2-2. Detail Factory Option

※ If you replace the main board with new one, please change the factory option as well.
The options you must change are "Type" and "Front Color".

2-1-1. UD6400

Model Name		UN40D6400UF	UN46D6400UF	UN55D6400UF
Panel	Vendor	CMI	CMI	AML
	CODE	BN07-00997A	BN07-00998A	BN95-00451A
	SPEC	LD400CSC-C1	LD460CSC-C1	LTJ550HJ06-V
SMPS	Vendor	DONGYANG	DONGYANG	HANSOL
	CODE	BN44-00427B	BN44-00427B	BN44-00428B
	SPEC	BN44-00427B	BN44-00427B	BN44-00428B
Main Assy	Chassis Ass'y	BN91-06484A	BN91-06484B	BN91-06484C
	PBA Ass'y code	BN94-04359A	BN94-04359B	BN94-04359C
1	**Factory Reset**	-	-	-
2	**Type**	40P1UF6E	46P1UF6E	55A1UF6E
3	**Local set**	US	US	US
4	**Model**	D6400	D6400	D6400
5	**Tuner**	SEC_Si2173	SEC_Si2173	SEC_Si2173
6	**DDR**	-	-	-
7	**Light Effect**	OFF	OFF	OFF
8	**Ch Table**	NONE	NONE	NONE
9	**Country**	-	-	-
10	**Front Color**	U-T-CL-M	U-T-CL-M	U-T-CL-M

2-1-2. UD6420

Model Name		UN40D6420UF	UN46D6420UF	UN55D6420UF
Panel	Vendor	CMI	CMI	AML
	CODE	BN07-00997A	BN07-00998A	BN95-00451A
	SPEC	LD400CSC-C1	LD460CSC-C1	LTJ550HJ06-V
SMPS	Vendor	DONGYANG	DONGYANG	HANSOL
	CODE	BN44-00427B	BN44-00427B	BN44-00428B
	SPEC	BN44-00427B	BN44-00427B	BN44-00428B
Main Assy	Chassis Ass'y	BN91-06484G	BN91-06484H	BN91-06484J
	PBA Ass'y code	BN94-04359G	BN94-04359H	BN94-04359J
1	**Factory Reset**	-	-	-
2	**Type**	40P1UF6E	46P1UF6E	55A1UF6E
3	**Local set**	US	US	US
4	**Model**	D6420	D6420	D6420
5	**Tuner**	SEC_Si2173	SEC_Si2173	SEC_Si2173
6	**DDR**	-	-	-
7	**Light Effect**	OFF	OFF	OFF
8	**Ch Table**	NONE	NONE	NONE
9	**Country**	-	-	-
10	**Front Color**	U-T-BL-M	U-T-BL-M	U-T-BL-M

2-1-3. UD6450

Model Name		UN40D6450UF	UN46D6450UF	UN55D6450UF
Panel	Vendor	CMI	CMI	AML
	CODE	BN07-00997A	BN07-00998A	BN95-00451A
	SPEC	LD400CSC-C1	LD460CSC-C1	LTJ550HJ06-V
SMPS	Vendor	DONGYANG	DONGYANG	HANSOL
	CODE	BN44-00427B	BN44-00427B	BN44-00428B
	SPEC	BN44-00427B	BN44-00427B	BN44-00428B
Main Assy	Chassis Ass'y	BN91-06484D	BN91-06484E	BN91-06484F
	PBA Ass'y code	BN94-04359D	BN94-04359E	BN94-04359F
1	**Factory Reset**	-	-	-
2	**Type**	40P1UF6E	46P1UF6E	55A1UF6E
3	**Local set**	US	US	US
4	**Model**	D6450	D6450	D6450
5	**Tuner**	SEC_Si2173	SEC_Si2173	SEC_Si2173
6	**DDR**	-	-	-
7	**Light Effect**	OFF	OFF	OFF
8	**Ch Table**	NONE	NONE	NONE
9	**Country**	-	-	-
10	**Front Color**	U-T-BK-M	U-T-BK-M	U-T-BK-M

2-2-4. UD6500

Model Name			UN32D6500VF	UN40D6500VF	UN46D6500VF	UN55D6500VF
Panel		Vendor	CMI	CMI	CMI	AML
		CODE	BN07-00996A	BN07-00997A	BN07-00998A	BN95-00451A
		SPEC	LD320CSC-C1	LD400CSC-C1	LD460CSC-C1	LTJ550HJ06-V
SMPS		Vendor	SEC	DONGYANG	DONGYANG	HANSOL
		CODE	BN44-00458A	BN44-00427B	BN44-00427B	BN44-00428B
		SPEC	BN44-00458A	BN44-00427B	BN44-00427B	BN44-00428B
Main Assy		Chassis Ass'y	BN91-06483D	BN91-06483C	BN91-06483A	BN91-06483B
		PBA Ass'y code	BN94-04357D	BN94-04357C	BN94-04357A	BN94-04357B
1	Factory Reset		-	-	-	-
2	Type		32D1UF3E	40P1UF6E	46P1UF6E	55A1UF6E
3	Local set		US	US	US	US
4	Model		D6500	D6500	D6500	D6500
5	Tuner		SEC_Si2173	SEC_Si2173	SEC_Si2173	SEC_Si2173
6	DDR		-	-	-	-
7	Light Effect		OFF	OFF	OFF	OFF
8	Ch Table		NONE	NONE	NONE	NONE
9	Country		-	-	-	-
10	Front Color		U-T-BL-M	U-T-BL-M	U-T-BL-M	U-T-BL-M

2-2-5. UD6900

Model Name			UN46D6900WF	UN55D6900WF
Panel		Vendor	CMI	AML
		CODE	BN07-00998A	BN95-00451A
		SPEC	LD460CSC-C1	LTJ550HJ06-V
SMPS		Vendor	DONGYANG	HANSOL
		CODE	BN44-00427B	BN44-00428B
		SPEC	BN44-00427B	BN44-00428B
Main Assy		Chassis Ass'y	BN91-06907A	BN91-06907B
		PBA Ass'y code	BN94-04629A	BN94-04629B
1	Factory Reset		-	-
2	Type		46P1UF6E	55A1UF6E
3	Local set		US	US
4	Model		D6900	D6900
5	Tuner		SEC_Si2173	SEC_Si2173
6	DDR		-	-
7	Light Effect		OFF	OFF
8	Ch Table		NONE	NONE
9	Country		-	-
10	Front Color		U-T-CL-M	U-T-CL-M

2-3. New Functions Explanation

2-3-1. Auto Motion Plus 120Hz

■ Function Naming

- 120Hz FRC + MJC : Auto Motion Plus 120Hz

■ Detail specifications

Function (OSD)	120Hz FRC	Judder reduction (only 24p source)	Blur reduction
Off	Off (repeat)	Off	Off
Clear	ON (interpolation)	Off	High
Standard	ON (interpolation)	Medium	Medium
Smooth	ON (interpolation)	High	High
Custom	Level variable (0~10)		
Demo	Demo (Standard/off)		

■ 120Hz Motion Enhancement

Off　　　　　Low / Medium / High　　　　　Demo

2-3-2. Media Play

■ Media Play

01. Functions that are not supported when connecting to a PC through a network:

- Sorting files by preference in the Photos, Music, and Videos folders.
- The ◄◄ **(REW)** or ►► **(FF)** button while a movie is playing.
- Divx DRM, Multi-audio, embedded captions are not supported.

02. When you use Media Play mode through a network connection, depending on the functions of the provided server

- The sorting method may vary.
- The scene search function may not be supported.
- The Play Continuously function, which resumes playing of a video, may not be supported.
- The Play Continuously function does not support multiple users. (It will have only memorized the point where the most recent user stopped playing.)
- The ◄ or ► buttons may not work depending on the content information.
– If you experience any file stuttering issue while playing a video over a wireless network, we recommend using a wired network."

● Supported Subtitle Formats

Name	File extension	Format
MPEG-4 time-based text	.ttxt	XML
SAMI	.smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

● Supported Video Formats

File Extention	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3 /LPCM /ADPCM /DTS Core
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	1920 x 1080	6 ~ 30	8	
*.asf	ASF	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3 /LPCM /ADPCM /WMA
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	1920 x 1080	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920 x 1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	MP3/ADPCM /AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		XVID	1920 x 1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	ADPCM / AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
*.vro	VRO VOB	MPEG2	1920 x 1080	24/25/30	30	AC3/MPEG /LPCM
		MPEG1	352 x 288	24/25/30	30	
*.mpg *.mpeg	PS	MPEG1	352 x 288	24/25/30	30	AC3/MPEG /LPCM/AAC
		MPEG2	1920 x 1080	24/25/30	30	
		H.264	1920 x 1080	6 ~ 30	25	
*.ts *.tp *.trp	TS	MPEG2	1920 x 1080	24/25/30	30	AC3/AAC /MP3/DD+ /HE-AAC
		H.264	1920 x 1080	6 ~ 30	25	
		VC1	1920 x 1080	6 ~ 30	25	

03. Other Restrictions

✍ NOTE

- If there are problems with the contents of a codec, the codec will not be supported.
- If the information for a Container is incorrect and the file is in error, the Container will not be able to play correctly.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.

Video Decoder	Audio Decoder

• Supports up to H.264, Level 4.1
• H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.
• XVID, MPEG4 SP, ASP:
  – Below 1280 x 720: 60 frame max
  – Above 1280 x 720: 30 frame max
• GMC is not support.
	• Supports up to WMA 7, 8, 9, STD, 9 PRO
	• WMA 9 PRO is not supported the 2 channel excess multi channel or the lossless audio
	• WMA sampling rate 22050Hz mono is not supported. ReadlAudio 10 lossless is not supported

✍ NOTE

2-3-3. AllShare

■ About AllShare™

AllShare™ connects your TV and compatible Samsung mobile phones/ devices through a network. On your TV, you can view call arrivals and SMS messages, and received by your mobile phones. In addition, you can play media contents including videos, photos, and music saved on your mobile phones or the other devices (such as your PC) by controlling them on the TV via the network. Additionally, you can use your TV for browsing web pages on your mobile phones.

✐ For more information, visit "www.samsung.com" or contact the Samsung call center. Mobile devices may need additional software installation. For details, refer to each device's user's guide.

■ Setting Up AllShare™

✆ MENU → Network → AllShare Settings → ENTER ⏎

01. AllShare Settings

Media (On / Off) : Enables or disables the media function. When the media function is on, you can control Media contents play using mobile phones or other devices that support DLNA DMC.

Message (On / Off) : Enables or disables the message function. (for call arrivals, and SMS messages received by your mobile phones)

AllShare Settings
Media
Message
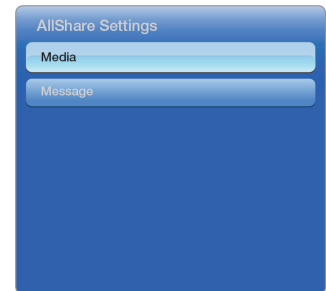
02. Media / Message

Shows a list of mobile phones or connected devices which have been set up to use the Media or Message function with this TV.

✐ The Media function is available in all devices which support DLNA DMC.

• **Allowed / Denied** : Allows/Blocks the devices.
• **Delete** : Deletes the devices from the list.
  ✐ This function only deletes the name of the device from the list. If the deleted device is turned on or tries to connect to the TV, it may appear on the list again.

03. Using the Message Function

You can view call arrivals and SMS messages received by your mobile mobile phone, through the alarm window, while watching TV.

✐ NOTE
• To disable the alarm window, set **Message** to **Off** in the **AllShare Settings**.
• Whether **OK** is selected or not selected after a message has appeared once, the message will be deleted from the alarm window.
• When a message from an unknown mobile phone is displayed, select the mobile phone in the **Message** menu in **AllShare Settings**, and then select **Denied** to block the phone.

Message View

If a new SMS message arrives while you are watching TV, the alarm window appears. If you select **OK**, the contents of the message are displayed.

✐ You can configure the viewing settings for SMS messages on your mobile phones. For the procedures, refer to the mobile phone manual.

✐ Some types of characters may be displayed as blank or broken characters.

Call Arrival Alarm

If a call arrives while you are watching TV, the alarm window appears.

Schedule Alarm

You can view scheduled events in the alarm window while you are watching TV.

✐ You can configure viewing settings for scheduled contents on your mobile phones. For the procedures, refer to the mobile phone manual.

✐ Some special characters may be displayed as blank or broken characters.

04. Using the Media Function

An alarm window appears informing you that media contents (videos, photos, music) sent from a mobile phone will be displayed on your TV. The contents are played automatically 3 seconds after the alarm window appears. If you press the **RETURN** or **EXIT** button when the alarm window appears, the media contents are not played.

✎ NOTE

- The first time a device accesses your TV through the media function, a warning popup window appears. Press the **ENTER**⏎ button to select Allow. This permits the phone to access the TV freely and use the Media function to play content.
- To turn off media contents transmissions from a mobile phone, set **Media** to **Off** in the **AllShare Settings**.
- Contents may not play on your TV depending on their resolution and format.
- The **ENTER**⏎ and ◀ ▶ buttons may not work depending on the type of media content.
- Using the mobile device, you can control the media play. For details, refer to each mobile's user's guide.

■ AllShare™ setup and checklists

Problem	Possible Solution
Deleted mobile phone list showing up again.	• [Menu > Application > Content View > AllShare™ > Message] Where need to block the added mobile phone or device again. Because deleted device would be added again if that device turns on or attempt to approach.
Want to turn off the function of receiving message from the mobile phone.	• One of the setup lists of AllShare™, you need to turn 'Message' list to 'Off'.
Want to turn off the function of receiving Media from mobile phone or home network devices on TV.	• One of the setup lists of AllShare™, you need to turn 'Media' list to 'Off'.
Want to add deleted mobile phone or home network devices again.	• Power on the deleted mobile phone or home network devices. Set up the network and activate the home network function, check the connection at AllShare™.
Several same names of TV shows up on mobile phone.	• At AllShare™ set up menu, change the name of the TV.
Messages/schedules/notifications from unknown mobile phone show up on TV.	• [Menu > Application > Content View > AllShare™ > Message] Where You can block the unknown mobile phone.
SMS message notification shows up in small window.	• Besides watching TV, If some other function is activating, SMS message will show up in small icon. • You need to finish the function and exit to Watching TV mode in order to display SMS message in large window.
Received SMS message is not showing up on TV.	• Check if TV's network setup is all right according to setup guide. • Check if mobile phone's network (Wi-Fi) is activated. • Among the **AllShare™** setup lists , check if the Message is 'on'. • Check if the mobile phone number is showing up on **AllShare™ message list**. • Check if the TV's showing up on mobile phone's setup lists.
Contents that play on mobile phone doesn't play on TV.	• Contents formats play on TV is exactly same as Media Play format. That means some contents may not play according to its resolution and format
Suddenly TV display is changed, unwanted movie/picture/music is playing	• Before the device play, Block the device at AllShare™ media list. Or press 'return' or 'exit' button of remote controller so that the device may not play.
The name of the TV is not appearing while try to play media on mobile phone.	• Check the network of TV. • Activate the network (Wi-Fi) of mobile phone and connect to home network . • Check if the setup list of media on AllShare™ is 'on'. • Check if mobile phone is blocked on media list . If blocked, change it to permition.
Movie is not playing or disconnected.	• High resolution of Movie may not play when Wi-Fi network is not in good condition.

2-3-4. Full Browser

■ Concepts and Features

Full Browser ?

Using this App., you can contact the web site and contents just like web browser of PC.

❶ **Favorite**
- Show the list of sites that user frequently accessed.(text list or thumbnail)
- User can export and import favorites list using USB.

❷ **History**
- Show and record the list of the sites that user had accessed.

❸ **Window list**
- It can show the 6 windows to the max.
- User can select window list to see the windows that opened.

❹ **Zooming**
- User can zoom in/out the windows.

❺ **Tab mode**
- User can focus data that linked using 4 direction button on internet websites.

❻ **Pointer mode**
- If User select yellow color key on Tab mode, Change to pointer mode.
- User can select and control data that can not be selected on Tab mode(ex. Volume button on Flash contents) using pointer that control by 4 direct button.

❼ **Reading tools**
- If user has a hard time reading because of small font size or advertisement, select the reading tool to display only text and image.

❽ **Clean site**
- Users can access only to websites set as "Clean Site" for safety. (ex. children care)
  This function can be set through the below path.
  "Option" → "Setting" → Select "Clean site" When users try to first access, the password is "0000".
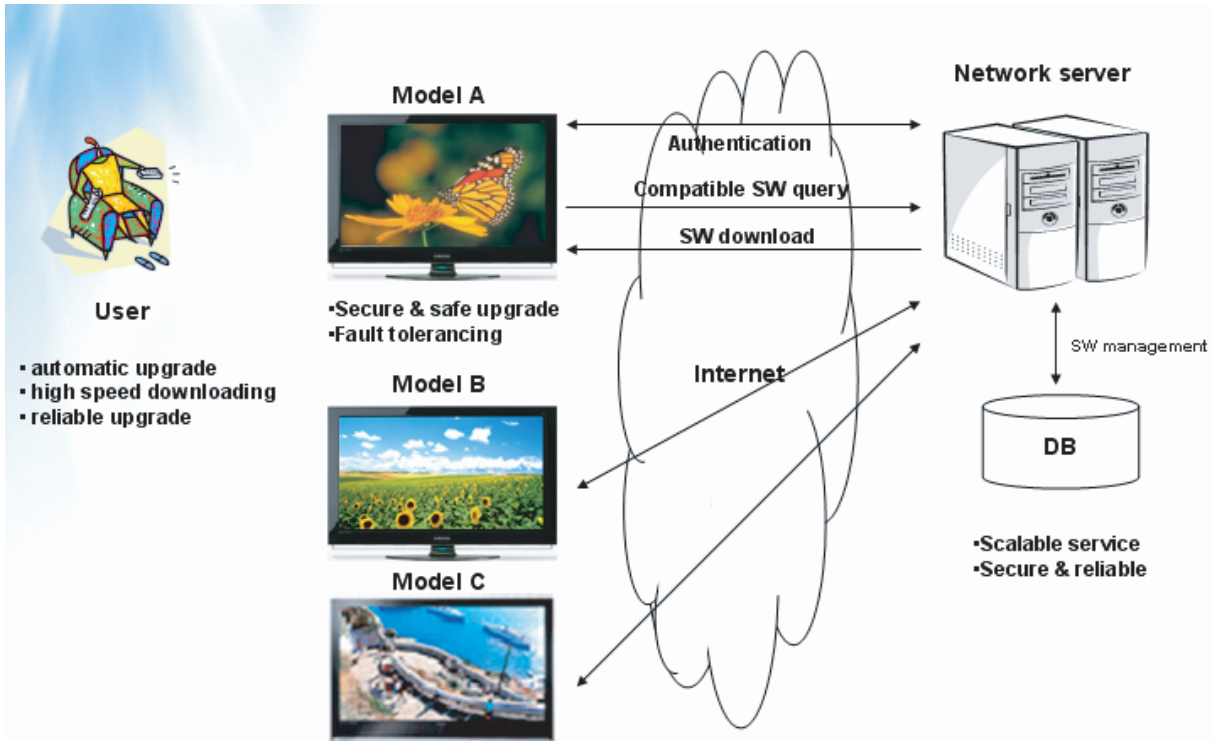
❾ **Private Browsing**
- This function can be set throug the below path.
  "Option" → "Setting" → Select "Private Browsing".
  After setting this function, all accessing sites will be stored in the user's web history.

2-3-5. OTN Over The Network

Over The Network : It is available that update to latest version by network.

1. Overview of OTN

■ Purpose of OTN
because of variable contents and devices, TV softwere will be more and more
    complicate. So it is necessary that TV softwere is updated real time.

1	2	3	4
1. DTV registration info. 3. Installed S/W info. 7. Download info. 8. Install result 　　/ Error info.	2. Verify registration 4. Available S/W info. 5. Install S/W info. 6. S/W Image 　　/ Security key	− Install error info. − Statistics info. − Statistics of error info.	− Model info. − Model S/W ver info. − S/W release policy
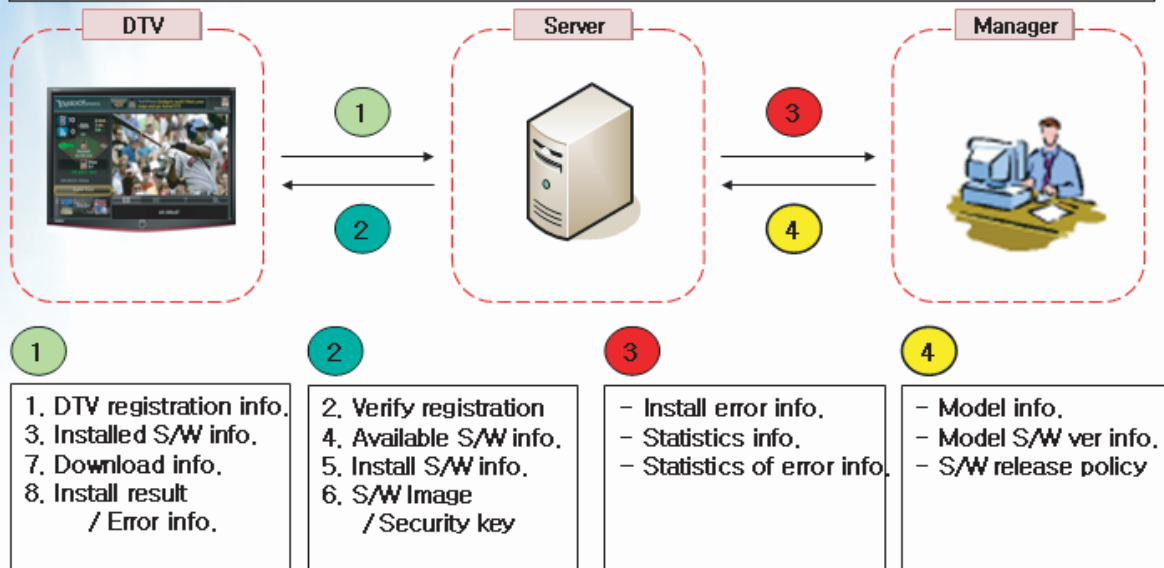
2-3-6. 3D Display

■ What is 3D Display?

• A system that display 3D images artificially

• How ? → Using binocular time delay

❶ Left eye recognizes left image, right eye recognizes right image.

❷ Human eyes be far away each other 65mm horizontally.
So each eye feels a little bit of time delay of left and right information.
Human brain merges those images and can feel three-dimensional.

Side by side ◄

■ 3D OSD terms

3D Format : There are several 3D formats existing on how to merge Left and Right images.

| Format	Input images	explanation	Input source	notes
Frame Packing	L / R	• Inserting Blink Active Space between Left and Right images. * Full resolution : 1920 x 1080 x 2 (Left and Right each) + Blink = 1920 x 2205	HDMI 1.4	1. HDMI 1.4 standard format 2. Automatically activating (Not in the menu or UI) 3. BD format
Top & Bottom	L / R	• In 1 frame, Left image on the upper half, Right image on the bottom half. * Vertically half resolution	HDMI, USB, DTV(VOD), PC	3D Broadcasting Format
Side by Side	L R	• In 1 frame, Left image on the left half, Right image on the right half. * Horizontally half resolution	HDMI, USB, DTV(VOD), PC	3D Broadcasting Format
Line by Line		• In 1 frame, every horizontal line, Left and Right image in turn. * Vertically half resolution	PC	1. MPEG encoding impossible 2. Only in PC
Vertical Stripe		• In 1 frame, every vertical line, Left and Right image in turn. * Horizontally half resolution	PC	1. MPEG encoding impossible 2. Only in PC
Checker Board		• In 1 frame, every pixel, Left and Right image in turn. * Half resolution both vertically and horizontally	PC	1. MPEG encoding impossible 2. Only in PC
Frame Sequential	L R Time	• Left And Right image in turn in every frame. • Full resolution spatially but Half resolution timely.	PC	
2D → 3D	Extract Left and Right images artificially from normal 2D contents input and show it in 3D. (a function of TV)			
3D → 2D	When watching 3D TV (input is 3D source) , if a viewer feels tired of watching 3D TV, a viewer can change the TV into 2D. (In this case , TV only displays one of Left and Right images)			
Depth	Only activating in '2D → 3D Mode' Control the depth of 3D. 1~10 steps, Tiredness goes higher as depth goes higher.			
L/R correction	Switch the position of Left and Right images so that correspond with 3D glasses.			
3D Disable (3D off)	'3D off' has below meanings according to present modes .			
	(1) In 2D → 3D Mode : coming back to 2D			
		3D off		
	(2) In 3D mode			
		3D off (original) 3D off (3D → 2D))		
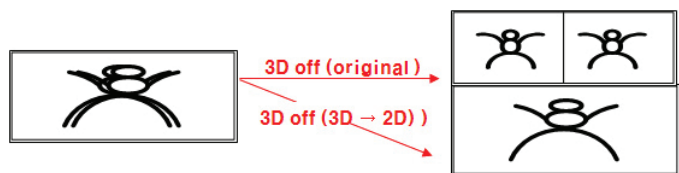
■ 3D Supporting Formats

	DTV	Internet VOD	ATV/AV	Comp.	A.PC	HDMI	USB_PC	USB (Photo)	USB (Video)
Top-Bottom	Over 720P	All Resolution		Over 720P	-	Over 720P	Over 720P	All Resolution	All Resolution
Side by Side	Over 720P	All Resolution		Over 720P	-	Over 720P	Over 720P	All Resolution	All Resolution
Line by line	-	-			-	-	PC Resolution	-	-
Vertical Stripe	-	-			-	-	PC Resolution	-	-
Frame Seq.	-	-			-	-	PC Resolution	-	-
Checker BD	-	-			-	-	PC Resolution * 60Hz only	-	-
2D → 3D	All Resolution								
MPO	-	-	-	-	-	-	-	All Resolution	-
SAVE(SS.TB)	-	-	-	-	-	-	-	-	All Resolution
HDMI 1.4a	-	-	-	-	-	-	-	-	-
M2TS(3D)	-	-	-	-	-	-	-	-	All Resolution

- ■ : If the resolution is below 1920 x1080,PC Format(LL, VS, ChBD)and USB photo support only original size
- ■ : The edge of the Side by Side and Top-Bottom images are processed by Black (only component)
- USB photo : If the resolution is below 1920x1080, L/R images must be placed in the center of the screen

■ 3D Format Test

3D Format : There are several 3D formats existing on how to merge Left and Right images.

Format	Input images	Test Method
Frame Packing (HDMI 1.4)	L / R	• Able to test only by HDMI 1.4 BD Player or MSPG-4600MT(Master Device)
Top & Bottom	L / R	• Using Format_test.bmp - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, left eye sees only 'L' letter, right eye sees only 'R' letter (close your eyes one by one)
Side by Side	L / R	• Using Format_test.bmp - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, left eye sees only 'L' letter, right eye sees only 'R' letter (close your eyes one by one)
Line by Line		• Using Format_test.bmp - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, left eye sees only 'L' letter, right eye sees only 'R' letter (close your eyes one by one)
Vertical Stripe		• Using Format_test.bmp - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, left eye sees only 'L' letter, right eye sees only 'R' letter (close your eyes one by one)
Checker Board		• Using Format_test.bmp - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, left eye sees only 'L' letter, right eye sees only 'R' letter (close your eyes one by one)
Frame Sequential	L / R Time	• Using Frame Seq.avi - Check in the PC(HDMI) source. PC resolution and format resolution must be same - Wearing 3D glass, you only see one of the numbers(1 or 2) when closing one of the eye.
2D → 3D		• Check in the normal 2D source. Check not in the test pattern but in the actual video. * Left/Right black region will grow more and more as the depth goes higher.

4-2. Fuction

4-2-1. Control the sensitivity of function key is available in Factory Mode

Option		
Control	Sub Option	KEY SENSITIVITY
SVC		FUNCTION KEY
Expert		
ADC/WB		
Advanced		

KEY SENSITIVITY

Default : 39

• 1~254, Not Used

• Raising this value, the sensitivity decreases.

• Not Used : Not use sensitivity, use Fuction default value.

FUNCTION KEY

Default : UNLOCK

• Set value to 'LOCK', Lock the function key.

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

| Power OFF | → | MUTE | → | 1 | → | 8 | → | 2 | → | Power On |

● If you have Factory remote-control

| INFO | → | Factory |

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

| Option |
| Contro |
| SVC |
| Expert |
| ADC/WB |
| Advanced |

```
T-GASAKUC-xxxx
T-GENAUSS1-xxxx
EDID SUCCESS
CALIB : AV O COMP O PC O HMDI O
Option : xxxx xxxx xxx

DTP-SP-VAL-xxxx

RFS : "Genoa.S 0055"
2010-XX-XX
onboot :
GASFRC3D : XXXX
PARMA3D : XXXX
Type : XXXX
Model : UNXXD6XXX
MAC SUCCESS
LOCK X
DRM XX
Factory Data Ver : 88
DTP-AP-COMP-347
DTP-HIGH-0342-1
TLIB US3 1G 2008-11-18-01
DTP-BP-0350
Date of purchase : mm/dd/yyyy
```

4-4. Factory Data

Option

Factory Menu Name	Data	Range	Remark
Factory Reset	-		
Type	32D1UF3E/40P1UF6E/46P1UF6E/55A1UF6E		
Local set	US		
Model	UD6400/UD6420/UD6450/UD6500/UD6900		
TUNER	SEC_Si2173		
DDR			
Light Effect	Off		
Ch table	…		
Country	USA		
Front Color	U-T-CL-M/U-T-BL-M/U-T-BK-M		

Control

Factory Menu Name	Data	Range	Remark
EDID			
EDID ON/OFF	Off		
EDID WRITE ALL	…		
EDID WRITE HDMI	…		
EDID WRITE PC	…		
HDMI EDID Ver	…		
HDMI EDID Port	…		
Sub Option			
Region	USA		
PnP Language	ENG_US		
RF Mute Time	0ms		
RS-232 Jack	UART		
Watchdog	OFF		
WD COUNT	255		
Dimm Type	EXT		
LVDS FORMAT	VESA		
Language_Arabic	US		
Auto Power	31		
TOOLS Support	OFF		
LNA Support	OFF		
CI Support			
NETWORK Support			
IPERF			

Info Link Country			
Info Link Server Type			
TTX List			
TTX Group			
ND ADJ Support			
24Px4 Support			
Power Indicator Support			
BD Wise Support			
RF Remocon Support			
Data Service Support			
PVR Support			
3D Support			
Gemstar Support			
WSS Support			
ColorSpace Support			
OTA Support			
OTA Duration Test			
Alternate Del			
OTN			
OTN Server Type	*operating*		
OTN Test Server	*OFF*		
OTN Support	*ON*		
OTN Reset	*-*		
OTN Duration	*OFF*		
OTN Fail Test	*OFF*		
Cable Modulation	QAM		
PC Auto Ident	Enable		
IIC BUS STOP	OFF		
Visual Test	Diable		
Emergency Log Copy			
View Log			
Select Log Type	*IR KEY*		
Log View			
Delete Log			
Spread Spectrum			
HD SSC ON/Off	*OFF*		
LVDS SSC ON/OFF	*ON*		
LVDS SSC Value	*10*		
DDR SSC ON/Off	*ON*		
DDR SSC Value	*4*		
Napoli LVDS SSC On/Off	*ON*		

Napoli LVDS SSC MFR	*0*		
Napoli LVDS SSC MRR	*31*		
Napoli DDR SSC ON/OFF	*ON*		
Napoli DDR SSC MFR	*0*		
Napoli DDC SSC MRR	*26*		
DDR Margin	PN		
A CTRL_OFFSET_0_3	*0*		
A CTRL_OFFSET_D	*0*		
B CTRL_OFFSET_0_3	*0*		
B CTRL_OFFSET_D	*0*		
H.264 Margin	8		
MPEGMargin	1000		
TunerMargin	10		
SST			
Y0 TH	*218*		
Y1 TH	*150*		
Y2 TH	*122*		
Y3 TH	*105*		
Y4 TH	*78*		
Y5 TH	*62*		
Y6 TH	*34*		
Y7 TH	*113*		
Cb0 TH	*127*		
Cb1 TH	*51*		
Cb2 TH	*152*		
Cb3 TH	*79*		
Cb4 TH	*177*		
Cb5 TH	*103*		
Cb6 TH	*204*		
Cb7 TH	*128*		
Cr0 TH	*127*		
Cr1 TH	*139*		
Cr2 TH	*54*		
Cr3 TH	*66*		
Cr4 TH	*189*		
Cr5 TH	*201*		
Cr6 TH	*116*		
Cr7 TH	*128*		
S.DEV0	*100*		
S.DEV1	*80*		
OTP Lock	0x0000		

Checksum			
EEPROM RESET			
EER RESET			
NVR All Clear			
3D OPTIMIZE VALUE			
FANET ON/OFF	OFF		
KEY SENSITIVITY	39		
LVDS OUTPUT			
FKP Down			
Function Key	OFF		
WIFI Region	5		
PDP Option			
Hospitality Option			
Shop Option			
Shop Mode	OFF		
Exhibition Mode	OFF		
3D_Emiton	ON		
3D_EmitShowMoe	OFF		
3D_GLASS PULSE_S	5		
3D_GLASS PULSE_H	3		
3D CUBE	OFF		
Asia Option			
TTX	OFF		
China HD	OFF		
NT Conversion	OFF		
Mono Last Memory	OFF		
Unbalance	OFF		
IF AGC	7		
D AGC	0		
PH BW	3		
FQ BW	3		
PH RATE	4		
PD EN	1		
SOUND			
High Devi	OFF		
Carrier Mute	ON		
Volume Curve	Type1		
Pilot Level High Thld	0x30h		
Pilot Level Low Thld	0x10h		
Chattering Cnt	5		
FM Prescale	0x14h		

AM Prescale	0x1Ah		
NICAM Prescale	0x14h		
Amp Volume	0xCBh		
Amp Scale	0x3Dh		
AMP Speaker EQ	ON		
AMP EQ CheckSum	0xBCC084		
AMP PEQ Test	Ready		
AMP PEQ Dump			
SPDIF PCM Level	-9		
DNSe-IP Test	Ready		
DNSe-IP CheckSum	0x0000		
Config Option			
Num of ATV	1		
Num of DTV	2		
Num of AV	0		
Num of SVIDEO	1		
Num of COMP	4		
Num of HDMI	1		
Num of PC	0		
Num of SCART	0		
Num of DVI	0		
Num of OPTICAL Link	1		
Num of MEDIA	6		
Num of PANEL KEY	2		
Num of USB Port	0		
MFT Offset	62.5		
Select LCD/PDP	LCD		
Num of DECODER	2		
Num of TUNER	1		
HDMI/DVI SEL	1		
Indicator Led	ON		
Wall Mount	OFF		
HV Flip	ON		
Num Of Display	2		
DVI/HDMI SOUND	Auto		
HDMI HOT PLUG	Disable		
HOTPLUG SWITCHING	Boot		
CLK TERMDURATION	300ms		
HOT PLUG OFF HOLD TIME	1200ms		
HDMI FLT CNT SIG	100ms		
HDMI FLT CNT LOS	100ms		

UNSTABLE BAN CNT	1250ms		
HDMI Err Cnt	1		
HDMI ROBIN	ON		
HDMI Callback	ON		
HDMI CTS Thld	0		
HDMI CTS Cnt1	0		
HDMI 3D Det	1		
TMDS_EQ2_Boost	1		
TMDS_EQ2_Gain	0		
TMDS_PLL_Loop	3		
TMDS_CPREG_BLEED	1		
HDMI EQ	AUTO		
HDMI EDID CTRL Type	Combine		
DVI SET TIME	300ms		
Type Of PANEL KEY	Vertical		
LD CTRL SELECT	FULL_CTRL		
PVR Record NUM	1		
Backend Device	NAPOLI		
ENCORDER	NXC1000		
BPARD CONTROL	ON		
All Share Support	ON		
SCC			
SCC Mode	Dynamic		
SCC ON/OFF	Off		
SCC Input Data			
Hx	*272*		
Hy	*278*		
Lx	*272*		
Ly	*278*		
sSCC Const			
sSCC Hx	*545*		
sSCC Hy	*571*		
sSCC Lx	*544*		
sSCC Ly	*572*		
pSCC Const			
pSCC Hx	*545*		
pSCC Hy	*571*		
pSCC Lx	*544*		
pSCC Ly	*572*		
SCC Source Data	PBA		

SWAP	PBA		

SVC			
Factory Menu Name	***Data***	***Range***	***Remark***
Test Pattern			
LOGIC Pattern Sel	*0*		
LOGIC Level Sel	*255*		
LDAsic Pattern Sel	*0*		
GenaoP Pattern Sel	*0*		
GenoaS Pattern Sel	*0*		
Napoli Pre Test Pattern	*0*		
Napoli Post Test Pattern	*0*		
Napoli FDISPLAY ON/OFF	*OFF*		
Napoli PC Mode ON/OFF	*OFF*		
HDMI WB Pattern	OFF		
HDMI Pattern Sel	0		
GenoaS FRC Post Test Pattern	0		
GenoaS FRC FDISPLAY ON/OFF	OFF		
GenoaS FRC PC Mode ON/OFF	OFF		
Panel Auto Setting	Fail		
PANEL DISPLAY TIME	0Hr		
T-CON USB Download	Failure		
T-CON CheckSum			
CPLD USB Download	Failure		
REMOCON PAIRING	X		
TC905x7			
MICOM UPGRADE	Off		
Function UPGRADE	Failure		
Temp Last	60		
Temp Read	0		
DCC Version	0x40519		
DCC_CHK_SEL	0		
DCC_Check_Local	0x0		
DCC_Check_Total	0x0		
IR_ON_OFF	ON		
BT ADDRESS	0a5c00157085		
SVC Reset			

Expert			
Factory Menu Name	***Data***	***Range***	***Remark***
N/D ADJ	OFF		

Source	...		

ADC/WB

Factory Menu Name	Data	Range	Remark
ADC			
AV Calibration	Success		
Comp Calibraion	Success		
PC Calibration	Success		
HDMI Calibration	Success		
ADC Target			
1st_AV_Low	64		
1st_AV_High	880		
1st_AV_Delta	2		
1st_COMP_Y_Low	64		
1st_COMP_Cb_Low	512		
1st_COMP_Cr_Low	512		
1st_COMP_Y_High	940		
1st_COMP_Cb_High	512		
1st_COMP_Cr_High	512		
1st_COMP_Delta	2		
1st_PC_Low	16		
1st_PC_High	1004		
2nd_AV_Low	4		
2nd_AV_High	940		
2nd_PC_Low	4		
2nd_PC_High	940		
2nd_Delta	2		
ADC Result			
1st_Y_GH	250		
1st_Y_GL	246		
1st_Cb_BH	…		
1st_Cb_BL	…		
1st_Cr_RH	…		
1st_Cr_RL	…		
2nd_R_L	130		
2nd_G_L	130		
2nd_B_L	130		
2nd_R_H	108		
2nd_G_H	108		
2nd_B_H	108		
White Balance			
Sub Brightness	128		

R-Offset	128		
G-Offset	128		
B-Offset	128		
Sub Contrast	128		
R-Gain	128		
G-Gain	128		
B-Gain	128		
Movie R-Offset	128		
Movie B-Offset	128		
Movie R-Gain	128		
Movie B-Gain	128		

4-5. White Balance

4-5-1. Calibration

| ADC/WB | → | AV Calibration
Comp Calibration
PC Calibration
HDMI Calibration |
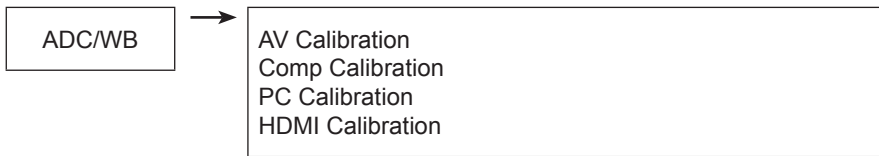
4-5-2. Service Adjustment

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

■ Color Calibration

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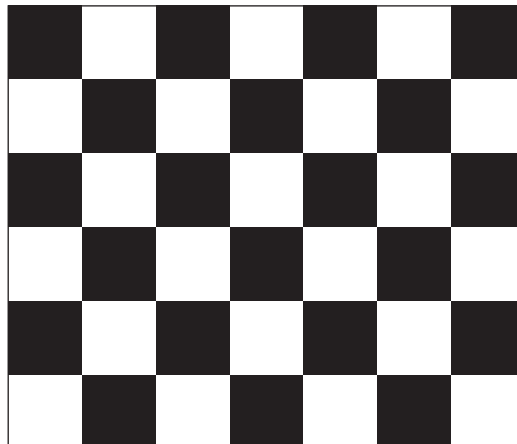
(Chess Pattern)

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.

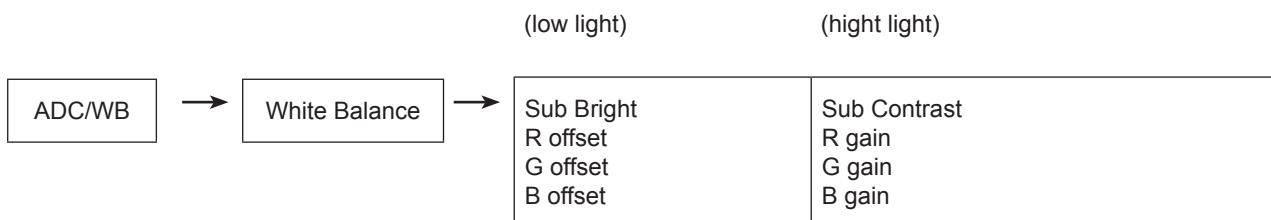## 4-6-3. Adjustment

		(low light)	(hight light)
ADC/WB →	White Balance →	Sub Bright R offset G offset B offset	Sub Contrast R gain G gain B gain

(W/B adjustment Condition refer next page)

4-6. Software Upgrade

Software Upgrade can be performed by network connection or downloading the latest firmware from "*www.samsung.com*" to a USB memory device.

■ By USB

Insert a USB drive containing the firmware upgrade file, downloaded from "*www.samsung.com*" into the TV.

Please be careful not to disconnect the power or remove the USB drive until upgrades are complete. The TV will be turned off and on automatically after completing the firmware upgrade. When software is upgraded, video and audio settings you have made will return to their default settings. We advise you to to write down your settings so that you can easily reset them after the upgrade.

TV Rear Panel

USB Drive

* The displayed menu may differ depending on the model.

■ 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.

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

4-7. RS-232C

1. To RS232C Control

Port : COM#(Serial)

Bit rate : 115200

Data Bit : 8 bit

Parity : None

Stop Bits : 1

Flow Control : None

2. Description of RS232C

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

4-8. AV control code

Control Item				Cmd1	Cmd2	Cmd3	Value
General	**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	Up	0x03	0x00	0x01	0x00
				Down			0x02	0x00

Control Item				Cmd1	Cmd2	Cmd3	Value
Input	**Source List**	TV	TV	0x0a	0x00	0x00	0x00
		AV	AV1			0x01	0x00
			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
PICTURE	**Mode**	Dynamic(Entertain)	0x0b	0x00	0x00	0x00
		Standard				0x01
		Movie				0x02
		Natural				0x03
		CAL-NIGHT				0x04
		CAL-DAY				0x05
		BD Wise				0x06
	BackLight			0x01	0x00	(0~20)
	Contrast			0x02	0x00	(0~100)
	Brightness			0x03	0x00	(0~100)
	Sharpness			0x04	0x00	(0~100)
	Color			0x05	0x00	(0~100)
	Tint	G/R		0x06	0x00	(0~100)
	Advanced Settings	Black Tone		0x07	0x00	0x00
						0x01
						0x02
						0x03
		Dynamic Contrast	Off		0x01	0x00
			Low			0x01
			Medium			0x02
			HIgh			
		Shadow Detail	-2 ~ 2		0x02	(-2~2)
		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
			On			0x01

		xvYCC	Off			0x10	0x00
			On				0x01
		Motion Lighting	Off			0x11	0x00
			On				0x01
		LED Motion Plus	Off			0x07	0x00
			On(Normal)				0x01
			Cinema				0x02
			Ticker				0x03
	Picture Option	Color Tone	Cool		0x0a	0x00	0x00
			Normal				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
		Film Mode	Off			0x05	0x00
			Auto1				0x01
			Auto2				0x02
		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

					Cmd1	Cmd2	Cmd3	Value
				Smart View II				0x07
	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)
		Picture Correction					0x04	0x00
		3D Auto View		Off			0x05	0x00
				Message Notice				0x01
				On				0x02

Control Item					Cmd1	Cmd2	Cmd3	Value
Sound	**SRS TheaterSound(Genoa)**			Standard	0x0c	0x00	0x00	0x00
	Sound Mode(X6)			Music				0x01
				Movie				0x02
				Clear Voice				0x03
				Amplify				0x04
	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(Genoa)			Off		0x02	0x00	0x00
	Virtual Surrond(X6)			On				0x01
	SRS TruDialog(Genoa)			Off		0x03	0x00	0x00
	Dialog Clarify(X6)			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
		Normal				0x01
		Night				0x02
	Speaker Select	TV Speaker		0x07	0x00	0x00
		External Speaker				0x01
	Sound Select	Main		0x08	0x00	0x00
		Sub				0x01
	Sound Reset	Sound Reset		0x09	0x00	0x00
KEY	**Key Generation**		0x0d	0x00	0x00	refer to the table of below

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)