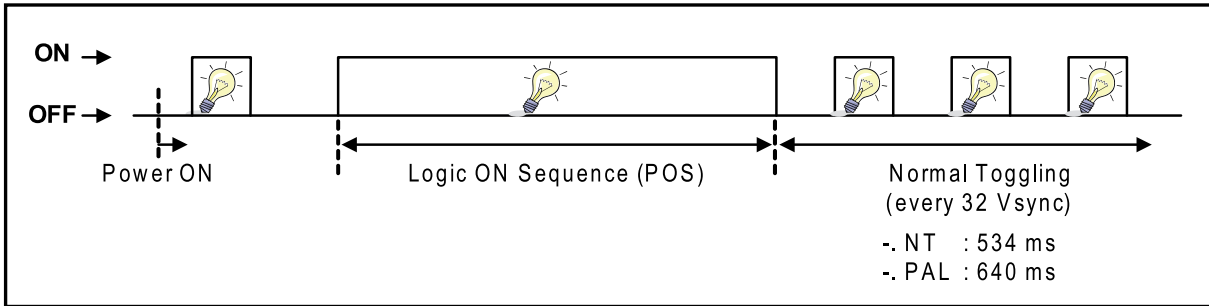


# Operating Logic LED

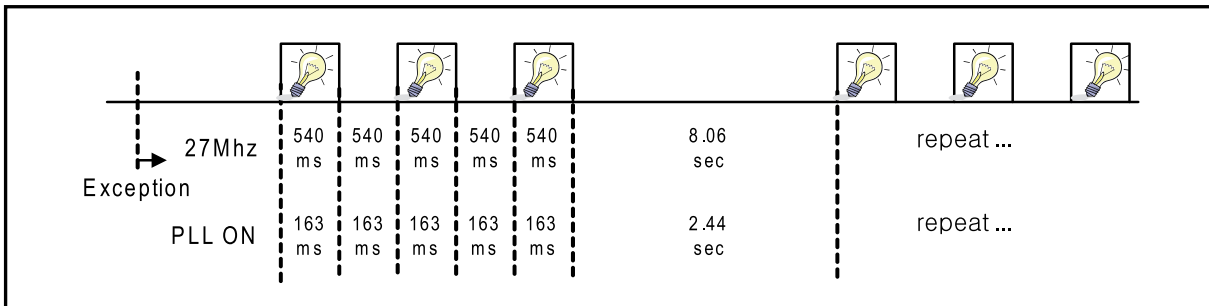
## ■ Normal

- LED ON/OFF for 0.5s



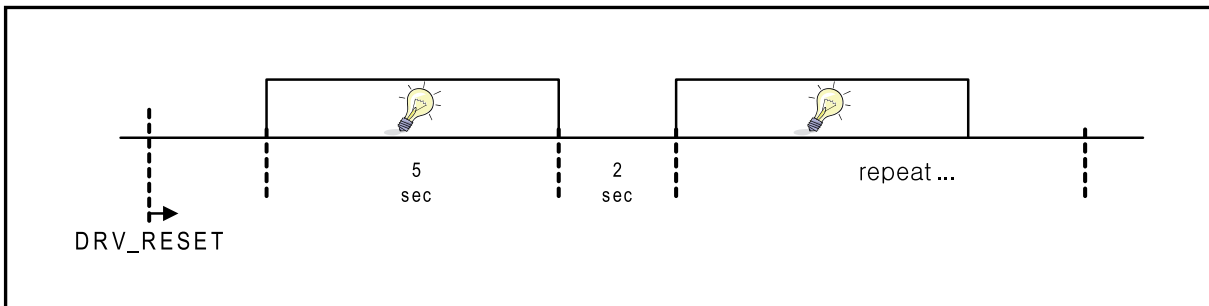
## ■ Abnormal

- LED ON/OFF three times for 8.1s



## ■ DRV\_RESET

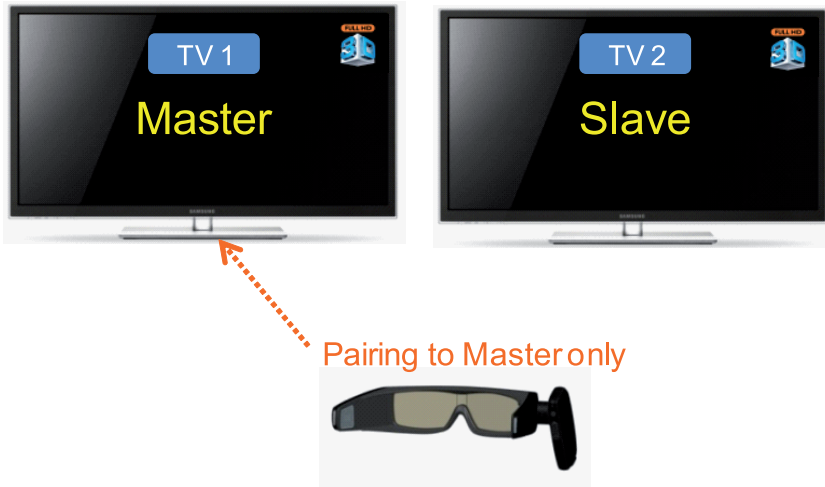
- LED ON for 5s and LED OFF for 2s



# Blue-tooth Pairing

## 1. Multi Display Pairing

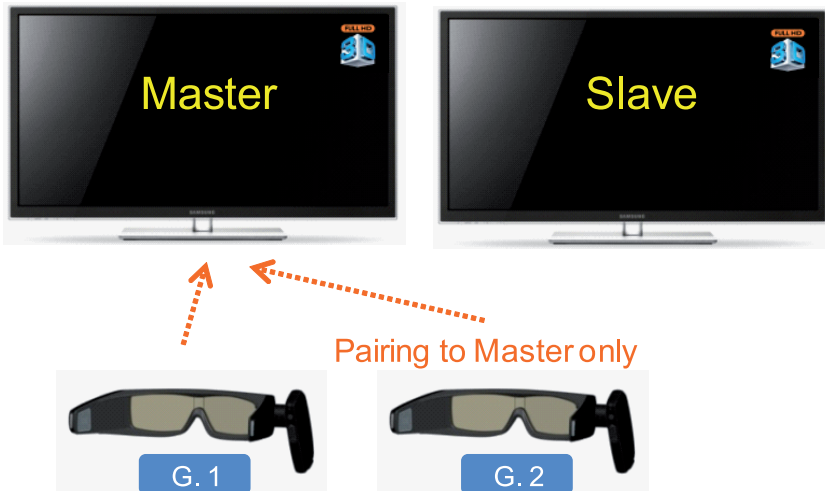
\* Max 10 sets of 3D TV can be connected as a "Master"



- Set "TV 1" as a Master and Do Pairing with 3D Glasses.
  - Set "TV 2" as a Slave TV of Master "TV 1".
- \* Slave TVs should be inside BT covering area of Master TV (6m)

## 2. Multi Glasses Pairing

- \* Unlimited Glasses can be paired with a 3D TV.
- \* Always Pairing to "Master TV".



- Press "Pairing Key" on "G.1" glasses for 3sec within 50cm distance from the "Master TV" set.
- Press "Pairing Key" on "G.2" glasses for 3sec within 50cm distance from the "Master TV" set.



**CAUTION**

3D glasses in 2010 did not work at 2011 model TV. (Working mechanism is different.)

# Factory Mode Adjustments

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## 4.2.1. Entering Factory Mode

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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 menu.

Option
Control
SVC
Expert
ADC/WB
Advanced
<p>T-GAPAKUC-xxxx (US) / T-GAPDEUC-xxxx (EU) / T-GAPIBRC-xxxx (BR)  T-GENAUSS1-xxxx (US) / T-T-GENDEUS1-xxxx (EU)  E-Manual :  GPATSCA-xxxx (US) / GPDVBEUA-xxxx (EU) / GPISDBA-xxxx (BR)</p> <p>EDID SUCCESS  CALIB : AV/COMP/PC/HDMI  OPTION : xxxxx xxx</p> <p>T-GAPAKU-xxxx (US) / T-GAPDEU-xxxx (EU) / T-GAPIBR-xxxx (BR)  DTP-SDAL-GENP-xxxx</p> <p>RFS:"Genoa.P xxxx"  xxxx-xx-xx  Onboot: xxxx  PARMA3D:xxxx  CPLD:xxxx  FUNC-TAG-ERR  Bluetooth:157</p> <p>Type: xxDSCrD  Model: PxxxD8000  Wired MAC SUCCESS  Wireless MAC SUCCESS  LOCK X DRM: Cert O Netflix O Widevine O  Factory Data Ver : XX  EERC Version : XXX  DTP-AP-COMP-XXX  DTP-BP-HAL-XXXX-X  DTP-BP-xxxx  Data of purchase : xx/xx/xxxx</p>

# Factory Data

## ■ Option

Item	Data	Remark
Factory Reset	-	
Type	51DSCrD/59DSCrD/64DSCrD	
Local set	xx	
Model	PD8000	
TUNER	Auto	
DDR	-	
Light Effect	Off	
Ch table	...	
Country	xx	
Front Color	P-W-Vio	

## ■ Control

Menu	Item	Data	Remark	
EDID	EDID ON/OFF	Off		
	EDID WRITE ALL	...		
	EDID WRITE HDMI	...		
	EDID WRITE PC	...		
	HDMI EDID Ver	...		
	HDMI EDID Port	...		
Sub Option	Region	xx		
	PnP Language	xx		
	RF Mute Time	0ms		
	RS-232 Jack	UART		
	Watchdog	OFF		
	WD COUNT	255		
	Dimm Type	EXT		
	LVDS FORMAT	VESA		
	Language_Arabic	US		
	TOOLS Support	31		
	LNA Support	OFF		
	CI Support	OFF		
	MediaPlay	Movie	...	
		DLNA	...	
		DB	...	
		Play List	...	
NETWORK Support	Int-Wifi			
IPERF	Stopped			

Menu	Item	Data	Remark
	Info Link Country	None	
	Info Link Server Type	development	
	TTX List	...	
	TTX Group	...	
	ND ADJ Support	ON	
	24Px4 Support	OFF	
	Power Indicator Support	ON	
	BD Wise Support	ON	
	RF Remocon Support	OFF	
	Data Service Support	OFF	
	PVR Support	OFF	
	3D Support	ON	
	Gemstar Support	OFF	
	WSS Support	...	
	ColorSpace Support	RGB Type	
	OTA Support	OFF	
	OTA Duration Test	OFF	
	Alternate Del	OFF	
	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	Diabile	
	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

Menu	Item	Data	Remark
	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	
Checksum		0 X 0000	
EEPROM RESET	EER RESET		

Menu	Item	Data	Remark
	NVR All Clear	Off	
PDP Option	KEY SENSITIVITY	Not Used	
	LOGIC CONNECT		
	PIXEL SHIFT TEST		
	PANEL VERSION		
	PANEL INCH		
	PANEL TYPE		
	PANEL TEMPERATURE		
	LOGIC SW VERSION		
	LOGIC SW CHECKSUM		
	SAPC TIMER		
	APC SPEED		
	Real 100 Hz Support		
	PLG_SHOP		
Hotel Option	HOTEL MODE	Off	
	POWER ON CHANNEL		
	CHANNEL TYPE		
	POWER ON VOLUME		
	MIN VOLUME		
	MAX VOLUME		
	PANEL BUTTON LOCK		
	POWER ON SOURCE		
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	
	PHBW	3	
	FQ BW	3	
	PH RATE	4	
PD EN	1		



Menu	Item	Data	Remark
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	0 x 0000	
Config Option		1	
	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	PDP	
	Num of DECODER	2	
	Num of TUNER	1	
	HDMI/DVI SEL	1	
	Indicator Led	ON	
	Wall Mount	OFF	
HV Flip	ON		

Menu	Item	Data	Remark
	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	
	BackendDevice	NAPOLI	
	ENCORDER	NXC1000	
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

Menu	Item		Data	Remark
		pSCC Ly	572	
	SCC Source Data		PBA	
	SWAP		PBA	

■ SVC

Menu	Item	Data	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				
PANEL DISPLAY TIME				
T-CON USB Download		3Hr		
T-CON CheckSum				
CPLD USB Download				
REMOCON PAIRING				
TC905x7	TC90507	FFT Size_0	0	
		Guard Interval_0	0	
		Freq. Offset_0	0	
		SNR_0	0	
		IF AGC_0	0	
		TMCC Lock_0	0	
		TS Packet_0	0	
		Master Lock_0	0	
		A_Modulation_0	0	
		A_Code Rate_0	0	
		A_Timer InterLeave_0	0	
		A_Segments Num_0	0	
		A_BER_0	0	
		B_Modulation_0	0	
B_Code Rate_0	0			

Menu	Item	Data	Remark
	B_Timer InterLeave_0	0	
	B_Segments Num_0	0	
	B_BER_0	0	
	C_Modulation_0	0	
	C_Code Rate_0	0	
	C_Timer InterLeave_0	0	
	C_Segments Num_0	0	
	C_BER_0	0	
MICOM UPGRADE			
Temp Last			
Temp Read			
DDC Version		0x40519	
DDC_CHK_SEL		0	
DDC_Check_Total		0x0	
IR_ON_OFF		0xaa	
BT ADDRESS		ON	
BT UPGRADE			
SVC Reset			

### ■ Expert

Menu	Item	Data	Remark
N/D ADJ			
Source			

### ■ ADC/WB

Menu	Item	Data	Remark
ADC	AV Calibration		
	Comp Calibraion		
	PC Calibration		
	HDMI Calibration		
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	

Menu	Item	Data	Remark
	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	248	
	1st_Y_GL	245	
	1st_Cb_BH		
	1st_Cb_BL		
	1st_Cr_RH		
	1st_Cr_RL		
	2nd_R_L	131	
	2nd_G_L	131	
	2nd_B_L	131	
	2nd_R_H	107	
	2nd_G_H	107	
2nd_B_H	107		
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		
	Movie B-Offset		
	Movie R-Gain		
	Movie B-Gain		

■ Advanced

Menu	Item		Data	Remark
Picture_2D	FBE3	BM_slope		
		BM_start		
		BM_start_max		
		Lfunc_gain		
		Hfunc_gain		
		ACR-Offset		
		Skin-UV		
		FBE Sub color		
		M-Skin-UV		
		M-Sub Color		
		N_Skin_UV		
		N_Sub_Gamma		
		Color Gamut		
		LFUNC_TH1		
		LFUNC_TH2		
		LFUNC_TH3		
		LFUNC_OUT2		
		LFUNC_OUT3		
		LFUNC_OUT4		
		LFUNC_OUT5		
		UFUNC_TH1		
		UFUNC_TH2		
		UFUNC_TH3		
		UFUNC_OUT2		
		UFUNC_OUT3		
		UFUNC_OUT4		
		UFUNC_OUT5		
		PPHC_Red		
		PPHC_Green		
		PPHC_Blue		
		PPHC_Cyan		
		PPHC_Magenta		
		PPHC_Yellow	WB Movie	W/B MOVIE ON/OFF
	MODE			
	Color Tone			
	MSub Brightness			
	MSub Contrast			
	N_Rgain			
	N_Bgain			

Menu	Item			Data	Remark
			N_Roffset		
			N_Boffset		
			W1_Rgain		
			W1_Bgain		
			W1_Roffset		
			W1_Boffset		
			W2_Rgain		
			W2_Bgain		
			W2_Roffset		
			W2_Boffset		
			Movie Contrast		
			Movie Bright		
			Movie Color		
			Movie Sharpness		
			Movie Tint		
			Movie Backlight		
			Movie Gamma		
			M_Sub_Gamma		
			HDMI Black Level		
		SubSetting	Gamma	0.95	
			PWM Max		
			PWM Mid		
			PWM Min		
			Contrast Dimming		
			7.5 IRE NTSC		
			7.5 IRE OFFSET		
			48Hz Enable		
			Peak Dimming		
			Dynamic CE		
		ColorMapping	Auto_Red_R		
			Auto_Red_G		
			Auto_Red_B		
			Auto_Green_R		
			Auto_Green_G		
			Auto_Green_B		
			Auto_Blue_R		
			Auto_Blue_G		
			Auto_Blue_B		
			Auto_Yellow_R		
			Auto_Yellow_G		



Menu	Item		Data	Remark	
			Auto_Yellow_B		
			Auto_Cyan_R		
			Auto_Cyan_G		
			Auto_Cyan_B		
			Auto_Magenta_R		
			Auto_Magenta_G		
			Auto_Magenta_B		
		EPA 3D	Standard Contrast		
			Standard Brightness		
			Standard Sharpness		
			Standard Color		
			Standard Tint		
			Standard Backlight		
			3D Contrast		
			3D Brightness		
			V_3D PWM Delay_60		
			V_3D ANA Delay_60		
			V_3D PWM Delay_50		
			V_3D ANA Delay_50		
			Motion plus Delay		
			Home Delay		
			Shop Delay		
		CH_VDEC	AGC_mode		
			Gain_VCR		
			Y_Gain_Man		
			Y_Shape_sel		
			Y_Shape_SCM		
			C_Shape_sel		
			C_Shape_SCM		
			If_iir		
			If_filt_sel		
			ST_Beg_NTSC		
			VS_Slice_Level		
			HS_Slice_Level		
			FB_Delay_adj		
			RGB_Delay_adj		
			slice_mod_fine		
		scm_fdet_lvl			
bl_range					
AR_ADC	PHASE				

Menu	Item		Data	Remark	
			SOG_BW		
			SSC_PC		
			RGB_DLY		
		YC_Delay	PAL_BG		
			PAL_DK		
			PAL_I		
			PAL_M		
			PAL_N		
			SECAM_BG		
			SECAM_DK		
			SECAM_L		
			NTSC_358		
			NTSC_443		
			AV_PAL		
			AV_PAL_M		
			AV_PAL_N		
			AV_SECAM		
			AV_NT358		
			AV_NT443		
			AV_PAL60		
			CH_DP	BD_MAX_PERCENT_X	
		BD_MAX_PERCENT_Y			
		BD_DETAIL_AMT_MAX			
		BD_TOUCH_SUPP			
		BD_TOUCH_SUP_INV			
		DR_SIGMA_FIL_GAIN			
		DR_GAIN_IN_ETE			
		SD2HD_Metric			
		Sharpness	Pre_GainH1		
			Pre_GainH2		
			Pre_GainH3		
			Pre_GainV1		
			Pre_GainV2		
			Pre_GainV3		
			Post_GainH1		
			Post_GainH2		
			Post_GainH3		
			Post_GainV1		
			Post_GainV2		
			Post_GainV3		

Menu	Item			Data	Remark
			Post_GainPE1		
			Post_GainPE2		
			Post_GainPV1		
			Post_GainPV2		
			CTI_Gain		
			Pre_LTIH		
			LTI_H		
			LTI_V		
			PRE_CORING_H		
			PRE_CORING_V		
			POST_CORING		
			Pre_TOT		
			Post_TOT		
			SH Sub Color		
		Sharpness_LN	S1_Pre_GainH1		
			S1_Pre_GainH2		
			S1_Pre_GainH3		
			S1_Pre_GainV1		
			S1_Pre_GainV2		
			S1_Pre_GainV3		
			S1_Post_GainH1		
			S1_Post_GainH2		
			S1_Post_GainH3		
			S1_Post_GainV1		
			S1_Post_GainV2		
			S1_Post_GainV3		
			S1_Post_GainPE1		
			S1_Post_GainPE2		
			S1_Post_GainPV1		
			S1_Post_GainPV2		
			S2_Pre_GainH1		
			S2_Pre_GainH2		
			S2_Pre_GainH3		
			S2_Pre_GainV1		
			S2_Pre_GainV2		
			S2_Pre_GainV3		
			S2_Post_GainH1		
			S2_Post_GainH2		
			S2_Post_GainH3		
			S2_Post_GainV1		

Menu	Item		Data	Remark		
			S2_Post_GainV2			
			S2_Post_GainV3			
			S2_Post_GainPE1			
			S2_Post_GainPE2			
			S2_Post_GainPV1			
			S2_Post_GainPV2			
			S3_Pre_GainH1			
			S3_Pre_GainH2			
			S3_Pre_GainH3			
			S3_Pre_GainV1			
			S3_Pre_GainV2			
			S3_Pre_GainV3			
			S3_Post_GainH1			
			S3_Post_GainH2			
			S3_Post_GainH3			
			S3_Post_GainV1			
			S3_Post_GainV2			
			S3_Post_GainV3			
			S3_Post_GainPE1			
			S3_Post_GainPE2			
			S3_Post_GainPV1			
			S3_Post_GainPV2			
			LNA_Plus	Synctip_Noise		
				dB0		
			dB1			
			dB2			
			dB3			
			dB4			
			dB5			
			dB6			
			dB7			
			dB8			
			dB9			
			LNA+_Yfilter			
		FRCS	FRCS LVDS Format			
			FRCS LVDS BitWidth			
			FRCS LVDS Sequence			
			FRCS Hangup Detection			
			FRCS FMD Demo			
		LDAsic	R_LD4_L3DD_RATIO			

Menu	Item			Data	Remark
			R_LD4_LD_ON		
			R_DELAY		
			R_ALL_READ		
			R_LVDS_TX_FMT		
			R_LVDS_SW		
		3D	EmitOn		
			EmitStartPosi60		
			EmitStartPosi50		
			EmitStartPosi48		
			3DSyncVstart60		
			3DSyncVend60		
			3DSyncVstart50		
			3DSyncVend50		
			3DSyncVstart48		
			3DSyncVend48		
			2D3D Focus		
			2D3D Depth1		
			2D3D Depth2		
			2D3D Depth3		
			2D3D Depth4		
			2D3D Depth5		
			2D3D Depth6		
			2D3D Depth7		
			2D3D Depth8		
			2D3D Depth9		
			2D3D Depth10		
			N240 PWM Delay_60		
			N240 ANA Delay_60		
			N240 PWM Delay_50		
		N240 ANA Delay_50			
		N240 PWM Delay_48			
		N240 ANA Delay_48			
		Reading	POST_FDISPLAY		
			RAMP_SPEED		
			POST_RAMP_SPEED		
			LVDS_RX_FMT		
			LVDS_TX_FMT		
			LVDS_RX_BIT		
			LVDS_TX_BIT		
		POST_OUT1_ORDER			

Menu	Item		Data	Remark
		POST_OUT2_ORDER		
		POST_OUT3_ORDER		
		POST_OUT4_ORDER		
		CROSS_PATTERN		
		EnableFB		
		HMVSRMargin_2X_H		
		HMVSRMargin_2X_M		
		HMVSRMargin_2X_L		
		VMVSRMargin_2X		
		HSADPercentT1_2X		
		HSADPercentT2_2X		
		HMVSRMargin_FILM_H		
		HMVSRMargin_FILM_M		
		HMVSRMargin_FILM_L		
	LEDDriver	VSYNC_DELAY_3D_50		
		VSYNC_DELAY_3D_60		
	FRC	FRCQ Option		
		SSC_OnOff		
		SSC_Width		
		SSC_Freq		
		FMD_Demo		
		CSB Vertical		
		CSB Horizontal		
		X_VStabStatVid		
		X_VStabStatF		
		X_VStabCorF		
		X_VStabSensF		
		X_HaloSizStatVid		
		X_HaloSizStatF		
		X_HaloSizCorF		
		X_HaloSizSensF		
		Film_Low_SD		
		Film_Medium_SD		
		Film_High_SD		
		Film_Low_HD		
		Film_Medium_HD		
		Film_High_HD		
		Video_Judder_Low		
		Video_Judder_Med		
		Video_Judder_High		
		Hangup Detection		

Menu	Item				Data	Remark
				Q LVDS Sequence		
				Q LVDS Format		
				Q LVDS bit width		
				PC_Mode_OnOff		
			FRCQ	SensD_Film_Low		
			Fallback	SensD_Film_Medium		
				SensD_Film_High		
				Rel_Start_Film		
				Rel_Slope_Film		
				H_Len_Start_Film		
				H_Len_Slope_Film		
				V_Len_Start_Film		
				V_Len_Slope_Film		
				SensD_Video		
				Rel_Start_Video		
				Rel_Slope_Video		
				H_Len_Start_Video		
				H_Len_Slope_Video		
				V_Len_Start_Video		
				V_Len_Slope_Video		
Picture Update						

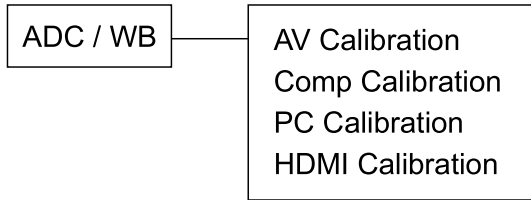
# Service Adjustment

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

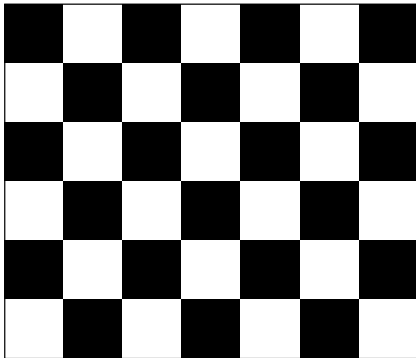
## ■ White Balance - Calibration

- Factory



## ■ Color Calibration

- Adjust spec.
  - 1) Source : HDMI
  - 2) Setting Mode : 1280\*720@60Hz
  - 3) Pattern : Pattern #24 (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/PAL 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



- **Method of Color Calibration (AV)**

- 1) Apply the NTSC/PAL 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.

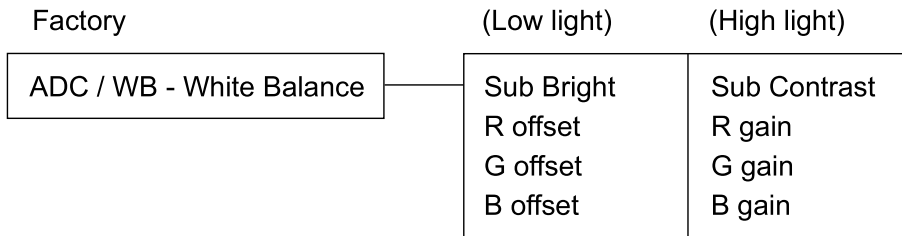
- **Method of Color Calibration (PC)**

- 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.

■ **White Balance - Adjustment**



# Software Upgrade

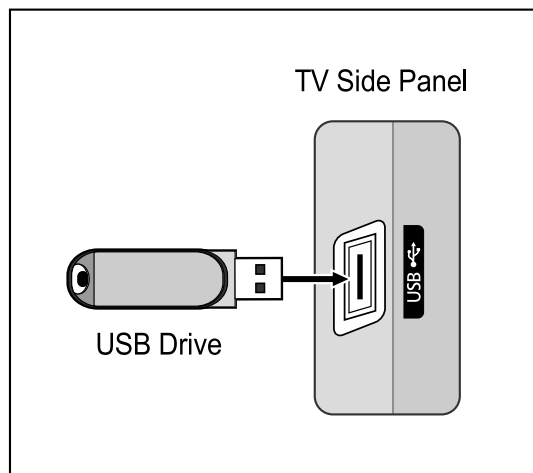
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Samsung may offer upgrades for the TV's firmware in the future.

These upgrades can be performed via the TV.

Upgrades will be possible by connecting a USB drive to the USB port.

- 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.



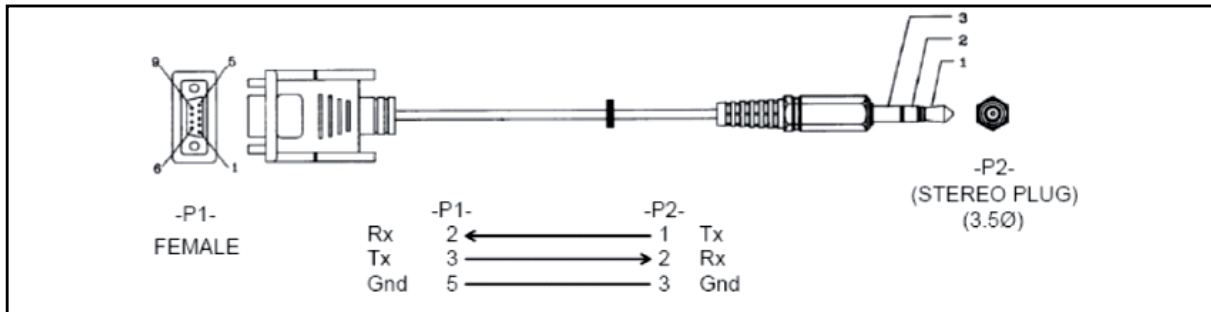
# RS-232C

## 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



# 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
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
Picture	Mode	Dynamic(Entertain)	0x0b	0x00	0x00	0x00	
		Standard				0x01	
		Movie				0x02	
		Natural				0x03	
		CAL-NIGHT				0x04	
		CAL-DAY				0x05	
		BD Wise				0x06	
	BackLight	0~20		0x01	0x00	(0~20)	

Control Item		Cmd1	Cmd2	Cmd3	Value	
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	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)
	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	

Control Item			Cmd1	Cmd2	Cmd3	Value	
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	
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	

Control Item			Cmd1	Cmd2	Cmd3	Value	
		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
		Sound	SRS TheaterSound(Genoa)	Standard	0x0c	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	



Control Item			Cmd1	Cmd2	Cmd3	Value
		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)