3.3.2　Factory Menu

a.　Enter the Field Service mode

Use the IR and press the remote key "Vol-" to "0", press mute remote key, then press 9,7,3,5 remote key. Press right key to enter the sub-menu and press MENU key to return the main-menu.

b.　Factory Menu Definition

Factory ***********　　　　　　MT: V***			
System	Power Mode	Off/Remember	
Balance	Factory Key	On/Off	
TV Geo	Tuner AGC	12	
Nicam	Key Board Lock	Off/On	
Mono	LOGO	Off/Logo1/Logo2	
Sound	Pattern	0/1/2/3/4/5/6	0-Black(It's used when Blue Mute is off in "Other"); 1-Low light white; 2-Red; 3-High light white; 4-Green; 5-Blue; 6-Continuous play 0 to 5
Other	Back Light	254	
Info	Reset		

Power mode

Remember: Keep the lately Power on state; OFF: Standby after Power on

Factory key

Shortcut key: ON The "Blue" key is the factory menu key; OFF: disabled.

Key Board Lock

ON: the keypad board is locked; only the RCU is available; OFF: disabled.

LOGO

LOGO 1; LOGO 2; OFF It's the power ON LOGO.

Pattern

It is used design test.

Backlight

It is used for the adjustment of the LCD panel.

Reset

It is used for going back and default value.

Factory ***********　　　　　　MT: V***		
System	Source	SCART/CMP/HDMI/VGA
Balance	White R	128
TV Geo	White G	125
Nicam	White B	121
Mono	Gray R	128
Sound	Gray G	129
Other	Gray B	128
Info	RGB　Calibrate	

Source

It is the source of white balance adjusts that is SCART, CMP, HDMI, and VGA.

White R/G/B

It is used for the adjustment of white balance.

Gray R/G/B

It is used for the adjustment of gray balance.

RGB Calibrate

It is used for the software adjustment in VGA mode.

Factory　***********	MT: V***	
System	**Color system**	**PAL**
Balance	**H POS**	**63**
TV Geo	**H Size**	**44**
Nicam	**V POS**	**88**
Mono	**V Size**	**68**
Sound		
Other		
Info		

H/V POS

It is used for the position of the horizontal and Vertical.

H/V Size

It is used for the size of the horizontal and Vertical.

Factory　***********	MT: V***		
System	**VOL_0**	**0**	
Balance	**VOL_10**	**1**	
TV Geo	**VOL_50**	**11**	
Nicam	**VOL_90**	**107**	
Mono	**VOL_100**	**254**	
Sound	**TV Pre**	**38**	**TV sound plus value**
Other	**AV Pre**	**50**	**AV sound plus value**
Info	**FW Freq**	**10**	**Default. No need Adjusting.**

VOL_0/10/50/90/100

It is used for adjusting of volume curve.

TV/AV Pre

It is used for adjusting of level of volume.

Factory	**********		MT: V***	
System		Blue Mute	ON	Switch of "BLUE" screen
Balance		CTI	Middle	Default. No need Adjusting.
TV Geo		Flash Tone	ON	Default. Must be "OFF" when adjusting white balance.
Nicam	Adaptive Luma Control		ON	Default. Must be "OFF" when adjusting white balance.
Mono	Deinterlace Mode		Automatic	Default. No need Adjusting.
Sound	White Peak Limitator		ON	Default. No need Adjusting.
Other	MDDi Edge Preserving		High	Default. No need Adjusting.
Info		TTX Contrast	10	Default. No need Adjusting.
		Black Level	2	Default. No need Adjusting.
		Seamless	OFF	Default. No need Adjusting.

It is only used for design, please don't change.

Factory	**********	MT: V***	
System		Project	LCD32MT02Y1
Balance		Version	***
TV Geo		Date	***
Nicam			
Mono			
Sound			
Other			
Info			

It is the information of the product model, the software version and the date.

"Nicam" and "Mono" is default, don't adjust.

Factory	**********		MT: V***	
System		Correst Thres	5	Default. No need Adjusting.
Balance		Sync Loop	50	Default. No need Adjusting.
TV Geo		Error Thre	6	Default. No need Adjusting.
Nicam		Parity Error Thres	47	Default. No need Adjusting.
Mono		Every Num Frames	32	Default. No need Adjusting.
Sound				
Other				
Info				

Factory	**********		MT: V***	
System	High DEVI	OFF	
Balance	AM Mute	ON	
TV Geo	AM Mute high	69	
Nicam	AM Mute low	53	
Mono	Carrier shift	OFF	
Sound	Saturation Mute	OFF	
Other	FM Mute	ON	
Info	FM Mute High	24	
	FM Mute Low	19	

3.3.3　Factory Alignment Process

Adjust the ADC channel of signal source

1) Set "OFF" on "Flesh Tone" and "Adaptive Luma Control" in "Other" of the service menu; Set "OFF" on "Black expand" in "PICTURE" of customer menu.

2) YUV(YPbPr), input SDTV-576i@50Hz, 100% saturation, 8-class color bar signal, then go into "Balance " page of service menu, set "CMP" of "Source", choose "RGB Calibrate", press "Enter" key on remote control, the machine will adjust the ADC channel on CMP situation, until show "OK".
(Referenced instrument: Pattern37, Timing33 of 2327, or Timing79, Pattern85 of BSG360A, or relevant output of 54200)

3) VGA, input 1024×768/60HZ, color temp signal, repeat the process before.

White Balance Adjustment (Adjusting VGA/TV/CMP, HDMI no need)

Set "OFF" on "Flesh Tone", "Adaptive Luma Control" and "White Peak Limitator" in "Other" of the service menu; Set "OFF" on "Black expand" in "PICTURE" of customer menu.

i.　White balance and color temperature adjusting on VGA state.

1) On VGA state, go into "balance" of service menu.

2) Input 640×480 8-class gray signal, test color coordinate with a color analyzer.
A. On the 3rd gray of the bright side. Then adjust White R and White G and White B until the data on the analyzer become x=282±10, y=293±10, also bright value ＞220 nit.
B. On the 3rd gray of the dark side. Then adjust Gray R and Gray G and Gray B until the data on the analyzer become x=282±10, y=293±10, also bright value ＜25 nit.

ii.　White balance and color temperature adjusting on TV/AV state.

1) On AV state, go into "balance" of service menu.

2) Input 8-class gray signal, test color coordinate with a color analyzer
A. On the 3rd gray of the bright side. Then adjust White R and White G and White B until the data on the analyzer become x=282±10, y=293±10, also bright value ＞220 nit.
B. On the 3rd gray of the dark side. Then adjust Gray R and Gray G and Gray B until the data on the analyzer become x=282±10, y=293±10, also bright value ＜25 nit.
C. Iterative adjusting between bright and dark side, until A&B all meet request.

iii.   White balance and color temperature adjusting on CMP state.

1) On CMP state, go into "balance" of service menu.
2) Input 576i/50Hz 8-class gray signal, test color coordinate with a color analyzer
   A. On the 3rd gray of the bright side. Then adjust White R and White G and White B until the data on the analyzer become x=282±10, y=293±10, also bright value ＞220 nit.
   B. On the 3rd gray of the dark side. Then adjust Gray R and Gray G and Gray B until the data on the analyzer become x=282±10, y=293±10, also bright value ＜25 nit.
   C. Iterative adjusting between bright and dark side, until A&B all meet request.

Remarks: after ADC adjusting and white balance adjusting, "Flesh Tone" and "Adaptive Luma Control" of "Other" in service menu should be set "ON"; "Black expand" of "Picture" in customer menu should be set "ON".

3.4 Update the software

The software can be updated on board and also can be update through the VGA port, do not need to open the cabinet.

Please install the MT8202 driver and parallel driver first. Need to prepare a special cable.

I   First time download on board

1) Connect by cable (the tool and the cable) between the PC and the XPA5 on the board.
2) Supply 5V to the main board by JP12A or POWER on.
3) Open the MT8202 driver as below:
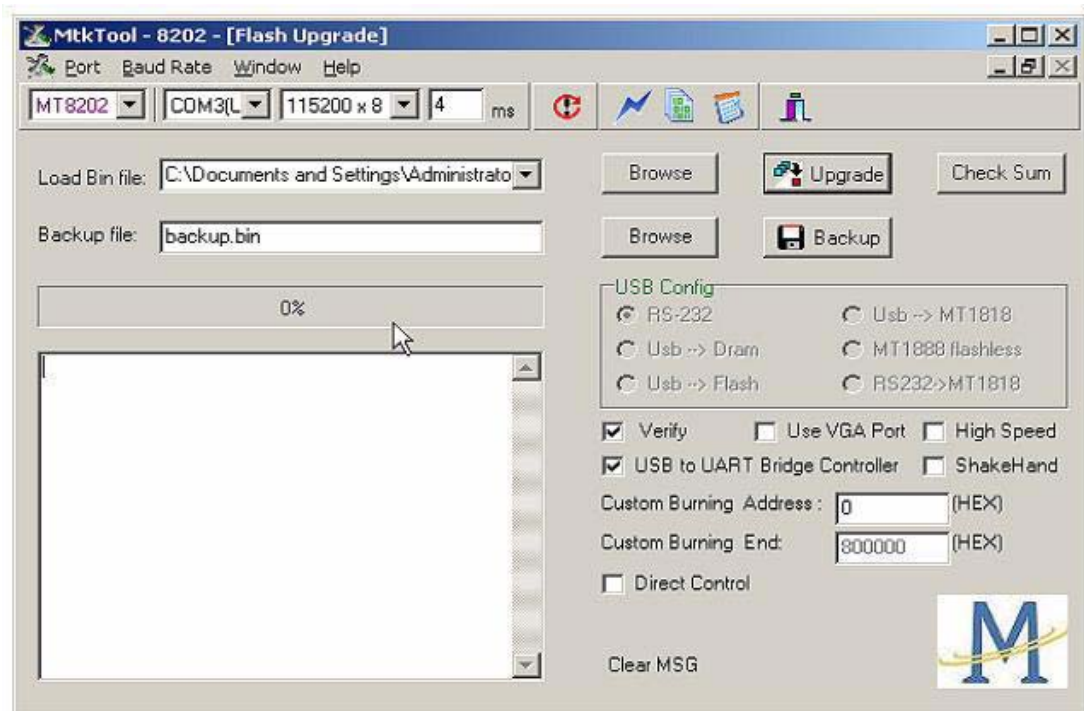
4) Then select "Browse" open the attached file (MT02.bin) in the location. In order to ensure it can be better updated, you can set the "baud rate" be "115200".
5) Select "update", when the rate of the progress get to 100%, the update finished.
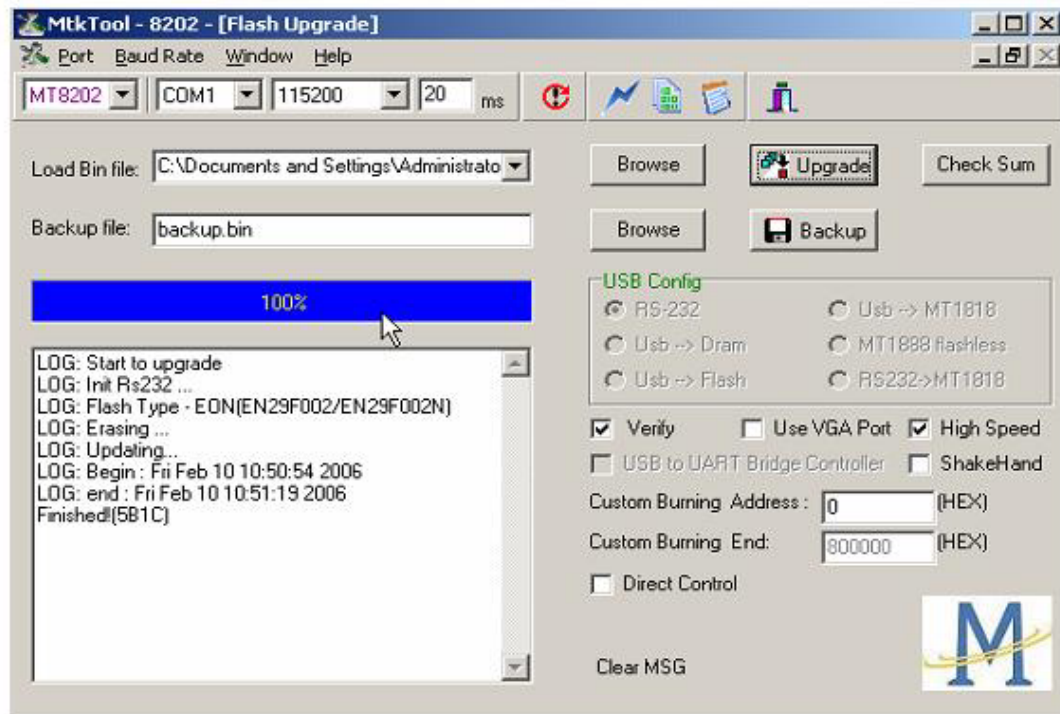
6) After update finished, power off the TV, then power on, at the first time that you power on the TV set, the display will be later than normal.

II   Update through the VGA port.

1) Connect by the cable (the tool and the cable) between the PC and the VGA port.

2) Power on the set, press the key of the factory remote control. After repeat that process 3,4,5,6 above, please note when doing the process 6, must erase flash first: press "ERASE FLASH".

3.5   The DDC data should be programmed before SMT, and it also can be updated through P2 (VGA) when finished SMT.

3.6   After download the software, it need about 30 second to initialize the EEprom, so must write the data to U2 before SMT.

3.7   IC need to be update

Location	Materiel NO.	Virtual coding
U2	**13-M24C32-MNB**	**E2PROM**