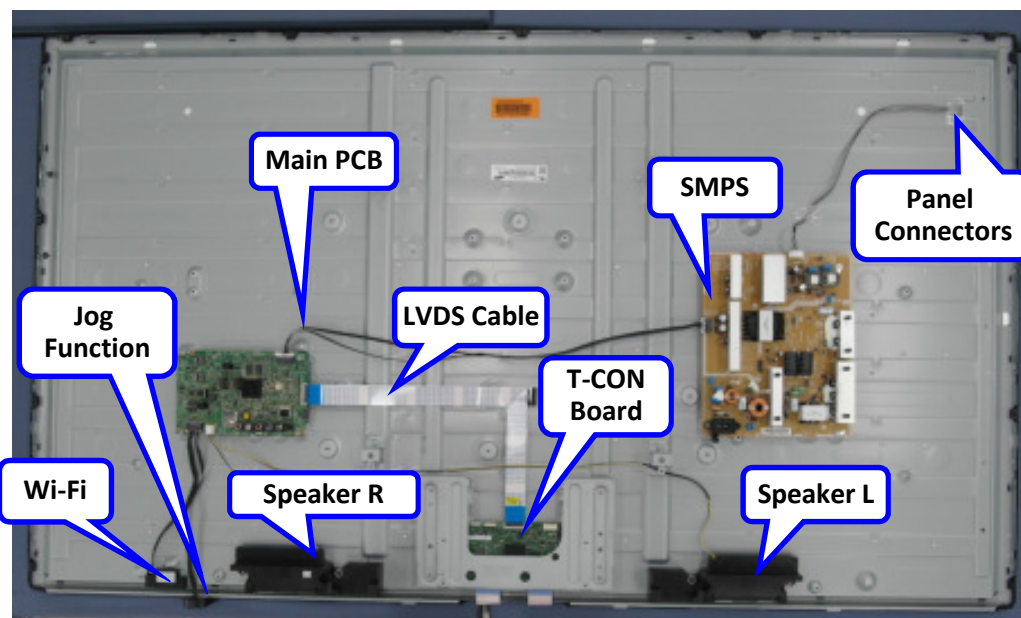




Part#	Description	Ver.
BN44-00776A	SMPS	AH01 /IH02
BN59-01174A	WIFI Module	AH01 /IH02
BN59-01199F	Remote	AH01 /IH02
BN94-08744L	Main board	AH01 /IH02
BN96-28894A	T-Con	AH01 /IH02
BN95-011488B	Panel	AH01
BN95-02436A	Panel	IH02
BN96-21669D	SPEAKERS ASSY	AH01 /IH02
See GSPN	LVDS CABLE	AH01 /IH02
BN96-23702M	JOG FUNCTION/IR	AH01 /IH02

Option Byte Tables

Version: AH01 / IH02

Factory Reset	
Type	65L1AF1D
Local Set	US
SW Model	J6203
BOM Model	6200
TUNER	S_ATSC
CH Table	NONE

Support Information

ASC Tech Support: (888) 751-4086

BE Tech Support: (866) 894-0637

GSPN: <http://gspn3.samsungcsportal.com/>

HOT TIPS

Verify TV has latest Firmware Updates found on samsung.com., unless related to a service bulletin directed to GSPN. Check TV is left in auto update mode. Many new TV model issues are firmware update related. This will prevent REDO.

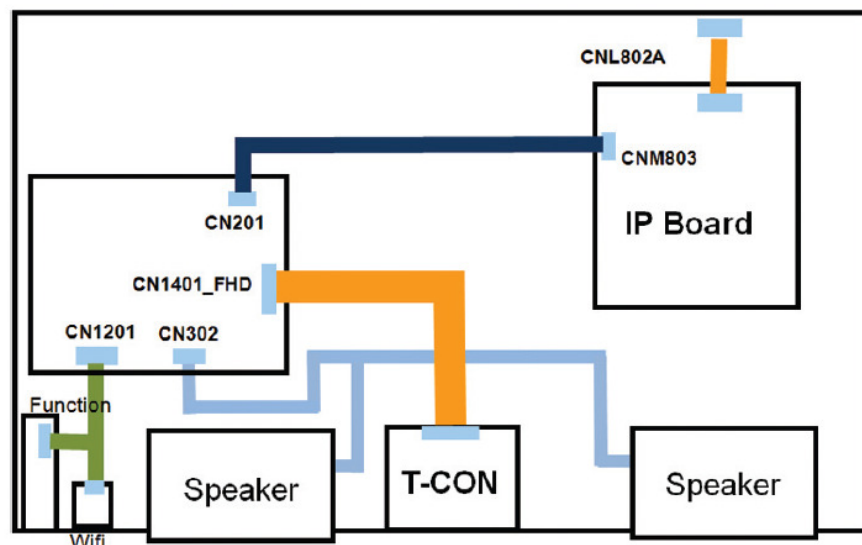
Service Bulletins/Tips

No Bulletins at time of publication.
Check GSPN for new technical bulletins.

TIPS: 4/30/15 2015 Option Bytes Table (download)

ALL Repairs: Prior to service... Check **GSPN** for latest Bulletins and to confirm part numbers.

- Download latest firmware onto a USB Stick from **Samsung.com**. Download from **GSPN** for Bulletin related updates.



CNM803

CNM803 SMPS to Main

2	OD_UD	1	A13V
4	BLU_PWM	3	A13V
6	PWR On/Off	5	A13V
8	GND	7	A13V
10	GND	9	GND

CNL802

CNL802 (to BLU)

11	M4-	12	NC
9	NC	10	M4+
7	M3+	8	M3=
5	M2-	6	NC
3	NC	4	M2+
1	M1+	2	M1-

IMPORTANT: Verify Connectors/Pin Information on the SMPS for any differences/changes.

Power- Up Sequence / Test ("TV Power On" Problem)

1. Check Standby: **A13V** (Always On) to Main Board. Measures between **7.5VDC & 12.7VDC** (if missing Check AC Line fuse/replace **SMPS**).
2. Turn TV Power on: **PS_ON** .2Vdc (when off) to **3.3Vdc** (turned on) if missing replace **Main Board..**
3. The **A13V** is then raised to full voltage level **12.7VDC**.
4. **BLU_PWM**: .9V~3.3Vdc . Backlight On/Off & Backlight PWM signal Level Control. (.2V eff. dc at min. bright to 3.3V eff. dc at max. bright)



Forced Backlight/SMPS-On Mode:

1. Disconnect Power Cord
2. Disconnect wire harness from CNM803
3. Re-Connect Power Cord
4. SMPS & LED Backlights should immediately turn on.

("TV Power On" or
"No Backlight" Problem)

Jog Function Test ("TV Power On" Problem)



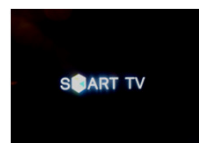
1. In **STBY** Check **LED Ind.** for 1.7Vdc and **VCC** for 3.3Vdc. If missing check the **STBY** voltage from **SMPS to Main Board**. If **STBY** is OK suspect **Main Board**.
2. Check Jog Shuttle 5 SW Operation (**Key 1 & Key 2**) for command changes. If incorrect suspect a **stuck Jog switch** which also holds data to Main preventing operation.
3. Check **SDA, SCL** for effective 3.3Vdc (after power on)
4. Check **IR** with Standard Remote command changes. (3.3V to 2,5V effective DC)

Backlight Test:

("TV Backlight" Problem)

1. Place TV in "Forced Backlight On Mode"
2. Check TV Screen for active backlight LEDs.
3. If no backlights, or one section is out, check minus & plus pins on the Panel Connector for drive voltages to the Panel. If no pin voltages replace **SMPS**.
4. If no backlight and the voltage measures high on one pin and missing on most other pins, the panel is wired in series at SMPS and a string of LEDs are open. Replace Panel.
5. If only one section is dark, the panel is wired in parallel. All plus pins should measure same. If one is higher, a string of LEDs are open, replace panel.
6. If one voltage is low, disconnect panel connector, retest, if it stays low - bad SMPS. If it goes high, bad Panel.

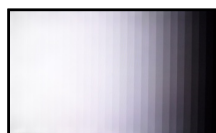


TROUBLESHOOTING VIDEO PROBLEMS**TCON Board****Main Board****Start Up Logo**

- ✓ **Video Operation**
Won't appear if "Instant On" was activated
- **If missing:**
 - ✓ Instant On is off
 - ✓ "Power-Up Sequence" and "Backlight Test"
- **If NG:**
 - ✓ Customer Picture Test

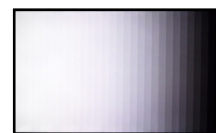
**Customer Picture Test 1****Mute 147 Mute**

- ✓ **Video Operation**
Both Generated on Main Board.
- **If OK:**
 - ✓ Check Source & Cables
 - ✓ Test other inputs
- **If NG:**
 - ✓ T-Con Board Test Patterns

PRE FRC of TCON**Customer Picture Test 2**

- ✓ **Video Operation**
Generated at Pre FRC, section of T-CON Board.
- **If OK:**
 - ✓ Main Board* / LVDS Cable
- **If NG:**
 - ✓ Post FRC Pattern

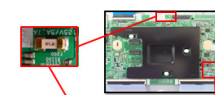
*Also replace LVDS if Main Board is defective

POST FRC of TCON**Customer Picture Test 3**

- ✓ **Video Operation**
Generated at Post FRC, section of T-CON Board.
- **If OK:**
 - ✓ T-CON Board (defective)
- **If NG:**
 - ✓ Mute 369 Mute

TCON**Mute 369 Mute**
Not available for 78 inch model)

- ✓ **Video Operation**
Generated at T-CON Board.
- **If OK:**
 - ✓ T-CON Board (defective)
- **If NG:**
 - ✓ T-CON Board Status

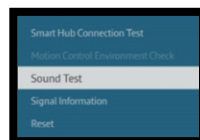
Panel**T-CON****12 Vdc Fuse** **2 Status LEDs**

- ✓ **T-CON Board Status.**
- **Both Status LEDs are On,** T-CON DC Supplies are OK.
- **If one LED Off:**
 - ✓ TCON Board (defective)
- **If both LEDs off:**
 - ✓ 12V fuse on TCON, if open replace TCON
 - ✓ 12Vdc from Main Board/LVDS.

AUDIO Troubleshooting:**Source****TV Main Board****Speakers****Audio Test**

- **No Sound/Distorted**

- ✓ Menu/Audio/Speaker Settings/set to **TV Speaker**
- ✓ Customer Menu/Support/activate **SOUND TEST**



- **SOUND TEST Missing/Distorted**

- ✓ Speakers (compare resistance/quality)
- ✓ TV Main Board (compare audio level out to speakers with multi meter)
Replace defective speakers or Main Board

- **No HDMI Audio**

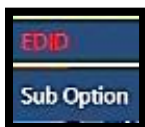
- ✓ Source / Cable & Connectors
- ✓ **EDID Write** (Restores missing HDMI Audio)
- ✓ Update firmware on TV (cover related bulletins)
- ✓ If OK, replace Main Board.

- **SOUND TEST OK**

- ✓ Audio Source & Cables
- ✓ Other Inputs

- **Optical Digital Out Errors**

- ✓ Red light from Optical Digital Out
If missing check Mini Box/Cable. If OK replace TV's Main Board

EDID Write

1. Remove ALL **HDMI** connections
2. **Factory Mode/Control/EDID**
3. Select **EDID/OFF** to **ON** (Right Arrow Key)
4. Select **EDID WRITE ALL** (Mute Key)
5. **Wait to Success** (Right Arrow Key)
6. **Confirm EDID WRITE ALL Success** (Mute Key)

**Factory Mode****Factory Remote**

Part No. AA81-00243A

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

Samsung IR Remote

(Limited Operation)

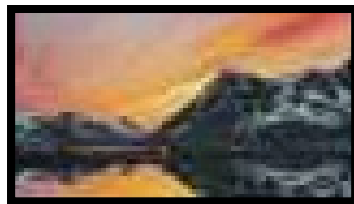
1. TV Power Standby
2. Mute/182/Power

**Factory Remote****Factory Mode**

Other Important Items to select:

- **Option** (must set Option Bytes when replacing Main Board)
- Option/ **Factory Reset** (returns TV to out of box condition. Does not reset Apps)
- SVC / **Test Patterns**
- SVC/Info/ **ER Count** (Important to check for errors. Note: Resets to 0 with Factory Reset.

Network Troubleshooting



TV



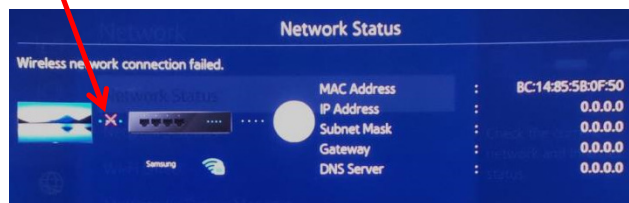
Router



Internet

TV to Router “Failure”

✓ Check Network Status



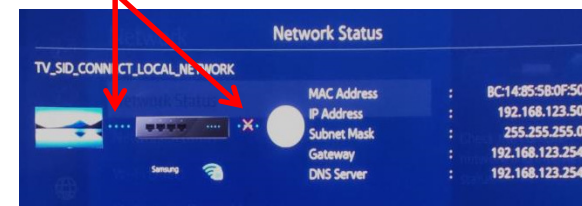
- ✓ **Wired & Wireless MAC Address** in Customer Support Menu.
- **No Wired MAC Address:** Replace Main Board
- **No Wireless MAC Address:**
- ✓ Module cabling & voltages from Main Board.
- If operating voltages are OK but signal is missing
Replace WiFi Module (WiFi/Bluetooth Module combo).

Check 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



- 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.



➤ **Go to Menu > Support > Self Diagnosis > Smart Hub Connection Test: Begin Test**

✓

If Smart Hub Test Fails:

- ✓ **Check** Network Status (Menu / Network/ Network Status)
- **Reset** Smart Hub
- **"Apps Reset"** (Factory Mode / SVC / Reset / Apps Reset /Wait/Done/Soft Power Off)

- ✓ 1) Network Test / Gateway Test
- ✓ 2) DNS test
- ✓ 3) ISP Blocking
- ✓ 4) Samsung Server Test

- ✓ 5) Samsung Apps Test

If Netflix Issue:

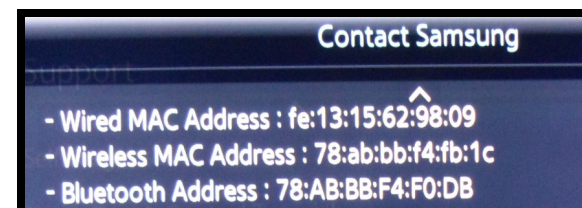
- ✓ **Check** Certificate & Netflix ESN Status in Factory Mode.

CO Nfo WO MO DI/ HX P/ AO O SI/ N/ RO SC/ SiX

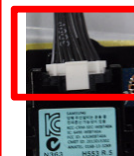
- If Certificate and ESN exists, "**CO**", "**Nfo**", change the **DNS** to **8.8.8.8**
- If Certificate is missing, "**C/**" replace the TV's Main board.
- If ESN number is missing: **NF/** do not replace the Main Board.
 - Reset TV Clock and check for correct Time & Date. Netflix relies on correct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

P	1	2	3	4	5	6
STBY	0	0	0	0	.8	0
Power ON	0	.04Vdc Wi-Fi Eff. Sig	.04Vdc Wi-Fi Eff. Sig	5.3 Vdc VCC	3.3 Vdc	3.3 Vdc

2015 Models with separate WiFi Module / Bluetooth Module

NOTE: Some Models are WiFi Only - No Bluetooth

Pins	1	2	3	4	5	6	7	8	9	10
Standby	0	3.3 Vdc	0	0	0V	0	5	3.3 VDC	0	3.3 Vdc
Power ON	3.3 Vdc	3.3 Vdc	0	0	2V BT Sig 4V P-P	1V BT Sig. 4V P-P	5	3.3 Vdc	3.3 Vdc	3.3 Vdc



✓. Wired MAC Address (error - replace Main Board)

✓. Wireless MAC Address

✓. Bluetooth Address

- If **Bluetooth Address** or **Wireless MAC Address** errors exist
- **Check BT & Wi-Fi Connector Voltages.** If Voltages are OK and no BT or Wi-Fi Sigs. replace Module.

Option	T-HKPAKUC-1002.9 T-HKPAKUS-0039 T-HKPAKUJ-0039	Micom SW Version Sub Micom SW Version(main) Sub Micom SW Version(JACK)
Control		
Debug	rel-hawkp-mu-atsc-factory-hawk-p_20150202.3 (Release)	
SVC	BT Version : BLUETOOTH-VER-0021 E-Manual : 1.201 CAMERA : 1.31.00 Mic Version : 10.29.04 Blaster Version : 260501-260501-300001 E-POP Version : 2.02.0 EDID SUCCESS HDCP SUCCESS CAUB : AV / COMP / PC / HDMI / Option : 65A1U09YJ,US,9500,NONE DTCF Not Support FRC[HAWK-UFT] Panel[SDC-120Hz] FW[623D] Data[0303] LD[DIRECT-15X10][07] TCOM[HawkUFT] Flash[U65A1U0C4] Demura[640c]	BT Version E-Manual Version Camera Version MIC Version
ADC/WB		
Advanced		
Factory Mode		
Factory Remote		
Standard IR Remote		
(Limited Factory Mode Operation)		
	Model : UN65J59500 Wired MAC SUCCESS Wireless MAC SUCCESS WiFi Version : BRCM43569_1.201.58_150130_BCIN CO NFO WO MO DI / HX PI / AO O S / N / RO SC / SIX Factory Data Ver : 241 / EERC Version : 124 CPLD/LD : N/A SmartControl : **** Date of purchase : --/--/----	Model Wired MAC (Status) Wireless MAC (Wi-Fi Module) CO NFO WO, etc. (Certificate/ Netflix/Wide Vine/ etc. Status)
		TESTING 1. Verify SW Versions 2. Verify Wired MAC 3. Verify Wireless MAC 4. Verify CO, NFO, etc. Status are "O" (OK)

(SAMPLE)

Option/Factory Reset

Factory Reset	
Type	65A1U09YJ
Local Set	US
SW Model	UJ59500
BOM Model	9500
TUNER	S_TDA18275A
Ch Table	NONE
MRT Option	
Engineer Option	

Self Test for HW

Self Test for HW	
Info	
Upgrade	
Reset	
OPTION_HDMI	
DVB CI	
Test Pattern	
Other Setting	
SVC Panel	ORIGINAL
System	
SIN	

Test Patterns

Self Test(for HW)	
Info	
Upgrade	
Reset	
OPTION_HDMI	
DVB CI	
Test Pattern	
Other Setting	
SVC Panel	ORIGINAL

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

Loop Back Test

Loop Back Test	
Info	
Upgrade	
Reset	
OPTION_HDMI	
DVB CI	
Test Pattern	
Other Setting	
SVC Panel	ORIGINAL
System	
SIN	

Factory Mode Screens

- "Option" for Option Byte Changes & Factory Reset.
- "Test Pattern" to select test patterns generated from specific board locations.
- "Self Test for HW" - Hardware.
- "Loop Back Test" - test each item listed.