

4-2 Adjustment

4-2-1 Service Instruction

1. General Adjustment :

In general, a color TV can provide ideal visual quality by adjusting the basic settings such as the vertical size, horizontal size, focus, etc.

Display a black and white picture on the screen to check if the picture is clearly displayed.

If there are some 'spotted' points on the screen when displaying a black and white picture, degauss the screen using the degauss coil. If the spotted points remain, re-adjust the purity and the convergence.

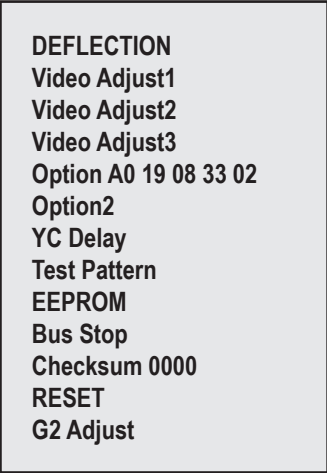
This completes the basic performance examination.

4-2-2 How to Access Service Mode

1. To enter Service Mode, press the keys on the remote control according to the following sequence. (in Stand-by status)



2. The initial screen of Service Mode.



3. Functions of the Keys within Service Mode.

MENU	Show all menus
▲ / ▼	Move the cursor to select an item.
◀ / ▶	Adjust the selected configuration value

4. W/B Setting

No	Item	Data	Required Adjustment
1	White Balance	x:275± 3 y:275± 3 Y:38± 0.3	White Balance (Standard Data)
		x:265± 3 y:265± 3 Y:1.8± 0.2	

4-2-3 Factory Data ♦ The underlined are items applied during the service adjustment. None of the others should be adjusted.

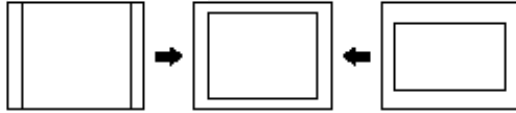
1. Option1

No	Item	Data
1	System	CL
2	ACS	Off
3	AV Jack	2RCA+DVD
4	Tilt	Off
5	Vchip	Off
6	Caption	On
7	PIP	Off
8	LNA	Off
9	Auto On	Off
10	StandBy LED	On
11	Philippines(AV MULTI)	Off
12	Osd Language	English
13	FM Radio	Off
14	Antenna Disp	Off
15	Hi-Deviation	Off
16	Plug & Play	On
17	DNle Jr	Off
18	Volume Curve	Small
19	Color Matrix	Japan
20	PWM/Parabola	Parabola

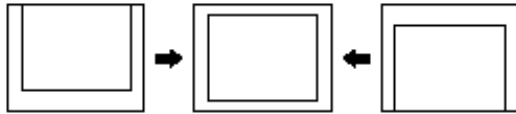
2. Option2

No	Item	Data
21	Hotel mode	Off
22	Child Lock	Off
23	Air/Cable On	Off
24	MaxBeam Check	On
25	Ser data sum	Off
26	Zoom Option	On

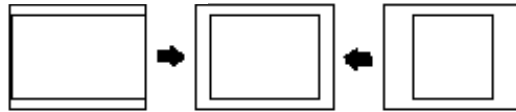
1 V Amp



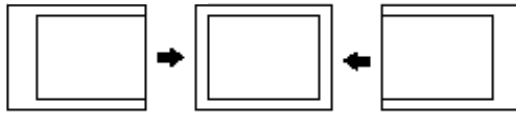
2 V Shift



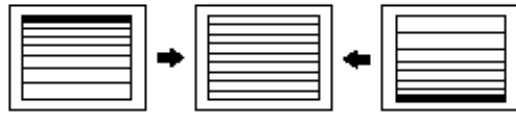
3 H EW



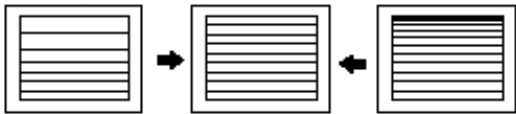
4 H Shift



5 V Linearity



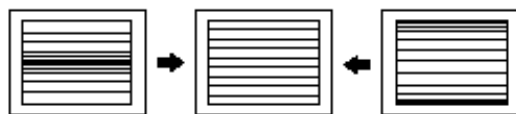
6 Upper Linearity



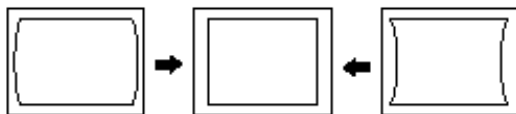
7 Lower Linearity



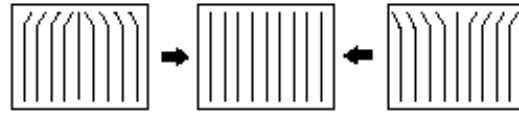
8 V SC



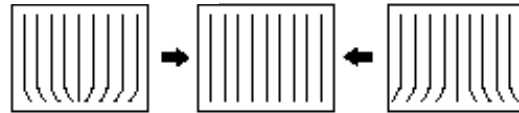
9 H Parabola



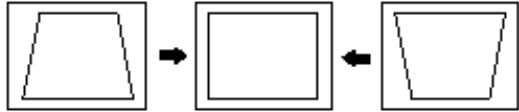
10 Upper Corner



11 Lower Corner



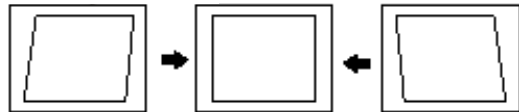
12 H Trapezium



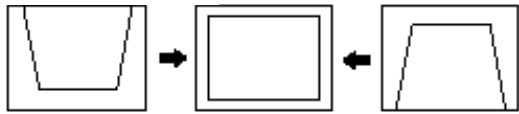
13 BOW



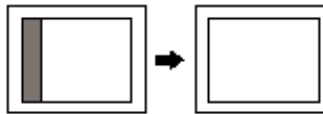
14 Angle



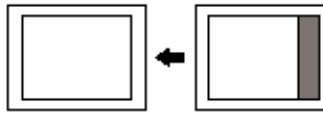
15 V Position



16 CXA Left Blk



17 CXA Right Blk



3. Deflection(NT 60Hz)

No	Item	Data	Min	Max	Initial value
1	<u>V Amp</u>	ADJ	-128	127	29
2	<u>V Shift</u>	ADJ	-128	127	-24
3	<u>H EW</u>	ADJ	-128	127	31
4	<u>H Shift</u>	ADJ	32	180	103
5	<u>V Linearity</u>	ADJ	-128	127	3
6	V SC	FIX	-128	127	28
7	<u>H Parabola</u>	ADJ	-128	127	55
8	<u>Upper Corner</u>	ADJ	-128	127	-17
9	<u>Lower Corner</u>	ADJ	-128	127	-31
10	Upper Corner6	FIX	-128	127	13
11	Lower Corner6	FIX	-128	127	17
12	<u>H Trapezium</u>	ADJ	-128	127	10
13	<u>Bow</u>	ADJ	-128	127	0
14	Angle	FIX	-128	127	0
15	EHT Time	FIX	0	255	1
16	EHT Threshold	FIX	0	255	10
17	EHT Vertical	FIX	-128	127	0
18	EHT Horizontal	FIX	-128	127	9
19	EHT Vertical2	FIX	-128	127	-1
20	EHT Horizontal2	FIX	-128	127	5

4. Deflection(PAL 50Hz)

No	Item	Data	Min	Max	Initial value
1	<u>V Amp</u>	ADJ	-128	127	4
2	<u>V Shift</u>	ADJ	-128	127	-6
3	<u>H EW</u>	ADJ	-128	127	0
4	<u>H Shift</u>	ADJ	32	180	-16
5	<u>V Linearity</u>	ADJ	-128	127	0
6	V SC	FIX	-128	127	0
7	<u>H Parabola</u>	ADJ	-128	127	3
8	<u>Upper Corner</u>	ADJ	-128	127	-8
9	<u>Lower Corner</u>	ADJ	-128	127	-5
10	<u>Upper Corner6</u>	ADJ	-128	127	4
11	<u>Lower Corner6</u>	ADJ	-128	127	2
12	<u>H Trapezium</u>	ADJ	-128	127	-5
13	Bow	FIX	-128	127	0
14	Angle	FIX	-128	127	0
15	EHT Time	FIX	0	255	20
16	EHT Threshold	FIX	0	255	5
17	EHT Vertical	FIX	-128	127	0
18	EHT Horizontal	FIX	-128	127	0
19	EHT Vertical2	FIX	-128	127	-7
20	EHT Horizontal2	FIX	-128	127	2
21	PAL VERPOS	FIX	0	127	18
22	PAL VERWIDTH	FIX	0	127	127

5. Video Adjust1

No	Item	Data	Min	Max	Initial value
1	<u>R Cutoff</u>	ADJ	0	255	127
2	G Cutoff	FIX	0	255	127
3	<u>B Cutoff</u>	ADJ	0	255	127
4	<u>R Drive</u>	ADJ	0	255	127
5	G Drive	FIX	0	255	127
6	<u>B Drive</u>	ADJ	0	255	127
7	<u>Sub Bright</u>	ADJ	0	100	45
8	<u>Sub Contrast</u>	ADJ	0	63	37
9	Sub Color	FIX	0	23	7
10	Sub Tint	FIX	0	100	57
11	AKB Option	FIX	0	1	1
12	BCL Threshold	FIX	-128	127	9
13	BCL Gain	FIX	0	255	200
14	BCL Time	FIX	0	255	255
15	Sub Sharpness	FIX	0	15	7
16	Pilot Low	FIX	10	127	5
17	Pilot High	FIX	10	127	13
18	V-Mute(x100ms)	FIX	0	15	3
19	BCL TCUP	FIX	0	65	50

6. Video Adjust2

No	Item	Data	Min	Max	Initial value
1	VSU	FIX	0	15	2
2	Melody Volume	FIX	0	20	5
3	HB Start	FIX	0	255	140
4	HB Stop	FIX	0	255	130
5	RF AGC	FIX	0	15	4
6	VM Gain	FIX	0	63	0
7	VM Delay	FIX	0	15	7
8	V Peaking	FIX	0	15	6
9	BLE Tilt	FIX	0	15	4
10	BLE Gain	FIX	0	3	1
11	BLE Mode	FIX	0	3	2
12	BLE Break	FIX	0	7	5
13	CTI Gain	FIX	0	15	1
14	CTI Coring	FIX	0	15	6
15	LTI Gain	FIX	0	15	5
16	D-EHT Time	FIX	0	255	5
17	DCT Ratio	FIX	0	255	85
18	VSP COMB	FIX	0	3	3

7. Video Adjust3

No	Item	Data	Min	Max	Initial value
1	NR Off Value	FIX	0	31	3
2	Gamma Mode	FIX	0	1	1
3	Gamma Correction	FIX	-255	255	80
4	BST StartPoint	FIX	0	255	127
5	BST Gain(B)	FIX	-64	63	100
6	DPWL Gain	FIX	0	255	120
7	DPWL Start	FIX	-64	0	150
8	PIP Contrast	FIX	0	15	6
9	PIP Tint	FIX	-32	31	57
10	PIP Color	FIX	0	15	5
11	PIP PAL V.Pos	FIX	0	255	24
12	PIP NTSC V.Pos	FIX	0	255	23
13	PIP H.Pos	FIX	0	255	39
14	PIP R Cutoff	FIX	0	15	3
15	PIP B Cutoff	FIX	0	255	3
16	PIP R Drive	FIX	0	255	157
17	PIP B Drive	FIX	0	255	158
18	NTSC VERPOS	FIX	0	170	18
19	NTSC VERWIDTH	FIX	0	170	101

8. EEPROM(NTSC)

No	Item	Data	Min	Max	Initial value
0	Dynamic Contrast	FIX	0	255	100
1	Dynamic Brightness	FIX	0	255	45
2	Dynamic Sharpness	FIX	0	255	65
3	Dynamic Color	FIX	0	255	43
4	Dynamic Tint	FIX	0	255	50
5	Standard Contrast	FIX	0	255	82
6	Standard Brightness	FIX	0	255	45
7	Standard Sharpness	FIX	0	255	50
8	Standard Color	FIX	0	255	43
9	Standard Tint	FIX	0	255	50
10	Movie Contrast	FIX	0	255	50
11	Movie Brightness	FIX	0	255	55
12	Movie Sharpness	FIX	0	255	25
13	Movie Color	FIX	0	255	40
14	Movie Tint	FIX	0	255	50
15					255
16					255
17					255
18					255
19	DVD SUB TINT	FIX	0		10
20	16:9 V-SHIFT	FIX	0	100	15
21	16:9 PARAVOLA	FIX	0	100	5
22	PIP BRIGHTNESS	FIX	0	15	0
23	Double TTX Contrast	FIX			255
24	TTX V Position	FIX	0	255	255
25	TTX H Position	FIX	0	255	255
26	TTX Contrast	FIX	0	255	255
27	TTX Brightness	FIX	0	255	255
28	OSD Contrast	FIX	0	255	120
29	OSD Brightness	FIX	0	255	25
30	Double TTX H Position	FIX	0	255	255
31	Standard Equ100(Std BASS)	FIX	0	8	50
32	Standard Equ300 (Std TREBLE)	FIX	0	13	50
33	Standard Equ1K (Music BASS)	FIX	0	14	85
34	Standard Equ3K (Music TREBLE)	FIX	0	13	70

No	Item	Data	Min	Max	Initial value
35	Standard 10K(Movie BASS)	FIX	0	12	95
36	Music Equ100 (Movie TREBLE)	FIX	0	18	50
37	Music Equ300 (Speech BASS)	FIX	0	14	40
38	Music Equ1K (Speech TREBLE)	FIX	0	11	50
39	Music Equ3K	FIX	0	14	255
40	Music 10K	FIX	0	18	255
41	Movie Equ100	FIX	0	22	255
42	Movie Equ300	FIX	0	15	255
43	Movie Equ1K	FIX	0	11	255
44	Movie Equ3K	FIX	0	12	255
45	Movie 10K	FIX	0	13	255
46	Speech Equ100	FIX	0	6	255
47	Speech Equ300	FIX	0	11	255
48	Speech Equ1K	FIX	0	14	255
49	Speech Equ3K	FIX	0	13	255
50	Speech 10K	FIX	0	11	255
51	Brightness(RGB/DVD)	FIX	0	255	6
52	Contrast(RGB/DVD)	FIX	0	63	42
53	U Saturation(RGB/DVD)	FIX	0	63	44
54	V saturation(RGB/DVD)	FIX	0	63	43
55	V/FBL Delay	FIX	0	255	85
56	CrCb Delay	FIX	0	255	84
57	d/w h-position	FIX	0	255	255
58	d/w -blanking 1	FIX	0	255	255
59	d/w -blanking 2	FIX	0	255	255
60	PIP G CUTOFF	FIX	0	255	4
61	PIP G DRIVE	FIX	0	255	170
62	OSD/PIP BRIGHT BALANCE	FIX	0	31	31
63	PIP BRIGHT OFFSET	FIX	0	255	86
64	MDB_STRENGTH	FIX	0	127	68
65	MDB_HARMONIC	FIX	0	127	37
66	MDB_HP	FIX	0	30	9
67	MDB_LP	FIX	0	30	11
68	MDB_LIM	FIX	0	255	87
69	MDB_CUTOFF	FIX	0	40	255
70	EHT POSITION 1	FIX	0	255	5

No	Item	Data	Min	Max	Initial value
71	EHT POSITION 2	FIX	0	255	249
72	3.4CH SLLTHD (TV-NO NOISE)	FIX	0	3	0
73	CH SLLTHD (TV-NO NOISE)	FIX	0	3	0
74	LNA Operating Point	FIX	0	255	166
75	SLLTHDV(TV NO NOISE)	FIX	0	6	0
76	LNA Default	FIX	0	1	0
77	LNA SWITCH	FIX	0	1	0
78	LMIXOFS	FIX	0	13	13
79	H-OUTDEL	FIX	0	255	72
80	CR-P Initial	FIX	0	255	4
81	CR-I Initial	FIX	0	255	5
82	DRX_CR_AMP_TH	FIX	0	255	10
83	Over Modulation Return Counter	FIX	0	255	100
84	VCR Mode Counter	FIX	0	255	5
85	VID_AMP_HEAD_BS (In the modulation)	FIX	0	255	40
86	CR_P (In the Over Modulation)	FIX	0	255	4
87	THRSEL(picture shaking when weak signal)	FIX	0	255	2
88	SLLTHDVP	FIX	0	255	1
89	EED_BC_MIN_LIMIT	FIX	0	255	150

9. Video Adjust COMP

No	Item	Data	Min	Max	Initial value
1	<u>R Cutoff Comp</u>	ADJ	0	32	11
2	G Cutoff Comp	FIX	0	32	0
3	<u>B Cutoff Comp</u>	ADJ	0	32	2
4	<u>R Drive Comp</u>	ADJ	0	32	0
5	G Drive Comp	FIX	0	32	0
6	<u>B Drive Comp</u>	ADJ	0	32	0
7	<u>Sub Bright Comp</u>	ADJ	0	32	23
8	<u>Sub Contrast Compa</u>	ADJ	0	32	0

10. YC Delay

No	Item	Data	Min	Max	Initial value
1	PAL Delay	FIX	-8	7	0
2	SECAM Delay	FIX	-8	7	0
3	NTSC Delay	FIX	-8	7	-3
4	PAL(AV) Delay	FIX	-8	7	0
5	SECAM(AV) Delay	FIX	-8	7	0
6	NTSC(AV) Delay	FIX	-8	7	0

11. Test Pattern

No	Item	Data	Min	Max	Initial value
1	Test Pattern	Fix	-	-	0

12. G2 Adjust

No	Item	Data	Min	Max	Initial value
1	Read Cut	-	0	255	-
2	Read Drive	-	0	255	-
3	IBRM	FIX	0	255	200
4	WDRM	FIX	0	255	50
5	CDL	FIX	0	255	180
6	COLR G B	FIX	0	255	50/50/50