

Service Adjustments

Adjust manual for 3I31

1. Notice for adjustments.

1-1. Before adjust, the TVs should work for 30 minutes. and degauss

1-2. Before inserted in the chassis to adjust, the EEPROM IC202 should copy the mother EEPROM of the data. The other data not mentioned in this adjust manual should not be changed.

2. Equipments needed:

2-1. scillograph

2-2. digital multimeter

2-3. (5418/54200) TV signal generator

3. IF adjust

3-1. Open tuner's IF pin.

3-2. TV signal generator set to 95dB 38.9MHz. Connect its output terminal to base of Q001.

3-3. Use digital multimeter to measure the voltage of location J110, adjust L020, till the value shown in the digital multimeter is within $1.6V \pm 0.05V$.

3-4. If SECAM-L' system is needed, continue the following adjustments. Otherwise, solder tuner's IF pin.

3-5. Set colour and sound system to SECAM and L'.

3-6. Set TV signal generator to SECAM-L' system, 95dB 33.9MHz output.

3-7. Adjust VR2 till voltage of J110 is $1.6V \pm 0.05V$.

3-8. Solder tuner's IF pin.

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4. RF AGC ADJUSTMENT.

4-1. Receive U band signal.

4-2. Set the RF signal to 53dBuV,greyscale pattern.

4-3. Measure the voltage of C003' "+"

4-4. Adjust R020 till the display voltage of the digital multimeter is 3.8V+/-0.1V。

5. How to use service menu

5-1. After pressing MENU key and menu OSD display on screen, press Q.VIEW key 5 times continuously to enter service menu. Press PROG +/- keys to select items to adjust, press VOL +/- keys to adjust values. Press Q.VIEW key to store the value. To escape service mode, press 0 key first, then press Q.VIEW key.

5-2. Description of service menu:

2-1. Press key "1" to adjust Horizontal part:

H blanking (HBSO, HBST); H position (HPOS); picture wide (H-P0);
H keystone correction (H-P1); H Pincushion Correction (H-P2); H S
distortion correction (H-P3); H corners correction (H-P4)

2-2. Press key "2" to adjust vertical part:

Vertical position (VERT.POSITION); Vertical size (V-P1); Vertical S
correction (V-P2); Vertical linearity (V-P3);

ANGLE、BOW belong to H correction;

Here, when adjust ANGLE, upside of picture is still, bottom side shift
between left and right.

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When adjust BOW, upside of picture is still, bottom side shift between left and right.

2-3. Press key “3” and “4” key to set option

2-4. Press key “5” to adjust screen voltage.

2-5. Press key “6” to check CUTOFF value.

2-6. Press key “7” to check DRIVE REF value.

2-7. Press key “8” to set sub brightness/sub contrast.

6.H and V adjust

6-1. Receive five circle pattern signal from factory central signal generator.(PAL: 751.25MHz;NTSC:73.25MHz)

6-2. Enter service menu and press key “1”, adjust Hor. Blanking Stop/Start, till H blanking is just beyond the screen.

Adjust Hor. Position, till picture’s horizontal center is at the screen’s center.

6-3. Press key “2” and adjust Vert Position, till picture’s vertical center is at the screen’s center.

6-4. Vertical size adjust: adjust Vert Amplitude till picture’s vertical re-display rate is around 85%.

6-5. Vertical symmetry adjust: Adjust S-Correction till picture is symmetrical in vertical.

6-6. Vertical linearity adjust: adjust Vert-Symmtry till the picture’s center vertical size is the same with the size at the edge.

6-7. Horizontal amplitude adjust: Adjust Hor Amplitude till picture’s width is ok.

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Adjust CUSHION to correct horizontal distortion, adjust Hor Corners to correct distortion at four corners, till picture's distortion is minimum.

Note NTSC and PAL should be separated.

7. SCREEN and FOCUS voltage adjustment:

7-1. Set the TV set to AV mode without signal input and switch screen protect function off.

7-2. Enter service mode, press key "5", adjust SCREEN knob of FBT, till the brightest line of RGB is just can be seen, then escape service mode.

7-3. Adjust FOCUS knob of FBT till picture is clearest.

Sub brightness adjust

7-4. Receive half colour bar/greyscale factory center signal(216.25MHz)or greyscale pattern signal with 11 steps from TV signal generator.

7-5. Set picture to standard mode, enter service mode, adjust Bright Mid till the tenth step is just can be seen.

7-6. Press Q.VIEW to store and to escape service mode.

8. White balance adjustment

8-1. White balance test signal

8-2. Use hand set to enter service menu, press RESUME key so that CUT OFF display on screen..

8-3. Plug the I2C connector of the auto adjust equipment into CN101.

8-4. Run auto adjust program, after auto adjustment, remove the I2C connector.

8. Press key "9" to justify EEPROM data. Confirm the following address' data is right,

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otherwise, the TV set may not be able to work.

ADD	DATA	ADD	DATA	ADD	DATA
381	20	134	130	424	160
425	1	426	160	427	1
181	90				

Note1 factory menu shows

page 3		
item	Default value	
MSP	YES	
WINDOW	YES	
FIX OUT	YES	
ALPS	YES	
HDEV3	YES	
TEXT TV	YES	
LANGUAGE	ALL	
page 4		
TILT	YES	
SVM	YES	
NICAM	YES	
SECAM-L	YES	
AV MODE	3	

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AV3	YES	
AVC	NO	
page 8		
CONTRAST1	25	
CONTRAST2	80	
CONTRAST3	99	
BRIGHT1	0	
BRIGHT2	30	
BRIGHT3	65	
COLOR1	0	
COLOR2	50	
COLOR3	99	