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

MUTE → Number Key(1) → Number Key(8) → Number Key(2) → Power on

- If you have Factory remote - control

PICTURE ON → DISPLAY → FACTORY

- The buttons are active in the service mode.

1. Remote - Control Key : Power, Arrow Up, Arrow Down, Arrow Left
   Arrow Right, Menu, Enter, Number Key(0~9)
2. Function - Control Key : Power, CH +, CH -, VOL +, VOL -,
   Menu, TV/VIDEO(Enter)

4-3-2 Panel Check

You have to check Panel Maker Because of different adjustments as follows.
First of all, Check the label rating!

1) Label Rating File

- LCD PANEL MARK
  A:ACER(AUO) S : SEC C : CMO

* If not printed you could consider S(sec) panel mark.

4-3-3 Factory Data

1. Option
2. ADC/WB
3. Control
4. Advanced : 0->0->0->0
5. FBE3
6. WB Movie
7. EPA Standard
8. CH_VDEC
9. YC_Delay
10. AR_ADC
11. CH_DP
12. NR
13. Sharpness
14. Sharpness_LNA
15. CE DIMMING
16. LNA_Plus
17. Tuner Status
18. FRC
19. PQ Others
20. EEPROM RESET
21. Expert
22. TC905x7
23. DDR Margin

T-CHE7IBRC-0012
T-CHE7IBRS-0035
SDAL-4.2.27-0153
RFS:24_2G_64_512 T-CHE7IBRC
2009-03-03
FRCQ FW : 1008, CONFIG : 4900
Type : 40A1UF0E
Model : UN40B7000
MAC
EDID
CALIB : AV,COMP,PC,HDMI
Option : 0751 3014 500
Factory Data Ver : 486
DTP-AP-COMP-132
DTP-HIIG-0127
TLIB BR 2G 2009-03-03-01
DTP-BP-0135
Date of purchase

■ Option

Item	Range	Data
Factory Reset		
Type	None/ 32L6AF0C/ 32A6AF0C/ 32L1UF0C/ 32L1UF0C/ 32D U11E/ 37L6AF0C/ 37L1UF0C/ 40A1UF0E/ 40L6AF0C/ 40A6AF0C/ 40L1UF0C/ 40D1UF0C/ 40D1AF0C/ 40A1AF0C/ 40A2UF0C/ 40D6AF0C/ 40A1UF0C/ 40A2UF0E/ 46L6AF0C/ 46A6AF0C/ 46L1AF0C/ 46A1AF0C/ 46D1UF0C/ 46L1UF0C/46A1UF0C	40A1UF0E
Model	LB550/ LB570/ UB6000/ LB650/ LB670/ UB7000/ LB750/UB8000	UB7000
TUNER	ALPS/ SEC_TI/ SEC_INF/ Error	SEC_TI
Region	BRA	BRA
DDR	-	-
Light Effect	ON/OFF	OFF
Ch Table	NONE/ SUWON	NONE
Medialink Type	Canada/ America/ Mexico/ S.America/ Infolink ON/ Infolink OFF	Infolink ON
Local Set	...	
PDP GROUP	...	

■ ADC/WB

ADC

Item	Range	Data
AV Calibraion	Success/Failure	Success
Comp Calibraion	Success/Failure	Success
PC Calibration	Success/Failure	Success
HDMI Calibration	Success/Failure	Success

ADC Target

Item	Range	Data
1st_AV_Low	0~1020	64
1st_AV_High	0~1020	880
1st_AV_Delta	7	1
1st_COMP_Y_Low	0~1020	64
1st_COMP_Cb_Low	0~1020	512
1st_COMP_Cr_Low	0~1020	512
1st_COMP_Y_High	0~1020	940
1st_COMP_Cb_High	0~1020	512
1st_COMP_Cr_High	0~1020	512
1st_COMP_Delta	7	1
1st_PC_R_Low	0~1020	16
1st_PC_G_Low	0~1020	16
1st_PC_B_Low	0~1020	16
1st_PC_R_High	0~1020	1004
1st_PC_G_High	0~1020	1004
1st_PC_B_High	0~1020	1004
1st_PC_Delta	7	1
2nd_AV_R_Low	124	4
2nd_AV_G_Low	124	4
2nd_AV_B_Low	124	4
2nd_AV_R_High	1020	940
2nd_AV_G_High	1020	940
2nd_AV_B_High	1020	940
2nd_AV_Delta	7	1
2nd_COMP_R_Low	124	4
2nd_COMP_G_Low	124	4
2nd_COMP_B_Low	124	4
2nd_COMP_R_High	1020	940
2nd_COMP_G_High	1020	940
2nd_COMP_B_High	1020	940
2nd_COMP_Delta	7	1
2nd_PC_R_Low	124	4
2nd_PC_G_Low	124	4
2nd_PC_B_Low	124	4
2nd_PC_R_High	1020	940
2nd_PC_G_High	1020	940
2nd_PC_B_High	1020	940
2nd_PC_Delta	7	1
2nd_HDMI_R_Low	124	4
2nd_HDMI_G_Low	124	4
2nd_HDMI_B_Low	124	4
2nd_HDMI_R_High	1020	940
2nd_HDMI_G_High	1020	940
2nd_HDMI_B_High	1020	940
2nd_HDMI_Delta	7	1

ADC Result

Item	Range	Data
1st_Y_GH	0~511	128
1st_Y_GL	0~511	128
1st_Cb_BH	0~511	128
1st_Cb_BL	0~511	128
1st_Cr_RH	0~511	128
1st_Cr_RL	0~511	128
2nd_R_L	0~255	131
2nd_G_L	0~255	131
2nd_B_L	0~255	131
2nd_R_H	0~255	67
2nd_G_H	0~255	67
2nd_B_H	0~255	67

White Balance

Item	Range	Data
Sub Brightness	0~255	128
R-Offset	0~1023	512
G-Offset	0~1023	512
B-Offset	0~1023	512
Sub Contrast	0~255	133
R-Gain	0~1023	512
G-Gain	0~1023	512
B-Gain	0~1023	512
Movie R-Offset	0~1023	-
Movie B-Offset	0~1023	-
Movie R-Gain	0~1023	-
Movie B-Gain	0~1023	-

■ Control

EDID

Item	Range	Data
EDID ON/OFF	ON/OFF	OFF
EDID WRITE ALL	Failure/Success	Success
EDID WRITE PC	Failure/Success	Success
EDID WRITE HDMI	Failure/Success	Success
EDID WRITE HDMI1	Failure/Success	-
EDID WRITE HDMI2	Failure/Success	-
EDID WRITE HDMI3	Failure/Success	-
EDID WRITE HDMI4	Failure/Success	-
EDID VERSION	HDMI1.2/HDMI1.3	NONE

Sub Option

Item	Range	Data
RF Mute Time	0ms~1000ms	600ms
SUB U-COM	-	Off
RS-232 Jack	Debug/UART/Logic	UART
Watchdog	On/Off	On
WD COUNT	-	0
SSC ON/Off	On/Off	On
SSC MRR	0~31	2
SSC MFR	0~8	2
SSC QLC	0~15	4
Gamma	Off/0.85/0.88/0.90/0.93/0.95/0.98/M1/M2/M3/M4	0.98
PANEL DISPLAY TIME	-	0hr
Dimm Type	INT/EXT	EXT
LVDS FORMAT	JEIDA/PDP/VESA	VESA
Language_Arabic	-	-
UI COLOR	BASIC/BLUE/RED	RED
TOOLS Support	-	40
LNA Support	0~1	1
Wiselink WithOut DB	With DB /Without DB	With DB
WiseLink Movie	On/Off	On
WiseLink DLNA	On/Off	On
WiseLink Write	On/Off	On
NETWORK Support	Not support/Cable/Wireless	Wireless
High Devi	On/Off	Off
Carrier Mute	On/Off	Off
Volume Curve	US_KR/EU/ASIA_SA/CUSTOM	ASIA_SA
PWM MAX	0~256	256
DVOUT CD	0~3	0
CVBS CD	0~3	1
EDID Jack Ident	On/Off	Off
Info Link Server Type	development/operating	operating
TTX List	-	Flof
TTX Group	-	UserOSD
24Px4 Support	On/Off	Off
Power Indicator Support	On/Off	On
BD Wise Support	On/Off	On
RF Remocon Support	On/Off	Off
Data Service Support	On/Off	Off
OTA Duration Test	On/Off	Off
Alternate Del	On/Off	Off
IIC BUS STOP	On/Off	Off
Visual Test	Disable/Enable	Disable
Temp Private Range Use	On/Off	Off
Panel Auto Setting	Failure/Success	Success
Checksum	-	0x0000
View Log	-	-
Font Data Viewer	-	-

Shop Option

Item	Range	Data
TTX	ON/OFF	OFF
China HD	ON/OFF	OFF
NT Conversion	ON/OFF	OFF
Sepco 120Hz	ON/OFF	OFF
Unbalance	ON/OFF	OFF

SOUND

Item	Range	Data
SAP High Threshold	0x00h~0xffh	0x1Ah
SAP Low Threshold	0x00h~0xffh	0x09h
Speaker Delay Normal	0~150	80
Auxout Delay Normal	0~150	80
Spdif Delay Normal	0~150	0
Speaker Delay Game	0~150	40
Auxout Delay Game	0~150	40
Spdif Delay Game	0~150	0
STA Amp Vol.	0x00h~0xffh	0x28h
STA Post Scale	0x00h~0x7fh	0x7fh
STA Speaker EQ	ON/OFF	On
STA Sub Woofer	1~2	2
Mono to Stereo Thld	0x00h~0xffh	0x12h
Stereo to Mono Thld	0x00h~0xffh	0x06h
Pilot Level High Thld	0x00h~0xffh	0x30h
Pilot Level Low Thld	0x00h~0xffh	0x10h
A2 Pilot AM Carr High Thld	-	-
A2 Pilot AM Carr Low Thld	-	-
NICAM Error High Thld	-	-
NICAM Error Low Thld	-	-
FM1 CarrMute High Thld	0x00h~0xffh	0x02h
FM1 CarrMute Low Thld	0x00h~0xffh	0x01h
DRC H Thresh	0x00h~0xffh	0x35h
DRC L Thresh	0x00h~0xffh	0x30h
DRC SW Thresh	0x00h~0xffh	0x3dh
Chattering Cnt	0~60	5
FM Prescale	-	-
AM Prescale	-	-
NICAM Prescale	-	-
BTSC Mono Prescale	0~40	20
BTSC Stereo Prescale	0~40	20
BTSC Sap Prescale	0~40	20
A2K Prescale	-	-
M Prescale	-	-

Config Option

Item	Range	Data
Num of ATV	1~2	1
Num of DTV	0~2	1
Num of AV	0~3	1
Num of SVIDEO	0~3	0
Num of COMP	0~3	1
Num of HDMI	0~4	4
Num of PC	0~1	1
Num of SCART	0~2	0
Num of DVI	0~1	0
Num of OPTICAL Link	0	0
Num of MEDIA	0~1	1
Num of PANEL KEY	0~8	6
Num of USB Port	0~2	2
MFT Offset	50/62.5	62.5
Select LCD/PDP	LCD/PDP	LCD
HDMI/DVI SEL	1~4	1
Indicator Led	ON/OFF	On
Wall Mount	ON/OFF	Off
Chelsea HV Flip	ON/OFF	On
Num Of Display	1~2	2
HDMI AV MUTE TIME	0~100	40
DVI/HDMI SOUND	Auto/DVI	Auto
HDMI HOT PLUG	Disable/Enable	Disable
HOTPLUG SWITCHING	Disable/Boot/Source	Boot
HOT PLUG OFF HOLD TIME	0~2000	1200ms
HDMI FLT CNT SIG	0~1000	600ms
HDMI FLT CNT LOS	0~1000	3500ms
UNSTABLE BAN CNT	0~10000	
HDMI Err Cnt	0~10	5
HDMI ROBIN	ON/OFF	On
HDMI Callback	ON/OFF	Off
HDMI CTS Thld	0~15	8
HDMI CTS Cnt1	0~15	1
TMDS_EQ2_Boost	0~7	1
TMDS_EQ2_Gain	0~3	0
TMDS_PLL_Loop	0~3	3
TMDS_CPREG_BLEED	0~1	1
HDMI EQ	AUTO/Low/Middle/High/Strong	AUTO
HDMI Switch	SIL9287/TMDS461	SIL9287
TTX Group Delay	ON/OFF	Off
DVI SET TIME	0~1000	300ms

Test Pattern

Item	Range	Data
FBE Pattern Sel	0~30	0
FRC PATT_BeforeDDR	0~9	0
FRC PATT_AfterDDR	0~8	0
LOGIC Pattern Sel	-	-

■ Advanced

FBE

Item	Range	Data
BM_slope1	0~255	19
BM_slope2	0~255	36
BM_slope3	0~255	56
BM_slope4	0~255	75
BM_start	0~255	68
BM_start_max	0~255	110
Lfunc_basis	0~255	70
Hfunc_basis	0~255	80
Mean-Offset1	0~255	30
Mean-Offset2	0~255	235
Mean-Slope	0~255	112
ACR-Offset	0~255	10
ACR-th1	0~255	10
ACR-th2	0~255	110
Skin-Enable	ON/OFF	On
Skin-UV	0~255	133
FBE Sub color	0~255	150
M-Skin-UV	-	-
M-Sub Color	-	-

WB Movie

Item	Range	Data
W/B MOVIE ON/OFF	On/Off	On
MODE	Movie/Dynamic	Dynamic
Color Tone	Cool/Normal/Warm1/Warm2/Warm3	-
MSub Brightness	0~255	-
MSub Contrast	0~255	-
N_Rgain	-512~511	-
N_Bgain	-512~511	-
N_Roffset	-512~511	-
N_Boffset	-512~511	-
W1_Rgain	-512~511	-
W1_Bgain	-512~511	-
W1_Roffset	-512~511	-
W1_Boffset	-512~511	-
W2_Rgain	-512~511	-
W2_Bgain	-512~511	-
W2_Roffset	-512~511	-
W2_Boffset	-512~511	-
W3_Rgain	-512~511	-
W3_Bgain	-512~511	-
W3_Roffset	-512~511	-
W3_Boffset	-512~511	-
Movie Contrast	0~100	-
Movie Bright	0~100	-
Movie Color	0~100	-
Movie Sharpness	0~100	-
Movie Tint	-50~50	-
Movie Backlight	0~10	-
Movie Gamma	“Off/0.85/0.88/0.90/0.93/0.95/0.98/M1/M2/M3/M4”	-
M_Sub_Gamma	-3~3	-

EPA Standard

Item	Range	Data	Value
Standard Contrast	0	100	95
Standard Brightness	0	100	45
Standard Sharpness	0	100	50
Standard Color	0	100	50
Standard Tint	-50	50	0
Standard Backlight	0	10	7

CH_VDEC

Item	Range	Data
AGC_mode	0~1	1
Gain_VCR	0~1	0
Y_Gain_Man	0~8191	880
Saturation	0~255	128
Hue	0~255	0
Y_Shape_sel	0~63	13
Y_Shape_SCM	0~63	29
C_Shape_sel	0~31	4
C_Shape_SCM	0~31	4
lf_iir	0~1	0
lf_filt_sel	0~31	6
LTI_en	On/Off	Off
LTI_level	0~127	100
CTI_en	On/Off	Off
SCM_STI_EN	On/Off	Off
CTI_level	0~63	15
ST_Beg_NTSC	0~127	0
VS_Slice_Level	0~7	4
HS_Slice_Level	0~15	5
FB_Delay_adj	0~7	0
RGB_Delay_adj	0~7	0
h_pk_gain	0~15	0
v_pk_gain	0~15	0
h_pk_band	0~3	0
2d_pk_gain	0~15	0
2d_pk_band	0~7	0
slice_mod_fine	0~127	0
scm_fdet_lvl	0~255	220
bl_range	0~7	5

YC_Delay

Name	Range	Value
V_Delay_adj	0~7	0
U_Delay_adj	0~7	0

AR_ADC

Item	Range	Data
RED_CUTOFF	-128~127	0
GREEN_CUTOFF	-128~127	0
BLUE_CUTOFF	-128~127	0
RED GAIN	-128~127	0
GREEN GAIN	-128~127	0
BLUE GAIN	-128~127	0
PHASE	0~31	0
SOG_BW	0~7	0
SSC_PC	0~31	0
RGB_DLY	0~3	0

CH_DP

Item	Range	Data
MNR	On/Off	On
DCR	On/Off	On
SD2HD_DCR	On/Off	On
SD2HD_DE	On/Off	On
SD2HD_SCL	On/Off	On
SD2HD_LTI	On/Off	On
SD2HD_NARS	0~3	2
SD2HD_DUR	0~1023	50
SD2HD_Metric	0~255	66
Coring_ON_OFF	On/Off	On
SD_CSC	5000~10000	7094
HD_CSC	5000~10000	7438
M_SD_CSC	5000~10000	7094
M_HD_CSC	5000~10000	7438
PC_SD_CSC	5000~10000	7094
MJC_DBG	0~8	0
MB_STEPS	0~2047	100
LIMIT_MV_STEP	0~2047	100
GLOBAL_FALLBACK	0~255	36
LOCAL_FALLBACK	0~255	2

NR

Item	Range	Data
OFF_Y	0~255	20
OFF_C	0~63	4
OFF_Noise_bias	0~31	4
OFF_YMAX	0~255	128
OFF_FADER	0~255	180
LOW_Y	0~255	70
LOW_C	0~63	16
LOW_Noise_bias	0~31	4
LOW_YMAX	0~255	140
LOW_FADER	0~255	150
MED_Y	0~255	80
MED_C	0~63	18
MED_Noise_bias	0~31	4
MED_YMAX	0~255	150
MED_FADER	0~255	152
HIGH_Y	0~255	90
HIGH_C	0~63	18
HIGH_Noise_bias	0~31	4
HIGH_YMAX	0~255	160
HIGH_FADER	0~255	150

SHARPNESS

Item	Range	Data
Pre_GainH1	0~255	12
Pre_GainH2	0~255	25
Pre_GainH3	0~255	20
Post_GainH1	0~255	20
Post_GainH2	0~255	40
Post_GainH3	0~255	30
Post_GainV1	0~255	30
Post_GainV2	0~255	50
Post_GainV3	0~255	30
CTI_Gain	0~15	15
Pre_LTIH	0~63	8
SD_TH	0~255	100
HD_TH	0~255	132
NORMAL_LTIH	0~63	8
NORMAL_LTIV	0~63	8
SD_LTIH	0~63	16
SD_LTIV	0~63	24
PRE_CORING	0~255	2
POST_CORING_H	0~255	2
POST_CORING_V	0~255	2
Pre_TOT	0~63	32
Post_TOT	0~63	32
SP Sub Color	0~80	64

SHARPNESS_LNA

Item	Range	Data
S1_Pre_GainH1	0~255	4
S1_Pre_GainH2	0~255	8
S1_Pre_GainH3	0~255	5
S1_Post_GainH1	0~255	4
S1_Post_GainH2	0~255	8
S1_Post_GainH3	0~255	5
S1_Post_GainV1	0~255	20
S1_Post_GainV2	0~255	20
S1_Post_GainV3	0~255	10
S2_Pre_GainH1	0~255	2
S2_Pre_GainH2	0~255	5
S2_Pre_GainH3	0~255	3
S2_Post_GainH1	0~255	2
S2_Post_GainH2	0~255	5
S2_Post_GainH3	0~255	3
S2_Post_GainV1	0~255	10
S2_Post_GainV2	0~255	20
S2_Post_GainV3	0~255	5
S3_Pre_GainH1	0~255	1
S3_Pre_GainH2	0~255	2
S3_Pre_GainH3	0~255	1
S3_Post_GainH1	0~255	1
S3_Post_GainH2	0~255	2
S3_Post_GainH3	0~255	1
S3_Post_GainV1	0~255	5
S3_Post_GainV2	0~255	10
S3_Post_GainV3	0~255	5

CE DIMMING

Item	Range	Data
Contrast Dimming	On/Off	Off
Dimming in Standard	On/Off	On
Dimming in Movie	On/Off	On

LNA_PLUS

Item	Range	Data
Synctip_Noise	0~4095	0
dB01_th	0~1023	9
dB12_th	0~1023	48
dB23_th	0~1023	73
dB34_th	0~1023	185
dB45_th	0~1023	318
LNA_Plus_Yfilter	0~5	3

Tuner Status

Item	Range	Data
SNR	-	-
BER	-	-
Singal 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	-	-

■ FRC

FRCQ Option

Item	Range	Data
SSC_OnOff	On/Off	On
SSC_Width	0~192	96
SSC_Freq	0~240	240
FMD_Demo	0~1	0
CSB Vertical	On/Off	On
CSB Horizontal	On/Off	On
X_VStabStatVid	0~7	7
X_VStabStatF	0~7	0
X_VStabCorF	0~31	8
X_VStabSensF	0~127	48
X_HaloSizStatVid	0~7	7
X_HaloSizStatF	0~7	0
X_HaloSizCorF	0~31	12
X_HaloSizSensF	0~127	32
Film_Low_SD	0~31	31
Film_Medium_SD	0~31	6
Film_High_SD	0~31	0
Film_Low_HD	0~31	31
Film_Medium_HD	0~31	6
Film_High_HD	0~31	0
Video_Judder_Low	0~31	10
Video_Judder_Med	0~31	5
Video_Judder_High	0~31	0
Hangup Detection	On/Off	On
Q LVDS Sequence	0-1-2-3/0-2-1-3/1-3-0-2/3-2-1-0	0-1-2-3
Q LVDS Format	VESA/JEIDA	JEIDA
Q LVDS bit width	8bit/10bit	10bit
PC_Mode_OnOff	On/Off	Off

FRCQ Fallback

Item	Range	Data
SensD_Film_Low	0~31	31
SensD_Film_Medium	0~31	31
SensD_Film_High	0~31	31
Rel_Start_Film	0~31	20
Rel_Slope_Film	0~31	3
H_Len_Start_Film	0~127	127
H_Len_Slope_Film	0~255	1
V_Len_Start_Film	0~40	40
V_Len_Slope_Film	0~255	1
SensD_Video	0~31	0
Rel_Start_Video	0~31	20
Rel_Slope_Video	0~31	1
H_Len_Start_Video	0~127	127
H_Len_Slope_Video	0~255	1
V_Len_Start_Video	0~40	40
V_Len_Slope_Video	0~255	1

PQ Others

Item	Range	Data
7.5 IRE NTSC	-	-
7.5 IRE OFFSET	-	-
HDMI 48Hz Enable	On/Off	Off
HDMI Black Level	Normal/Low	Normal

EEPROM RESET

Item	Range	Data
EER RESET	-	-
NVR All Clear	On/Off	Off

Expert

TC905x7

- TC90507

Item	Range	Data
FFT Size_0	-	8K(mode3)
Guard Interval_0	-	1/8
Freq. Offset_0	-	-2.97
SNR_0	-	30.45
IF AGC_0	-	59
TMCC Lock_0	-	Unlock
TS Packet_0	-	Error
Master Lock_0	-	Lock
A_Modulation_0	-	QP
A_Code Rate_0	-	2/3
A_Timer InterLeave_0	-	4
A_Segments Num_0	-	1
A_BER_0	-	0.0000000
B_Modulation_0	-	64QAM
B_Code Rate_0	-	3/4
B_Timer InterLeave_0	-	2
B_Segments Num_0	-	12
B_BER_0	-	0.0000000
C_Modulation_0	-	No Layer
C_Code Rate_0	-	No Layer
C_Timer InterLeave_0	-	No Layer
C_Segments Num_0	-	No Layer
C_BER_0	-	No Layer

- TC90517

Item	Range	Data
FFT Size_1	-	8K(mode3)
Guard Interval_1	-	1/8
Freq. Offset_1	-	-2.97
SNR_1	-	29.74
IF AGC_1	-	59
TMCC Lock_1	-	Unlock
TS Packet_1	-	Error
Master Lock_1	-	Lock
A_Modulation_1	-	QP
A_Code Rate_1	-	2/3
A_Timer InterLeave_1	-	4
A_Segments Num_1	-	1
A_BER_1	-	0.0000000
B_Modulation_1	-	64QAM
B_Code Rate_1	-	3/4
B_Timer InterLeave_1	-	2
B_Segments Num_1	-	12
B_BER_1	-	0.0000000
C_Modulation_1	-	No Layer
C_Code Rate_1	-	No Layer
C_Timer InterLeave_1	-	No Layer
C_Segments Num_1	-	No Layer
C_BER_1	-	No Layer

DDR Margin

Item	Range	Data
A CTRL_OFFSET_0_3	-	0x202
A CTRL_OFFSET_D	-	0x41
B CTRL_OFFSET_0_3	-	0x4141
B CTRL_OFFSET_D	-	0x42

4-4. White Balance - Calibration

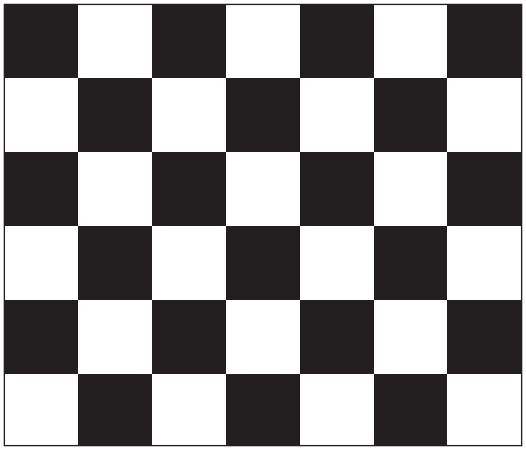
4-4-1 White Balance -Calibration

1. Calibration → AV Calibration
Comp Calibration
PC Calibration
HDMI Calibration

4-4-2 Service Adjustment - You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

Adjust spec.
1. Source : HDMI
2. Setting Mode : 1280*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_#3)	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 “Calibration” 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 “Calibration” menu
5) Select the “DTV Calibration” menu.
6) In “DTV (Component) 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 “Calibration” 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 “Calibration” 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 White Balance - 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 : Time #6 720P, Pattern #24 Chessboard Calibration → Manual adjustment #92 pattern (720p)
COMP: Time #6 720P, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (720p)
CVBS: Time #3 NTSC-J, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (NTSC)
PC: Time #21 1024*768, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (NTSC)

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

		CA-210			
		x	y	Y(L)	T(K) + MPCD
CVBS (NTSC)	H/L	272	278	- (Sub_CT:133)	12,000 (+/- 0)
	L/L	272	278	19.7cd/m^2 (5.8 Ft - Sub_BR:128)	12,000 (+/- 0)
COMP (720P)	H/L	272	278	- (Sub_CT:133)	12,000 (+/- 0)
	L/L	272	278	19.7cd/m^2 (3.5 Ft - Sub_BR:128)	12,000 (+/- 0)
HDMI (720P)	H/L	272	278	- (Sub_CT:133)	12,000 (+/- 0)
	L/L	272	278	19.7cd/m^2 (5.8 Ft - Sub_BR:128)	12,000 (+/- 0)

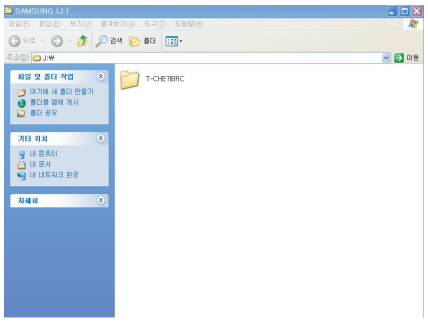
- Adjustment Specification
  White Balance : High light (±3), Low light (±5)
  Luminance : High light (±0.1Ft/L), Low light (±0.1Ft/L)

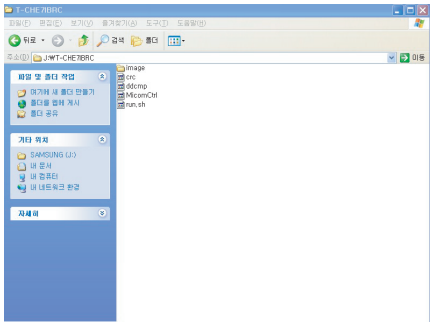
4-6. Servicing Information

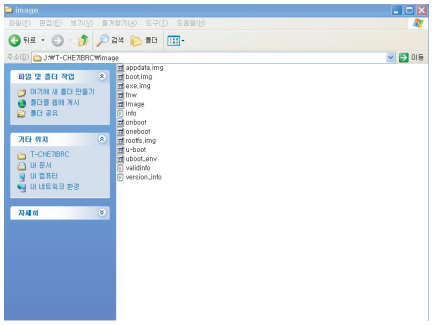
4-6-1 USB Download Method

Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (7267864) 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 located on the back of your TV.

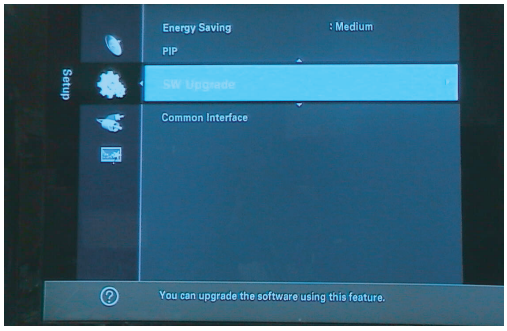
1. Insert a USB drive containing the firmware upgrade into the wiselink port on the side of the TV.
   (USB drive make folder "T-CHE7IBRC" and this folder download micom program.)

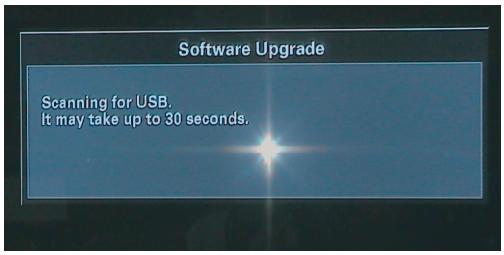


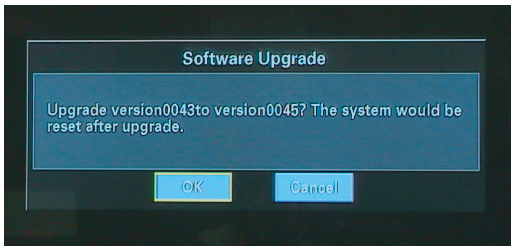


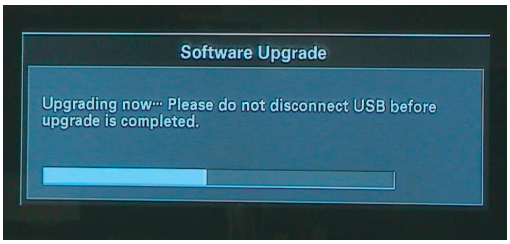


2. Insert USB drive.
   Menu > Support > Software Upgrade then press the ENTER button.
   The message “Scanning for USB. It may take up to 30 seconds.” Please be careful to not disconnect the power or remove the USB drive while upgrade is being applied.
   The message “Upgrade version XXXX to version XXXX ? The system would be reset after upgrade.”
   Press the left, right button to select “OK”.
   The TV will shut off after completing the firmware upgrade.
   Please check the firmware version after the upgrade is complete.

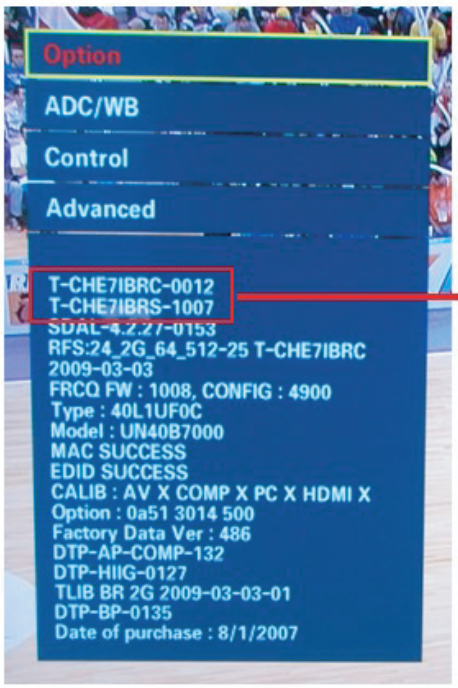








* How to check Program Version
1. To enter Factory mode
2. Check the micom version
   T-CHE7IBRC-xxxx

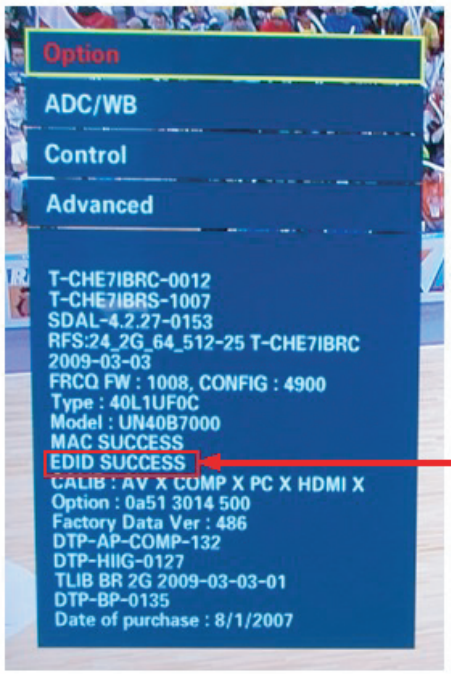


T-CHE7IBRC-0012 : Main Micom S/W version
T-CHE7IBRS-1007 : Sub Micom S/W version

* In case of B6000, T-CHE5IBRC xxxx : Main ver.
T-CHE5IBRS xxxx : Sub ver.

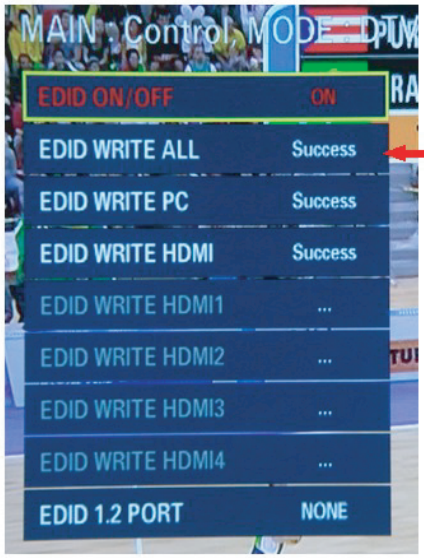
4-7. EDID Self-Write Method

1. OSD in case of entering Factory : It's displayed to check if Self write runs normally.



In case of Failure occurs!
EDID : Fail

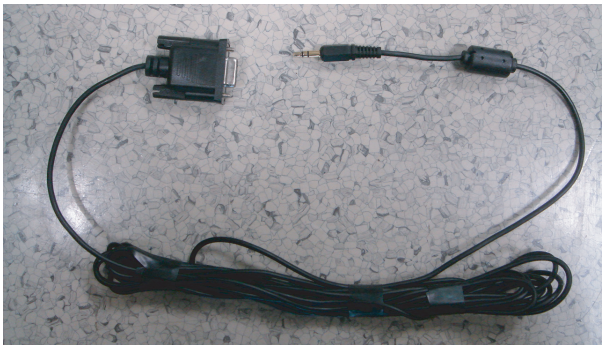
2. How to EDID Self-Write
   Enter Factory Mode -> Control –> EDID –> EDID Write On/Off Press right button of Remocon –> Choose On
   And then All EDID Write Press right button of Remocon



It's displayed if self – write run normally

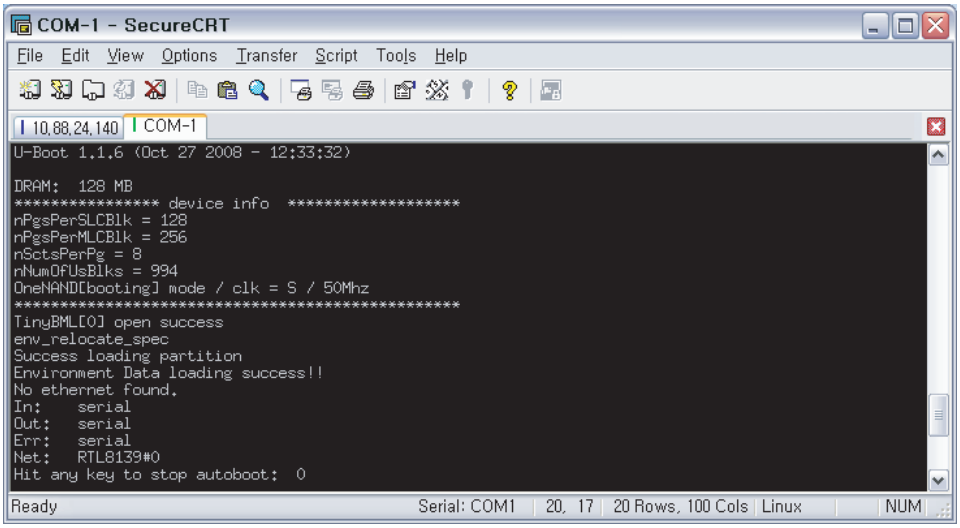
In case of Failure occurs!
EDID:Fail

4-8. S/W Update method (JIG)

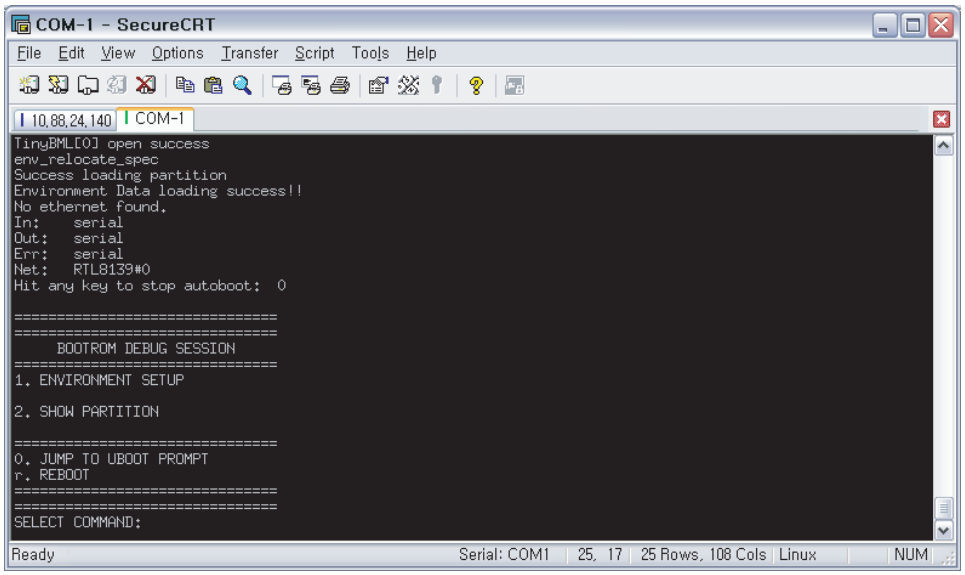


“[Serial JIG]”

1. Connect Power & Uart cable to board and Turn on the board.
2. Press [shift + ~] to enter uboot prompt.

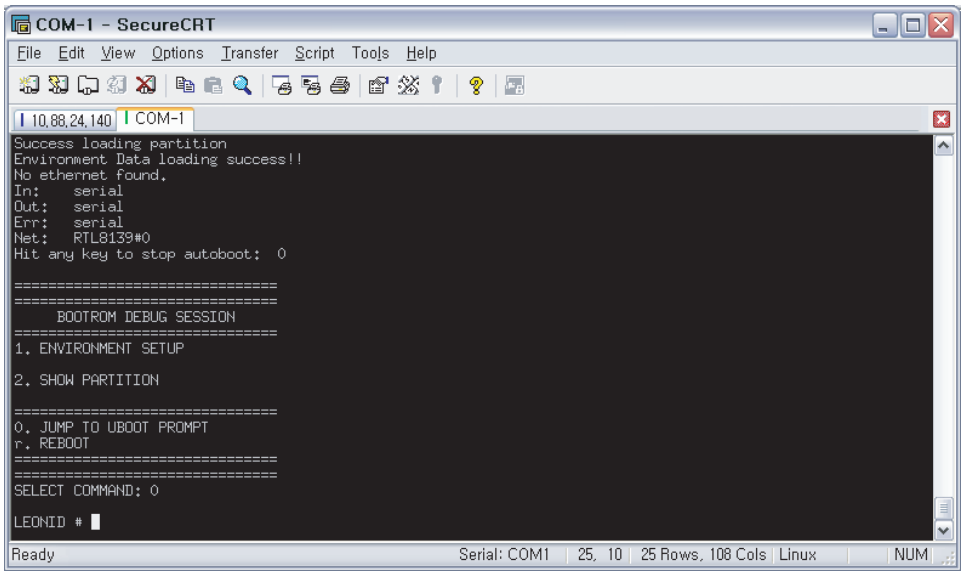


3. Press any key to enter BOOTROM DEBUG SESSION before timeout.

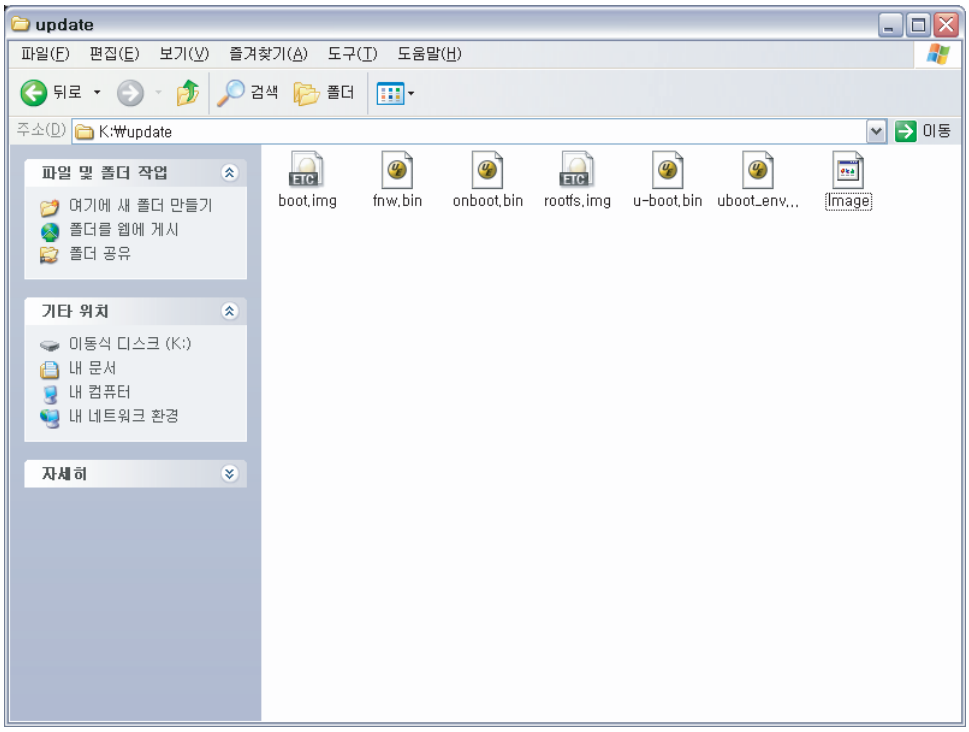


4. Make sure watchdog off.
   If watchdog status is on then board will reboot after 15secs

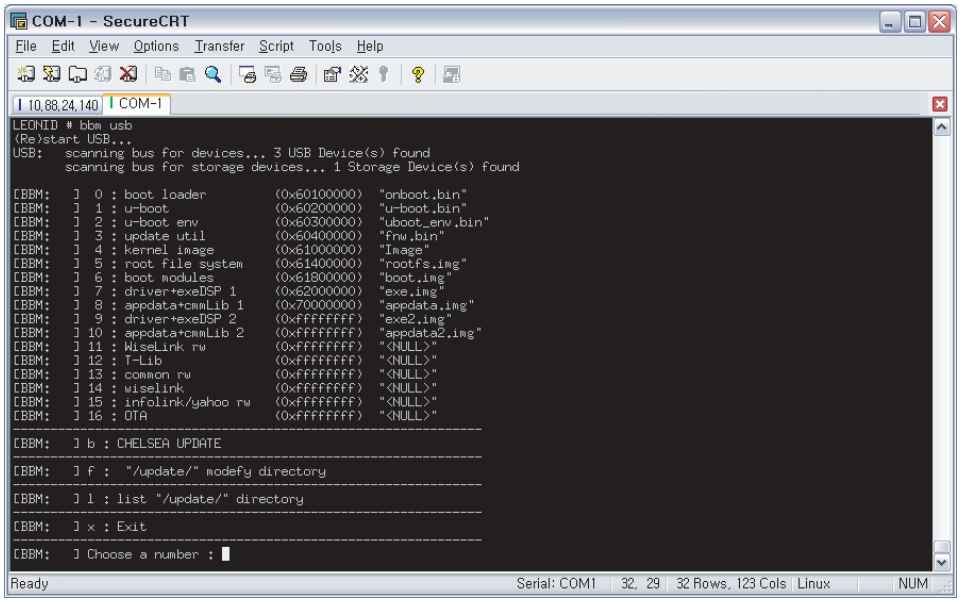
5. Press “0”.



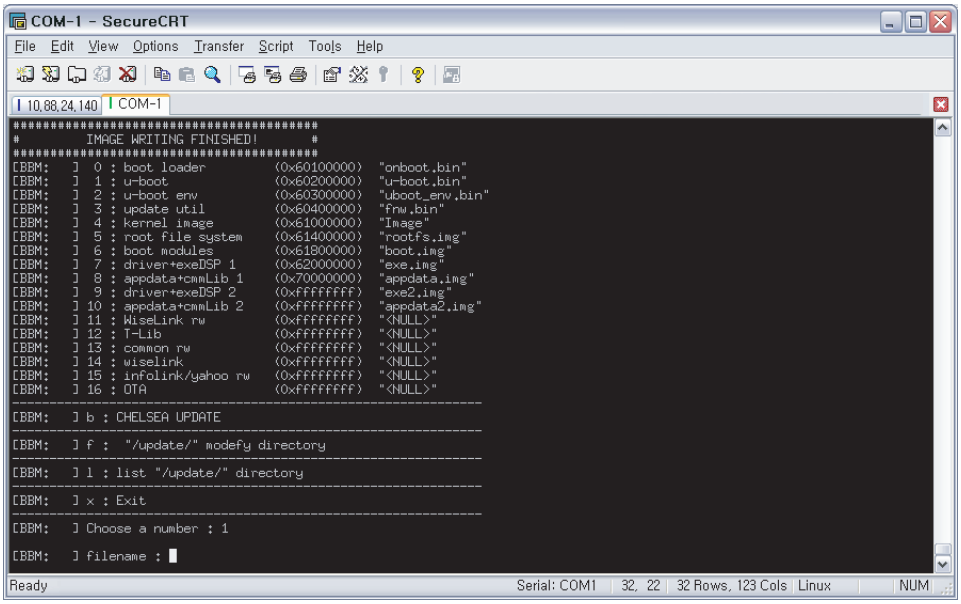
6. Save latest BSP images to /update folder in usb memory.



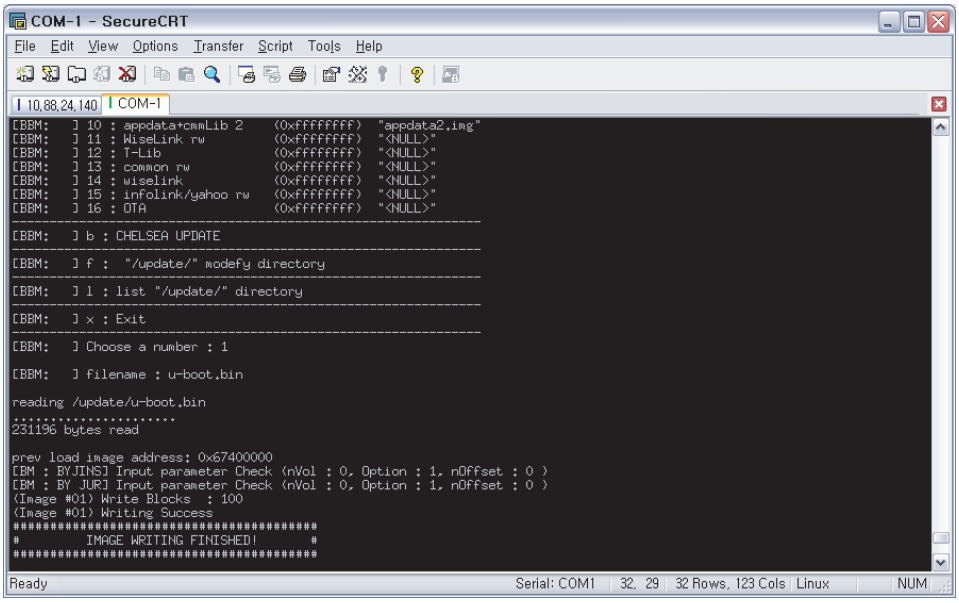
7. Enter “bbm usb” after connecting usb memory.



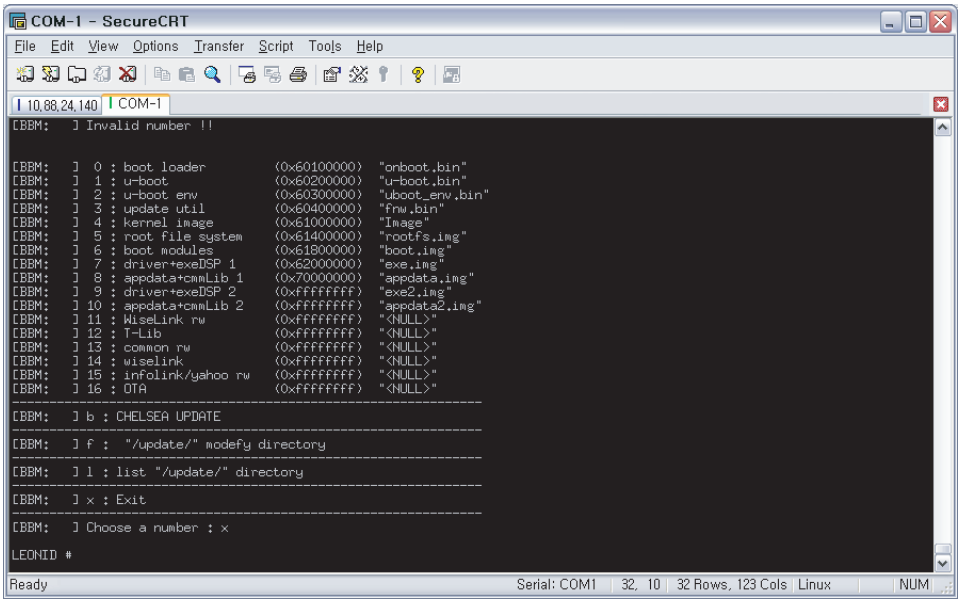
8. Press “1”.



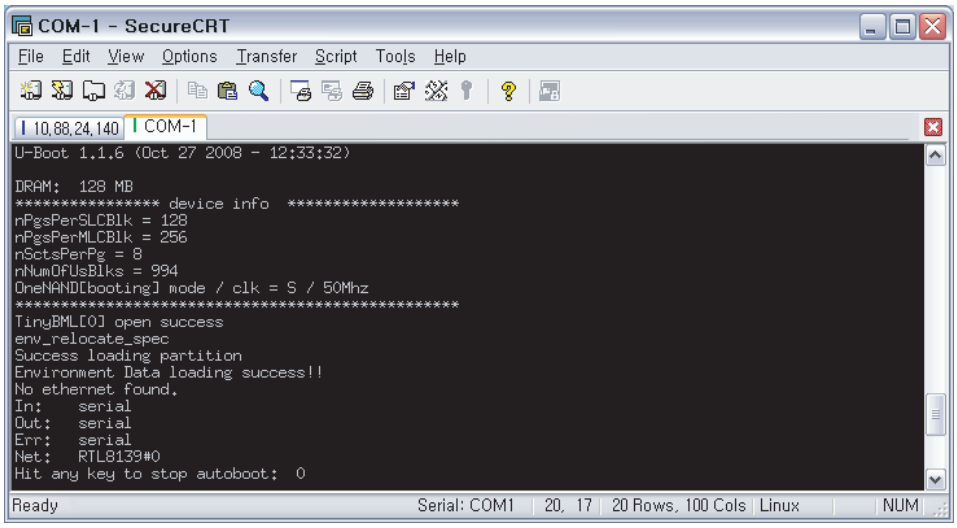
9. Enter “u-boot.bin”.



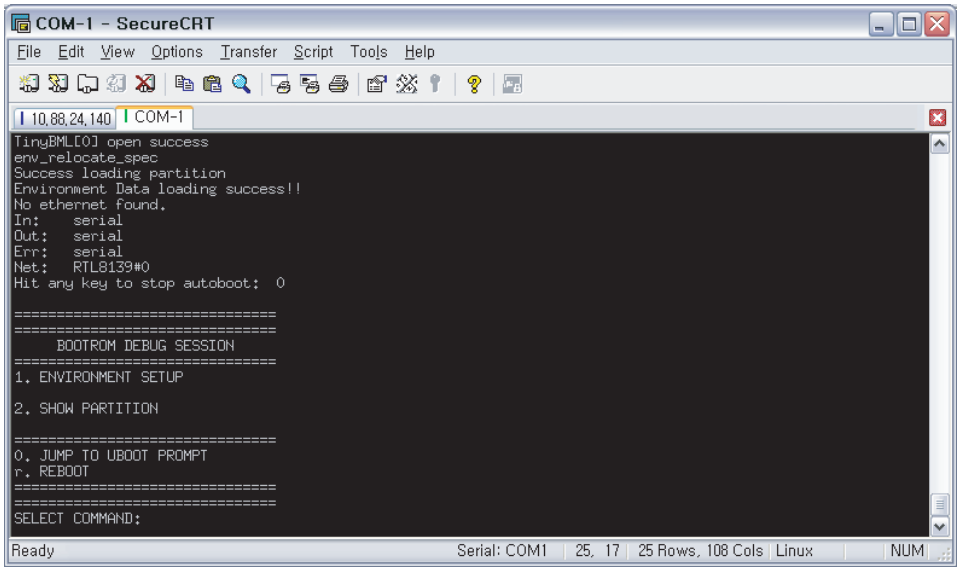
10. Press “x” to return prompt menu.



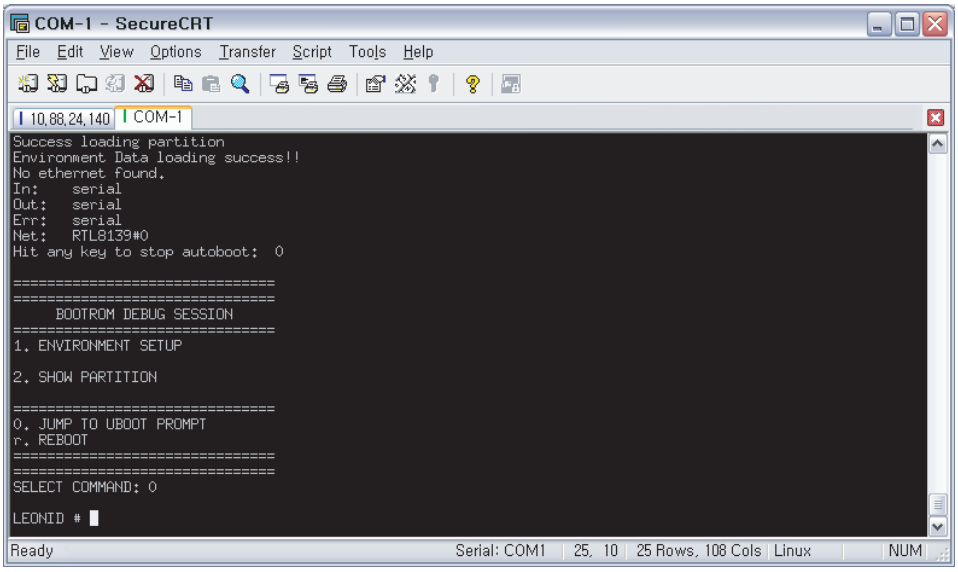
11. Press [shift + ~] to enter uboot prompt again.



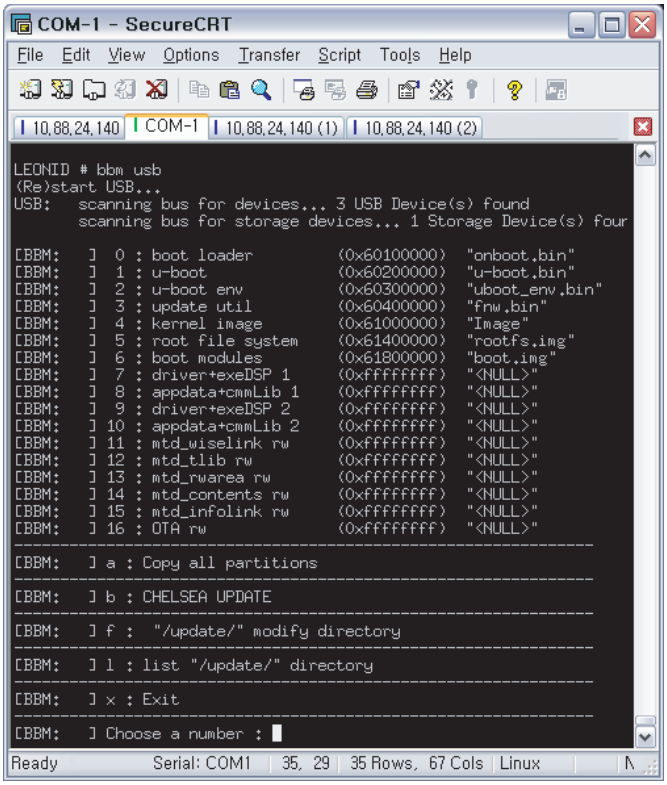
12. Press any key to enter BOOTROM DEBUG SESSION before timeout.



13. Press “0”.

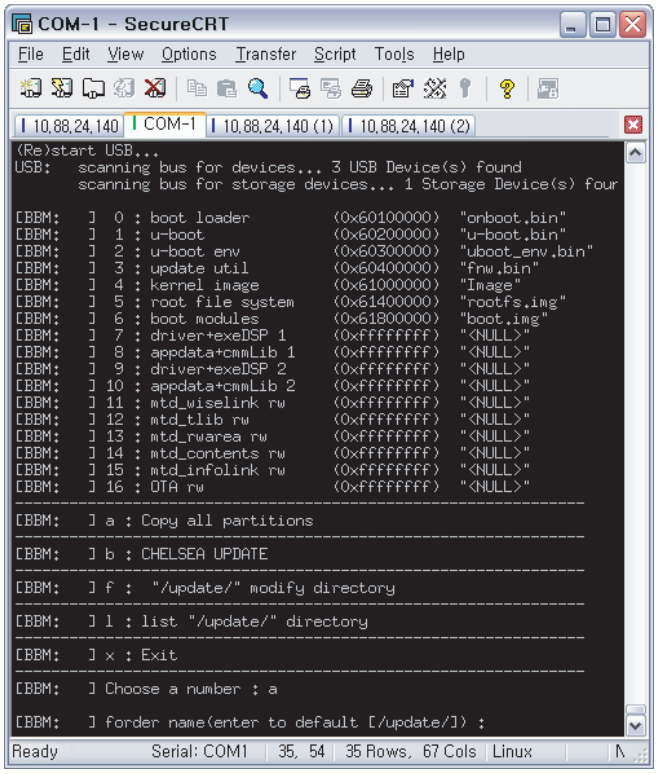


14. Enter “bbm usb”.

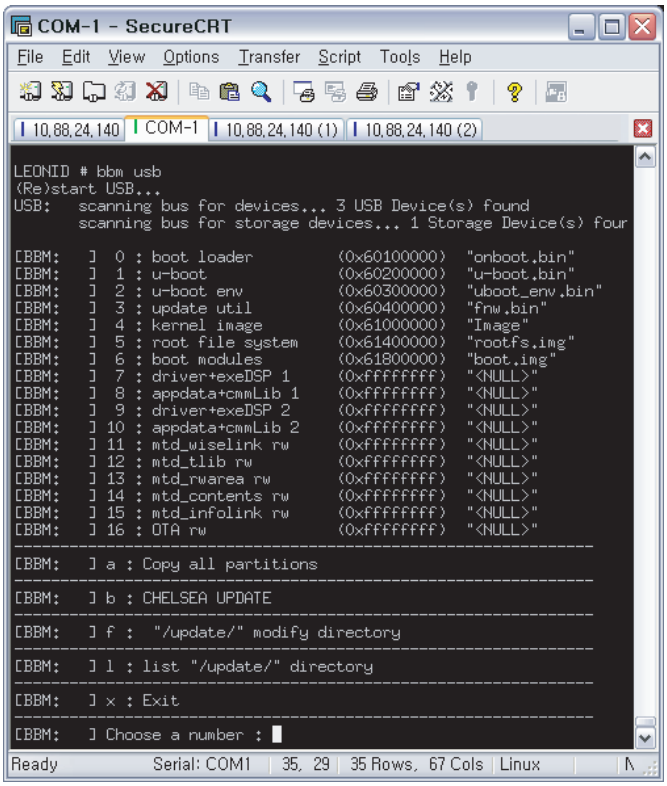


* If there is not “a” option, Image is old version or not updated. Then try again from No.1.

15. Enter “a”.

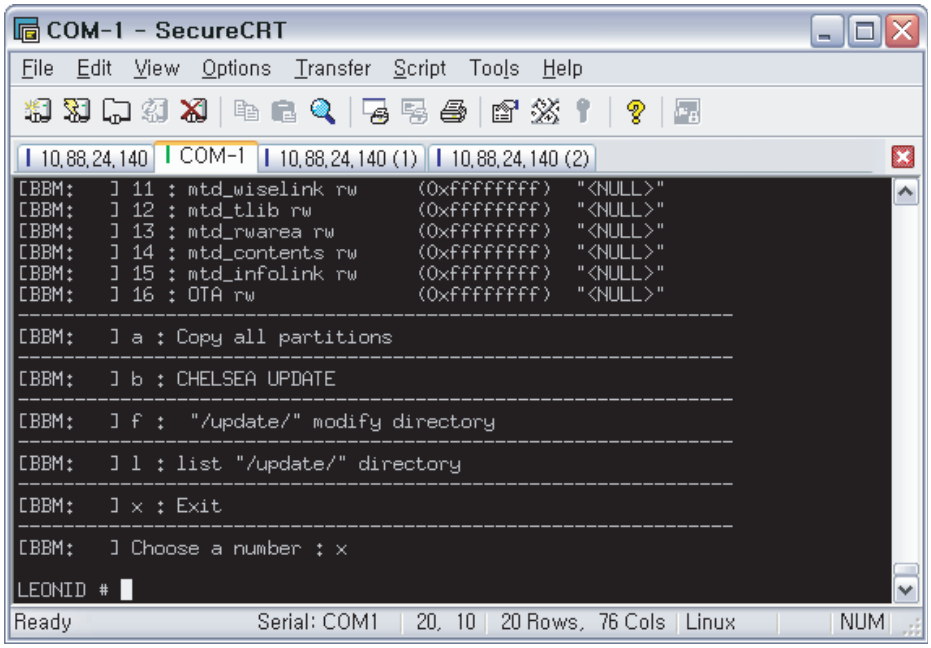


16. Enter directory path (if “/update/”is right, just input Enter key).



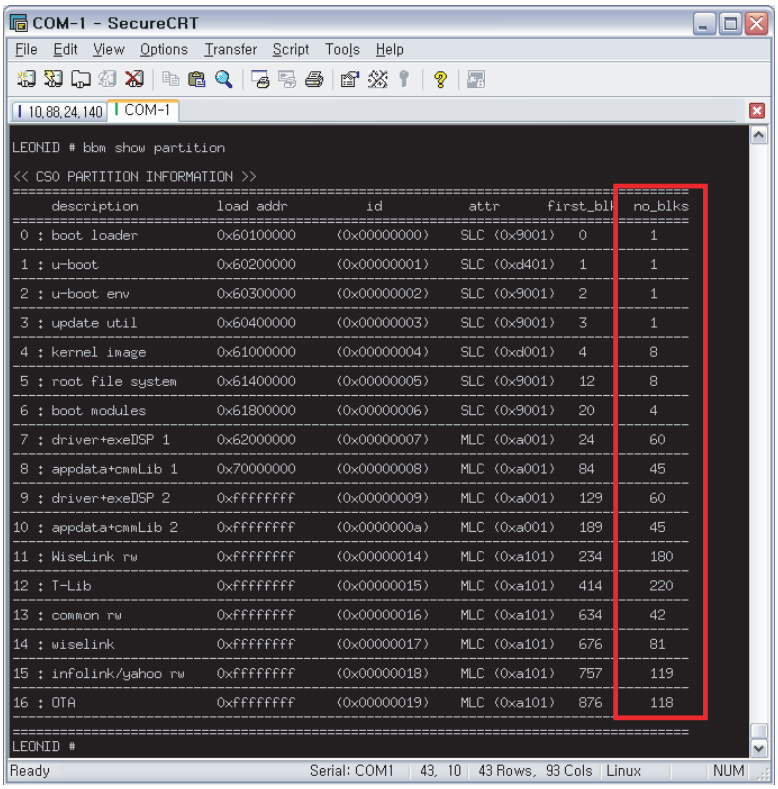
It takes about 1 minute

17. Press “x”.



18. Enter “bbm show partition”

- Check partition status same as red box on picture below
- If different, go back to first phase. Do it all again!!!



** After this, if you want to update BSP image except for partition format
Then just press “b”instead of 8 ~ 15

19. Turn off master power of TV and turn on and reset after prompt is shown.

20. Mount USB memory with next command.

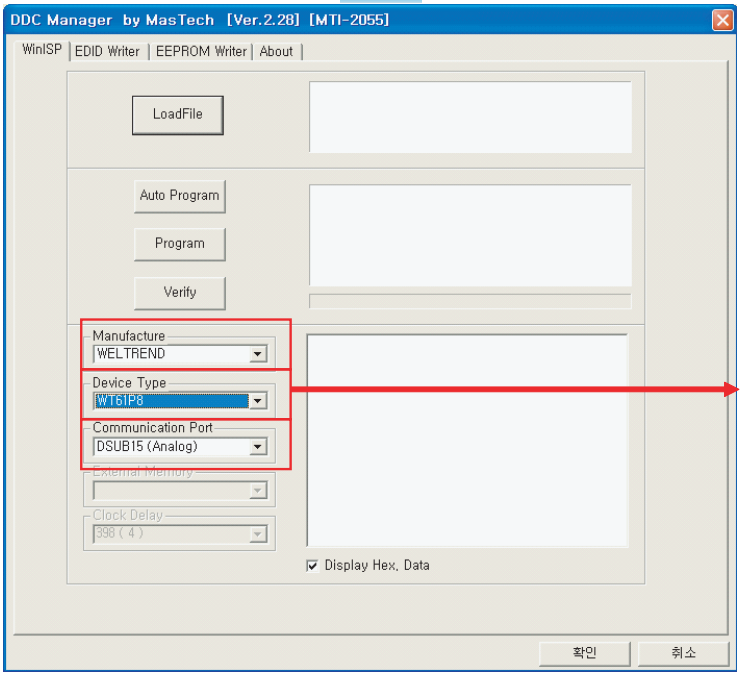
```
# cd
# ls
Java          mnt           mtd_contents  mtd_pers      proc
bin           mtd_acap      mtd_down      mtd_ram       sbin
dev           mtd_appdata   mtd_drv       mtd_rwarea    sys
dtv           mtd_boot      mtd_epg       mtd_swu       usr

etc           mtd_chmap     mtd_exe       mtd_tlib
lib           mtd_cmmlib    mtd_factory   mtd_wiselink
#start_usb.sh
# cd dtv
# ls
usb
# cd usb
# ls
log  sda
# cd sda
# ls
Autorun.inf     T-CHL7DEUC      update
T-CHL5DEUC      photos.zip.exe
# cd update
# ls
Image             exe.img           oneboot.bin       uboot_env.bin
Image_serial      fnw.bin           rootfs.img        validinfo.txt
appdata.img       info.txt          serial_temp       version_info.txt
boot.img          onboot.bin        u-boot.bin
```

21. Write ‘exe.img and appdata.img’.

```
fsrrestore /dev/bml0/8 exe.img;
fsrrestore /dev/bml0/9 appdata.img;
fsrrestore /dev/bml0/10 exe.img;
fsrrestore /dev/bml0/11 appdata.img;
```

4-9. Sub Micom Update

▪ Win-DDC Set-Up



▪LED On, But can not be operated

by Remote Control

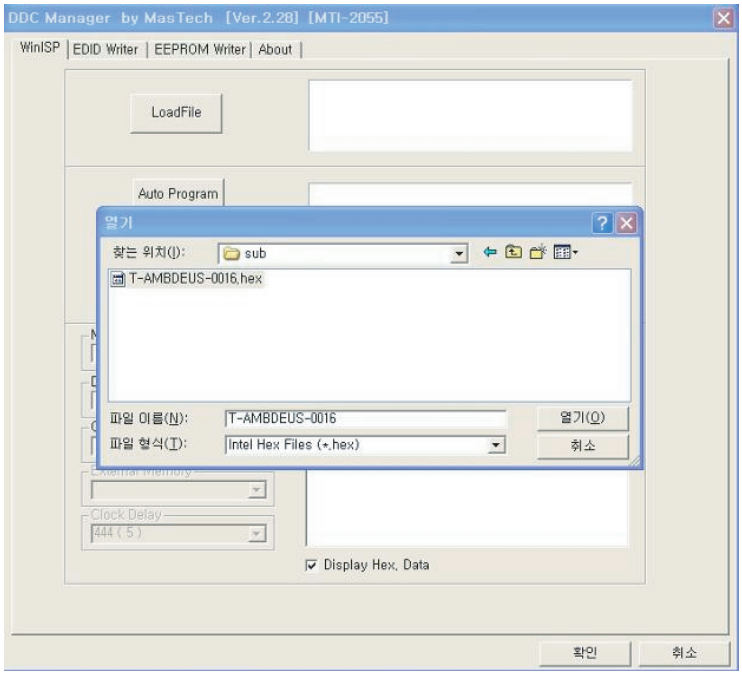
→ Update sub micom

▪**Manufacture:** **WELTREND**

▪**Device Type :** **WT61P8**

▪**Communication type**

: D-SUB15(Analog)

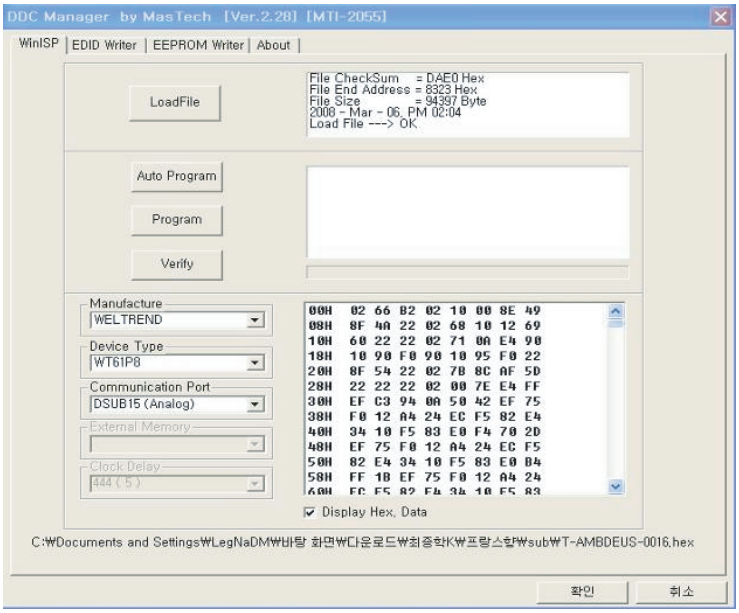


1-1.

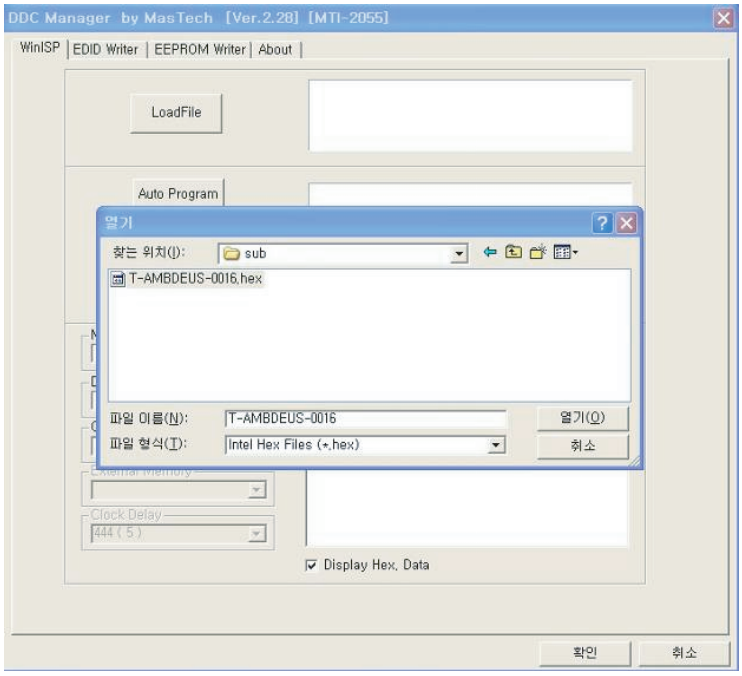
- Connect Sub-Micom Download JIG (DDC manager) and D-SUB JACK.

1-2.

- Click Load File
- Choose to update Sub-Micom file (For example) TP8_TT_EU_0015_N.hex



1-3. Click Auto Program to update
Sub-Micom S/W



1-4. If Programming and Verifying are OK,
S/W Updating is complete.

1-5.

- Remove Download JIG Cable Turn off
(=AC Power off) the Set (waiting a few seconds)
and turn on again.