10.1.3. THX white balance adjustment

The adjusting method is different according to the PEAKS EEPROM version.
[copy adjustment] : Peaks EEPROM ver.1.00-
[Differential (Normal) + copy + WARM adjustment] : Peaks EEPROM ver.1.**-

Name of measuring instrument	Connection	Remarks
W/ B pattern Color analyzer (Minolta CA-100 or equivalent)	Panel surface	

Steps	Remarks

[copy adjustment]
Connect IIC cable (bus controller-cable) after banner OSD appear.
And after SRQ-L, begin an adjustment 2 seconds later.
 	
 • Make sure the front panel to be used on the final set is fitted.
 • Make sure a color signal is not being shown before adjustment.
 • Put the color analyzer where there is little color variation.
 	
Note:
    Copy Adjustment method in service mode.
    When you push [OK] key in each item,
    Adjustment data is copied between HD data and SD data.
	Picture menu : Dynamic
	ASPECT : 16:9
	
	Condition is same at
	alternative method too.

| Steps	Remarks

1. Enter the Service mode.
   Please receive the Analog-RF.
   Or, please select CVBS/YUV/HDMI. (No inputting is possible.).
   (Forbid Analog-RF with no signal.)
2. A number key [1] or [2] are operated and [WB-ADJ] is displayed.
   Check that the color temp is [COOL].
3. A number key [0] is operated and select [METHOD 01].
4. A number key [5] is operated and [INNER PATTERN] is displayed.
 	
[INNER PATTERN]
 	
5. Select [G-CUTOFF] item, using the number-key [3] or [4], and set to [80], using the volume-key [+] or [-].
   Also, [B-CUTOFF] and [R-CUTOFF] set to [80].
6. Set [G-DRIVE] at [D0].
7. Touch the signal receiver of color analyzer to the INNER PATTERN's center, and adjust B drive and R
   drive so x, y become the [COLOR TEMP COOL] in the below table1.
8. All RGB drive increase so that the maximum drive value of RGB may become [FF].
   ([ALL-DRIVE] set to [FF].)
9. Set color balance to [NORMAL] using [7] key.
10. Fix G-CUTOFF, B-CUTOFF and R-CUTOFF at [80].
11. Set [G-DRIVE] at [D0].
12. Adjust B-DRIVE and R-DRIVE so the INNER PATTERN's x, y become the [COLOR TEMP NORMAL] in
   the table 1.
13. All RGB drive increase so that the maximum drive value of RGB may become [FF].
   ([ALL-DRIVE] set to [FF].)
14. Set color balance to [WARM] using [7] key.
15. Set Picture menu to [CINEMA] using [9] key.
16. A number key [5] is operated and [INNER PATTERN] is displayed.
 	
[INNER PATTERN]
 	
17. Fix G-CUTOFF, B-CUTOFF and R-CUTOFF at [80].
18. Set [G-DRIVE] at [D0].
19. Adjust B-DRIVE and R-DRIVE so the INNER PATTERN's x, y become the [COLOR TEMP WARM] in the
   table 1.
20. All RGB drive increase so that the maximum drive value of RGB may become [FF]. ([ALL-DRIVE] set to
   [FF].)
21. Confirm [METHOD=01].
 	
   Please refer table2-3 to address.
 	
22. Asking matter to execute white balance difference adjustment.
   Please feed back the DAC value in the adjusted each color temperature in an internal pattern.
	METHOD=01
	copy adjustments

Steps	Remarks

[Differential (Normal) + copy + WARM adjustment]
Adjustment of [COOL], [WARM] by data shift from [NORMAL] adjust.
And only [WARM] is readjusted.
Execute adjustment for color temp. [NORMAL], and set data for color temp. [COOL], [WARM] by data shift WB of HD (or PAL) copies the adjustment data from an adjusted format side.
 	
Note:
   The adjustment does color temp. [NORMAL] first.
   A adjustment value difference from [NORMAL] is written to EEPROM as for [COOL] and [WARM] by operating a [OK] key.
   As for WB of HD (or RF), the adjustment data from an adjusted format side is copied simultaneously.
   Text color of the adjusted value changes into red -> black at the same time too. And only [WARM] is readjusted.	

1. Enter the Service mode.
   Please receive the Analog-RF.
   Or, please select CVBS/YUV/HDMI. (No inputting is possible.).
   (Forbid Analog-RF with no signal.)
2. A number key [1] or [2] are operated and [WB-ADJ] is displayed.
   Check that the color balance is [NORMAL].
3. A number key [0] is operated and select [METHOD=03].
4. A number key [5] is operated and [INNER PATTERN] is displayed.
 	
[INNER PATTERN]
5. Select [G-CUTOFF] item, using the number-key [3] or [4], and set to [80], using the volume-key [+] or [-].
   Also, [B-CUTOFF] and [R-CUTOFF] set to [80].
6. Set [G-DRIVE] at [D0].
7. Touch the signal receiver of color analyzer to the highlight window center, and adjust B drive and R drive so x, y become the [COLOR TEMP NORMAL] in the table 1.
8. All RGB drive increase so that the maximum drive value of RGB may become [FF]. ([ALL-DRIVE] set to [FF].)
9. A number key [0] is operated and select [METHOD=01].
10. Set color balance to [WARM] using [7] key.
11. Set Picture menu to [CINEMA] using [9] key.
12. A number key [5] is operated and [INNER PATTERN] is displayed.
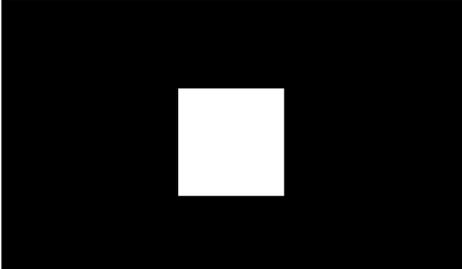 	
[INNER PATTERN]
13. Fix G-CUTOFF, B-CUTOFF and R-CUTOFF at [80].
14. Set [G-DRIVE] at [D0].
15. Adjust B-DRIVE and R-DRIVE so the INNER PATTERN's x, y become the [COLOR TEMP WARM] in the table 1.
16. All RGB drive increase so that the maximum drive value of RGB may become [FF]. ([ALL-DRIVE] set to [FF].)
17. Confirm [METHOD=01].
 	
   Please refer table2-3 to address.
	METHOD=03
	Differential (Normal) + copy + WARM adjustment
	
	METHOD=01
	copy adjustment

Table 1-1, Color temp. target value (This data is target data by CA-100 PAVCCZ.)

COLOR TEMP	x	y
COOL	0.278	0.279
NORMAL	0.301	0.316
WARM	0.315	0.329

Table 1-2, Color temp. target value (This data is target data by CS-2000 PAVCCZ.)

COLOR TEMP	x	y
COOL	0.277	0.279
NORMAL	0.299	0.314
WARM	0.313	0.329

Table 2, Peaks EEP addresses (adjustment data)

signal / temp	Meaning of value	address
SD High	R-Cutoff for SD High	A0-070c
	G-Cutoff for SD High	A0-070d
	B-Cutoff for SD High	A0-070e
	R-Drive for SD High	A0-070f
	G-Drive for SD High	A0-0710
	B-Drive for SD High	A0-0711
SD Middle	R-Cutoff for SD Middle	A0-0712
	G-Cutoff for SD Middle	A0-0713
	B-Cutoff for SD Middle	A0-0714
	R-Drive for SD Middle	A0-0715
	G-Drive for SD Middle	A0-0716
	B-Drive for SD Middle	A0-0717
SD Low	R-Cutoff for SD Low	A0-0718
	G-Cutoff for SD Low	A0-0719
	B-Cutoff for SD Low	A0-071a
	R-Drive for SD Low	A0-071b
	G-Drive for SD Low	A0-071c
	B-Drive for SD Low	A0-071d
HD High	R-Cutoff for HD High	A0-071e
	G-Cutoff for HD High	A0-071f
	B-Cutoff for HD High	A0-0720
	R-Drive for HD High	A0-0721
	G-Drive for HD High	A0-0722
	B-Drive for HD High	A0-0723
HD Middle	R-Cutoff for HD Middle	A0-0724
	G-Cutoff for HD Middle	A0-0725
	B-Cutoff for HD Middle	A0-0726
	R-Drive for HD Middle	A0-0727
	G-Drive for HD Middle	A0-0728
	B-Drive for HD Middle	A0-0729
HD Low	R-Cutoff for HD Low	A0-072a
	G-Cutoff for HD Low	A0-072b
	B-Cutoff for HD Low	A0-072c
	R-Drive for HD Low	A0-072d
	G-Drive for HD Low	A0-072e
	B-Drive for HD Low	A0-072f

Table 3, Peaks EEP addresses (DIFF setting)

signal / temp	Meaning of value	address
SD High	R-Cutoff difference for SD High	A0-0730
	G-Cutoff difference for SD High	A0-0731
	B-Cutoff difference for SD High	A0-0732
	R-Drive difference for SD High	A0-0733
	G-Drive difference for SD High	A0-0734
	B-Drive difference for SD High	A0-0735
SD Middle	R-Cutoff difference for SD Middle	A0-0736
	G-Cutoff difference for SD Middle	A0-0737
	B-Cutoff difference for SD Middle	A0-0738
	R-Drive difference for SD Middle	A0-0739
	G-Drive difference for SD Middle	A0-073a
	B-Drive difference for SD Middle	A0-073b
SD Low	R-Cutoff difference for SD Low	A0-073c
	G-Cutoff difference for SD Low	A0-073d
	B-Cutoff difference for SD Low	A0-073e
	R-Drive difference for SD Low	A0-073f
	G-Drive difference for SD Low	A0-0740
	B-Drive difference for SD Low	A0-0741
HD High	R-Cutoff difference for HD High	A0-0742
	G-Cutoff difference for HD High	A0-0743
	B-Cutoff difference for HD High	A0-0744
	R-Drive difference for HD High	A0-0745
	G-Drive difference for HD High	A0-0746
	B-Drive difference for HD High	A0-0747
HD Middle	R-Cutoff difference for HD Middle	A0-0748
	G-Cutoff difference for HD Middle	A0-0749
	B-Cutoff difference for HD Middle	A0-074a
	R-Drive difference for HD Middle	A0-074b
	G-Drive difference for HD Middle	A0-074c
	B-Drive difference for HD Middle	A0-074d
HD Low	R-Cutoff difference for HD Low	A0-074e
	G-Cutoff difference for HD Low	A0-074f
	B-Cutoff difference for HD Low	A0-0750
	R-Drive difference for HD Low	A0-0751
	G-Drive difference for HD Low	A0-0752
	B-Drive difference for HD Low	A0-0753