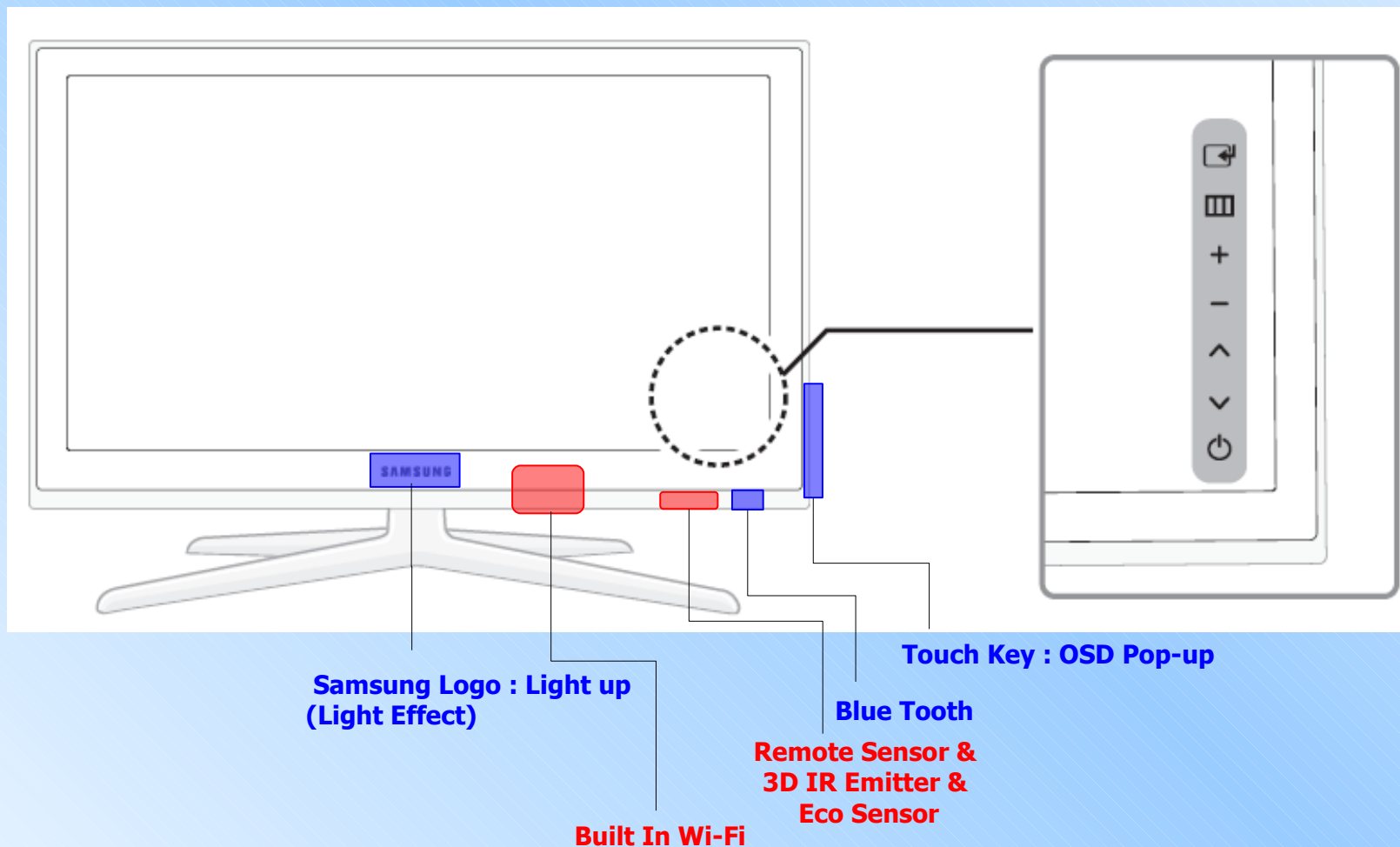
Blue Tooth

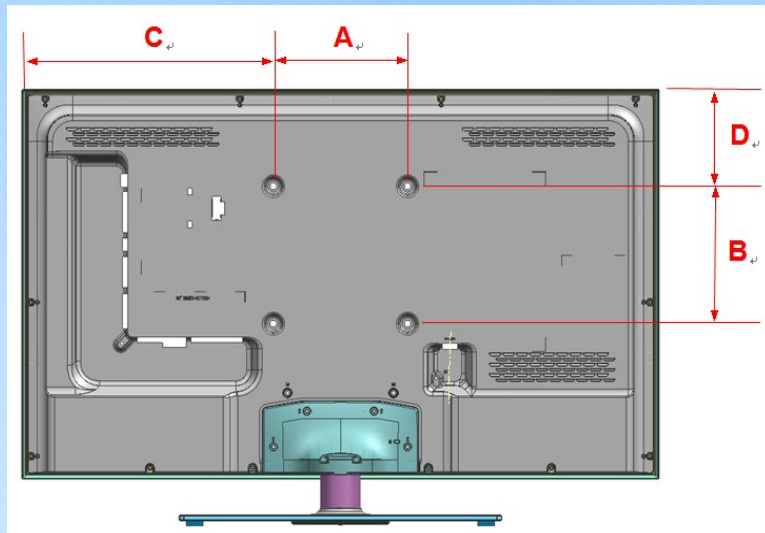**Remote Sensor & 3D IR Emitter & Eco Sensor**

● Viewing Front (46",55")

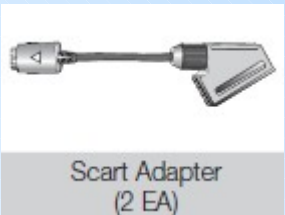**Samsung Logo : Light up (Light Effect)**

Built In Wi-Fi

Remote Sensor & 3D IR Emitter & Eco Sensor

Blue Tooth

Touch Key : OSD Pop-up

Rear

□ Adaptors are used to connect each inputs
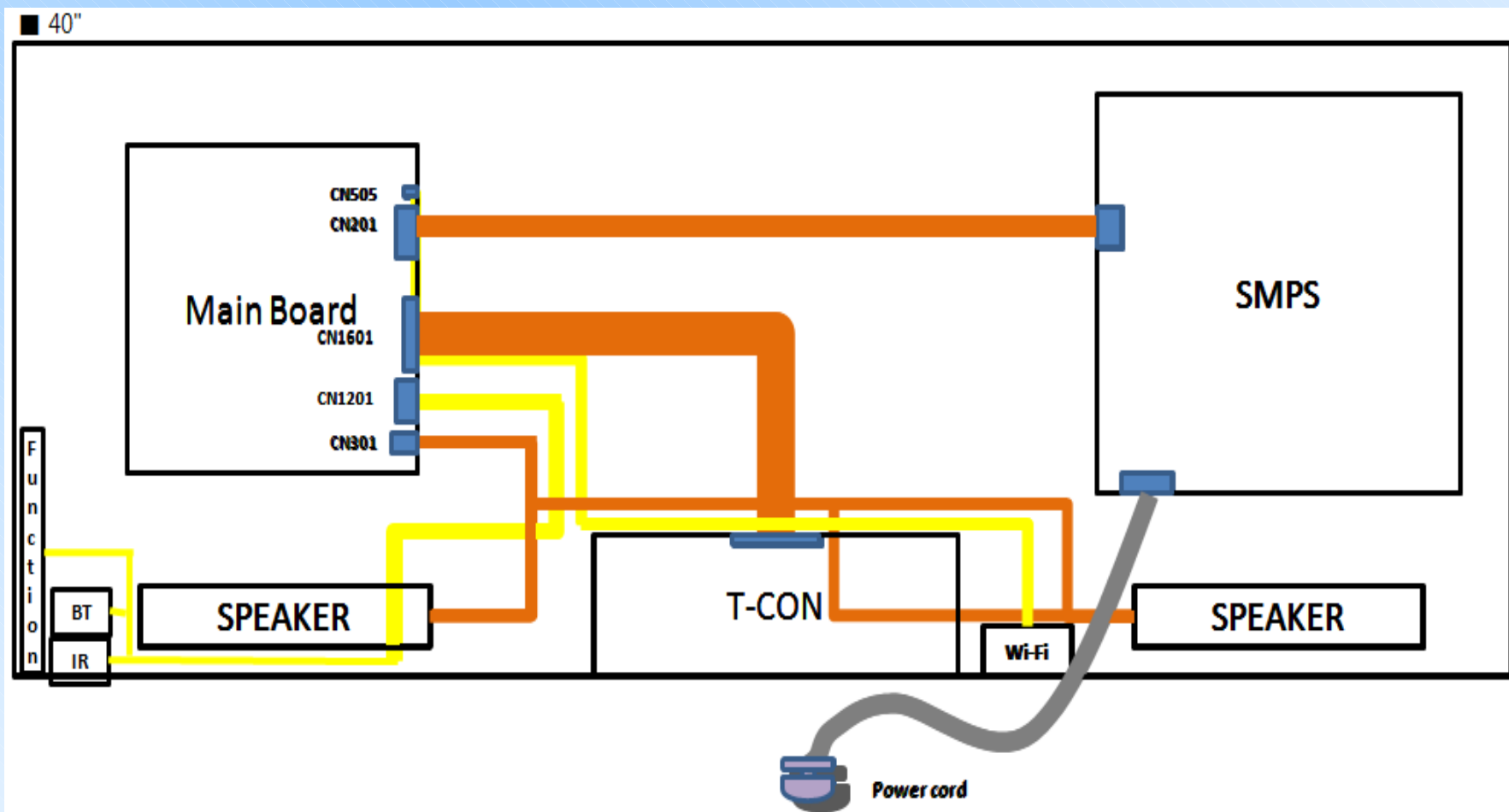

Scart Adapter
(2 EA)

Component Adapter

CI Card Adapter

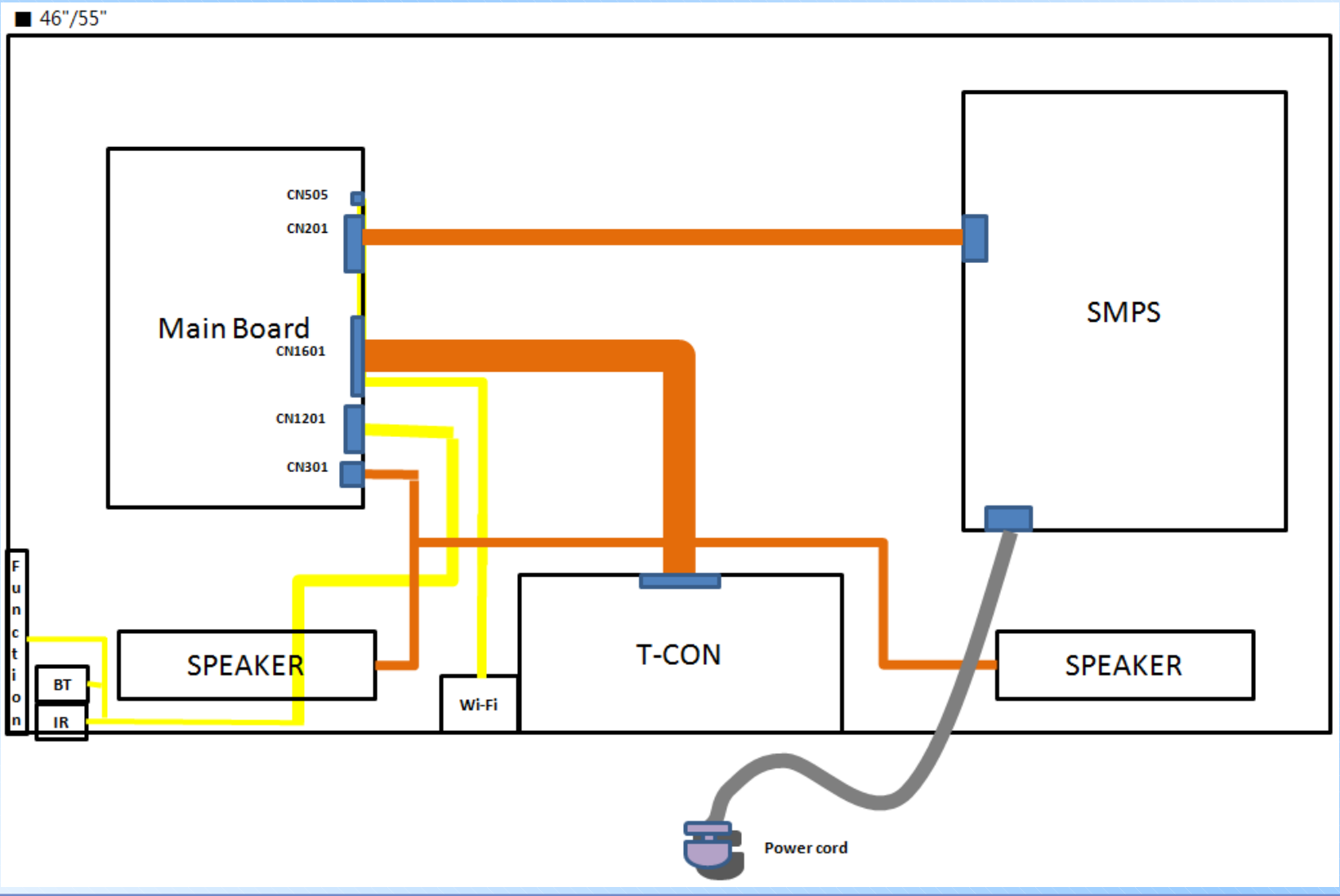## Inner Feature of UD7X

IP board, Main board, Panel
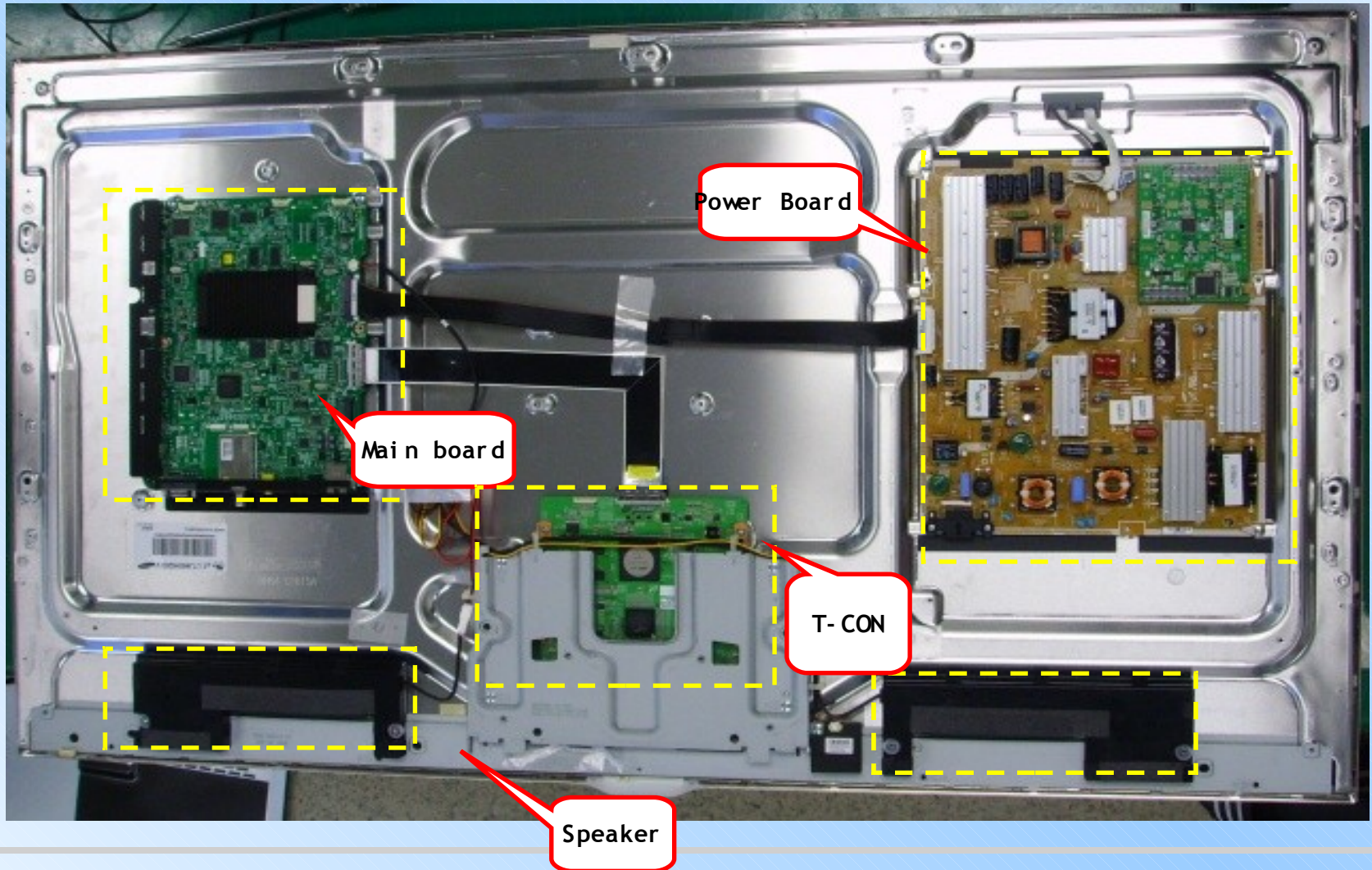
□. Layout

Wiring Diagram (40")

Wiring Diagram (46",55")

Ⅰ. Layout

Main Board Layout
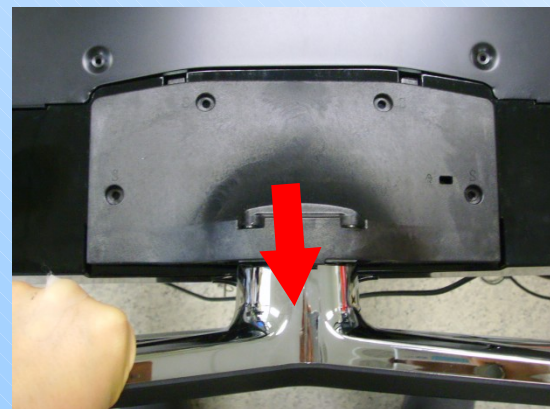

Label
USB3
USB2
OPTICAL
USB3
HDMI4
HDMI3
HDMI2
HDMI1
Component
PC sound
D-sub
RF(S2)
RF UK/Nordic:T2/C EU: T/C
EXT1
H/P
EXT2
LAN
CN301 Speaker
CN1201 Function
CN1601 LVDS
CN201 Power
Wi-Fi
IC2002 IC encoder
IC1202 IC Video process
IC801 IC Video decoder
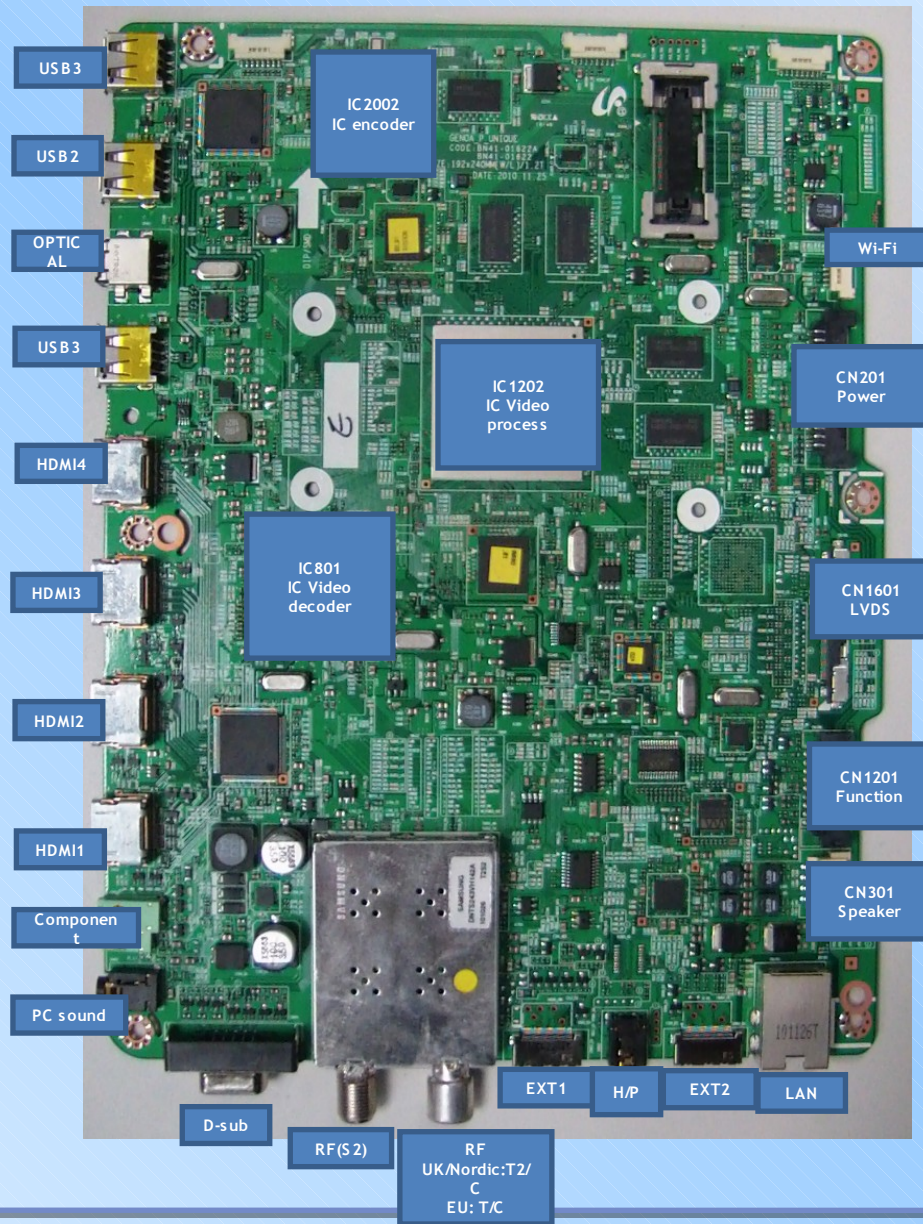
▫. Disassembly
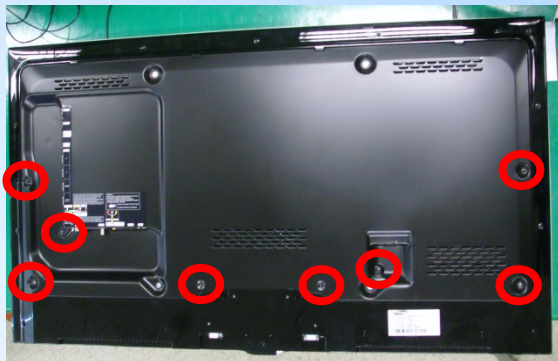
1. Place TV face down on cushioned table.
Remove screws from the Stand.
Remove stand.

2.   Remove the screws of rear cover.

3. Lift up and remove the rear-cover.
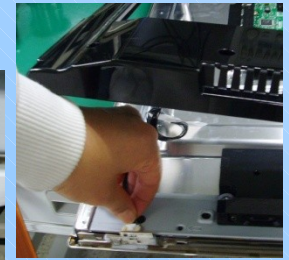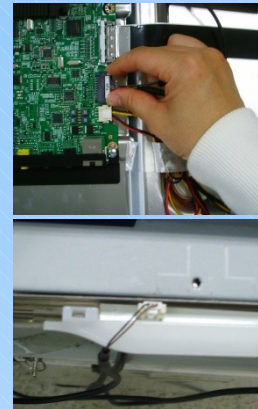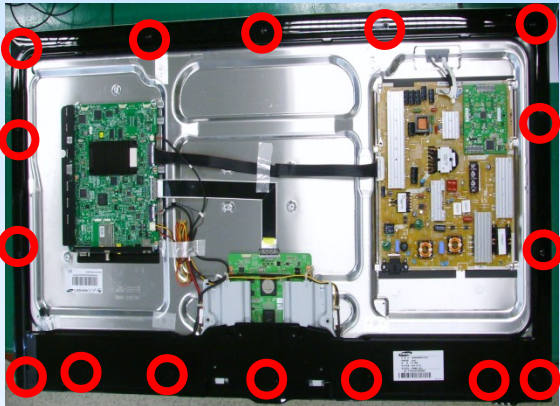*Caution : Be careful when you lift up the rear-cover, It's really sharp.

4. Remove the screws of middle-cover.
5. Lift up and remove the middle-cover.
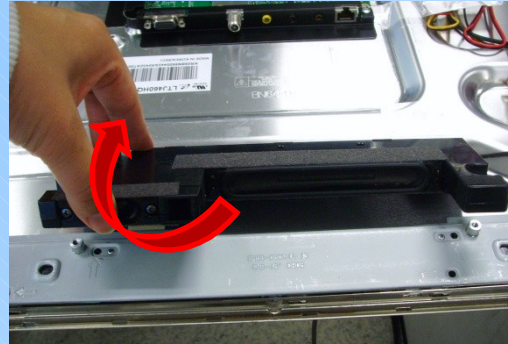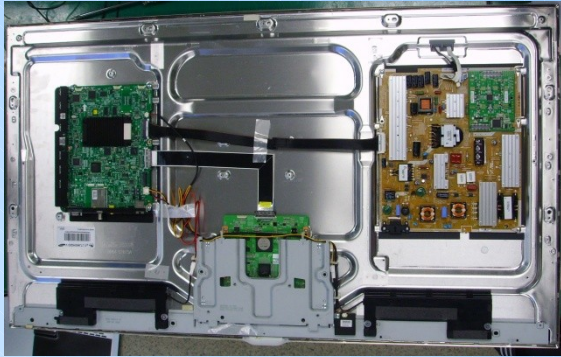*Caution: Remove the function cable, 3D emitter cable and deco cable before removing the middle cover
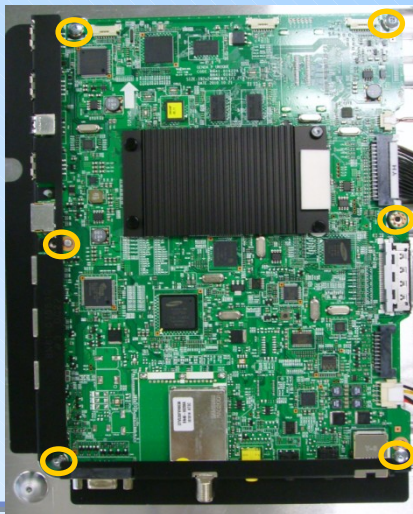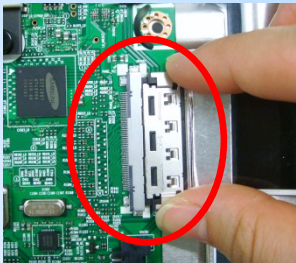
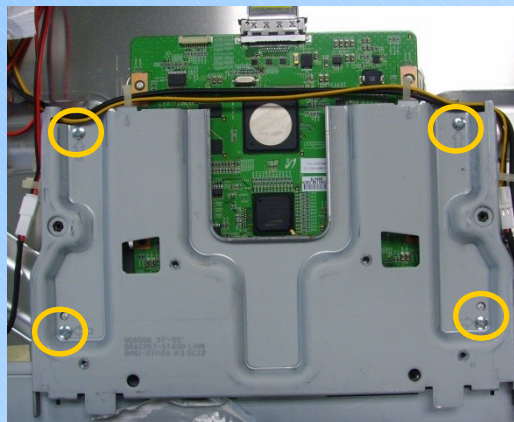6. Remove the Speakers(R/L)
7. Remove the WiFi module

8. Remove the screws of main board.
*Caution :Disconnect all cable connectors before removing any board

9. Remove the screws of IP board.
10. Remove the T-CON Bracket

Panel   40"/46"/55"

- □□ / □□□□ □□ □□ □□
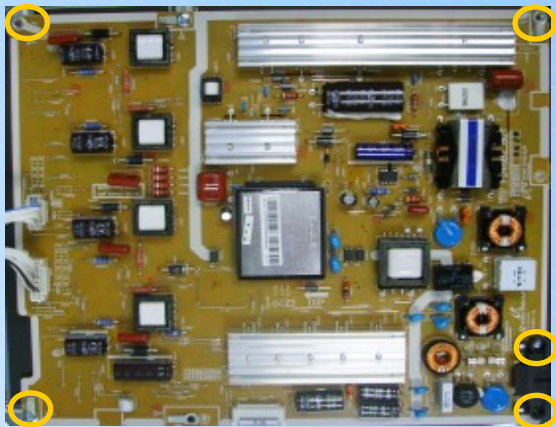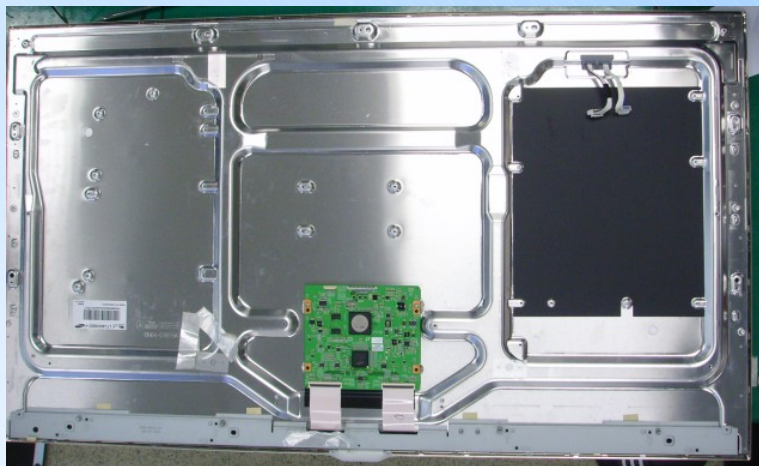
3D TV

- What is 3D TV

- A system that display 3D images artificially

- How? Using binocular time delay
  ①Left eye recognizes left image, right eye
    recognizes right image.
  ②Human eyes be far away each other 65mm
    horizontally.
    So each eye feels a little bit of time delay of left
    and right information.
    Human brain merges those images and can
    feel three-dimensional.

LEFT Image   RIGHT Image

▶Side by side

- **How to operate**

- 3D TV shows left and right image by turns.

- At the same time, TV gives synchronizing signal to 3D glasses through 3D emitter.

- 3D glasses shutter each lens by turns according to this signal

240Hz

L B R B L B

L R

Emitter L R L R

L R
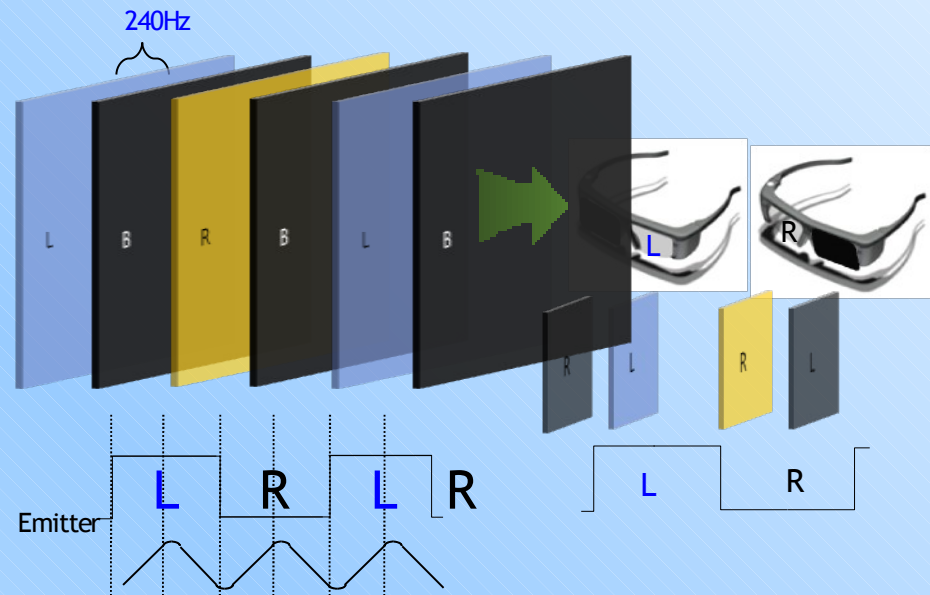
- 3D Formats

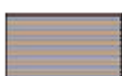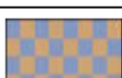| Format	Input images	explanation	Input source	notes
Frame Packing		• Inserting Blink Active Space between Left and Right images. * Full resolution : 1920 x 1080 x 2 (Left and Right each) + Blink = 1920 x 2205	HDMI 1.4	1. HDMI 1.4 standard format 2. Automatically activating (Not in the menu or UI) 3. BD format
Top & Bottom		• In 1 frame, Left image on the upper half, Right image on the bottom half. * Vertically half resolution	HDMI, USB, DTV(VOD), PC	3D Broadcasting Format
Side by Side		• In 1 frame, Left image on the left half, Right image on the right half. * Horizontally half resolution	HDMI, USB, DTV(VOD), PC	3D Broadcasting Format
Line by Line		• In 1 frame, every horizontal line, Left and Right image in turn. * Vertically half resolution	PC	1. MPEG encoding impossible 2. Only in PC
Vertical Stripe		• In 1 frame, every vertical line, Left and Right image in turn. * Horizontally half resolution	PC	1. MPEG encoding impossible 2. Only in PC
Checker Board		• In 1 frame, every pixel, Left and Right image in turn. * Half resolution both vertically and horizontally	PC	1. MPEG encoding impossible 2. Only in PC
Frame Sequential		• Left And Right image in turn in every frame. • Full resolution spatially but Half resolution timely.	PC	
2D → 3D	Extract Left and Right images artificially from normal 2D contents input and show it in 3D. (a function of TV)			
3D → 2D	When watching 3D TV (input is 3D source) , if a viewer feels tired of watching 3D TV, a viewer can change the TV into 2D. (In this case , TV only displays one of Left and Right images)			

- 3D Formats

Depth	Only activating in '2D → 3D Mode' Control the depth of 3D. 1~10 steps, Tiredness goes higher as depth goes higher.
L/R correction	Switch the position of Left and Right images so that correspond with 3D glasses.
3D Disable (3D off)	'3D off' has below meanings according to present modes .
	(1) In 2D → 3D Mode : coming back to 2D
	(2) In 3D mode

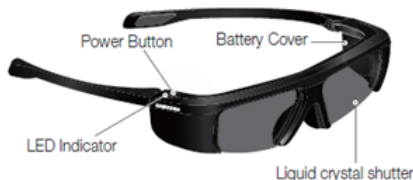*** How to Use Bluetooth 3D Glasses**

3D Active Glasses
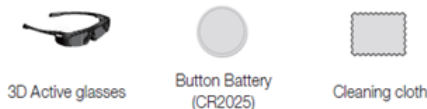
SSG-3100GB

Features

The 3D glasses enable you to view 3D images. To view 3D images, you need both a pair of 3D glasses and a Samsung 3D TV. SSG-3100GB allows you to connect devices via the 2.45GHz RF band.
(The Samsung 3D glasses cannot connect to a non-Samsung wireless communication device.)

Parts

- Power Button
- Battery Cover
- LED Indicator
- Liquid crystal shutter

Components

- 3D Active glasses
- Button Battery (CR2025)
- Cleaning cloth

Performing 3D Active Glasse pairing

(What is Pairing? It is a process to share Information and connect 3D Glasses with a 3D TV.)

◆ For the initial pairing
1. If the user takes the 3D glasses out of the box and briefly presses the power button, the glasses are turned on and the pairing process is started automatically.
▷ Be sure to power on the TV before you press the power button.
2. If the first attempt to pair fails, turn on the TV (2D or 3D) and press the Power button on the 3D glasses. The 3D glasses will power on and there will be another attempt to pair.

◆ Operating range
Recommended pairing distance

- Turning the glasses on.
Press the power button briefly. The green LED is turned on for 3 seconds.
- Turning the glasses off.
Press the power button briefly. The red LED is turned on for 3 seconds.
- Performing the pairing process.
The green and red LEDs will blink for 2 seconds if paring is under progress.

Recommended viewing distance

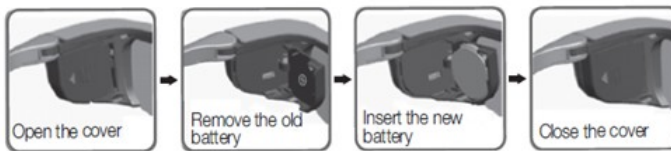| Recommended viewing distance	2~6m
Recommended pairing distance	50 cm or less

◆ To perform the pairing process again
1. If a user presses and holds the power button on the 3D glasses for at least 2 seconds when it is turned off, the power is turned on and the pairing process starts.
▷ If the user presses and holds the power button of the 3D glasses for at least 2 seconds, the pairing process starts.
▷ If the pairing process fails, the power is turned off.
▷ The maximum viewing distance may vary depending on obstacles (human body, metal, wall, etc.) or electromagnetic wave near the 3D glasses.
▷ Turn off the 3D glasses while they are not in use. If you leave the 3D glasses on, the battery lifespan decreases.

◆ Re-pairing is required in the following circumstances
▷ The 3D glasses do not function even when the power button is pressed on the 3D TV after repair.
▷ You want to enjoy a 3D video on a newly purchased Samsung 3D TV released in 2011.

◆ Replacing the Batteries
Red LED blinks every two seconds continually, replace the batteries with new ones.

Open the cover → Remove the old battery → Insert the new battery → Close the cover

Specifications (Model Number: SSG-3100GB)

Optics	Shutters	Liquid crystal	Transmittance	35±2%
	Recommended viewing distance	2~6m	Field Rate	120 fields/s
Weight	Glasses	33.1g (including the battery: 35.4g)		
Power	Glasses	One 3V lithium/manganese dioxide battery 3V(CR2025)		
Power Consumption	Glasses	1.3mA (Average)		
	Battery	Type	165mAh, 3.0V (CR2025)	
		Operating time when On	70 hours	
Operating Conditions	Operating Temperature	0 ℉ to 40 ℉		
	Custody Temperature	-20 ℉ to 60 ℉		

□. Key Feature

Smart Hub

-The Gateway to all content
  integrated in one place

-All search, web browser, samsung apps

-Supply differentialed player
  accoding to the contents

- Support various USB device
  (multi midea)

Detail

→ It's all integrated to guide you to easier and diverse entertainment choices

→ Control your entertainment life with easy and simple user friendly UI

→ Access to diverse Apps that are adding up every day

→ Customize your TV, by App grouping & sorting to your taste

Ⅶ. Key Feature

3" Premium remote

- Universal Remote Control
- Wireless PC content Control
- Clone View

Detail

Gives more convenient access to your TV & Legacy devices

• Universal Remote Control : One Remote Controller for your TV, STB and AV devices in   living room.
• Wireless PC content Control : Check content list of DLNA Certified device in 3" LCD and play it in Main TV.
• Clone view : Watch TV programs or BD/DVD titles in 3-inch screen on remote and TV.

Built in Wi-Fi

-Easy Set- up & Optimized
  -. One Foot Connection
  -. USB configuration
-Priority QoS(Quality of Service)

Detail

Easy Set-up & Optimized Solution for using Ethernet
• One Foot Connection : Establish a Wi-Fi connection to any compatible device
                                 placed within 25cm distance (Samsung Patent pending)
• USB configuration : Insert USB to router →Insert USB to Samsung TV
                              Configurations is safely stored on USB drive and restored on TV
Priority QoS(Quality of Service) Solution for using Ethernet
• Prioritize streaming content to the TV
• Ensure the best streaming content and throughput speeds are given to the TV

Web Browser

Using the Web Browser function provided by the SMART HUB, you can surf the Internet on your TV.

To open **Web Browser**, press the ◀ / ▶ / ▲ / ▼ buttons to select **Web Browser**, and then press the **ENTER** ⏎ button. The **Web Browser** is optimized for the Webkit system and may function differently from Internet Explorer.

When the Web Browser opens, the cursor is in Tab Mode. In Tab Mode, the cursor highlights text or objects, or surrounds them with a blue rectangle. To move the cursor in Tab Mode, use the ◀ / ▶ / ▲ / ▼ buttons. Press **ENTE** ⏎ to select. To scroll the screen ▲ or ▼ down, use the ◀ or ▶ buttons.

You can change from Tab Mode to Pointer Mode by pressing the Yellow **C** button. Use the arrow buttons to move the pointer. Press **ENTER** ⏎ to select.