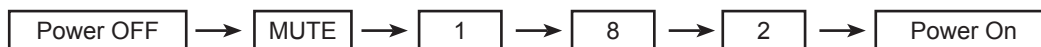

4-3. Factory Mode Adjustments

4-3-1 Entering Factory Mode

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

- If you do not have Factory remote - control



4-3-2 How to Access Service Mode

Using the Customer Remote

1. Turn the power off and set to stand-by mode
2. Press the remote buttons in this order; POWER OFF-MUTE-1-8-2-POWER ON to turn the set on.
3. The set turns on and enters service mode. This may take approximately 20 seconds.
4. Press the Power button to exit and store data in memory.
- If you fail to enter service mode, repeat steps 1 and 2 above.
5. Initial SERVICE MODE DISPLAY State

Mode: CDTV . RES : 480I

Option	T-CHE7AUSC-0062
ADC/WB	T-CHE7AUSS-1006
Control	SDAL-LB650-4.2.27-016
Expert	RFS:25_2G_64_512-26 T-CHE7AUSC
Advanced	2009-03-09
	FRCQ FW : 1008, CONFIG : 4900
	ZIG BEE VER : 502
	Type : 46A2UF0E
	Model: UN46B8000
	EDID OK
	CALIV : AV O COMP O PC 0 HDMO O
	Option : 0938 2011 0
	Factory Data Ver : 292
	DTP-AP-COMP-119-0017
	DTP-HIIG-0114-13
	TLIB 8000 US 2G 2009-02-13-02
	DTP-BP-0122-02-0013
	Date of purchase : 2/20/2009

6. Buttons operations withn Service Mode

Menu	Full Menu Display/Move to Parent Menu
Direction Keys ▲/▼	Item Selection by Moving the Cursor
Direction Keys ◀/▶	Data Increase / Decrease for the Selected Item
Source	Cycles through the active input source that are connected to the unit

4-3-3 Factory Data

■ Option

Main: Opiton, Mode : CDTV, RES :480I

Option	Factory Reset	
	Type	46A2UF0E / 55A2UF0E
	Model	UB8000
	TUNER	SEC_Custom
	Region	USA
	DDR	0
	Light Effect	ON
	Media Link Type	America
	PDP GROUP	...

■ ADC/WB

ADC	AV Calibration	Success
	Comp Calibration	Success
	PC Calibration	Success
	HDMI Calibration	Success

ADC Target	1st_AV_Low	64	1st_PC_B_High	...	2nd_COMP_Delta	1
	1st_AV_High	880	1st_PC_Delta	1	2nd_PC_R_Low	4
	1st_AV_Delta	1	2nd_AV_R_Low	4	2nd_PC_G_Low	4
	1st_COMP_Y_Low	64	2nd_AV_G_Low	4	2nd_PC_B_Low	4
	1st_COMP_Cb_Low	...	2nd_AV_B_Low	4	2nd_PC_R_High	940
	1st_COMP_Cr_Low	...	2nd_AV_R_High	940	2nd_PC_G_High	940
	1st_COMP_Y_High	940	2nd_AV_G_High	940	2nd_PC_B_High	940
	1st_COMP_Cb_High	...	2nd_AV_B_High	940	2nd_PC_Delta	1
	1st_COMP_Cr_High	...	2nd_AV_Delta	1	2nd_HDMI_R_Low	4
	1st_COMP_Delta	1	2nd_COMP_R_Low	4	2nd_HDMI_G_Low	4
	1st_PC_R_Low	16	2nd_COMP_G_Low	4	2nd_HDMI_B_Low	4
	1st_PC_G_Low	...	2nd_COMP_B_Low	4	2nd_HDMI_R_High	940
	1st_PC_B_Low	...	2nd_COMP_R_High	940	2nd_HDMI_G_High	940
	1st_PC_R_High	1004	2nd_COMP_G_High	940	2nd_HDMI_B_High	940
	1st_PC_G_High	...	2nd_COMP_B_High	940	2nd_HDMI_Delta	1

ADC Result	1st_Y_GH	128
	1st_Y_GL	128
	1st_Cb_BH	128
	1st_Cb_BL	128
	1st_Cr_RH	128
	1st_Cr_RL	128
	2nd_R_L	131
	2nd_G_L	131
	2nd_B_L	131
	2nd_R_H	67
	2nd_G_H	67
	2nd_B_H	67

White Balance	Sub Brightness	128
	R-Offset	512
	G-Offset	512
	B-Offset	512
	Sub Contrast	128
	R-Gain	512
	G-Gain	512
	B-Gain	512
	Movie R-Offset	...
	Movie B-Offset	...
	Movie R-Gain	...
	Movie B-Gain	...

■ Contol

EDID	EDID ON/OFF	ON
	EDID WRITE ALL	Success
	EDID WRITE PC	Success
	EDID WRITE HDMI	Success
	EDID WRITE HDMI1	...
	EDID WRITE HDMI2	...
	EDID WRITE HDMI3	...
	EDID WRITE HDMI4	...
	EDID 1.2 PORT	None

Sub Option

RF Mute Time	600ms	TOOLS Support	9	ND ADJ Support	ON
SUB U-COM	OFF	LNA Support	0	24Px4 Support	OFF
RS-232 Jack	UART	Wiselink WithOut DB	with DB	Power Indicator Support	ON
Watchdog	ON	WiseLink Movie	ON	BD Wise Support	ON
WD COUNT	0	WiseLink DLNA	ON	RF Remocon Support	ON
SSC ON/Off	ON	WiseLink Write	ON	Data Service Support	OFF
SSC MRR	2	NETWORK Support	Wireless	OTA Duration Test	OFF
SSC MFR	2	High Devi	OFF	Alternate Del	OFF
SSC QLC	4	Carrier Mute	ON	OTN Server Type	operating
Gamma	0.95	Volume Curve	ASIA_SA	OTN Test Server	OFF
PANEL DISPLAY TIME	7Hr	PWM MAX	256	OTN Support	ON
Dimm Type	EXT	DVOUT CD	0	OTN Reset	
LVDS FORMAT	VESA	CVBS CD	0	OTN Duration	OFF
Language	...	EDID Jack Ident	OFF	OTN Fail Test	OFF
UI COLOR	BLUE	Info Link Server Type	operating	IIC BUS STOP	OFF

Visual Test	Disable
Panel Auto Setting	Failure
Checksum	0x0000
View Log	
Font Data Viewer	

PDP Option

Hotel Option	HOTEL MODE	OFF
	POWER ON CHANNEL	...
	POWER ON BAND	...
	POWER ON VOLUME	...
	MIN VOLUME	...
	MAX VOLUME	...
	PANEL BUTTON LOCK	...
	POWER ON SOURCE	...

Shop Option	Shop Mode	OFF
	USB DEMO ON(SEC)	OFF
	USB DEMO OFF(SEC)	OFF
	Exhibition Mode	OFF
	PLG_MAX_SHOP	140

Sound	SAP High Threshold	0x1ah	Pilot Level Low Thld	0x10h
	SAP Low Threshold	0x9h	A2 Pilot AM Carr High Thld	...
	Speaker Delay Normal	0x59h	A2 Pilot AM Carr Low Thld	...
	Auxout Delay Normal	0x59h	NICAM Error High Thld	...
	Spdif Delay Normal	0x0h	NICAM Error Low Thld	...
	Speaker Delay Game	0x28h	FM1 CarrMute High Thld	0x02h
	Auxout Delay Game	0x28h	FM1 CarrMute Low Thld	0x01h
	Spdif Delay Game	0x0h	DRC H Thresh	0x35h
	STA Amp Vol.	0x28h	DRC L Thresh	0x30h
	STA Post Scale	0 x7fh	DRC SW Thresh	0x3dh
	STA Speaker EQ	ON	Chattering Cnt	5
	STA Sub Woofer	2	FM Prescale	...
	Mono to Stereo Thld	0x08h	AM Prescale	...
	Stereo to Mono Thld	0x04h	NICAM Prescale	...
	Pilot Level High Thld	0X30h	BTSC Mono Prescale	0x14h
			BTSC Stereo Prescale	0x14h
			BTSC Sap Prescale	0x14h
			A2K Prescale	...
		M Prescale	...	

Config Option	Num of ATV	1	HDMI/DVI SEL	1
	Num of DTV	1	Indicator Led	ON
	Num of AV	1	Wall Mount	OFF
	Num of SVIDEO	0	Chelsea HV Flip	ON
	Num of COMP	1	Num of DISPLAY	2
	Num of HDMI	4	HDMI AV MUTE TIME	40
	Num of PC	1	DVI/HDMI SOUND	Auto
	Num of SCART	0	HDMI HOT PLUG	Disable
	Num of DVI	0	HOTPLUG SWITCHING	Boot
	Num of OPTICAL Link	0	HOT PLUG OFF HOLD TIME	1200ms
	Num of MEDIA	1	HDMI FLT CNT SIG	100ms
	Num of PANEL KEY	6	HDMI FLT CNT LOS	600ms
	Num of USB Port	2	UNSTABLE BAN CNT	2500ms
	MFT Offset	62.5	HDMI Err Cnt	2
	Select LCD/PDP	LCD	HDMI ROBIN	ON
			HDMI Callback	OFF
			HDMI CTS Thld	14
			HDMI CTS Cnt1	1
			TMDS_EQ2_Boost	1
			TMDS_EQ2_Gain	0
			TMDS_PLL_Loop	3
			TMDS_CPREG_BLEED	1
			HDMI EQ	AUTO
			HDMI Switch	SIL9287
			DVI SET TIME	300ms

Test Pattern	FPE Pattern Sel	0
	FRC PATT_BeforeDDR	0
	FRC PATT_AfterDDR	0
	LOGIC Pattern Sel	...

■ **Expert** (It is just for experts. The service man doesn't have to change option.)

Expert	N/D ADJ Source	OFF ...
---------------	-------------------	------------

■ **Advanced** (Press the 0 button four times on advanced to enter hidden menu)

FBE3	BM_slope1	19	Skin-Enable	ON
	BM_slope2	36	Skin-UV	121
	BM_slope3	56	FBE Sub color	140
	BM_slope4	75	M-Skin-UV	...
	BM_start	68	M-Sub Color	...
	BM_start_max	110		
	Lfunc_basis	70		
	Hfunc_basis	80		
	Mean-Offset1	30		
	Mean-Offset2	235		
	Mean-Slope	112		
	ACR-Offset	10		
	ACR-th1	10		
	ACR-th2	110		

WB Movie	WB Movie	OFF	W2_Roffset	...
	W/B MOVIE ON/OFF	...	W2_Boffset	...
	MODE	...	W3_Rgain	...
	Color Tone	...	W3_Bgain	...
	MSub Brightness	...	W3_Roffset	...
	MSub Contrast	...	W3_Boffset	...
	N_Rgain	...	Movie Contrast	...
	N_Bgain	...	Movie Bright	...
	N_Roffset	...	Movie Color	...
	N_Boffset	...	Movie Sharpness	...
	W1_Rgain	...	Movie Tint	...
	W1_Bgain	...	Movie Backlight	...
	W1_Roffset	...	Movie Gamma	...
	W1_Boffset	...	M_Sub_Gamma	...
	W2_Rgain	...		
	W2_Bgain	...		

EPA Standard	Standard Contrast	95
	Standard Brightness	45
	Standard Sharpness	50
	Standard Color	50
	Standard Tint	0
	Standard Backlight	7

CH_VDEC	AGC_mode	1	CTI_level	15
	Gain_VCR	0	ST_Beg_NTSC	0
	Y_Gain_Man	880	VS_Slice_Level	4
	Saturation	128	HS_Slice_Level	3
	Hue	0	FB_Delay_adj	0
	Y_Shape_sel	13	RGB_Delay_adj	0
	Y_Shape_SCM	29	h_pk_gain	0
	C_Shape_sel	4	v_pk_gain	0
	C_Shape_SCM	4	h_pk_band	0
	If_iir	0	2d_pk_gain	0
	If_filt_sel	6	2d_pk_band	0
	LTI_en	OFF	slice_mod_fine	0
	LTI_level	100	scm_fdet_lvl	150
	CTI_en	OFF	bl_range	3
	SCM_STI_EN	OFF		

YC_Delay	V_Delay_adj	0
	U_Delay_adj	0

AR_ADC	RED_CUTOFF	0
	GREEN_CUTOFF	0
	BLUE_CUTOFF	0
	RED GAIN	0
	GREEN GAIN	0
	BLUE GAIN	0
	PHASE	16
	SOG_BW	3
	SSC_PC	6
	RGB_DLY	0

CH_DP	MNR	ON	MJC_DBG	0
	DCR	ON	MB_STEPS	100
	SD2HD_DCR	ON	LIMIT_MV_STEP	100
	SD2HD_DE	ON	GLOBAL_FALLBACK	36
	SD2HD_SCL	ON	LOCAL_FALLBACK	2
	SD2HD_LTI	ON		
	SD2HD_NARS	2		
	SD2HD_DUR	50		
	SD2HD_Metric	131220		
	Coring_ON_OFF	ON		
	SD_CSC	7094		
	HD_CSC	7438		
	M_SD_CSC	7094		
	M_HD_CSC	7438		
	PC_SD_CSC	7094		

NR	OFF_Y	20	HIGH_Y	90
	OFF_C	4	HIGH_C	18
	OFF_Noise_bias	4	HIGH_Noise_bias	4
	OFF_YMAX	128	HIGH_YMAX	160
	OFF_FADER	180	HIGH_FADER	150
	LOW_Y	70		
	LOW_C	16		
	LOW_Noise_bias	4		
	LOW_YMAX	140		
	LOW_FADER	150		
	MED_Y	80		
	MED_C	18		
	MED_Noise_bias	4		
	MED_YMAX	150		
	MED_FADER	152		

Sharpness	Pre_GainH1	12	SD_LTIH	16
	Pre_GainH2	25	SD_LTIV	24
	Pre_GainH3	20	PRE_CORING	2
	Post_GainH1	20	POST_CORING_H	2
	Post_GainH2	40	POST_CORING_V	2
	Post_GainH3	30	Pre_TOT	32
	Post_GainV1	30	Post_TOT	32
	Post_GainV2	50	SP Sub Color	59
	Post_GainV3	30		
	CTI_Gain	15		
	Pre_LTIH	8		
	SD_TH	100		
	HD_TH	132		
	NORMAL_LTIH			
	NORMAL_LTIV			

Sharpness_LNA	S1_Pre_GainH1	7	S3_Pre_GainH1	2
	S1_Pre_GainH2	11	S3_Pre_GainH2	3
	S1_Pre_GainH3	7	S3_Pre_GainH3	2
	S1_Post_GainH1	7	S3_Post_GainH1	2
	S1_Post_GainH2	11	S3_Post_GainH2	3
	S1_Post_GainH3	7	S3_Post_GainH3	2
	S1_Post_GainV1	30	S3_Post_GainV1	10
	S1_Post_GainV2	37	S3_Post_GainV2	12
	S1_Post_GainV3	30	S3_Post_GainV3	10
	S2_Pre_GainH1	5		
	S2_Pre_GainH2	7		
	S2_Pre_GainH3	5		
	S2_Post_GainH1	5		
	S2_Post_GainH2	7		
	S2_Post_GainH3	5		
	S2_Post_GainV1	20		
	S2_Post_GainV2	25		
	S2_Post_GainV3	20		

CE_DIMMING	Contrast Dimming	OFF
	Dimming in Standard	ON
	Dimming in Movie	ON

LNA_Plus	Synctip_Noise	0
	dB01_th	16
	dB12_th	48
	dB23_th	73
	dB34_th	185
	dB45_th	318

FRCQ Option	SSC_OnOff	ON	Film_Low_SD	31
	SSC_Width	96	Film_Medium_SD	6
	SSC_Freq	240	Film_High_SD	0
	FMD_Demo	0	Film_Low_HD	31
	CSB Vertical	ON	Film_Medium_HD	6
	CSB Horizontal	ON	Film_High_HD	0
	X_VStabStatVid	7	Video_Judder_Low	10
	X_VStabStatF	0	Video_Judder_Med	5
	X_VStabCorF	8	Video_Judder_High	0
	X_VStabSensF	48	Hangup Detection	ON
	X_HaloSizStatVid	7	Q LVDS Sequence	0-1-2-3
	X_HaloSizStatF	0	Q LVDS Format	JEIDA
	X_HaloSizCorF	12	Q LVDS bit width	10bit
	X_HaloSizSensF	32	PC_Mode_OnOff	

FRCQ Fallback	SensD_Film_Low	31	V_Len_Slope_Video	1
	SensD_Film_Medium	31		
	SensD_Film_High	31		
	Rel_Start_Film	20		
	Rel_Slope_Film	3		
	H_Len_Start_Film	127		
	H_Len_Slope_Film	1		
	V_Len_Start_Film	40		
	V_Len_Slope_Film	1		
	SensD_Video	0		
	Rel_Start_Video	20		
	Rel_Slope_Video	1		
	H_Len_Start_Video	127		
	H_Len_Slope_Video	1		
	V_Len_Start_Video	40		

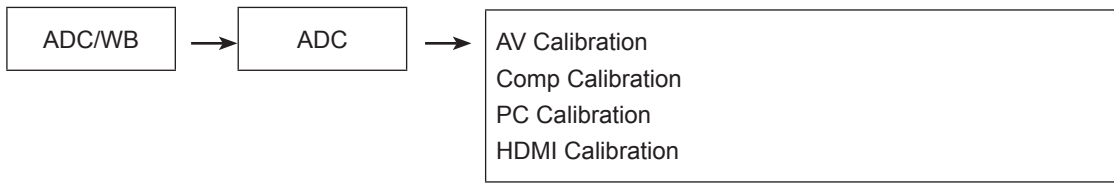
PQ Others	7.5 IRE NTSC	...
	7.5 IRE OFFSET	...
	HDMI 48Hz Enable	OFF
	HDMI Black Level	Normal

DDR margin	A CTRL_OFFSET_0_3	0x42424141
	A CTRL_OFFSET_D	0x41
	B CTRL_OFFSET_0_3	0x41410101
	B CTRL_OFFSET_D	0x42

EEPROM RESET	EER RESET	
	NVR All Clear	OFF

4-4. White Balance - Calibration

4-4-1 White Balance -Calibration

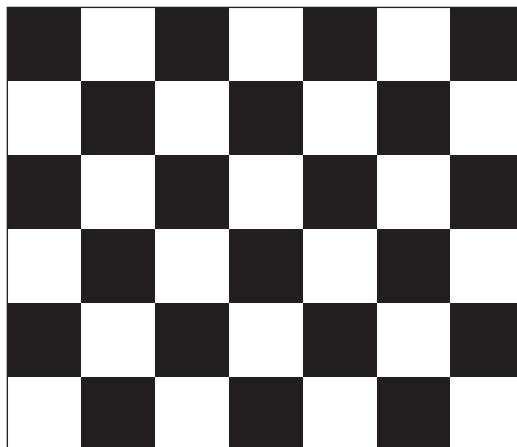


4-4-2 Service Adjustment - You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

Adjust spec.

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



(Chess Pattern)

4. Use Equipment : CA210 & Master MSPG925 Generator

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

Input mode	Calibration	Pattern
CVBS IN (Model_#1)	Perform in NTSC B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024x768) B&W Pattern #24	Lattice
HDMI IN	Perform in 720p B&W Pattern #24	Lattice

<Table 1>

■ 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/WB" and "ADB" 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 "component" mode
- 3) Enter Service mode
- 4) Select the "ADC/WB" and "ADB" 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.

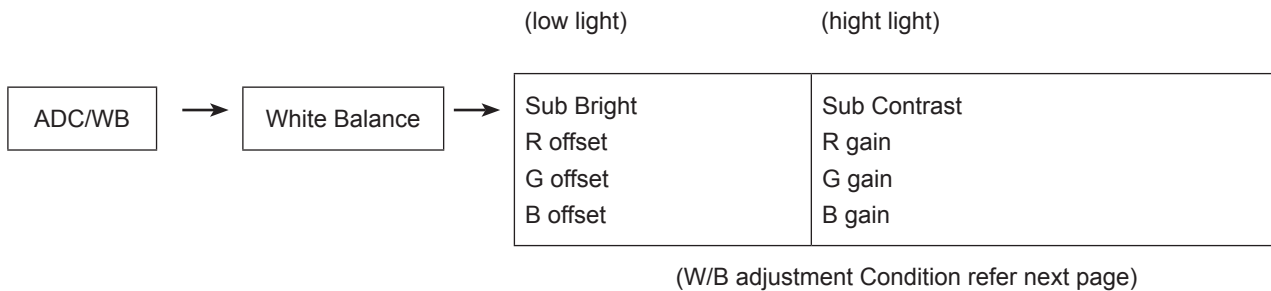
■ Method of Color Calibration (PC)

- 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/WB" and "ADB" 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/WB" and "ADB" 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 White Balance - Adjustment



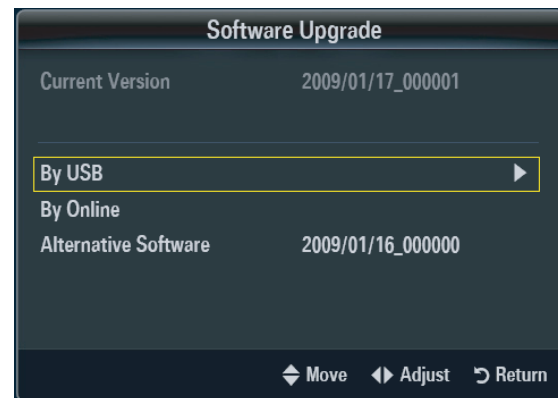
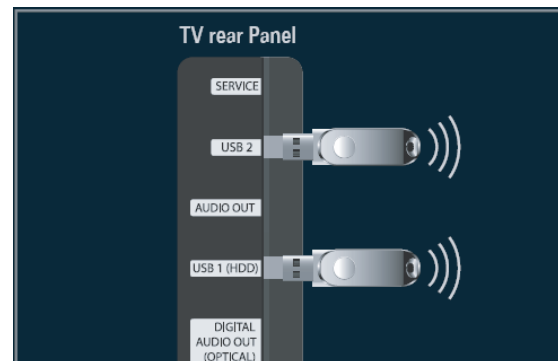
4-5. Servicing Information

4-5-1 Upgrading the Software

Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (726-7864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port located on your TV.

1. Insert a USB drive containing the firmware upgrade into the Wiselink Pro port on the side of the TV.
2. If pop up is showed, press the exit or press the No button. (If you press Yes button, display is changed to Wiselink Pro Menu)
3. Press the **MENU** button to display the menu. Press the **▲** or **▼** button to select "Setup", then press the **ENTER** button.
4. Press the **▲** or **▼** button to select "SW Upgrade", then press the **ENTER** button.
5. Press the **ENTER** button.
The message "Scanning for USB... It may take up to 30 seconds." is displayed.
6. The message "Upgrade version XXXX to version XXXX? The system will be reset after upgrade." is displayed. Press the **◀** or **▶** to select the "OK", then press the **ENTER** button.

Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete. 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.

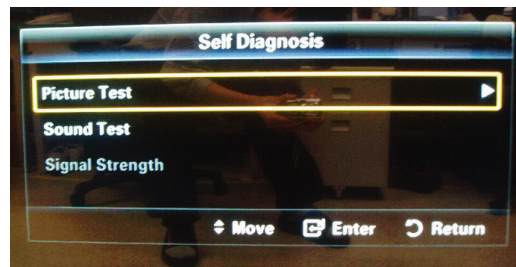


4-5-2 Self Diagnostic

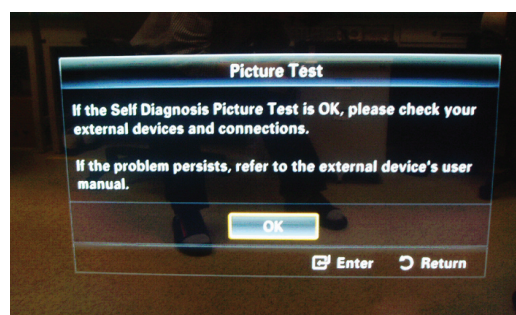
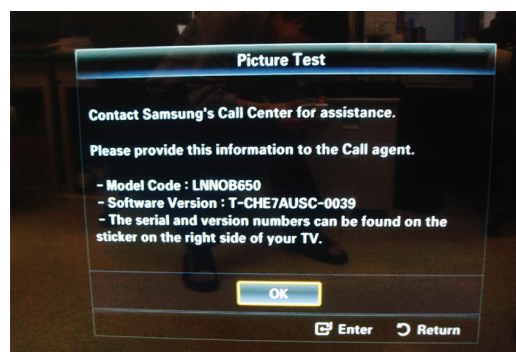
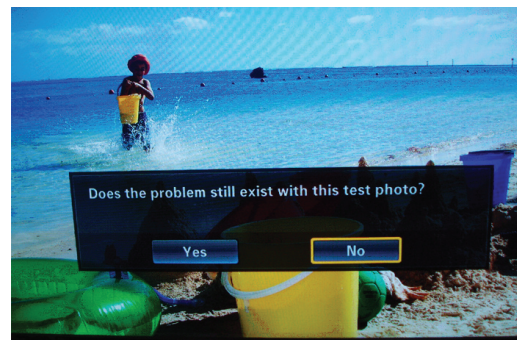
This is simple test function that judge whether is TV SET's problem or not.

There are two self-test. Picture and Sound.

1. Press "Menu -> Support -> Self Diagnosis"
The message "Picture Test / Sound Test" is displayed.



2. Picture Test
 - 1) The message "Does the problem still exist with this test pattern?" is displayed.
 - 2) Press "Yes". This is a TV SET problem.
The message "Contact Samsung's call center at 1-800-SAMSUNG for assistance." is displayed.
 - 3) Press "No".
This is not a TV SET problem.
The message "If the self diagnosis picture is OK, picture distortion may caused by your external device. Please check connection. If the problem still persists, refer to the external device's user manual." is displayed.



3. Sound Test

1) The message “Does the problem still exist with this sound test?” is displayed.

2) Press “Yes”. This is a TV SET problem.

The message “Contact Samsung’s call center at 1-800-SAMSUNG for assistance.” is displayed

3) Press “No”.

This is not a TV SET problem.

The message “If the self diagnosis picture is OK, picture distortion may caused by your external device.

Please check connection. If the problem still persists, refer to the external device’s user manual.” is displayed.

