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 | → | INFO | → | MENU | → | MUTE | → | Power On |

4-3-2 How to Access Service Mode

Using the Customer Remote

1. Turn the power off and set to stand-by mode.

2. Press the remote buttons in this order; POWER OFF- INFO - MENU - MUTE to turn the set on.

3. The set turns on and enters service mode. This may take approximately 20 seconds.

4. Press the Power button to exit and store data in memory.
   - If you fail to enter service mode, repeat steps 1 and 2 above.

5. Initial SERVICE MODE DISPLAY State

Option
Control
SVC
Expert
ADC/WB
Advanced
T-TDT5DEUC-XXXX T-TDT5DEUS-XXXX EDID SUCCESS CALIB : AV X COMP X PC X HDMI X Option : XXXX XXXX XXXX X T-TDTDEU-XXX SDAL-XXX RFS : P0155 T-TDT5DEUC 20XX-XX-XX TYPE : XX MODEL : XXXXX MAC Not Available FACTORY DATA VER : XXX EERC VERSION : XXX DTP-AP-COMP-XXX-XX DTP-HIIG-XXXX-X DTP-BP-XXXX DATE OF PURCHASE : XX/XX/XX

* How to enter the hidden factory mode.

   a. into the factory mode
   b. move the tap to Advanced
   c. key input : 0 + 0 + 0 + 0

   ** hidden menu : Advanced

6. Buttons operations withn Service Mode

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

4-3-3 Factory Data

■ Option

OPTION	Factory Name	Data	Range	Use
	Factory Reset			
	Type		NONE/19O6TH0C/19A6TH0C/22I6TH0C/22A6TH0C/22D6TH0C/22P6TH0C/26A6AH0C/26D6AH0C/26L6AH0C/26P6AH0C/32A6AH0C32D6AH0C/32L6AH0C32P6AH0C/32A6AF0C/32L6AF0C/32A1AF0C/32L1AF0C/37L6AF0C/37L1AF0C/40A6AF0C/40D6AF0C/40L6AF0C/40A1AF0C/40L1AF0C/40A1UF0C/40D1UF0C/40L1UF0C/46A6AF0C/46D6AF0C/46L6AF0C/46A1AF0C/46L1AF0C/46A1UF0C/46D1UF0C/46L1UF0C/55A1UF0C/55L1UF0C/65L1UF0C/19R6TH0E/22D6TH0E/26D6AH0E/32D6AH0E32D6UF0E/32A1UF0E/32D1UF0E/37L6UF0E/37D1UF0E/37L1UF0E/40D6UF0E/40A1UF0E/40D1UF0E/46D6UF0E/46L6UF0E/46A1UF0E/46D1UF0E/46L1UF0E/55A1UF0E/55D1UF0E/55L1UF0E/65L1UF0E/42HHcD3/50HHcD450FArN4/50FArV458FArN1/58FArV163FArN1/	Select Panel Type ❶❷ : inch ❸ : vendor ❹ : refresh ❺ : POL ❻ : resolution ❼ : multi ❽ : BLU
	Local Set	EU	EU/EU_Italy/EU_Africa/EU_Israel/NORDIG/AD_Au/CIS	Select Area
	Model	UC5100	LC350/LC450/LC450H/LC451/LC452/LC457HLC459H/LC480/LC530/LC530H/LC539H/LC540/LC550/LC560/LC580/LC570/LC610/LC620/LC630/LC631/LC632/LC633/LC640/LC650/LC652/LC653/LC654/LC670/UC400/UC400H/UC4010/UC5000/UC5100/UC6000/UC6200/UC6300/UC6400/UC6400H/UC6500/UC6510/UC6530/UC6540/UC6550/UC6600/UC6620/UC6630/UC6700/UC6720/UC6730/UC6740/UC6800/UC6830/UC6900/UC6900H/UC8000/PC420/PC430/PC431/PC432/PC450/PC451/PC480/PC520/PC530/PC531/PC540/PC541/PC550/PC551/PC560/PC580/PC590/PC670/PC6100/PC6400/PC6500/PC7000/PC7700/PC8000	Select Model
	TUNER	DRXKSEMCO	DRXKSEMCO/S2Semco/T2CXD/DRXKSEM_E/DRXKALPS/DRXKSEN_2/DRXKXG	EU : DRXKSEMCO AU : DRXKALPS satellite : S2Semco
	DDR	SAMSUNG / Etron	SAMSUNG	SAMSUNG
	Front Color		NONE/W-MILKY/T-M-Brn/T-W-Brn/T-W-Gray/W-D-Gray/W-M-Whit/W-Violet/T-C-Gray/T-R-BLK/S-BLK/S-RBLK/S-C-Gray/	Select Design for Illuminance Sensor

■ Control

Control	Factory Name	Data	Range
	EDID		
	Sub Option		
	Shop Option		
	Sound		

EDID	Factory Name	Data	Use
	EDID ON/OFF	OFF	
	EDID WRITE ALL	…	
	EDID WRITE PC	…	
	EDID WRITE HDMI	…	
	EDID WRITE HDMI1	…	**Download EDID data to EEPROM.**
	EDID WRITE HDMI2	…	1. Set "ON" of EDID ON/OFF.
	EDID WRITE HDMI3	…	2. Go EDID WRITE ALL and Push Enter or ▶ button.
	EDID WRITE HDMI4	…	3. If You See Success message, SET "OFF" of EDID ON/OFF.
	EDID 1.2 PORT	…	
	EDID WRITE DVI	…	

Sub Option	Factory Name	Data	RANGE	Use
	RS-232 Jack	UART	Debug/Logic/UART	Select Setting of UART port. Initial value is "UART"
	Watchdog	ON	ON/OFF	Select Watchdog. Initial value is "ON"
	WD Count	0	255	Watchdog Count. Read Only.
	Dimm Type	EXT	fixed	Select Dimming Type. Initial value is "EXT"
	Lvds Format	JEIDA	JEIDA/VESA/19INCH	Select LVDS format. 19inch : VESA" other inch : "JEIDA"
	OTN Server Type	operating	operating/development	
	OTN Test Server	OFF	OFF/ A/B/C/D/E Zone	
	OTN Support	ON	ON/OFF	
	OTN Reset		not modifyed	
	OTN Duration	OFF	ON/OFF	
	OTN Fail Test	OFF	ON/OFF	
	T-CON USB Download	Failure	fixed	
	View Log		not modifyed	

Hotel Option	Factory Name	Data	Range
	Hotel Mode	OFF	
	SI Vender	…	
	Power On Channel	…	
	Channel Type	…	
	Power On Volume	…	
	Min Volume	…	
	Max Volume	…	
	Panel Button Lock	…	
	Power On Source	…	

Shop Option	Factory Name	Data	Range
	Shop Mode	OFF	ON/OFF
	Exhibition Mode	OFF	ON/OFF

Sound	Factory Name	Data	Range	Use
	High Devi	OFF	ON/OFF	
	Carrier_Mute	ON	ON/OFF	
	Speaker Delay Normal	10	0~255	Audio delay for Lipsync
	Pilot Level High Thld	0x70h	0x00~0xff	Control for ATV sound of stereo / multiplex
	Pilot Level Low Thld	0x20h	0x00~0xff	Control for ATV sound of stereo / multiplex
	Speaker EQ	ON	ON/OFF	Control for sound precision

■ SVC

SVC	Factory Name	Data	Range
	Test Pattern		
	Panel Auto Setting		
	Panel Display Time	0Hr	fixed
	Logic Usb D/L	off	
	Tuner Status		

Test Pattern	Factory Name	Data	Range	Use
	Pattern Sel	OFF	OFF/ White/Grey/Black Red/Green/Blue	Test for Input of Scaler. If you can see pattern well, there is problem at input of Scaler.
	FRC PC Mode	…	ON/OFF	
	Logic Pattern Sel	…	Not modified	
	Logic Level Sel	…	Not modified	

TUNER STATUS	Factory Name	Factory Name	Range
	DVB	SNR	Not modified
		BER	Not modified
		Singal Strength	Not modified
		Bandwidth	Not modified
		Frequency	Not modified
		LNA Status	Not modified
		FFT	Not modified
		Modulation	Not modified
		Code Rate	Not modified
		GI	Not modified
		Hier Modulation	Not modified
		Frequency Offset	Not modified
		Timing Offset	Not modified
		AGC	Not modified
		UCB	Not modified
		PLL Type	Not modified
		DEMOD Type	Not modified
		TPS LOCK	Not modified
		RS Lock	Not modified
		SSI	Not modified
		SQI	Not modified

	ISDB-T	FFT Size_1	Not modified
		Guard Interval_1	Not modified
		Freq. Offset_1	Not modified
		SNR_1	Not modified
		IF AGC_1	Not modified
		TMCC Lock_1	Not modified
		TS Packet_1	Not modified
		Master Lock_1	Not modified
		A_Modulation_1	Not modified
		A_Code Rate_1	Not modified
		A_Timer InterLeave_1	Not modified
		A_Segments Num_1	Not modified
		A_Ber_1	Not modified
		B_Modulation_!	Not modified
		B_Code Rate_1	Not modified
		B_Timer InterLeave_1	Not modified
		B_Segments Num_1	Not modified
		B_BER_1	Not modified
		C_Modulation_1	Not modified
		C_Code Rate_1	Not modified
		C_Timer InterLeave_1	Not modified
		C_Segments Num_1	Not modified
		C_BER_1	Not modified

■ Expert

SVC	Factory Name	Data	Range
	N / D ADJ	Off	Off / On / FIX
	SOURCE	...	Not modified

■ ADC/WB

ADC/WB	Factory Name	Data	Range
	ADC		
	ADC Target		
	ADC RESULT		
	WB		

ADC	Factory Name	Data	Range
	AV Calibration	Success	Success / Failure
	Comp Calibration	Success	Success / Failure
	PC Calibration	Success	Success / Failure
	HDMI Calibration	Success	Success / Failure

ADC Target	Factory Name	Data	Range
	1st_AV_Low	64	0 ~ 1023
	1st_AV_High	880	0 ~ 1023
	1st_AV_Delta	2	0 ~ 7
	1st_COMP_Y_Low	64	0 ~ 1023
	1st_COMP_Y_High	940	0 ~ 1023
	1st_COMP_Delta	2	0 ~ 7
	1st_PC_R_Low	16	0 ~ 1023
	1st_PC_R_High	1004	0 ~ 1023
	1st_PC_Delta	2	0 ~ 7
	2nd_AV_R_Low	4	-
	2nd_AV_G_Low	4	0 ~ 1023
	2nd_AV_B_Low	4	-
	2nd_AV_R_High	940	-
	2nd_AV_G_High	940	0 ~ 1023
	2nd_AV_B_High	940	-
	2nd_AV_Delta	2	0 ~ 7
	2nd_COMP_R_Low	4	-
	2nd_COMP_G_Low	4	0 ~ 1023
	2nd_COMP_B_Low	4	-
	2nd_COMP_R_High	940	-
	2nd_COMP_G_High	940	0 ~ 1023
	2nd_COMP_B_High	940	-
	2nd_COMP_Delta	2	0 ~ 7
	2nd_PC_R_Low	4	-
	2nd_PC_G_Low	4	0 ~ 1023
	2nd_PC_B_Low	4	-

	Factory Name	Data	Range
	2nd_PC_R_High	940	-
	2nd_PC_G_High	940	0 ~ 1023
	2nd_PC_B_High	940	-
	2nd_PC_Delta	2	0 ~ 7
	2nd_HDMI_R_Low	4	-
	2nd_HDMI_G_Low	4	0 ~ 1023
	2nd_HDMI_B_Low	4	-
	2nd_HDMI_R_High	940	-
	2nd_HDMI_G_High	940	0 ~ 1023
	2nd_HDMI_B_High	940	-
	2nd_HDMI_Delta	2	0 ~ 7
ADC RESULT	**Factory Name**	**Data**	**Range**
	1st_Y_GH	0	0 ~ 255
	1st_Y_GL	0	0 ~ 255
	1st_Cb_BH	0	0 ~ 255
	1st_Cb_BL	0	0 ~ 255
	1st_Cr_RH	0	0 ~ 255
	1st_Cr_RL	0	0 ~ 255
	2nd_R_L	132	0 ~ 255
	2nd_G_L	132	0 ~ 255
	2nd_B_L	132	0 ~ 255
	2nd_R_H	50	0 ~ 255
	2nd_G_H	50	0 ~ 255
	2nd_B_H	50	0 ~ 255
WB	**Factory Name**	**Data**	**Range**
	Sub Brightness	128	0 ~ 255
	R_Offset	512	0 ~ 1023
	G_Offset	512	0 ~ 1023
	B_Offset	512	0 ~ 1023
	Sub Contrast	128	0 ~ 255
	R_Gain	512	0 ~ 1023
	G_Gain	512	0 ~ 1023
	B_Gain	512	0 ~ 1023
	Movie R Offset	-	0 ~ 1023
	Movie B Offset	-	0 ~ 1023
	Movie R Gain	-	0 ~ 1023
	Movie B Gain	-	0 ~ 1023

4-4. White Balance

4-4-1. Calibration

1. Calibration

→

AV Calibration Comp Calibration PC Calibration HDMI Calibration

4-4-2. Adjustment

(low light)   (hight light)

3. W/B

→

Sub Bright R offset G offset B offset	Sub Contrast R gain G gain B gain
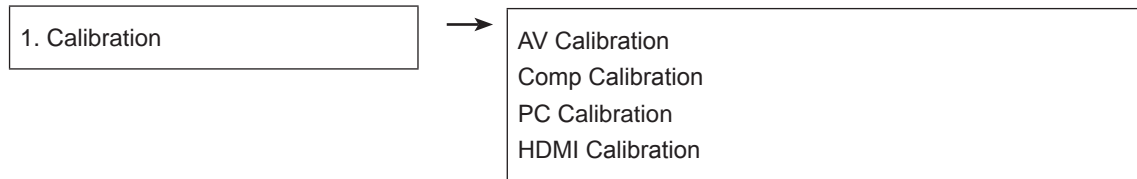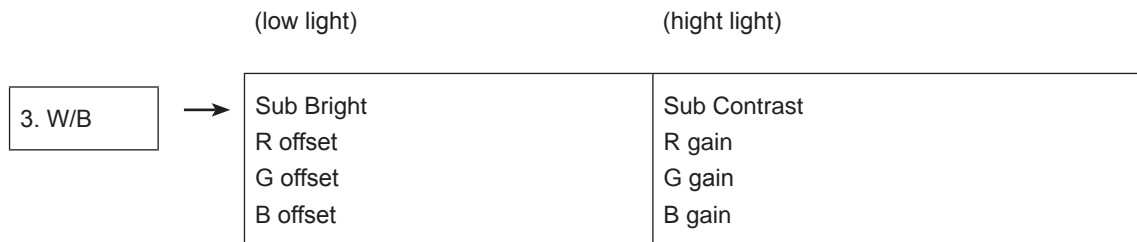
(W/B adjustment Condition refer next page)

4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).

2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.

3. The optimal values for each mode are configured by default. (Refer to Table 1, 2)
   It varies with Panel's size and Specification.

   - Equipment : CS-210
   - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
   - Use other equipment only after comparing the result with that of the Master equipment.

   - Set Aging time : 60min

   - Calibration and Manual setting for WB adjustment.

HDMI : Calibration at #24 Chessboard Pattern → Manual adjustment #92 pattern (720p)

COMP: Calibration at #24 Chessboard Pattern → Manual adjustment at #92 pattern (720p)

CVBS: Calibration at #24 Chessboard Pattern → Manual adjustment at #92 pattern (PAL)

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

P-Mode		Adjustment Coordinate			
		x	y	Y (Luminance)	T(K) + MPCD
CVBS (PAL)	H/L	272	278	- (Sub_CT:130)	12,000 ($\pm$0)
	L/L	272	278	12.6cd/m^2 (3.7 Ft)	12,000 ($\pm$0)
COMP (720P)	H/L	272	278	- (Sub_CT:130)	12,000 ($\pm$0)
	L/L	272	278	13.0cd/m^2 (3.8 Ft)	12,000 ($\pm$0)
HDMI (720P)	H/L	272	278	- (Sub_CT:130)	12,000 ($\pm$0)
	L/L	272	278	13.0cd/m^2 (3.8 Ft)	12,000 ($\pm$0)

- Adjustment Specification

White Balance : High light ($\pm$1), Low light ($\pm$3)
Luminance : High light (Don't care), Low light ($\pm$0.2 Ft/L)

4-6. Servicing Information

4-6-1 USB Download Method

Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (726-7864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port located on your TV.
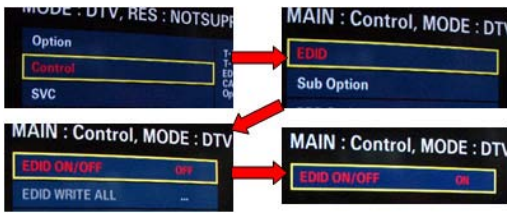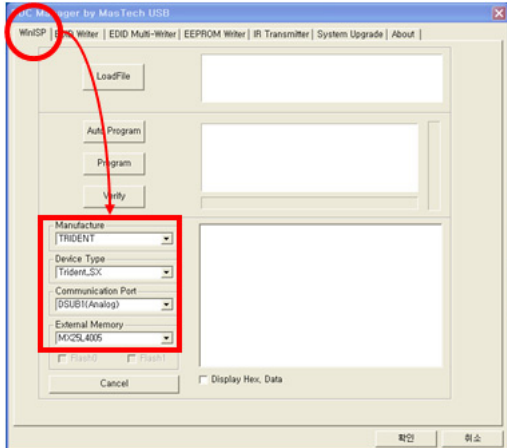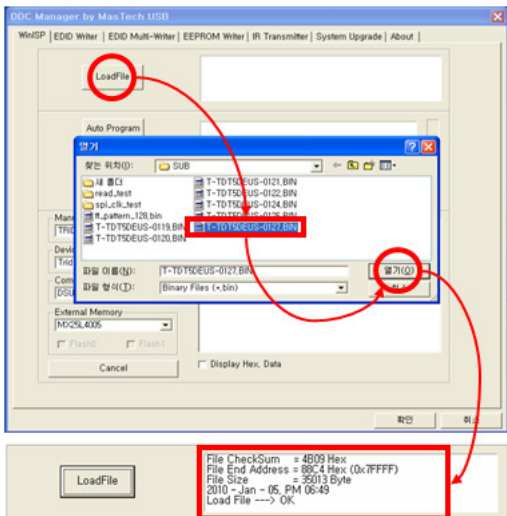
1. Insert a USB drive containing the firmware (T-TDT5DEUC) upgrade into the USB port on the rear of the TV.

2. Press the **MENU** button to display the menu.
   Press the ▲ or ▼ button to select "Support", then press the **ENTER** button.

3. Press the ▲ or ▼ button to select "SW Upgrade", then press the **ENTER** button.
   The message "Scanning for USB. It may take up to 30 seconds." is displayed.

4. The message "Upgrade version XXXX to version XXXX? The system will be reset after upgrade." is displayed.
   Press the ◄ or ► to select the "OK", then press the **ENTER** button.
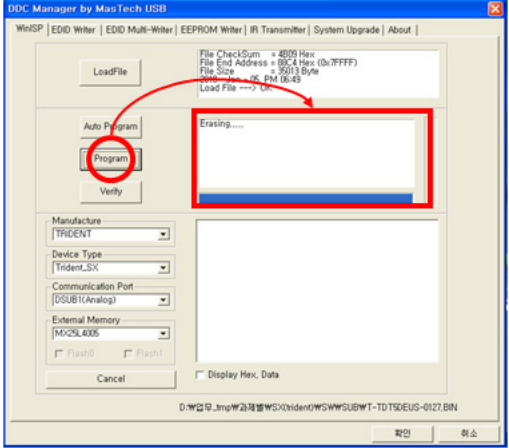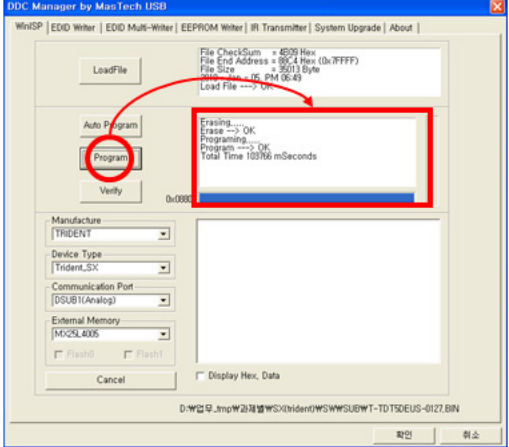
Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete. When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

4-6-1 USB Download Method
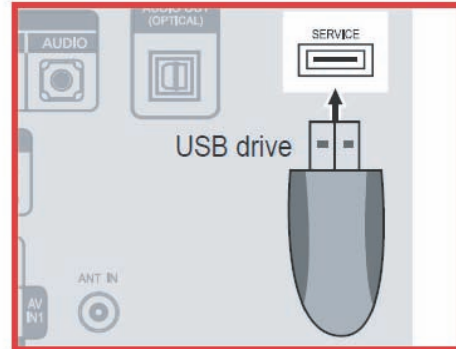
4-7. How To Upgrade Sub Micom With Ddc Manager

4-7-1. TV Sub S/W

Order	Description
1	Connect DDC MANAGER to the TV Set with D-SUB cable. And Power on. (USB type : MTI-2510 / parallel type : MTI-2059)
2	Enter the factory mode. Control - EDID - EDID ON/OFF Select ON.
3	Open the DDC tool. (Parallel type & USB type) Check the setting.
4	Load the sub micom program file (T-TDT5DEUS-XXXX.BIN).

Order	Description
5	Push the 'Program' Button. (It takes quite a bit of time. You can wait or close the DDC tool by force and open tool and load file again.)
6	Push the 'Program' Button again. (It takes about 100 seconds.)
7	If update completes, TV set will booting automatically. Disconnect the JIG.