



# UHD TV

Project : URU7400G

Chassis : UWE90

Model : UA43RU7400K  
UA50RU7400K  
UA55RU7400K  
UA65RU7400K

# ***SERVICE*** Manual

## UHD TV



UA\*\*RU7400K

## Contents

1. Precautions
2. Product specifications
3. Disassembly and Reassembly
4. Troubleshooting
5. Wiring Diagram

# Contents

<b>1. Precautions.....</b>	<b>1-1</b>
1-1. Safety Precautions .....	1-1
1-1-1. Warnings.....	1-1
1-1-2. Servicing the LED TV .....	1-1
1-1-3. Fire and Shock Hazard.....	1-1
1-1-4. Product Safety Notices.....	1-2
1-2. Servicing Precautions .....	1-3
1-2-1. General Servicing Precautions .....	1-3
1-3. Static Electricity Precautions .....	1-4
1-4. Installation Precautions .....	1-5
<b>2. Product Specifications .....</b>	<b>2-1</b>
2-1. Product information .....	2-1
2-2. Product specification.....	2-2
2-3. Accessories.....	2-18
2-4. Viewing the Functions.....	2-19
2-4-1. Smart Hub.....	2-19
2-4-2. Ambient Mode .....	2-21
2-4-3. Bixby.....	2-24
2-5. The Samsung Smart Remote.....	2-27
2-6. Using the TV Controller .....	2-29
<b>3. Disassembly and Reassemble.....</b>	<b>3-1</b>
3-1. Disassembly .....	3-1
<b>4. Troubleshooting .....</b>	<b>4-1</b>
4-1. Function Control Operation Test.....	4-1
4-2. Power .....	4-2
4-2-1. SMPS Standby .....	4-2
4-2-2. SMPS Power On .....	4-4
4-2-3. SMPS / PANEL BACKLIGHT (Parallel Wired SMPS Panel Connections).....	4-6
4-3. Video .....	4-8
4-3-1. Customer Picture Test.....	4-8
4-3-2. Check Test Patterns .....	4-9
4-3-3. MAIN/T-CON BOARD.....	4-10
4-4. Audio.....	4-13
4-5. Network.....	4-14
4-6. Smart Hub.....	4-15
4-7. BlueTooth / WiFi Module .....	4-17
4-8. Factory Mode.....	4-18
4-9. Factory Mode Adjustments .....	4-25
4-9-1. Entering Factory Mode .....	4-25
4-9-2. Detail Factory Option .....	4-26
4-9-3. Factory Data.....	4-30

4-10. Replacing Main Board .....	4-43
4-11. White Balance .....	4-45
4-11-1. Calibration.....	4-45
4-11-2. Service Adjustment.....	4-45
4-11-3. Adjustment.....	4-47
4-12. LED Indicator Test.....	4-48
4-12-1. Diagnostic Methods - Flashing Symptom Codes.....	4-48
4-13. Updating the TV's Software .....	4-49

## **5. Wiring Diagram..... 5-1**

5-1. Wiring Diagram .....	5-1
5-2. Connector .....	5-3
5-2-1. Main Board.....	5-3
5-2-2. SMPS Board.....	5-7



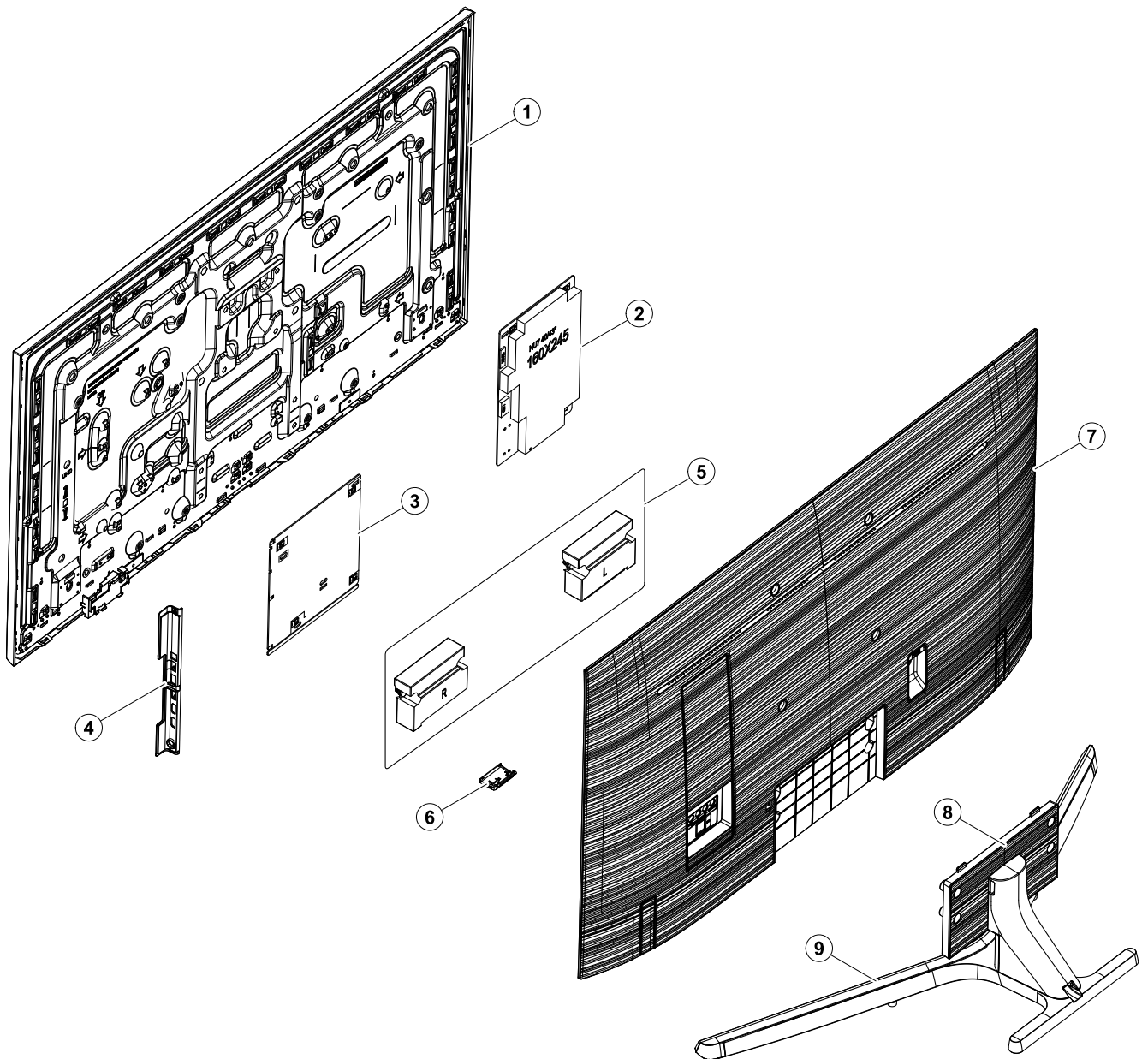
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# 1. Exploded View & Part List

## Exploded View



**Parts List**

No.	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	1	PANEL	BN95-04755G	PRODUCT LCD-AUO; CY-NN043HGAV9V/H,NU7400,	SA	1
2	2		BN44-00947K	DC VSS-PD BOARD; L43E7N_RSM,AC/DC,126W,AC	SA	1
3	2	M0014	BN94-14152C	ASSY PCB MAIN; URU7400G	SA	1
4	2		BN63-18112C	COVER-TERMINAL SIDE; 65URU7100H,HIPS,V-0,	SA	1
5	2		BN96-30337L	ASSY SPEAKER P-FRONT; TV-SPK,40UNU7100X,6	SA	1
6	2		BN96-48730A	ASSY BOARD P-FUNCTION TACT; Y19 VNB Carbo	SA	1
7	2	R001A	BN96-45900J	ASSY COVER P-REAR; 43URU7400G,PC+ABS+ED20	SA	1
8	2	SG03A	BN96-46046A	ASSY STAND P-GUIDE; 43UNU7400H,W/W,PC+ABS	SA	1
9	2		BN96-49123B	ASSY STAND P-BRACKET BOTTOM; 43URU7400H,H	SA	1

## 2. Electrical Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
			<b>UA43RU7400KXXV (AC01)</b>		
1	R001A	BN90-10419K	ASSY COVER REAR;URU7400G	1	SNA
..2	R001A	BN96-45900J	ASSY COVER P-REAR;43URU7400G,PC+ABS+ED20	1	SA
..3		BN63-10851F	SHEET-PROTECTION COVER;HU8500,PET,T0.1,W	2	SNA
..3	R001	BN63-17502T	COVER-REAR;43URU7100H,PC+ABS+ED20%,V-1,B	1	SNA
...4		0103-010818	RESIN PC ABS;CM20G/BK00749,BLACK,BK0007,	1756	SNA
...4		BN68-05603E	LABEL-RESIN;ART,W8,L50,UL LABEL (COVER R	4	SNA
..3		BN64-04173A	INLAY-TERMINAL SIDE;55URU7100H,PET,T0.12	1	SNA
..3		BN68-07835Q	LABEL-STICKER LICENSE;65QNQ8CB,PET,T0.12	1	SNA
1	S001A	BN90-10573E	ASSY STAND;URU7400G	1	SNA
..2	SG03A	BN96-46046A	ASSY STAND P-GUIDE;43UNU7400H,W/W,PC+ABS	1	SA
..3		6902-002472	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W300,L45	1	SNA
..3	SG03	BN61-15625A	GUIDE-STAND;43UNU7400H,PC+ABS+GF20%,V-1,	1	SNA
...4		0103-009946	RESIN PC ABS;HM-1200,BLACK,BK0007,V-1,GF	555	SNA
..3		BN63-17530A	COVER-STAND NECK REAR;43UNU7400H,HIPS,HB	1	SNA
...4		0103-004631	RESIN HIPS;HF-1690H/K21294,K21294,BK0007	100	SNA
..3		BN96-36261A	ASSY ACCESSORY-SCREW;JU7000 75",6003-001	2	SNA
...4	SCREW	6003-001334	SCREW-TAPTYPE;BH,+,S,M4,L14,ZPC(BLK),SWR	8	SA
...4		6902-002476	BAG SCREW;LDPE,T0.05*,W70,L90,TRP,RECYCL	2	SNA
..2		BN96-49123B	ASSY STAND P-BRACKET BOTTOM;43URU7400H,H	1	SA
..3	SCREW	6003-001119	SCREW-TAPTYPE;FH,+,S,M4,L10,ZPC(BLK),SWR	8	SA
..3	SCREW	6003-001239	SCREW-TAPTYPE;FH,+,B,M4,L10,ZPC(WHT),SWR	8	SA
..3		6902-002918	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W70,L400	2	SNA
..3		6902-002920	BAG PE;HDPE/PE FOAM,T0.015/T0.5,W300,L40	1	SNA
..3		BN61-15612A	BRACKET-STAND BOTTOM FRONT;43UNU7400H,CR	1	SNA
..3		BN63-17549A	COVER-STAND TOP;43UNU7400H,ABS,HB,BK0007	1	SNA
...4		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	169	SNA
..3	RF01	BN67-00398L	FOOT-RUBBER;UH6K,RUBBER,GRAY,T2,,	5	SNA
..3		BN68-05603A	LABEL-E PASS;ART,W/W,90g	2	SNA
..3		BN74-00053E	TAPE-SINGLE FACE;PAPER,3M2307,T0.14,W20,	0	SNA
..3		BN95-05723A	ASSY STAND SMT-COVER STAND DECORATOIN;43	1	SNA
...4		0204-007674	COATING;UVICHEM CVM93000(VOC) MATT(5)B,C	2	SNA
...4		BN01-00160A	TARGET-CHROMIUM CY;Cr,99.95%,1800x132x80	0	SNA
...4		BN63-18184A	COVER-STAND DECORATION;43URU7400G,PC+ABS	1	SNA
....5		0103-011389	RESIN PC ABS;NH-1210/G34051,Titan Gray,G	118	SNA
....5		BN63-17173A	SHEET-PROTECTION COVER;55MU7000,PE,T0.05	1	SNA
....5		BN68-05603E	LABEL-RESIN;ART,W8,L50,UL LABEL (COVER R	1	SNA
..3		BN96-46805A	ASSY STAND P-BRACKET BOTTOM;43UNU7400H,H	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		6001-002610	SCREW-MACHINE;BH,+,M4,L6,ZPC(BLK),SWRCH1	4	SA
...4		BN61-15587A	BRACKET-STAND BOTTOM REAR;43UNU7400H,HGI	1	SNA
...4		BN61-15601A	BRACKET-STAND BOTTOM;43UNU7400H,HGI,T4,N	1	SNA
...4		BN61-16176A	BRACKET-STAND BOTTOM FRONT;65URU7400G,SU	4	SNA
1		BN90-10952D	ASSY W/I;URU7400G	1	SNA
.2		BN81-08159Z	A/S PART SET-ELEC W/I;LED TV ELEC spec-C	1	SNA
.2		BN81-17115N	A/S PART SET-MECH W/I;URU7400G,U43RG*	1	SNA
1	M0017	BN91-20904D	ASSY CHASSIS;URU7400G	1	SNA
.2	M0014	BN94-14152C	ASSY PCB MAIN;URU7400G	1	SA
...3		BN62-00834D	HEAT SINK-PS;Muse-L Built-In,A1050,T1.5,	1	SNA
...3		BN68-05458A	LABEL-BARCODE;ALL,ART,W45,L12,BLACK,WHIT	1	SNA
...3		BN97-00029S	ASSY DRM;Muse-L Built-In,ISDB,NagSam, MA	1	SNA
...4		BN46-00109H	KEY CODE-CERTIFICATION;MAC,TV/AV,General	1	SNA
...4		BN46-00110P	KEY CODE-CERTIFICATION;MIRACAST(HDCP2.2)	1	SNA
...4		BN46-00972A	KEY CODE;Muse-L Built-In,Nagra CSC Data,	1	SNA
...3		BN97-00029X	ASSY MICOM;TCON DATA,RU7K,43" AUO	1	SNA
...4		BN46-00976A	S/W MICOM;R43L6U1F20,RU7K	1	SNA
...3		BN97-15650H	ASSY SMD;URU7400G	1	SNA
...4		0202-001830	SOLDER-CREAM;LFM-48W TM-HP,D20~38um,96.5	4	SNA
...4	DS01A	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	SA
...4		0403-001783	DIODE-ZENER;BZB84-C6V2,5.8~6.6V,300mW,SO	3	SNA
...4		0403-002014	DIODE-ZENER;KDZ16B,16.2~18.3V,1000mW,SOD	1	SNA
...4		0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	2	SA
...4		0404-001640	DIODE-SCHOTTKY;SS1060HEWS,60V,1000mA,SOD	2	SA
...4		0404-001953	DIODE-SCHOTTKY;MBRA340F-HAF,40V,3000mA,S	3	SA
...4		0404-001976	DIODE-SCHOTTKY;SV540,40V,5000mA,TO-277,T	1	SA
...4		0406-001200	DIODE-TVS;RClamp0504F,6V,1MAV,TP	4	SA
...4		0406-001718	DIODE-TVS;SMF36A,40V,44.2V,3.8MAV,1.25VP	1	SA
...4		0406-001778	DIODE-TVS;PUSB3FR4,6V,9V,0.2MAV,0.7VPA,0	7	SA
...4		0406-001786	DIODE-TVS;PJEC5V0V6TM,5V,7V,8V,0.1MAV,9V	1	SA
...4		0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	4	SA
...4		0501-000462	TR-SMALL SIGNAL;MMBT2907A,PNP,350mW,SOT-	2	SA
...4		0504-000126	TR-DIGITAL;KSR1101,NPN,200mW,4.7K/4.7K,S	1	SA
...4		0505-002560	FET-SILICON;AO6415,P,20V,-3.3A,0.15ohm,1	1	SA
...4		0505-002598	FET-SILICON;AP2317GN,P,20V,-4.2A,0.052oh	1	SA
...4		0505-002660	FET-SILICON;Si2308BDS,N,60V,2.3A,0.156oh	1	SA
...4		0505-002790	FET-SILICON;ZXMP6A17G,P,60V,-4.3A,0.190o	1	SA
...4		0505-002893	FET-SILICON;AO4801AS,P,30V,-5A,2W,SOIC-8	1	SA
...4		0505-003205	FET-SILICON;DMG4435SSS-13,P,30V,-7.3A,1.	1	SA
...4		0505-003391	FET-SILICON;AOD2922,N,100V,8A,140Mohm,18	1	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		0505-003397	FET-SILICON;2N7002K,N,60V,0.38A,1.19ohm,	2	SA
...4		0505-003752	FET-SILICON;PJL9409,P,30V,50A,0.035ohm,3	1	SNA
...4		1103-001584	IC-EEPROM;M24512-DFMN6TP,512Kbit,64K x 8	1	SNA
...4		1105-002751	IC-DDR4 SDRAM;K4F2E3S4HM-MGCJ,LPDDR4-SDR	1	SA
...4		1105-002853	IC-DDR3 SDRAM;K4B4G1646E-BCNB,DDR3 2133,	1	SA
...4		1201-004117	IC-AUDIO AMP;TAS5749M,QFP,48P,7x7x1mm,DU	1	SA
...4		1201-004217	IC-OP AMP;TLV9062,SOP,ST,8P,DUAL,PLASTIC	1	SA
...4		1203-008777	IC-DC/DC CONVERTER;TPS563201,SOT-23,6,1.	2	SA
...4		1203-009067	IC-DC/DC CONVERTER;TPS564201,SOT-23,6P,3	1	SA
...4		1203-009186	IC-POSLADJUST REG.;TLV759P01PDRVR,TP,6P	2	SA
...4		1203-009188	IC-VOL. DETECTOR;G623F11U,TP,8P,4.9x6x1.	1	SA
...4		1203-009196	IC-DC/DC CONVERTER;TPS565201,SOT-23-THIN	1	SA
...4		1203-009206	IC-DC/DC CONVERTER;AOZ2255LQI-30,QFN-22L	1	SA
...4		1203-009208	IC-DC/DC CONVERTER;VPMSSM,QFN,72P,8x8x0.	1	SA
...4		1204-003779	IC-DECODER;SDP1804,FCBGA,794P,27x27x1.79	1	SA
...4		1205-004692	IC-SWITCH;TPS2069CDBVR,SOT-23,5P,2.9x2.8	2	SA
...4		1205-005749	IC-SWITCH;G2897KD1U,TDFN2X3-14,14P,2x3mm	1	SA
...4		1404-001731	THERMISTOR-NTC;33Kohm,4050K,1MWC,TP,1.6x	1	SNA
...4		1405-001232	VARISTOR;6.4V,5.6VDC,30A,1608,TP,19V,200	1	SNA
...4		1405-001271	VARISTOR;35V,20VDC,5A,1005,TP,100V,10pF	18	SA
...4		1405-001306	VARISTOR;11VDC,45A,1608,TP,50V,40pF	1	SA
...4		1405-001381	VARISTOR;11V,8VDC,30A,1608,TP,25V,500pF	3	SA
...4		1405-001382	VARISTOR;24.5V,16VDC,120A,2012,TP,42V,40	2	SA
...4		1405-001452	VARISTOR;15V,12VDC,8A,1608,TP,46V,18pF	6	SA
...4		2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-000066	R-CHIP;20Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608,T0.45	11	SA
...4		2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005,T0.35	1	SA
...4		2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005,T0.35	1	SA
...4		2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005,T0.35	31	SNA
...4		2007-000772	R-CHIP;33Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-000779	R-CHIP;33ohm,1%,1/10W,TP,1608	8	SNA
...4		2007-000816	R-CHIP;390Kohm,1%,1/10W,TP,1608	1	SNA
...4		2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005,T0.35	3	SA
...4		2007-000979	R-CHIP;5.6Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-001125	R-CHIP;68Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-001139	R-CHIP;7.5Kohm,1%,1/10W,TP,1608	2	SA
...4		2007-001288	R-CHIP;18ohm,5%,1/16W,TP,1005,T0.35	4	SA
...4		2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005,T0.35	3	SA
...4		2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005,T0.35	4	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2007-002899	R-CHIP;10ohm,1%,1/10W,TP,1608	20	SA
...4		2007-002906	R-CHIP;200Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005,T0.35,-	13	SA
...4		2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005,T0.35	3	SA
...4		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005,T0.35	40	SA
...4		2007-007137	R-CHIP;1.2Kohm,1%,1/16W,TP,1005,T0.35	4	SA
...4		2007-007138	R-CHIP;27Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007139	R-CHIP;47Kohm,1%,1/16W,TP,1005,T0.35	8	SA
...4		2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005,T0.35	28	SA
...4		2007-007306	R-CHIP;100ohm,1%,1/16W,TP,1005,T0.35	14	SA
...4		2007-007308	R-CHIP;33Kohm,1%,1/16W,TP,1005,T0.35	1	SA
...4		2007-007309	R-CHIP;12Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007310	R-CHIP;8.2Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007311	R-CHIP;22Kohm,1%,1/16W,TP,1005,T0.35	2	SA
...4		2007-007312	R-CHIP;20Kohm,1%,1/16W,TP,1005,T0.35	10	SA
...4		2007-007313	R-CHIP;6.8Kohm,1%,1/16W,TP,1005,T0.35	5	SA
...4		2007-007316	R-CHIP;3.3Kohm,1%,1/16W,TP,1005,T0.35	1	SNA
...4		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005,T0.35	24	SNA
...4		2007-007517	R-CHIP;240ohm,1%,1/16W,TP,1005,T0.35	4	SNA
...4		2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	2	SA
...4		2007-007528	R-CHIP;1.5Kohm,1%,1/16W,TP,1005,T0.35	1	SA
...4		2007-007588	R-CHIP;1.8Kohm,1%,1/16W,TP,1005,T0.3	1	SA
...4		2007-007643	R-CHIP;2Mohm,1%,1/10W,TP,1608	1	SA
...4		2007-007736	R-CHIP;510Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005,T0.35	16	SA
...4		2007-007767	R-CHIP;200ohm,1%,1/16W,TP,1005	4	SA
...4		2007-007791	R-CHIP;9.1Kohm,1%,1/16W,TP,1005,T0.35	1	SNA
...4		2007-007798	R-CHIP;10ohm,1%,1/16W,TP,1005,T0.35	11	SA
...4		2007-007992	R-CHIP;1ohm,1%,1/10W,TP,1608	4	SA
...4		2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005,T0.35	6	SNA
...4		2007-008294	R-CHIP;33ohm,1%,1/16W,TP,1005,T0.35	16	SA
...4		2007-008298	R-CHIP;49.9ohm,1%,1/16W,TP,1005,T0.35	5	SA
...4		2007-008596	R-CHIP;0.1ohm,1%,1/4W,TP,3216	3	SC
...4		2007-009322	R-CHIP;1.3Kohm,1%,1/16W,TP,1005	1	SA
...4		2011-001264	R-NETWORK;10ohm,5%,1/16W,L,CHIP,8P,TP,2.	9	SNA
...4		2011-001448	R-NETWORK;10ohm,5%,1/16W,L,4P,TP,1.0x1.0	2	SA
...4		2011-001587	R-NETWORK;100ohm,5%,1/16W,L,CHIP,4P,TP,1	2	SA
...4	AD480	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005,T0.5	5	SNA
...4	AD480	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,C0G,TP,1005	2	SA
...4	AD480	2203-000359	C-CER,CHIP;0.15nF,5%,50V,C0G,TP,1005,T0.	5	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4	AD480	2203-000425	C-CER,CHIP;0.018nF,5%,50V,C0G,TP,1005	1	SA
...4	AD480	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,TP,1005	6	SA
...4	AD480	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,TP,1005	2	SA
...4	AD480	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,TP,1005	3	SA
...4	AD480	2203-000940	C-CER,CHIP;0.47nF,10%,50V,X7R,TP,1005,T0	2	SNA
...4	AD480	2203-001072	C-CER,CHIP;0.056nF,5%,50V,C0G,TP,1005	1	SA
...4	AD480	2203-001428	C-CER,CHIP;470nF,10%,50V,X7R,TP,2012	1	SA
...4	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,TP,1005	7	SNA
...4	AD480	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	SA
...4	AD480	2203-005057	C-CER,CHIP;0.0082nF,0.25pF,50V,C0G,TP,10	2	SA
...4	AD480	2203-005083	C-CER,CHIP;220nF,10%,50V,X7R,TP,1608,T0.	6	SNA
...4	AD480	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP,1608	5	SA
...4	AD480	2203-005642	C-CER,CHIP;0.22nF,5%,50V,C0G,TP,1005,T0.	3	SA
...4	AD480	2203-005968	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1005,T0.	2	SNA
...4	AD480	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005,T0.	3	SNA
...4	AD480	2203-006126	C-CER,CHIP;47nF,10%,16V,X7R,TP,1005,T0.5	3	SNA
...4	AD480	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,TP,1005,T0.	92	SA
...4	AD480	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,TP,1005,T0	19	SA
...4	AD480	2203-006698	C-CER,CHIP;1000nF,10%,25V,X7R,TP,1608,T0	7	SA
...4	AD480	2203-006838	C-CER,CHIP;2200nF,10%,6.3V,X5R,TP,1005	2	SA
...4	AD480	2203-006844	C-CER,CHIP;470nF,10%,10V,X5R,TP,1005	1	SA
...4	AD480	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012,T	13	SNA
...4	AD480	2203-007240	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,1608,	49	SA
...4	AD480	2203-007269	C-CER,CHIP;22000nF,20%,10V,X5R,TP,2012(2	13	SA
...4	AD480	2203-007271	C-CER,CHIP;2200nF,10%,10V,X5R,TP,1005,T0	9	SNA
...4	AD480	2203-007306	C-CER,CHIP;10000nF,10%,25V,X5R,TP,2012,T	22	SNA
...4	AD480	2203-007393	C-CER,CHIP;4700nF,10%,10V,X5R,TP,1005,T0	23	SNA
...4	AD480	2203-007423	C-CER,CHIP;10000nF,10%,35V,X7R,TP,3216	4	SA
...4	AD480	2203-007544	C-CER,CHIP;100nF,10%,50V,X7R,TP,1005,T0.	9	SA
...4	AD480	2203-007795	C-CER,CHIP;10000nF,20%,10V,X5R,TP,1005,T	23	SA
...4	AD480	2203-008096	C-CER,CHIP;2200nF,10%,50V,X5R,TP,2012,1.	2	SA
...4	AD480	2203-008315	C-CER,CHIP;22000nF,20%,25V,X5R,TP,2012,T	12	SA
...4	AD480	2203-008412	C-CER,CHIP;4700nF,10%,50V,X5R,TP,2012,T1	1	SNA
...4		2402-001268	C-AL,SMD;100uF,20%,25V,WT,TP,8x6.3mm	1	SA
...4		2409-001240	C-ORGANIC,SMD;33uF,20%,25V,LR,TP,7343(1.	1	SA
...4		2703-000213	INDUCTOR-SMD;470nH,10%,1.35Ohm,35mA,15,M	1	SA
...4		2703-002269	INDUCTOR-SMD;56nH,5%,1005,T0.5,1.4Ohm,15	3	SA
...4		2703-003747	INDUCTOR-SMD;22uH,20%,6060,0.135ohm,1300	2	SA
...4		2703-003862	INDUCTOR-SMD;10uH,20%,6060,0.065ohm,1900	4	SA
...4		2703-004724	INDUCTOR-SMD;8.2uH,20%,5050,T4,0.072Ohm,	4	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2703-005191	INDUCTOR-SMD;1.5uH,20%,6060,T4.5,0.02Ohm	2	SA
...4		2703-005193	INDUCTOR-SMD;2.2uH,20%,6060,T4.5,0.024Oh	2	SA
...4		2703-005376	INDUCTOR-SMD;10uH,20%,10.7x10mm,T3.8,0.0	1	SA
...4		2703-005715	INDUCTOR-SMD;820nH,20%,11x10mm,T3.8,0.00	1	SNA
...4		2801-004021	CRYSTAL-SMD;24.576MHz,20ppm,28-AAN,12pF,	1	SA
...4		3301-001364	BEAD-SMD;1000ohm,1608,TP,1085ohm/108MHz,	2	SNA
...4		3301-002039	BEAD-SMD;26ohm,1608,TP	33	SA
...4		3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,PL	4	SA
...4		3601-001376	FUSE-SURFACE MOUNT;32V,3A,FAST-ACTING,Hi	1	SA
...4		3701-001967	CONNECTOR-HDMI;19P,A,FEMALE,AU,0.5mm,BLK	3	SA
...4		3707-001123	CONNECTOR-OPTICAL;ANGLE,SPDIF,2.5PI	1	SA
...4		3708-003241	CONNECTOR-FPC/FFC/PIC;96P,0.5mm,SMD-A,AU	2	SNA
...4	EH01	3711-007803	HEADER-BOARD TO CABLE;BOX,12P,1R,1.25mm,	1	SA
...4	EH01	3711-008098	HEADER-BOARD TO CABLE;BOX,20P,1R,1.25mm,	1	SNA
...4	EH01	3711-008131	HEADER-BOARD TO CABLE;BOX,4P,1R,2.5mm,AN	1	SA
...4	EH01	3711-008859	HEADER-BOARD TO CABLE;BOX,12P,2R,2mm,ANG	1	SA
...4		3722-003229	JACK-MODULAR;8P/8C,Y,STRAIGHT,NONE,AU,1P	1	SA
...4		3722-003457	JACK-USB;4P/1C,NI,BLK,ANGLE,A,2.0,13.1x1	2	SA
...4	JACK PIN	3722-003546	JACK-PIN;5P,NI/SN,BLU/GRN/RED/WHT/YEL,SM	1	SA
...4		6302-001376	GASKET-SMD;SMT Gasket,Sn/Cu plated PI-Fi	5	SNA
...4		BN40-00330A	TUNER-DTV AIR CABLE;DTOS40EH7A,DVB-TC,38	1	SA
...4		BN41-02703A	PCB-MAIN;Muse-L Built-In,FR-4,4L,T1.6,1,	1	SNA
...4		BN59-01313A	NETWORK-WLAN CLIENT;WCP731M,70x35x18.33m	1	SA
...4	CB07	BN61-13312B	BRACKET-SCREWLESS PCB;55KS8000,SK5,T0.3,	4	SNA
...4		BN97-00029P	ASSY MICOM;T-MSLUABC,RU7.4K,KLM8G1GETF-B	1	SNA
....5		1107-002590	IC-EMMC;KLM8G1GETF-B041007,8Gbyte,64Gbx1	1	SNA
...4		BN97-00029V	ASSY MICOM;TCON F/W,Muse-L Built-In,W25Q	1	SNA
....5		1107-002339	IC-NOR FLASH;W25Q80DV,8Mbit,SOP,5.28x5.2	1	SNA
....5		BN46-00975A	S/W MICOM;Muse-L Built-In,TCON F/W	1	SNA
...4		BN97-00029W	ASSY MICOM;MLMICOM_INTV,Muse-L Built-In,	1	SNA
....5		1107-002226	IC-NOR FLASH;W25Q40CLSSIP,4Mbit,SOIC,8P,	1	SA
1		BN91-20957M	ASSY SHIELD;URU7400G	1	SNA
.2		BN02-00102B	TAPE-SINGLE FACE;OPP,T0.15,W25,L50M,WHIT	0	SNA
.2	EC13	BN39-02217A	LEAD CONNECTOR-SUB ASSY;UN50KU6000,UL210	1	SA
.2		BN39-02457A	LEAD CONNECTOR-SUB ASSY;Q70,UL21016,12P,	1	SA
.2		BN44-00947K	DC VSS-PD BOARD;L43E7N_RSM,AC/DC,126W,AC	1	SA
.2		BN63-18112C	COVER-TERMINAL SIDE;65URU7100H,HIPS,V-0,	1	SA
..3		0103-004637	RESIN HIPS;VE-1897/K2901,Black,BK0020,V-	14	SNA
.2		BN96-30337L	ASSY SPEAKER P-FRONT;TV-SPK,40UNU7100X,6	1	SA
.2		BN96-39820G	FFC CABLE;40NU7100,Fold,L500,96P,-	1	SA



Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.2		BN96-39821E	FFC CABLE;40NU7100,Fold,L350,96P,-	1	SA
.2		BN96-48730A	ASSY BOARD P-FUNCTION TACT;Y19 VNB Carbo	1	SA
1		BN92-24843D	ASSY LABEL POP;URU7400G	1	SNA
.2		BN68-09637H	LABEL POP-BEZEL;55RU7400,PET,T0.188,W133	1	SNA
1		BN92-24875C	ASSY P/MATERIAL;URU7400G	1	SNA
.2		6902-000379	BAG AIR;LDPE,T0.13,W1000,L1800,TRP,Hole	0	SNA
.2		6902-000609	BAG ROLL;LDPE,T0.05,W2400,L1000,TRP,RECY	110	SNA
.2		6902-002677	BAG ROLL;HDPE/HDPE/PE FOAM,T0.015/T0.5,W	1	SNA
.2		6922-000013	BAND;PP,T0.8,W18,L2300 M,TRP	1	SNA
.2		BN02-00319A	TAPE-SINGLE FACE;OPP,T0.05,W60,L800M,CLE	1	SNA
.2		BN02-00319B	TAPE-SINGLE FACE;OPP,T0.05,W75,L800M,CLE	1	SNA
.2		BN69-11504A	WRAP VINYL;LDPE,T0.018,W500,L10000,Trans	4	SNA
.2		BN69-17053D	PACKING ANGLE;ALL,PAPER,T3,W2000,L50,YEL	0	SNA
.2		BN69-17558A	CUSHION-SET;43UNU7400H,EPS,16.7g/l,WHITE	1	SNA
..3		BN81-01918A	A/S-RESIN;EPS,SG-302	1	SNA
1		BN92-25166J	ASSY LABEL;URU7400G	1	SNA
.2		BN68-06708G	LABEL-RATING;Monitor,WW,PP,T0.161,W93,L7	1	SNA
.2		BN68-09428J	LABEL-ENERGY;UA43RU7400KXXV,VIET NAM,PET	1	SNA
.2		BN68-09504A	LEAFLET-QUICK SETUP GUIDE;UA50RU7400K,OT	1	SNA
1		BN92-25573H	ASSY BOX;URU7400G	1	SNA
.2		BN68-07893A	LABEL BOX;ALL,THERMAL PAPER,W60,L110,WHT	1	SNA
.2		BN68-07943A	LABEL BOX;ALL,XXV,ART,W100,L150,150g	1	SNA
.2		BN69-19417D	BOX UNIT;43RU7400,CB,DW2,F1,L1135,W155,H	1	SNA
1	ACCE1	BN92-26137H	ASSY ACCESSORY;URU7400G	1	SNA
.2		BN96-48693E	ASSY ACCESSORY MANUAL CABLE;URU7400G	1	SNA
..3	T0268	3903-001118	POWER CORD-DT;EUR,2P-F,250V,2.5A,BLK,L15	1	SA
..3		4301-000101	BATTERY-ALKALINE;1.5V,1650mAh,LR6,14.5x5	2	SNA
..3		6902-001962	BAG PE;LDPE,BIOBASED,T0.05,W400,L300,TRP	1	SNA
..3	ANT04	AA59-00853A	MODULE RF-SHIELD BOX;SGLBF-6B,PAL-BG,DK,	1	SA
..3		BN59-01312K	REMOCON-SMART CONTROL;2019 TV,SAMSUNG,21	1	SA
..3	T0527	BN68-00513A	LABEL-E PASS;ALL MODEL,WW,YUPO,W50,L15,W	1	SNA
..3		BN68-09533E	MANUAL USERS;RU7400,XV,VIETNAM,MOJO,0,1	1	SNA
..3		BN68-09535C	LEAFLET-ACCESSORY KIT;URU7400G,XY & MR & HC&	1	SNA
..3	EH03A	BN96-43169A	ASSY HOLDER P-RING;65Q8C,ABS,BLACK,HB	1	SA
...4		6902-001404	BAG PE;LDPE,T0.05,W80,L100,TRP,Bio. N	1	SNA
...4		BN61-14912A	HOLDER-WALL RING;55Q7F,ABS,T2,BLACK,HB,1	4	SNA
1	PANEL	BN95-04755G	PRODUCT LCD-AUO;CY-NN043HGAV9V/H,NU7400,	1	SA
.2	M0131	BN63-00520A	GASKET-EMI;APPOLO_PAL,Conductive Fabric,	2	SNA
.2		BN68-05722A	LABEL-E PASS;POLYPROPYLENE,NON-COATING	1	SNA
.2		BN90-09639A	ASSY BACK LIGHT UNIT;UNU7400H	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...3		BN61-15651A	OPTICAL SHEET-COMPLEX;18Y_NU7K_43INCH_CO	1	SNA
...3		BN61-15657A	DIFFUSER PLATE;18Y_NU7K_43INCH_DIFFUSER	1	SNA
...3		BN61-15663A	LGP;18Y_NU7K_43INCH_LGP,MS,NewEdge(OD5mm	1	SNA
...3		BN61-15701A	OPTICAL SHEET-REFLECTOR;18Y_NU7K_43INCH_	1	SNA
...3		BN96-45678B	ASSY CHASSIS REAR P;43UNU7400H,EGI-SECC	1	SNA
...4		0203-007064	TAPE-DOUBLE FACE;ACRYL,T0.2,W6,N/A,WHITE	1	SNA
...4		0204-007677	COATING;TD 18740C,4.0%,3.0cps,CLEAR,1.61	0	SNA
...4		BN02-00040B	TAPE DOUBLE FACE;NNB 32/40/46/55",PET,T0	1	SNA
...4		BN02-00102B	TAPE-SINGLE FACE;OPP,T0.15,W25,L50M,WHIT	0	SNA
...4		BN39-02393A	LEAD CONNECTOR-BLU;43NU7400,UL21016,4P,L	1	SNA
...4		BN60-01534A	SPACER-PET;PET,689,BLACK,T0.3,W3	0	SNA
...4	CB20	BN61-11982C	BRACKET-WALL;65QNQ7FC,CR-SPCC,BLACK,M8,L	4	SNA
...4	CB20	BN61-13521A	BRACKET-WALL;32K5500,CR-SPCC,T1.2,NATURA	4	SNA
...4		BN61-13557E	BRACKET-WIRE;49KS7000,SW-C,T1,NATURAL,ZI	2	SA
...4		BN61-13557L	BRACKET-WIRE;40KU6400,SW-C,T1,NATURAL,ZI	2	SA
...4		BN61-15482A	BRACKET-LED PCB;43UNU7100X,Al,T1,NATURAL	1	SNA
...4		BN61-15526A	HOLDER-SOURCE PCB;65UNU7100X,ABS,BK0007,	2	SNA
....5		0103-004609	RESIN ABS;HF-0680U,K21294,BK0007,HB,High	2	SNA
...4		BN61-15531A	HOLDER-LGP TOP RIGHT;65QNQ7FC,TPE,BK0020	1	SNA
...4		BN61-15532A	HOLDER-LGP TOP LEFT;65QNQ7FC,TPE,BK0020,	1	SNA
...4		BN61-15540A	HOLDER-LGP BOTTOM LEFT;65QNQ7FC,TPE,BK00	1	SNA
...4		BN61-15541A	HOLDER-LGP BOTTOM RIGHT;65QNQ7FC,TPE,BK0	1	SNA
....5		0103-005041	RESIN PC ABS;FR3200TV/901408,Black,BK000	4	SNA
....5		0103-010906	RESIN TPE;5202SP/5209B,BLACK,BK0020,HB,T	4	SNA
...4		BN61-16491A	FOOT;49NU7100,RUBBER,Gray,T18.7,T4.3, L1	4	SA
...4		BN63-17620A	INSULATOR-SOURCE PCB;43UNU7100X,PET,BLAC	1	SNA
...4		BN63-17622A	INSULATOR-SMPS;40UNU7100X,PC,BLACK,L255,	1	SNA
...4	CC04	BN64-03995A	CHASSIS-REAR;43UNU7100X,EGI-SECC,-,T0.5,	1	SNA
....5		BN01-00554A	STEEL;43NU7100,EGI-SECC,L995,0.5mm,595mm	1	SNA
...4	T0527	BN68-00513A	LABEL-E PASS;ALL MODEL,WW,YUPO,W50,L15,W	1	SNA
...4		BN96-46053A	ASSY LED BAR P;18Y_NU7K_43INCH_EDGE_LED	2	SA
...3		BN96-45693B	ASSY FRAME P-MIDDLE;40UNU7100X,PC+GF10%,	1	SNA
...4		BN02-00586A	TAPE DOUBLE FACE;UNU7100X,ACRYL,T0.3,W3,	2	SNA
...4		BN60-00715M	SPACER-CONDUCTIVE;65UNU7100X,CONDUCTIVE	2	SNA
...4		BN60-01605A	SPACER-FOAM;NU7K,HR FOAM,L50,DARK GRAY,T	1	SNA
...4		BN61-15490B	FRAME-MIDDLE;43UNU7100X,PC+GF10%,V-2,No	1	SNA
....5		0103-010237	RESIN PC;LS-3104G/W95265,White,WT0044,V-	184	SNA
..2		BN96-45673B	ASSY CHASSIS FRONT P;43UNU7400H,PC+ABS+E	1	SA
...3		BN60-00715C	SPACER-CONDUCTIVE;Y13 Slim F-LED 76,COND	4	SNA
...3		BN60-01611A	SPACER-CONDUCTIVE;NU7100,CONDUCTIVE FABR	3	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
..3		BN63-17418C	SHEET-PROTECTION COVER;NU7K,PO,T0.05,W30	6	SNA
..3		BN63-17876A	SHEET-PROTECTION COVER;PO,T0.05,W9,L100,	0	SNA
..3	AC155	BN64-03988A	CHASSIS-FRONT;43UNU7400H,PC+ABS+ED18%,V-	1	SNA
..4		0103-010808	RESIN PC ABS;NH-1210/K21294,BLACK,BK0007	290	SNA
.2		BN96-45683A	ASSY COVER P-SOURCE PCB;43UNU7100X,EGI-S	1	SNA
..3		BN63-17459A	COVER-SOURCE PCB;43UNU7100X,EGI-SECC,T0.	1	SNA
..3		BN63-17632A	INSULATOR-SOURCE PCB COVER;43UNU7100X,PE	1	SNA
.2		BN96-45764A	ASSY OPEN CELL;AUO,43Inch,Y18 New Model	1	SNA
..3		BN81-12964A	A/S OPEN CELL-ADHESIVE SIL;ADHESIVE SIL,	1	SNA
..3		BN81-15464A	A/S OPEN CELL-ASSY PCB-SOURCE L;ASSY PCB	1	SNA
..3		BN81-15465A	A/S OPEN CELL-ASSY PCB-SOURCE R;ASSY PCB	1	SNA
..3		BN81-16288A	A/S-ADHESIV-A.C.F;ADHESIV-A.C.F,47.COF21	1	SNA
..3		BN81-16631A	A/S-IC DRIVER SOURCE;IC DRIVER SOURCE,46	1	SNA
..3		BN81-16632A	A/S-POLARIZER-C/F;POLARIZER-C/F,66.C4T57	1	SNA
..3		BN81-16633A	A/S-POLARIZER-TFT;POLARIZER-TFT,66.T4T58	1	SNA

### 3. Disassembly and Reassemble

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




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




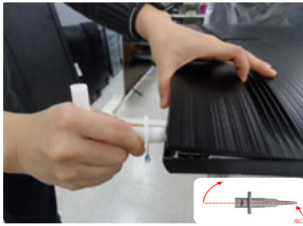
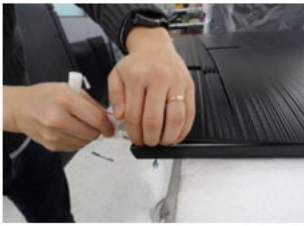


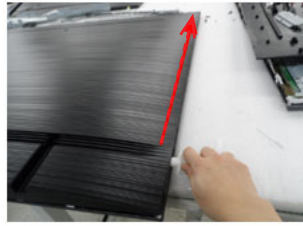
#### Open Jigs

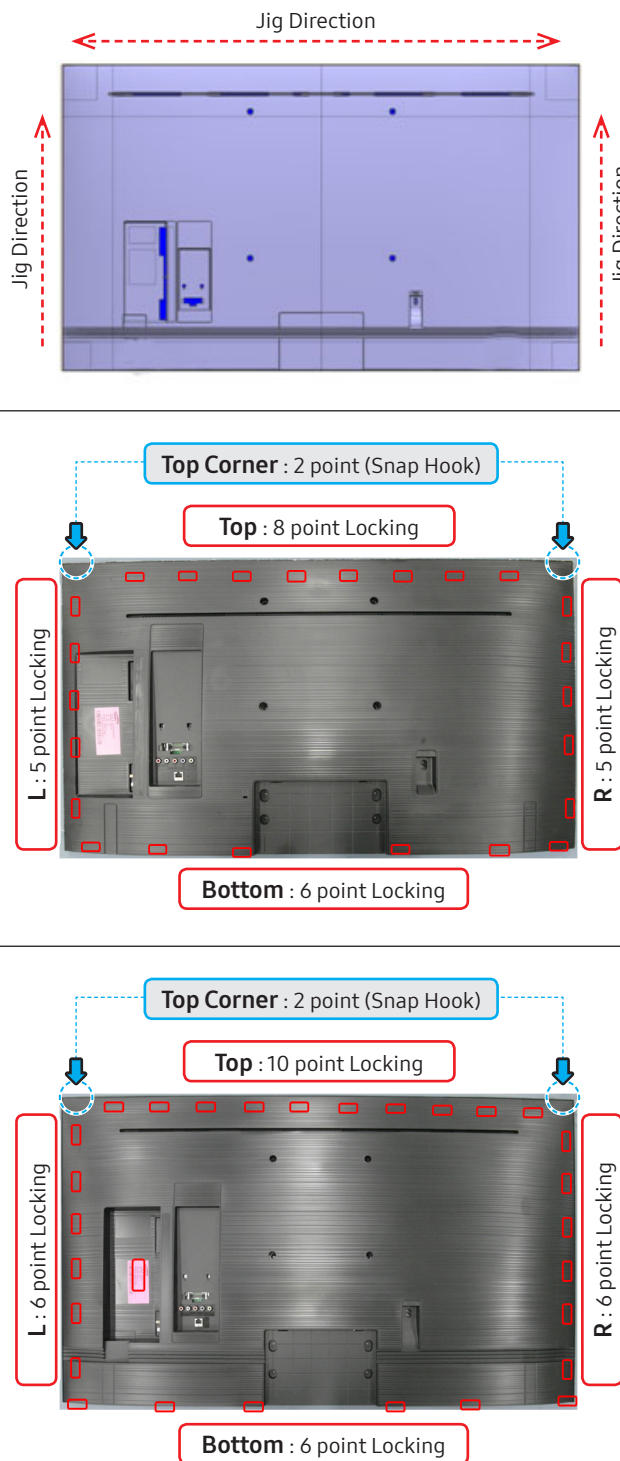
Please Use Lower Open Jig, for opening of Screwless rear cover.

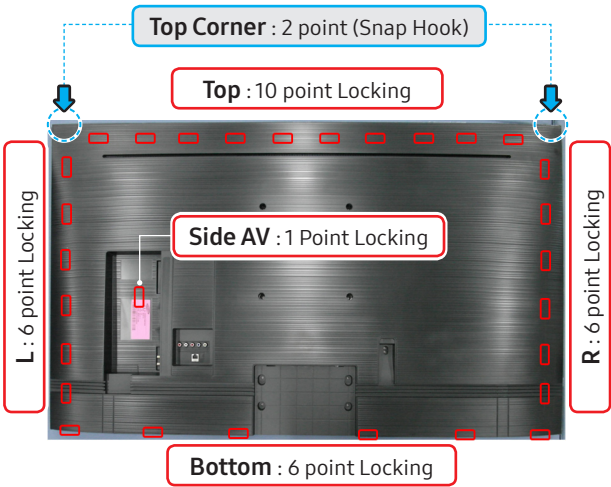
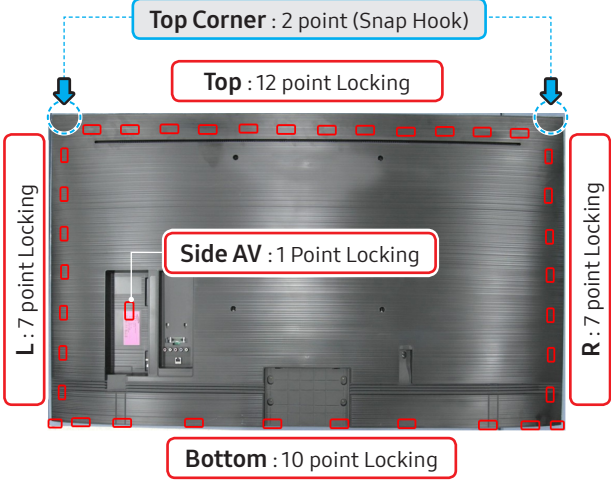

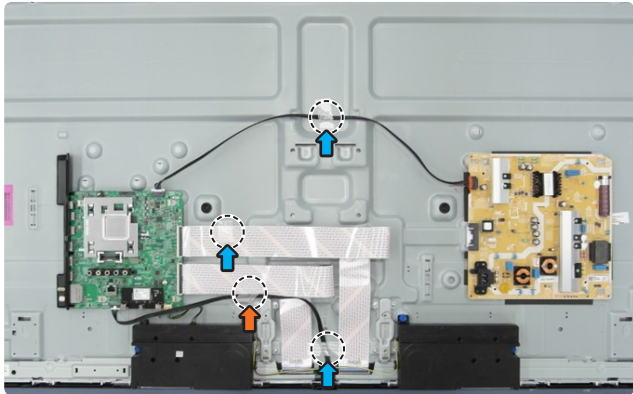
BN81-12884A	BN81-14946A	BN81-14946B

#### 3-1. Disassembly

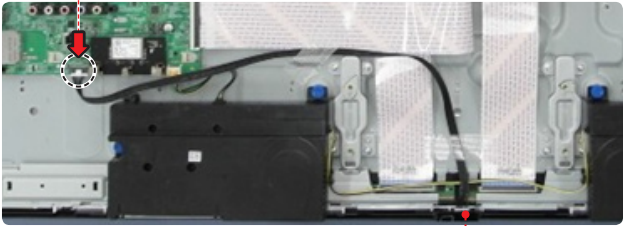
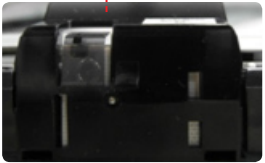

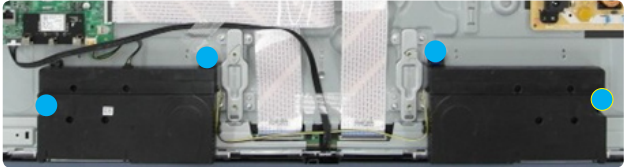
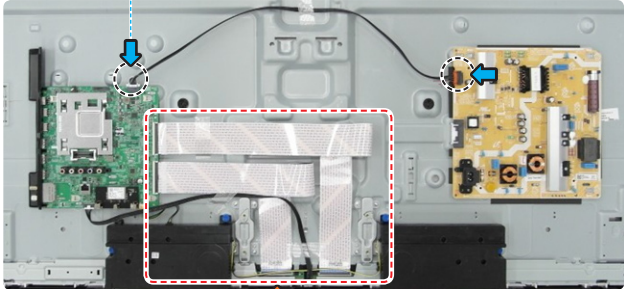
Description & Screws	Picture Description
<p><b>1</b> Carefully position the TV so that the screen is facing downwards.</p> <ul style="list-style-type: none"> <li>• Make sure to place the TV upon a soft cushion or any material that will prevent damage to the screen.</li> </ul>	
<p><b>2</b> Remove the screws of ASSY GUIDE P-STAND, and then ASSY GUIDE P-STAND.</p> <p><b>Screws</b></p> <p> <b>6003-001334 x 4ea</b> TORQUE (22.0 ~ 26.5lbf)</p> <ul style="list-style-type: none"> <li>• SET + STAND</li> </ul>	

Description & Screws	Picture Description
<div data-bbox="183 291 215 347">3</div> <div data-bbox="252 291 638 353">Removing the 'ASSY REAR COVER'. (Please follow 8 sequence on right.)</div>	<div data-bbox="802 297 1106 521"></div> <div data-bbox="802 533 1062 584">1. Ready to insert open jig adjust jig edge to hole.</div> <div data-bbox="1125 297 1428 521"></div> <div data-bbox="1125 533 1412 560">2. Insert open jig till red line.</div> <div data-bbox="802 624 1106 848"></div> <div data-bbox="802 857 1114 884">3. Rotate open jig to 90-degree.</div> <div data-bbox="1125 624 1428 848"></div> <div data-bbox="1125 857 1412 907">4. Lift jig to unlock wire hook on bottom.</div> <div data-bbox="802 949 1106 1173"></div> <div data-bbox="802 1182 1093 1209">5. Insert hand and retain gap.</div> <div data-bbox="1125 949 1428 1173"></div> <div data-bbox="1125 1182 1396 1232">6. Take out jig and insert in side gap.</div> <div data-bbox="802 1279 1106 1503"></div> <div data-bbox="802 1512 1086 1538">7. Insert open jig till red line.</div> <div data-bbox="1125 1279 1428 1503"></div> <div data-bbox="1125 1512 1406 1561">8. Disassemble Hooks of Cover Rear along the side.</div>

Description & Screws	Picture Description
<p><b>4</b> Disassemble all Hooks of Cover Rear along the three side.</p> <p><b>Locking tabs locations</b></p> <ul style="list-style-type: none"><li>• 43"</li><li>• 50"</li></ul>	<p><b>Picture Description</b></p>  <p>The diagram illustrates the disassembly of the rear cover hooks. The top image shows the jig direction for disassembly. The middle and bottom images show the locking tab locations for 43 inch and 50 inch models respectively.</p> <p><b>43 inch model:</b></p> <ul style="list-style-type: none"><li>Top Corner : 2 point (Snap Hook)</li><li>Top : 8 point Locking</li><li>L : 5 point Locking</li><li>R : 5 point Locking</li><li>Bottom : 6 point Locking</li></ul> <p><b>50 inch model:</b></p> <ul style="list-style-type: none"><li>Top Corner : 2 point (Snap Hook)</li><li>Top : 10 point Locking</li><li>L : 6 point Locking</li><li>R : 6 point Locking</li><li>Bottom : 6 point Locking</li></ul>

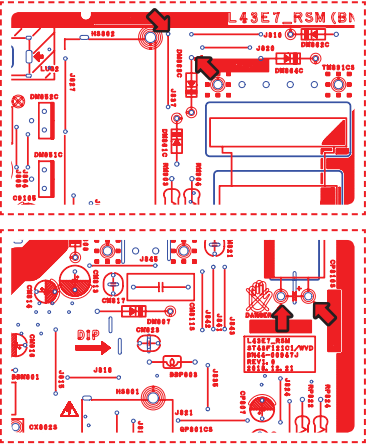



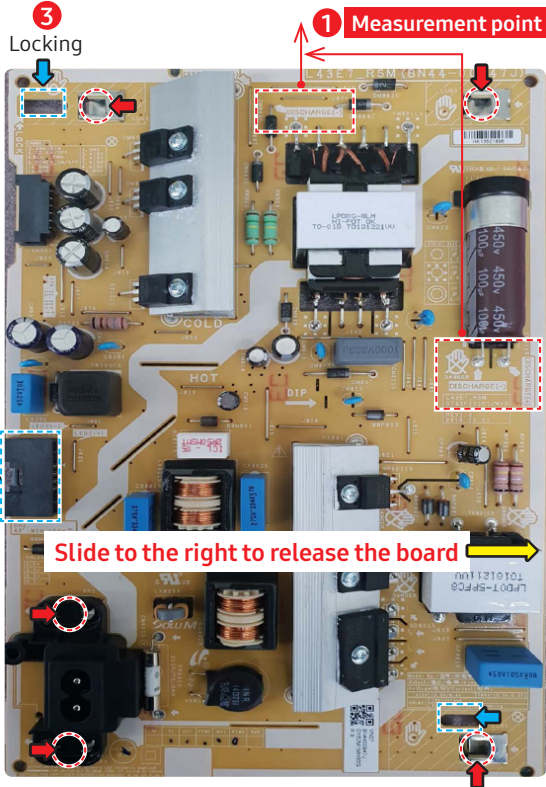
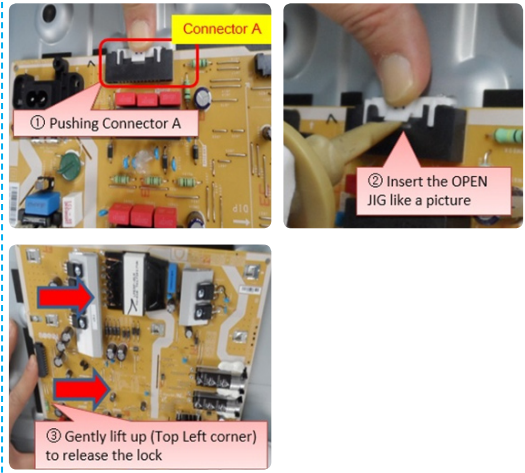
Description & Screws	Picture Description
<ul style="list-style-type: none"><li>55"</li></ul>	
<ul style="list-style-type: none"><li>65"</li></ul>	
<div>5</div> <p>Remove the Electric tapes shown on the images.</p> <ul style="list-style-type: none"><li>EMI Filament Tape (Dressing)</li><li>Filament Tape (Dressing)</li></ul> <div> <b>NOTE</b><ul style="list-style-type: none"><li>When assembling the TV, the electric tapes must be applied on the same locations. Please remember to take a picture of where the tapes were first applied.</li></ul></div>	

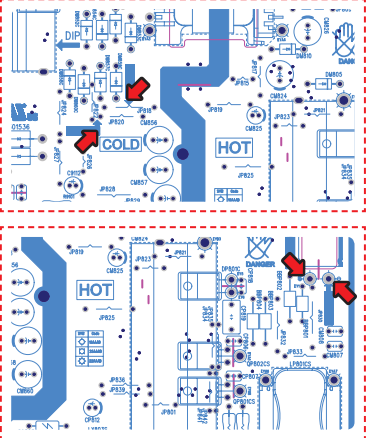

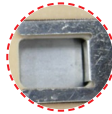

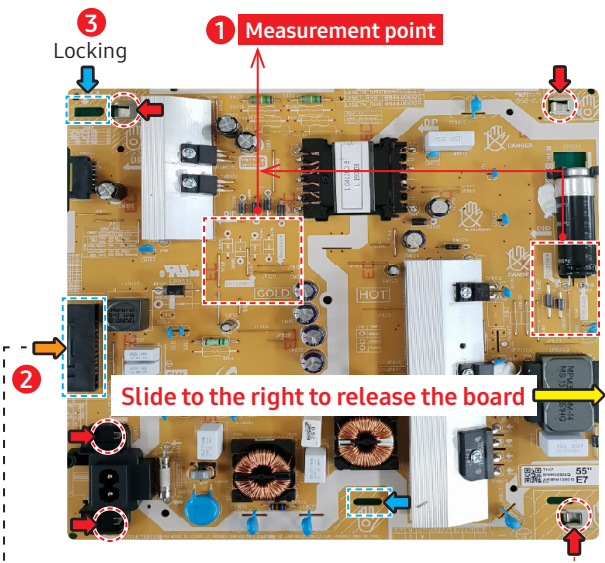
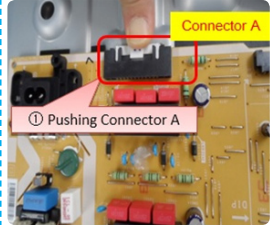
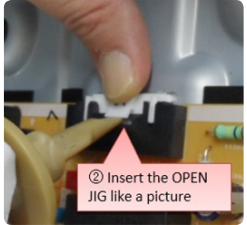
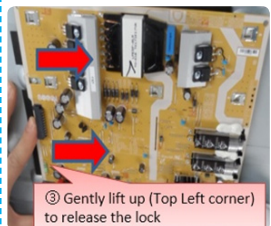


Description & Screws	Picture Description
<p><b>6</b> Remove the ASSY BOARD P-FUNCTION ONE KEY.</p> <ul style="list-style-type: none"> <li>➡ ASSY BOARD P-FUNCTION ONE KEY Cable</li> </ul>	<p>ASSY BOARD P-FUNCTION ONE KEY Cable</p>   <p>ASSY BOARD P-FUNCTION ONE KEY</p>
<p><b>7</b> Remove the ASSY SPEAKER P-FRONT.</p> <ul style="list-style-type: none"> <li>➡ ASSY SPEAKER P-FRONT Cable</li> <li>● : Assy SPK to Panel Hole 4 Points</li> </ul>	<p>ASSY SPEAKER P-FRONT Cable</p>  <p>ASSY SPEAKER P-FRONT</p>  <p>&lt;Hole 4 Points&gt;</p>
<p><b>8</b> Remove the Cables.</p> <ul style="list-style-type: none"> <li>➡ LEAD CONNECTOR-POWER (SMPS - MAIN)</li> <li>➡ FFC Cables</li> </ul>	<p>LEAD CONNECTOR-POWER Cables</p>  <p>FFC Cables</p>

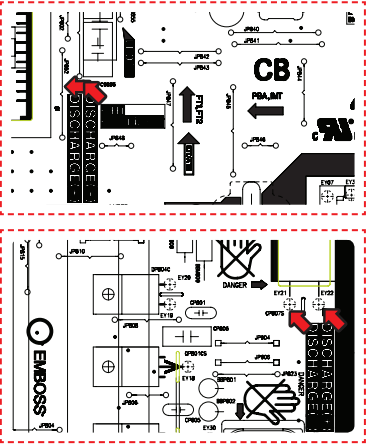



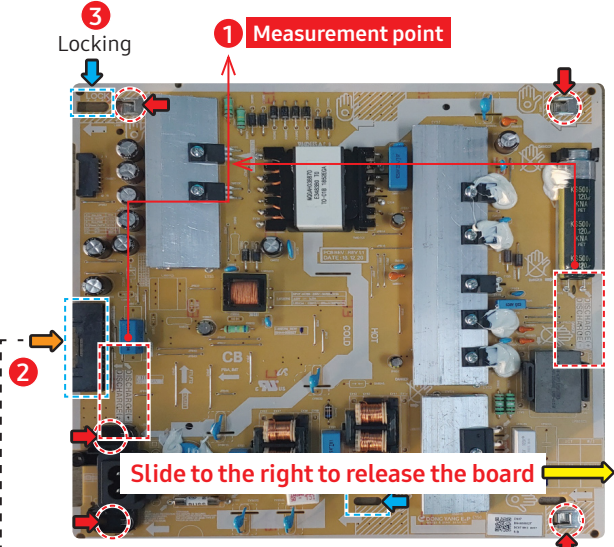
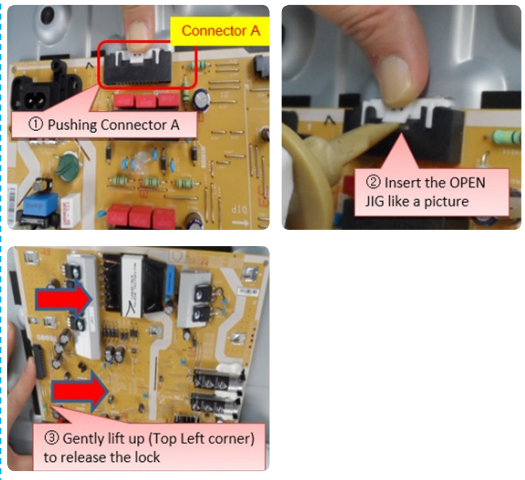


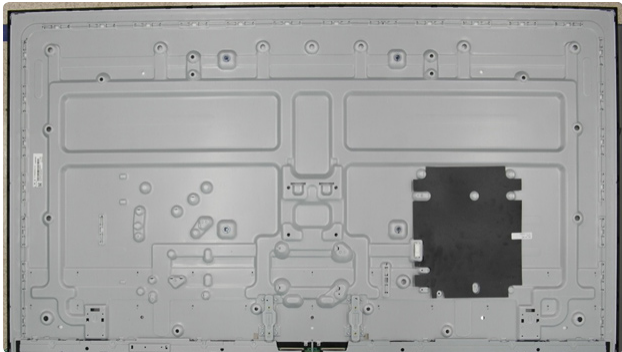
Description & Screws	Picture Description
<div data-bbox="183 291 215 347">9</div> <div data-bbox="247 291 758 448"><p>Remove the ASSY PCB MAIN BOARD.</p><ul style="list-style-type: none"><li>• Gently lift up (Top Right corner) to release the lock.</li><li>• Use both hands to hold the board and slide to the left to release the board.</li></ul></div> <div data-bbox="255 459 774 627"><div data-bbox="263 470 311 526"></div><div data-bbox="327 481 391 515"><b>NOTE</b></div><div data-bbox="263 537 758 627"><p>When installing the ASSY PCB MAIN BOARD, verify the board is properly positioned in all 4 mounting slots.</p></div></div> <div data-bbox="247 627 758 784"><div data-bbox="247 627 399 784"></div><div data-bbox="406 683 486 728">Locking</div><div data-bbox="486 627 638 784"></div><div data-bbox="646 683 758 728">Fixing Hole</div></div>	<div data-bbox="805 280 1428 1041"></div> <div data-bbox="1077 862 1157 896">Locking</div> <div data-bbox="1029 1052 1364 1086">Bottom chassis Guide Fixing Hole</div>


Description & Screws	Picture Description
<p><b>10</b> Remove the DC VSS-PD BOARD. (Decomposition order: ① - ② - ③)</p> <ul style="list-style-type: none"> <li>43"</li> </ul> <p>① Before Removing SMPS Board, You have to discharge the SMPS by using service JIG.</p> <ul style="list-style-type: none"> <li>If LED ON -&gt; LED OFF discharge is completed.</li> </ul> <p><b>Measurement point</b></p>   <p>② Remove the SMPS Board pushing to the arrow direction.</p> <ol style="list-style-type: none"> <li>Pushing Connector A.</li> <li>Insert the OPEN JIG like a picture.</li> <li>Gently lift up (Top Left corner) to release the lock.</li> </ol> <p>③ Gently lift up (Top Left corner) to release the lock and Slide Board to the Right.</p>  <p><b>A/S-DISCHARGE-JIG</b></p>  <p>BN81-12884A</p>	<p><b>Picture Description</b></p>  <p>③ Locking</p> <p>① Measurement point</p> <p>② Slide to the right to release the board</p> <p>③ Bottom chassis Guide Fixing Hole</p>  <p>Connector A</p> <p>① Pushing Connector A</p> <p>② Insert the OPEN JIG like a picture</p> <p>③ Gently lift up (Top Left corner) to release the lock</p>

Description & Screws	Picture Description
<p><b>11</b> Remove the DC VSS-PD BOARD. (Decomposition order: ① - ② - ③)</p> <ul style="list-style-type: none"> <li>50" / 55"</li> </ul> <p>① Before Removing SMPS Board, You have to discharge the SMPS by using service JIG.</p> <ul style="list-style-type: none"> <li>If LED ON -&gt; LED OFF discharge is completed.</li> </ul> <p><b>Measurement point</b></p>  <p><b>LED ON</b> <b>LED OFF</b></p> <p>&lt;Before discharging&gt; &lt;After discharging&gt;</p> <p>② Remove the SMPS Board pushing to the arrow direction.</p> <ol style="list-style-type: none"> <li>Pushing Connector A.</li> <li>Insert the OPEN JIG like a picture.</li> <li>Gently lift up (Top Left corner) to release the lock.</li> </ol> <p>③ Gently lift up (Top Left corner) to release the lock and Slide Board to the Right.</p> <div style="display: flex; align-items: center; gap: 10px;">  <span>Locking</span>  <span>Fixing Hole</span> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>A/S-DISCHARGE-JIG</b></p>  <p>BN81-12884A</p> </div>	<p><b>Picture Description</b></p>  <p>③ Bottom chassis Guide Fixing Hole</p> <div style="border: 1px dashed blue; padding: 5px; margin-top: 10px;">  <p>Connector A</p> <p>① Pushing Connector A</p>  <p>② Insert the OPEN JIG like a picture</p>  <p>③ Gently lift up (Top Left corner) to release the lock</p> </div>



Description & Screws	Picture Description
<p><b>12</b> Remove the DC VSS-PD BOARD. (Decomposition order: ① - ② - ③)</p> <ul style="list-style-type: none"> <li>65"</li> </ul> <p>① Before Removing SMPS Board, You have to discharge the SMPS by using service JIG.</p> <ul style="list-style-type: none"> <li>If LED ON -&gt; LED OFF discharge is completed.</li> </ul> <p><b>Measurement point</b></p>   <p>LED ON LED OFF &lt;Before discharging&gt; &lt;After discharging&gt;</p> <p>② Remove the SMPS Board pushing to the arrow direction.</p> <ol style="list-style-type: none"> <li>Pushing Connector A.</li> <li>Insert the OPEN JIG like a picture.</li> <li>Gently lift up (Top Left corner) to release the lock.</li> </ol> <p>③ Gently lift up (Top Left corner) to release the lock and Slide Board to the Right.</p>  <p>Locking Fixing Hole</p> <p><b>A/S-DISCHARGE-JIG</b></p>  <p>BN81-12884A</p>	<p><b>Picture Description</b></p>  <p>③ Bottom chassis Guide Fixing Hole</p>  <p>Connector A ① Pushing Connector A ② Insert the OPEN JIG like a picture ③ Gently lift up (Top Left corner) to release the lock</p>

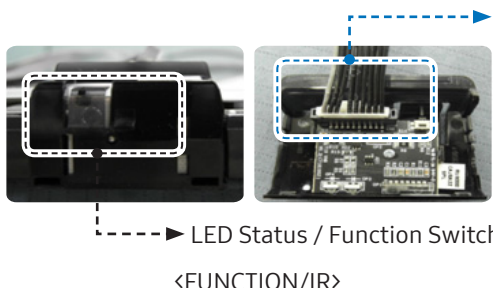
Description & Screws	Picture Description
<div>13</div> <div>Completed the disassembly.</div>	

 **NOTE**

Reassembly procedures are in the reverse order of disassembly procedures.

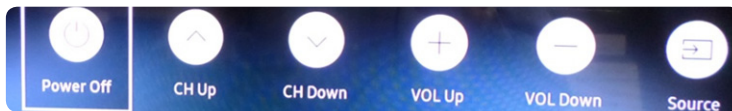
## 4. Troubleshooting

### 4-1. Function Control Operation Test



CN1601 (FUNCTION & IR)			
1	IR	2	GND
3	A3.3V_PW	4	SENSOR_SCL_I2C
5	SENSOR_SDA_I2C	6	KEY_INPUT1
7	-	8	LED_STB_OUT
9	IR_OUT_1	10	IR_OUT_2
11	GND	12	-

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



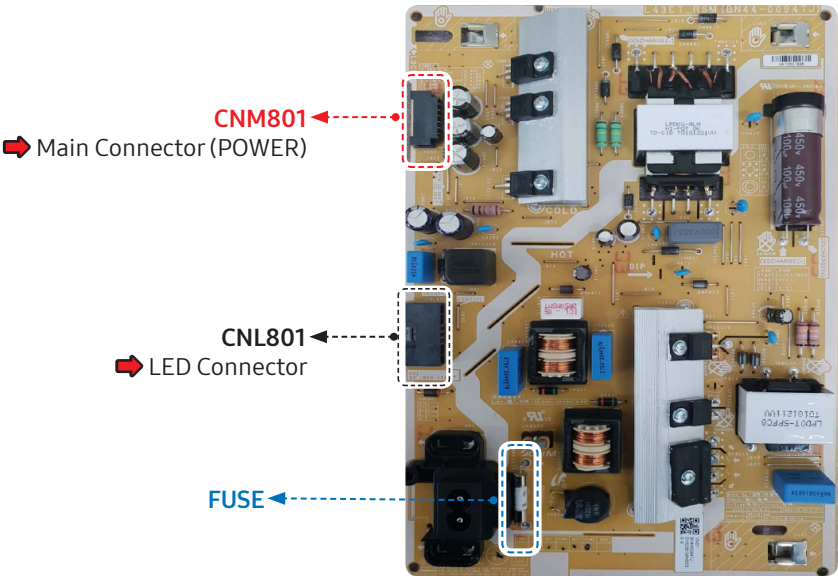
[On Screen Selections with Function Control]

- If missing:
    - ✓ **Key\_Input1** (pin **6**) change to 0V with a command.
  - If wrong voltage or no change:
    - ✓ Switch for stuck or miss-operation.
5. Check **IR** operation with Standard Remote command changes.
  6. Check **SDA, SCL** for effective 3.3Vdc. (after power on)
    - If missing suspect Function Assy/Cable Assy./Main Assy

## 4-2. Power

### 4-2-1. SMPS Standby

- 43 inch



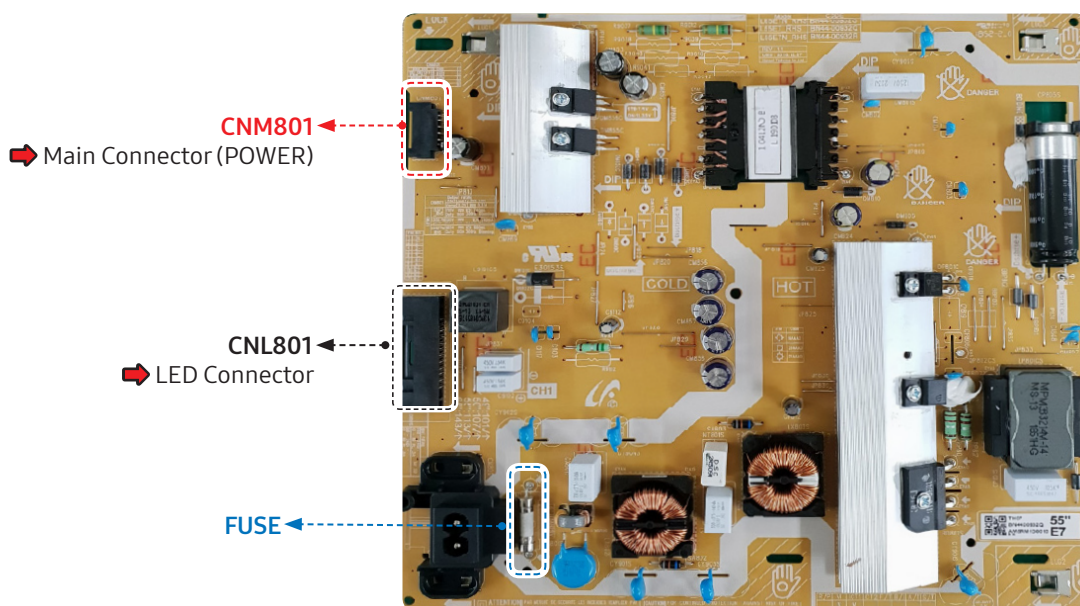
CNM801 (MAIN Connector)											
1	GND	2	ANA-DIM	3	A13V	4	OD_ON/OFF	5	A13V	6	BLU_PWM
7	A13V	8	POWER_On/Off	9	A13V	10	GND	11	GND	12	GND

CNL801 (LED Connector)							
1	1+	2	1-	3	2+	4	2-

#### TV POWER STANDBY TEST :

1. TV in Standby
  - ✓ Check **Standby LED Indicator**
2. If Not Lit:
  - ✓ Check AC 120Vac Line
3. If missing:
  - ✓ Check AC120Vac Source/Power Cord
4. If OK:
  - ✓ Check resistance on SMPS **FUSE** after first removing AC power cord.
5. If fuses are open : replace **SMPS**
6. If fuses are OK:
  - ✓ **Standby: A13V** (Always On) to Main Board.
7. If any missing remove the SMPS connector to the Main Board.
  - ✓ Check Standby **A13V** again.
    - If OK replace the **Main Board**.
    - If still missing replace **SMPS**.

- 50 / 55 / 65 inches



CNM801 (MAIN Connector)											
1	GND	2	ANA-DIM	3	A13V	4	OD_ON/OFF	5	A13V	6	BLU_PWM
7	A13V	8	POWER_On/Off	9	A13V	10	GND	11	GND	12	GND

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

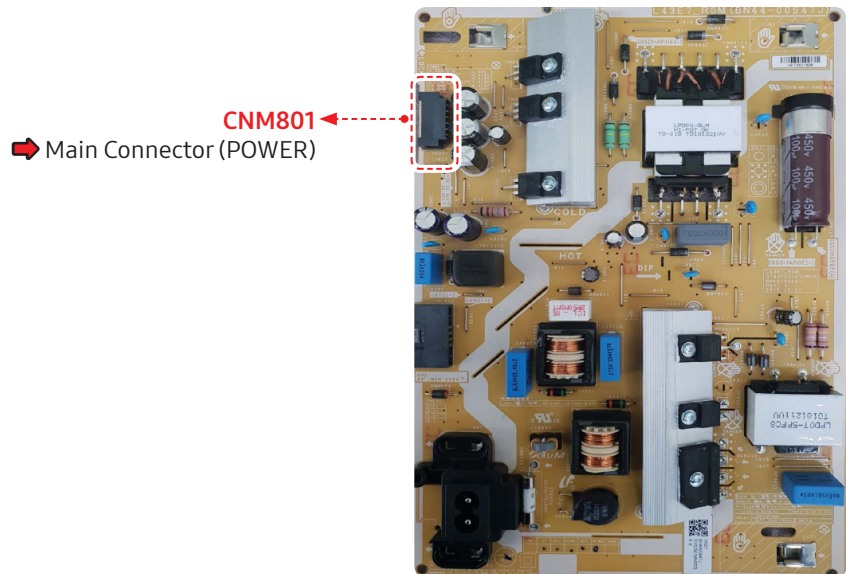
#### TV POWER STANDBY TEST :

- TV in Standby
  - ✓ Check **Standby LED Indicator**
- If Not Lit:
  - ✓ Check AC 120Vac Line
- If missing:
  - ✓ Check AC120Vac Source/Power Cord
- If OK:
  - ✓ Check resistance on SMPS **FUSE** after first removing AC power cord.
- If fuses are open : replace **SMPS**
- If fuses are OK:
  - ✓ **Standby: A13V** (Always On) to Main Board.
- If any missing remove the SMPS connector to the Main Board.
  - ✓ Check Standby **A13V** again.
    - If OK replace the **Main Board**.
    - If still missing replace **SMPS**.



## 4-2-2. SMPS Power On

- 43 inch



CNM801 (MAIN Connector)											
1	GND	2	ANA-DIM	3	A13V	4	OD_ON/OFF	5	A13V	6	BLU_PWM
7	A13V	8	POWER_On/Off	9	A13V	10	GND	11	GND	12	GND

Dashed arrow from pin 8 points to **Power**.  
 Dashed arrow from pin 6 points to **Backlight**.

### TV POWER ON SEQUENCE TEST :

#### 1. Power TV On

- ✓ **Power\_On/Off / POWER\_ON** (pin **8**) .2Vdc (when off) changes to **3.3Vdc** (on)



#### NOTE

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

#### 2. If voltage error or no change:

- ✓ Jog Function Control Test

#### 3. If OK replace **Main Board**

- ✓ All **A13V** supplies for approx. **12.7VDC** (pins **3**, **5**, **7**, **9**)

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

- ✓ All **A13V** again for **12.7VDC** (pins **3**, **5**, **7**, **9**)

#### 5. If OK replace **Main Board**

#### 6. If still wrong voltage replace SMPS

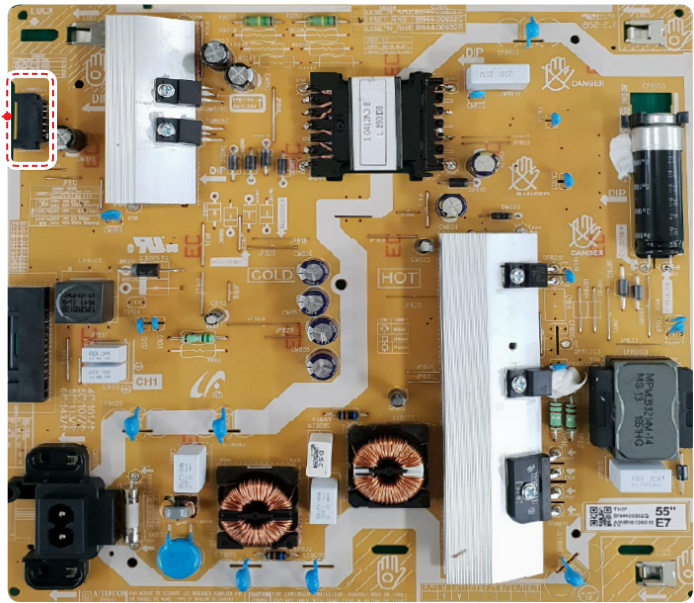
- ✓ **OD\_ON/OFF** (Over Voltage Detect) (pin **4**) 3.3Vdc : Operating Normal

#### 7. If OV or changing, an SMPS or Panel error exists. Perform Backlight Test.

- ✓ **BLU\_PWM / PWM\_BLU** (pin **6**) Backlight On/Off & Dim Control : **1Vdc – 3.3 Vdc** depending on backlight dimming level for video.
  - If missing or error : Replace **Main Board**.

- 50 / 55 / 65 inches

➡ Main Connector (POWER) **CNM801**



CNM801 (MAIN Connector)											
1	GND	2	ANA-DIM	3	A13V	4	OD_ON/OFF	5	A13V	6	BLU_PWM
7	A13V	8	POWER_On/Off	9	A13V	10	GND	11	GND	12	GND

──────────▶ Power (Pin 8)  
 ──────────▶ Backlight (Pin 6)

#### TV POWER ON SEQUENCE TEST :

##### 1. Power TV On

- ✓ **Power\_On/Off / POWER\_ON** (pin **8**) .2Vdc (when off) changes to **3.3Vdc** (on)



#### NOTE

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

##### 2. If voltage error or no change:

- ✓ Jog Function Control Test

##### 3. If OK replace **Main Board**

- ✓ All **A13V** supplies for approx. **12.7VDC** (pins **3**, **5**, **7**, **9**)

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

- ✓ All **A13V** again for **12.7VDC** (pins **3**, **5**, **7**, **9**)

##### 5. If OK replace **Main Board**

##### 6. If still wrong voltage replace SMPS

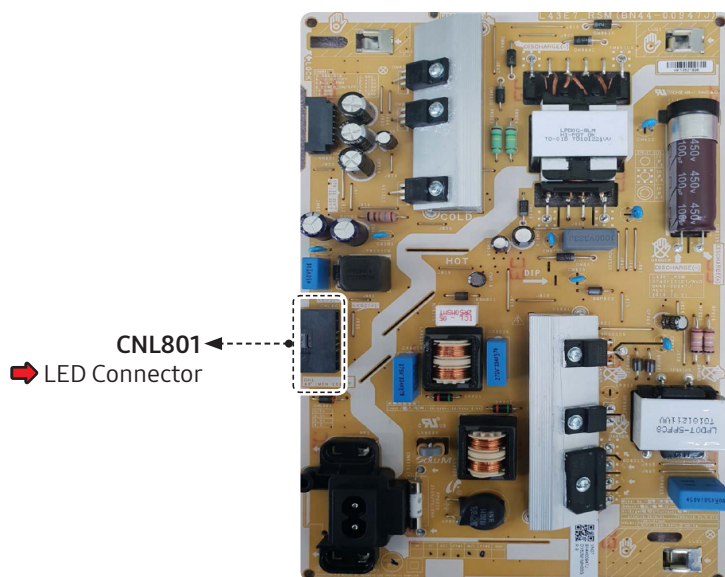
- ✓ **OD\_ON/OFF** (Over Voltage Detect) (pin **4**) 3.3Vdc : Operating Normal

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

- ✓ **BLU\_PWM / PWM\_BLU** (pin **6**) Backlight On/Off & Dim Control : **1Vdc – 3.3 Vdc** depending on backlight dimming level for video.
  - If missing or error : Replace **Main Board**.

### 4-2-3. SMPS / PANEL BACKLIGHT (Parallel Wired SMPS Panel Connections)

- 43 inch



CNL801 (LED Connector)							
1	1+	2	1-	3	2+	4	2-

#### Backlight Test :

1. **Activate Backlights Test** : Disconnect Lead Cable from Main to Power Supply.
  - ✓ Check TV Screen for active backlight LEDs.
2. **If No Backlights**
  - ✓ Minus (Control) pins & Plus (Supply) pins voltages on the Panel Connector. **(with fine test probe on left side of connector only for safety)**
    - If no pin voltages replace **SMPS**.
3. **If Backlights ON BUT PANEL SECTION(S) OFF**
  - ✓ The Supply Drive (+) pins and (-) pins. All should measure same.
    - If a Minus (-) pin measures low (near 0 volts), a string(s) of LEDs are likely open.
      - ✓ Replace **Panel**.
    - If a (+) pin measures low voltage.
      - ✓ Defective **SMPS**

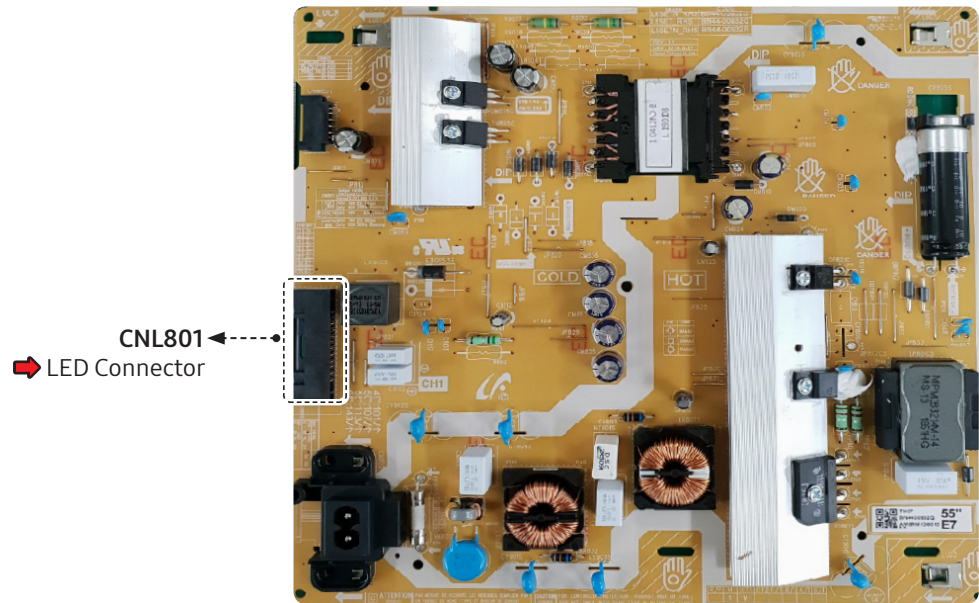
#### BACKLIGHT DIMMING PROBLEMS :

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

**Backlight Test :** In normal TV operating mode, use standard **IR Remote** or **Factory Remote** with commands.

Go to **MUTE > 4 > 1 > 9 > EXIT**

- 50 / 55 / 65 inches



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

#### Backlight Test :

1. **Activate Backlights Test** : Disconnect Lead Cable from Main to Power Supply.
  - ✓ Check TV Screen for active backlight LEDs.
2. **If No Backlights**
  - ✓ Minus (Control) pins & Plus (Supply) pins voltages on the Panel Connector. **(with fine test probe on left side of connector only for safety)**
    - If no pin voltages replace **SMPS**.
3. **If Backlights ON BUT PANEL SECTION(S) OFF**
  - ✓ The Supply Drive (+) pins and (-) pins. All should measure same.
    - If a Minus (-) pin measures low (near 0 volts), a string(s) of LEDs are likely open.
      - ✓ Replace **Panel**.
    - If a (+) pin measures low voltage.
      - ✓ Defective **SMPS**

#### BACKLIGHT DIMMING PROBLEMS :

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


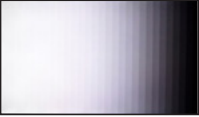
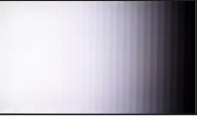
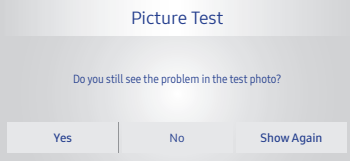
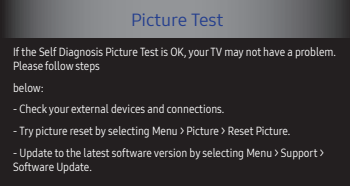
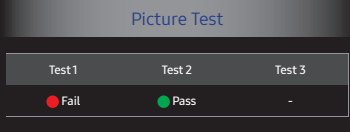
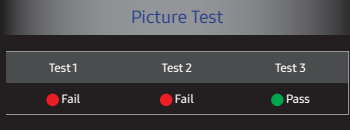
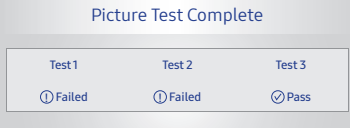
**Backlight Test :** In normal TV operating mode, use standard **IR Remote** or **Factory Remote** with commands.

Go to **MUTE > 4 > 1 > 9 > EXIT**

## 4-3. Video

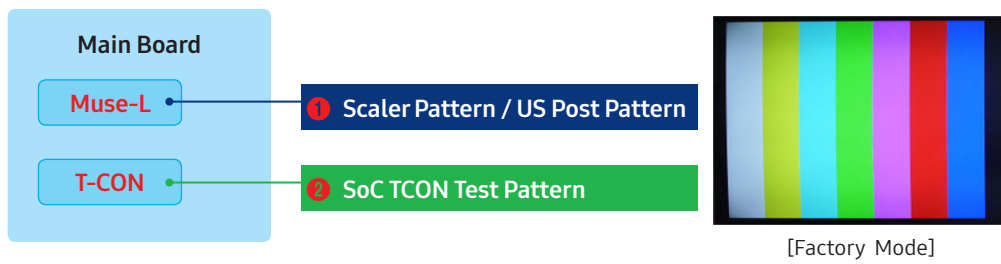
### 4-3-1. Customer Picture Test

#### ■ MAIN/TCON BOARD

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

### 4-3-2. Check Test Patterns

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

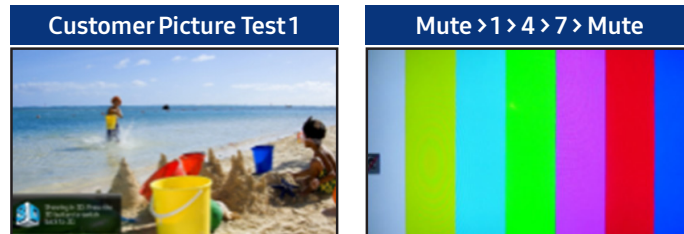


1. Verify "Scaler Pattern" and "US Post Pattern"
2. Verify "SoC TCON Test Pattern"

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

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

#### ■ Main Section

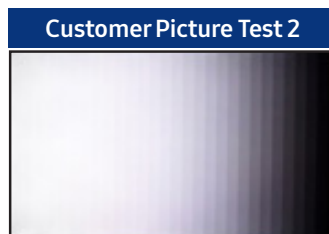


#### Video Operation

Generated on Main Section.

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

#### ■ PRE FRC Section

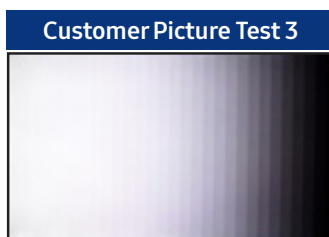


#### Video Operation

Generated at Pre FRC Section.

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

## ■ POST FRC Section



### Video Operation

Generated at Post FRC Section.

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

## ■ T-CON Section



[May not be available for Larger models over 70 inches.]

### Video Operation

Generated at T-CON Section.

1. **If OK:**
  - ✓ Replace Main/T-CON Board.
2. **If Noisy:**
  - ✓ Main/T-CON Board
  - ✓ Panel



## ■ PANEL



- Check Panel

1. If Noisy Video:

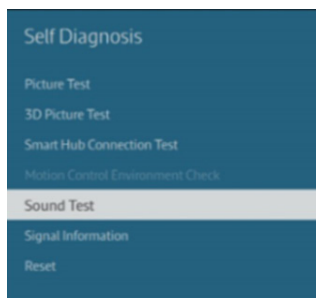
- ✓ Soc T-CON Pattern in Factory Mode
  - Use type of Noise observed (Bars, single lines, video distortion, etc to help.)
  - If noise is only on one half of screen check / swap panel cables.
  - Verify Defective Panel Cables, TV Main/T-CON Board or Panel.

## 4-4. Audio

- Source > Main Board > Speakers

### ■ Source

- **No TV Sound**
  - ✓ Menu > Audio > Speaker Settings set to **TV Speaker**
- **Noisy / Distorted TV Audio**
  - ✓ Customer Menu > Support > **Sound Test**
    - **If Sound Test FAILS : (Missing / Noisy Audio)**
      - ✓ Speakers (compare resistance/quality)
        - Compare audio level out to speakers with multi meter.
      - ✓ Replace defective Speakers or Main Board or Cable.
    - **If Sound Test OK :**
      - ✓ Audio Source & External Cables
      - ✓ With external Audio Generator (device or App)
      - ✓ Other Inputs
- **Optical Digital Out Errors**
  - ✓ Red light from Optical Digital Out.
    - If missing replace Main Board



### ■ Main Board

- **No HDMI Audio**
  - ✓ Source / HDMI Cable
    - Swap with other HDMI Inputs / Sources.
    - Perform **EDID Write** in Factory Mode (Can restore missing HDMI Audio).
  - ✓ Bulletins and Latest firmware on TV.
    - If not restored replace Main Board
    - Check Audio Format PCM / Dolby based on external Receiver
- **ARC Issues**
  - ✓ HDMI Cable is input to the ARC Designated HDMI port.
  - ✓ ARC (HDMI Control) is enabled on the external Receiver.
- **Bluetooth Audio "Sound Share" Connection Issues**
  - ✓ Sound Bar is in TV Mode.
    - To Connect, Press & Hold Play Button until Sound Bar pairing mode begins.

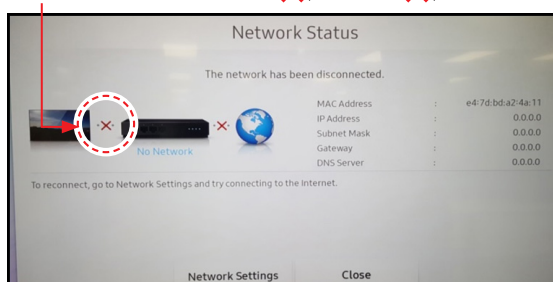
## 4-5. Network



### ■ TV to Router "Failure"

- ✓ **Check** Network Status

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



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

### ■ Router to Network "Failure"

- ✓ **Check** Network Status

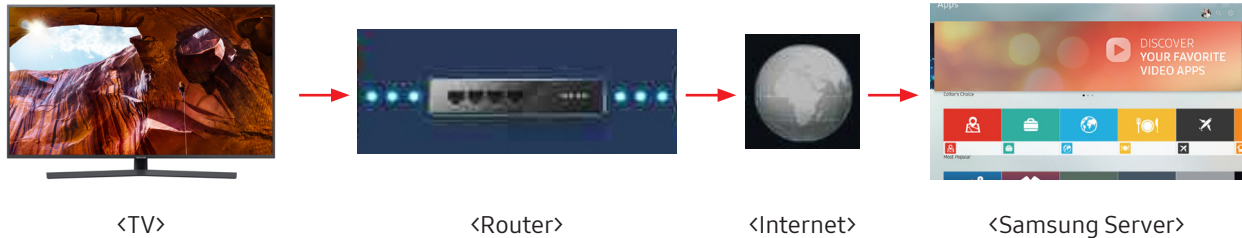
**Check** Network Status (TV → Router ~~→~~ Internet)



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

## 4-6. Smart Hub

- Menu > DNS Support > Self Diagnosis > Start Smart Hub Connection Test



Network Test/Gateway > DNS Test > ISP Blocking > Samsung Server Test > Samsung Apps Test

### ■ Network / Gateway

- If it Fails:
  - ✓ TV to Router Connection Test in "**Network Trouble shooting**"

### ■ DNS Test

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

### ■ ISP Blocking

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

### ■ Samsung Server Test

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

### ■ Samsung Apps

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

#### 4. Troubleshooting

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##### For Netflix Operation/Connection Issues:

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

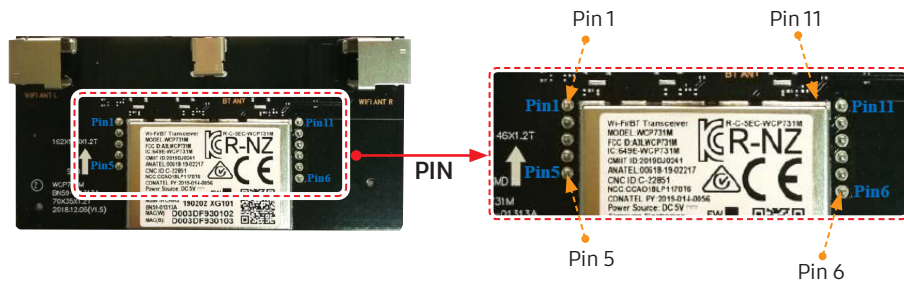


- If Certificate and ESN exists, "CO", "Nfo", change the **DNS** to **8.8.8.8**
- If Certificate is missing, "C/" replace the TV's Main Board.
- If ESN number is missing: **NF**/ do not replace the Main Board.
  - Reset TV Clock and check for correct Time & Date. Netflix relies on correct settings.
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

##### For Streaming Issues:

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

## 4-7. BlueTooth / WiFi Module



### Pin Description

Pins	Pin Name	Description	Type
1	UART_TX	UART_Tx signal out	O
2	GND	Ground	G
3	WIFI_WAKE_UP	Wake up signal input	O
4	BT_WAKE_UP	Wake up signal input	O
5	RESET_N	Reset for Wi-Fi	I
6	GND	Ground	G
7	WIFI-USB_DP	USB Interface D+	I/O
8	WIFI_USB_DM	USB Interface D-	I/O
9	GND	Ground	G
10	USB_5V	+5V DC power supply for DC-DC	V
11	WIFI_USB_SUSPEND	USB Suspend	I

## 4-8. Factory Mode

### ■ Setting TV into Factory Mode



AA81-00243A

#### Factory Remote

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

#### Samsung IR Remote

1. TV Power Standby.
2. Press as follows.

- Remote Button

**NTSC**   **MUTE** → **1** → **8** → **2** → **POWER**

**PAL**   **INFO** → **MENU** → **MUTE** → **POWER**

### ■ Important Items

- **Option** (must set Option Bytes when replacing Main Board.)
- Option → **Factory Reset** (returns TV to out of box condition.)
  - Must perform when replacing Main Board or Full One Connect)
  - **Factory Reset** : Select Factory Reset

<b>Factory Reset</b>	
Type	55A6AU5NN
Writing Type	
Local Set	ED_VIET
SW Model	URU7400
Model Code	UA55RU7400KXXV
TUNER	S_T2CS2
Ch Table	NONE

← Ex. Sample Model

- SVC → Info → **ER Count** (Important to check for errors.)
  - Resets to 0 with Factory Reset.
  - ✓ Check before resetting TV
- SVC → **Test Patterns** (Use to check / troubleshoot) videos errors.
- Control → **EDID** (Use to Reset HDMI Operational Errors)

**Setting Option Bytes**

1. Enter Factory Mode with **Service Remote** (only).
2. Check Option Byte Table located on **GSPN** (Fast Track or Tips).
3. Select **Option**.
4. Select each item to change.
5. Can Use new **Writing Type** to enter model (if entered wrong it will not change.)
6. Soft power TV Off to load.

**Performing Factory Reset**

1. Enter Factory Mode.
2. Select **Option** ➤ **Factory Reset**
3. TV will power off.
4. Perform ALL TV Settings. (New out of box condition)

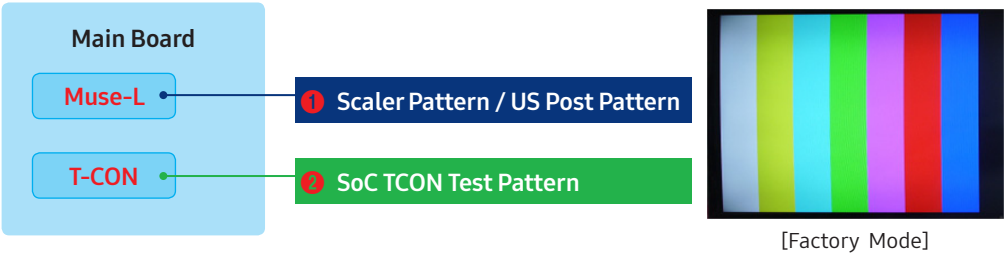
**First Screen Appearing in Factory Mode**

- Sample : UA55RU7400KXXV

Home	Updates	Exit		✓ Testing Items
Option			T-MSLDEUC-XXXX.XX	✓ Micom Version
Control			T-MLINTV-XXXX	✓ Sub Micom
Debug			TIZEN-X.X.-TRUNK2019*-MuseL-RELEASE_XXXXXXXX.X (Debug)	✓ Tizen
SVC			BT Version : BLUETOOTH-VER-XXXX	✓ BT Version
ADC/WB			E-Manual:----	✓ E-Manual
Advanced			Blaster Version : Not support	✓ Blaster Version
			E-POP Version : MUSEUHD-X.XX.X	✓ E-Pop Version
			EDID SUCCESS	✓ EDID Success (Status)
			HDCP SUCCESS	✓ HDCP Success (Status)
			CALIB : AV/COMP/PC/HDMI/ Option : 55A6AU5NN,ED_VIET,UA55RU7400KXXV,NONE DTCP : Not Supported (X) FRC-[MUSE-L xxx][60Hz][HW:0x0F] DIMMING-[GLOBAL][FF] LD FW1 : ---- LD FW2 : ---- TCON-[MUSE-L] FW[xxxx] DATA[xxxx]	
			Model : UA55RU7400KXXV	✓ Model
			Wired MAC SUCCESS	✓ Wired MAC Success
			Wireless MAC SUCCESS	✓ Wireless MAC Success
			WIFI Version : x.x.xx.xxx.xxx.xxxxxx	
			CO NfO W/MO D/HX PO AO O S/N/RO FP/SIO WS/DIO UX IO (T) NS//,1100	✓ CO Status ("O" Operational)
			Factory Data Ver : XXX / Fixed Ver : XX	✓ Factory Data Version
			EERC Version ; XX / WB Ver : 1	
			CPLD/LD : N/A SmartControl : ----/----	
			Board Info : XXXX/XX/XX/XX/X/BNXX-XXXXXXX	
			Factory Reset In Production : ----	
			SID : ----	✓ SID
			Date of purchase : --/--/----	✓ Date of Purchase (resets with Factory Reset)



■ SVC ➤ Test Patterns



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

Scaler Pattern	OFF
US Post Pattern	OFF
FRC Pre Pattern	0
FRC Post Pattern	0
SOC TCON Pattern	0
SOC TCON Pattern Level	255
FRC OSD Pre Pattern	0
FRC OSD Post Pattern	0
FRC2 Pre Pattern	0
FRC2 Post Pattern	0
SOC TCON2 Pattern	0
SOC TCON2 Pattern Level	255
SOC TCON3 Pattern	0
SOC TCON3 Pattern Level	255

## ■ SVC > Info > ER Count

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

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

■ **Factory Mode > Control > EDID**

- 1. Remove ALL **HDMI** connections.
- 2. Factory Mode → Control → **EDID**. (→ **Enter** Key)

Option	EDID
Control	Sub Option
Debug	
SVC	
ADC/WB	
Advanced	

- 3. Select EDID/OFF to ON. (→ **Right Arrow** Key)

EDID ON/OFF	ON
-------------	----

- 4. Select EDID WRITE ALL. (→ **Enter** Key)

EDID WRITE ALL	Success
----------------	---------

- 5. Wait to Success. (→ **Right Arrow** Key)

EDID WRITE ALL	Wait
----------------	------

- 6. Confirm EDID WRITE ALL Success. (→ **Menu** Key)

EDID WRITE ALL	Success
----------------	---------

## ■ Important New Option Byte “Writing Type” Entry

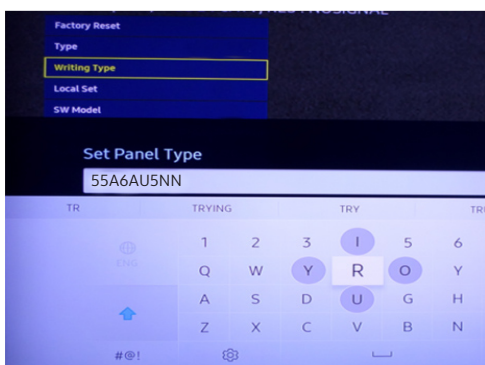
### For Quick Entry of Type

1. Confirm **Type** from Option Byte Table for your TV.
2. Select **Writing Type**.

Factory Reset	
Type	55A6AU5NN
Writing Type	
Local Set	ED_VIET
SW Model	URU7400
Model Code	UA55RU7400KXXV

◀Select Writing Type▶

3. “Set Panel Type” appears.

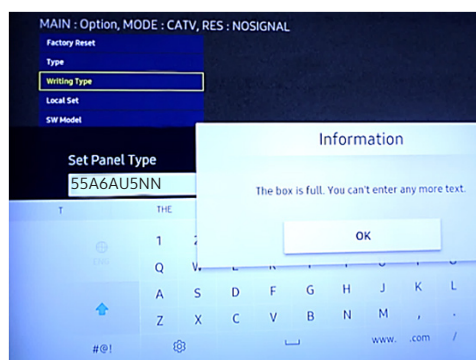


◀Set Writing Type▶

4. Enter exact Model Type using cursors.
5. Select **OK**.
6. **Writing Type Success** appears in the Option Table.  
If the model Type you entered doesn't exist it will not load.  
If you entered over 10 digits an Information screen box is full appears.

Factory Reset	
Type	55A6AU5NN
Writing Type	Success
Local Set	ED_VIET
SW Model	URU7400
Model Code	UA55RU7400KXXV

◀Writing Type Success▶



◀Writing Type digits exceeded▶

7. Complete rest of Option Byte Table info.
8. Press soft power off with remote to enter settings.



#### NOTE

When installing the ASSY PCB MAIN BOARD, verify the board is properly positioned in all 4 mounting slots.

## ■ Important New Option Byte “Model Code” Entry

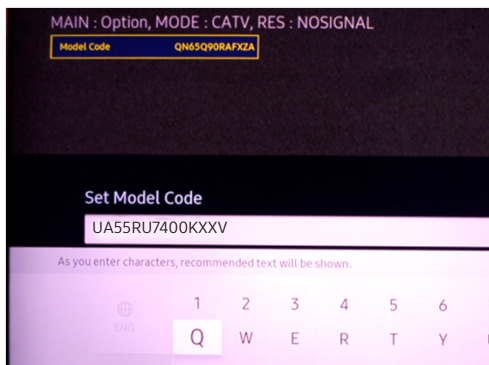
### For Quick Entry of Model Code

1. Confirm **Model Code** from Option Byte Table for your TV.
2. Select **Model Code**.

Factory Reset	
Type	55A6AU5NN
Writing Type	Success
Local Set	ED_VIET
SW Model	URU7400
Model Code	UA55RU7400KXXV

<Select Model Code>

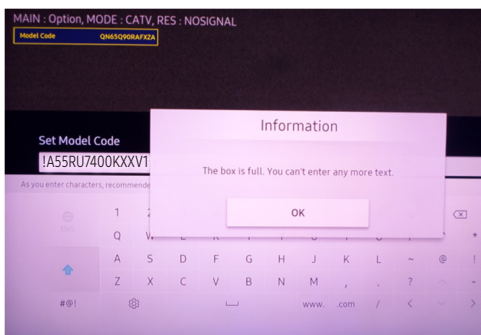
3. “Set Model Code” appears.
4. Enter exact Model Type using cursors.



<Set Model Code>

5. If you entered over 19 digits an **Information** screen **box is full** appears.

**IMPORTANT:** It will accept wrong model code, be sure to enter correct code



<Model Code digits exceeded>

Factory Reset	
Type	55A6AU5NN
Writing Type	Success
Local Set	ED_VIET
SW Model	URU7400
Model Code	!A55RU7400KXXV1

<Wrong Model Code Entry>

6. Complete rest of Option Byte Table info.
7. Press soft power off with remote to enter settings.

## 4-9. Factory Mode Adjustments

### 4-9-1. Entering Factory Mode

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

- With Consumer Remote (IR Remote)

✓ Remote Button :

**NTSC** **POWER OFF** → **MUTE** → **1** → **8** → **2** → **POWER ON**

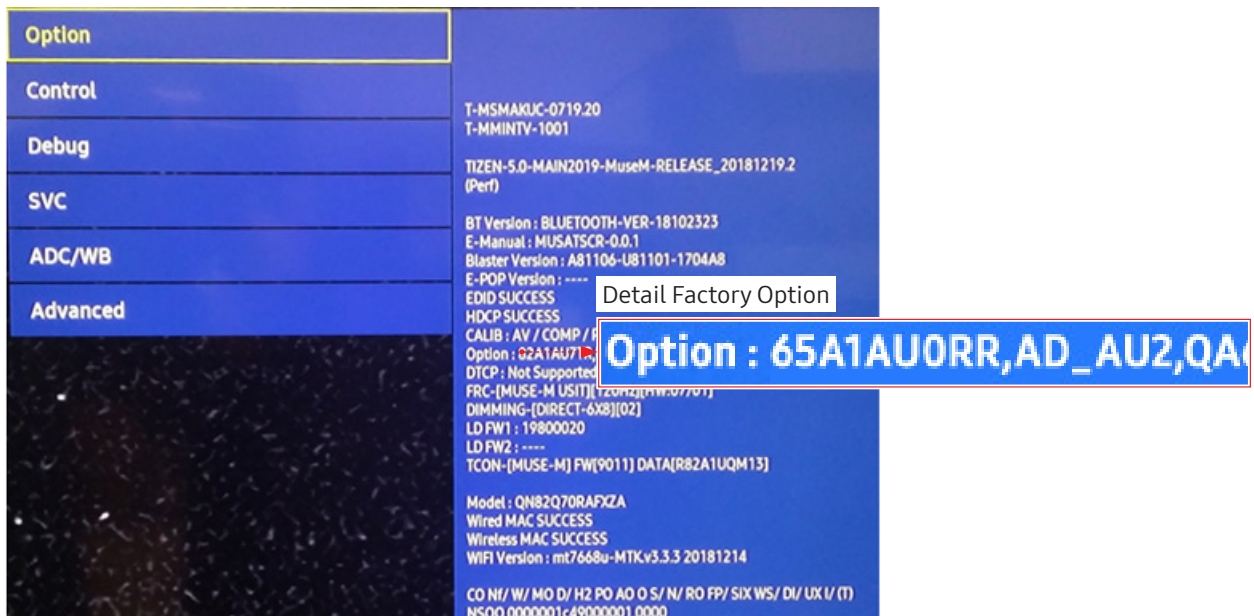
**PAL** **POWER OFF** → **INFO** → **MENU** → **MUTE** → **POWER ON**

- With Factory Remote

**INFO** → **FACTORY**

- The following screen appears.

- Please refer to "[Detail Factory Option](#)" page" for details.



## 4-9-2. 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**".

### ■ UA43RU7400KXXV

#### • PANEL / SMPS / MAIN Information

Multi Bom	Panel Info	Panel Type	Description	SMPS	Assy Chassis	Assy PCB/ Main	S/W Model
AC01	BN95-04755G	43L6AU6NN	PRODUCT LCD-AUO	BN44-00947K	BN91-20904D	BN94-14152C	URU7400
BD02	BN95-04756F	43B6AU6NN	PRODUCT LCD-BOE	BN44-00947K	BN91-21438K	BN94-14793Q	URU7400
BP05	BN95-04756W	43B6AUNNR	PRODUCT LCD-BOE	BN44-00947K	BN91-21488B	BN94-14855W	URU7400
CE03	BN95-05655E	43S6AUNNR	PRODUCT LCD-CSOT	BN44-00947K	BN91-21484C	BN94-14883U	URU7400
AK04	BN95-06085B	43L6AU6NN	PRODUCT LCD-AUO	BN44-00947K	BN91-20904D	BN94-14152C	URU7400

#### • MAIN Factory Option

Local Set	ED_VIET	Bom Model	7400	Front Color	U-F-RU71-S-43
-----------	---------	-----------	------	-------------	---------------

#### • PBA Factory Option

Panel Type	00GD00020	Local Set	AD_AU2	S/W Model	URU7400	Bom Model	Follow S/W Model
------------	-----------	-----------	--------	-----------	---------	-----------	------------------

## ■ UA50RU7400KXXV

- PANEL / SMPS / MAIN Information

Multi Bom	Panel Info	Panel Type	Description	SMPS	Assy Chassis	Assy PCB/ Main	S/W Model
AC02	BN95-04753B	50L6AU5NN	PRODUCT LCD-AUO	BN44-00932R	BN91-21438F	BN94-14799F	URU7400
DC01	BN95-04754B	50D6AU5NN	PRODUCT LCD-INX	BN44-00932R	BN91-21293J	BN94-14142A	URU7400
YC03	BN95-06001C	50C6AU5NN	PRODUCT LCD-CEC	BN44-00932R	BN91-21436Q	BN94-14799K	URU7400

- MAIN Factory Option

Local Set	ED_VIET	Bom Model	7400	Front Color	U-F-RU71-S-50
-----------	---------	-----------	------	-------------	---------------

- PBA Factory Option

Panel Type	00GD00020	Local Set	AD_AU2	S/W Model	URU7400	Bom Model	Follow S/W Model
------------	-----------	-----------	--------	-----------	---------	-----------	------------------



## ■ UA55RU7400KXXV

- PANEL / SMPS / MAIN Information

Multi Bom	Panel Info	Panel Type	Description	SMPS	Assy Chassis	Assy PCB/ Main	S/W Model
FC01	BN95-04751B	55A6AU5NN	PRODUCT LCD-SDC	BN44-00932R	BN91-20894B	BN94-14489A	URU7400
AC02	BN95-04752B	55L6AU5NN	PRODUCT LCD-AUO	BN44-00932R	BN91-21436V	BN94-14793T	URU7400
FG03	BN95-06097A	55A6AU5NN	PRODUCT LCD-SDC	BN44-00932R	BN91-20894B	BN94-14489A	URU7400
AF04	BN95-06101A	55L6AU5NN	PRODUCT LCD-AUO	BN44-00932R	BN91-21436V	BN94-14793T	URU7400

- MAIN Factory Option

Local Set	ED_VIET	Bom Model	7400	Front Color	U-F-RU71-S-55
-----------	---------	-----------	------	-------------	---------------

- PBA Factory Option

Panel Type	00GD00020	Local Set	AD_AU2	S/W Model	URU7400	Bom Model	Follow S/W Model
------------	-----------	-----------	--------	-----------	---------	-----------	------------------

## ■ UA65RU7400KXXV

- PANEL / SMPS / MAIN Information

Multi Bom	Panel Info	Panel Type	Description	SMPS	Assy Chassis	Assy PCB/ Main	S/W Model
FC01	BN95-04748B	65A6AU5NN	PRODUCT LCD-SDC	BN44-00932T	BN91-20894A	BN94-14147E	URU7400
AD03	BN95-04749J	65L6AUNNR	PRODUCT LCD-AUO	BN44-00932T	BN91-21488F	BN94-14890A	URU7400
DD02	BN95-04750B	65D6AU5NN	PRODUCT LCD-INX	BN44-00932T	BN91-21436Z	BN94-14793Z	URU7400

- MAIN Factory Option

Local Set	ED_VIET	Bom Model	7400	Front Color	U-F-RU71-S-65
-----------	---------	-----------	------	-------------	---------------

- PBA Factory Option

Panel Type	00GD00020	Local Set	AD_AU2	S/W Model	URU7400	Bom Model	Follow S/W Model
------------	-----------	-----------	--------	-----------	---------	-----------	------------------

## 4-9-3. Factory Data

### ■ Option

Factory Menu Name		Data	Range
<b>Factory Reset</b>		-	
<b>Type</b>	43"	43L6AU6NN, 43B6AU6NN, 43B6AUNNR, 43S6AUNNR	
	50"	50D6AU5NN, 50L6AU5NN, 50C6AU5NN	
	55"	55A6AU5NN, 55L6AU5NN	
	65"	65A6AU5NN, 65L6AUNNR, 65D6AU5NN	
<b>Writing Type</b>			
<b>Local set</b>		ED_VIET	
<b>SW Model</b>		URU7400	
<b>Model Code</b>		UA**RU7400KXXV	43/50/55/65
<b>TUNER</b>		-	PAL,DVB-T2/C
<b>Ch Table</b>		NONE	
<b>MRT Option</b>			
<b>Engineer Option</b>			

### ■ Control

Factory Menu Name		Data	Range
<b>EDID</b>			
EDID ON/OFF		OFF	
EDID WRITE ALL		...	
EDID WRITE HDMI		...	
EDID WRITE PC		...	
HDMI EDID Ver		...	
HDMI EDID Port		...	
<b>Sub Option</b>			
RS-232 Jack		UART	
EXT Link Support		ON	
Serial Log On/Off		OFF	
Watchdog		ON	
FRC Monitoring		OFF	
Checksum		0x0000	
Fast Boot In Production		ON	
USB Serial		OFF	

Factory Menu Name	Data	Range
ECO IC TYPE	NOT_DETECT	
COLOR IC TYPE	RISG315	
Info Link Server Type	development	
Info Link Country	None	
TTX Group	UserOSD	
OPTION_SWU		
RF Remocon Support	OFF	
CDD mode	...	
DPMS Support	OFF	
T-CON Device	MUSE-l	
RM Server Type	Operating	
LMF LEAVE THRESHOLD	160	
LMF TRIM THRESHOLD	120	
LMF TERM THRESHOLD	80	
EOS Click	OFF	
BP PMS Reset	1	
FAnet Thread	2	
CI CPLD Version	1	
ACM_MC	ON	
UNIQUE TRIPLET	ON	
FS_FAV	OFF	
Private Range USE	ON	
SCSA Support	OFF	
OCM Reboot	ON	
SPI Protection		
FKP Server Type	Default	
OCM Support	ON	
Preloading Support	ON	
Multitasking Support	ON	
Browser preloading Support	FULL	
EXT IR Boot Support	OFF	
APP BOOTING SUPPORT	ON	
NagSam Support	OFF	
EWBS Support	OFF	
MVPD MBR Provider	COMCAST	
cloudscan Always Upload	OFF	
FirstScreen Cach Size	300	

#### 4. Troubleshooting

Factory Menu Name	Data	Range
<b>Hotel Option</b>		
Hospitality Mode	OFF	
Power On		
Menu OSD		
Operation		
Music Mode		
External Source		
Eco Solution		
Cloning		
<b>Shop Option</b>		
Exhibition Mode	OFF	
Peak Mode	ON	
Metadata	ON	
Shopmode Picture Reset	ON	
<b>Asia Option</b>		
Unbalance	OFF	
AF Level adjust	0	
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	0	
<b>SOUND</b>		
High Devi	OFF	*If the broadcast signal is not good, TV will complement the characteristics of the signal (most use when weak signal comes from the growing area countries)
Carrier_Mute	ON	*If the noise comes from weakness-electromagnetic field, TV will be set Mute automatically(Only default on in North America)
Pilot Level High Thld	0x20h	* The High threshold value of stereo signal(If Pilot level is greather than High threshold value, recognize Stereo signal)
Pilot Level Low THLD	0x10h	* The Low threshold value of stereo signal(If Pilot level is less than Low threshold value, recognize Mono signal)
Carrier2 Amp High ThLD	9	
Carrier2 Amp Low THLD	6	
Amp Volume	0xc4h	
Amp Scale	0x3ch	
Amp EQ Check Sum	0x000057B5	
Subwoofer Support	3	
Woofer Type	0	

Factory Menu Name	Data	Range
Woofer Volume	0xc7h	
Woofer Scale	0x3fh	
Woofer Check sum	0x0000A273	
PEQ Inx	76	
PEQ Test	Ready	
Speaker EQ	ON	
Bottom Checksum	NONE	
Wall Filter Type	3	
SRS Tuning Parm	0	
SPDIF PCM Gain	-9	
AudioDock BT Delay	90	
3D_Glass BT delay	50	
Mic Scale	OFF	
India Sound	0	
Speaker Delay Normal	0	
NTV CU Delay	NORMAL	
Lipsync Inx	1	
Lipsync Checksum	0x4972	
Lipsync USB Test	Ready	
Lipsync BT Checksum	0x0000	
TP volume	0xc4h	
TP Scale	0x6ch	
TP EQ CheckSum	NONE	

## ■ Debug

Factory Menu Name	Data	Range
<b>Spread Spectrum</b>		
LVDS Spread	0	
DDR Spread	0	
Period	0	
Amplitude	0	
HD DDR SSC ON OFF	OFF	
HD DDR SSC Value	0	
FHD DDR SSC ON OFF	OFF	
FHD DDR SSC Value	4	
UHD DDR SSC ON OFF	ON	
UHD DDR SSC Value	0	

#### 4. Troubleshooting

Factory Menu Name	Data	Range
PeBus SSC ON/OFF	OFF	
PeBus Value	0	
LVDS SSC ON/OFF	OFF	
LVDS SSC Value	0	
AP Vx1 SSC ON/OFF	ON	
AP Vx1 Value	12	
N Vx1 SSC ON/OFF	ON	
N Vx1 Value	0	
FRC Vx1 SSC ON/OFF	OFF	
FRC Vx1 SSC Period	0	
FRC Vx1 SSC Modulation	0	
FRC LVDS ON/OFF	ON	
FRC LVDS SSC MFR	3	
FRC LVDS SSC MRR	2	
FRC DDR SSC ON/OFF	ON	
FRC DDR SSC Period	1	
FRC DDR SSC Modulation	2	
ADV7619 Data strength	1	
ADV7619 Clock strength	1	
ADV7619 H_V_DE strength	1	
AP DDR SSC ON/OFF	OFF	
AP DDR SSC Value	0	
AP USIT SSC ON/OFF	ON	
AP USIT SSC Value	13	
OCM Vx1 SSC ON/OFF	OFF	
OCM Vx1 SSC Value	0	
TCON USIT SSC ON/OFF	BYPASS	
<b>DDR Margin</b>		
A CTRL_OFFSET_0_3	0	
A CTRL_OFFSET_D	0	
B CTRL_OFFSET_0_3	0	
B CTRL_OFFSET_D	0	
<b>BT_ON_OFF</b>	ON	
<b>RF Mute Time</b>	600ms	
<b>Tuner Margin</b>	3	European specifications
<b>FRC</b>		
FRC FDISPLAY ON/OFF	OFF	

Factory Menu Name	Data	Range
3D FDISPLAY ON/OFF	OFF	
PC Mode ON/OFF	OFF	
FRC VX1 RX EQ SETTING	OFF	
FRC VX1 TX Pre_emphasis setting	0	
Netflix OSD Threshold	179	
<b>TCON</b>		
TCON_TEMP READ	34	
TEMP LAST	6000	
DCC VERSION	0x0	
TCON Demura Bypass	OFF	
TCON FDisplay	OFF	
Panel Code 1		
Panel Code 2		
Panel Revision		
Panel Menu Week		
Panel S/N 1		
Panel S/N 2		
Panel S/N 3		
Panel S/N 4		
<b>MPEG Margin</b>		
<b>H.264 Margin</b>		
<b>CAM Wait Time</b>		
<b>Voice Debug</b>		
<b>Power Management</b>		
<b>Cert Option</b>		
<b>RM_BIST_DTV</b>		
<b>RM_BIST_ATV</b>		
<b>RM_BIST_CABLE</b>		
<b>SerDES Check</b>		
<b>SerDES Tuner</b>		
HDMI SW	Failure	
HDMI Rx	Failure	
MP Failure		
Main SerDES	Failure	
Jack SerDES	Failure	
<b>Stress Mode</b>		
<b>Log Analyzer</b>		



#### 4. Troubleshooting

Factory Menu Name	Data	Range
<b>Error Popup On/Off</b>		
<b>DeadLock KILL</b>		
<b>CES Option</b>		
<b>CES Convergence Option</b>		
<b>CES ATSC 3_0</b>		
<b>CES OOB MDPD SUPPORT</b>		
<b>BT DUT</b>		
<b>BT Throughput</b>		
<b>Reproduce Module</b>		
<b>21_9</b>		
L-DETECT STABLE TIME	7	
L-DETECT UNSTABLE TIME	3	
L-DETECT CAPTION THRESHOLD	720	
L-DETECT RAGION THRESHOLD	720	
L-DETECT B-LEVEL THRESHOLD	32	
L-DETECT USB SUPPORT	0	
<b>DB Download</b>		
MRT Option Dump	Failure	
Picture Data Dump	Failure	
VCONF Dump	Failure	
<b>Read Eco Sensor Data</b>		
<b>No Signal Power OFF</b>		
<b>Alert Option</b>		
<b>Default HDMI1 Booting</b>		

#### ■ SVC

Factory Menu Name	Data	Range
<b>Self Test(for HW)</b>		* the Output of test pattern from each IC
<b>Info</b>		
<b>Reset</b>		
Apps Reset		
SVC Reset		
SPI Flash Reset		
Data Sync Reset		
Factory Data Reset		
<b>OPTION_HDMI</b>		

Factory Menu Name	Data	Range
DVI/HDMI SOUND	Auto	
HDMI HOT PLUG	Disable	
HOTPLUG SWITCHING	Auto	
HOT PLUG DURATION	800ms	
CLK TERM DURATION	300ms	
HDMI FLT CNT SIG	0ms	
HDMI FLT CND SIG2		
HDMI FLT CNT LOS	0ms	
UNSTABLE BAN CNT	1250ms	
HDMI ROBIN	0	
HDMI Callback	ON	
HDMI CTS Thld	0	
HDMI CTS Cnt1	0	
HDMI EQ	0	
HDMI Write Type	0	
HDMI Switch	0	
DVI SET TIME	0	
H Write	0	
HDMI Sync	0	
HDMI 3D DET	1	
HOT PLUG OFF HOLD TIME	600ms	
HDMI MUTE TIME	0ms	
HDMI NFST UNMUTE TIME	800ms	
HDMI FST UNMUTE TIME	0ms	
REPEA AUDIO PKT	OFF	
HDMI Stable Count	3	
HDMI HDCP EN	OFF	
HDMI HDCP EN FLAG	85	
POWER ON FLT CNT LOS		
HDCP UPDATE SPI	READY	
SPI VERSION	0	
HdmiRx EQ	0	
HDMI TMDS ERR DET	1	
<b>DVB CI</b>		
TS Clock delay TC	0	
TS Clock delay S	0	
CI Control Buf ON	ON	
TS Clock delay CPU	1	

#### 4. Troubleshooting

Factory Menu Name	Data	Range
TS Clock delay TC2	0	
TS Clock delay S2	0	
CI Control Buf ON2	1	
TS Clock delay CPU2	0	
<b>Test Pattern</b>		
Scaler Pattern	OFF	
US Post Pattern	OFF	
FRC Pre Pattern	0	
FRC Post Pattern	0	
SOC TCON Pattern	0	
SOC TCON Pattern Level	255	
FRC OSD Pre Pattern	0	
FRC OSD Post Pattern	0	
FRC2 Pre Pattern	0	
FRC2 Post Pattern	0	
SOC TCON2 Pattern	0	
SOC TCON2 Pattern Level	255	
<b>Upgrade</b>		
T-CON DATA UPGRADE		
T-CON FW UPGRADE		
T-CON CheckSum		
T-CON2 Usb Download		
T-CON2 CheckSum		
PANEL EEPROM UPGRADE		
PANEL FLASH UPGRADE		
Logic Usb D/L		
SUBMICOM UPGRADE		* Upgrade Sub-Micom Program
SUBMICOM JP USB UPGRADE		
BT UPGRADE		
BT FREEPAIRING		
Function Upgrade		
FRC3D FW UPGRADE		
FRC3D SRP UPGRADE		
FRC3D LD UPGRADE		
FRC2 3D FW UPGRADE		
Camera Upgade		* Upgarde Camera module(There is upgrade program in Main-Image)

Factory Menu Name	Data	Range
Mic Upgrade		* Upgarde MIC in Camera module(There is upgrade program in Main-Image)
Jump UPGRADE		
IR Blaster Upgrade		
IR Blaster delay time		
NTV CU UPDATE		
UD LDC PROFILE UPGRADE		
Pic Data USB Update		
Audio Data USB Update		
Eco Data USB Update		
CI CPLD Upgrade		
SC ADK Upgrade		
<b>Other Setting</b>		
Delete S/N		
IPERF	Stopped	
Expert		
CAL Data Backup	...	
CAL Data Restore		
MICOM POWER OFF	ON	
NTV CU FW VER	0	
ATV IF AGC SPEED	0	
Upgrade UHD OSD Test	0	
Main USB Path		
JackP USB Path		
Source Direct On/Off	OFF	
Apps Update		
Auto Power	LAST POWER	
SMCE Control		
Motor Test		
Cube Test		
V APP	OFF	
Picture Direct On/Off	OFF	
<b>SVC Panel</b>	ORIGINAL	
<b>S/N</b>		
Serial number		
Writing S/N		

## ■ ADC/WB

Factory Menu Name	Data	Range
<b>ADC</b>		
AV Calibration		
Comp Calibration		
PC Calibration		
HDMI Calibration		
<b>ADC Result</b>		
1st_Y_GH	0	
1st_Y_GL	0	
1st_Cb_BH	0	
1st_Cb_BL	0	
1st_Cr_RH	0	
1st_Cr_RL	0	
2nd_R_L	128	
2nd_G_L	128	
2nd_B_L	128	
2nd_R_H	69	
2nd_G_H	69	
2nd_B_H	69	
<b>White Balance</b>		
R-Offset	128	
G-Offset	128	
B-Offset	128	
R-Gain	128	
G-Gain	128	
B-Gain	128	
WB-W2_R_Offset	128	
WB_W2_B_Offset	128	
WB_W2_R_Gain	136	
WB_W2_B_Gain	76	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	131	
WB_N_B_Gain	119	
<b>MGA</b>		
MGA On/Off	OFF	
R1_Gain		

Factory Menu Name	Data	Range
G1_Gain		
B1_Gain		
R2_Gain		
G2_Gain		
B2_Gain		
R3_Gain		
G3_Gain		
B3_Gain		
R4_Gain		
G4_Gain		
B4_Gain		
R5_Gain		
G5_Gain		
B5_Gain		
R6_Gain		
G6_Gain		
B6_Gain		
R7_Gain		
G7_Gain		
B7_Gain		
R8_Gain		
G8_Gain		
B8_Gain		
R9_Gain		
G9_Gain		
B9_Gain		
R10_Gain		
G10_Gain		
B10_Gain		
<b>SPI White Balance</b>		
SPI White Balance On/Off		
SPI R-Offset		
SPI G-Offset		
SPI B-Offset		
SPI R-Gain		
SPI G-Gain		
SPI B-Gain		

4. Troubleshooting

Factory Menu Name	Data	Range
SPI N Rgain		
SPI N Bgain		
SPI N Roffset		
SPI N Boffset		
SPI W2 Rgain		
SPI W2 Bgain		
SPI W2 Roffset		
SPI W2 Boffset		
<b>SPI MGA</b>		
<b>WB Data to SPI</b>		

■ Advanced

## 4-10. Replacing Main Board

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

### ■ Steps to Replace Main Board

1. Enter Factory Menu (Use Factory Remote only).

- Power TV on : **Select TV Source > Info/Factory > Option**

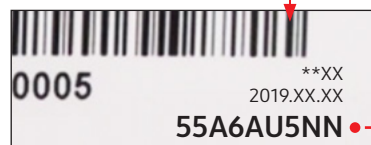
2. Change Each value according to the TV Model.

- Type**, **Local Set**, **SW Model**, **Model code** must be set to correct value.

- Sample Model : UA55RU7400KXXV**

#### Type

- Check Panel label (located in the back chassis of panel) and choose same Type code from the list.



<"Type" in Panel Label>

Home	Updates	Exit
Factory Reset		
Type	55A6AU5NN	
Writing Type		
Local Set	ED_VIET	
SW Model	URU7400	
Model Code	UA55RU7400KXXV	
TUNER	-	
Ch Table	-	
MRT Option		
Production Option		
Engineer Option		

55A1QU7QN	55L1QU7QN
75L1QU7QN	55A1QU8XN
55L1QU7QN	55A1QU7QN
65D6AU0NN	55A6AU5NN
65A1QU7QN	65L1QU7QN
65A1QU8XN	65L1QU8XN
55A6AU0NN	55L6AU0NN

<Type list in the Factory Menu>

3. Change Each value according to the TV Model.

#### Local Set

- Set according to Local region(country).

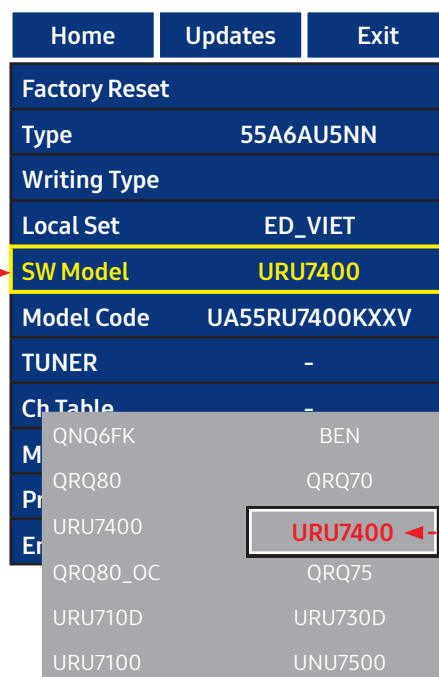


## SW Model

- Check Label Rating of the TV(located on the Rear Cover).
  - SW Model is digits **after "/"** in **Version No.**
  - Choose same SW Model code from the list.



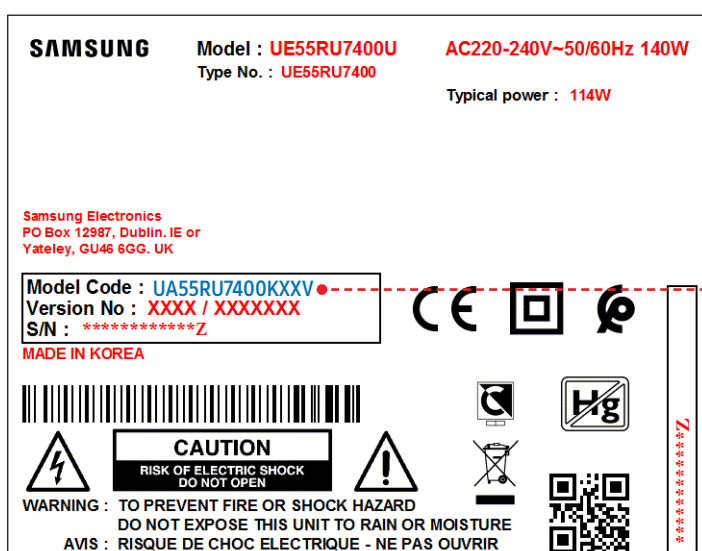
<"SW Model" in Label Rating>



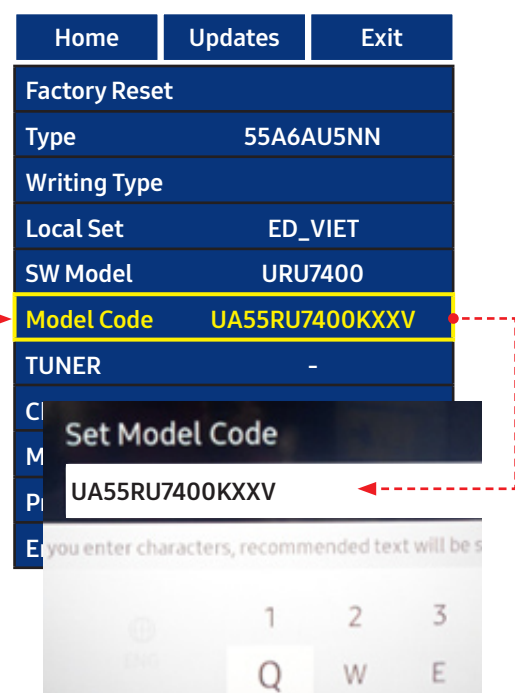
<SW Model list in the Factory Menu>

## Model code

- Check 19 digits of Model code and type in.
  - e.g.) Model Code : **UA55RU7400KXXV**



<"Model code" in Label Rating>



<Model Code input in Factory Menu>

## 4-11. White Balance

### 4-11-1. Calibration

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

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

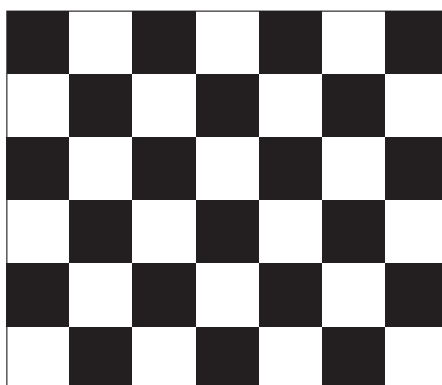
### 4-11-2. Service Adjustment

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 IN1 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 IN1 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.

### 4-11-3. Adjustment

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

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

## 4-12. LED Indicator Test

### 4-12-1. Diagnostic Methods - Flashing Symptom Codes

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

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

#### ■ Defect type and Number of LED flash

Defect Block	Detection Method	Number of LED Flash	
OCB	-	LED off	No Blinking
Main Board	<ul style="list-style-type: none"> <li>WDC -&gt; Reboot -&gt; Flash</li> <li>Error -&gt; Flash</li> </ul>	1 time	<p>Blinks 1 time when cold boot</p> <p>1 set 4 sec x 5 time</p>
Panel	<ul style="list-style-type: none"> <li>Error -&gt; Reboot -&gt; Flash</li> <li>Error -&gt; Flash(after 10cm)</li> </ul>	2 time	<p>4 sec(10min) x 5 time</p>
SMPS	<ul style="list-style-type: none"> <li>Error -&gt; Reboot -&gt; Flash</li> <li>Error -&gt; Flash</li> </ul>	3 time	<p>4 sec x 5 time</p>
Bluetooth / WIFI	<ul style="list-style-type: none"> <li>Cold Boot -&gt; 30 sec after module starts</li> </ul>	4 time	<p>20~30sec x 5 time</p>
AOC	<ul style="list-style-type: none"> <li>Cold Boot -&gt; 30 sec after module starts</li> <li>Signal level below threshold</li> </ul>	5 time	<p>4 sec(30sec) x 5 time</p> <p>↑ Cold Boot</p>

#### How to COLD BOOT the TV

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

## 4-13. Updating the TV's Software

View your TV's software version and update it if necessary.



**DO NOT turn off the TV's power until the update is complete. The TV will turn off and on automatically after completing the software update. Video and audio settings will be reset to their defaults after a software update.**

-  >  [Settings](#) > [Support](#) > [Software Update](#)

### ■ Updating through the Internet

-  >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#)



Updating from the Internet requires an active Internet connection.

### ■ Updating through a USB device

-  >  [Settings](#) > [Support](#) > [Software Update](#) > [Update Now](#)

After downloading the update file from the Samsung website and storing it on a USB device, connect the USB device to the TV to update.



To update using a USB device, download the update package from Samsung.com to your computer. Then, save the update package in the USB device's top-level folder. Otherwise, the TV will not be able to locate the update package.

### ■ Updating the TV automatically

-  >  [Settings](#) > [Support](#) > [Software Update](#) > [Auto Update](#)

If the TV is connected to the Internet, you can have the TV update its software automatically while you are watching the TV. When the background update is completed, it is applied the next time the TV is turned on.

If you agree to the Smart Hub terms and conditions, [Auto Update](#) is set to **On** automatically. If you want this function disabled, use the Select button to turn it off.



This function may take a longer time if another network function is running concurrently.

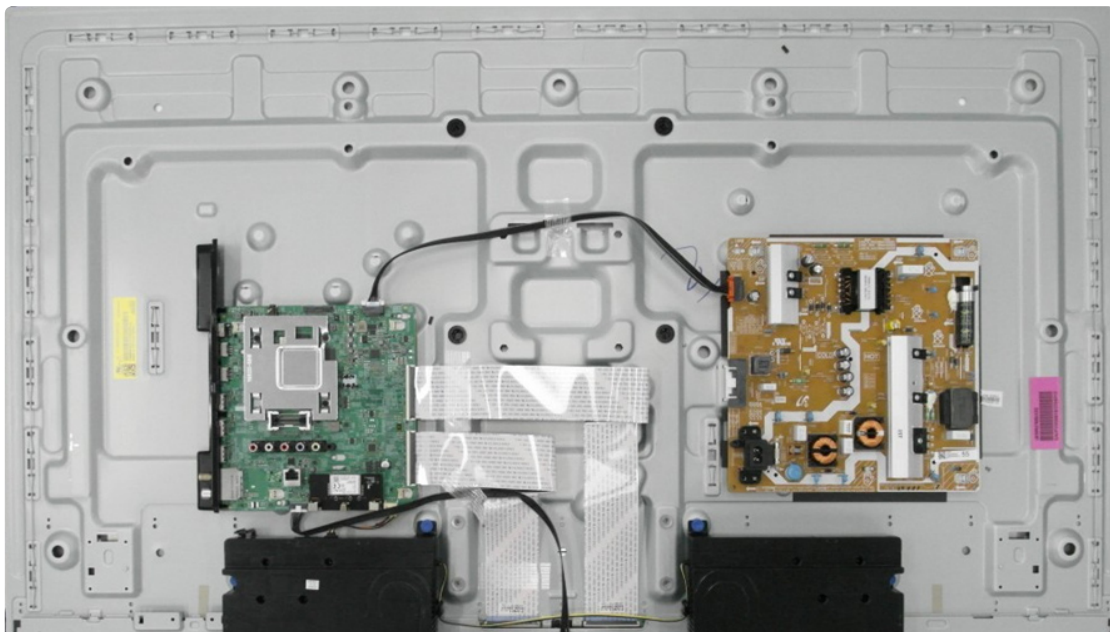
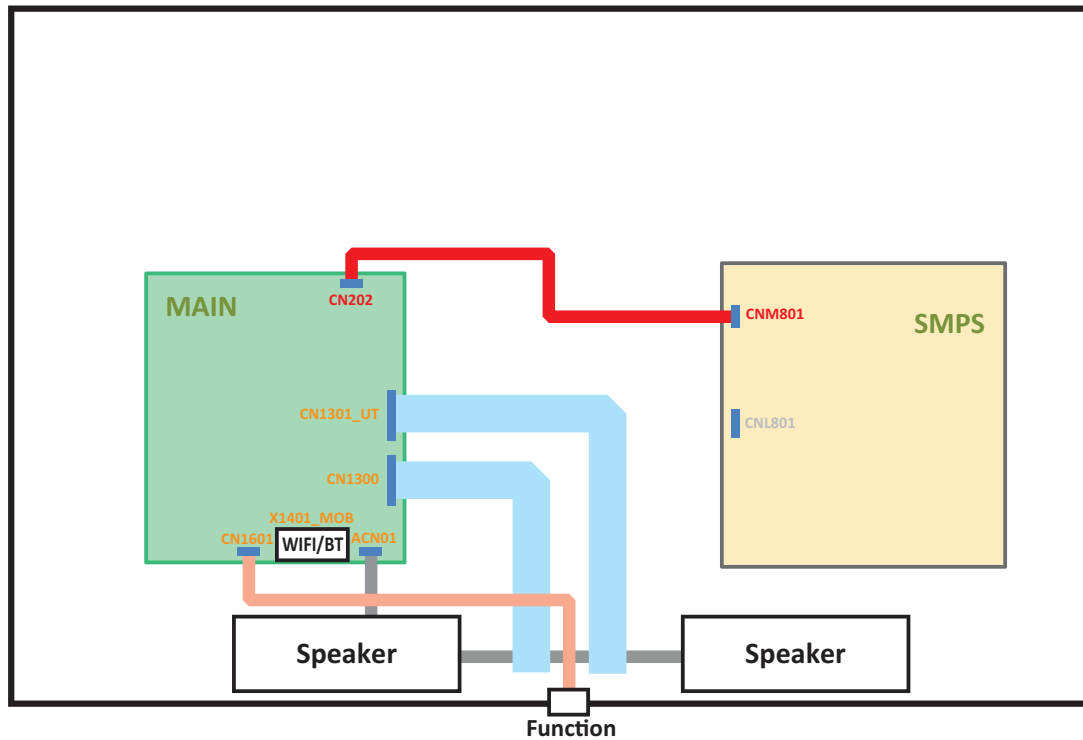


This function requires an Internet connection.

## 5. Wiring Diagram

### 5-1. Wiring Diagram

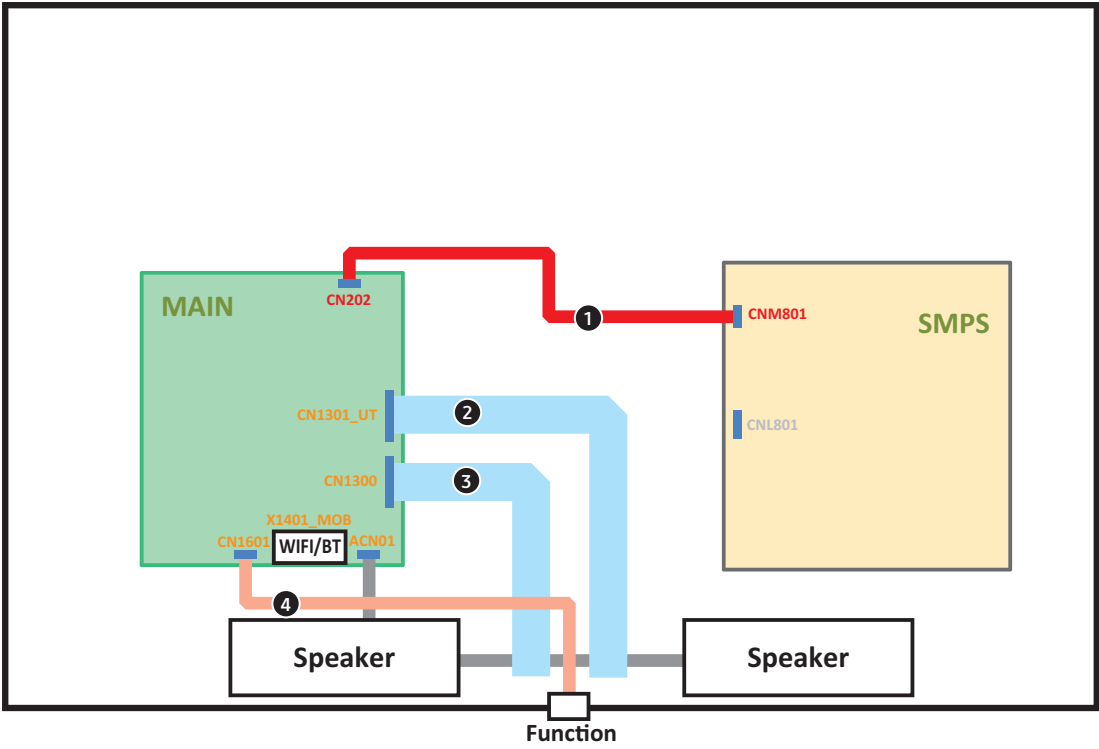
- 43 / 50 / 55 / 65 inches


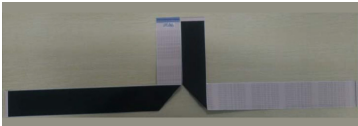
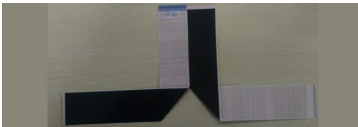



5. Wiring Diagram

■ Cables

- 43 / 50 / 55 / 65 inches

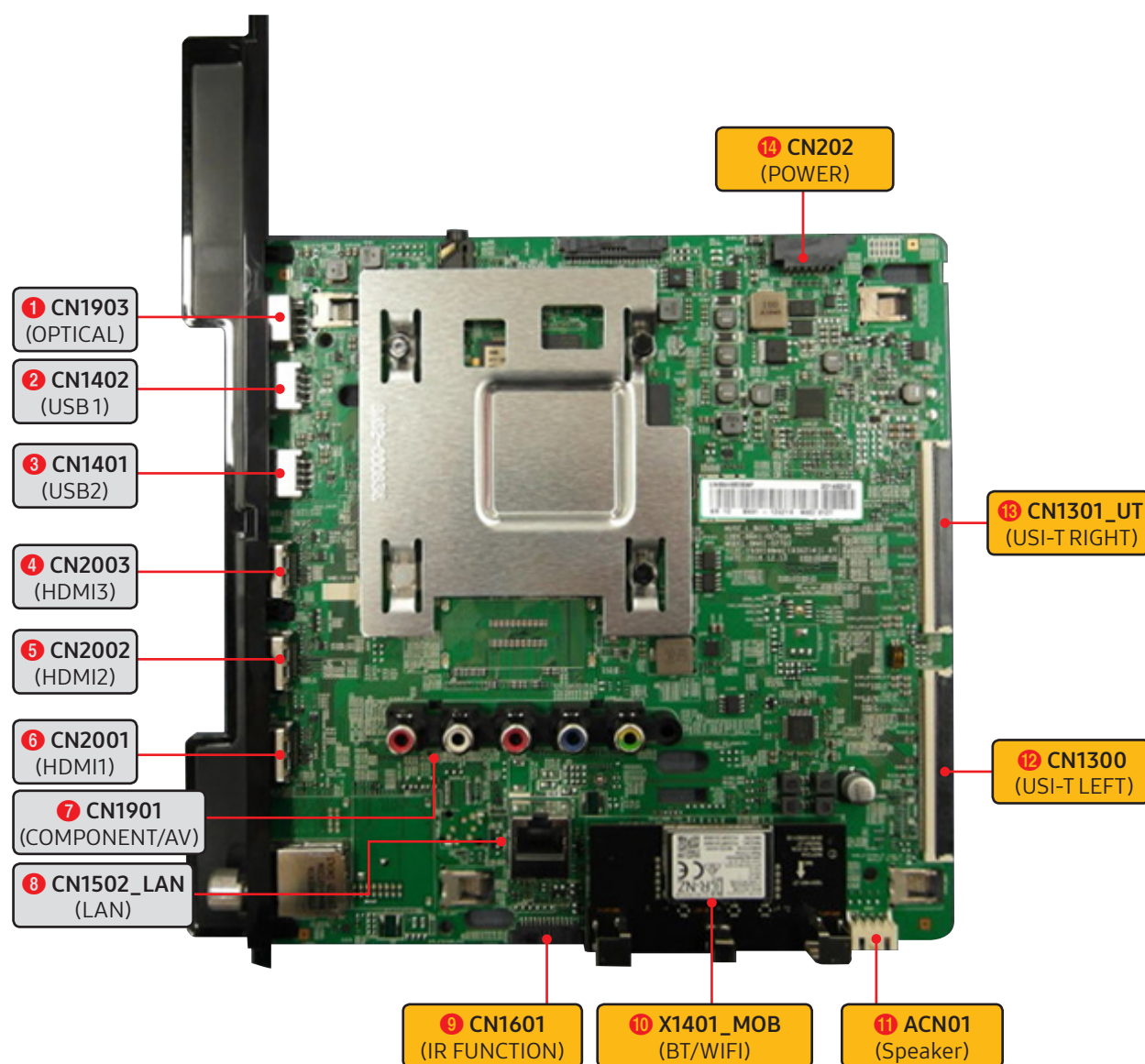


Part Name & Connection		Part Spec		Code No.	
①	LEAD CONNECTOR-POWER SMPS - MAIN		12P/400	43"	BN39-02217A
				50"	
				55"	
			12P/600	65"	BN39-02217F
②	FFC CABLE Main - Source B		96P/L500	43"	BN96-39820G
				50"	BN96-39820F
				55"	
			96P/L650	65"	BN96-39903C
③	FFC CABLE Main - Source B		96P/L350	43"	BN96-39821E
				50"	BN96-39821F
				55"	
			96P/L500	65"	BN96-39820H
④	LEAD CONNECTOR-SUB ASSY Main - FUNCTION		12P/L400	43"	BN39-02457A
				50"	
				55"	
			12P/L500	65"	BN39-02457B



## 5-2. Connector

### 5-2-1. Main Board



#### ■ Main Board Pin Map

1 CN1903 (OPTICAL)				3 CN1401 (USB2)			
1	SPDIF_OUT	2	B5V_PW	1	USB2_VCC_5V_PW	2	D-
3	GND			3	D+	4	GND

2 CN1402 (USB1)			
1	USB1_VCC_5V_PW	2	D-
3	D+	4	GND

## 5. Wiring Diagram

4 CN2003 (HDMI IN3)			
1	HDMI1_RX2+_HDMI	2	GND
3	HDMI1_RX2-_HDMI	4	HDMI1_RX1+_HDMI
5	GND	6	HDMI1_RX1-_HDMI
7	HDMI1_RX0+_HDMI	8	GND
9	HDMI1_RX0-_HDMI	10	HDMI1_RX_CLK+_IN_HDMI
11	GND	12	HDMI1_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI1_SCL_DDC	16	HDMI1_SDA_DDC
17	HDMI1_INS_DET	18	HDMI1_5V_PW
19	HDMI1_HPD		

5 CN2002 (HDMI2)			
1	HDMI2_RX2+_HDMI	2	GND
3	HDMI2_RX2-_HDMI	4	HDMI2_RX1+_HDMI
5	GND	6	HDMI2_RX1-_HDMI
7	HDMI2_RX0+_HDMI	8	GND
9	HDMI2_RX0-_HDMI	10	HDMI2_RX_CLK+_IN_HDMI
11	GND	12	HDMI2_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI2_SCL_DDC	16	HDMI2_SDA_DDC
17	HDMI2_INS_DET	18	HDMI2_5V_PW
19	HDMI2_HPD		

6 CN2001 (HDMI1)			
1	HDMI3_RX2+_HDMI	2	GND
3	HDMI3_RX2-_HDMI	4	HDMI3_RX1+_HDMI
5	GND	6	HDMI3_RX1-_HDMI
7	HDMI3_RX0+_HDMI	8	GND
9	HDMI3_RX0-_HDMI	10	HDMI3_RX_CLK+_IN_HDMI
11	GND	12	HDMI3_RX_CLK-_IN_HDMI
13	CEC	14	GND
15	HDMI3_SCL_DDC	16	HDMI3_SDA_DDC
17	HDMI3_INS_DET	18	HDMI3_5V_PW
19	HDMI3_HPD		

7 CN1901 (COMPONENT/AV)			
1	GND	2	COMP_Y / AV_IN_CVBS
3	IDENT_AV	4	GND
5	COM_PB	6	IDENT_COMP
7	GND	8	COM_PR
9	TEST_PR	10	GND
11	COMP_AV_SL_IN	12	TEST_SL
13	GND	14	COMP_AV_SR_IN
15	TEST_SR		

8 CN1502_LAN (LAN)			
1	EPHY_TXP_LAN	2	A1.8V_PW
3	EPHY_TXN_LAN	4	EPHY_RXP_LAN
5	A1.8V_PW	6	EPHY_RXN_LAN
7		8	GND

9 CN1601 (IR FUNCTION)			
1	IR	2	GND
3	A3.3V_PW	4	SENSOR_SCL_I2C
5	SENSOR_SDA_I2C	6	KEY_INPUT1
7		8	LED_STB_OUT
9	IR_OUT_1	10	IR_OUT_2
11	GND	12	

10 X1401_MOB (WIFI/BT)			
1	UART_TX	2	GND
3	WIFI_WOW	4	BT_WAKE
5	WIFI_NRESET	6	GND
7	D+_USB_WIFI	8	D-_USB_WIFI
9	GND	10	A5V_PW
11	WIFI_PHY_ON		

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

14 CN202 (POWER)			
1	GND	2	GND
3	A13V_PW	4	GND
5	A13V_PW	6	SW_POWER_OUT
7	A13V_PW	8	PWM_DIMMING_OUT1
9	A13V_PW	10	OVD_ONOFF_LD_SDA_I2C
11	GND	12	ANA_DIMMING

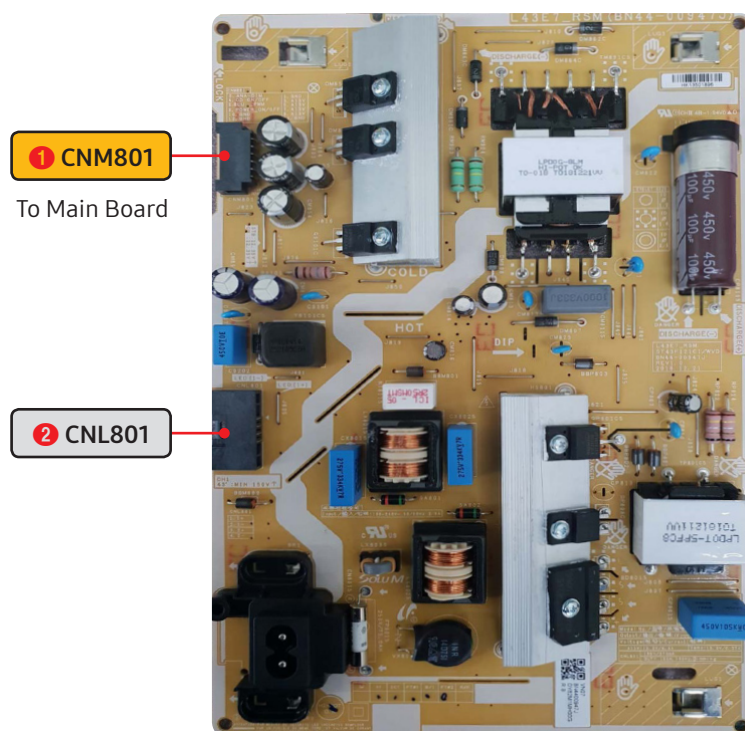
12 CN1300 (USI-T LEFT)							
1	FB_TRDY_1	2	GND	3	PANEL_3.3V_PW	4	PANEL_3.3V_PW
5	FB_VCOM1_2_CELL	6	VCOM1_CELL	7	VCOM2_CELL	8	VCOM3_CELL
9	VSS_OUT1_CELL	10	VOFF_-11V_PW	11	VGHD_30V_PW	12	CKV1_GOA
13	CKV2_GOA	14	CKV3_GOA	15	CKV4_GOA	16	CKVB1_GOA
17	CKVB2_GOA	18	CKVB3_GOA	19	CKVB4_GOA	20	STVP1_GOA
21	STVP1_GOA	22	ST_GOA	23	DEMURA_SSPFRM_SPI	24	DEMURA_SSPLCK_SPI
25	DEMURA_SSPHOLD_SPI	26	DEMURA_SSPWP_SPI	27	DEMURA_SSPRXD_SPI	28	DEMURA_SSPTXD_SPI
29	DEMURA_SSPFRM_SPI	30	SFC2	31	GND	32	TX_CH0_A+_USIT
33	TX_CH0_A-_USIT	34	GND	35	TX_CH0_B+_USIT	36	TX_CH0_B-_USIT
37	GND	38	TX_CH1_A+_USIT	39	TX_CH1_A-_USIT	40	GND
41	TX_CH1_B+_USIT	42	TX_CH1_B-_USIT	43	GND	44	TX_CH2_A+_USIT
45	TX_CH2_A-_USIT	46	GND	47	TX_CH2_B+_USIT	48	TX_CH2_B-_USIT
49	GND	50	TX_CH3_A+_USIT	51	TX_CH3_A-_USIT	52	GND
53	TX_CH3_B+_USIT	54	TX_CH3_B-_USIT	55	GND	56	TX_CH4_A+_USIT
57	TX_CH4_A-_USIT	58	GND	59	TX_CH4_B+_USIT	60	TX_CH4_B-_USIT
61	GND	62	TX_CH5_A+_USIT	63	TX_CH5_A-_USIT	64	GND
65	TX_CH5_B+_USIT	66	TX_CH5_B-_USIT	67	GND	68	TX_CH6_A+_USIT
69	TX_CH6_A-_USIT	70	GND	71	TX_CH6_B+_USIT	72	TX_CH6_B-_USIT
73	GND	74	TX_CH7_A+_USIT	75	TX_CH7_A-_USIT	76	GND
77	TX_CH7_B+_USIT	78	TX_CH7_B-_USIT	79	GND	80	SFC1
81	GND	82	PI_DSF_MON	83	PORTNUM	84	VCCA_1.9V_PW
85	VCCB_1.8V_PW	86	LL_CELL	87	LH_CELL	88	HAVDD_8.5V_PW
89	UL_CELL	90	UH_CELL	91	AVDD_17V_PW	92	AVDD_17V_PW
93	AVDD_17V_PW	94	AVDD_17V_PW	95	N.C.	96	FB_TRDY_2

## 5. Wiring Diagram

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

## 5-2-2. SMPS Board

- 43 inch



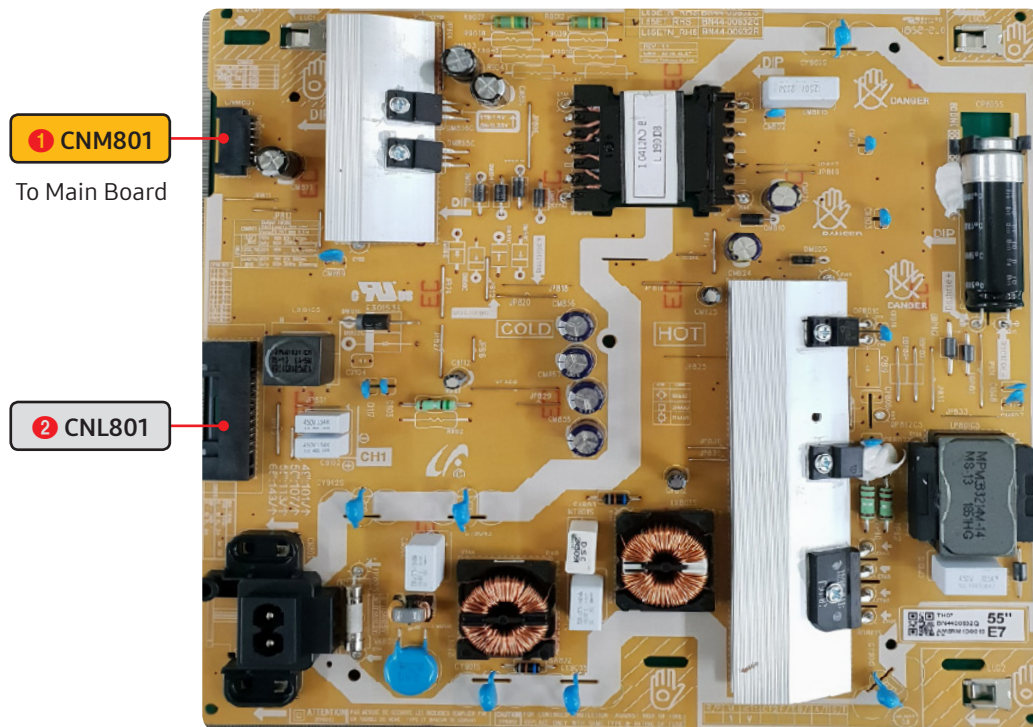
### ■ SMPS Board Pin Map

1 CNM801			
1	GND	2	ANA_DIM
3	A13V	4	OD ON/OFF
5	A13V	6	BLU_PWM
7	A13V	8	Power_On/Off
9	A13V	10	GND
11	GND	12	GND

2 CNL801			
1	1+	2	1-
3	2+	4	2-

## 5. Wiring Diagram

- 50 / 55 inches

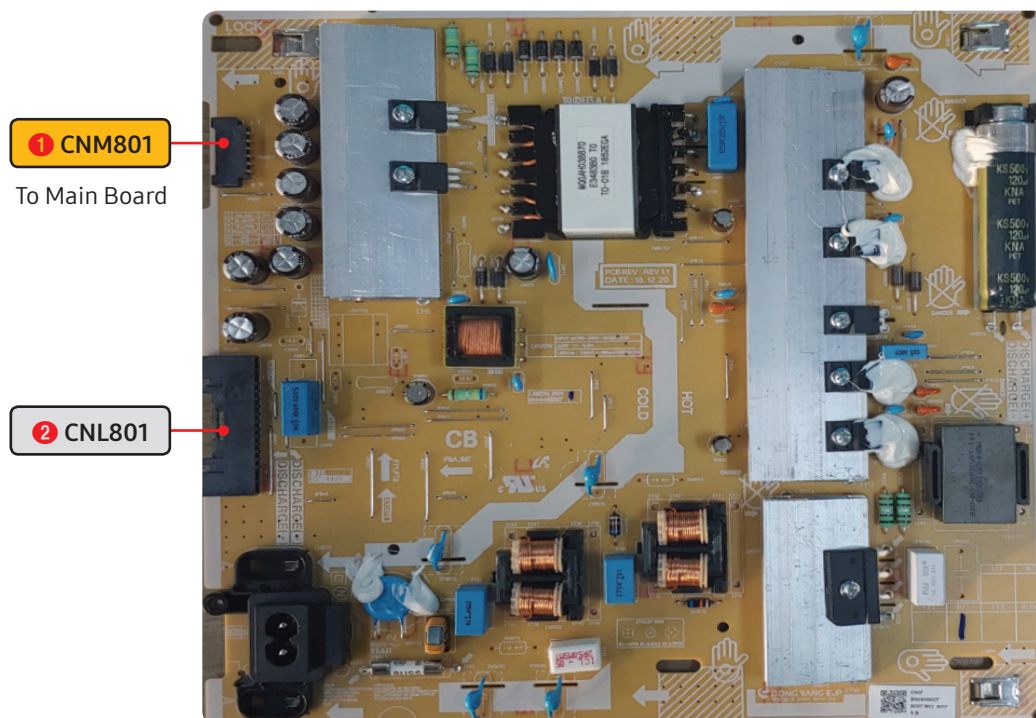


### ■ SMPS Board Pin Map

1 CNM801				2 CNL801			
1	GND	2	ANA_DIM	1	1+	2	1-
3	A13V	4	OD ON/OFF	3	2+	4	2-
5	A13V	6	BLU_PWM	5	3+	6	3-
7	A13V	8	Power_On/Off	7	4+	8	4-
9	A13V	10	GND	9	N.C	10	N.C
11	GND	12	GND	11	N.C	12	N.C



- 65 inch



### ■ SMPS Board Pin Map

1 CNM801				2 CNL801			
1	GND	2	ANA_DIM	1	1+	2	1-
3	A13V	4	OD ON/OFF	3	2+	4	2-
5	A13V	6	BLU_PWM	5	3+	6	3-
7	A13V	8	Power_On/Off	7	4+	8	4-
9	A13V	10	GND	9	N.C	10	N.C
11	GND	12	GND	11	N.C	12	N.C