

4. Troubleshooting

4-1. Troubleshooting

4-1-1. Testing the Picture



Before you review the list of problems and solutions below, use Picture Test to determine if the problem is caused by the TV. The Picture Test displays a high definition picture you can examine for flaws or faults. If the test picture does not appear or there is noise or distortion, the TV may have a problem. Contact Samsung's Call Center for assistance. If the test picture is displayed properly, there may be a problem with an external device. Please check the connections. If the problem persists, check the signal strength or refer to the external device's user manual.

The Problem	Try this!
Flickering and Dimming.	If your Samsung Television is flickering or dimming sporadically, you may need to disable some of the energy efficiency features. Disable Energy Saving (System > Eco Solution > Energy Saving) or Eco Sensor (System > Eco Solution > Eco Sensor) .
Component Connections/ Screen Color	If the color on your Samsung television screen is not correct or the black and white colors are off, run Picture Test (Support > Self Diagnosis > Picture Test). If the test results indicate that the problem is not caused by the TV, do the following: - Confirm that the TV's video input connectors are connected to the correct external device video output connectors. - Check the other connections as well. If the TV is connected to an external device via a component cable, confirm that the Pb, Pr, and Y jacks are plugged into their proper connectors.
Screen Brightness	If the colors on your Samsung TV are correct but just a little too dark or bright, try adjusting the following settings first. Go to the Picture menu and adjust the Backlight/Cell Light (available on different models) Contrast, Brightness, Sharpness, Color, and Tint (G/R) settings.
Ghosting, Blurring, or Juddering	If you notice ghosting or blurring on the screen, use the Auto Motion Plus option (Picture > Picture Options > Auto Motion Plus) to resolve the issue.  NOTE For the LED 5203, 5303 and 4303 series models, you can resolve this issue by using LED Clear Motion (Picture > Picture Options > LED Clear Motion).
Unwanted Powering Off	If your Samsung TV appears to turn off by itself, try disabling some of the TV's energy efficiency features. See if Sleep Timer (System > Time > Sleep Timer) has been enabled. The Sleep Timer automatically turns the TV off after a specified period of time. If the Sleep Timer has not been enabled, see if No Signal Power Off (System > Eco Solution > No Signal Power Off) or Auto Power Off (System > Eco Solution > Auto Power Off) has been enabled and disable them.
Problems Powering On	When the TV is turned on, the remote control receiver flashes 5 times before the screen turns on. If you are having problems powering on your Samsung television, there are a number of things to check before calling the service department. Confirm that the TV's power cord is connected correctly at both ends and that the remote control is operating normally. Make sure that the antenna cable or cable TV cable is firmly connected. If you have a cable/satellite box confirm that it is plugged in and turned on.
Unable to find a Channel	If your TV is not connected to a cable box or satellite box, run Setup (System > Setup) or Auto Program (Broadcasting > Auto Program) .

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The Problem	Try this!
The TV image does not look as good as it did in the store.	Store displays are all tuned to digital, HD (high definition) channels. If you have an analog cable/set top box, upgrade to a digital set top box. Use HDMI or Component cables to deliver HD (high definition) picture quality. Many HD channels are upscaled from SD (Standard Definition) content. Look for a channel that is broadcasting true HD content. • Cable/Satellite Subscribers: Try HD channels from the channel lineup. • Air/Cable Antenna Connection: Try HD channels after running the Auto Program function. Adjust the cable/satellite box's video output resolution to 1080i or 720p.
The picture is distorted.	The compression of video content may cause picture distortions, especially in fast moving pictures from sports programs and action movies. A weak or bad quality signal can cause picture distortions. This is not an issue with the TV. Mobile phones used close to the TV (within 3.2 ft) may cause noise in analog and digital channels.
The color is wrong or missing.	If you're using a Component connection, make sure that the Component cables are connected to the correct jacks. Incorrect or loose connections may cause color problems or a blank screen.
The color is poor or the picture is not bright enough.	Go to the Picture menu and then adjust the Picture Mode, Brightness, Sharpness, and Color settings. See if Energy Saving (System > Eco Solution > Energy Saving) has been enabled. Try resetting the picture. (Picture > Picture Reset)
There is a dotted line on the edge of the screen.	If the Picture Size has been set to Screen Fit, change the setting to 16:9. Change the cable/satellite box resolution.
The picture is black and white.	If you are using AV composite input, connect the video cable (yellow) to the TV's green component jack.

4-1-2. Testing the Sound



Before you review the list of problems and solutions below, make sure that the **TV Sound Output** menu item is set to **TV Speaker**, and then listen to the speakers again. If the TV still does not play audio, run the **Sound Test**. The **Sound Test** uses a built-in melody to check for sound problems. If the TV does not play sound during the Sound Test, or the sound is distorted, there may be a problem with the TV. Contact Samsung's Call Center for assistance. If the TV plays the Sound Test melody without distortion, there may be a problem with an external device. Please check the connections. If the problem persists, refer to the external device's user manual.

The Problem	Try this!
There is no sound or the sound is too low at maximum volume.	Check the volume control of the device (cable/satellite box, DVD, Blu-ray, etc.) connected to your TV.
The picture is good but there is no sound.	Set Sound > Speaker Settings > TV Sound Output to TV Speaker . If you are using an external device, check the device's audio output option. (For example, you may need to change your cable box's audio option to HDMI if the box connected to your TV is using an HDMI cable.) To listen to the computer sound, connect the external speaker to the computer's audio output connector. If your TV has a headphone jack, make sure there is nothing plugged into it. Reboot the connected device by disconnecting and then reconnecting the device's power cable.
The speakers are making an odd sound.	Make sure that the audio cable is connected to the correct audio output connector on the external device. For antenna or cable connections, check the signal information. A low signal level may cause sound distortions. Run Sound Test (Support > Self Diagnosis > Sound Test).

4-1-3. There is a problem with the broadcast

The Problem	Try this!
The TV is not receiving all channels.	If your TV is not connected to a cable box or satellite box: • Confirm that the coaxial cable is securely connected to the TV. • If you are using an antenna, verify it is positioned correctly and the all the connections are secure. • Run Setup (System > Setup) or Auto Program (Broadcasting > Auto Program).
There are no captions with digital channels.	Go to Caption (System > Accessibility > Caption) and change the Caption Mode . Some channels may not have caption data.
The picture is distorted.	The compression of the video content may cause picture distortions. This is especially true with fast moving pictures from sports programs and action movies. A weak signal can cause picture distortions. This is not a problem with the TV.

4-1-4. My computer won't connect

The Problem	Try this!
The "Mode Not Supported" message appears.	Set your PC's output resolution so it matches a resolution supported by the TV.
The video is OK but there is no audio.	If you are using an HDMI connection, check the audio output setting on your PC. If you are using a DVI to HDMI cable, a separate audio cable is required.

4-1-5. I can't connect to the Internet

The Problem	Try this!
The wireless network connection failed.	Confirm your wireless modem/router is on and connected to the Internet. Reset your wireless modem/router by turning it off, waiting for 15 seconds, and then turning it on again. Run Network Setup (MENU > Network > Network Settings).
The software update over the Internet has failed.	Check the network connection status (MENU > Network > Network Status). If the TV is not connected to a network, connect to a network. The upgrade stops if you already have the latest software version.

4-1-6. My file won't play

The Problem	Try this!
Some files can't be played.	This problem may occur with high-bitrate files. Most files can be played back, but you might experience problems with high-bitrate files.

4-1-7. I am having trouble launching/using apps

The Problem	Try this!
I launched an app, but it's in English. How can I change the language?	Languages supported by the app may be different from the user interface language. The ability to change the language depends on the service provider.
My application is not working.	Check with the service provider. Refer to the help section on the application service provider's website.

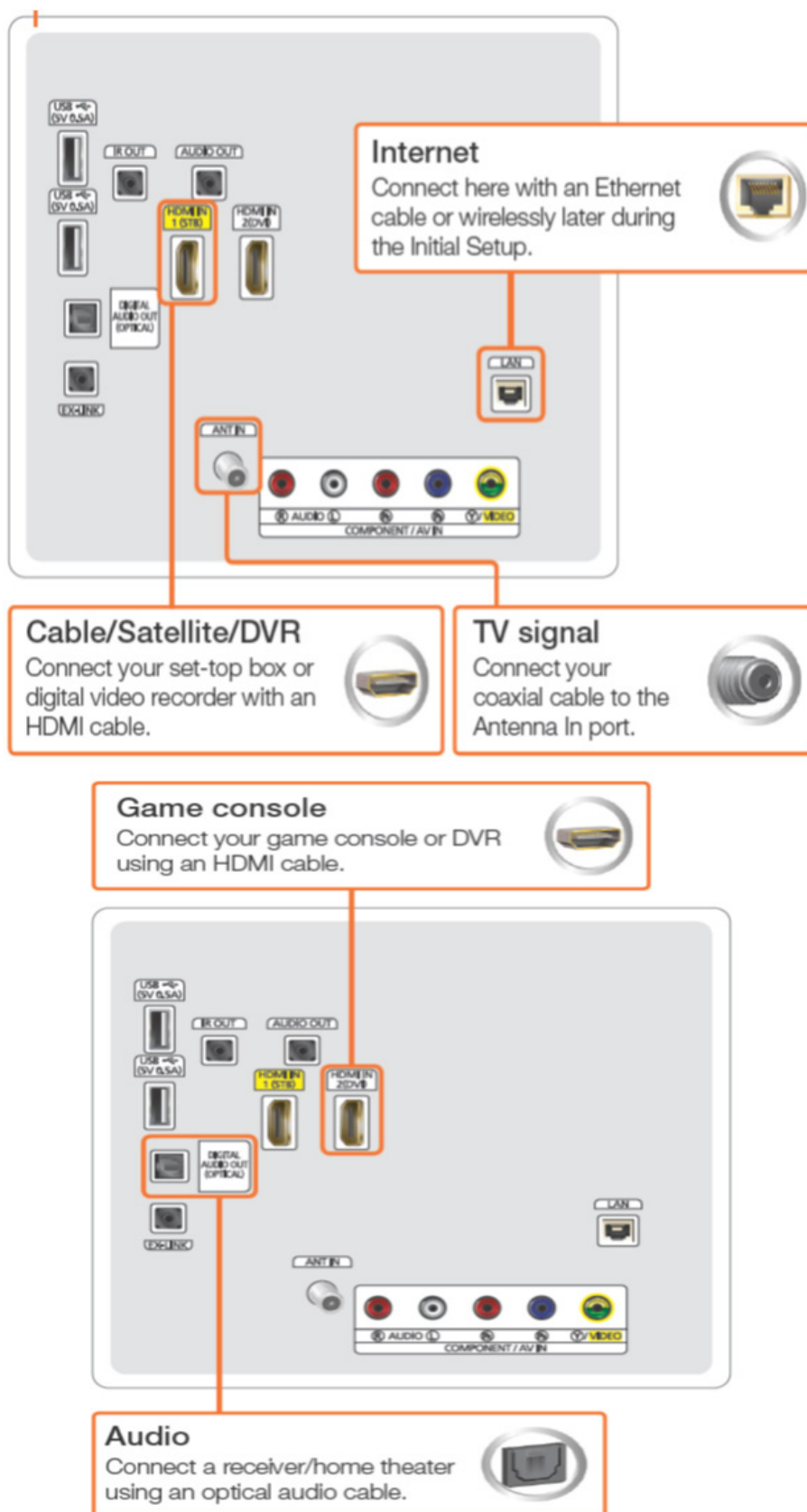
4-1-8. I want to reset the TV

Reset	Path	Description
Reset Settings	MENU > Support > Self Diagnosis > Reset	Reset Picture , Sound , Channel , Smart Hub , and all other settings, except for the network settings, default settings.
Resetting Smart Hub	MENU > Smart Hub > Smart Hub Reset	Resets all Smart Hub settings to their factory defaults and deletes all information related to Samsung accounts, linked service accounts, Smart Hub service agreements, and Smart Hub applications.

4-1-9. Other Issues

The Problem	Try this!
The TV is hot.	Watching TV for an extended period of time causes the panel to generate heat. The heat from the panel is dissipated through internal vents running along the top of the TV. The bottom, however, may feel hot to the touch after extended use. Children watching TV need constant adult supervision to prevent them from touching the TV. This heat, however, is not a defect and does not affect the TV's functionality.
The picture won't display in full screen.	HD channels will have black bars on either side of the screen when displaying upscaled SD (4:3) content. Black bars will appear at the top and bottom of the screen when you watch movies that have aspect ratios different from your TV. Adjust the picture size options on your external device or set the TV to full screen.
The "Mode Not Supported" message appears.	The output resolution of the attached device is not supported by the TV. Check the TV's supported resolutions and adjust the external device's output resolution accordingly.
The Captions item in the TV menu is grayed out.	You cannot select the Caption menu if you have selected a source connected to the TV via HDMI or Component. To view captions, turn on the external device's caption function.
The TV smells of plastic.	This smell is normal and will dissipate over time.
The Signal Information option under Self Diagnosis isn't activated.	Verify that the current channel is a digital channel. The Signal Information is only available for digital channels.
The TV is tilted to the side.	Remove the base stand from the TV and reassemble it.
The Broadcasting option has been deactivated.	Broadcasting is only available when the Source is set to TV . The Broadcasting menu cannot be accessed while you watch TV using a cable box or satellite receiver.
The settings are lost after 5 minutes or every time the TV is turned off.	If the Use Mode is set to Store Demo , the TV's audio and video settings are automatically reset every 5 minutes. Change the Use Mode (Support > Use Mode) to Home Use .
There is an intermittent loss of audio or video.	Check the cable connections and reconnect them. Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If you are mounting the TV to a wall, we recommend using cables with 90-degree connectors.
There are small particles on the TV's bezel.	This is part of the product's design and is not a defect.
The PIP menu is not available.	PIP functionality is only available when you are viewing video from an HDMI or Component source on the main screen.
A POP (TV's internal banner ad) appears on the screen.	Change the Use Mode (Support > Use Mode) to Home Use .
The TV is making a popping noise.	The expansion and contraction of the TV's outer casing may cause a popping noise. This does not indicate a product malfunction. The TV is safe to use.
The TV is making a humming noise.	Your TV utilizes high-speed switching circuits and high levels of electrical current. Depending on the TV's brightness level, the TV may seem slightly noisier than a conventional TV. Your TV has undergone strict quality control procedures that meet our demanding performance and reliability requirements. Some noise coming from the TV is considered normal and is not an acceptable cause for an exchange or refund.

4-2. Connect



4-3. Factory Mode Adjustments

4-3-1. 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**".

■ UN58H5203AGXZD

Inches		58"
PANEL	Vendor	INX
	Code	BN95-01724A
	Spec.	HH058BGNV1H/V
SMPS BOARD	Vendor	SEM
	Code	BN44-00787A
	Spec.	L58GFB_ESM
MAIN BOARD	Chassis Ass'y	BN91-13444M
	PBA Ass'y	BN94-07903M
Byte	Item	
0	Factory Reset	-
1	Type	58D6AF0S
2	Local set	Different according to the country
3	SW Model	UH5203
4	BOM Model	5203
5	Tuner	ISDB-T
6	Ch table	NONE

4-3-2. Entering Factory Mode

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

- If you have Factory remote control



- If you don't have Factory remote control, can't control some menus.

Option
Control
Debug
SVC
ADC/WB
Advanced

```

T-NT14MAKUC-xxxx
T-NT14MAKUSS-xxxx
BT Version :*****
E-Manual : NMISDBH-1.****
Blaster Version : 258401-258403-300001
EDID SUCCESS
CALIB : AV/COMP/PC/HDMI/
Option : **A6AF1D,US,5303,NONE (Vary by
inches)

DTP-SDAL-NT14M-MAIN-****-****
RFS : "NT14M *****" K/2 2014-0*-**
KERNEL : 107.1272,/ Onboot : 00**
DTP-DTVTD-****

Model : UN**H5303
Wired MAC SUCCESS
Wireless MAC SUCCESS
WIFI :ATH6KL (5.0.0.99_****)
C/Nf/W/M/D/HO PO AO /S/ N/
Factory Data Ver : 191 /EERC Ver :77

Smart control : ****
DTP-BP-HAL-4718
DTP-BP-HW- 4718
DTP-BP-APP-4718-02
POP-FLA-14-HD_SMART-**
Date of purchase : mm/dd/yyyy
  
```

4-3-3. Factory Data

■ Option

Factory Menu Name	Data	Range
Factory Reset	-	
Type		58D6AF0S
Local Set	-	
Model	-	
SVC Model	5203	
TUNER	S_TC	
Ch Table	NONE	
MRT Option		
Front Color	U-S-C-53	
Lvds Format	JEIDA	
Language_Arabic	US	
Region	USA	
PnP Language	Local	
WIFI REGION	S	
OTN Support	ON	
OTA Support	OFF	
MediaPlay DLNA	...	
TTX	OFF	
China HD	OFF	
NT Conversion	OFF	
Num of DTV	1	
Num of AV	1	
Num of COMP	1	
Num of HDMI	2	
Num of SCART	0	
Num of USB Port	2	
Num of USB 3.0	0	
Num of RVU	0	
Num of Display	2	
Num of IPTV	0	
Num of RUI	0	
Num of PVR RECORD	0	
TOOLS Support	40	
LNA Support	OFF	
24Px4 Support	OFF	

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Factory Menu Name	Data	Range
BD Wise Support	OFF(H6203 ON)	
Data Service Support	OFF	
PVR Support	OFF	
CI Support	OFF	
LEDMotionPlus Support	ON	
Natural Mode Support	ON	
Relax Mode Support	OFF	
HDMI/DVI SEL	2	
Select LED/PDP	LCD	
Wall Mount	OFF	
HV Flip	HV Filp	
FRC HV Flip	0	
Light Effect	OFF	
e-Pop Default	ON	
CAMERA Support	OFF	
NETWORK Support	Int-Wifi	
EcoSensor Support	ON	
3D Support	OFF	
BT Support	OFF	
BT ADDRESS	Not support	
HP LINE	LineOut	
Smart Control Support	OFF	
Motion Recog	OFF	
Voice Recog	OFF	
Virtual Remocon color	1	
Local Dimming Panel	OFF	
Wifi Vendor	QCA	
Engineer Option		
Type Of PANEL KEY	None	
5 Way Function Key	R_BACK	
Contents Bar	OFF	
Cable Modulation	QAM	
Standby led on/off	OFF	
Recognition Support	OFF	
IF AGC	0	
D AGC	0	
PH BW	0	
FQ BW	0	

Factory Menu Name	Data	Range
PH RATE	0	
PD EN	0	
PEQ Inx	0	
WF Scale		
WF Type	0	
Num of Network Stream	1	
DP V Size	0	
Backend Device		
BT_AUDIO_ON_OFF	OFF	
Config_AV_PATH		
USING_PSI_UPDATE		
ECO Stanby	OFF	
Fast Logo Delay	0	
Num of PANEL KEY		
Panel Detail	0	
Panel Init Time	250	
Tcon Init Time	460	
WRITE MAC Address		

■ Control

Factory Menu Name	Data	Range
EDID		
EDID ON/OFF	OFF	
EDID WRITE ALL	...	
EDID WRITE PC	...	
EDID WRITE HDMI	...	
EDID WRITE HDMI1	...	
EDID WRITE HDMI2	...	
EDID WRITE HDMI3	...	
EDID WRITE HDMI4	...	
EDID Ver	...	
EDID Port		
EDID WRITE DVI	...	
Sub Option		
RS-232 Jack	UART	Debug/UART
Serial Log On/Off	OFF	ON/OFF
Watchdog	OFF	

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Factory Menu Name	Data	Range
FRC Monitoring	OFF	
Checksum	0x0000	
Fast Boot in Production	ON	
UART ENABLE	OFF	
ECO IC TYPE	MC8121	
Info Link Server Type	development	
Info Link Country	None	
TTX Group	...	
Visual Test	...	
MediaPlay DB	...	
OPTION_SWU		
OPTION_NUM		
RF Remocon Support	OFF	
CCD mode	...	
DONS Support	OFF	
Num of IPTV CIP	0	
Num of CI	0	
Num of HYBRID TV	0	
T-CON Device		
BOARD CONTROL	OFF	
RM		
PSA		
LMK threshold	4	
Low threshold	10	
High threshold	15	
CSB	ON	
CLB	ON	
EEPG Enable	0	
Last Screen	OFF	
App Resume	OFF	
BP PMS Reset	1	
F Anet Thread	2	
ACM_MC	OFF	
Support MiniBrowser	ON	
HotkeyList	Basic_Smart	
PDP Option		
Pixel Shift Test	OFF	
Logic SW		

Factory Menu Name	Data	Range
Panel Temperature		
LOGIC Waveform Day		
Logic Check Sum		
MRT		
SAPC Timer		
APC Speed		
Hotel Option		
Hospitality Mode	OFF	
Power On		
Menu OSD		
Operation		
Music Mode		
External Source		
Eco Solution		
Cloning		
Shop Option		
Shop Mode	OFF	
Exhibition Mode	OFF	
3D Cube	OFF	
Asia Option		
Unbalance		
AF Level adjust		
TX Power Level		
Mono Last Memory		
H Shaking		
SOUND		
Carrier_Mute	ON	
High Devi	OFF	
Speaker Delay Normal	10	
SPDIF PCM Gain	□9 dB	
FM M Prescale	48	
FM Prescale	0x00h	
AM Prescale	0x32h	
NICAM Prescale	0x48h	
BTSC Mono Prescale	15	
BTSC stereo Prescale	29	
BTSC SAP Prescale	29	
A2Ident High Thid	36	

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Factory Menu Name	Data	Range
A2Ident Low Thld	9	
Pilot Level High Thld	0x0Fh	
Pilot Level Low Thld	0x08h	
Carrier2 Amp High Thld	4	
Carrier2 Amp Low Thld	3	
Carrier2 SNR High THR	16	
Carrier2 SNR Low THR	80	
Sig Error On	35	
Sig Error Off	41	
Amp Model	TAS5745	
Amp Volume	0xc9h	
Amp Scale	0x35h	
Amp Check Sum	0x00480W60	
Woofer Type	0	
Woofer Volume	0xcbh	
Woofer Scale	0x8ah	
Woofer Check Sum	NONE	
Woofer Local EQ Checksum	0	
Speaker EQ	ON	
PEQ Test	Ready	
Lacal Speaker EQ	0	
Local EQ Checksum	0	
SRS Tuning Parm	0	
Subwoofer Support	0	
India Sound	OFF	
AudioDock BT delay	50	
Wall Filter Type	0	
Bottom CheckSum	0	
Bottom Local Checksum	0	
Lipsync Inx	2	
Lipsync checkSum	NG	
Lipsync USB Test	Ready	
Lipsync BT Checksum	NG	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		

Factory Menu Name	Data	Range
LVDS Spread	ON	
DDR Spread	OFF	
Period	20K	
Amplitude	1.5	
HD SSC ON/Off	OFF	
HD SSC Value	1	
LVDS SSC ON/OFF	OFF	
LVDS Value	0	
DDR SSC ON/OFF	OFF	
DDR SSC Value	1	
FRC Vx1 SSC ON/OFF	OFF	
FRC LVDS SSC ON/OFF	OFF	
FRC LVDS SSC MRR	10	
FRC LVDS SSC MFR	1	
FRC Vx1 SSC Period	0	
FRC Vx1 SSC Modulation	0	
FRC DDR SSC ON/OFF	ON	
FRC DDR SSC MRR	15	
FRC DDR SSC MFR	1	
FRC DDR SSC Period	0	
FRC DDR SSC Modulation	0	
DDR Margin		
A CTRL_OFFSET_0_3	0	
A CTRL_OFFSET_D	0	
B CTRL_OFFSET_0_3	0	
B CTRL_OFFSET_D	0	
MICOM POWER OFF	OFF	
RF Mute Time	6ms	
CI +1.3	OFF	
FRC		
Tuner Margin	10	
MPEG Margin	100	
H.264 Margin	100	
CAM Wait Time		
TS Clock delay	0	
TCON_TEMP_READ	0	
TEMP LAST	60	

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Factory Menu Name	Data	Range
DCC VERSION	0x3447	
DCC CHK SEL	0	
DCC CHECK LOCAL	0	
DCC CHECK TOTAL	0	
MultiACC Checksum	0	
IIC Bus Stop	OFF	
Tuner Status		
Cert Option	SHOW	
RM_BIST_DTV	0	
RM_BIST_ATV	0	
Voice Debug	OFF	

■ SVC

Factory Menu Name	Data	Range
Self Test(for HW)		
Loop Back		
CPU		
DDR		
FLASH		
EEPROM		
Tuner X-TAL		
Tuner1		
HDMI Switch IC		
USB HUB IC		
WIFI		
LVDS		
LVDS2		
T-CON/FRC		
T-CON2/FRC		
PCB Test		
MOIP		
BT		
EcoSensor		
Voltage		
Chip Test		
Module Test		
ATV CH Inspection		

Factory Menu Name	Data	Range
DTV CH Inspection		
Satellite CH Inspection		
Woofer Sound Inspection		
DP Test		
DP CRC Result		
Voltage Result		
BT		
Chip Test		
Module Test		
ATV CH Inspection		
DTV CH Inspection		
Satellite CH Inspection		
UHD OSD TEST		
Aging Line Test		
Tweeter Sound Inspection		
Info		
SVC Info		
LOG(View Log)		
ER Count		
Panel Display Time		
Factory Execution History		
Factory Reset History		
Upgrade		
T-CON Usb Download		
T-CON CheckSum		
Logic Usb D/L		
SUBMICOM UPGRADE		
BT UPGRADE		
BT FREEPAIRING		
Function Upgrade		
FRC3D FW UPGRADE		
FRC3D LD UPGRADE		
Camera Upgrade		
Mic Upgrade		
CPLD USB Download		
JP MICOM UPGRADE		
DP MICOM UPGRADE		
Jump UPGRADE		

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Factory Menu Name	Data	Range
IR Blaster Upgrade		
IR Blaster delay time		
CPLD Download		
LDC PROFILE UPGRADE		
Pic Data USB Update		
Audio Data USB Update		
Eco Data USB Upate		
SC ADK Upgrade		
SC MBR Upgrade		
Reset		
App Reset	0	
EEPROM Rst	0	
SPI Flash Reset	Failure	
OPTION_HDMI		
DVI/HDMI SOUND	Auto	
HDMI HOT PLUG	Disable	
HOTPLUG SWITCHING	boot	
HOTPLUG DURATION	1200ms	
CLK TERM DURATION	1200ms	
HDMI FLT CNT SIG	100ms	
HDMI FLT CNT LOS	100ms	
UNSTABLE BAN CNT	5000ms	
HDMI ROBIN	ON	
HDMI Callback	OFF	
HDMI CTS Thld	8	
HDMI CTS Cnt1	1	
HDMI EQ	Auto	
HDMI Write Type	Combine	
HDMI Switch	NONE	
DVI SET TIME	300ms	
HDMI Sync	DE	
HDMI 3D DET	0	
HOTPLUG OFF HOLD TIME		
HDMI Stable Count	1	
HDCP UPDATE SPI		
SPI VERSION	0	
DVB CI		
TS Clock delay TC	0	

Factory Menu Name	Data	Range
TS Clock delay S	0	
CI Control Buf ON	ON	
TS Clock delay CPU	-1	
Test Pattern		
Pattern Sel	OFF	
Logic Pattern Sel		
Logic Level Sel		
FRC Pre Test Pattern	0	
FRC Post Test Pattern	0	
SOC TCON Test Pattern	0	
SOC TCON Pattern Level	255	
SOC TCON FRC Pattern	0	
HDMI WB Pattern	OFF	
HDMI Pattern Sel	0	
Parma Pre Test Pattern	0	
Parma Port Test Pattern	0	
FRC OSD PRE PATTERN	0	
FRC OSD POST PATTERN	0	
Other Setting		
Delete S/N	0	
IPERF	stopped	
Expert		
CAL Data Backup		
CAL Data Restore		
ATV IF AGC SPEED		
Source Direct ON/OFF	0	
App Update	LAST POWER	
SVC Panel	ORIGINAL	

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibaration		
Comp Calibration		
PC Calibration		
HDMI Calibration		
ADC Result		

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Factory Menu Name	Data	Range
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	134	
2nd_G_L	134	
2nd_B_L	134	
2nd_R_H	49	
2nd_G_H	49	
2nd_B_H	49	
White Balance		
R-Offset	128	
G-Offset	128	
B-Offset	128	
R-Gain	128	
G-Gain	128	
B-Gain	128	
WB-W2_R_Offset		
WB_W2_B_Offset		
WB_W2_R_Gain		
WB_W2_B_Gain		
WB-N_R_Offset		
WB_W2_N_Offset		
WB_W2_N_Gain		
WB_W2_N_Gain		
MGA		
MGA On/Off	OFF	
R1_Gain		
G1_Gain		
B1_Gain		
R2_Gain		
G2_Gain		
B2_Gain		
R3_Gain		
G3_Gain		
B3_Gain		

Factory Menu Name	Data	Range
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		

■ Advanced

4-4. White Balance

4-4-1. Calibration

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

Option
Control
Debug
SVC
ADC/WB
Advanced

ADC

AV Calibration
Comp Calibration
HDMI Calibration

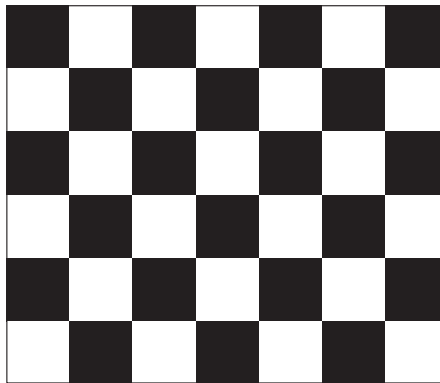
4-4-2. Service Adjustment

You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

- Adjust Specification

Source	Setting Mode	Pattern	Use Equipment
HDMI	1280 x 720@60 Hz	Pattern #24 (Chess Pattern)	CA210 & Master MSPG925 Generator



(Chess Pattern)

- Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#1)	Perform in NTSC B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
HDMI IN	Perform in 720p B&W Pattern #24	Lattice

■ Method of Color Calibration (AV)

1. Apply the NTSC Lattice (N0. 3) pattern signal to the AV IN 1 port.
2. Press the Source key to switch to "AV1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "AV Calibration" menu.
6. In "AV Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "AV Calibration" status from Failure to Success.

■ Method of Color Calibration (Component)

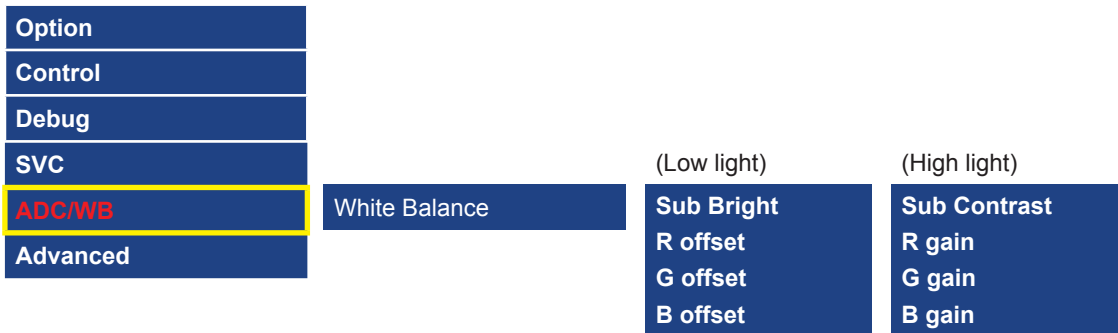
1. Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port.
2. Press the Source key to switch to "Component1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "Comp Calibration" menu.
6. In "Comp Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "Comp Calibration" status from Failure to Success.

■ Method of Color Calibration (HDMI)

1. Apply the 720p Lattice (N0. 6) pattern signal to the HDMI1/DVI IN port.
2. Press the Source key to switch to "HDMI1" mode.
3. Enter Service mode.
4. Select the "ADC" menu.
5. Select the "HDMI Calibration" menu.
6. In "HDMI Calibration Off" status, press the "▶" key to perform Calibration.
7. When Calibration is complete, it returns to the high-level menu.
8. You can see the change of the "HDMI Calibration" status from Failure to Success.

4-4-3. Adjustment

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



4-5. Software Upgrade

Samsung may offer upgrades for the TV's firmware in the future. These upgrades can be performed via the TV when it is connected to the Internet, or by downloading the new firmware from samsung.com to a USB memory device.

- Alternative Software (Backup) shows The previous version that will be replaced.
- Software is represented as 'Year/Month/Day_Version'. The more recent the date, the newer the software version. Installing the latest version is recommended.



4-5-1. By USB

Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the TV. Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied.

"MENU-->Support--> Software Update"

The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete (the new version will have a higher number than the older version). When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

4-5-2. By Online

Upgrades the software using the Internet.

- First, configure your network. For detailed procedures on using the Network Setting, refer to the 'Setting the Network' instructions.
- If The internet connection doesn't operate properly, connection can be broken, please retry downloading. If the problem still happens, download by USB and upgrade.

4-5-3. Alternative Software (Backup)

If there is an issue with the new firmware and it is affecting operation, you can change the software to the previous

- If Software was changed, existing Software is displayed.
- you can change current Software to Alternative Software by 'Alternative Software'.

4-6. The Dimension of H5203 Models

