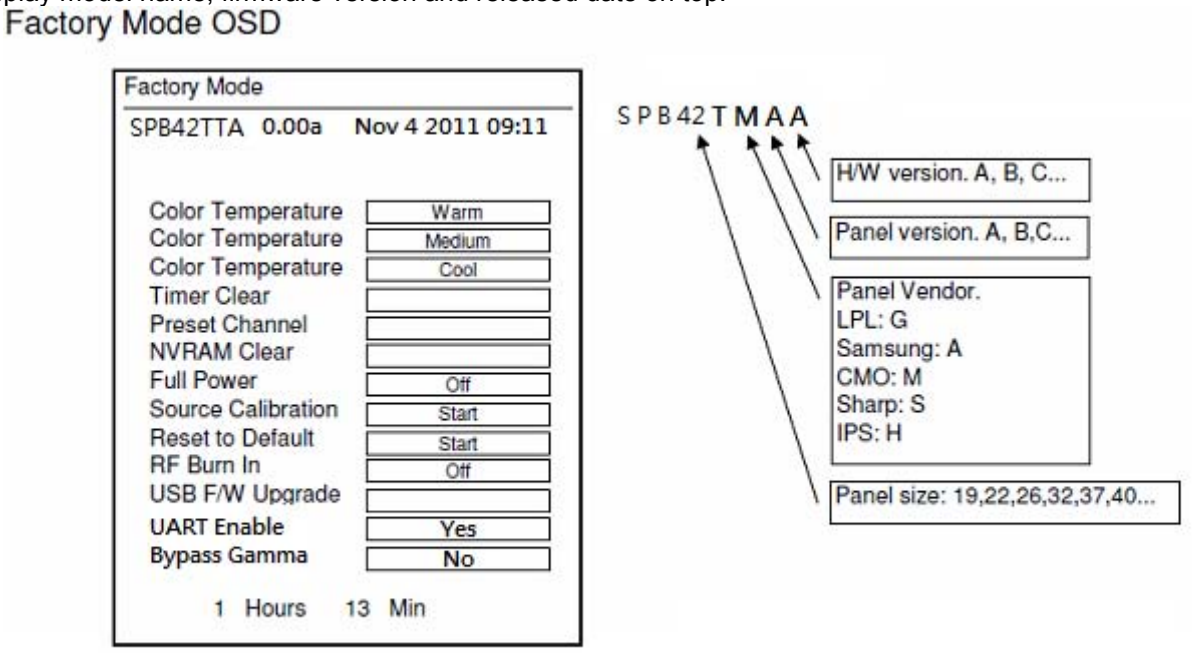
Items of Factory menu

When in PC/ Component/ Video (Composite)/ ANT inputs then press the “Left -> Exit -> Enter” key of remote control to enter factory mode..
During Factory menu, if “MENU” or “EXIT” key is pushed, system will exit factory mode.
Press up and down key can move high light item from Color Temperature -> Timer Clear -> Preset Channel->NVRAM Clear-> Full Power -> Source Calibration -> Reset to Default -> RF Burn In -> USB F/W Upgrade -> UART Enable-> Bypass Gamma.
The Timer Clear, NVRAM Clear and Reset to Default items will have a check dialog “yes or no” to do or not.
Push “Enter” key can select high light item function. (Press left and right can adjust value)
Display panel Burn in Time on the bottom.
Display model name, firmware version and released date on top.

Factory Mode OSD



1) Factory Color Temp data edit
   Press up or down key can select high light item function
   Press enter key to enter the item.
   -Color temp default preset No (Warm, Medium, Cool).
   -R, G, B data for each preset
   Press “Up” or “Down” key to select “R”, “G”, “B” item
   Press “Left” or “Right” key to set the “R”, “G”, “B” value
   Press “MENU” or “EXIT” item to exit to factory mode
2) Timer Clear
   Reset the timer which records hours of LCD panel burn in
   This item will have a check dialog “yes or no” to do or not.
   - Time in factory mode: Time function shall be displayed automatically. Saving the total time of system power on (LCD turn on), and count the time automatically. The timer is continuous and saved (per 10 minutes) forever, unless it will be reset by doing “Timer Clear”.
3) Preset channel
   Load preset channel for production line. (Refer 4.4.4 Preset channel table).
4) NVRAM CLEAR
   Initialize program’s default values to NVRAM for following adjustment items accuracy.
   In factory mode it is the first and important step to make sure all values are default value and correct
   - Reset settings: Gamma table, Channel table (Favorite channel, Channel label etc.), Model table (H/V Position, Clock, Phase), Source dependent setting (Contrast, Brightness etc.), Common setting (Volume, Language etc.), Parental Control (Rating, Password etc), Closed Caption.
   To avoid a mistake initial process after factory setting is done. This item will have a check dialog “yes or no” to do the initial or not.

Notice:

After this item is processed then the DUT needs to be powered off then AC powered off.

5) Full power
This is for power consumption testing.
To measure the maximum power consumption of TV set, we adjust the value of following items to maximum.
- Video: Contrast maximum value, Brightness maximum value, Backlight maximum value.
- Audio: Volume maximum value, Bass default value, Treble default value.
Press enter key to turn on Full Power and OSD stay display until press enter key to recover from Full Power

6) Source Calibration
Source Calibration (gain/offset) must be adjusted color by firmware automatic adjustment in PC, Composite and Component input source.
This item will have a result dialog “OK” or “NG”.

7) Reset to Default
Reset all settings of OSD menu to default value.
- Reset settings: Channel table, Model table (H/V Position, Clock, Phase), Source dependent setting (Contrast, Brightness etc.), Common setting (Volume, Language etc.), Parental Control (Rating, Password etc), Closed Caption.

8) RF Burn In
Use “snow” pattern for burn in. Selected items are “On” and “Off”.
While turn on burn in mode, firmware will automatically turn off “Auto power off” function.
If there is no power supply suddenly, firmware will re-enter burn in mode automatically when power supply is back
Pressed the “Power” key, firmware will automatically turn off burn in mode.
Burn in mode: Source is “ANT/Cable" and channel is NTSC channel 3.

9) USB F/W Upgrade
Upgrade firmware through USB.

10) UART Enable
Enable to communicate with Auto-Alignment system.

11) Bypass Gamma
For factory test value of gamma.

(6) Performance check

6-1 TV function
Connect RF to the center signal source, enter Channel menu → auto tuning, check if there are channels be skipped, check if the picture and speaker are normal.

6-2 AV terminals
Input Video signal, check if the picture and sound are normal.

6-3 YPbPr terminal
Input YUV signal (VG859 signal generator), separately input the YUV signals listed in table4 and check if the display and sound are normal at any situation (power on, channel switch and format convert, etc.)

Table4 YUV signal format

MODE	FREQ	PERIOD	SYNC POLARITY	PIXEL CLOCK	Display	SYNC WIDTH	BACK PORCH
	LINE(kHz) FRAME (Hz)	LINE (pixel) FIELD (lines)	LINE FIELD	(MHz)	LINE (pixel) FRAME (lines)	LINE (pixel) FRAME (lines)	LINE (pixel) FRAME (lines)
	15.734	1716	Negitive	27	1440	124	114
59.94Hz 720x480i	59.94	525	Negitive		480	3	15
	31,469	858	Negitive	27	720	62	60
59.94Hz 720x480P	59.94	525	Negitive		480	6	30

	45	1650	Positive	74.25	1280	40	220
60Hz 1280x720P	60	750	Positive		720	5	20
	33.75	2200	Positive	74.25	1920	44	148
60Hz 1920X1080i	60	1125	Positive		1080	5	15
	67.5	2200	Positive	148.5	1920	44	148
60Hz 1920X1080P	60	1125	Positive		1080	5	36

6-4 VGA terminal

Input VGA signal (VG848 signal generator), separately input the signals listed in table5 and check the display and sound. If the image is deflection of the Horizontal and vertical, select Menu->Setup->Auto Adjust to perform auto-correct.

Table5 VGA signal format

Mode	FREQ	PERIOD	SYNC POLARITY	PIXEL CLOCK	Display	SYNC WIDTH	BACK PORCH
	LINE(kHz) FRAME(Hz)	LINE (pixel) FIELD(lines)	LINE FIELD	(MHz)	LINE (pixel) FRAME(lines)	LINE (pixel) FRAME (lines)	LINE (pixel) FRAME (lines)
VGA 60Hz	31.469	800	Negative	25.175	640	96	40
640x480	59.941	525	Negative		480	2	25
SVGA 60Hz	37.879	1056	Positive	40	800	128	88
800x600	60.317	628	Positive		600	4	23
XGA 60Hz	48.363	1344	Negative	65	1024	136	160
1024x768	60.004	806	Negative		768	6	29
WXGA 60Hz	47.776	1664	Negative	79.5	1280	128	192
1280x768	59.87	798	Positive		768	7	20
WXGA 60Hz	47.712	1792	Positive	85.5	1360	112	256
1360x768	60.015	795	Positive		768	6	18
SXGA 60Hz	63.981	1688	Positive	108	1280	112	248
1280x1024	60.02	1066	Positive		1024	3	38

6-5 HDMI terminal

Input HDMI signal (VG859 signal generator), separately input the signals listed in table6 and check the display and sound (32 KHz, 44.1 KHz, 48 KHz) at any situation (power on, channel switch and format convert, etc.)

Table6 HDMI signal format

FREQ	FREQ	PERIOD	SYNC POLARITY	PIXEL CLOCK	Display	SYNC WIDTH	BACK PORCH
MODE	LINE(kHz) FRAME(Hz)	LINE (pixel) FIELD(lines)	LINE FIELD	(MHz)	LINE (pixel) FRAME (lines)	LINE (pixel) FRAME (lines)	LINE (pixel) FRAME (lines)
VGA 60Hz	31.469	800	Negitive	25.175	640	96	40
640x480	59.94	525	Negitive		480	2	25
SVGA 60Hz	37.879	1056	Positive	40	800	128	88

800x600	60.317	628	Positive		600	4	23
XGA 60Hz	48.363	1344	Negitive	65	1024	136	160
1024x768	60.004	806	Negitive		768	6	29
SXGA 60Hz	63.981	1688	Positive	108	1280	112	248
1280x1024	60.02	1066	Positive		1024	3	38
WXGA 60Hz	47.776	1664	Negitive	79.5	1280	128	192
1280x768	59.87	798	Positive		768	7	20
WXGA 60Hz	47.712	1792	Positive	85.5	1360	112	256
1360x768	60.015	795	Positive		768	6	18
59.94Hz 720x480i	15.734	1716	Negitive	27	1440	124	114
	59.94	525	Negitive		480	3	15
59.94Hz 720x480P	31.469	858	Negitive	27	720	62	60
	59.94	525	Negitive		480	6	30
60Hz 1280x720P	45	1650	Positive	74.25	1280	40	220
	60	750	Positive		720	5	20
60Hz 1920X1080i	33.75	2200	Positive	74.25	1920	44	148
	60	1125	Positive		1080	5	15
60Hz 1920X1080P	67.5	2200	Positive	148.5	1920	44	148
	60	1125	Positive		1080	5	36
24Hz 1920x1080P	27	2750	Positive	74.25	1920	44	148
	24	1125	Positive		1080	5	36

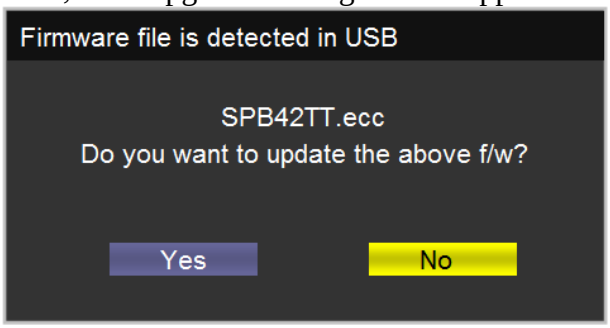
6-6 other functions check

a) Check the turn on/turn off timer, sleep timer, picture/sound mode, OSD, stereo and analog TV Teletext, etc.

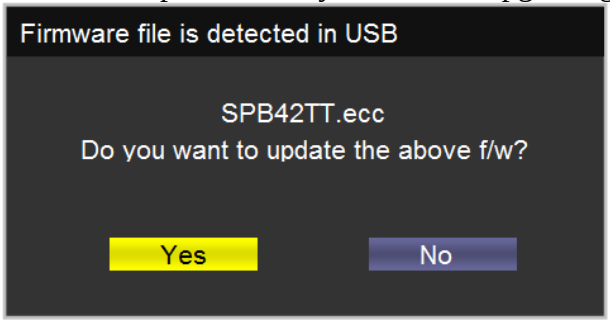
(7) Firmware update process

(1) Plug the USB with the firmware file named SPB42TT.ecc

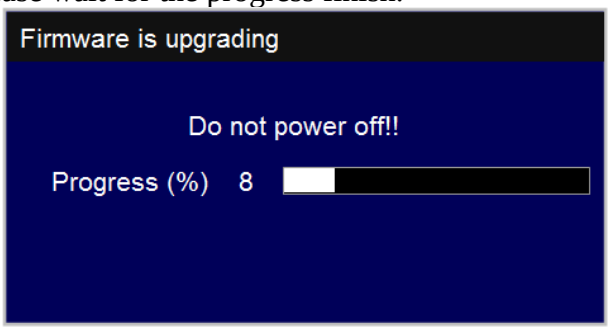
(2) If system detect SPB42TT.ecc, USB upgrade message would appear automatically.



(3) Press Left key to select Yes, and then press OK key to start the upgrading.



(4) Upgrading is starting, please wait for the progress finish.



(5) When the progress completed, please follow the instruction to remove USB and restart by AC off then on.