

Training Manual

For LED TV UE4,5 Series

UE22ES5000****

UEEH50*******

UEEH52*******

UE19ES4000W***

UEEH4000W*****

Contents

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- II . Specification
- III . Product Image
- IV . Inner Feature
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“The Most Affordable LED TV ever”

- ✓ Picture Quality : Direct LED backlighting Panel
- ✓ Design : Narrow Bezel
- ✓ Experience : USB 2.0 Movie
- ✓ Energy Saving : Low power consumption up to 40% of LCD TV

II. Specification



Series	Series	UE**E5000
Display	Ultra Clear Panel	No(Anti Glare)
	Screen Size	22" / 32" / 40" / 46"
	Resolution	1920x 1080
Video	Dynamic Contrast Ratio	MEGA
	Picture Engine	HyperReal Engine
	Wide Color Enhancer Plus	Wide Color Enhancer Plus
	100/200Hz Motion Plus	No
	Clear Motion Rate	120
	Precision Dimming	No
	Dolby	Dolby Digital Plus/ Pulse
Audio	SRS	SRS TheaterSoUEd
	dtS 2.0 + Digital Out	Yes
	SoUEd Output (RMS)	22" 3W / 32"~ 10W x 2
	Speaker Type	Down Firing
	Woofer	No
	SamsUEg 3D	No
	Anynet+ (HDMI-CEC)	No
	Auto Channel Search	Yes
	Auto Power Off	Yes
	Auto Volume Leveler	Yes
Feature	BD Wise	No
	Caption (Subtitle)	Yes
	Clock & On/Off Timer	Yes
	Allshare (Powerd by DLNA)	No
	EPG	No
	Game Mode	Yes
	Internet@TV	No
	Skype on SamsUEg TV	No
	Picture-In-Picture	No
	Sleep Timer	Yes
	USB	Movie
	WiFi Adaptor Support	No
	User Interface	Single UI
	Extended PVR	No
	Time Shift	No
	Still Picture	No
	Digital Noise Filter	Yes
	Teletext (TTXT)	No
	Wireless Remote Control	No

Series	Series	UE**E5000
System	DTV Reception (DVB-T/T2/C/S2)	PAL
	DTV TUEr Built-in	Yes
	MHP/ MHEG (version)	No
Input & Output	Audio Out (Mini Jack)	1
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common use for Component Audio In)
	Digital Audio Out (Optical)	1
	DVI Audio In (Mini Jack)	0
	Ethernet (LAN)	0
	Headphone	0
	HDMI	2 (side v1.3)
	PC Audio In (Mini Jack)	1
	PC In (D-sub)	0
Design	RF In	1
	RS232C (AV CONTROL)	Yes
	USB	1(side)
	CI Slot	Yes
	Scart	Yes
	Slim Type	Normal
	Front Color	Black
	Light Effect (Deco)	No
	Stand Type	Square
	Swivel (Left/Right)	No
Power	Eco Mark	Energy Star
	Eco Sensor	No
	Power Supply	AC110-120V 60Hz
	Power Consumption (Max.)	22" (TBD) / 32" (TBD) / 40" (TBD) / 46" (TBD)
Dimension	Power Consumption (Stand-by)	0.3W
	Package Size (W x D x H)	22" (585.0 x 475.0 x 120.0)
		32" (902.0 x 162.0 x 530.0)
		40" (1104.0 x 165.0 x 641.0)
		46" (1237.0 x 165.0 x 723.0)
Weight	Set Size (W x D x H) with Stand	22" (513.4 x 364.4 x 161.0)
		32" (738.3 x 498.1 x 191.6)
		40" (927.6 x 606.4 x 227.6)
		46" (1059.8 x 680.7 x 227.6)
	Set Size (W x D x H) without Stand	22" (513.4 x 316.2 x 49.6)
		32" (738.3 x 444.6 x 93.1)
		40" (927.6 x 551.0 x 93.0)
		46" (1059.8 x 625.6 x 94.3)
	Package Weight	22" (4.9) / 32" (7.9) / 40" (13.5) / 46" (16.1)
	Set Weight with Stand	22" (3.5) / 32" (6.4) / 40" (11.0) / 46" (14.0)
	Set Weight without Stand	22" (3.3) / 32" (5.7) / 40" (9.0) / 46" (12.0)

II. Specification



Series	Series	UE**E4000
Display	Ultra Clear Panel	No(Anti Glare)
	Screen Size	19" / 26" / 32"
	Resolution	1366 x 768
Video	Dynamic Contrast Ratio	MEGA
	Picture Engine	HyperReal Engine
	Wide Color Enhancer Plus	Wide Color Enhancer Plus
	100/200Hz Motion Plus	No
	Clear Motion Rate	60
	Precision Dimming	No
	Dolby	Dolby Digital Plus/ Pulse
Audio	SRS	SRS TheaterSoUEd
	dts 2.0 + Digital Out	Yes
	SoUEd Output (RMS)	19" 3W X2
		26" 5W X2
		32" 10W x 2
	Speaker Type	Down Firing
	Woofer	No
	SamsUEg 3D	No
	Anynet+ (HDMI-CEC)	No
	Auto Channel Search	Yes
Feature	Auto Power Off	Yes
	Auto Volume Leveler	Yes
	BD Wise	No
	Caption (Subtitle)	Yes
	Clock & On/Off Timer	Yes
	Allshare (Powerd by DLNA)	No
	EPG	No
	Game Mode	Yes
	Internet@TV	No
	Skype on SamsUEg TV	No
	Picture-In-Picture	No
	Sleep Timer	Yes
	USB	Movie
	WiFi Adaptor Support	No
	User Interface	Single UI
	Extended PVR	No
	Time Shift	No
	Still Picture	No
	Digital Noise Filter	Yes
	Teletext (TTXT)	No
	Wireless Remote Control	No

"22	Series	UE**E4000
System	DTV Reception (DVB-T/T2/C/S2)	PAL
	DTV TUEr Built-in	Yes
	MHP/ MHEG (version)	No
Input & Output	Audio Out (Mini Jack)	1
	Component In (Y/Pb/Pr)	1
	Composite In (AV)	1 (Common use for Component Audio In)
	Digital Audio Out (Optical)	1
	DVI Audio In (Mini Jack)	0
	Ethernet (LAN)	0
	Headphone	0
	HDMI	2 (side v1.3)
	PC Audio In (Mini Jack)	1
	PC In (D-sub)	0
Design	RF In	1
	RS232C (AV CONTROL)	Yes
	USB	1(side)
	CI Slot	No
	Scart	No
	Slim Type	Normal
	Front Color	Black
	Light Effect (Deco)	No
	Stand Type	Square
	Swivel (Left/Right)	No
Power	Eco Mark	Energy Star
	Eco Sensor	No
	Power Supply	AC110-120V 60Hz
	Power Consumption (Max.)	19" (TBD) / 26" (TBD) / 32" (TBD)
	Power Consumption (Stand-by)	0.3W
	Package Size (W x D x H)	19" (514.0 x 424.0 x 125.0)
		26" (770.0 x 162.0 x 445.0)
		32" (902.0 x 162.0 x 5300)
Dimension	Set Size (W x D x H) with Stand	22" (446.8 x 326.9 x 161.0)
		26" (615.1 x 419.2 x 180.7)
		32" (738.8 x 493.3 x 191.7)
	Set Size (W x D x H) without Stand	22" (446.8 x 278.7 x 49.6)
Weight	Set Weight with Stand	26" (615.1 x 365.6 x 93.3)
		32" (738.8 x 436.7 x 93.3)
		22" (4.1) / 26" (5.70) / 32" (7.90)
	Set Weight without Stand	22" (3.0) / 26" (4.50) / 32" (6.30)
		22" (2.7) / 26" (4.00) / 32" (5.70)

II. Specification



Spec. Comparison

Model		UD5R	UE5L
Design			
Set	Size(without stand)	30.2 x 18.4 x 1.2 (32")	29.1 x 17.5 x 3.7 (32")
		15.88 lbs (32")	12.57 lbs(40")
Panel	Size	Diagonal 32"	Diagonal 32"
	Resolution	1920 x 1080	1920 x 1080
	Hz	60	60
	Viewing angle	H : 176 V : 176	H : 176 V : 176
Color System		PAL	PAL
TUEer		1	1
Function	Contrast (cd/m ²)	450	TBD
	CR (Dynamic)	MEGA	MEGA
	Enhancer	HyperReal Engine (X5)	HyperReal Engine (X9)
Back light UEit		Edge LED	Direct LED
Additional Function		ANYNET+	
		TOUCH Function	JOG FUETION
Power Consumption		80W	TBD

II. Specification

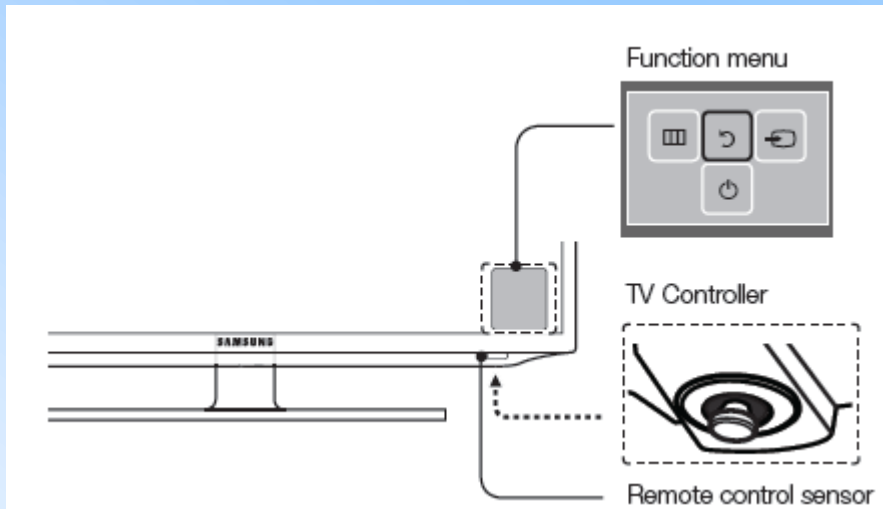


Spec. Comparison

Model		UD4N	UE4J
Design			
Set	Size(without stand)	30.1 x 18.2 x 1.2 (32")	24.2 x 14.4 x 3.7 (32")
		15.40 lbs (32")	8.82 lbs(32")
Panel	Size	Diagonal 32"	Diagonal 32"
	Resolution	1366 x 768	1366 x 768
	Hz	60	60
	Viewing angle	H : 176 V : 176	H : 176 V : 176
Color System		PAL	PAL
TUEer		1	1
Function	Contrast (cd/m ²)	250	250
	CR (Dynamic)	MEGA	MEGA
	Enhancer	HyperReal Engine (X5)	HyperReal Engine (X9)
Back light UEit		Edge LED	Direct LED
Additional Function		ANYNET+	
		TOUCH Function	JOG FUETION
Power Consumption		70W	TBD

III. Design

TV Controller



Power on

Turns the TV on by pressing the controller in standby mode.

Adjusting the volume

Adjusts the volume by moving the controller from side to side when the power is on.

Selecting a channel

Selects a channel by moving the controller up and down when the power is on.

Using the function menu

Press the controller when the power is on, then the function menu screen appears. If you press it again, the function menu screen disappears.

Using the Menu ()

Selects the Menu() by moving the controller in the function menu screen. The OSD(On Screen Display) of your TV's feature appears.

Selecting the Source ()

Selects the Source() by moving the controller in the function menu screen. The Source List screen appears.

Power Off ()

Selects the Power Off () to turn the TV off by moving the controller in the function menu screen.

 If you press the controller more than 1 sec., the menu returns to the previous step.

III. Design



● Plug & Play

When the TV is initially powered on, a sequence of on-screen prompts will assist in configuring basic settings. Press the **POWER**  button. **Setup** is available only when the source is set to TV.

1. Menu Language: Selecting a menu language

Press the  or  button, then press the **ENTER**  button.
Select the desired OSD (On Screen Display) language.

2. Use Mode: Selecting Store Demo or Home Use

Press the  or  button, then press the **ENTER**  button.
Select the **Home Use** mode. **Store Demo** mode is for retail environments.

 When pressing TV controller, the function menu screen appears. Select the **Menu**() and press it more than 5 seconds using the controller. The **Store Demo** mode is set. Cancel the **Store Demo** by selecting **Source**() and pressing it more than 5 seconds.

 **Store Demo** is only for shop display. If you select it, several functions are not able to use. Please select **Home Use** when you watch at home.

3. Country (Depending on the country): Selecting a country

Press the  or  button, then press the **ENTER**  button.
Select the appropriate country.

 After selecting the country in the country menu, some models may proceed with an additional option to setup the pin number.

III. Design



● Plug & Play

4. Auto Tuning (Step 1): Selecting how you watch your TV

- **I use an aerial cable. (Auto Tuning necessary):** Memorises all of the available channels using RF cable.
- **I use a cable or satellite service. (Auto Tuning not necessary):** You don't need to use Auto Tuning to find channels.

5. Auto Tuning (Step 2): Selecting a search options

Press the ▲/▼/◀/▶ button, then press the ENTER  button. Select the desired broadcasting signal and antenna source.

 Select the channel source to memorise. When setting the antenna source to **Cable**, a step appears allowing you to assign numerical values (channel frequencies) to the channels. For more information, refer to **Channel → Auto Tuning**.

 Press the ENTER  button at any time to interrupt the memorisation process.

6. Clock: Setting the Clock Mode

- **Auto:** Set the current time automatically.
- **Manual:** Allows you to manually set the current date and time.

7. Time Zone (Depending on the country): Setting the your Time Zone

This step is only available when the clock mode is set to **Auto**.

- **Auto:** Set the time zone automatically.
- **Manual:** Set the time zone manually.

 If you selected **Manual**, you can select whether to turn DST (Daylight Savings Time) **On** or **Off**. (Depending on the country)

III. Design



● Plug & Play

8. Setup Complete

Press the ENTER  button.

 The completed settings are displayed.

If You Want to Reset This Feature...

Select **System - Setup** (Initial Setup). Enter your 4 digit PIN number. The default PIN number is "0-0-0-0". If you want to change the PIN number, use the **Change PIN** function.

You should do **Setup** (MENU → **System**) again at home although you did in shop.

 If you forget the PIN code, press the remote control buttons in the following sequence in Standby mode, which resets the PIN to "0-0-0-0": MUTE → 8 → 2 → 4 → POWER (on).

III. Design

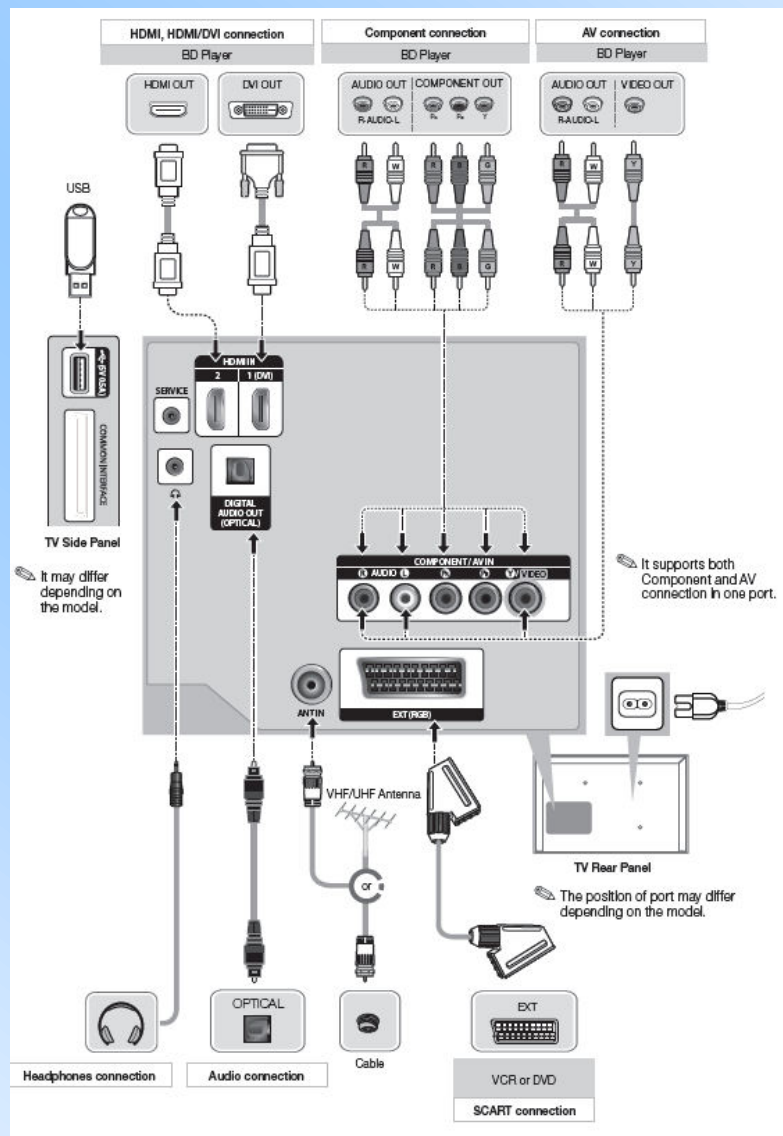


○ Connectios

- For better picture and audio quality, connect to a digital device using an HDMI cable.
 - The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the TV. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
 - Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
-
- **PC(D-Sub)** and **PC/DVI AUDIO IN** input is not supported.
 - For HDMI/DVI cable connection, you must use the **HDMI IN 1 (DVI)** jack.
 - Connecting through the HDMI cable may not be supported depending on the PC.
 - If an HDMI to DVI cable is connected to the **HDMI IN 1 (DVI)** port, the audio does not work.
 - **EX-LINK**: Connector for service only.

III. Design

○ Connections



III. Design



Changing the Input Source

Source List

Use to select TV or an external input sources such as a DVD / Blu-ray player / cable box / STB satellite receiver.

1. Press the **SOURCE** button.
2. Select a desired external input source.

■ **TV / AV / Component / HDMI1/DVI / HDMI2 / USB**

 You can only choose external devices that are connected to the TV. In the **Source List**, connected inputs will be highlighted.

■ **VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI / TV / IPTV / Blu-ray / HD DVD / DMA:** Name the device connected to the input jacks to make your input source selection easier.

 When connecting a PC to the HDMI IN 1(DVI) port with HDMI cable, you should set the TV to **PC** mode under **Edit Name**.

 When connecting a PC to the HDMI IN 1(DVI) port with HDMI to DVI cable, you should set the TV to **DVI PC** mode under **Edit Name**.

 When connecting an AV devices to the HDMI IN 1(DVI) port with HDMI to DVI cable, you should set the TV to **DVI** mode under **Edit Name**.

III. Design



Display Modes(HDMI/DVI)

Optimal resolution

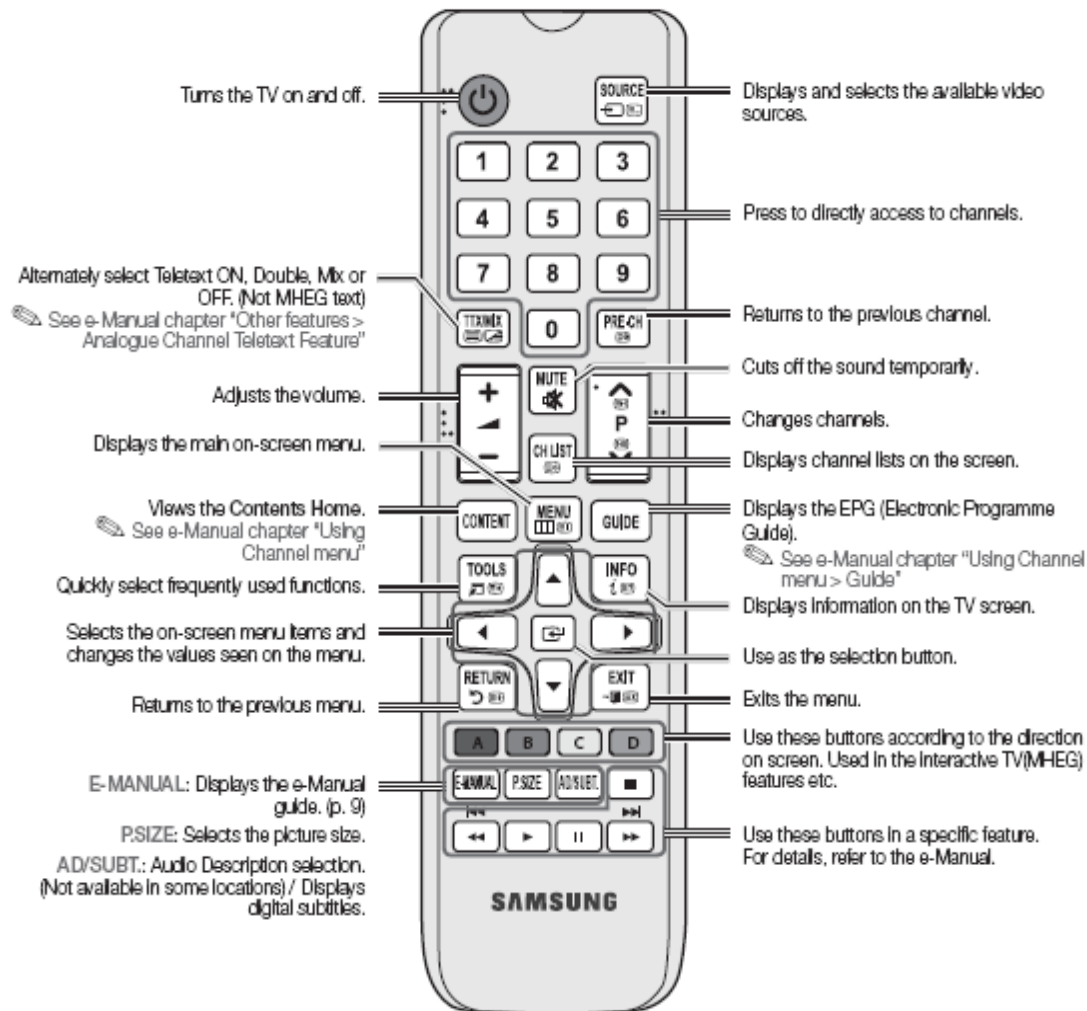
4000 series:1366 x 768@60Hz / 5000 series: 1920 x 1080@60Hz

Mode	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H / V)	1366 x 768	1920 x 1080
IBM	640 x 350	31.469	70.086	25.175	+/-	✓	✓
	720 x 400	31.469	70.087	28.322	-/+	✓	✓
MAC	640 x 480	35.000	66.667	30.240	-/-	✓	✓
	832 x 624	49.726	74.551	57.284	-/-	✓	✓
	1152 x 870	68.681	75.062	100.000	-/-		✓
VESA DMT	640 x 480	31.469	59.940	25.175	-/-	✓	✓
	640 x 480	37.861	72.809	31.500	-/-	✓	✓
	640 x 480	37.500	75.000	31.500	-/-	✓	✓
	800 x 600	37.879	60.317	40.000	+/+	✓	✓
	800 x 600	48.077	72.188	50.000	+/+	✓	✓
	800 x 600	46.875	75.000	49.500	+/+	✓	✓
	1024 x 768	48.363	60.004	65.000	-/-	✓	✓
	1024 x 768	56.476	70.069	75.000	-/-	✓	✓
	1024 x 768	60.023	75.029	78.750	+/+	✓	✓
	1152 x 864	67.500	75.000	108.000	+/+		✓
	1280 x 720	45.000	60.000	74.250	+/+	✓	✓
	1280 x 800	49.702	59.810	83.500	-/+		✓
	1280 x 1024	63.981	60.020	108.000	+/+		✓
	1280 x 1024	79.976	75.025	135.000	+/+		✓
	1366 x 768	47.712	59.790	85.500	+/+	✓	✓
	1440 x 900	55.935	59.887	106.500	-/+		✓
	1600 x 900RB	60.000	60.000	108.000	+/+		✓
	1680 x 1050	65.290	59.954	146.250	-/+		✓
	1920 x 1080	67.500	60.000	148.500	+/+		✓

III. Design



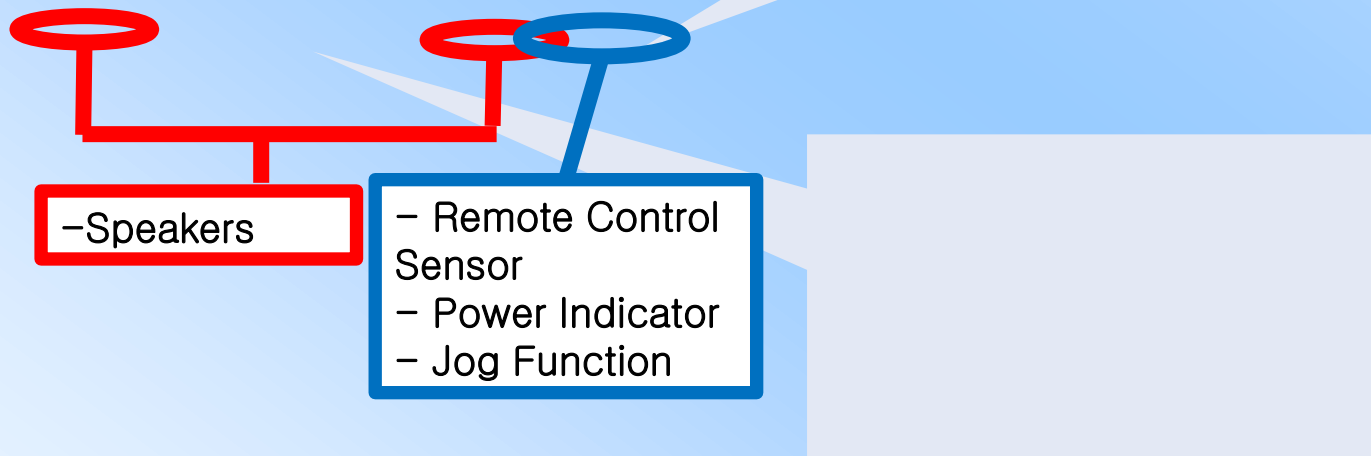
Remote Control



III. Design



● Viewing Front – UE22ES5000



III. Design



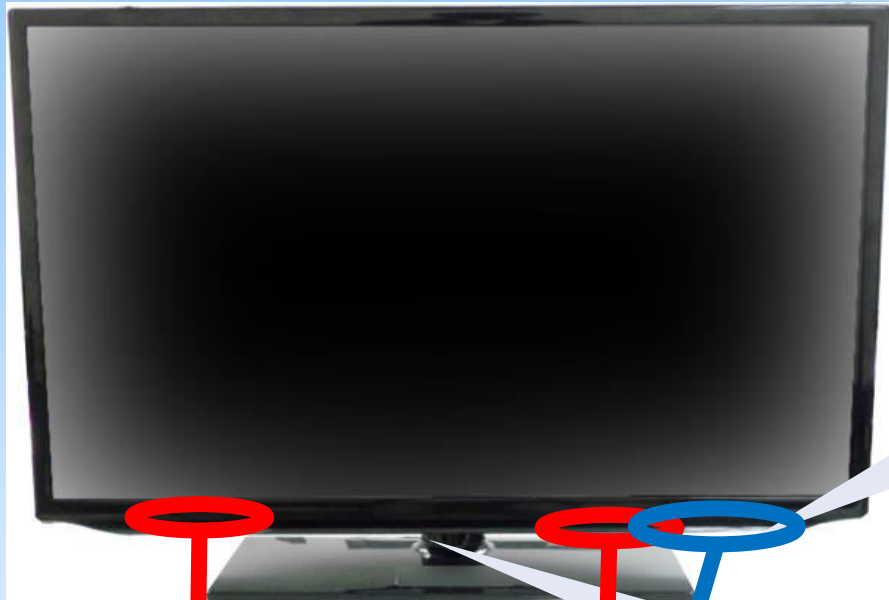
● Rear – UE22ES5000



III. Design



● Viewing Front – UE32EH5000



–Speakers

- Remote Control Sensor
- Power Indicator
- Jog Function



III. Design



Rear – UE32EH5000



III. Design



● Viewing Front – UE40EH5000



– Speakers

– Remote Control
Sensor
– Power Indicator
– Jog Function



III. Design



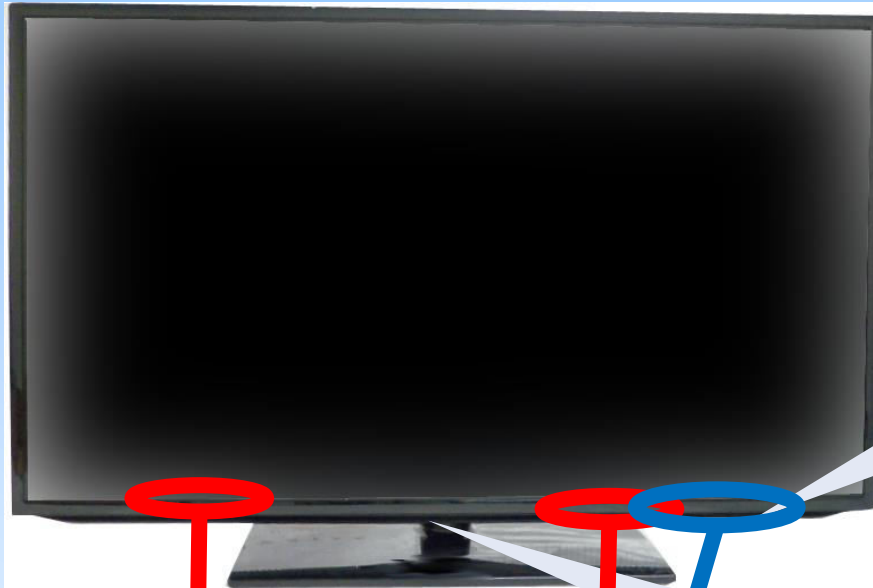
Rear – UE40EH5000



III. Design



● Viewing Front – UE46EH5000



–Speakers

- Remote Control Sensor
- Power Indicator
- Jog Function



III. Design



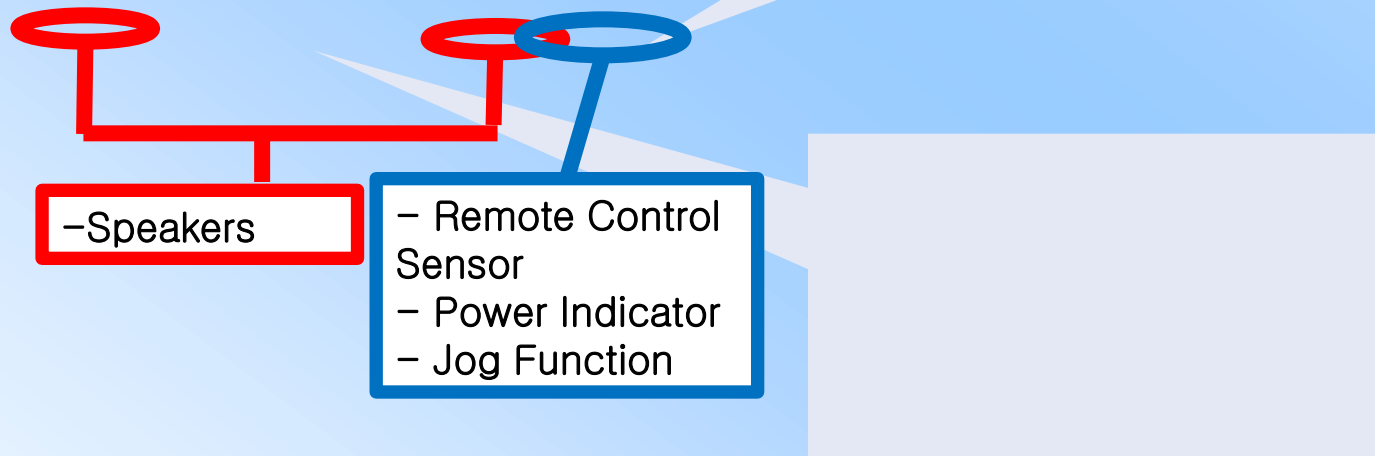
Rear – UE46EH5000



III. Design



● Viewing Front – UE19ES4000



III. Design



● Rear – UE19ES4000



III. Design



● Viewing Front - UE26EH4000



-Speakers

- Remote Control
Sensor
- Power Indicator
- Jog Function



III. Design



Rear – UE26EH4000



III. Design

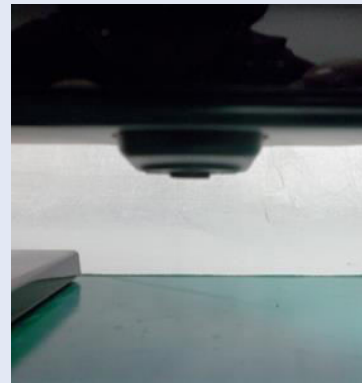


● Viewing Front – UE32EH4000



– Speakers

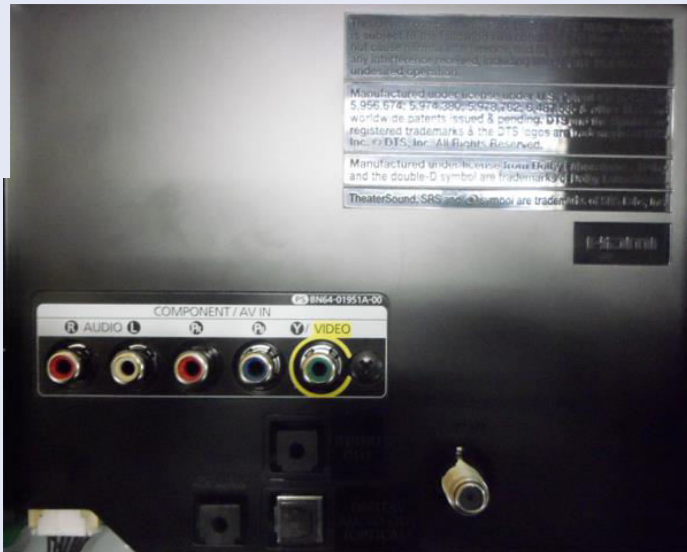
– Remote Control
Sensor
– Power Indicator
– Jog Function



III. Design



Rear – UE32EH4000



IV. Inner Feature



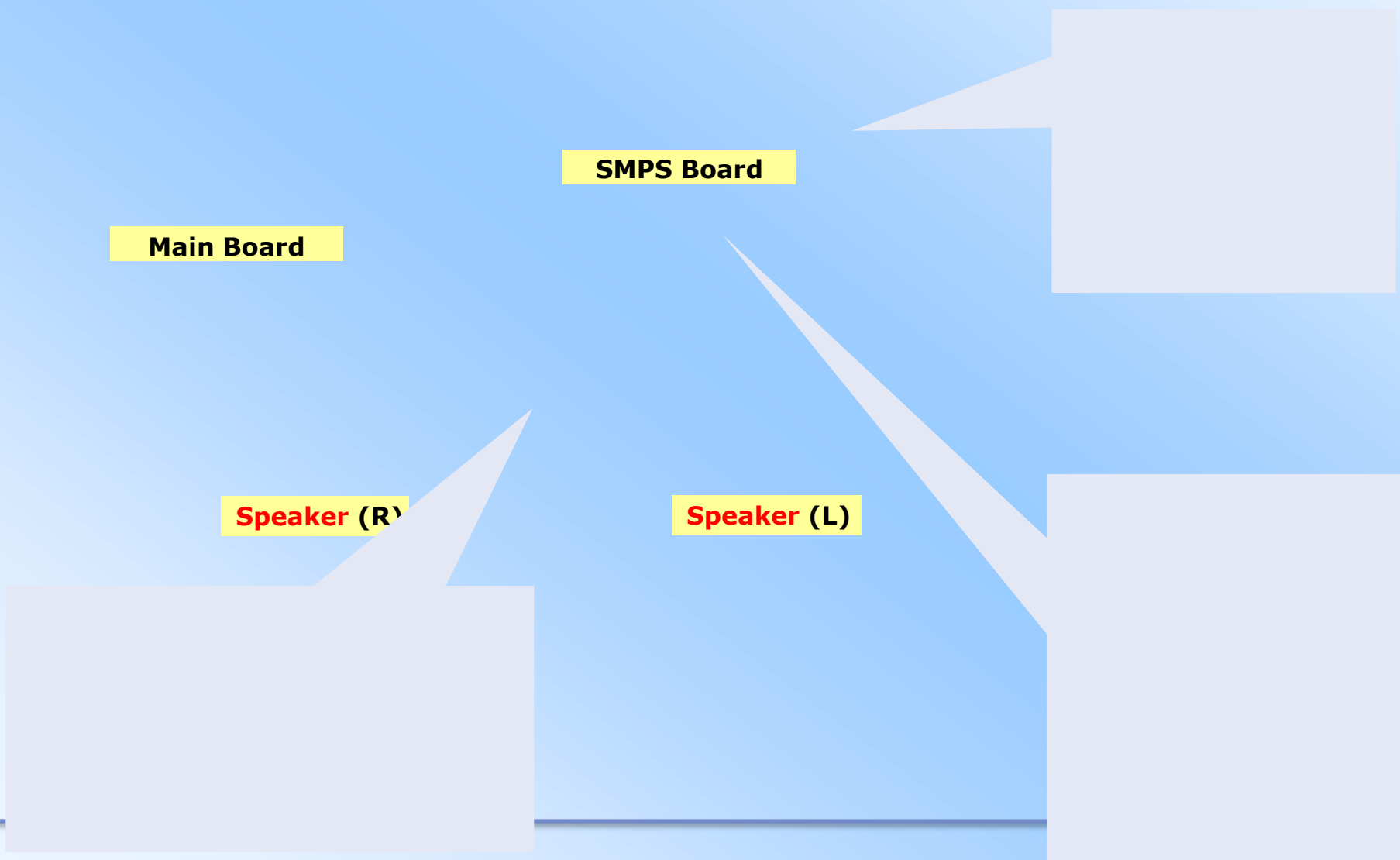
○ LAY OUT – UE19ES5000

Main Board

SMPS Board

Speaker (R)

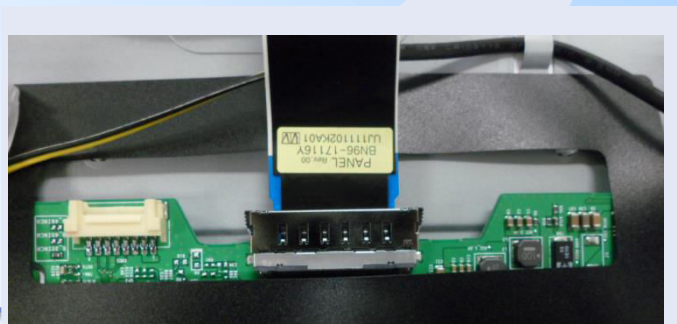
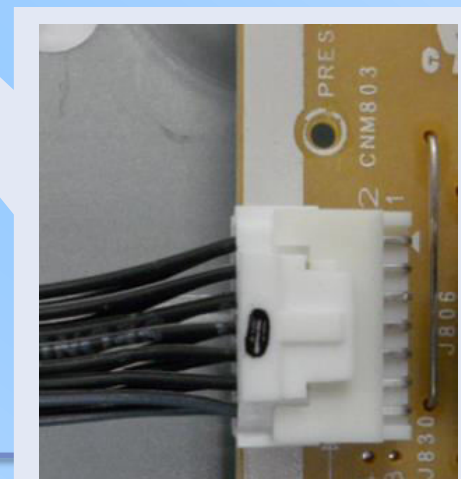
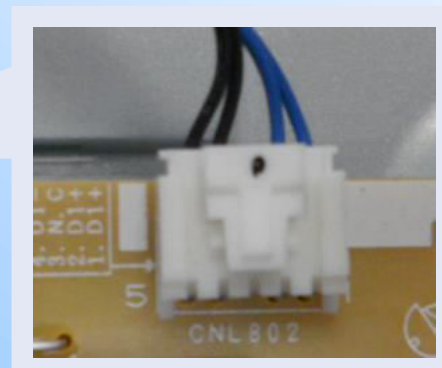
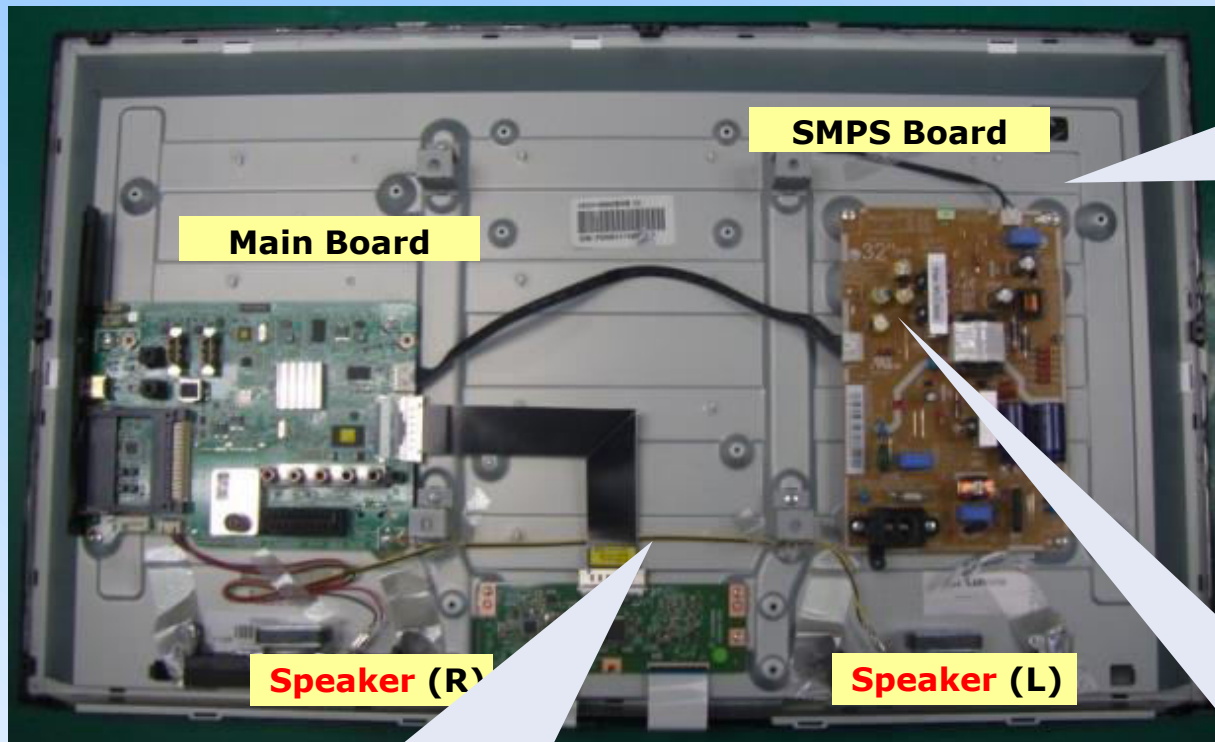
Speaker (L)



IV. Inner Feature



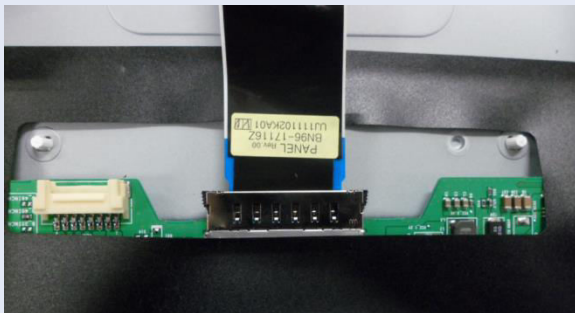
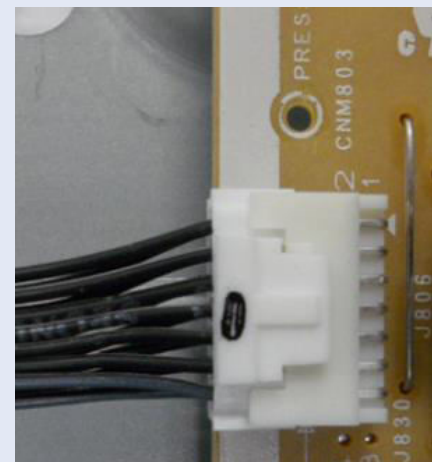
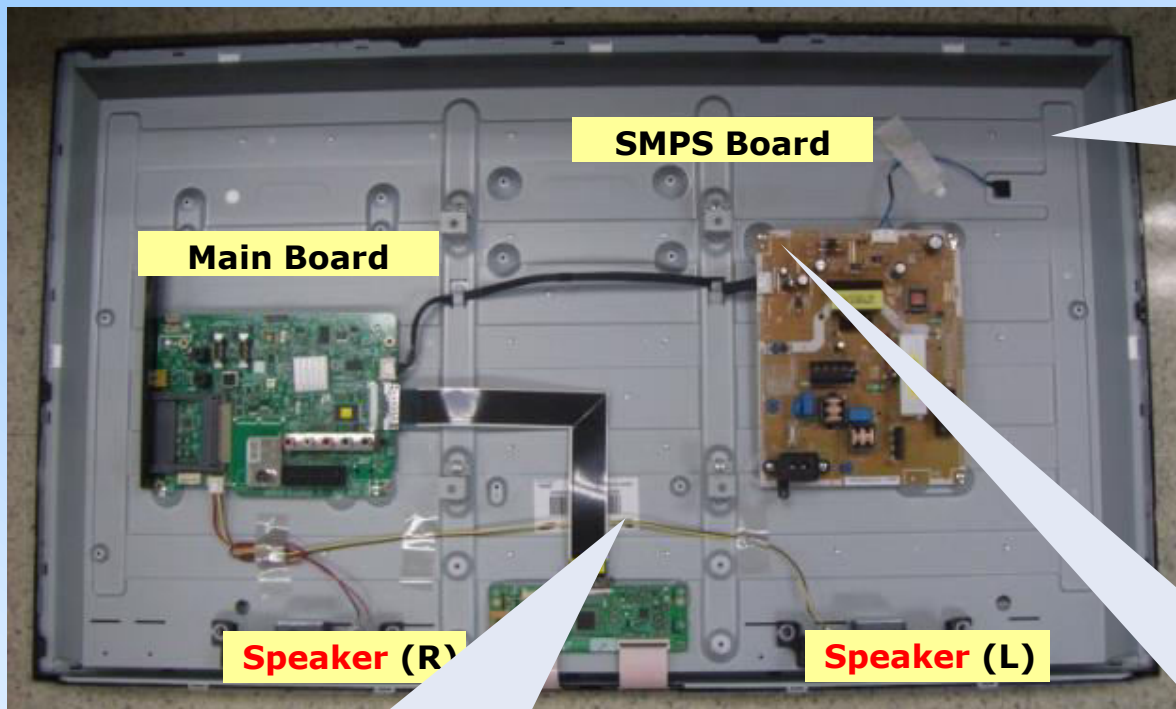
LAY OUT – UE32EH5000



IV. Inner Feature



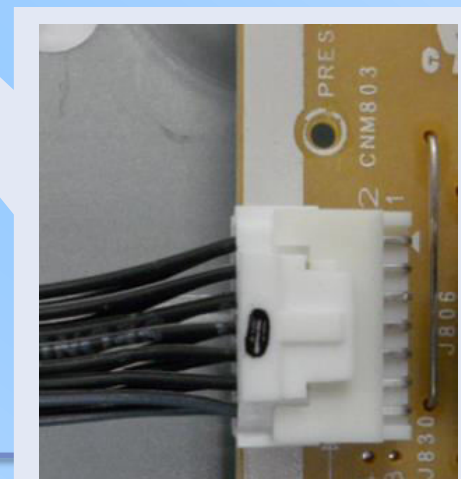
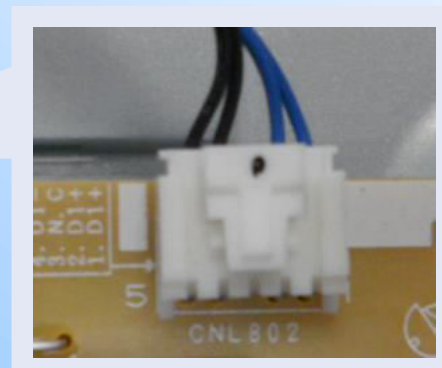
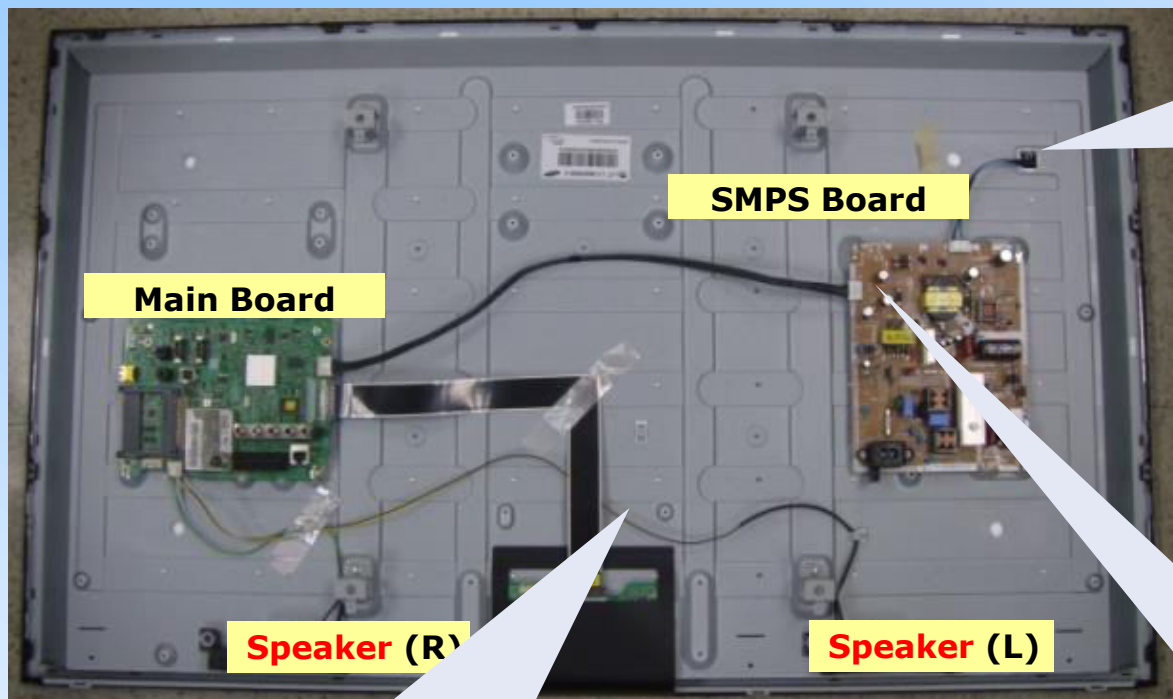
LAY OUT – UE40EH5000



IV. Inner Feature



LAY OUT – UE46EH5000



IV. Inner Feature



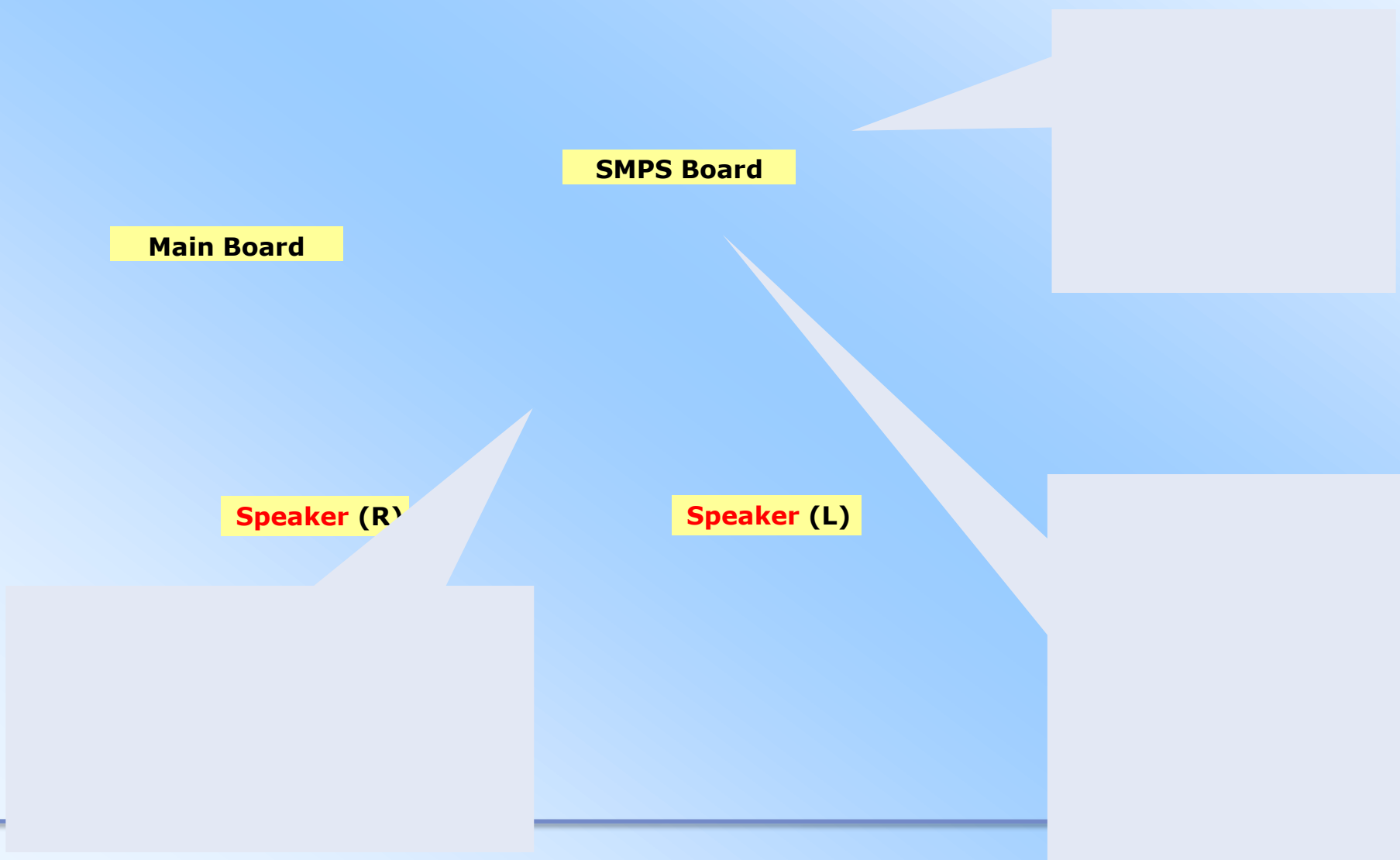
○ LAY OUT – UE19ES4000

Main Board

SMPS Board

Speaker (R)

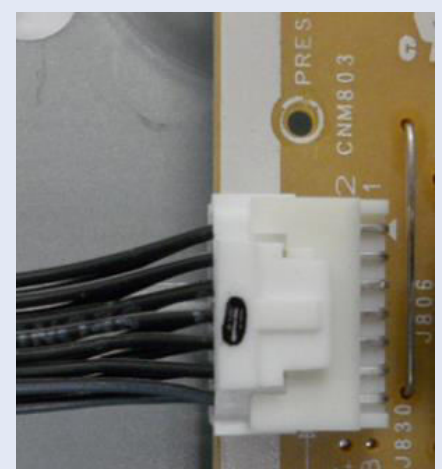
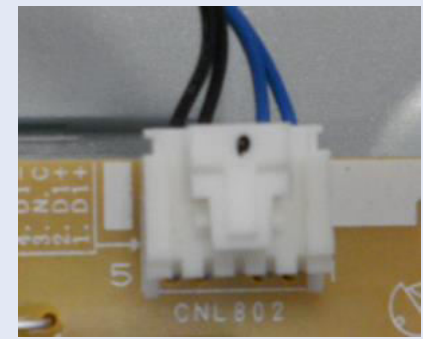
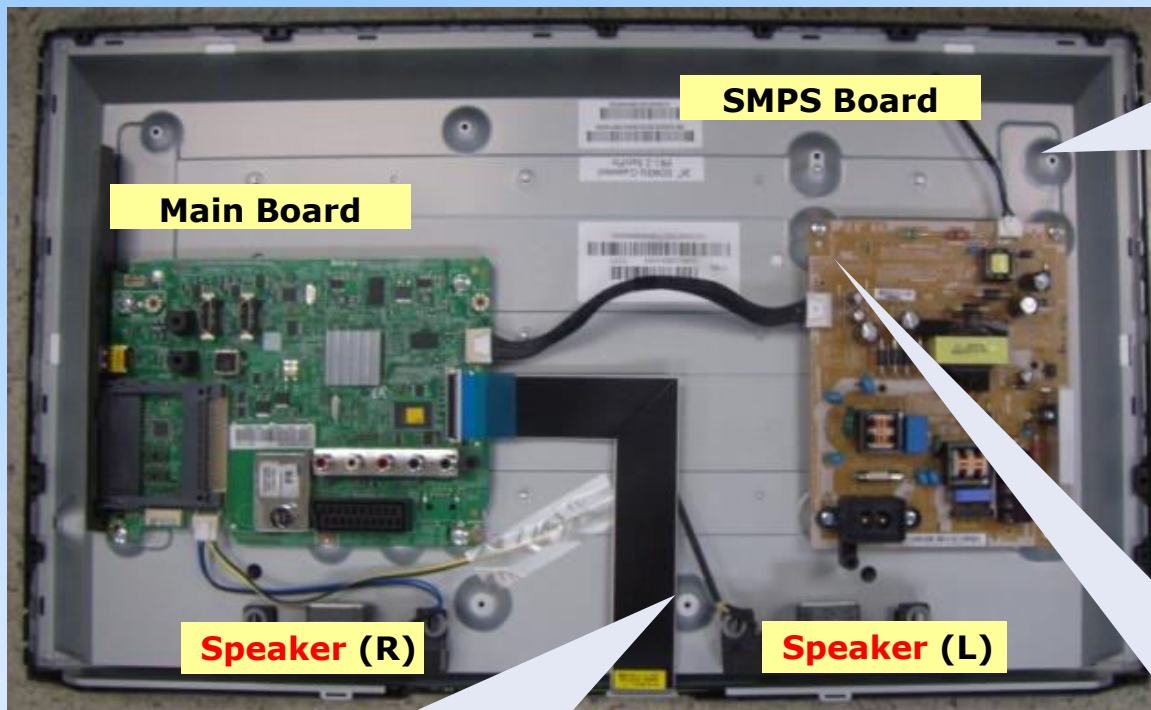
Speaker (L)



IV. Inner Feature



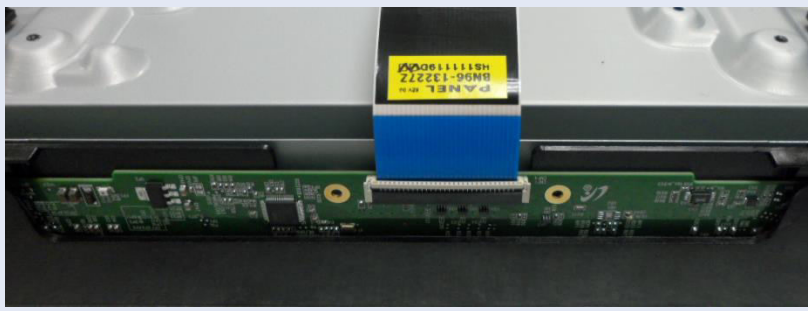
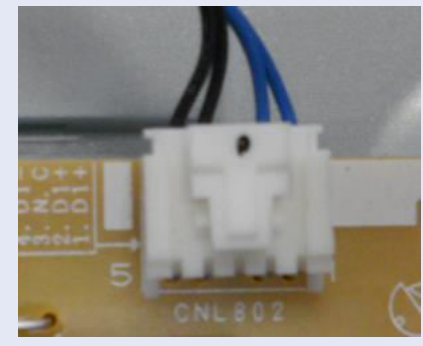
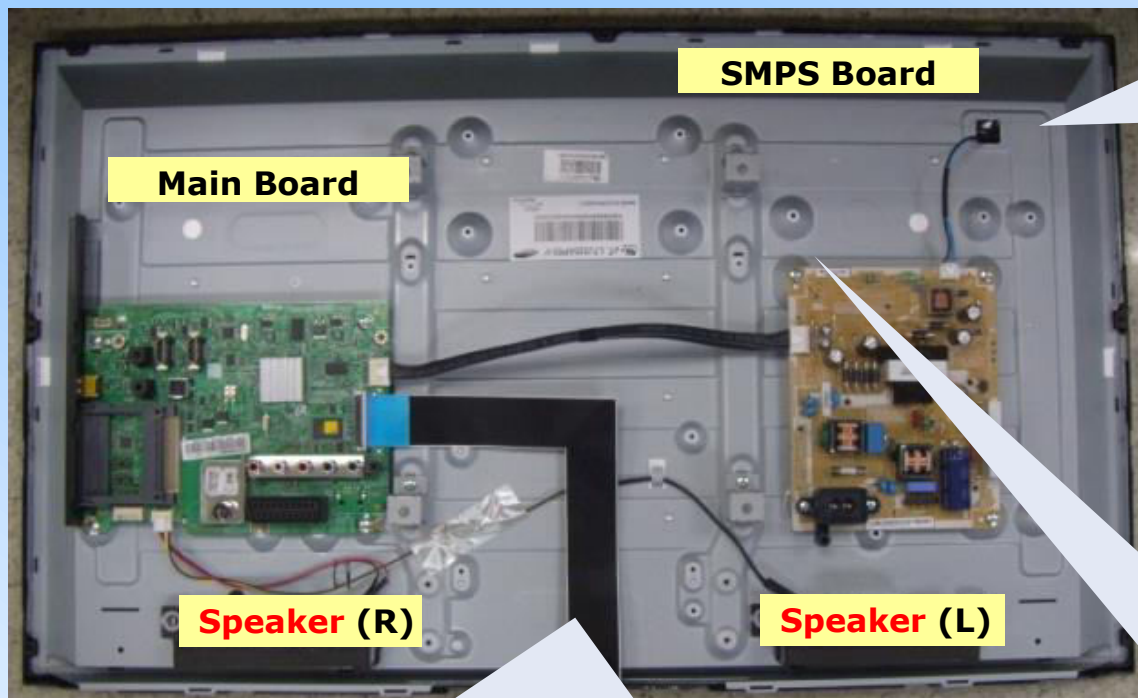
LAY OUT - UE26EH4000



IV. Inner Feature



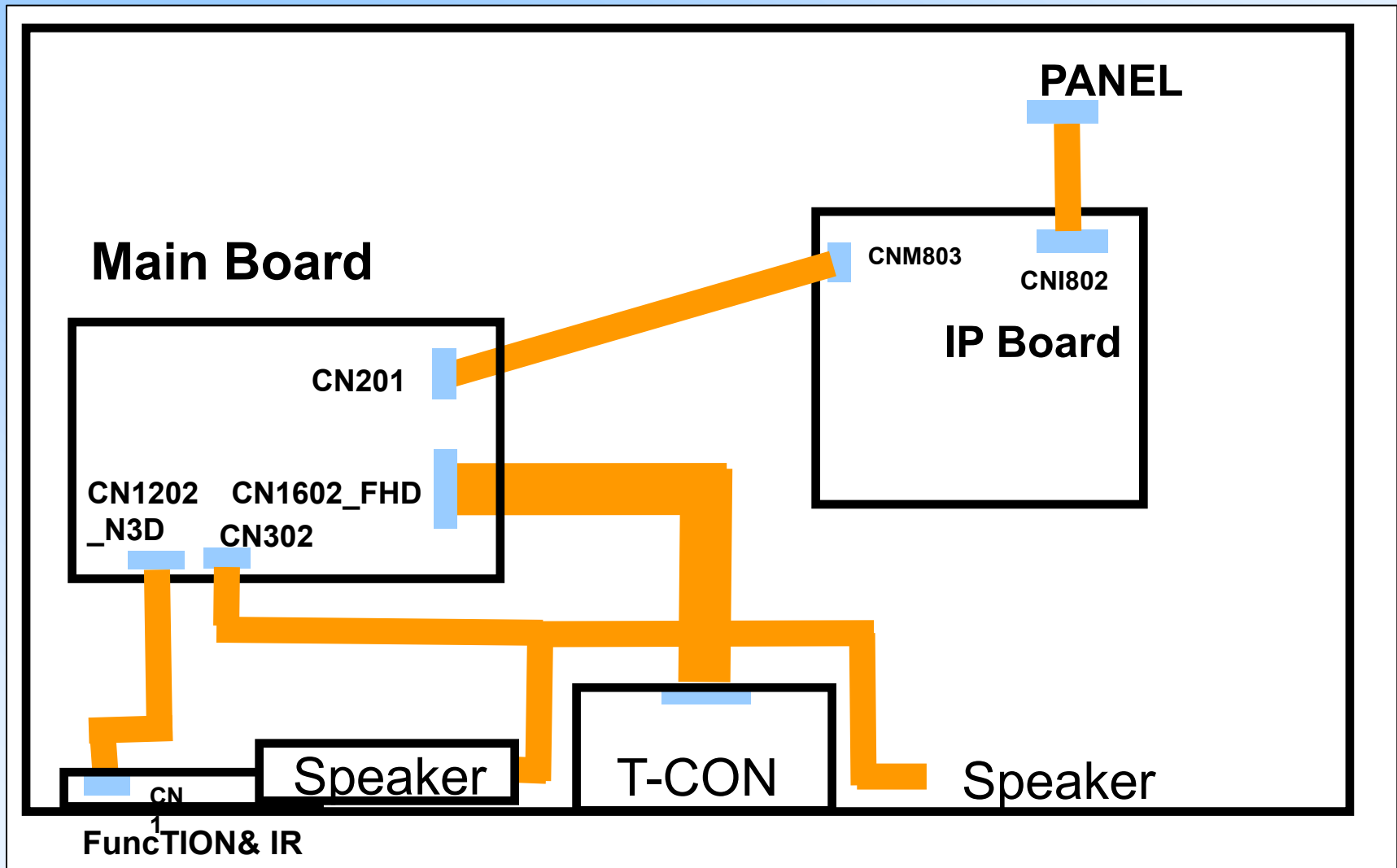
LAY OUT - UE32EH4000



IV. Inner Feature



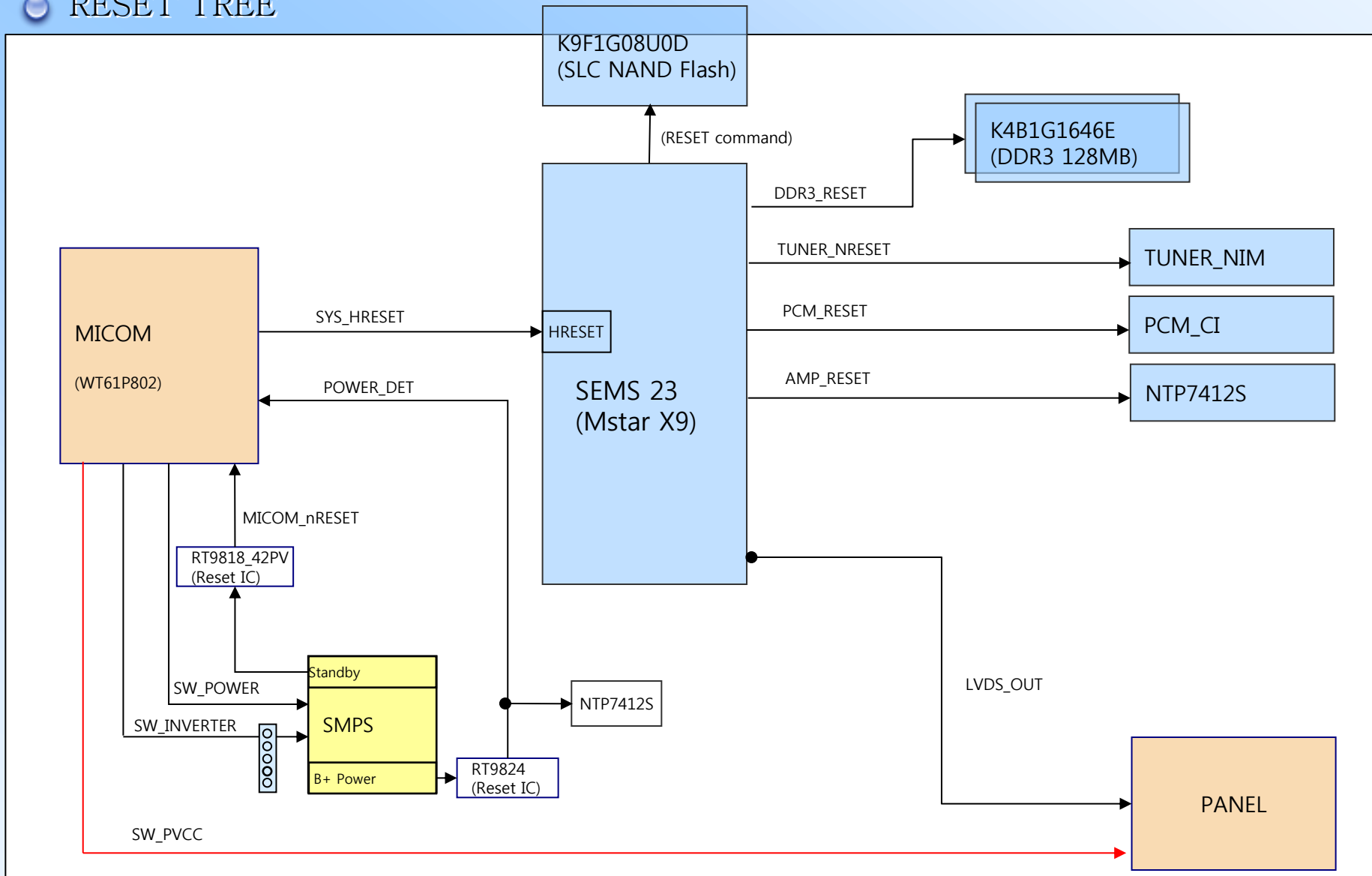
Wiring Diagram



IV. Inner Feature



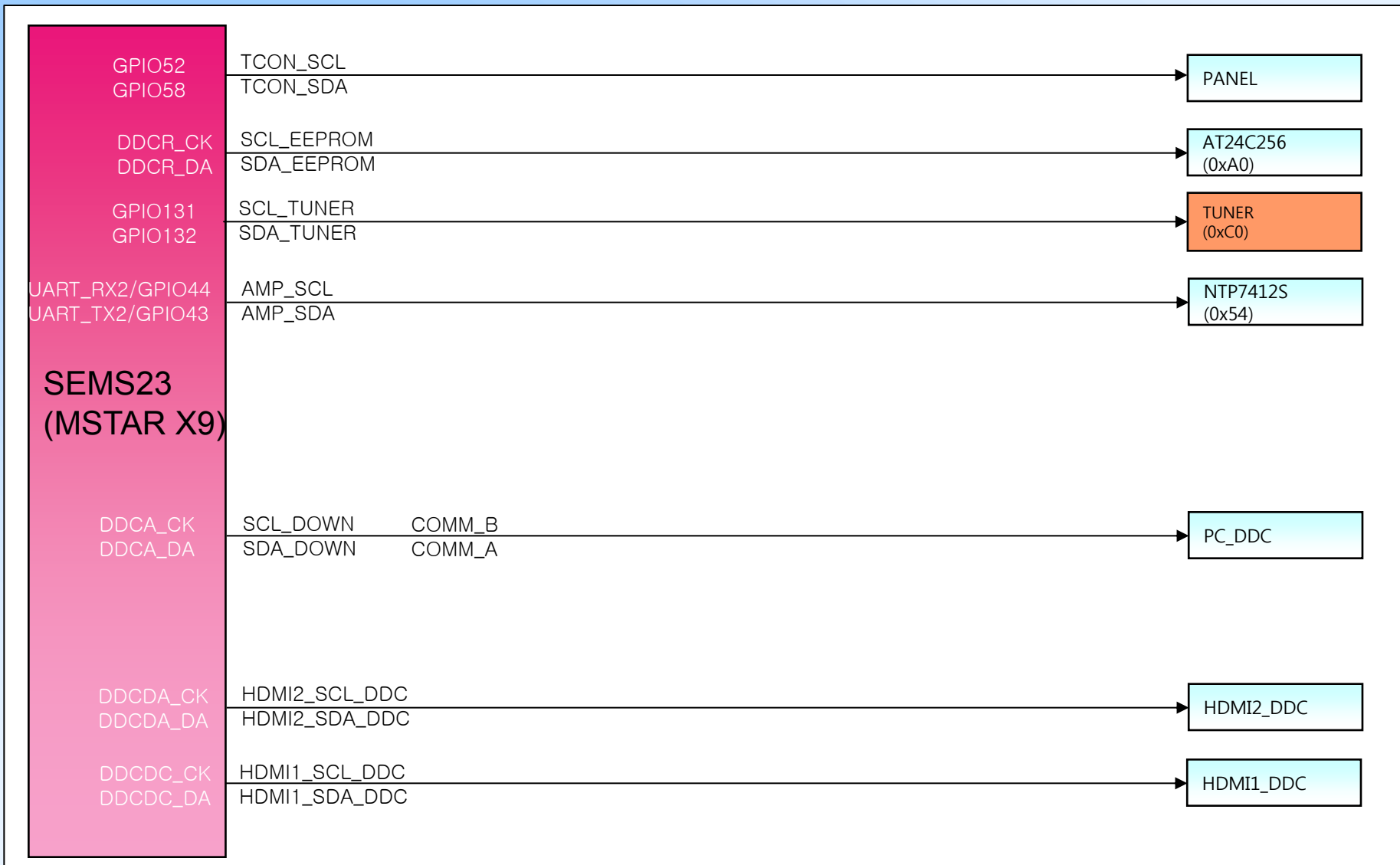
RESET TREE



IV. Inner Feature

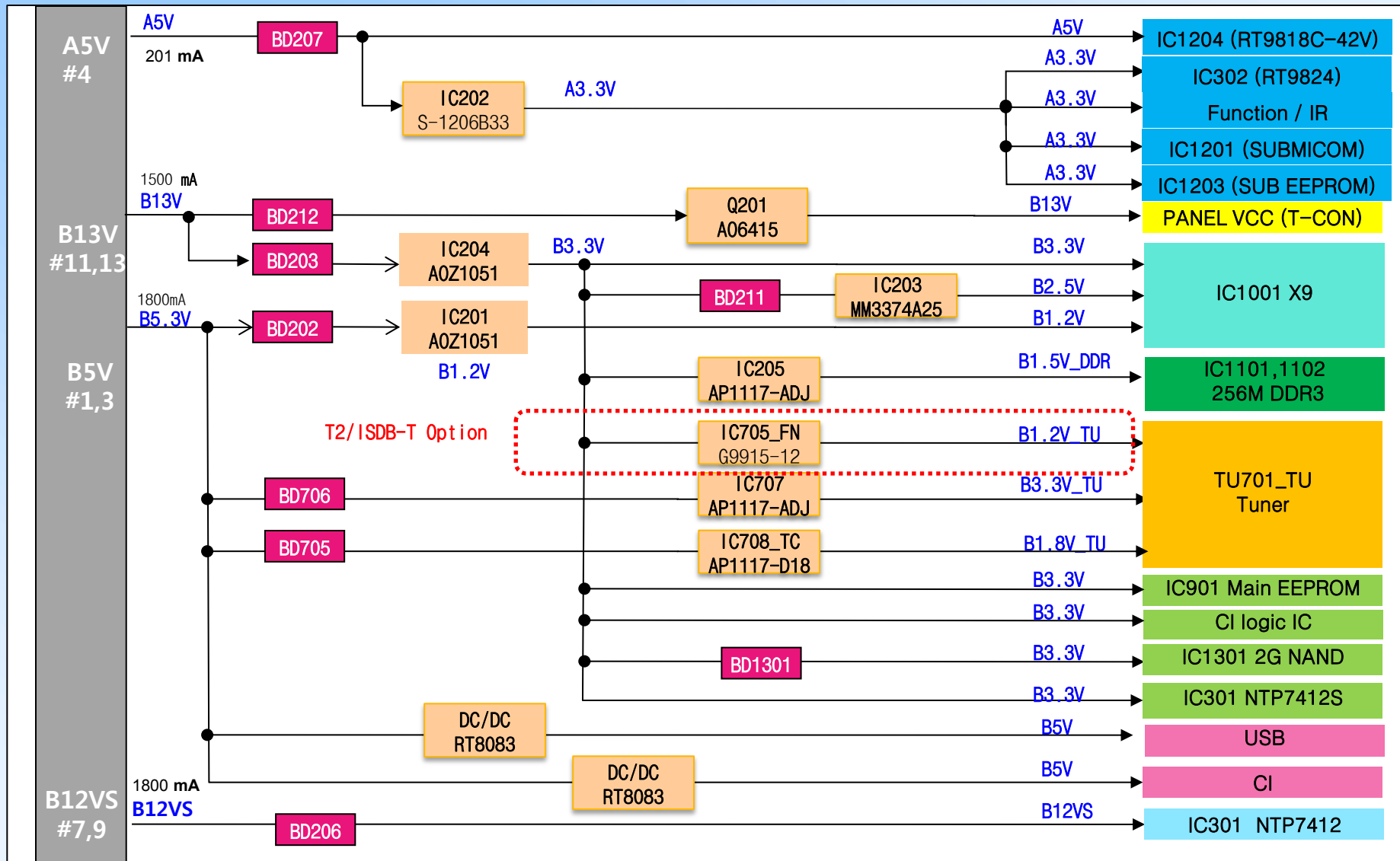


I2C



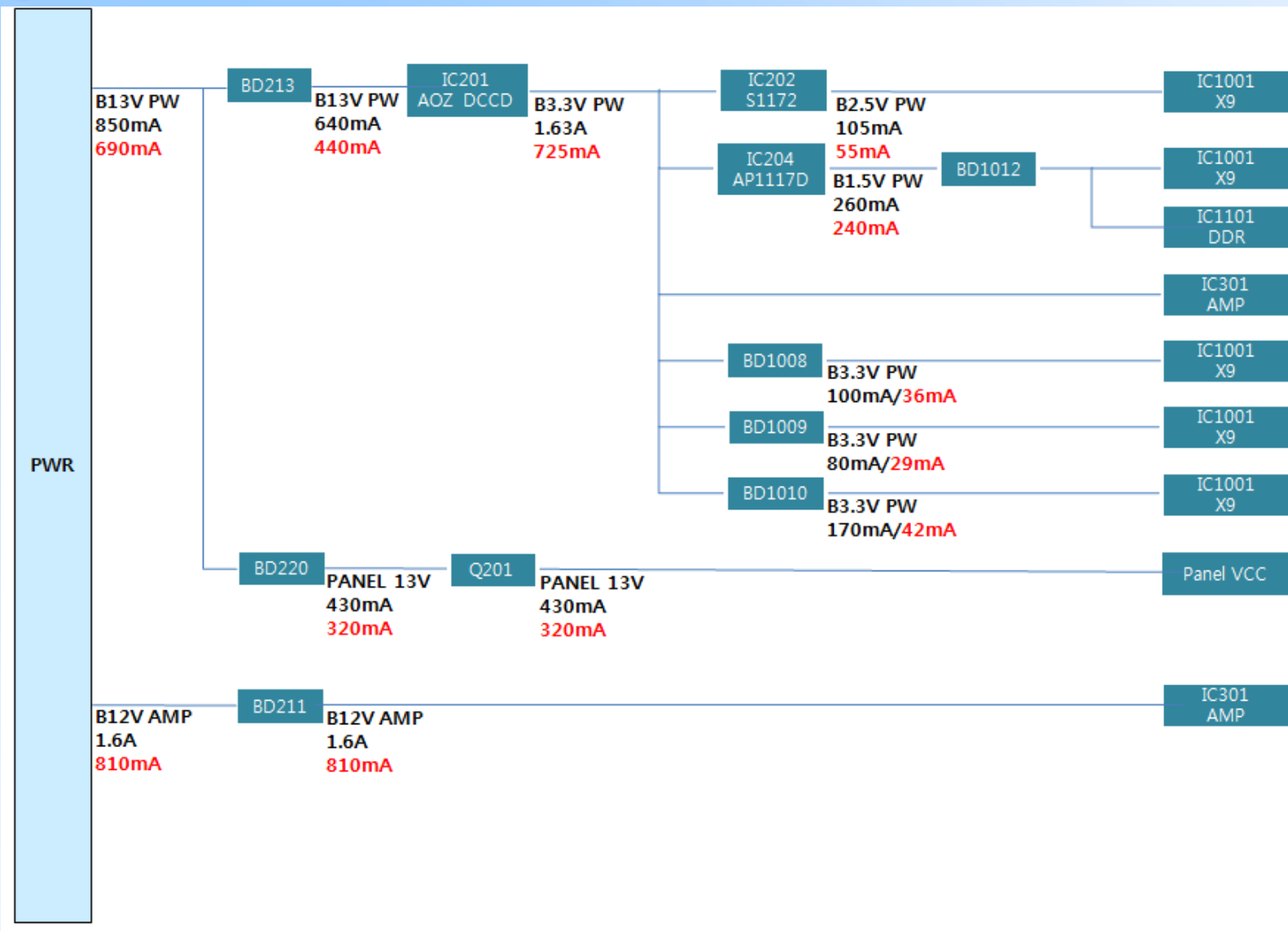
IV. Inner Feature

POWER TREE



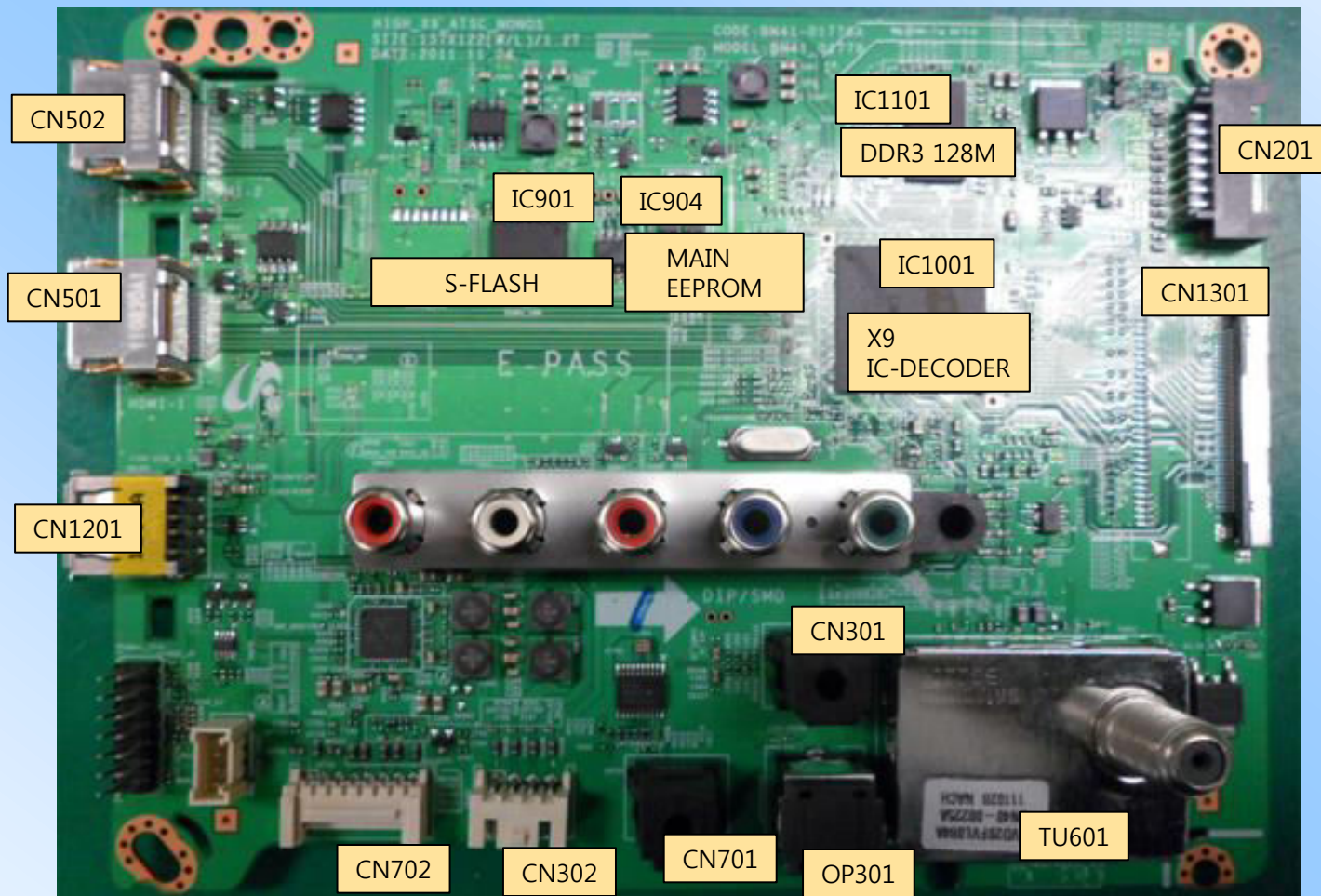
IV. Inner Feature

POWER TREE



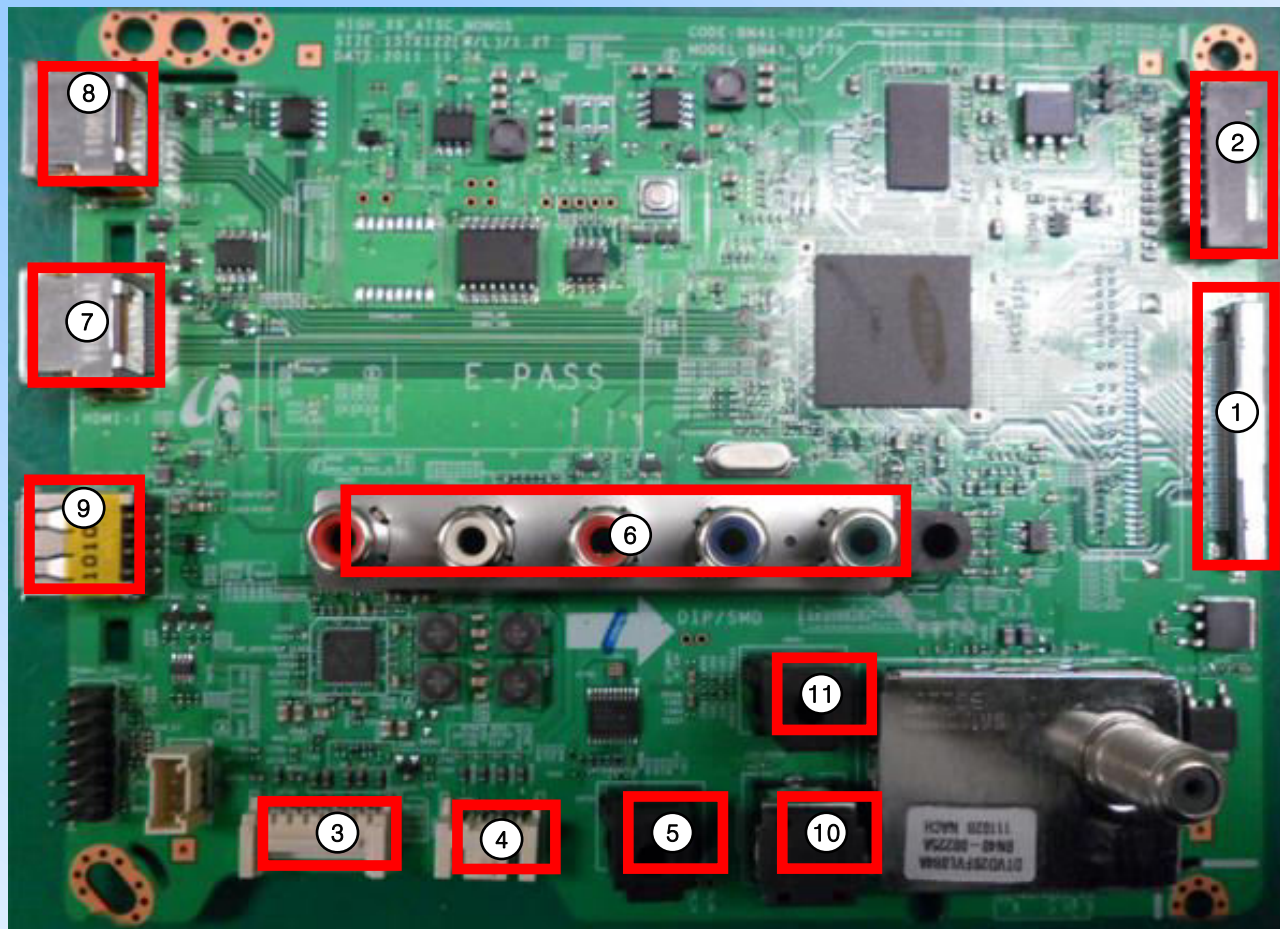
IV. Inner Feature

● Main Board Layout



IV. Inner Feature

Main Board Conn. Pin map



IV. Inner Feature



Main Board Conn. Pin map

1.CN1301_FHD (to Panel)			
1	NC	27	EVEN[0]-
2	NC	28	GND
3	NC	29	ODD[4]+
4	NC	30	ODD[4]-
5	NC	31	ODD[3]+
6	NC	32	ODD[3]-
7	FORMAT	33	GND
8	SDA_Panel	34	ODDCLK+
9	TCON_WP	35	ODDCLK-
10	NC	36	GND
11	SDA_Panel	37	ODD[2]+
12	SCL_Panel	38	ODD[2]-
13	GND	39	ODD[1]+
14	EVEN[4]+	40	ODD[1]-
15	EVEN[4]-	41	ODD[0]+
16	EVEN[3]+	42	ODD[0]-
17	EVEN[3]-	43	GND
18	GND	44	GND
19	EVENCLK+	45	GND
20	EVENCLK-	46	NC
21	GND	47	Panel_VCC
22	EVEN[2]+	48	Panel_VCC
23	EVEN[2]-	49	Panel_VCC
24	EVEN[1]+	50	Panel_VCC
25	EVEN[1]-	51	Panel_VCC
26	EVEN[0]+		

2.CN201 (to Powr board)			
1	B5V	8	GND
2	SW_POWER	9	B13VS
3	B5V	10	SW_INVERTER
4	A5V	11	B13V
5	GND	12	B13V
6	GND	13	B13V
7	B13VS	14	PWM_DIMM

3.CN702 (FuncTION)			
1	IR	5	MSDA
2	GND	6	KEY1
3	A3.3V	7	KEY2
4	MSCL	8	GND

IV. Inner Feature



Main Board Conn. Pin map

4. CN302 (SPEAKER)

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

5. CN701 (DEBUG)

1	GND	4	DEBUG_TX
2	DEBUG_RX	5	DEBUG_TX
3	DEBUG_TX	6	GND

6. CN403 (COMPONENT)

1	GND	9	GND
2	COMP1_Y	10	GND
3	IDENT_AV	11	SL
4	GND	12	SR
5	PB	13	GND
6	IDENT_COMP	14	SR
7	GND	15	SL
8	PR		

7. CN501 (HDMI1)

1	HDMI1_RX2+	11	GND
2	GND	12	HDMI1_RXCLK-
3	HDMI1_RX2-	13	HDMI_CEC
4	HDMI1_RX1+	14	GND
5	GND	15	SCL
6	HDMI1_RX1-	16	SDA
7	HDMI1_RX0+	17	GND
8	GND	18	5V
9	HDMI1_RX0-	19	HPD
10	HDMI1_RXCLK+		

8. CN502 (HDMI2)

1	HDMI2_RX2+	11	GND
2	GND	12	HDMI2_RXCLK-
3	HDMI2_RX2-	13	HDMI_CEC
4	HDMI2_RX1+	14	GND
5	GND	15	SCL
6	HDMI2_RX1-	16	SDA
7	HDMI2_RX0+	17	GND
8	GND	18	5V
9	HDMI2_RX0-	19	HPD
10	HDMI2_RXCLK+		

IV. Inner Feature



● Main Board Conn. Pin map

9. CN1201 (USB1)			
1	USB_VCC	3	USB_DP
2	USB_DM	4	GND
10. OP301 (OPTICAL)			
1	SPDIF_OUT	3	GND
2	GND		
11. CN301(MONITOR OUT)			
1	GND	4	GND
2	SR_OUT	5	NC
3	SL_OUT	6	GND

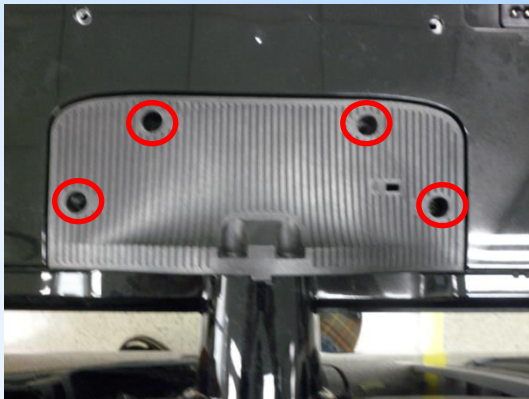
V. Disassembly



1. Place monitor face down on cushioned table.



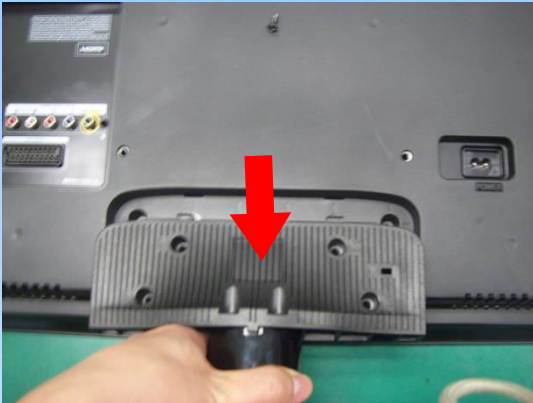
2. Remove 4 screws from the stand.



V. Disassembly



3. Remove stand.

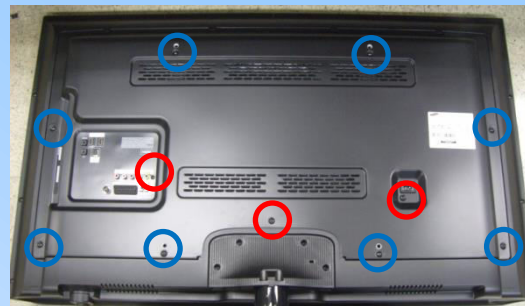


4. 32/40" : Remove 1 screw of cover jack
46" : Remove 9 screws of rear cover.

32/40



46



V. Disassembly



5. 32/40" : Remove the cover jack
46" : Remove the rear cover.

32/40



46



6. Disconnect the Function assy cable..

32/40



46



V. Disassembly



7. Remove the screws of rear-cover.

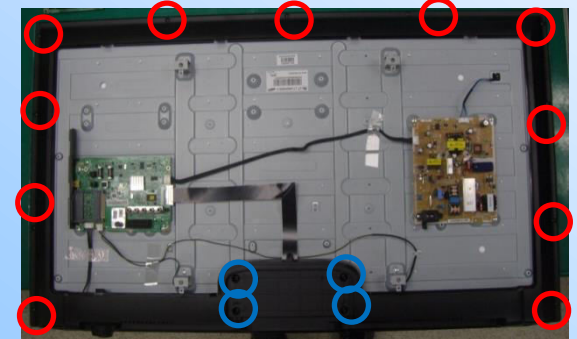
32



40

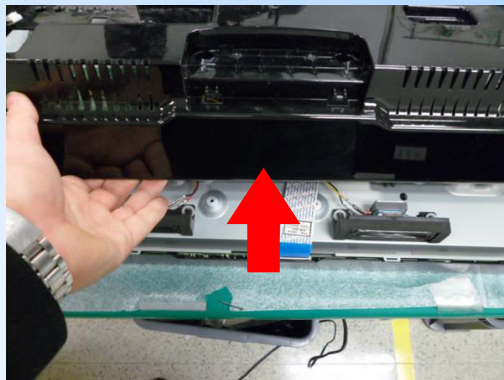


46

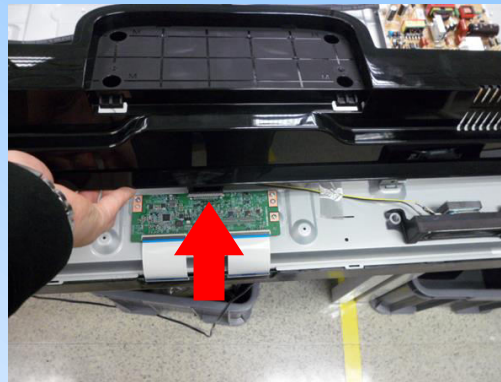


8. Remove the rear-cover.

32/40



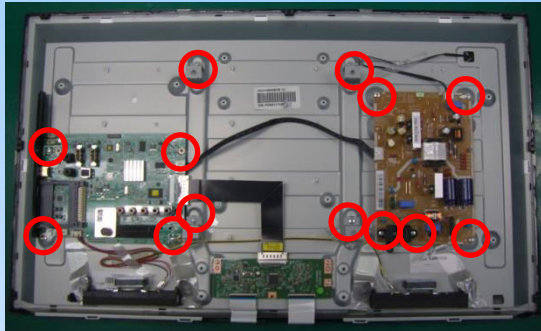
46



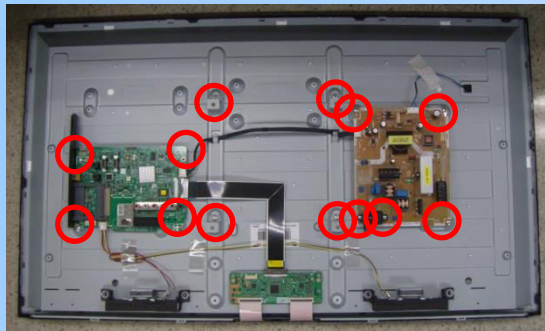
V. Disassembly

9. Remove the screws of main board and IP board and Panel.

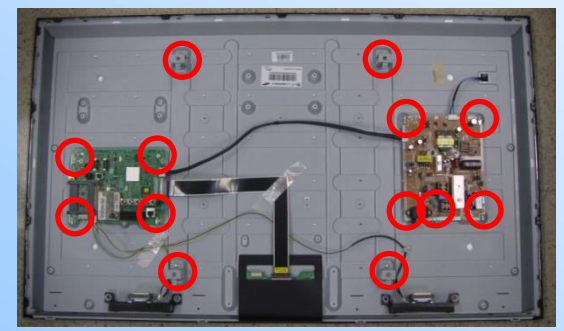
32



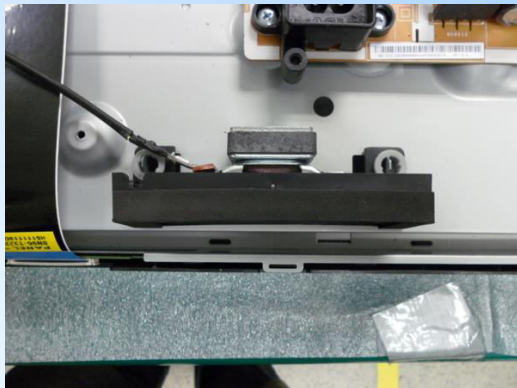
40



46



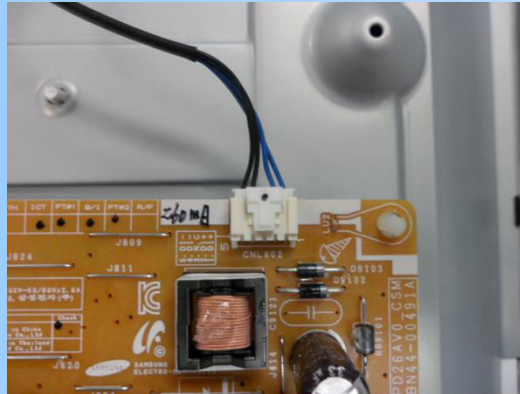
10. Remove the speakers and power cables



V. Disassembly



11. Remove the LVDS cable and Panel drive cable



12. Completed disassembly



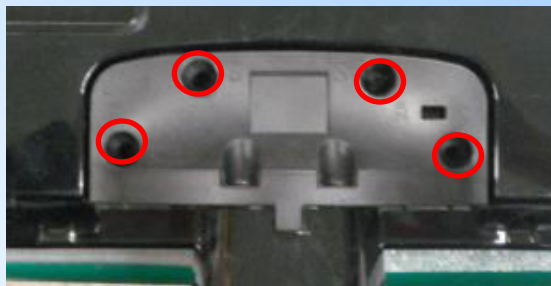
V. Disassembly



1. Place monitor face down on cushioned table.



2. Remove 4 screws from the stand.



V. Disassembly



3. Remove stand.



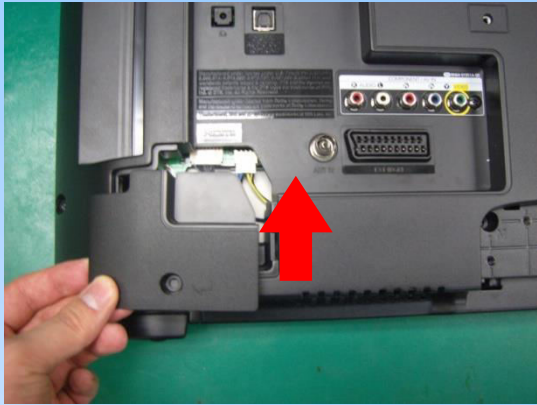
4. Remove the 1 screw of cover jack



V. Disassembly



5. Remove the cover jack.



6. Disconnect the function assy cable..



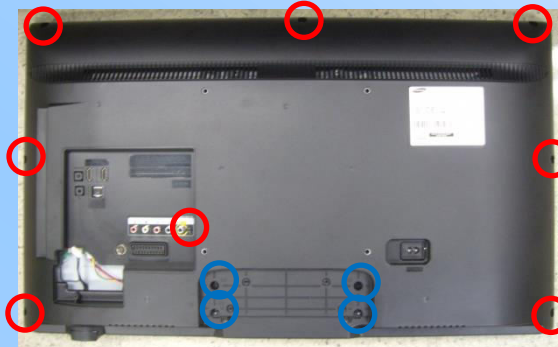
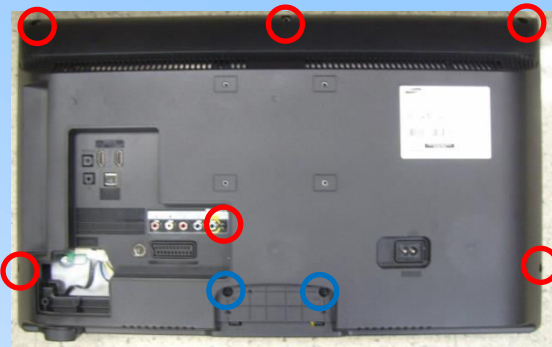
V. Disassembly



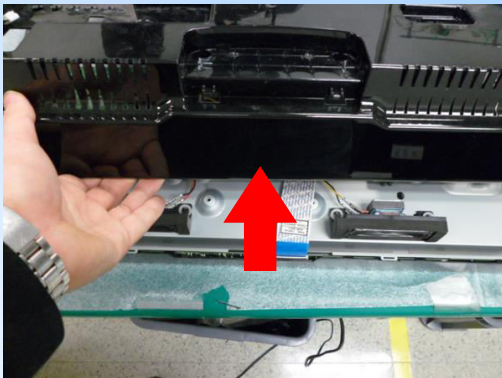
7. Remove the screws of rear-cover.

26

32



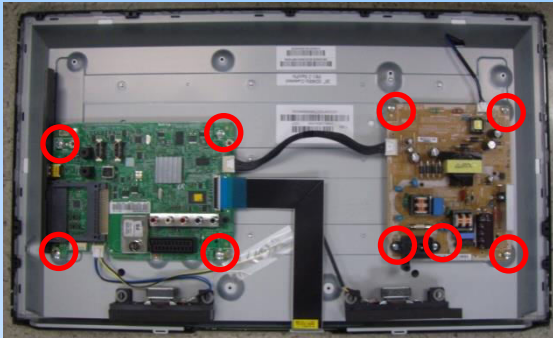
8. Remove the rear-cover.



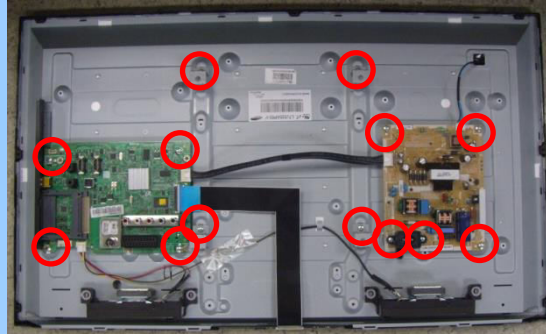
V. Disassembly

9. Remove the screws of main board and IP board and Panel.

26



32



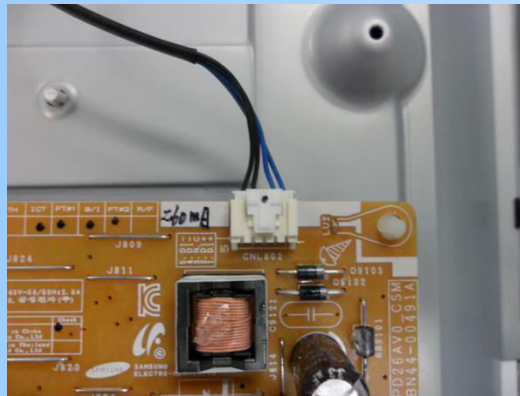
10. Remove the speakers and power cables.



V. Disassembly



11. Remove the LVDS cable and Panel drive cable



12. Completed disassembly



V. Disassembly(PTC)



1. Place monitor face up on cushioned table.



2. remove the T-CON Cover



V. Disassembly(PTC)



3. first spread the PTC upper



4. Spread the both sides of PTC upper (marked "▽") by use the tool.



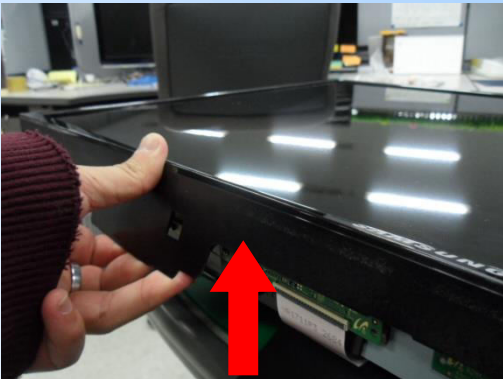
V. Disassembly(PTC)



5. Apart left and right sides of PTC



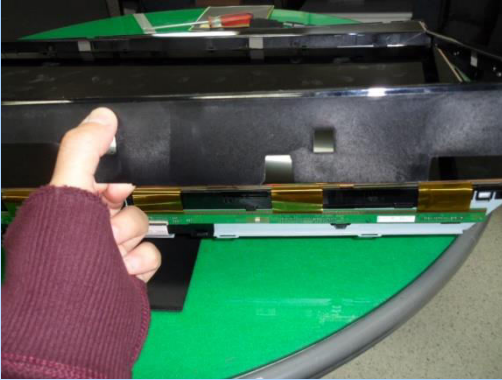
6. Raise up the PTC bottom



V. Disassembly(PTC)



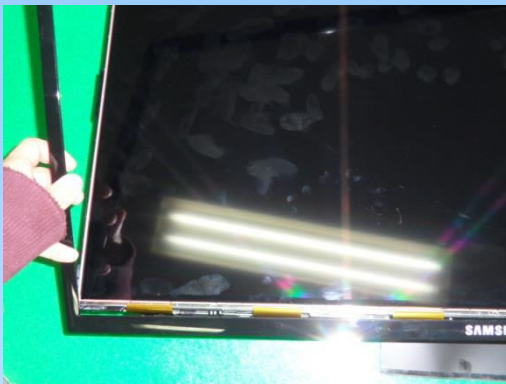
7. Disassembly is complete.



V. Reassembly(PTC)



1. Cover the PTC bottom



2. Combine the hook of left and right side



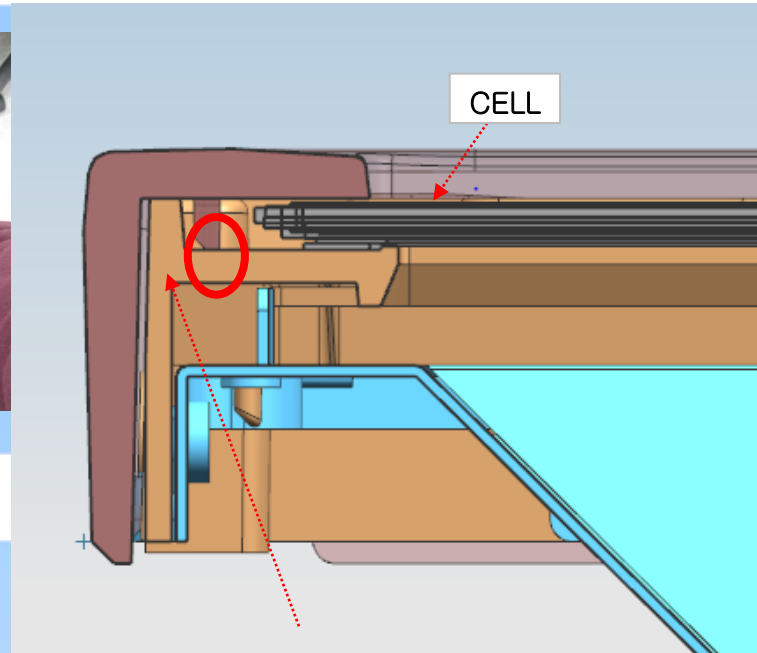
V. Disassembly(PTC)



3. Check to combine the top and bottom



※caution

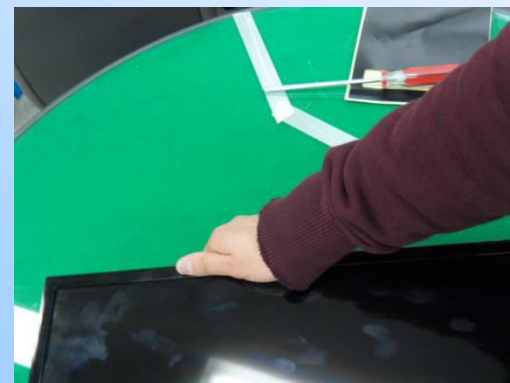
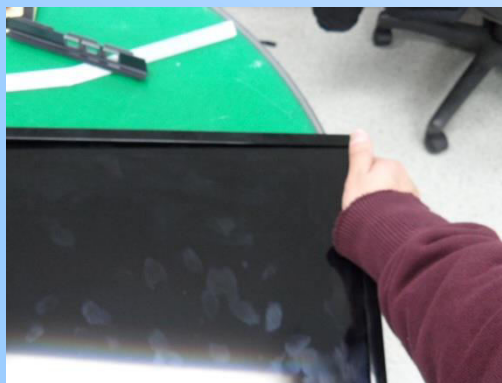


※ Combine to stuck the PTC Rib in middle molde

V. Disassembly(PTC)

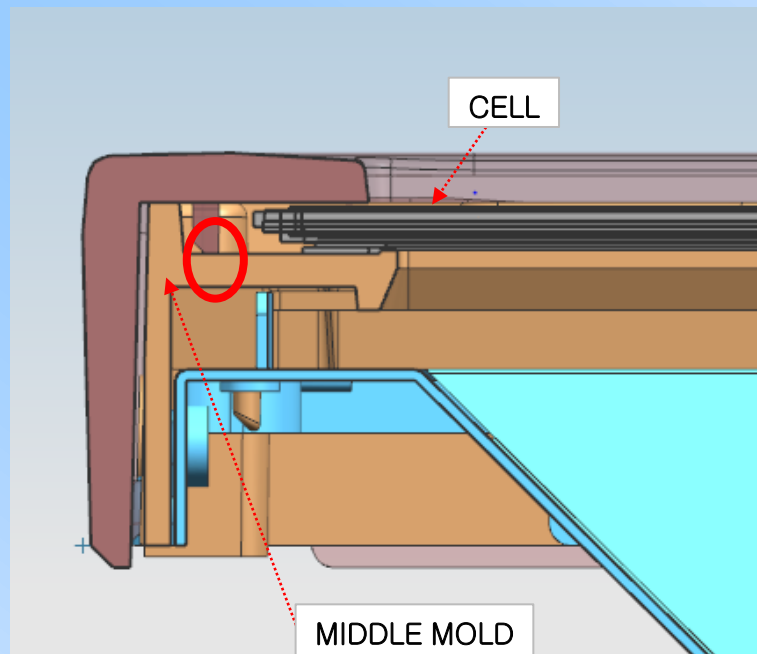


3. Check to combine the top and bottom



V. Disassembly(PTC)

※caution



※ Combine to stuck the PTC Rib in middle molde

V. Disassembly(PTC)

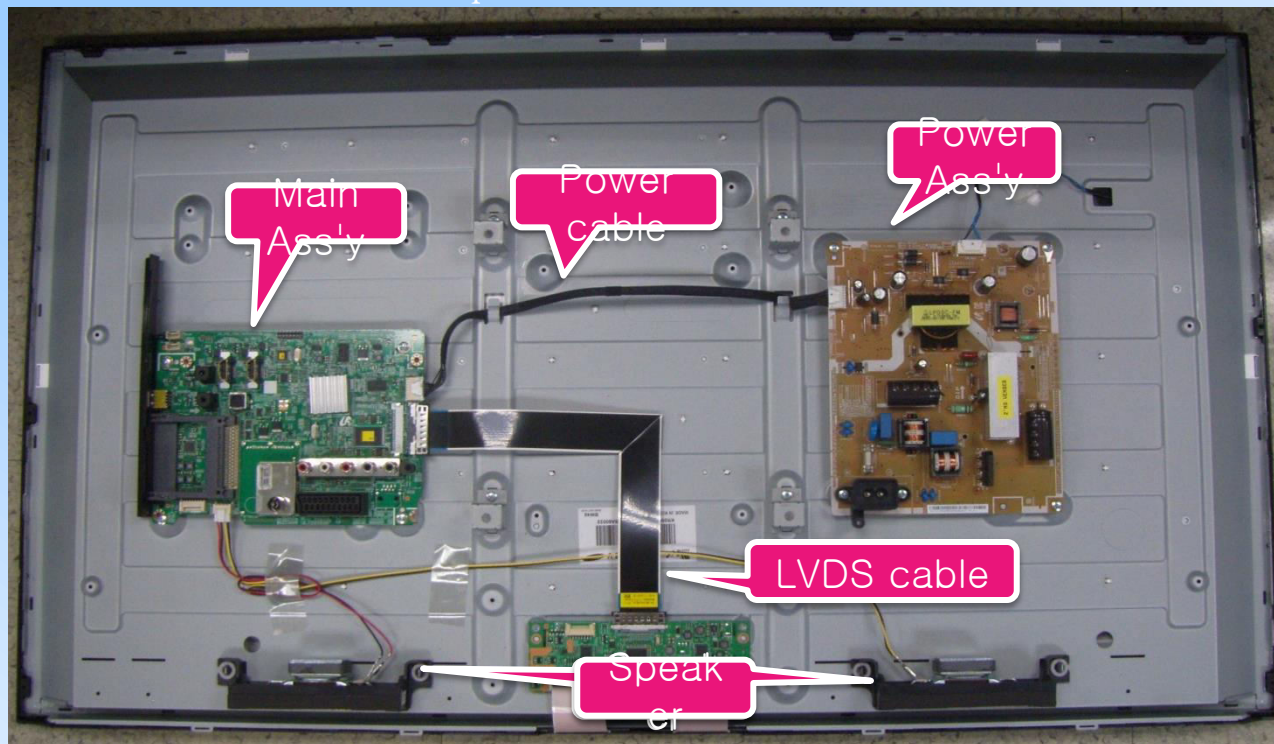


4. Disassembly is complete.



VI. Trouble Shooting

● Check List for Initial operation



Main Board Assy (CN201)			
13	B13V	14	B13V
11	B13V	12	B13V
9	B13VS	10	SW_INV
7	B13VS	8	GND
5	GND	6	GND
3	B5.3V	4	A5.3V
1	B5.3V	2	SW_PW

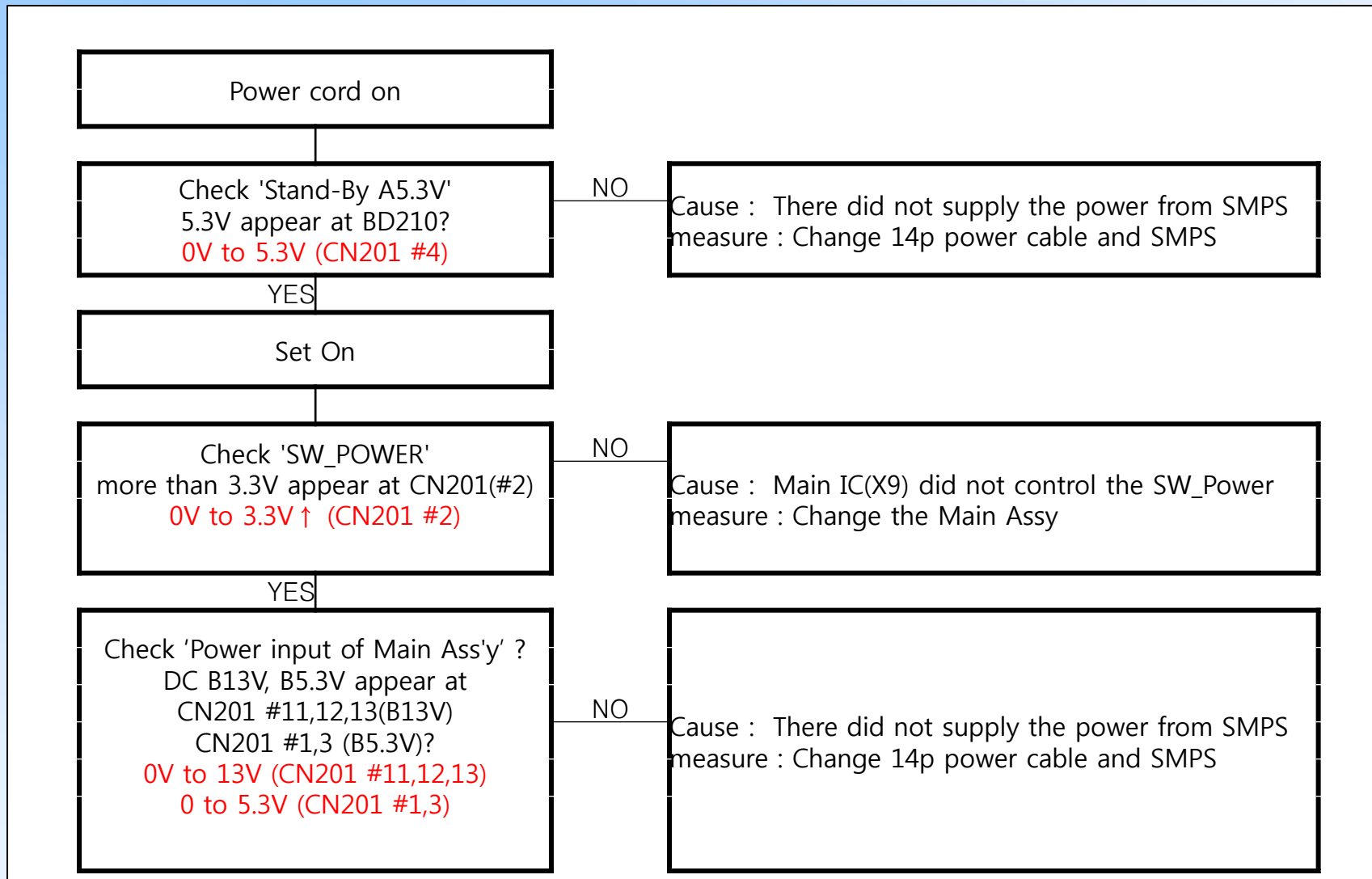
Power Board Assy (CM803)			
14	B13V	13	B13V
12	B13V	11	B13V
10	SW_INV	9	B13VS
8	GND	7	B13VS
6	GND	5	GND
4	A5.3V	3	B5.3V
2	SW_PW	1	B5.3V

*Change the 12Pin to B13V(2012 years) from NC(2011 years)

VI. Trouble Shooting



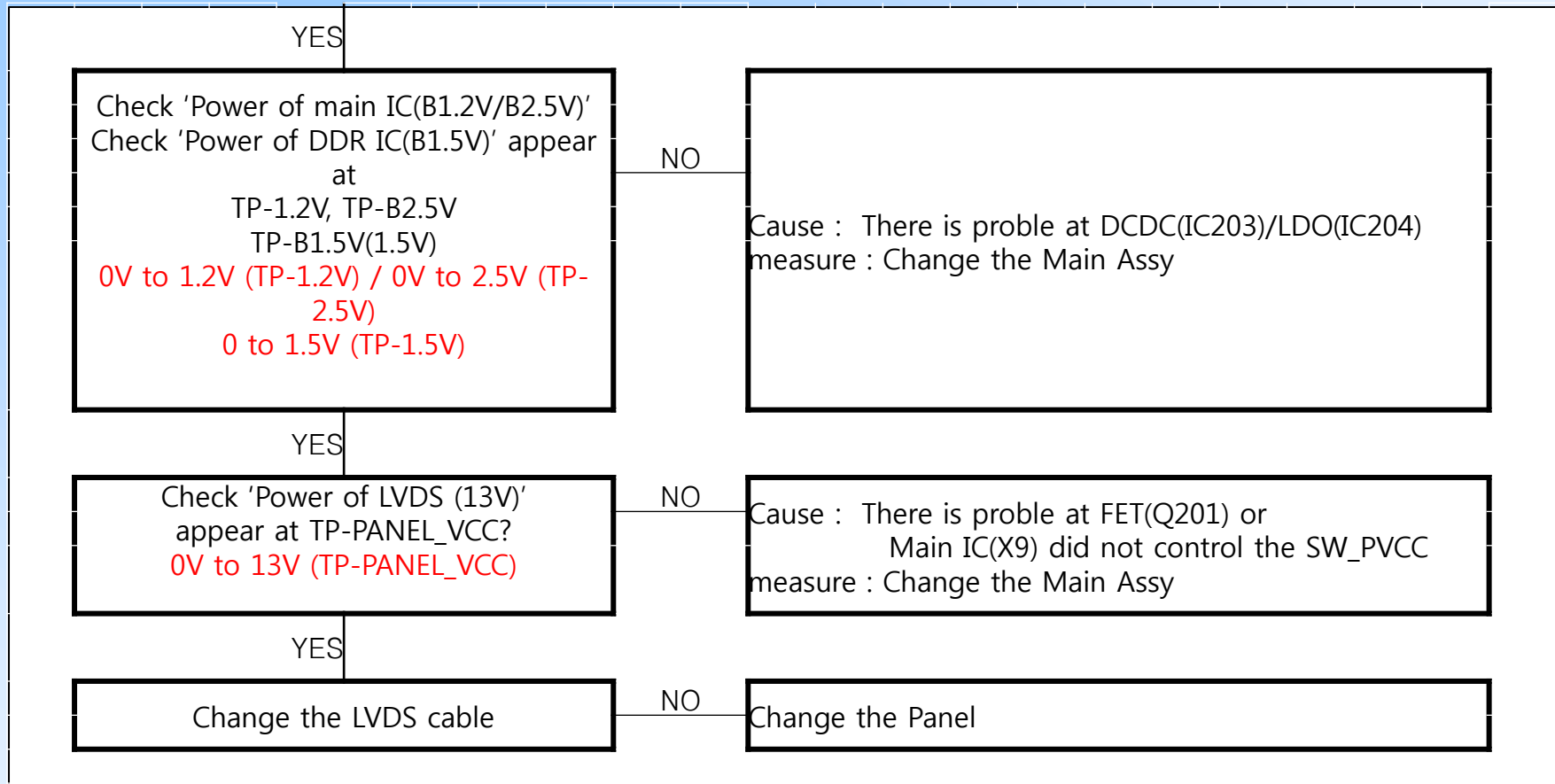
○ No power AND No Video



VI. Trouble Shooting

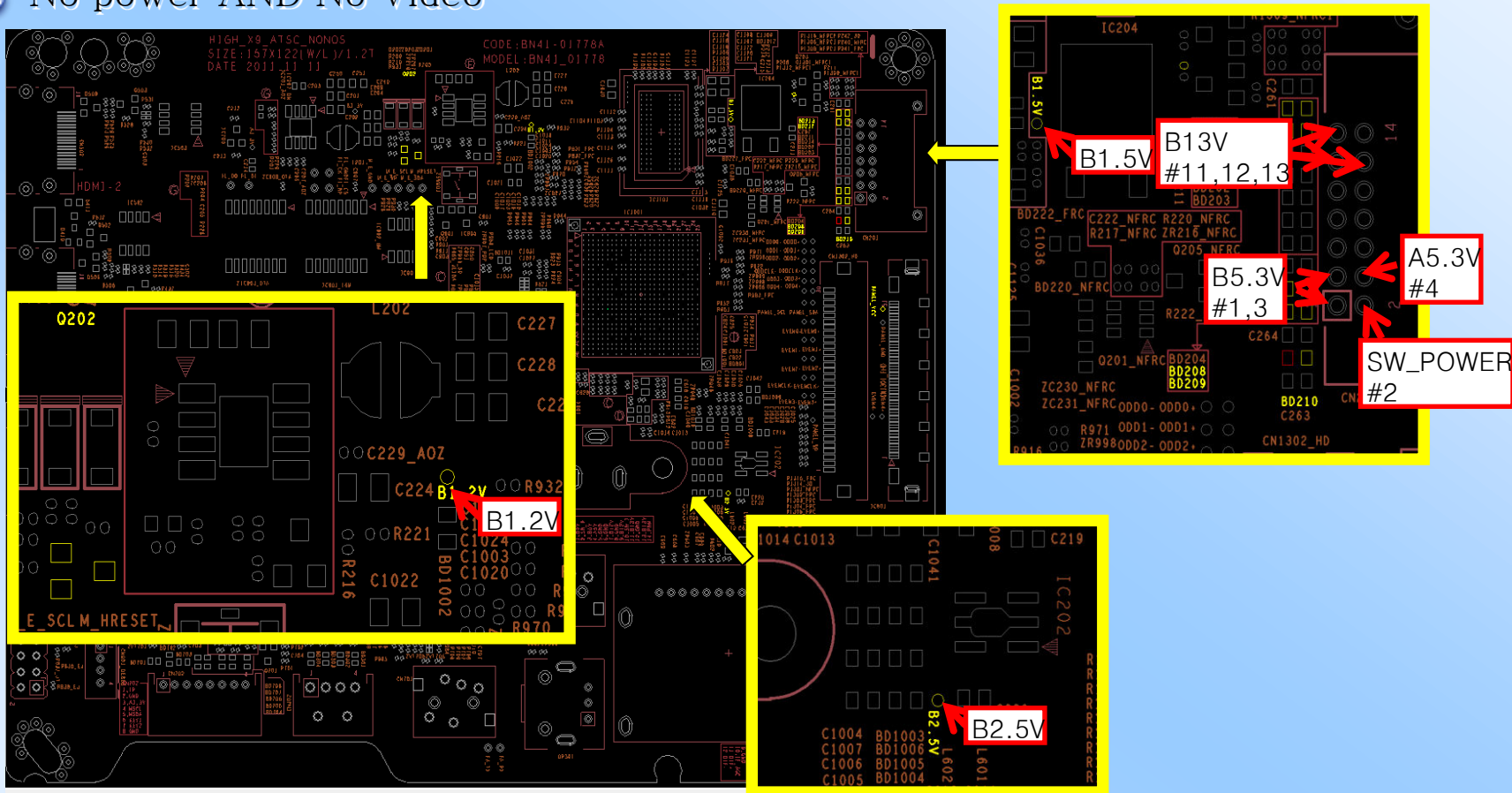


● No power AND No Video



VI. Trouble Shooting

● No power AND No Video



VI. Trouble Shooting



● RS232C code



RS232C code

VI. Trouble Shooting



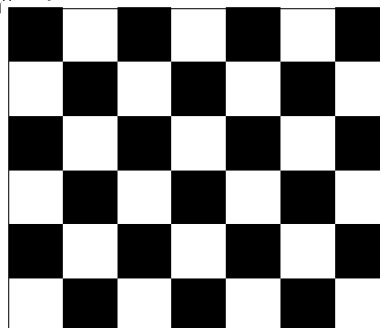
Calibration

■ Color

Calibration

Adjust spec.

1. Source : HDMI
2. Setting Mode : 1280*720@60Hz
3. Pattern : Pattern #24 (Chess Pattern)



4. Use Equipment : CA210 & Master MSPG925 Generator

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

VI. Trouble Shooting



● Calibration

■ 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 HDMI 1/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.

VI. Trouble Shooting



○ White Balance

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. (Refer to Table 1, 2)
- It varies with Panel's size and Specification.



- Equipment : CS-210
 - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
 - Use other Equipment only after comparing the result with that of the Master equipment.
 - Set Aging time : 60min
 - Calibration and Manual setting for WB adjustment.
- HDMI : Calibration at #24 Chessboard Pattern Manual adjustment #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)
- If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.
 - White Balance Manual adjustment

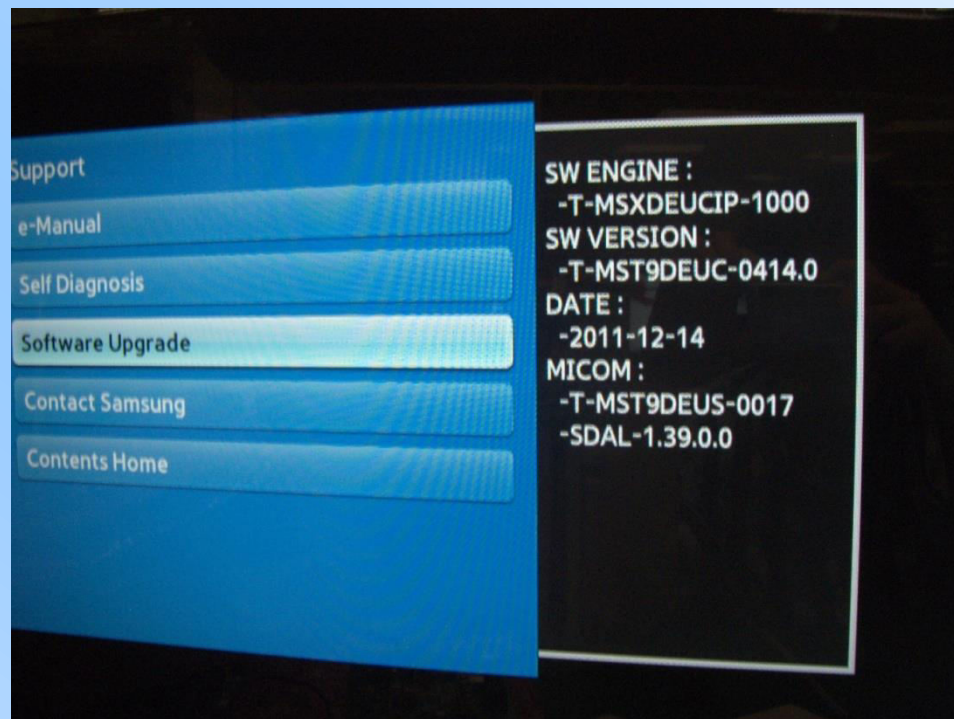
VI. Trouble Shooting



● How to check the SW version

(1) use the main menu

- click the "menu" key in remote controller
- select Support menu
- locate the menu cursor "Software Upgrade" menu
- click the "info" key
- check the Main SW and Micom version.



VI. Trouble Shooting



○ How to check the SW version

(2) use the factory mode

● access the factory mode

Option
Control
SVC
Expert
ADC/WB
Advanced
T-MST0DEUC : SW Ver
T-MST0DEUS : SW Ver
EDID : SUCCESS
HDCP : SUCCESS
CALIB : AV / COMP / PC / HDMI /
OPTION:**
FactoryCS:*****
T-MSXDEUCIP-****
Onboot : ***
SDAL-****
RFS:Mstar-X9 ****
20**-**-**

VI. Trouble Shooting



○ USB Download

4-5-2. How to Upgrade SW and Micom

Insert a USB drive containing the firmware upgrade downloaded from samsUEg.com into the TV. Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version).

When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

VI. Trouble Shooting



● USB Download

(1) Main SW upgrade

- store the sw program named "T-MST9DEUC" in USB memory stick
- connect the USB



VI. Trouble Shooting



● USB Download

- click the "menu" key in remote controler
- select Support menu
- locate the menu cursor "Software Upgrade" menu



VI. Trouble Shooting

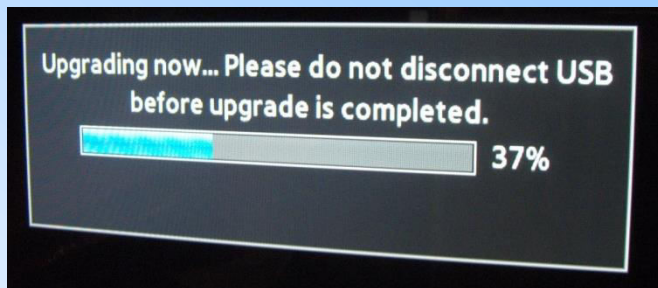


● USB Download

- click the "enter" key



- click the "enter" key



- wait for upgrade complete
- Check the SW version