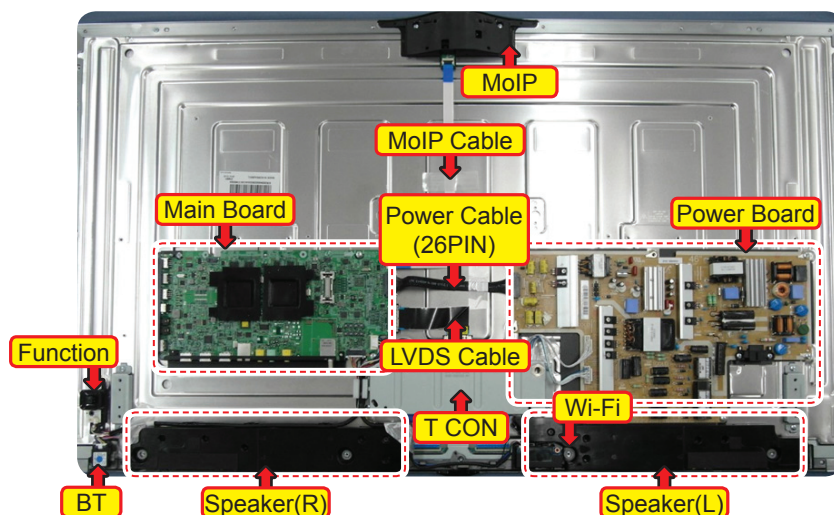


## 4. Troubleshooting

### 4-1. Troubleshooting

#### 4-1-1. Previous Check

1. Check the various cable connections first.
  - Check to see if there is a burnt or damaged cable.
  - Check to see if there is a disconnected or loose cable connection.
  - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.



3. How to distinguish if the problem is caused by **Main Board** or **T CON**

- No Video

If the problem is No Video but BLU is on and Indication LED is blinking repeatedly and faster than normal booting, replace the T-CON board.

- Distorted Picture

Check the inner patterns.

- For All mode

X12	FOX_FT1 FRC Post	Picture	Problem
OK	OK	NG	Main Board or Signal Source
NG	OK	NG	Main Board
NG	NG	NG	Main Board or LVDS cable or T CON or Panel

- Only for HDMI mode (additional check)

HDMI	Picture	Problem
OK	NG	There is no problems after HDMI IC check HDMI source or HDMI jack.
NG	NG	There is no problems before HDMI IC check X10+ pattern or LVDS cable or T CON

■ **How to check inner pattern?**

1. Enter the service mode → Choose 'SVC' → Check the 'internal pattern.'

2. Enter 'Service Mode.'

- If you do not have Factory remote control



- If you have Factory remote control

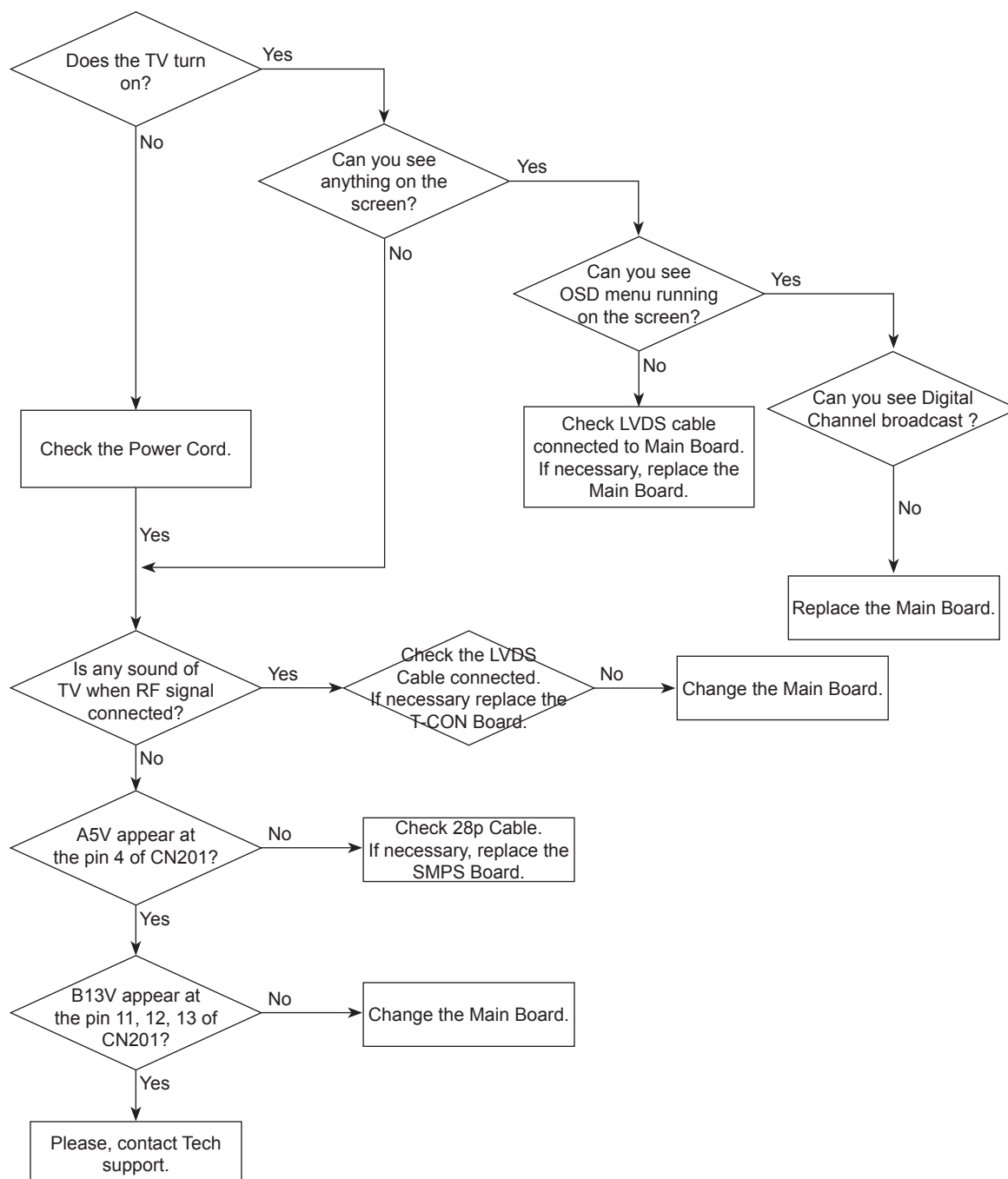


3. Choose 'SVC → Test pattern'.

Option	Test Pattern	Mstar Test Pattern
Control		
Debug		
SVC		
ADC/WB		
Advanced		

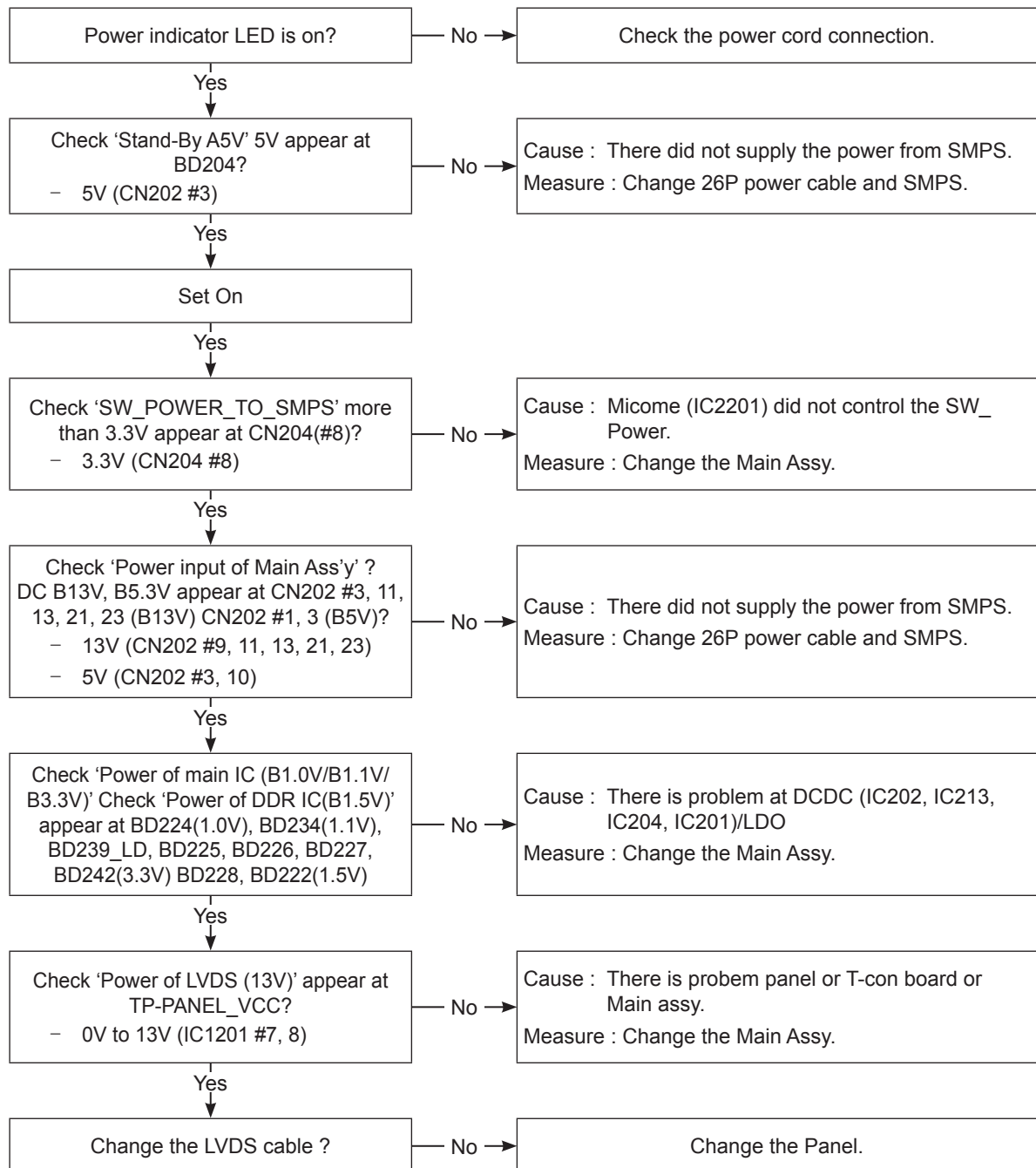
4. Check inner patterns.

## 4-1-2. Simple flow chart of malfunction

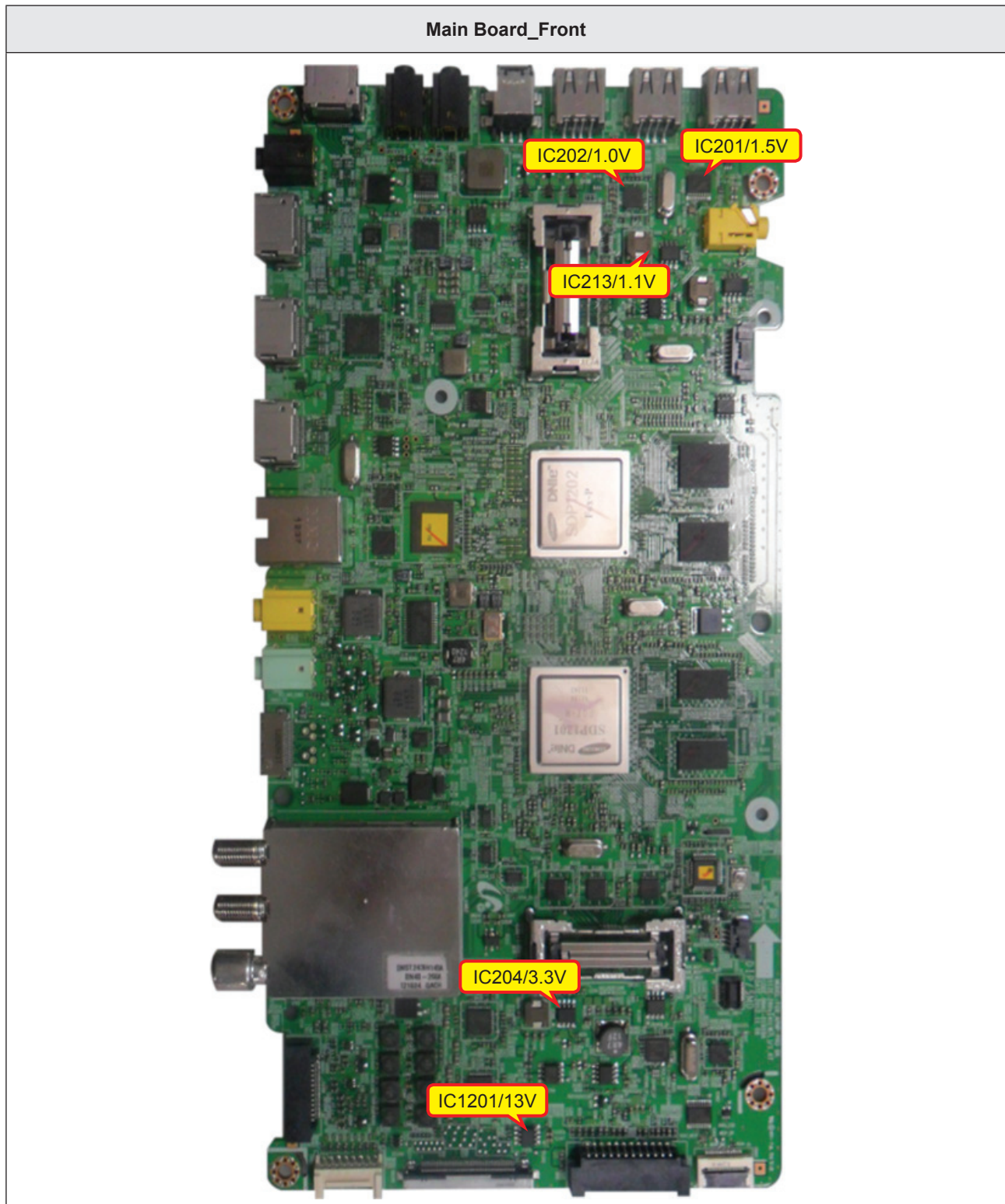


## 4-2. How to Check Fault Symptom

### 4-2-1. NO Power and No Video



## ■ Location of Parts



## 4-2-2. Problems and Solutions

### ■ Apps

There is something wrong with the TV.	Try this!
Some application content only appears in English. How can I change the language?	<ul style="list-style-type: none"><li>• The application content language may be different from the user interface language.</li><li>• The ability to change the language depends on the service provider.</li></ul>
Some application services do not work.	<ul style="list-style-type: none"><li>• Check with the service provider.</li><li>• Refer to the help section on the application service provider's website.</li></ul>

### ■ Photos, Videos & Music

There is something wrong with the TV.	Try this!
Some files can't be played back.	<ul style="list-style-type: none"><li>• This problem may occur with high-bitrate files. Most files can be played back, but you might experience problems with high-bitrate files.</li></ul>

### ■ Web Browser

1. Select Web Browser. The browsing screen may differ from the one on your computer.
2. The web browser is not compatible with Java applications.
3. You cannot download files. If you attempt to download a file, you will receive an error message instead.
4. The web browser may not be able to access certain websites.
5. Playing Flash videos may be restricted.
6. E-commerce for online purchases is not supported.
7. With websites that have scrollable windows, scrolling through such a window can result in corrupted characters.
8. ActiveX is not supported.
9. Certain options are not accessible in Link Browsing mode. (Switch to Pointer Browsing to activate this.)
10. Only a limited number of fonts are supported. Certain symbols and characters may not be displayed properly.
11. The response to remote commands and the resulting on-screen display may be delayed while a webpage is loading.
12. Loading a webpage may be delayed or suspended completely with certain operating systems.
13. The copy and paste operations are not supported.
14. When composing an email or a simple message, certain functions such as the font size and color selection may not be available.
15. There is a limit to the number of bookmarks and the size of the log file that can be saved.
16. The number of windows that can be opened concurrently varies depending on the search conditions and the TV model.
17. The web browsing speed will vary depending on the network environment.
18. Playing embedded video automatically disables PIP. Video playback may not commence after PIP is disabled. In this case, you will have to reload the page.
19. The web browser supports .mp3 audio files only.
20. The web browser supports a specific file format for importing and exporting bookmarks. (Compatible Format: Netscape-bookmarkfile- 1)
21. The folder tree information is not included when importing and exporting bookmarks.

- 22.** Exporting bookmarks to a USB device connected to the TV saves the bookmarks under a folder named "Samsung SmartTV Bookmark".
- 23.** If Clock (System > Time > Clock) has not been enabled, the browsing history will not be saved.
- 24.** The browsing history is saved in the order of latest to oldest, with the oldest entries being overwritten first.
- 25.** Depending on the types of video/audio codecs supported, it might not be possible to play back certain video and audio files during Flash playback.
- 26.** A sudden change in the picture brightness inside a video window may affect the brightness of the screen. This problem applies to PDP TVs only.
- 27.** Video sources from PC-optimized streaming service providers may not play properly on our proprietary web browser.
- 28.** Using the on-screen QWERTY keyboard automatically disables PIP. (Except when entering a URL.)

## 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**".

Model Name		UE40F80****	UE46F80****	UE55F80****
PANEL	Vendor	SDC	SDC	SDC
	Code	BN95-00898A	BN95-00902A	BN95-00902A
	Spec.	LSF400HL01	LSF550HQ01	LSF550HQ01
SMPS	Vendor	SEM	HANSOE	HANSOE
	Code	BN44-00635A	BN44-00635B	BN44-00636B
	Spec.	L46U2P_DSM	L46U2P_DHS	L55U2P_DHS
MAIN ASSY	Chassis Ass'y	Depending on Region, Chassis Ass'y is different.		
	PBA Ass'y	Depending on Region, PBA Ass'y code is different.		
Byte	Item			
0	Factory Reset	-	-	-
1	Type	40A2UF8E	46A2UF8E	55A2UF8E
2	Local set	EU	EU	EU
3	SW Model	UF8000 UF8005 UF8080 UF8090	UF8000 UF8005 UF8080 UF8090	UF8000 UF8005 UF8080 UF8090
4	BOM Model	8000 8005 8080 8090	8000 8005 8080 8090	8000 8005 8080 8090
5	Tuner	TC	SI_ADI	
		T2C	FOX_T2C	
		TCS2	SI_TCS2	
6	Ch table	NONE	NONE	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	T-FXPDEUC-xxxx	Main SW Version
Control	T-FOXDEUS2-xxxx	Sub micom Version
Debug	BT Version :	Bluetooth Version
SVC	E-Manual : FPDVBEUF-xxxx	E-Manual Version
ADC/WB	Camera Version : x.xx	Camera Version
Advanced	Mic Version : x.xx	Camera(Mic) Version
	Blaster-Version : x.xx	IR Blaster Version
	EDID SUCCESS	
	CALIB : AV / COMP / PC / HMDI /	
	Option : xxxx xxxx xxx	
	CPLD/LD : T-FOXCPD 0003	LD Version
	SDAL-FOXP-MAIN-xxxx-xxxx	
	RFS : "Fox.P 00xx" / 201x-xx-xx	
	KERNEL : xxx.xxxx, / Onboot : xxxx	
	DTP-DTVTD-xxxx	
	Backend IC[1], Data Ver : xxxx	FRC SW Version
	TCON Version: xxxx	TCON Version
	Model : xxxxxxxx	
	Wired MAC----	Condition of Wired Mac
	Wireless MAC----	Condition of Wireless Mac
	DRM : Crt O,Nf O,Wv O, Hc O, Dc O, Mx O, MI O	
	Factory Data Ver : xx	
	EERC Version : xx	
	DTP-BP-HAL-xxxx	
	DTP-BP-MW-xxxx	
	DTP-BP-APP-xxxx	
	Date of purchase : mm/dd/yyyy	

### 4-3-3. Factory Data

#### ■ Option

Factory Menu Name	Data	Range
<b>Factory Reset</b>	-	
<b>Type</b>	40A2UF8E/46A2UF8E/55A2UF8E/ 60A2UF8E/75A2UF8E	
<b>Local Set</b>	EU	EU / EU_ITALY / EU_GER / EU_FRANCE / EU_BENELUX / EU_SPAIN / EU_UK / CIS_ CA_MS / NORDIC / CIS_RUSSIA / CIS_UKR / EU_TURKEY / EU_AFRICA / EU_ALGERIA / EU_S_AFR / EU_POLAND
<b>SW Model</b>	UF8000	UF8005 / UF8080 / UF8090
<b>BOM Model</b>	8000	
<b>TUNER</b>	SI2190	
<b>Ch Table</b>	NONE	
<b>MRT Option</b>		
Front Color	U-MOIP	
LVDS FORMAT	JEIDA	
Language_Arabic	EU	
Region	USA	
PnP Language	ENG_US	
WIFI REGION	S	
OTN Support	ON	
OTA Support	OFF	
TTX	OFF	
China HD	OFF	
NT Conversion	OFF	
Num of DTV	1	
Num of AV	1	
Num of COMP	1	
Num of HDMI	4	
Num of SCART	0	
Num of USB Port	3	
Num of HeadPhone	0	
Num of RVU	1	
Num of Display	2	
Num of IPTV	0	
Num of RUI	0	
Num of PVR RECORD	0	
TOOLS Support	40	

Factory Menu Name	Data	Range
LNA Support	OFF	
24Px4 Support	OFF	
BD Wise Support	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	4	
Select LCD/PDP	LCD	
Wall Mount	OFF	
HV Flip		HV Flip / H Filp / OFF
Light Effect	OFF	
e-Pop Default	1	
CAMERA Support	OFF	
NETWORK Support	3	
EcoSensor Support	ON	
3D Support	ON	
BT Support	ON	
BT ADDRESS		
<b>Engineer Option</b>		
Auto Power	MEMORY	
Type Of PANEL KEY	None	
5 Way Function Key	R BACK	
Contents Bar	OFF	
Cable Modulation	QAM	
Standby led on/off	OFF	
Recognition Support		
IF AGC	0	
D AGC	0	
PH BW	0	
FQ BW	0	
PH RATE	0	
PD EN	0	
PEQ Inx	0	
WF Scale		

#### 4. Troubleshooting

Factory Menu Name	Data	Range
WF Type	0	
Nu of Network Stream	1	
DP V Size	0	
Backend Device	FOX-FT1	
BT_AUDIO_ON_OFF	OFF	
Config_AV_PATH		
ECO Standby	OFF	
Fast Logo Delay	0	
Num of PANEL KEY	6	

#### ■ Control

Factory Menu Name	Data	Range
<b>EDID</b>		
EDID ON/OFF	OFF	
EDID WRITE ALL	...	
EDID WRITE HDMI	...	
EDID Ver	...	
EDID Port		
<b>Sub Option</b>		
RS-232 Jack	UART	Debug/UART
Watchdog	OFF	
Checksum	0x0000	
Fast Boot in Production	OFF	
USB Serial	OFF	
Eeprom Reset		
ECO IC TYPE	NONE	
Info Link Server Type	development	
Info Link Country	None	
TTX Group	-	
Visual Test	-	
MediaPlayDB	-	
OPTION_SWU		
OTN Server Type	operating	
OTN Test Server	OFF	
SWU Reset		
SWU Duration	OFF	
SWU Fail Test	OFF	

Factory Menu Name	Data	Range
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	
Num of Tuner	1	
Num of ISP	1	
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	
HP LINE	LineOut	
RM		
Server Type	Operating	
RTS Mode	OFF	
PSA		
FKP Download1	0	
FKP Download2	0	
LMK threshold	3	
Low threshold	10	
High threshold	15	
CSB	ON	
CLB	ON	
<b>PDP Option</b>		
Pixel Shift Test	OFF	
Logic SW	0	
Panel Temperature	0	
LOGIC Waveform Day	0	
Logic CheckSum	0	
MRT	0	
SAPC Timer		

#### 4. Troubleshooting

Factory Menu Name	Data	Range
APC Speed		
<b>Hotel Option</b>		
Hospitality Mode	OFF	
Power On	...	
Menu OSD	...	
Operation	...	
Music Mode	...	
External Source	...	
Eco Solution	...	
Cloning	...	
<b>Shop Option</b>		
Shop Mode	OFF	
Exhibition Mode	OFF	
3D Cube	OFF	
<b>Asia Option</b>		
Unbalance	OFF	
AF Level adjust	3	
TX Power Level	0	
Mono Last Memory	OFF	
H Shaking	OFF	
<b>SOUND</b>		
Carrier_Mute	OFF	
High Devi	OFF	
Speaker Delay Normal	0x6Eh	
SPDIF PCM Gain	-9dB	
FM M Prescale	0x30h	
FM Prescale	0x00h	
AM Prescale	0x32h	
NICAM Prescale	0x48h	
BTSC Mono Prescale	0x19h	
BTSC stereo Prescale	0x2Fh	
BTSC SAP Prescale	0x2Bh	
A2Ident High THID	31	
A2Ident Low THID	0	
Pilot Level High Thld	0x28h	
Pilot Level Low Thld	0x10h	
Carrier2 Amp High THID	4	

Factory Menu Name	Data	Range
Carrier2 Amp Low THID	3	
Carrier2 SNR High THR	16	
Carrier2 SNR Low THR	80	
Sig Error On	35	
Sig Error Off	41	
Amp Model	TAS5745	
Amp Volume	0xcbh	
Amp Scale	0x35h	
Amp Check Sum	0x000821B2	
Woofer Type	0	
Woofer Scale	0	
Woofer Check Sum	0x8ah	
Woofer Local EQ Checksum	0	
Speaker EQ	ON	
PEQ Test	Ready	
Local Speaker EQ	0	
Local EQ Checksum	0	
Speaker cut-off Ferq	4	
Audio-IP Test		
SRS Tuning Parm	0	
TruBass-CheckSum	0	
Mic Scale	0	
Subwoofer Support	0	
India Sound	OFF	
AudioDock BT delay	50	
Wall Filter Type	0	
Wiselink Delay Menu	90	

## ■ Debug

Factory Menu Name	Data	Range
<b>Spread Spectrum</b>		
LVDS Spread	ON	
DDR Spread	1.0% Spectrum	
Period	30K	
Amplitude	1	
HD SSC ON/Off	ON	
HD SSC Value	1	

#### 4. Troubleshooting

Factory Menu Name	Data	Range
LVDS SSC ON/Off	ON	
LVDS SSC Value	0	
DDR SSC ON/Off	ON	
DDR SSC Value	1	
FRC LVDS SSC ON/OFF	ON	
FRC LVDS SSC MRR	10	
FRC LVDS SSC MFR	1	
FRC LVDS SSC Period	1	
FRC LVDS SSC Modulation	1	
FRC DDR SSC ON/OFF	ON	
FRC DDR SSC MRR	15	
FRC DDR SSC MFR	1	
FRC DDR SSC Period	1	
FRC DDR SSC Modulation	1	
<b>DDR Margin</b>		
A CTRL_OFFSET_0_3	0x0	
A CTRL_OFFSET_D	0x0	
B CTRL_OFFSET_0_3	0x0	
B CTRL_OFFSET_D	0x0	
<b>ND ADJ Support</b>	OFF	
<b>MICOM POWER OFF</b>	OFF	
<b>RF Mute Time</b>	6ms	
<b>CI+1.3</b>	OFF	
<b>FRC</b>		
FRC FDISPLAY ON/OFF	0	
3D FDISPLAY ON/OFF	OFF	
PC Mode ON/OFF	OFF	
<b>Tuner Margin</b>	10	
<b>MPEG Margin</b>	1000	
<b>H.264 Margin</b>	8	
<b>CAM Wait Time</b>		
<b>TS Clock deldy</b>	0	
<b>TCON_TEMP READ</b>	0	
<b>TEMP LAST</b>	60	
<b>DCC VERSION</b>	0x0	
<b>DCC CHK SEL</b>	0	
<b>DCC CHECK LOCAL</b>	0x0	



Factory Menu Name	Data	Range
<b>DCC CHECK TOTAL</b>	0x0	
<b>MultACC Checksum</b>	0	
<b>IIC Bus stop</b>	OFF	
<b>Tuner Status</b>		
DVB		
SNR		
BER		
Signal Strength		
Bandwidth		
Frequency		
LNA Status		
FFT		
Modulation		
Code Rate		
GI		
Hier Modulation		
Frequency offset		
Timing offset		
AGC		
UCB		
PLL Type		
DEMOD Type		
TPS Lock		
RS Lock		
SSI		
SQI		
Firmware Version		
ISDB-T		
FFT Size_1		
Guard Interval_1		
Freq. Offset_1		
SNR_1		
IF AGC_1		
TMCC Lock_1		
TS Packer_1		
Master Lock_1		
A_Modulation_1		

#### 4. Troubleshooting

Factory Menu Name	Data	Range
A_Code Rate_1		
A_Timer InterLeave_1		
A_Segments Num_1		
A_BER_1		
B_Modulation_1		
B_Code Rate_1		
B_Timer InterLeave_1		
B_Segments Num_1		
B_BER_1		
C_Modulation_1		
C_Code Rate_1		
C_Timer InterLeave_1		
C_Segments Num_1		
C_BER_1		

#### ■ SVC

Factory Menu Name	Data	Range
<b>Test Pattern</b>		
Pattern Sel	OFF	
Logic Pattern Sel	...	
Logic Level Sel	...	
FRC Pre Test Pattern	0	
FRC Post Test Pattern	0	
FRC3D Fdisplay	OFF	
FRC3D PC Mode	OFF	
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 Post Test Pattern	0	
<b>Panel Display Time</b>	0Hr	
<b>SVC Info</b>	0	
<b>Delete S/N</b>	0	
<b>Upgrade</b>		
T-CON Usb Download	Failute	

Factory Menu Name	Data	Range
T-CON CheckSum	Error	
Logic Usb D/L	...	
SUBMICOM UPGRADE	Failute	
BT UPGRADE		
BT FREPAIRING	ON	
Function Upgrade	Failute	
FRC3D FW Upgrade		
Camera Upgrade		
Mic Upgrade		
CPLD USB Download		
JP MICOM UPGRADE	Failute	
DP MICOM UPGRADE	Failute	
Jump Upgrade	Failute	
<b>Smart Hub Reset</b>	0	
<b>ER Count</b>		
WD Count	0	
AR Count	0	
WIFI ER Count	0	
BT ER Count	0	
HDMI Err Cnt	0	
Camera ER Count	0	
<b>LOG(View Log)</b>		
Select Log Type	NVRAM	
Log View	0	
Delete Log		
Debug Log Down		
Emergency Log Copy		
<b>Self Diagnosis</b>		
Loop Back		
LAN Test		
AV Audio Test		
DVIN Audio Test		
CVBS Test		
COMP Test		
USB HUB Test		
HDMI Test		
SCART Audio Test		

#### 4. Troubleshooting

Factory Menu Name	Data	Range
SCART CVBS Test		
SCART RGB Test		
CPU		
DDR		
FLASH		
EEPROM		
Sound AMP		
HDMI Switch IC		
USB HUB IC		
WIFI		
LVDS		
T-CON/FRC		
PCB Test		
MOIP		
App Self Test		
Device self Test		
Voltage		
EcoSensor		
BT		
EXT Sound Inspection		
Woofer Sound Inspection	NONE	
ATV CH Inspection		
DTV CH Inspection		
Satellite CH Inspection		
<b>IPERF</b>	Stopped	
<b>OPTION HDMI</b>		
<b>Expert</b>		
<b>DVB CI</b>		
<b>CAL Data Backup</b>	...	
<b>CAL Data Restore</b>	...	

#### ■ ADC/WB

Factory Menu Name	Data	Range
<b>ADC</b>		
AV Calibration	Success	
Comp Calibraion	Success	
PC Calibration	Success	

Factory Menu Name	Data	Range
HDMI Calibration	Success	
<b>ADC Result</b>		
1st_Y_GH	258	
1st_Y_GL	128	
1st_Cb_BH	...	
1st_Cb_BL	...	
1st_Cr_RH	...	
1st_Cr_RL	...	
2nd_R_L	132	
2nd_G_L	132	
2nd_B_L	132	
2nd_R_H	70	
2nd_G_H	70	
2nd_B_H	70	
<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	164	
WB_W2_B_Gain	63	
WB_N_R_Offset	128	
WB_N_B_Offset	128	
WB_N_R_Gain	151	
WB_N_B_Gain	108	
<b>MGA</b>		
MGA On/Off	OFF	
R1_Gain	...	
B1_Gain	...	
G1_Gain	...	
R2_Gain	...	
B2_Gain	...	
G2_Gain	...	

#### 4. Troubleshooting

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Factory Menu Name	Data	Range
R3_Gain	...	
B3_Gain	...	
G3_Gain	...	
R4_Gain	...	
B4_Gain	...	
G4_Gain	...	
R5_Gain	...	
B5_Gain	...	
G5_Gain	...	
R6_Gain	...	
B6_Gain	...	
G6_Gain	...	
R7_Gain	...	
B7_Gain	...	
G7_Gain	...	
R8_Gain	...	
B8_Gain	...	
G8_Gain	...	
R9_Gain	...	
B9_Gain	...	
G9_Gain	...	
R10_Gain	...	
B10_Gain	...	
G10_Gain	...	

## 4-4. White Balance

### 4-4-1. 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	

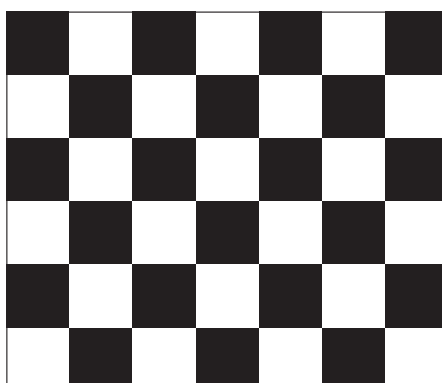
### 4-4-2. Service Adjustment

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.

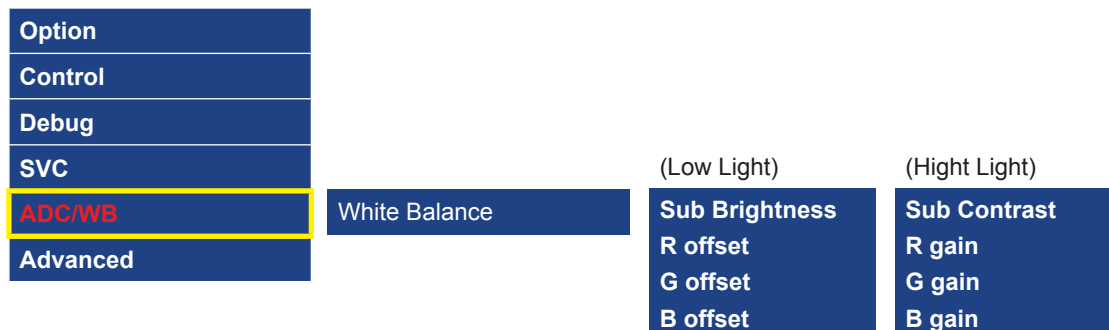
##### **Method of Color Calibration (HDMI)**

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.



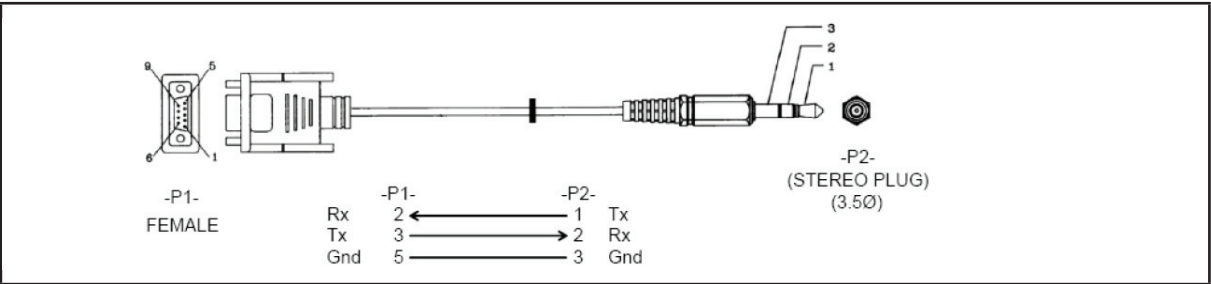
### 4-4-3. Adjustment

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



## 4-5. RS-232C

- **RS232C Control**
  - Port : COM#(Serial)
  - Bit rate : 115200
  - Data Bit : 8 bit
  - Parity : None
  - Stop Bits : 1
  - Flow Control : None



- Description of RS232C

Pin#	Name	Full Name	Pin#	Name	Full Name	Pin#	Name	Full Name
1	CD	Carrier Detect	4	DTR	Data Terminal Ready	7	RTS	Request To Send
2	RxD	Received Data	5	GND	Signal Ground	8	CTS	Clear To Send
3	TxD	Transmitted Data	6	DSR	Data Set Ready	9	RI	Ring Indicator

## 4-6. AV Control Tab

Control Item				Cmd1	Cmd2	Cmd3	Value
<b>General</b>	Power	Power		0x00	0x00	0x00	0x00
		Off					0x01
		On					0x02
	Volume	Direct		0x01	0x00	0x00	(0~100)
		Up				0x01	0x00
		Down				0x02	0x00
	Mute			0x02	0x00	0x00	0x00
		Ch.	Direct	0x04	-		
			Continuous	0x03	0x00	0x01	0x00
			Down			0x02	0x00

Control Item				Cmd1	Cmd2	Cmd3	Value
<b>Input</b>	Source List	TV	TV	0x0a	0x00	0x00	0x00
			AV			0x01	0x00
		AV	AV1				0x01
			AV2				0x01
			AV3				0x02
		S-Video	S-Video1			0x02	0x00
			S-Video2				0x01
			S-Video3				0x02
		Component	Component1			0x03	0x00
			Component2				0x01
			Component3				0x02
		PC	PC1			0x04	0x00
			PC2				0x01
			PC3				0x02
		HDMI	HDMI1			0x05	0x00
			HDMI2				0x01
			HDMI3				0x02
			HDMI4				0x03
		DVI	DVI1			0x06	0x00
			DVI2				0x01
			DVI3				0x02

Control Item				Cmd1	Cmd2	Cmd3	Value
<b>PICTURE</b>	Mode	Dynamic(Entertain)		0x0b	0x00	0x00	0x00
		Standard					0x01
		Movie					0x02
		Natural					0x03

#### 4. Troubleshooting

Control Item				Cmd1	Cmd2	Cmd3	Value	
PICTURE	Mode	CAL-NIGHT					0x04	
		CAL-DAY					0x05	
		BD Wise					0x06	
		Relax					0x07	Only for PDP
	BackLight (CellLight)		0~20		0x01	0x00	(0~20)	
	Contrast		0~100		0x02	0x00	(0~100)	
	Brightness		0~100		0x03	0x00	(0~100)	
	Sharpness		0~100		0x04	0x00	(0~100)	
	Color		0~10		0x05	0x00	(0~100)	
	Tint	G/R			0x06	0x00	(0~100)	
	Advanced Settings	Black Tone	Off		0x07	0x00	0x00	
			Dark				0x01	
			Darker				0x02	
			Darkest				0x03	
		Dynamic Contrast	Off			0x01	0x00	
			Low				0x01	
			Medium				0x02	
			High				0x03	
		Shadow Detail	-2 ~ 2			0x02	(-2~2)	Not support
		Gamma	-3 ~ 3			0x03	(-3~3)	
		RGB Only Mode	Off			0x05	0x00	
			Red				0x01	
			Green				0x02	
			Blue				0x03	
		Color Space	Auto			0x06	0x00	
			Native				0x01	
			Custom				0x02	
		White Balance	R-Offset(LCD)			0x07	(0~50)	
		White Balance	G-Offset(LCD)			0x08	(0~50)	
		White Balance	B-Offset(LCD)			0x09	(0~50)	
		White Balance	R-Gain(LCD)			0x0a	(0~50)	
		White Balance	G-Gain(LCD)			0x0b	(0~50)	
		White Balance	B-Gain(LCD)			0x0c	(0~50)	
		White Balance	Reset(LCD)			0x0d	0x00	
		Flesh Tone	-15 ~ 15			0x0e	(-15~15)	
		Edge Enhancement	Off			0x0f	0x00	Not support
			On				0x01	

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE		xvYCC	Off			0x10	0x00
			On				0x01
		Motion Lighting	Off			0x11	0x00
			On				0x01
		Color Space Custom Color	Red			0x12	0x00
			Green				0x01
			Blue				0x02
			Yellow				0x03
			Cyan				0x04
			Magenta				0x05
		Color Space Custom Color Red Value	0~100			0x13	0~100
		Color Space Custom Color Green Value	0~100			0x14	0~100
		Color Space Custom Color Blue Value	0~100			0x15	0~100
		LED Motion Plus	Off		0x0a	0x07	0x00
			On(Normal)				0x01
			Cinema				0x02
			Ticker				0x03
	Picture Option	Color Tone	Cool		0x0a	0x00	0x00
			Standard				0x01
			Warm1				0x02
			Warm2				0x03
		Digital Noise Filter	Off			0x02	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
			Auto Visualization				0x05
		MPEG Noise Filter	Off			0x03	0x00
			Low				0x01
			Medium				0x02
			High				0x03
			Auto				0x04
		HDMI Black Level	Normal			0x04	0x00
			Low				0x01

Control Item				Cmd1	Cmd2	Cmd3	Value
PICTURE		Film Mode	Off			0x05	0x00
			Auto1				0x01
			Auto2				0x02
			Cinema Smooth				0x03
		Auto Motion Plus	Off			0x06	0x00
			Clear				0x01
			Standard				0x02
			Smooth				0x03
			Custom				0x04
			Demo				0x05
	Screen Adjustment	Picture Size	16:9	0x0b	0x0a	0x01	0x00
			Zoom1				0x01
			Zoom2				0x02
			Wide Fit				0x03
			4:3				0x04
			Screen Fit				0x05
			Smart View I				0x06
			Smart View II				0x07
			Auto Wide				0x08
			Wide Zoom				0x09
			Zoom				0x0a
	Reset Picture	Reset Picture		0x0b	0x0b	0x00	0x00
	3D	3D Mode	Off	0x0b	0x0c	0x00	0x00
			2D ↔ 3D				0x01
			Side By Side				0x02
			Top Bottom				0x03
			Line By Line				0x04
			Vertical Line				0x05
			Checker BD				0x06
			Frame Sequence				0x07
		3D ↔ 2D	Off			0x01	0x00
			On				0x01
		3D View Point				0x02	(-5~5)
		Depth				0x03	(1~10)
		3D Auto View	Off			0x05	0x00

Only for PDP

Only for DVB

Control Item				Cmd1	Cmd2	Cmd3	Value
		3D Auto View	Message Notice				0x01
			On				0x02

Control Item				Cmd1	Cmd2	Cmd3	Value
<b>Sound</b>	Sound Mode	Standard		0x0c	0x00	0x00	0x00
		Music					0x01
		Movie					0x02
		Clear Voice					0x03
		Amplify					0x04
<b>Sound</b>	Equalizer	Balance			0x01	0x00	(0~20)
		100hz				0x01	(0~20)
		300hz				0x02	(0~20)
		1khz				0x03	(0~20)
		3khz				0x04	(0~20)
		10khz				0x05	(0~20)
		Reset				0x06	0x00
	SRS TruSurround HD (echo)	Off			0x02	0x00	0x00
	Virtual Surround (echo)	On					0x01
	SRS TruDialog (echo)	Off			0x03	0x00	0x00
	Dialog Clarify (X9)	On					0x01
	Preferred Language	English			0x04	0x00	0x00
		Spanish					0x01
		French					0x02
		Korean					0x03
		Japanese					0x04
	Multi-Track Sound	Mono			0x05	0x00	0x00
		Stereo					0x01
		SAP					0x02
	Auto Volume	Off			0x06	0x00	0x00
		ON					0x01
		Night					0x02
	Speaker Select	TV Speaker			0x07	0x00	0x00
		External Speaker					0x01

#### 4. Troubleshooting

Control Item				Cmd1	Cmd2	Cmd3	Value
	Sound Select	Main			0x08	0x00	0x00
		Sub					0x01
	Sound Reset	Sound Reset			0x09	0x00	0x00
	3D Audio	Off			0x0a	0x00	0x00
		Low					0x01
		Medium					0x02
		High					0x03
	Auto Stereo	Manual			0x0b	0x00	0x00
		Auto					0x01

Only for korea model

Control Item				Cmd1	Cmd2	Cmd3	Value
<b>KEY</b>	Key Generation			0x0d	0x00	0x00	refer to table
<b>OSD</b>	Show/Hide Control	Show		0x0e	0x00	0x00	0x00
		Hide					0x01
<b>Get Status</b>	Power (On/Off)			0xf0	0x00	0x00	0x00
	Volume(0~100)			0xf0	0x01	0x00	0x00
	Mute (On/Off)			0xf0	0x02	0x00	0x00
	Channel Number			0xf0	0x03	0x00	0x00
	Source (TV/AV/.../HDMI/...)			0xf0	0x04	0x00	0x00
	Picture Size			0xf0	0x05	0x00	0x00
	3D (On/Off)			0xf0	0x06	0x00	0x00
	Picture Mode			0xf0	0x07	0x00	0x00
	Sound Mode			0xf0	0x08	0x00	0x00

Key value	Value
Up	96 (0x60)
Down	97 (0x61)
Left	101 (0x65)
Right	98 (0x62)
Menu	26 (0x1A)
Internet	147 (0x93)
Enter(OK)	104 (0x68)
EXIT	45 (0x2D)



## 4-7. Software Upgrade

Software Upgrade can be performed by downloading the latest firmware from [samsung.com](http://samsung.com) to a USB memory device.

- Current Version - The software already installed in the TV.

Software is represented as 'Year/Month/Day\_Version'.

### 4-7-1. How to Check the Software Version

#### ■ Use the Main Menu

1. Click the "MENU" key in remote controller.
2. Select "Support" menu.
3. Locate the menu cursor "Software Upgrade" menu.
4. Click the "INFO" key.
  - Check the Main SW and Micom version.

#### ■ Use the Factory Mode

Option
Control
Debug
SVC
ADC/WB
Advanced

```

T-FXPDEUC-xxxx
T-FOXDEUS2-xxxx
BT Version :
E-Manual : FPDVBEUF-xxxx
Camera Version : x.xx
Mic Version : x.xx
Blaster-Version : x.xx
EDID SUCCESS
CALIB : AV / COMP / PC / HDMI /
Option : xxxx xxxx xxx
CPLD/LD : T-FOXCPLD 0003
  
```

## 4-7-2. How to Upgrade Software

1. Insert a USB drive containing the firmware upgrade downloaded from [samsung.com](http://samsung.com) into the TV.



### NOTE

Please be careful not to disconnect the power or remove the USB drive while upgrades are being applied.

2. The TV will turn off and turn on automatically after completing the firmware upgrade.
3. Please check the firmware version after the upgrades are complete.
  - the new version will have a higher number than the older version.



### NOTE

- 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 before beginning firmware update.

4. After update is completed, restore your previous settings.

## ■ Main Software Upgrade

1. Store the sw program named "T-FXPDEUC" in USB memory stick.
2. Click the "MENU" key in Remote Controller.
3. Select "Support > Software Update > Update Now" menu.
4. Click the "ENTER" key.
  - Wait for upgrade complete.
  - Check the Software Version.

## ■ Sub Software Upgrade

### USB Download

1. After Main Software upgrade, Enter the Factory menu by below method.

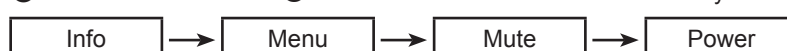
– Factory Remocon

- Click the Remocon button continuedly. (Info key+ Factory key)



– Nomal Remocon

- ① Turn off the TV. → ② Click the Remocon button continuedly.



2. Select the “SVC”.

Option
Control
Debug
<b>SVC</b>
ADC/WB
Advanced

3. Select the “SUBMICOM UPGRADE”.

Test pattern		DCC CHK SEL	0
Panel Display Time	1Hr	DCC CHECK LOCAL	0x0
Tuner Status		DCC CHECK TOTAL	
T-CON Usb Download	Failure	Fuction Upgrade	off
T-CON CheckSum	Error	Smart Hub Reset	off
Tuner Margin	10	WIFI ER COUNT	0
TS Clock delay	0	BT ER COUNT	0
<b>SUBMICOM UPGRADE</b>	<b>off</b>	Debug Log Down	
BT ADDRESS	0000	MulitACC Checksum	Error
BT UPGRADE		SVC Info	
BT FREEPAIRING	ON	TS Clock delay TC	0
SVC Reset		TS Clock delay S	0
TCON_TEMP READ	0.00	CAL Data Backup	....
TEMP LAST	60.00	CAL Data Restore	....
DCC VERSION	0x0		

4. Click the “→” remocon key.

<b>SUBMICOM UPGRADE</b>	<b>Wait</b>
-------------------------	-------------

- Wait for upgrade complete.
- Check the Software version.