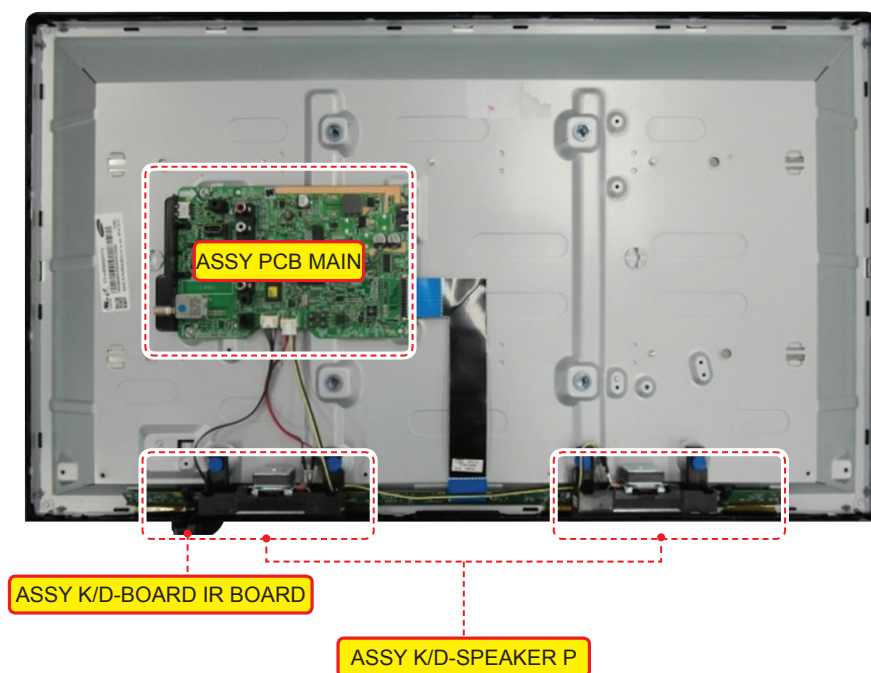


4. Troubleshooting

4-1. Previous Check

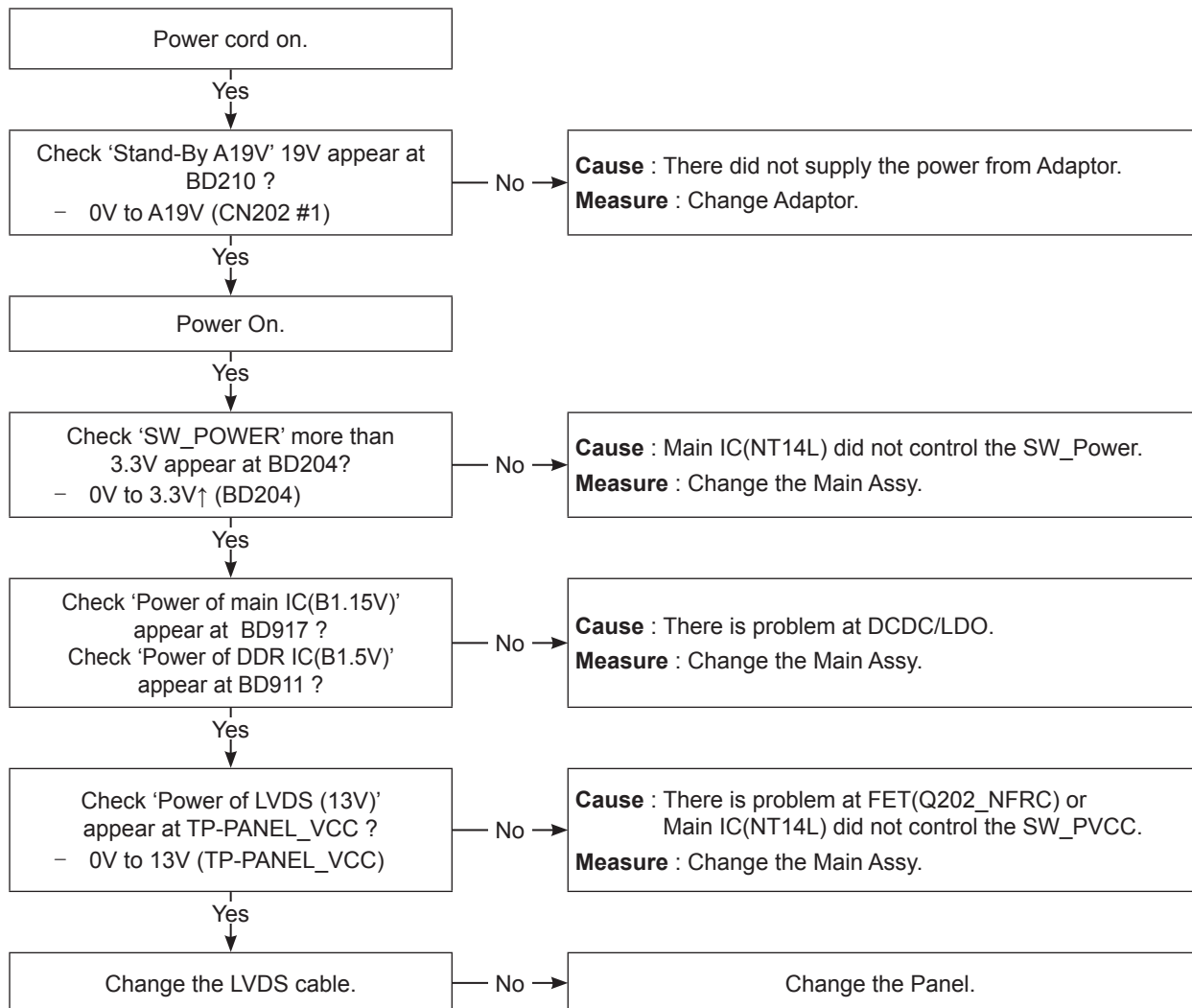
■ Check list for initial operation

- AC Power Cord connected to the TV and the wall receptacle.
- Standby Power/IR Indicator LED is turned On.
- If Power/IR Indicator is not on check 10p power cable is connected and for correct Standby Voltage from SMPS to Main. Also check Jog Function Cable.
- Power turned On with Jog Function or Remote.
- Power/IR Indicator Flashes.
- Panel Back Lights are turned On.
- If no Backlights, unplug AC Power Cord, unplug 10 pin connector to SMPS, plug in AC Power Cord, Back light should come on. Check Main Board operation for error.
- Power/IR Indicator goes off.
- Picture or banner is displayed.
 - If nothing is displayed, check the LVDS cable.

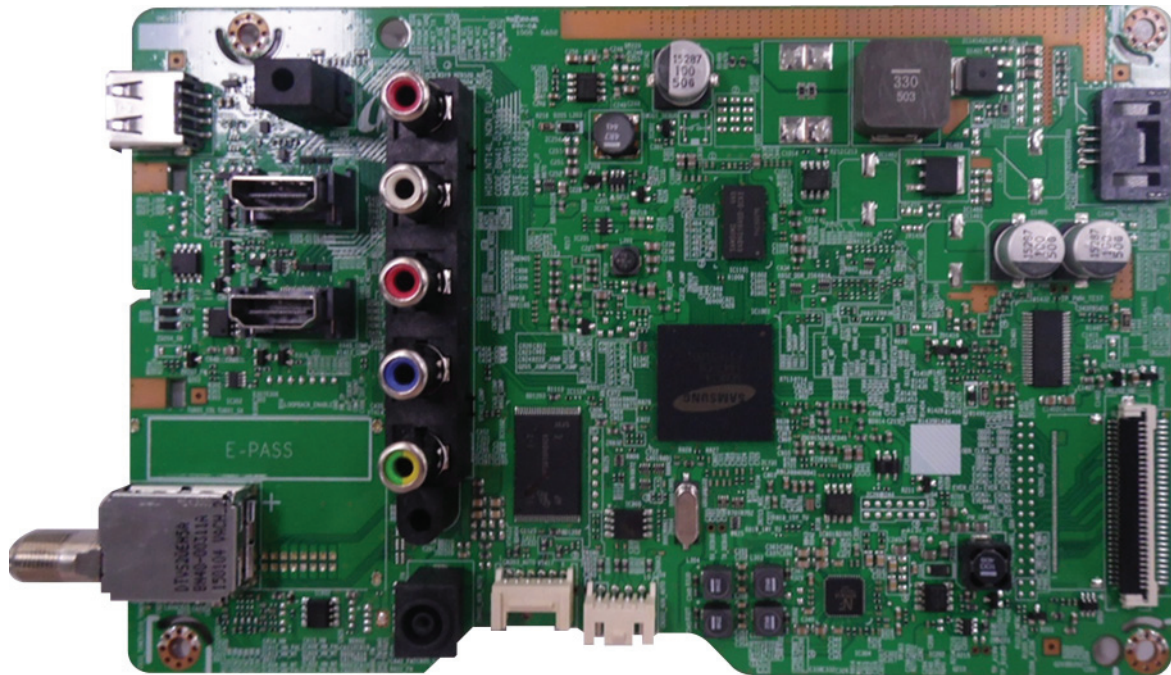


4-2. How to Check Fault Symptom

■ No Power and No Video



Main Board_Front



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**".

■ HG32ND450SGXZD

Inches		32"
PANEL	Vendor	CSOT
	Code	BN95-02125B
	Spec.	CY-JJ032AGHV1G
MAIN	ASSY CHASSIS	BN91-12216W
	ASSY PCB MAIN	BN94-07312W
Byte	Item	
0	Factory Reset	-
1	Type	32S6AH0JJ
2	Local set	BRA_DTV
3	SW Model	HD450
4	BOM Model	450
5	Tuner	-
6	Ch table	NONE

4-3-2. Entering Factory Mode

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

- If you do not have Factory remote control



- If you have Factory remote control



- If you don't have Factory remote control, can't control some menus. (Expert, Advanced menu)

Option		
Control	T-N14LJIBRCH-xxxx	MAIN SW Version
Debug	T-N14LJAUSSxxxx	SUB SW Version
SVC	EDID SUCCESS	
ADC/WB	CALIB : AV/COMP/PC/HDMI/	
Advanced	Option : 32S6AH0JJ,BRA_DTV,450,NONE	
	DTP-SDAL-NT14L-HOTEL-xxxx	
	RFS:"NT14L xxxx" K/20xx-xx-xx	
	KERNEL:x.xxxx, /Onboot:xxxx	
	TCON Version:----	
	NSP-DTVTD-xxxx-xxxx	
	Model: HG32ND450	
	Factory Data Ver:xx	
	EERC Version: xx	
	NSP-BP-HAL-xxxx	
	NSP-AP-CNC-xxxx	
	NSP-AP-MM-xxxx	
	NSP-AP-WP-xxxx	
	NSP-BP-MW-xxxx	
	NSP-BP-APP-xxxx	
	POP-PNG-xx	
	Date of purchase:-/-----	

4-3-3. Factory Data

■ Option

Factory Menu Name	Data	Range
Factory Reset	-	
Type	32S6AH0JJ	
Local Set	BRA_DTV	
SW Model	HD450	
BOM Model	450	
TUNER	-	
Ch Table	NONE	
MRT Option		
Front Color	N/A	
Lvds Format	JEIDA	
Language_Arabic	S_AMERICA	
Region	BRA	
Pup Language	POR_US	
WIFI REGION	D	
OTN 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	1	
Num of RVU	0	
Num of Display	2	
Num of IPTV	0	
Num of RUI	0	
TOOLS Support	313	
LNA Support	0	
24Px4 Support	OFF	
BD Wise Support	OFF	
Data Service Support	ON	
PVR Support	OFF	

Factory Menu Name	Data	Range
CI Support	OFF	
OTA support	OFF	
LEDMotionPlus Support	ON	
Natural Mode Support	ON	
Relax Mode Support	OFF	
HDMI/DVI SEL	2	
Select LCD/PDP	LCD	
Wall Mount	0	
HV Flip	OFF	
PVR RECORD NUM	0	
Light Effect	OFF	
e-Pop Default	OFF	
CAMERA Support	OFF	
NETWORK Support	Not Support	
EcoSensor Support	ON	
3D Support	OFF	
BT Support	OFF	
BT ADDRESS	Not Support	
HP LINE	NONE	
Capture Recording Support	OFF	
JAVA Data Service Support	ON	
Engineer Option		
Type Of Panel Key	Horizontal	
5 Way Function Key	R_BOTTOM	
Contents Bar	0	
Cable Modulation	...	
Standby Led on/off	OFF	
Recognition Support	OFF	
IF AGC	0	
D AGC	0	
PH BW	3	
FQ BW	3	
PH RATE	4	
PD EN	1	
PEQ Inx	164	
WF Scale		
Num of Network Stream	0	

4. Troubleshooting

Factory Menu Name	Data	Range
DP V Size	1	
Backend Device	ECHO_FS	
BT_AUDIO_ON_OFF	OFF	
Config_AV_PATH		
V_HDMI IDENT TYPE	2134	
V_HDMI PATH TYPE	BACD	
V_EDID TYPE	LCD_FHD	
V_ATV	CVBS_PORT_2	
V_AV1	AV_COMP_G1	
V_AV2	CVBS_PORT_3	
V_COMP1	ADC_PORT_1	
V_COMP2	None	
V_PC	ADC_PORT_0	
V_SCART1_CVBS	CVBS_PORT_3	
V_SCART1_RGB	ADC_PORT_2	
V_SCART2_CVBS	None	
V_SCART2_RGB	None	
A_ATV	SIF	
A_DTV	DECODER	
A_AV1	AUIN1	
A_AV2	AUIN0	
A_COMP1	AUIN1	
A_COMP2	None	
A_PC	AUIN0	
A_SCART1	AUIN0	
A_SCART2	None	
A_DVI	None	
A_HDMI	None	
A_Media	DECODER	
USING_PSI_UPDATE	...	
Fast Logo Delay	0	
Num of PANEL KEY	6	

■ Control

Factory Menu Name	Data	Range
EDID		
EDID ON/OFF	OFF	
EDID WRITE ALL	...	

Factory Menu Name	Data	Range
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	
Serial Log On/Off	OFF	
Watchdog	ON	
Checksum	0x0000	
Fast Boot in Production	OFF	
USB Serial	OFF	
Eeprom Reset		
SCO IC TYPE	MC8121	
Info Link Server Type	operating	
Info Link Country	None	
TTX Group	UserOSD	
Visual Test	...	
MediaPlay DB	...	
OPTION_SWU		
OTN Server Type	operating	
OTN Test Server	OFF	
SWU Reset		
SWU Duration	OFF	
SWU Fail Test	OFF	
SWU_Diag_Code		
OPTION_NUM		
Num of ATV	1	
Num of SVIDEO	0	
Num of PC	0	
Num of DVI	0	
Num of OPTICAL Link	1	
Num of MEDIA	1	

4. Troubleshooting

Factory Menu Name	Data	Range
Num of Tuner	1	
Num of PVR RECORD	0	
RF Remocon Support	OFF	
CDD mode	...	
DPMS Support	OFF	
Num of IPTV CIP	0	
Num of CI	0	
Num of DECODER	0	
T-CON Device		
BOARD CONTROL	OFF	
RM		
PSA		
LMK threshold	0	
Low threshold	0	
High threshold	0	
CSB	ON	
CLB	ON	
EEPG Enable	OFF	
Fanet Thread	2	
UNIQUE TRIPLET	ON	
ASIA PROMOTION	OFF	
PDP Option		
HOTEL Option		
Power On		
Menu OSD		
Music Mode		
External Source		
Eco Solution		
Cloning		
Shop Option		
Shop Mode	...	
Exhibition Mode	OFF	
3D Cube	OFF	
Asia Option		
Sepco 120Hz	OFF	
Unbalance	OFF	
FMTransmitter Support	OFF	

Factory Menu Name	Data	Range
FMTransmitter Carrier	OFF	
AF Level adjust	3	
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	OFF	
SOUND		
High Devi	OFF	
Carrier Mute	OFF	
Speaker Delay Normal	0	
Wiselink Delay Menu	0	
Pilot Level High Thld	0x1Fh	
Pilot Level Low Thld	0x1Dh	
Pilot_Phase_diff_on_THR	OFF	
FM Prescale	0X17h	
AM Prescale	0x1Ah	
NICAM Prescale	0x1Dh	
Amp Model	NTP7414	
Amp Volume	0xc5h	
Amp Scale	0x9ah	
Amp Check Sum	0x1E1ED856	
SubWoofer Support	0	
Woofer Type	0	
Woofer Volume	0xcbh	
Woofer Scale	0x8ah	
Woofer Check Sum	NONE	
Woofer Local Check Sum	NONE	
Amp Local Check Sum	NONE	
Speaker EQ	ON	
PEQ Test	Ready	
Speaker cut-off Freq	5	
SPDIF PCM Gain	-9 dB	
FM M Prescale	0	
BTSC Mono Prescale	15	
BTSC stereo Prescale	29	
SAP Prescale	29	
A2 Ident High Thid	11	
A2 Ident Low Thid	5	

4. Troubleshooting

Factory Menu Name	Data	Range
Carrier2 Amp High Thld	27	
Carrier2 Amp Low Thld	22	
Carrier2 SNR High THR	32	
Carrier2 SNR Low THR	15	
Audio-IP Test	Ready	
SRS Tuning Param	4	
TruBass CheckSum	0	
Mic Scale	0	
India Sound	OFF	
Wall Filter Type	0	
SAP High T'hld	9	
SAP Low T'hld	7	
Bottom CheckSum	0	
Bottom Local CheckSum	0	

■ Debug

Factory Menu Name	Data	Range
Spread Spectrum		
DDR Margin		
ND SDJ Support	0	
MICOM POWER OFF	0	
RF Mute Time	6ms	
CI+1.3	0	
FRC		
Tuner Margin	0	
MPEG Margin	1000	
H.264 Margin	8	
CAM Wait Time	0	
TS Clock delay	0	
TCON_TEMP READ	0.00	
TEMP LAST	60.00	
DCC VERSION	0x0	
DCC CHK SEL	0	
DCC CHECK LOCAL	0x0	
DCC CHECK TOTEL	0x0	
MultiACC Checksum	0	
IIC Bus Stop	OFF	
Tuner Status		

■ SVC

Factory Menu Name	Data	Range
Test Pattern		
Panel Display Time	2Hr	
SVC Info	0	
Delete S/N	Failure	
Upgrade		
Smart Hub Reset	0	
ER Count		
LOG		
Self Diagnosis		
IPERF	Stopped	
OPTION_HDMI		
DVB CI		
CAL Data Backup_Copy	...	
CAL Data Restore_Copy	...	
Expert		
ATV IF AGC SPEED	0	
Reset		
Auto Power	MEMORY	

■ ADC/WB

Factory Menu Name	Data	Range
ADC		
AV Calibration	/	
Comp Calibration	/	
PC Calibration	/	
HDMI Calibration	/	
ADC Result		
1st_Y_GH	128	
1st_y_GL	128	
1st_Cb_BH	...	
1st_Cb_BL	...	
1st_Cr_RH	...	
1st_Cr_RL	...	
2nd_R_L	133	
2nd_G_L	133	
2nd_B_L	133	
2nd_R_H	70	

4. Troubleshooting

Factory Menu Name	Data	Range
2nd_G_H	70	
2nd_B_H	70	
White Balance		
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	158	
WB_W2_B_Gain	68	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	146	
WB_N_B_Gain	107	
MGA		
MGA On/Off	OFF	
R1_Gain	512	
G1_Gain	512	
B1_Gain	512	
R2_Gain	512	
G2_Gain	512	
B2_Gain	512	
R3_Gain	512	
G3_Gain	512	
B3_Gain	512	
R4_Gain	512	
G4_Gain	512	
B4_Gain	512	
R5_Gain	512	
G5_Gain	512	
B5_Gain	512	
R6_Gain	512	
G6_Gain	512	
B6_Gain	512	

Factory Menu Name	Data	Range
R7_Gain	512	
G7_Gain	512	
B7_Gain	512	
R8_Gain	512	
G8_Gain	512	
B8_Gain	512	
R9_Gain	512	
G9_Gain	512	
B9_Gain	512	
R10_Gain	512	
R10_Gain	512	
R10_Gain	512	

■ Advanced

4-4. White Balance

4-4-1. Calibration

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

Option
Control
Debug
SVC
ADC/WB
Advanced

ADC
ADC Result
White Balance
MGA

AV Calibration
Comp Calibration
PC Calibration
HDMI Calibration

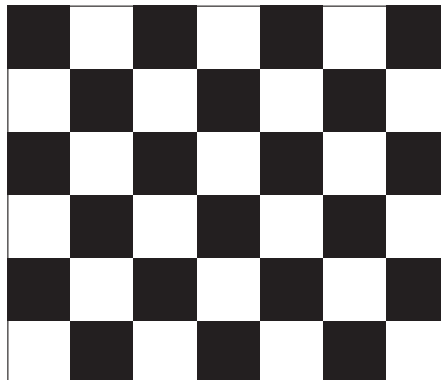
4-4-2. Service Adjustment

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 (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.

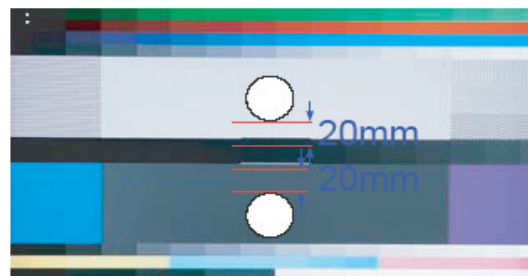
4-4-3. Adjustment

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

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

4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).
2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.
3. The optimal values for each mode are configured by default. It varies with Panel's size and Specification.
 - Equipment : CS-210
 - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
 - Alternate Equipment : CA200& anyone Master supported pattern#92(refer to right photo)
 - Use other Equipment only after comparing the result with that of the Master equipment.
 - Set Aging time : 60 min



Calibration and Manual setting for WB adjustment

- HDMI : Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (720p)
- COMP: Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (720p)
- CVBS: Calibration at #24 Chessboard Pattern Manual adjustment at #92 pattern (NTSC)



NOTE

- If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.
- White Balance Manual adjustment.

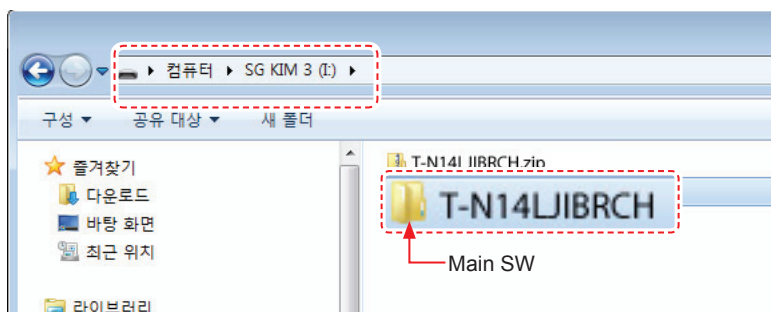
4-6. Software Upgrade

■ How to Upgrade SW and Micom

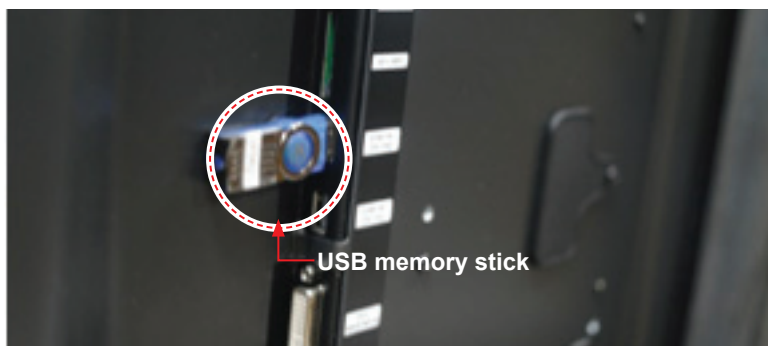
- Insert a USB drive containing the firmware upgrade downloaded from samsung.com into the Set. Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied.
- The set will turn off and turn on automatically after completing the firmware upgrade. Please check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

■ Main SW Upgrade

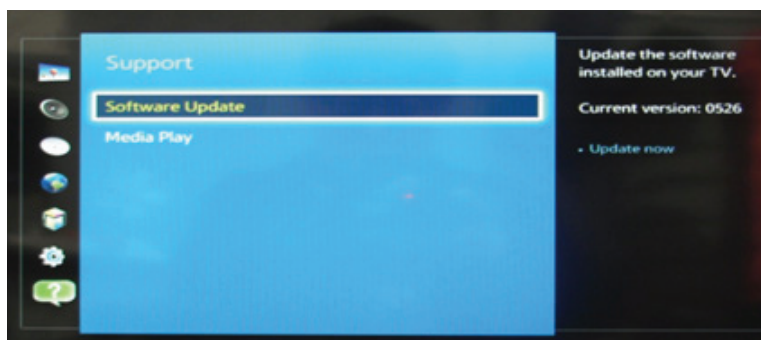
1. You need USB, including update file.
 - <http://displaysolutions.samsung.com/resources/downloadCenter?method=list> save "T-N14LJIBRCH" file in USB.
2. Store the SW program named "T-N14LJIBRCH" in a USB memory stick.



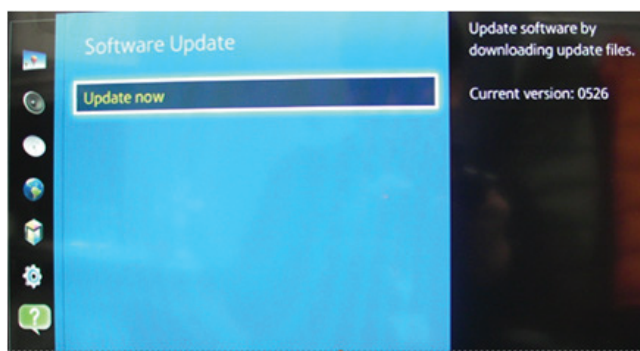
3. Connect the USB memory stick.



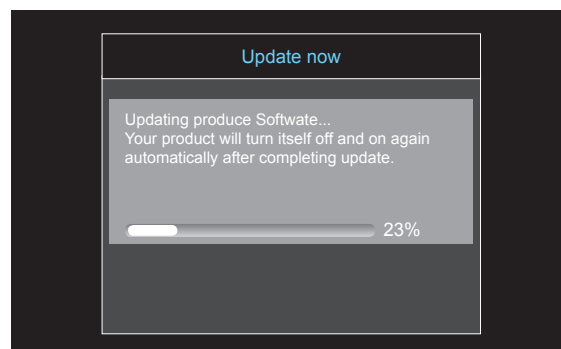
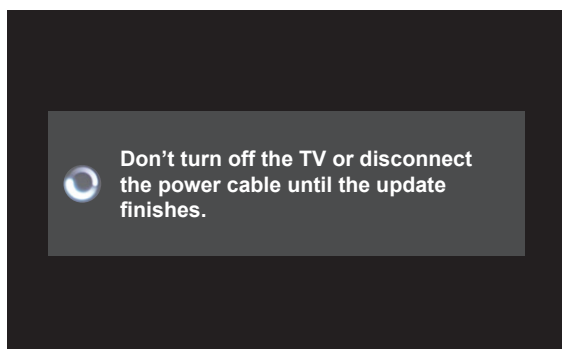
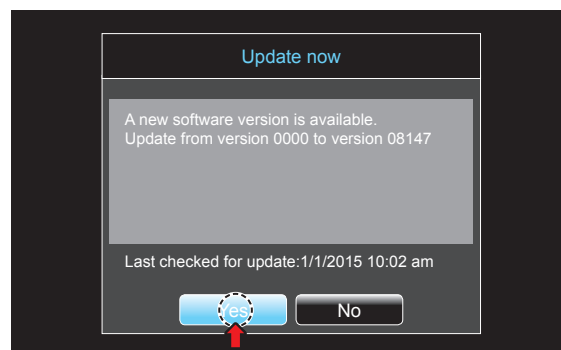
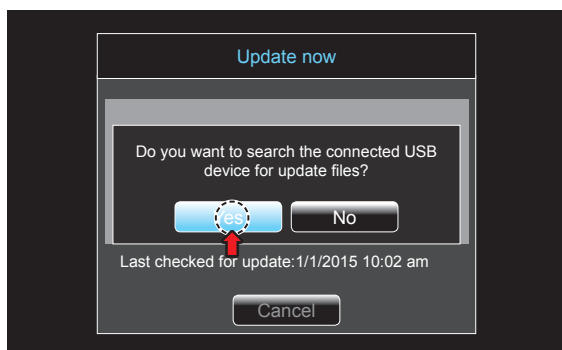
4. Click the **MENU** button on the remote control.
 - You can use OSD menu.
5. Select **Support** menu.
 - Locate the menu cursor **Software Upgrade** menu.



6. Locate the menu cursor **Update now** menu.



7. Click the **YES** button.



4-7. How to write EDID

1. Select **Control** - **EDID**.

Option	EDID
Control	Sub Option
Debug	PDP Option
SVC	Hotel Option
ADC/WB	Shop Option
Advanced	Asia Option
	LFD Option
	Config Option

2. Select **EDID ON/OFF** and push ► button of remote control.
then you can see the change of state **OFF** to **ON**.

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

3. Select **EDID WRITE ALL** and push ► button of remote control.

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