

8893CRCNG7D65 Factory adjust manual

General introduce

TMPA8893CRCNG7D65 adapt to 14" to 29" color TV.

1、TV decode

1. Built in trap filter, band filter and PIF VCO circuit.
2. Black level stretch, luminance r-correct function.
3. PAL/NTSC decode.
4. Two sound input terminal, two volume control output terminal, one sound output terminal, have stereo sound control.
 - ⇨ Support two AV mono sound input, haven't 4052 control.
 - ⇨ Stereo input, stereo output.

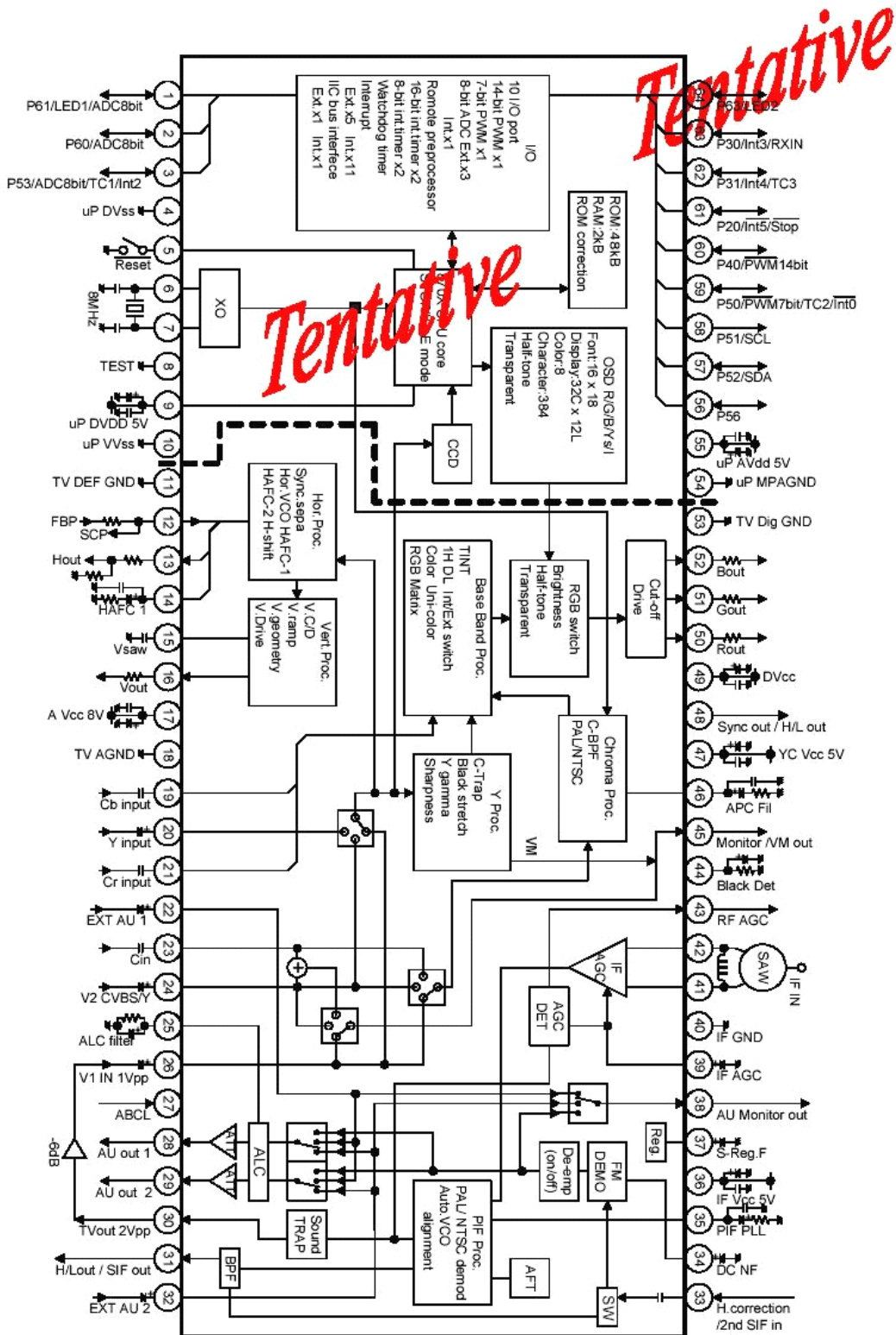
2、Software control function

1. Voltage tuner: 14 bits PWM output, full channel range.
Frequency tuner: can support normal sacn mode(38M and 38.9M).
Channel number: 250.
2. Auto initialize the data of E2PROM.
3. Auto select the color system of PAL and NTSC.
4. The sound system is optional to: 4.5M、5.5M、6.0M、6.5M.
5. Mono sound and stereo sound is optional.
6. The power on mode is optional
7. Can support two AV input, S-VIDEO, YUV input.
8. OSD language: Chinese/English/Thai/Vietnamese/Arab
9. OSD style: you can select the OSD icon, background, color of the character between eight kinds of colors. Support translucency menu, and you can adjust the position of menu.
10. Calendar function.
11. Game function(push box)
12. Power on/off curtain-opening.
13. Child Lock function.
14. Inner auto-test signal, you can adjust the bright and dark balance and geometry distortion.
15. Auto-distinguish 50HZ/60HZ.
16. No signal blue background or black background is optional.
17. Support no signal LOGO function.
18. Use the general purpose remote code. (TA9028、two kinds LC7461)

19. Support auto search, manual search, fine adjust, skip, frequency setup.
20. Direct to channel, channel recall, channel up/down, volume up/down function.
21. Can adjust brightness, contrast, chroma, definition, hue, volume, bass, treble, balance and woofer by IIC BUS.
22. Picture mode include: standard, soft, vivid, brightness, personal.
23. Support Timer setup, Time ON/OFF, awake time, booking time, booking channel.
24. Mute function, no signal auto mute, change channel or change signal source mute.
25. Auto turn off without signal beyond 15 minutes. If under the blue screen condition, will keep blue background without signal. (Besides the debug mode)
26. Support channel edit, channel exchange function.
27. Support favourite channel function. You can set the label to your favourite channel.
28. Only listen function.
29. Support FM radio function.
30. Support ZOOM function.
31. You can auto adjust the white balance under the condition of "TV IC ADJUST"

二: Port Define

2-1、TMPA8893CRCNG7D65 inner diagram



2-3、TMPA8893CRCNG7D65 pin function introduce

2) Function: MCU and SP

NO.	Icon	Description
1	SCL	Tuner Band selection output
2	SDA	Tuner Band selection output
3	KEY	Key on wake up input
4	UP DVSS	Power Supply GND
5	RESET	Reset signal input
6	XOUT	8 MHz oscillator connecting pins
7	XIN	8 MHz oscillator connecting pins
8	TEST	GND connection
9	UP DVDD(5V)	Power supply 5V
10	UP VVSS	GND connection
11	TV AGND	GND terminal for Analog block
12	FBP IN	Input terminal for FBP
13	H.OUT	Output terminal for Horizontal driving pulse
14	H.AFC1	H AFC filter connection
15	V.SAW	Terminal to be connected capacitor to generate V saw signal
16	V.OUT	Output terminal for Vertical driving pulse
17	H.Vcc	Vcc terminal for DEF circuit
18	TV GND	GND connection
19	Cb in	Input terminal for Cb signal
20	Y in	Input terminal for Y signal
21	Cr in	Input terminal for Cr signal
22	EXT-AUDIO1	Audio in
23	C in	Input terminal for Chroma signal
24	V2 in	Input terminal for ext Video signal
25	ACL	Automatic volume leveling
26	TV IN	Input terminal for video signal
27	ABCL in	Input terminal for ABL/ACL control
28	AUDIO OUT1	Output terminal for Audio signal
29	AUDIO OUT2	Output terminal for Audio signal
30	TV OUT	Output terminal for detected PIF signal
31	SIF OUT	Output terminal for detected SIF signal
32	EXT AUDIO2	Input terminal for external audio signal
33	SIF IN	Input terminal for 2nd SIF
34	DC NF	Terminal to be connected capacitor for DC Negative Feedback
35	PIF PLL	Terminal to be connected with loop filter for PIF PLL
36	IF VCC(5V)	Vcc terminal for IF circuit
37	REG FIL	Terminal to be connected capacitor for stabilizing internal bias
38	AUDIO OUT	Audio output
39	IF AGC	Terminal to be connected IF AGC filter

40	IF GND	GND terminal for IF circuit
41	IF IN	Input terminal for IF signals
42	IF IN	Input terminal for IF signals
43	RF AGC	Output terminal for RF AGC control level output
44	BLACK DET	Terminal to be connected with Black Det filter for black stretch
45	MONITOR OUT	Monitor output terminal
46	APC FIL	Terminal to be connected with APC filter for Chroma demodulation
47	YC VCC(5V)	Vcc terminal for YC
48	SYNC OUT	Input terminal to Sense ACB cathode current
49	R.G.B. VCC(3.3V)	Vcc terminal for RGB circuit
50	R OUT	Output terminal for R signal
51	G OUT	Output terminal for G signal
52	B OUT	Output terminal for B signal
53	TV AGND	GND terminal for Analog block
54	UP A GND	GND for Oscillator circuit
55	UP A VDD(5V)	VDD for Oscillator circuit
56	AV SW(STEREO)	AV1/AV2 switch
57	SDA	IIC bus serial data input/output
58	SCL	IIC bus serial clock input/output
59	50HZ/60HZ	50HA/60HZ Check out (60Hz=Hi. 50Hz=L)
60	VT	Tuning Voltage (Vt) PWM output
61	MUTE(STEREO)	Output terminal for Mute
62	TV.SYNC	Sync separator
63	REMOTE	Remote control signal preprocessor input
64	POWER SW	Power control (On=Hi. Off=L)

3. Descriptions for the operation of factory mode

■ AGING MODE

1) With factory remote controller to press “D-mode” directly enter AGING mode, screen will display

“factory”. Press “DISP” key to exit “factory” to enter “WHITE BALANCE”.

With user remote controller to press “MENU” key to turn to “PICTURE” menu, Input “2483”, “6483”, then enter AGING mode.

At “factory” mode or “AGING” mode, Press “MENU” to display main Menu to adjust all data. Press “DISP” to exit, screen only display “factory”.

■ WHITE BALANCE MODE

1) At AGING mode, press “D-mode” exit “factory” to enter WHITE BALANCE mode.

2) Press “D-mode” key two time (factory key) to enter WHITE BALANCE mode.

3) At “factory” mode, press figure key “0” enter WHITE BALANCE mode.

4) At WHITE BALANCE mode, press “MUTE”, one horizontal bright line appear on screen,

use “1,4” key to adjust RCUT, “2,5” key to adjust GCUT, “3,6” key to adjust BCUT

■ ENTER FACTORY MODE

A. USER REMOTE CONTROLLER

1) At first enter AGING mode, at AGING mode, press “DISP” to exit “factory”, enter WHITE BALANCE mode.

2) At WHITE BALANCE mode, press figure 1,2,3,4,5,6, DISP to enter “factory” mode.

B. Press “D-mode” key three time (factory key) to enter factory’s adjustment menu.

■ ENTER FACTORY MODE F11~F17

Press “2483”, “6483”, enter F11, and also open F12-F17. Press “Mute” Key to turn Page Up and “RECALL” key to turn Page Down for factory mode menu. Press figure Key 1、2、3、4、5、6、7、8、9

to enter “factory” mode F1~F9。

EXIT FACTORY MODE

1) Press “DISP” or “POWER” to exit from “factory” menu.

2) Press power switch, exit “factory’s mode.”

■ EXPLANATION FOR ADJUSTMENT SPEED KEY

After entering factory mode, some remote controller key function will change to suit for the production adjustment.

1) Press “MUTE” key to turn page up, press “RECALL” key to turn page down.

2) Press “CH+” and “CH-“ key to select item, and press “VOL+” and “VOL-“ key to change data value.

3) Press “SLEEP” key to display CHIP inner 6 kinds test signal.

4. FACTORY MENU ADJUSTS DATA

F0 White Balance adjustment

ITEMS	Descriptions	Scope	Initial value
RC	Red cut setup	0~255	80
GC	Green cut setup	0~255	80
BC	Blue cut setup	0~255	80
GD	Green drive gain setup	0~127	64
BD	Blue drive gain setup	0~127	64
SB	Subsidiary Bright Adjustment	-64~63	0
U. BLK	U signal black level adjust	0~15	8
V. BLK	V signal black level adjust	0~15	8

Press "MUTE", one horizontal bright line appear on screen, use "1,4" key to adjust RCUT, "2,5" key to adjust GCUT, "3,6" key to adjust BCUT

F1 PAL Geometry parameter adjustment for PAL

ITEMS	Descriptions	Scope	Initial value
H.PHASE	50HZ Horizontal centre setup	0~31	17
V.SIZE	50HZ vertical size setup	0~63	14
V.POS	50HZ vertical center setup	0~15	5
V.LIN	50HZ Vertical linearity setup	0~31	15
V.SC	50HZ Vertical S- Correction setup	0~31	13
HBOW	Lune mini adjustment	0~7	4
HPARA	Parallelogram mini adjustment	0~7	4
H.BLK.LEFT	H.Left Blanking	0~7	0
H.BLK.RIGHT	H.Right Blanking	0~7	0

F1 NTSC Geometry parameter adjustment for NTSC

ITEMS	Descriptions	Scope	Initial value
NT.H.PHASE	60HZ Horizontal centre setup	0~31	2
NT.V.SISE	60HZ vertical size setup	0~63	1
NT.V.POSI	60HZ vertical center setup	0~15	1
NT.V.LIN	60HZ Vertical linearity setup	0~31	0
NT.V.SC	60HZ Vertical S- Correction setup	0~31	1
NT.HBOW	Lune mini adjustment	0~7	4
NT.HPARA	Parallelogram mini adjustment	0~7	4
V.BLK.TOP	V.Top Blanking	0~3	0
V.BLK.BTM	V.Bottom Blanking	0~3	0

F2 Brightness、 Contrast、 Color adjustment

ITEMS	Descriptions	Scope	Initial value
SUB.CONT	Sub Contrast	0~15	12
SUB.COLOR	Sub Color (PAL-NTSC)	-127~+127	0
SEC.COLC	Sub Color for SECAM	0~127	40
ST3	In TV NISC3.58 high frequency boost	0~63	32
ST4	In TV other systems high frequency boost	0~63	32
OSD.CONT	OSD Contrast	0~15	1
OSD.H.POSI.	Horizontal position for Screen protection OSD	0~127	40
OSD.V.POSI	Vertical position for Screen protection OSD	0~47	0
PAGE	Underneath Factory data Display switch	0/1	1

Only when the PAGE is setuped 1, you can open the latter menu.

F3 MENU adjustment

ITEMS	Descriptions	Function explain	Initial value
TEMP.	TEMP. Switch	0:OFF 1:ON	1
BACKGRPUND	Background select	0: OFF 1: BIUE 2: BLACK	1
CH DARK	Black screen for exchange channels	0:OFF 1:ON	1
POS.TIMER	Black screen time adjustment for exchange channels, 8MS time for data "1"	0~255	32
LOGO	LOGO selection	0: OFF 1: ON	1
NO.SG.SP	No signal screen saver LOGO	0:OFF,1:User Edit,3:喜	0
DSP POSITION	TV Station display position	0: right 1: left	0
NOISE RE	Picture reduce noise	0: OFF 1: ON	0
DVD DISP	DVD DISPLAY USB	0: DVD 1: DVB 2: USB	0

F4 MENU adjustment

ITEMS	Descriptions	Function explain	Initial value
VIF	Image IF	0: 38M 1: 38.9M 2: 45.75M	0
RF AGC	IF AGC Gain	0~63	25
AV2	AV2 selection	0: OFF 1: ON	1
YUV	YUV (Y. Cr. Cb in) selection	0: OFF 1: ON	0
FM	FM selection (FM Radio)	0: OFF 1: ON	0
DVD2IN1	DVD comb selection	0: OFF 1: ON	0
BG	Sound system of 5.5M selecting	0: OFF 1: ON	1
I	Sound system of 6.0M selecting	0: OFF 1: ON	1
DK	Sound system of 6.5M selecting	0: OFF 1: ON	1
M	Sound system of 4.5M selecting	0: OFF 1: ON	0

F5 MENU adjustment

ITEMS	Descriptions	Scope	Initial value
LEFT	Left position limit for Screen protection OSD moving	0~255	0
RIGHT	Right position limit for Screen protection OSD moving	0~255	223
TOP	Top position limit for Screen protection OSD moving	0~255	26
BOTTOMS	Bottom position limit for Screen protection OSD moving	0~255	127
OPEN CURT	Curtain style when switch on 0: OFF 1: ON	0~1	1
CLOSE CURT	Curtain style when switch off 0: OFF 1: ON	0~1	1
WTIME	Wait time for pulling curtain	0~255	10
CENT	Center position for pulling curtain	0~255	194
STEP	Speed for pulling curtain	0~255	2

F6 Function control adjustment

ITEMS	Descriptions	Function explain	Initial value
LOCK	Child lock selection	0: OFF 1: ON	1
GAME	Game selection	0: OFF 1: ON	1
CALENDAR	Calendar selection	0: OFF 1: ON	1
ZOOM	Zoom selection	0: OFF 1: ON	1
CHINESE	Chinese OSD language selection	0: OFF 1: ON	1
VIETNAM	Vietnam OSD language selection	0: OFF 1: ON	1
THAI	Thai OSD language selection	0: OFF 1: ON	1
INDONESIA	Indonesia OSD language selection	0: OFF 1: ON	1
ARABIC	Arabic OSD language selection	0: OFF 1: ON	1

F7 Screen Protection OSD position

ITEMS	Descriptions	Scope	Initial value
ICON	MENU icon display selection	0~1	1
MENU BACK	MENU translucent background selection	0~1	1
SBOXD	UP BOX BACKGROUND	0~15	0
SBOXM	Color selection to pitch on picture in up window of main MENU	0~15	6
XBOXD	Background color selection for down window of main menu	0~15	1
XBOXM	Color selection to pitch on menu item bar in down window of main MENU	0~15	0
XCHRD	Character color selection for down window in main MENU	0~15	6
XCHRM	Color selection to pitch on character in down window of main MENU	0~15	4

Press "MENU" key on this page, blue screen MENU appear, and also display "FACTORY",

pls directly use P+,P-,V+,V- key to adjust all items color in MENU, after adjustment then press "DISP" to exit.

F8 Chip pins status control

ITEMS	Descriptions	Function explain	Initial value
23 PIN SET	31PIN Output control	0: Tint signal 1: CVBS	0
31 PIN SET	31PIN Output control	0: SIF 1: AUDIO OUT High DC voltage (Open collector output) 2: Low DC voltage	0
59 PIN SET	59PIN Output control	0: 50/60HZ 1: High level When UHF 2: DVD Control out	0
38 PIN SET	38PIN Output control	0: depending on AUDIO-SW 1: TV 2: mute	0
56 PIN SET	56PIN Output control	0: TV 0V/AV1 0V/AV2 5V/YUV 0V 1: TV 0V/AV1 5V/AV2 0V/YUV 5V 2: TV 0V/AV1 2.5V/AV2 5V/YUV 2.5V 3: TV 0V/AV1 5V/AV2 2.5V/YUV 5V	0
64 PIN SET	64pins function, "POWER ON" level selection:	0: Low level "ON", 1: High level "ON"	1
RCKEY SET	Whether remote control key has "FAVOURITE" function:	0: as Up,Down,Left,Right key 1: as Favorite, Scan, Music key	1
SVIDEO IDE	S-VIDEO Automatically	0: OFF 1: ON	0
SANYO RC SW	SANYO Remote control switch	0: OFF 1: ON	1
SANYO RC SEL	SANYO Remote control code selection	0: 55L7 1: 58A3	0

F9 Sound Parameters adjustment

ITEMS	Descriptions	Function explain	Initial value
S.AUDIO	When video input, sound input from AV1 or AV2,	0: AV1 1: AV2	0
AUDIO IN	Sound input combination,	0: Stereo 1: 32PIN 2: 22PIN	0
NO.SG.TV.MUTE	MUTE control without TV signal,	0: TV no MUTE 1: MUTE	0
NO.SG.AV.MUTE	MUTE control without AV signal,	0: AV no MUTE 1: MUTE	0
SIF PRI	Force sound system as auto search	0: BG 1: DK 2: I 3: M	0
ALC GAIN	Volume automatic control grade,	0: off, 1: 1.1Vp-p, 2: 1.6Vp-p, 3: 2.3Vp-p	1
SOUND IC	Sound IC selection,	0: OFF 1: Balance 2: TA1343 3: TA1304	2
WOOFER	Woofers switch	0: OFF 1: ON	1
WOOF SET	Woofers output select	0: TA1343 output 1: Fold to add L/R	1
DVD2IN1 IN	DVD comb Switch	0: OFF 1: ON	0

F10 Function control

ITEMS	Descriptions	Function explain	Initial value
BYRGB	Black screen switch Y/RGB option	0: off Y 1: off RGB	1
PIF.LEVEL	CVBS output amplitude control,	0: 2.1V 1: 2.2V 2: 2.3V 3: 2.4V	3
P.OFF.RGB	“POWER OFF” brightness vanish,	0:OFF 1:Brightness vanish : RGB/Cut as 0 2: Brightness vanish, RGB/Cut as FF	0
POWER TIME	Cold “POWER ON” power pin wait time:	0: 0 second, 1: 1 second, 2: 2 seconds, 3: 3 seconds	0
STANBY.MODE	“POWER ON” power pin memory status,	0: Remember status, 1 : Stand-by status, remote control to “POWER ON”, 2: Do not remember last time “POWER ON” status, automatic “POWER ON”	0
U.BAND	Tuner U band level selection,	0: 00 1: 11	1
TUNER	Tuning mode,	0: VS 1: FS	1
VHFH LOW	FS TUNER H Low Frequency	0-255	147
UHF LOW	FS TUNER U Low Frequency	300-555	437

When display this menu, move the cursor to the item “UHF LOW”, then press the number button “2483” or “6483” in seconds, you can open the latter adjustment menu.

F11: SOUND SYSTEM installs options

ITEMS	Descriptions	Recommend value				Max value
STD	Standard state contrast,brightness,color,sharpness	50	50	50	50	100
MILD	Mild state contrast,brightness,color,sharpness	40	40	40	60	100
DYN.	Dynamic state contrast,brightness,color,sharpness	80	70	50	30	100
VOL	Sound curve Setting 1%,25%,50%,100%	9	61	87	137	
S. F0	Sound trap center frequency band wideBG,DK,I,M	08	08	08	03	15
S. Q	Sound trapQ BG,DK,I,M	0	0	0	0	3
S. GD	Sound trap GD BG,DK,I,M	2	2	2	2	3
S. HPL	Sound trap HP/LP BG,DK,I,M	0	0	0	3	3

F12: COLOR/CONTRAST/BRIGHTNESS/TINT Setting

ITEMS	Descriptions	Max	Initial value
CNTX	Max CONTRAST setup	7F	0x7a
CNTC	Center contrast setup	7F	0x4a

CNTN	Min contrast setup	7F	0x00
BRTX	Max value of sub-brightness set	7F	0x2f
BRTC	Centre value of sub-brightness	7F	0x50
BRTN	Min value of sub-brightness set	7F	0x30
COLX	Max value of color	7F	0x7f
COLC	Center value of color (NTSC)	7F	0x40
COLN	Min value of color	7F	0x0d
TNTX	Max tint set	7F	0x28

F13: TINT/SHARP MAX/MIN Setting

ITEMS	Descriptions	Max	Initial value
TNTC	Center tint setup(NTSC)	7F	0x40
TNTN	Min tint set	7F	0x28
SHPX	Sharpness Max	3F	0x1f
SHPN	Sharpness Min	3F	0x10
ASSH	Definition	07	0x00
SV3	In AV NISC3.58 high frequency boost	3F	0x20
SV4	In AV other systems high frequency boost	3F	0x20
SVD	DVD definition	3F	0x20
SRY	SECAM R-Y black level adjustment	08	0F
SBY	SECAM B-Y black level adjustment	08	0F

F14: ABCL and Horizontal sync Setting

ITEMS	Descriptions	Max	Initial value	
SECD	SECAM SET	FF	0x88	
	D0 D1:S-GP			00:normal 01:+200ns 10:center 11:-200ns
	D2:secam inhibit switch			0:detecting 1:inhibit
	D3:SECAM Identify degree			0:normal 1:low
	D4:sel SECAM bell filter bandwidth			0: bell filter 1:boost mode
	D5: :select SECAM indent mode			0:H ID 1:H+V ID
	D6:select YS-SW mode			0:normal operation 1:secam black level alignment mode
	D7: select SECAM bell filter Q			0:low 1:high
ABL	ABL Data	FF	0x38	
	D0.D1: ABL gain			00:-0.2V,01:-0.35V,10:-0.5V,11:-0.65V
	D2.D3: ABL start order			00:0V,01:-0.2V,10:-0.3V,11:-0.4V

	D4.D5: ALC ST	00:0V,01:-0.2V,10:-0.3V,11:-1 V(OFF)		
	D6YPL(Y peak limiter switch)	0:off 1:on		
HAFC	AFC Gain adjustment		FF	0x86
VCEN	Vertical center value		3F	0x13
PYNX	Horizontal sync impulse max in normal state		3F	0x33
PYNN	Horizontal sync impulse min in normal state		3F	0x11
PYXS	Horizontal sync impulse max in search		3F	0x22
PYNS	Horizontal sync impulse min in search		3F	0x1e
SVM	SVM gain Setting		1F	0x10

F15: Color Contrast Brightness emulation quantity establishes menu

ITEMS	Descriptions			Max	Initial value
DCBS		10010011		FF	0x92
	D0、 D1 Black level extension Y	00: 30IRE	01: 40IRE		
		10: 50IRE	11: 75IRE		
	D2、 D3 Brightness gamma	00: OFF	01: 78IRE		
		10: 68IRE	11: 58IRE		
	D4 Black level extension Switch	0: OFF	1: ON		
	D5 Y coring SW	0: OFF	1: ON		
D6 H/V Blanking on/OFF switch	0: OFF	1: ON			
D7 C-Trap Q	0:low	1:high			
CLTO		1000 1001		FF	0x89
	D0、D1、D2 Brightness delay setup	000:0ns	001:40ns		
		010:80ns	011:120ns		
		100:160ns	101:200ns		
		110:240ns	111:280ns		
	D3、 D4 G-Y matrix setup	00: PAL 10: NTSC2	01: NTSC1 11: DVD		
	D5 N CONB	0:off	1:on		
D6 Killer off	0: normally	1: off			
D7 PAL/NTSC Colorful intelligent degree set	0: normally	1: low			
CLTM	TV-NTSC color .brightness. Sensitivity adjustment		FF	0xac	
CLTS	TV-SECAM color .brightness. Sensitivity adjustment		FF	0x8a	
CLVO	AV color .brightness. Sensitivity adjustment		FF	0xad	
CLVD	DVD TV-P color .brightness .Sensitivity adjustment		FF	0x88	
FLG0	TB1254 Set			FF	0x44
	D0 PIF Over-modulate switch OVER MODE	0:Normal enactment	1: OFF		

	D1AFT Intelligent degree (aft sensitivity)	0: wide(250hz)	1:normal (83hz)		
	D2Nyquist Buzz reducer sw	0: ON	1: OFF		
	D3 SVIDEO AUDIO Follow	0:AV1	1:AV2		
	D4Whether CVBS output pass band filter	0: PASS	1: NO PASS		
	D5 Select sharpness center frequency,	0: 2.75MHz	1: 4MHz		
	D6 H-sync discretion select	0: BUS	1:		
	D7 Whether adjust VC0 when	0: adjust VCO	1: No		
FLG1	TB1254 Set			FF	0xA6
	D0 D1 30PIN CVBS output amplitude control	00: 1.1V	10: 2.2V		
	D2 Exchange Channel OSD Display	0:No Display	1:Display		
	D3 no use				
	D4 power on H STOP	0:H STOP=0	1:H		
	D5 Horizontal blank switch	0: No blanking	1:		
	D6 no use				
	D7 no use				
SET2	No use				
VCD0	00001000		FF	08	
	D0 SY SKEW Examine	0 off	1		
	D2 Cb/Cr Input mode ; UV	0:Cb/Cr	1:U/V		
	D3 Half tone gain switch ; HT	0:30%	1:50%		
	D4 D5 C trap Mode set	00:01 interlocking "video sw"			
		10 off	11		
D6 D7 38 PIN audio monitor signal choose	00: depend on AV sw	01:TV			
	10/11: mute				
NOISE	00010000	0F	1F	0x0f	
	D0、D1、D2、D3 Noise Det				
	D4 Noise Examine switch	0:ON	1:OFF		
	D5、D6、D7 NO USE				

F16: Sound curve Setting

WCTL	TA1343 Set		7F	0x0f
	D0、D1 Woofer frequency center	00: 100Hz	01: 125Hz	
		10: 170Hz	11: 210Hz	
	D2 Input attenuation	0: (0dB)	1: (-5dB)	
	D3、D4 ALS Start point	00: 220mv	00: 220mv	
		10: 525mv	11: 210Hz	
	D5 ALS Switch	0: OFF	1: ON	
D6 BASS Enlarge switch	0: OFF	1: ON		

BASC	BASS Center setup	7F	0x24
BASX	BASS Max setup	7F	0x72
TREC	TREBLE Center setup	7F	0x40
BALC	Balance Center setup	7F	0x40
WOFC	WOOFER Center	7F	0x72

F17 H. Synchronization parameters adjustment

ITEMS	Descriptions	Max					Initial value	
SYNC	Sync detection general setting	02					07	0x02
	D0 Select sync slice level for weak signal	0:normal					1:low [20h,d7]	
	D1 Select sync separation level	0:40%					1:50% [1eh,d6]	
SYBBN	Sync detection setting for BB	1c					FF	1C
	D1,D0 Blue screen on Examine mode	00: H-LOCK-1				01 : H-LOCK-2		
		10: V-LOCK						
	D2 Sync detection setting 5	D5(2)	D6(3)	D3(4)	D2(5)	-8dB,weak signal		
	D3 Sync detection setting 4	0	1	0	0			
	D4 Sync detection setting 1	0	1	0	1	-4dB		
	D5 Sync detection setting 2	0	1/0	1	1/0	0dB		
	D6 Sync detection setting 3							
D7 No use								
SYBBF	Sync detection setting for BB OFF	1C					FF	1C
	D1,D0 Blue screen off Examine mode	00: H-LOCK-1				01 : H-LOCK-2		
		10: V-LOCK						
	D2 Sync detection setting 5	D5(2)	D6(3)	D3(4)	D2(5)	-8dB,weak signal		
	D3 Sync detection setting 4	0	1	0	0			
	D4 Sync detection setting 1	0	1	0	1	-4dB		
	D5 Sync detection setting 2	0	1/0	1	1/0	0dB		
	D6 Sync detection setting 3							
D7 No use								
SYSR	Sync detection setting for search/tuning	04					0F	02
	D1,D0 Search channel sync mode	00: H-LOCK-1				01 : H-LOCK-2		
		10: V-LOCK						
	D2 Sync detection setting 5	D5(2)	D6(3)	D3(4)	D2(5)	-8dB,weak signal		
	D3 Sync detection setting 4	0	1	0	0			
	D4 Sync detection setting 1	0	1	0	1	-4dB		

	D5 Sync detection setting 2	0	1/0	1	1/0	0dB	
	D6 Sync detection setting 3						
	D7No use						
BBCT	Blue back hysteretic counter (BUS H sync detection)	04			FF		04
NDTC	Noise DET counter for test	1F			FF		
UCOM		0 0 : G N D 0 1 : R output 10:G output 11:Monitor RF AGC via ADC					
	D1/D0 : INTER A A D C	0:APC data Set 0 1 : APC data From UCOM D4、D3Set					
	D2						
	D4、D3:APC data Set						
	D5, D6,D7 No use						
V.AGC.D C	Vertical AGC select	1:exterior			0: interior		
HOTEL	Hotel Mode	1:ON			0:OFF		
ODI PANEL KEY	Key board state	1:ODI key			2: Pantron Key		

5. LOGO EDIT

LOGO setting : without signal ,At AV mode, press remote figure key “2 4 8 3”、 “6483”、 to enter LOGO setting MENU, according to MENU to select item, press P+、 P-、 V+、 V- key to set LOGO Parameters, after setting, press DISP key to exit

Press “MENU” button, you can select the LOGO edit option: E,N,M

When you select the E, then press the P+,P-,V+,V- to change the LOGO character.

When you select the N,then press the P+,P- to change the LOGO color, and press the V+,V- to change the LOGO size.

When you select the M, then press the P+,P-,V+,V- to change the LOGO position.

6. IIC BUS ADDRESS

	EEPROM ADDRESS	TMPA8893 ADDRESS	
R-CUT	1FH	08H	00-FFH
G-CUT	20H	09H	00-FFH
B-CUT	21H	0AH	00-FFH
G-DRIVE	22H	0BH	00-7FH
B-DRIVE	23H	0CH	00-7FH
Slave	A0	88	

CHILD LOCK: Long press DISP key , the screen left and last Cape shows a lock, target all key operations at this time, after main power supply shut down, the front-panel can't switch on, either and attain restriction child to watch the function of television. Only re-press "DISP", until the lock disappears.

HOTEL mode function: Function explains: Long press SLEEP key to get into the password importation of hotel mode appearance for four seconds, password is: 8888, importation password the juniors establishes menu into the function of the hotel mode.

7. REMOTE CONTROL KEY: (TA9028/LA7461)

KEY	HEX			FUNCTION	
	9028-0E0E	7461-54H7	7461-55K2		
1	00	0x01	0x01	NUMBER KEY	
2	01	0x02	0x02		
3	02	0x03	0x03		
4	03	0x04	0x04		
5	04	0x05	0x05		
6	05	0x06	0x06		
7	06	0x07	0x07		
8	07	0x08	0x08		
9	08	0x09	0x09		
0	09	0x00	0x00		
-/--	0A	0x0a	0x0a		
SOUND-MODE	1E	0x1d	0x0b		SOUND-MODE
GAME	1D	0x1c	0x0c		GAME
SYS	0C	0x1f	0x0d	SYSTEM	
RECALL	17	0x1a	0x0e	RETURN	
TV/AV/DVD	0F	0x0b	0x0f	AV/TV	
MENU	1C	0x0e	0x10	MENU	
LEFT/SELECT	1A	0x15	0x11	UP/FAV SELECT	
PIC-MODE	0E	0x19	0x13	PP	
DISP/LOCK	16	0x1b	0x14	DISP/LOCK	
MUTE	14	0x16	0x15	MUTE	
UP/ZOOM	19	0x18	0x16	LEFT/ZOOM	
RIGHT/SCAN	1B	0x1e	0x17	RIGHT/SCAN	
DOWN/A-AUDIO	18	0x0d	0x18	DOWN/AUDIO	
SLEEP	15	0x0f	0x19	SLEEP	
P-	10	0x17	0x1a	P+	
P+	11	0x13	0x1b	P-	
POWER	0B	0x12	0x1c	POWER	
D-MODE	2C	0x11	0x1d	D-MODE	
Vol-	12	0x14	0x1e	VOL-	
Vol+	13	0x10	0x1f	VOL+	

KEY	Off	P+	P-	V+	V-	MENU	TV/AV	POWER
(Sanyo)	0-0.8	0.8-1.16	1.16-1.74	1.74-2.45	2.45-3.17	3.17-3.88	3.88-4.60	4.6-5
(Toshiba)	5-4.65	0-0.4	0.4-1.2	1.2-2.0	2.0-2.9	2.9-3.8	3.8-4.65	