3. Alignment & Adjustment

3-1 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.

   ⚠ Notice.
   - ■ These adjustments and the check list are only applied to S63A chassis-applied models.
   - ■ Only use 230V for the measurement set. It is recommended using an insulation transformer when supplying power to the set so as to prevent shock to the set or to yourself.
   - ■ These adjustment specifications have been created on the basis of the domestic S63A chassis-applied remote control model. Some of the contents may be changed subject to the sales location and the product specifications.

2. When replacing the F_Box Board :
   Since the software is loaded to the EPROM of the F_box board, check the version of the software of the EPROM.
   To check the version of the software, Enter service mode presee the key on the reomte control according to the following seguenu.
   (in stand-by status) Info→Menu→Mute→Power→ON
   The software information will then be displayed below the OSD menu.
   The notation of the software information : For example, T_SHPEU_1009 refers to "CORSET BASIC MODEL Europe. ver.1009".
   Since the settings including the Channel information, Deflection, etc. are saved to the nvRAM, reconfigure these settings when replacing the System Board

3. When replacing the Main Board : No adjustments required. Except that Tilt adjustment, focus adjustment, screen voltage setting and W/B adjustment are all required.

4. When replacing the CRT Ass'y : No adjustments required.

5. When replacing the front panel master power switch : No adjustments required.

6. When replacing the Side AV : No adjustments required.

7. When replacing the control switch : No adjustments required.

3-2 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)

   Info → Menu → Mute → Power On

   ※ When failing to enter Service Mode, repeat the procedure above.

2. The initial screen of Service Mode.

   < Europe>

   1. Deflection
   2. 480p/576p
   3. 720p/1080i
   4. 4:3 offset--VixIm
   5. Video Adkust1
   6. Video Adkust2
   7. Video Adkust3
   8. Video Adkust4
   9. Video Adkust5
   10. Video Adkust6
   11. Video Adkust7
   12. Video Adkust8
   13. OPTION (55 OB 00)
   14. YC Delay
   15. EEPROM
   16. Bus Stop
   17. checksum 0000
   18. RESET

3. Functions of the Keys within Service Mode

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

3-3 Factory Data

■ Europe

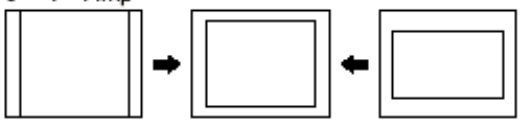
1. DEFLECTION(PAL)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	30	30	34	Adjust
1	V Shift	0~63	26	26	27	Adjust
2	H EW	0~63	30	30	21	Adjust
3	H Shift	0~63	36	36	42	Adjust
4	V Linearity	0~15	6	6	6	FIX
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	1	1	1	FIX
7	V SC	0~15	3	3	4	FIX
8	H Parabola	0~63	32	32	48	Adjust
9	Upper Corner	0~63	37	37	38	Adjust
10	Lower Corner	0~63	34	34	35	Adjust
11	H Trapezium	0~63	40	40	37	Adjust
12	Bow	0~63	32	32	34	Adjust
13	Angle	0~63	30	30	28	Adjust
14	V Position	0~63	32	32	32	FIX
15	H Parablar_Pal(Offset)	0~63	0	0	0	FIX
16	Upper Corner_Pal(Offset)	0~63	0	0	0	FIX
17	Lower Corner_Pal(Offset)	0~63	0	0	0	FIX
18	Bow(Offset)	0~63	0	0	0	FIX

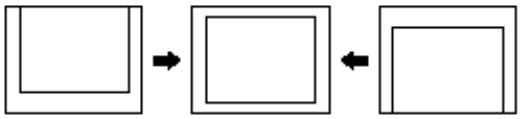
2. DEFLECTION(NTSC)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	-4	-6 → -4	-6	Adjust
1	V Shift	0~63	-3	-3	-3	Adjust
2	H EW	0~63	0	-2 → 0	-2	Adjust
3	H Shift	0~63	-3	0 → -3	0	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	4	4	4	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	H Parablar_Pal(Offset)	0~63	0	0	0	FIX
16	Upper Corner_Pal(Offset)	0~63	0	0	0	FIX
17	Lower Corner_Pal(Offset)	0~63	0	0	0	FIX
18	Bow(Offset)	0~63	0	0	0	FIX

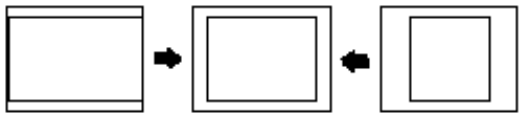
0 V - Amp



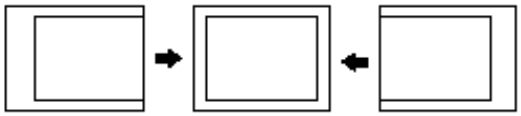
1 V-Shift



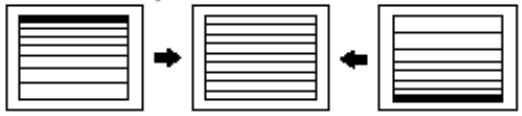
2 H-EW



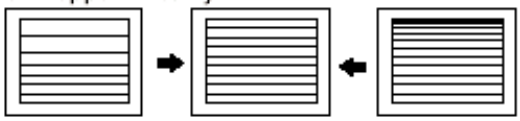
3 H-Shift



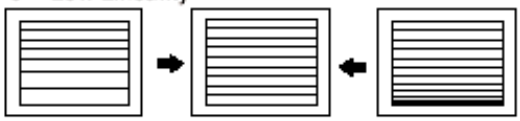
4 V-Linearity



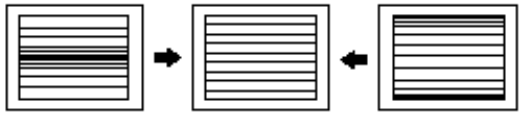
5 Upper Linearity



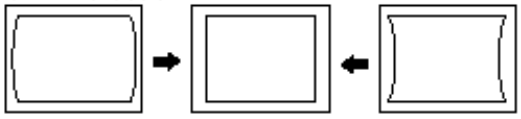
6 Low Linearity



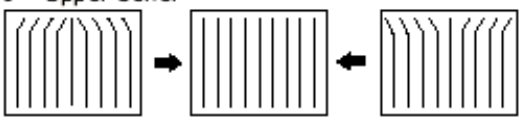
7 V SC



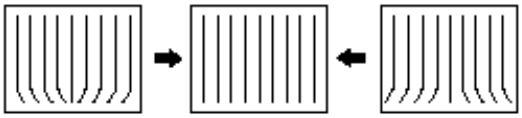
8 H-Parabola



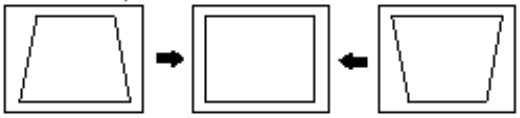
9 Upper Coner



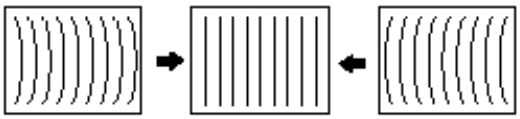
10 Low Coner



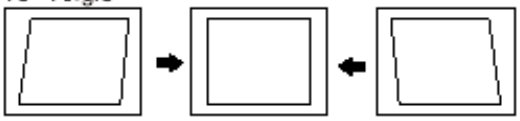
11 H- Trapezuim



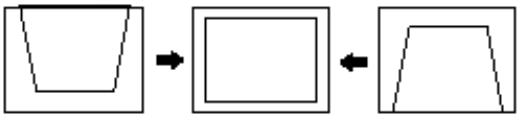
12 Bow



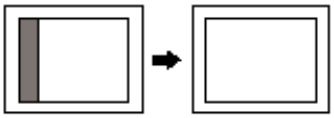
13 Angle



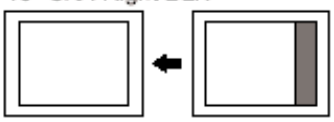
14 V Position



15 CXA Left BLK



16 CXA Right BLK



3. DTV DEFLECTION OFFSET(480P)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	-63~63	2	2	0	Adjust
1	V Shift	-63~63	0	0	0	Adjust
2	H EW	-63~63	0	0	0	Adjust
3	H Shift	-63~63	0	0	0	Adjust
4	V Linearity	-15~15	0	0	0	Adjust
5	Upper Linearity	-15~15	0	0	0	FIX
6	Lower Linearity	-15~15	0	0	0	FIX
7	V SC	-15~15	0	0	0	FIX
8	H Parabola	-63~63	0	0	0	Adjust
9	Upper Corner	-63~63	0	0	0	Adjust
10	Lower Corner	-63~63	0	0	0	Adjust
11	H Trapezium	-63~63	0	0	0	Adjust
12	Bow	-63~63	0	0	0	Adjust
13	Angle	-63~63	0	0	0	Adjust
14	V Position	-63~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

4. DTV DEFLECTION OFFSET(576P)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	-63~63	6	6	6	Adjust
1	V Shift	-63~63	-4	-4	-4	Adjust
2	H EW	-63~63	0	0	0	Adjust
3	H Shift	-63~63	0	0	0	Adjust
4	V Linearity	-15~15	0	0	0	Adjust
5	Upper Linearity	-15~15	0	0	0	FIX
6	Lower Linearity	-15~15	0	0	0	FIX
7	V SC	-15~15	0	0	0	FIX
8	H Parabola	-63~63	0	0	0	Adjust
9	Upper Corner	-63~63	0	0	0	Adjust
10	Lower Corner	-63~63	0	0	0	Adjust
11	H Trapezium	-63~63	3	3	8	Adjust
12	Bow	-63~63	0	0	0	Adjust
13	Angle	-63~63	0	0	0	Adjust
14	V Position	-63~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

5. DEFLECTION OFFSET(720P)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	0	0	0	Adjust
1	V Shift	0~63	0	0	0	Adjust
2	H EW	0~63	0	0	0	Adjust
3	H Shift	0~63	0	0	0	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	0	0	0	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	0~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	0~3	0	0	0	FIX

6. DEFLECTION OFFSET(1080I)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	-15	-15	-15	Adjust
1	V Shift	0~63	-5	-5	-5	Adjust
2	H EW	0~63	4	4	4	Adjust
3	H Shift	0~63	-3	-3	-3	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	5	5	5	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	0~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	0~3	0	0	0	FIX

7. 4:3 OFFSET_VIXLIM

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
1	H Parabola	-20~20	0	0	0	Adjust
2	Upper Corner	-20~20	0	0	0	Adjust
3	Lower Corner	-20~20	0	0	0	Adjust
4	Bow	-20~20	0	0	0	Adjust
5	Angle	-20~20	0	0	0	Adjust
6	H Shift	-20~20	0	0	0	Adjust
7	H Parabola NT	-20~20	0	0	0	Adjust
8	Upper Corner NT	-20~20	0	0	0	Adjust
9	Lower Corner NT	-20~20	0	0	0	Adjust
10	Bow NT	-20~20	0	0	0	Adjust
11	Angle NT	-20~20	0	0	0	Adjust
12	H Shift	-20~20	0	0	0	Adjust

8. VIDEO ADJUST 1

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	R CutOff	0~63	20	20	20	Adjust
1	G CutOff	0~63	20	20	20	FIX
2	B CutOff	0~63	20	20	20	Adjust
3	R Drive	0~63	32	32	32	Adjust
4	G Drive	0~63	32	32	32	FIX
5	B Drive	0~63	32	32	32	Adjust
6	Sub Bright	0~63	15	15	15	Adjust
7	Sub Contrast	0~15	9	9	9	Adjust
8	Bright VCTP	0~256	140	140	140	FIX
9	Contrast VCTP	0 ~ 63	28	28 → 30	30	FIX
10	SAT-VCTP	0 ~ 63	23	15 → 11	11	FIX
11	Tint VCTP	0 ~ 23	10	10	10	FIX
12	SC_RGB_ BRTADJ	-128 ~ 127	128	128	128	FIX
13	SC_RGB_ CONADJ	0 ~ 63	45	45	45	FIX
14	SC_RGB_ USATADJ	0 ~ 63	42	42 → 32	32	FIX
15	SC_RGB_ VSATADJ	0 ~ 63	42	42 → 32	32	FIX
16	RGB24_BRTADJ	0~255	14	16 → 14	14	FIX
17	RGB24_CONADJ	0 ~ 63	30	30	30	FIX
18	RGB24_ USATADJ	0 ~ 63	30	32 → 30	30	FIX
19	RGB24_ VSATADJ	0 ~ 63	30	32 → 30	30	FIX
20	RGB24_BR_HD	0~255	0	16 → 14	14	FIX
21	RGB24_CO_HD	0 ~ 63	30	30	30	FIX
22	RGB24_ USA_HD	0 ~ 63	30	32 → 30	30	FIX
23	RGB24_ VSA_HD	0 ~ 63	30	32 → 30	30	FIX

9. VIDEO ADJUST 2

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	ABL Mode	0~03	3	3	3	FIX
1	Gamma	0~03	0	0	2	FIX
2	ABL TH	0~15	14	14	3	FIX
3	AKB Time	0~31	15	15	15	FIX
4	S - ABL		3	3	3	FIX
5	P - ABL		6	9 → 6	9	FIX
6	VSU		0	0	0	FIX
7	LNA EXE	0 ~ 4	3	3	3	FIX
8	H_EHT comp	0~15	3	3	3	FIX
9	V_EHT comp	0~15	5	5	5	FIX
10	PIN EHT comp	0~07	3	2 → 3	3	FIX
11	AFC EHT comp	0~07	0	0	0	FIX
12	Sync Phase	0~1	0	0	0	FIX
13	Sync Phase (480)	0~1	1	1	1	FIX
14	Sync Phase (576P)	0~1	0	0	0	FIX
15	Sync Phase (720P)	0~1	1	1	1	FIX
16	Sync Phase (1080)	0~1	0	0	0	FIX

10. VIDEO ADJUST 3

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	TNR Enable	0 ~ 1	1	1	1	FIX
1	TNR Chroma	0 ~ 15	10	11	10	FIX
2	TNR Luma	0 ~ 15	11	11	7	FIX
3	LTI Enable	0 ~ 1	1	1	1	FIX
4	LTI Gain	0 ~ 15	15	15	15	FIX
5	LTI Gain x2	0 ~ 1	1	1	1	FIX
6	LTI Coring	0 ~ 7	2	3 → 2	3	FIX
7	Lmix gain		3	3	3	FIX
8	Lmix offset	0 ~ 31	13	12 → 13	13	FIX
9	Peak Center Freq	0~3	3	3	3	FIX
10	Peaking Coring	0 ~ 31	2	2	2	FIX
11	CTI BW	0 ~ 1	4	1 → 4	4	FIX
12	CTI LP	0 ~ 1	1	1	1	FIX
13	CTI Gain	0 ~ 15	5	5	5	FIX
14	CTI Coring	0 ~ 15	2	3 → 2	2	FIX
15	V Peaking	0 ~ 15	3	2 → 3	3	FIX
16	V Peak Coring gain	0~7	0	0	0	FIX
17	V Peak high gain	0~15	0	0	0	FIX
18	V Peak coring high	0~15	0	0	0	FIX
19	IF Comp Filter	0 ~ 7	4	4	4	FIX
20	DHYAPRESC	0~3	2	2	2	FIX
21	DHCAPRESC	0~3	2	2	2	FIX
22	Neg Peaking	0 ~ 15	11	11	11	FIX
23	DCE Gain	0~255	45	45	45	FIX
24	CORBP	0~1	0	0	0	FIX

11. VIDEO ADJUST 4

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	SVM RW	0 ~ 7	2	2	2	FIX
1	SVM Delay	0 ~ 7	0	0	0	FIX
2	SVM Coring	0 ~ 15	2	2	2	FIX
3	SVM Gain	0 ~ 63	45	45	45	FIX
4	SVM C_Gain	0 ~ 3	0	0	0	FIX
5	OSD Contrast	0 ~ 127	30	30	30	FIX
6	OSD Bright	-512 ~ 511	127	127	127	FIX
7	TTX Contrast	0 ~ 127	17	17	17	FIX
8	TTX Bright	`	127	127	127	FIX
9	Melody Volume	0 ~ 127	10	10	10	FIX
10	VCR Mode Cnt		30	30	30	FIX
11	SLLTHD		2	2	2	FIX
12	SLLTHDV		3	3	3	FIX
13	THRSEL		0	0	0	FIX
14	LPCDEL		0	0	0	FIX
15	Pilot High		13	13	13	FIX
16	Pilot Low		7	7	7	FIX
17	AM_Prescale		22	22	22	FIX

12. Video Adjust5 (60i/100i)

No	item	Range	PAL_RF	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
			Initial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		50	50	50	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		26	26	26	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		65	65	65	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		29	29	29	FIX
8	NAPPLIP_H		2	2	2	FIX
9	NAPPLIP_L		94	94	94	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		18	18	18	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		70	70	70	FIX
14	VSCPOSC_H		31	31	31	FIX
15	VSCPOSC_L		100	100	100	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		50	50	50	FIX
18	VERWIDTH_M_H		1	1	1	FIX
19	VERWIDTH_M_L		39	39	39	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		60	60	60	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		23	23	23	FIX
24	VSCPRESC_H		0	0	0	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		128	128	128	FIX
27	SD_CONADJ		32	32	32	FIX
28	SD_USATADJ		32	32	32	FIX
29	SD_VSATADJ		32	32	32	FIX

13. Video Adjust5 (NTSC)

No	item	Range	NTSC	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
			Initial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		75	75	75	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		235	235	235	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		50	50	50	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		30	30	30	FIX
8	NAPPLIP_H		2	2	2	FIX
9	NAPPLIP_L		18	18	18	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		10	10	10	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		45	45	45	FIX
14	VSCPOSC_H		12	12	12	FIX
15	VSCPOSC_L		20	20 → 80	20	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		88	88	88	FIX
18	VERWIDTH_M_H		2	2	2	FIX
19	VERWIDTH_M_L		5	5	5	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		30	30	30	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		10	10 → 15	10	FIX
24	VSCPRESC_H		4	4	4	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		128	128	128	FIX
27	SD_CONADJ		32	32	32	FIX
28	SD_USATADJ		32	32	32	FIX
29	SD_VSATADJ		32	32	32	FIX

14. Video Adjust5 (576i)

No	item	Range	576i	576i_32"	576i_29"	Remark
			Initial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		50	50	50	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		30	30	30	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		65	65	65	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	NAPPLIP_H		1	1	1	FIX
9	NAPPLIP_L		176	176	176	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		16	16	16	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		125	125	125	FIX
14	VSCPOSC_H		31	31	31	FIX
15	VSCPOSC_L		100	100	100	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		50	50	50	FIX
18	VERWIDTH_M_H		1	1	1	FIX
19	VERWIDTH_M_L		38	38	38	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		55	55	55	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		23	23	23	FIX
24	VSCPRESC_H		0	0	0	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		146	145	145	
27	SD_CONADJ		46	45	45	
28	SD_USATADJ		32	52	52	
29	SD_VSATADJ		32	54	54	

15. Video Adjust5 (480i)

No	item	Range	480i	480i_32"	480i_29"	Remark
			Initial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		48	48	48	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		246	246	246	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		60	60	60	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		21	21	21	FIX
8	NAPPLIP_H		1	1	1	FIX
9	NAPPLIP_L		101	101	101	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		16	16	16	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		125	125	125	FIX
14	VSCPOSC_H		12	12	12	FIX
15	VSCPOSC_L		0	0	0	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		48	48	48	FIX
18	VERWIDTH_M_H		1	1	1	FIX
19	VERWIDTH_M_L		241	241	241	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		41	41	41	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		24	24	24	FIX
24	VSCPRESC_H		4	4	4	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		146	146	146	FIX
27	SD_CONADJ		45	46 → 45	45	FIX
28	SD_USATADJ		52	32 → 52	52	FIX
29	SD_VSATADJ		52	32 → 52	52	FIX

16. Video Adjust6 (comp_HD)

No	item	Range	480P_HD	480P_HD_32"	480P_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		45	45	45	FIX
2	VERWIDTHP_H		1	1	1	FIX
3	VERWIDTHP_L		226	226	226	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		104	104	104	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		11	11	11	FIX
9	DHSCPRESC_L		100	100	100	FIX
10	DNAPPLIP_H		1	1	1	FIX
11	DNAPPLIP_L		11	11	11	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		1	1	1	FIX
16	HORPOS_S_L		41	41	41	FIX
	HPULLINMODE		0	0	0	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		131	131	131	FIX
19	DVSCPOSC_LO_L		17	17	17	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		255	255	255	FIX
22	HD_BRTADJ		145	145	145	FIX
23	HD_CONADJ		45	47 → 45	45	FIX
24	HD_USATADJ		52	32 → 52	52	FIX
25	HD_VSATADJ		52	32 → 52	52	FIX

17. Video Adjust6 (comp_HD)

No	item	Range	576P_HD	576P_HD_32"	576P_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		20	20	20	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		68	68	68	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		85	85	85	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		11	11	11	FIX
9	DHSCPRESC_L		210	210	210	FIX
10	DNAPPLIP_H		1	1	1	FIX
11	DNAPPLIP_L		35	35	35	FIX
12	DVOFPOSC		100	100	100	FIX
13	VERPOS_S		5	5	5	FIX
14	VEROFFS_S		6	6	6	FIX
15	HORPOS_S_H		1	1	1	FIX
16	HORPOS_S_L		1	1	1	FIX
	HPULLINMODE		0	0	0	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		66	66	66	FIX
19	DVSCPOSC_LO_L		203	203	203	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		215	215	215	FIX
22	HD_BRTADJ		146	145 → 146	146	FIX
23	HD_CONADJ		46	47 → 46	46	FIX
24	HD_USATADJ		53	32 → 53	53	FIX
25	HD_VSATADJ		54	32 → 54	54	FIX

18. Video Adjust6 (comp_HD)

No	item	Range	720P 50_HD	720P 50_HD_32"	720P 50_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		226	226	226	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		125	125	125	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		50	50	50	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		2	2	2	FIX
9	DHSCPRESC_L		30	30	30	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		240	240	240	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		1	1	1	FIX
16	HORPOS_S_L		15	15	15	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		71	71	71	FIX
18	DVSCPOSC_LO_H		60	60	60	FIX
19	DVSCPOSC_LO_L		178	178	178	FIX
20	DHSCPOSC_HI		15	15	15	FIX
21	DHSCPOSC_LO		255	255	255	FIX
22	HD_BRTADJ		142	144 → 142	142	FIX
23	HD_CONADJ		50	50	50	FIX
24	HD_USATADJ		50	32 → 50	50	FIX
25	HD_VSATADJ		50	32 → 50	50	FIX

19. Video Adjust6 (comp_HD)

No	item	Range	720P 60_HD	720P 60_HD_32"	720P 60_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		225	225	225	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		16	16	16	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		53	53	53	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		3	3	3	FIX
9	DHSCPRESC_L		210	210	210	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		214	214	214	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		24	24	24	FIX
14	VEROFFS_S		1	0 → 1	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		240	240	240	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		85	85	85	FIX
18	DVSCPOSC_LO_H		70	70 → 90	70	FIX
19	DVSCPOSC_LO_L		255	255	255	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		162	162	162	FIX
22	HD_BRTADJ		142	144 → 142	142	FIX
23	HD_CONADJ		50	50	50	FIX
24	HD_USATADJ		50	32 → 50	50	FIX
25	HD_VSATADJ		50	32 → 50	50	FIX

20. Video Adjust6 (comp_HD)

No	item	Range	1080i 50_HD	1080i 50_HD_32"	1080i 50_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		220	220	220	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		129	129	129	FIX
4	HORPOSP_H		0	0	0	FIX
5	HORPOSP_L		250	250	250	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		15	15	15	FIX
9	DHSCPRESC_L		30	30	30	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		0	0	0	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		131	131	131	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		53	53	53	FIX
18	DVSCPOSC_LO_H		69	69	69	FIX
19	DVSCPOSC_LO_L		255	255	255	FIX
20	DHSCPOSC_HI		13	13	13	FIX
21	DHSCPOSC_LO		246	246	246	FIX
22	HD_BRTADJ		143	145 → 143	145 → 143	FIX
23	HD_CONADJ		49	49	49	FIX
24	HD_USATADJ		50	32 → 50	32 → 50	FIX
25	HD_VSATADJ		50	32 → 50	32 → 50	FIX

21. Video Adjust6 (comp_HD)

No	item	Range	1080i 60_HD	1080i 60_HD_32"	1080i 60_HD_29"	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		30	30	30	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		17	17	17	FIX
4	HORPOSP_H		0	0	0	FIX
5	HORPOSP_L		180	180	180	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		14	14	14	FIX
9	DHSCPRESC_L		130	130	130	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		100	100	100	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		190	190	190	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		0	0	0	FIX
19	DVSCPOSC_LO_L		183	183	183	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		66	66	66	FIX
22	HD_BRTADJ		143	145 → 143	145 → 143	FIX
23	HD_CONADJ		49	49	49	FIX
24	HD_USATADJ		50	32 → 50	32 → 50	FIX
25	HD_VSATADJ		50	32 → 50	32 → 50	FIX

22. VIDEO ADJUST 7(color tone setting)

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	R drive offset Warm2	-20~+20	3	3 → 8	8	FIX
1	B drive offset Warm2	-20~+20	-9	-9	-9	FIX
2	R cutoff offset Warm2	-20~+20	6	6	6	FIX
3	B cutoff offset Warm2	-20~+20	-11	-11	-11	FIX
4	R drive offset Warm1	-20~+20	2	2 → 4	4	FIX
5	B drive offset Warm1	-20~+20	-2	-2 → -3	-3	FIX
6	R cutoff offset Warm1	-20~+20	3	3 → 4	4	FIX
7	B cutoff offset Warm1	-20~+20	-2	-2 → -3	-3	FIX
8	R drive offset Normal	-20~+20	0	0	0	FIX
9	B drive offset Normal	-20~+20	0	0	0	FIX
10	R cutoff offset Normal	-20~+20	0	0	0	FIX
11	B cutoff offset Normal	-20~+20	0	0	0	FIX
12	R drive offset Cool 1	-20~+20	0	0 → -5	-5	FIX
13	B drive offset Cool 1	-20~+20	4	4	4	FIX
14	R cutoff offset Cool 1	-20~+20	2	2 → 0	0	FIX
15	B cutoff offset Cool 1	-20~+20	6	6	6	FIX
16	R drive offset Cool 2	-20~+20	-2	-2	-2	FIX
17	B drive offset Cool 2	-20~+20	6	6	6	FIX
18	R cutoff offset Cool 2	-20~+20	0	0	0	FIX
19	B cutoff offset Cool 2	-20~+20	9	9	9	FIX

23. VIDEO ADJUST8

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	LTI Gain NTSC	NT RF	15	15	15	FIX
1	Peak_f0_NTSC	NT RF	3	3	3	
2	Peak_cor_NTSC	NT RF	2	2	2	FIX
3	CTI_gain_NTSC	NT RF	5	5	5	FIX
4	Lmix gain_NTSC	NT RF	3	3	3	FIX
5	Lmix offset_NT	NT RF	13	13	13	FIX
6	LTI Gain AV	AV(CVBS)	15	15	15	FIX
7	Peak_f0_AV	AV(CVBS)	3	3	3	FIX
8	Peak_cor_AV	AV(CVBS)	2	2	2	FIX
9	CTI_gain_AV	AV(CVBS)	5	5	5	FIX
10	Lmix gain_AV	AV(CVBS)	6	3	3	FIX
11	Lmix offset_AV	AV(CVBS)	13	13	13	FIX
12	LTI Gain SD	DVD,480P,576P	15	15	15	FIX
13	Peak_f0_SD	DVD,480P,576P	0	0	0	FIX
14	Peak_cor_SD	DVD,480P,576P	2	2	2	FIX
15	CTI_gain_SD	DVD,480P,576P	5	0 → 5	5	FIX
16	Lmix gain_SD	DVD,480P,576P	3	3	3	FIX
17	Lmix offset_SD	DVD,480P,576P	13	13	13	FIX
18	LTI Gain HD	720P,1080I	15	15	15	FIX
19	Peak_f0_ HD	720P,1080I	3	3	3	FIX
20	Peak_cor_ HD	720P,1080I	2	2	2	FIX
21	CTI_gain_ HD	720P,1080I	5	5	5	FIX
22	Lmix gain_ HD	720P,1080I	3	3	3	FIX
23	Lmix offset_ HD	720P,1080I	13	13	13	FIX

24. YC Delay

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	P.YC (AV) Delay	-8 ~ 7	4	4	4	FIX
1	S.YC (AV) Delay	-8 ~ 7	0	0	0	FIX
2	N.YC (AV) Delay	-8 ~ 7	1	1	1	FIX
3	P.BG.YC Delay	-8 ~ 7	4	4	4	FIX
4	P.DK.YC Delay	-8 ~ 7	4	4	4	FIX
5	P.I.YC Delay	-8 ~ 7	2	2	2	FIX
6	P.M.YC Delay	-8 ~ 7	0	0	0	FIX
7	P.L.YC Delay	-8 ~ 7	3	3	3	FIX
8	S.BG.YC Delay	-8 ~ 7	-1	-1	-1	FIX
9	S.DK.YC Delay	-8 ~ 7	-1	-1	-1	FIX
10	S.I.YC Delay	-8 ~ 7	-2	-2	-2	FIX
11	S.M.YC Delay	-8 ~ 7	0	0	0	FIX
12	S.L.YC Delay	-8 ~ 7	0	0	0	FIX
13	N.M.YC Delay	-8 ~ 7	-1	-1	-1	FIX
14	SD YFDEL	0 ~ 127	60	60	60	FIX
15	SD_UVDEL	0 ~ 127	60	60	60	FIX
16	RGB Y_Delay	0 ~ 127	118	118	118	FIX
17	RGB UV_Delay	0 ~ 127	118	118	118	FIX
18	HD_DELB	0 ~ 3	0	0	0	FIX
19	HD_DELG	0 ~ 3	0	0	0	FIX
20	HD_DELR	0 ~ 3	0	0	0	FIX

25. EEPROM

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
0	System		1	1	1	FIX
1	System_480		2	2	2	FIX
2	System_1080		3	3	3	FIX
3	Dynamic Contrast		90	100	90	FIX
4	Dynamic Brightness		50	40	50	FIX
5	Dynamic Shapness		75	65	75	FIX
6	Dynamic Color		50	50	50	FIX
7	Dynamic Tint		50	50	50	FIX
8	Dynamic Color Tone		2	2	2	FIX
9	Standard Contrast		70	70	70	FIX
10	Standard Brightness		50	50	50	FIX
11	Standard Shapness		50	50	50	FIX
12	Standard Color		45	45	45	FIX
13	Standard Tint		50	50	50	FIX
14	Standard Color Tone		2	2	2	FIX
15	Movie Contrast		50	50	50	FIX
16	Movie Brightness		50	50	50	FIX
17	Movie Shapness		40	40	40	FIX
18	Movie Color		40	40	40	FIX
19	Movie Tint		50	50	50	FIX
20	Movie Color Tone		4	4	4	FIX
21	Left _Blank		17	17	17	FIX
22	Right_Blank		25	25	25	FIX
23	Left Blanking (480)		25	25	25	FIX
24	Right Blanking (480)		25	25	25	FIX
25	Left Blanking (720)		44	44	44	FIX
26	Right Blanking (720)		25	25	25	FIX
27	Left Blanking (1080)		44	44	44	FIX
28	Right Blanking (1080)		25	25	25	FIX
29	RGB Tint	0 ~ 127	0	0	0	FIX
30	DVD Tint	0 ~ 127	0	0	0	FIX
31	Bypass Deint	0 ~ 1	0	0	0	FIX
32	SLMCSW	0 ~ 1	1	1	1	FIX
33	DCE Gain		30	30	30	FIX
34	TTX V-Position		41	41	41	FIX
35	TTX H-Position		222	222	222	FIX
36			255	255	255	FIX
37	37~64 not available		4	4	4	FIX
38	VIDEO ADJUST6 1080I 50		220	220	220	FIX
39			2	2	2	FIX
40			129	129	129	FIX
41			0	0	0	FIX
42	-		250	250	250	FIX
43	-		0	0	0	FIX
44	-		26	26	26	FIX
45	-		15	15	15	FIX

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
46	System		30	30	30	FIX
47	System_480		0	0	0	FIX
48	System_1080		0	0	0	FIX
49	Dynamic Contrast		128	128	128	FIX
50	Dynamic Brightness		6	6	6	FIX
51	Dynamic Shapness		0	0	0	FIX
52	Dynamic Color		0	0	0	FIX
53	Dynamic Tint		131	131	131	FIX
54	Dynamic Color Tone		1	1	1	FIX
55	Standard Contrast		53	53	53	FIX
56	Standard Brightness		69	69	69	FIX
57	Standard Shapness		255	255	255	FIX
58	Standard Color		13	13	13	FIX
59	Standard Tint		246	246	246	FIX
60	Standard Color Tone		145	145	145	FIX
61	Movie Contrast		49	49	49	FIX
62	Movie Brightness		32	32	32	FIX
63	Movie Shapness		32	32	32	FIX
64	Movie Color		-1	-1	-1	
65	Movie Tint		-1	-1	-1	
66	Movie Color Tone		-1	-1	-1	
67	Left _Blank		-1	-1	-1	
68	Right_Blank	0~3	1	1	1	FIX
69	Left Blanking (480)	0~3	2	2	2	FIX
70	Right Blanking (480)	0~63	45	45	45	FIX
71	Left Blanking (720)		0	0	0	
72	Right Blanking (720)		15	15	15	FIX
73	Left Blanking (1080)		16	16	16	FIX
74	Right Blanking (1080)		30	30	30	FIX
75	RGB Tint		32	32	32	FIX
76	DVD Tint		32	32	32	FIX
77	Bypass Deint		255	255	255	FIX
78	SLMCSW	0~255	255	255	255	FIX
79	DCE Gain	0~255	255	255	255	FIX
80	TTX V-Position	-20~+20	0	0	0	FIX
81	TTX H-Position	-20~+20	0	0	0	FIX
82		-20~+20	7	7	7	FIX
83	37~64 not available	-20~+20	6	6	6	FIX
84	VIDEO ADJUST6 1080I 50	-20~+20	0	0	0	FIX
85		-20~+20	0	0	0	FIX
86		-20~+20	7	7	7	FIX
87		-20~+20	6	6	6	FIX
88	-	-20~+20	0	0	0	FIX
89	-	-20~+20	0	0	0	FIX
90	-	-20~+20	0	7	7	FIX
91	-	-20~+20	7	6	6	FIX

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
92	R drive offset 720P-50HZ	-20~+20	6	0	0	FIX
93	G drive offset 720P-50HZ	-20~+20	0	0	0	FIX
94	R cutoff offset 720P-50HZ	-20~+20	7	7	7	FIX
95	G cutoff offset 720P-50HZ	-20~+20	6	6	6	FIX
96	R drive offset 480P	-20~+20	0	0	0	FIX
97	G drive offset 480P	-20~+20	0	0	0	FIX
98	R cutoff offset 480P	-20~+20	0	0	0	FIX
99	G cutoff offset 480P	-20~+20	0	0	0	FIX
100	R drive offset 576P	-20~+20	0	0	0	FIX
101	G drive offset 576P	-20~+20	0	0	0	FIX
102	R cutoff offset 576P	-20~+20	0	0	0	FIX
103	G cutoff offset 576P	-20~+20	0	0	0	FIX
104	R drive offset 480i	-20~+20	0	0	0	FIX
105	G drive offset 480i	-20~+20	0	0	0	FIX
106	R cutoff offset 480i	-20~+20	0	0	0	FIX
107	G cutoff offset 480i	-20~+20	0	0	0	FIX
108	R drive offset 576i	-20~+20	0	0	0	FIX
109	G drive offset 576i	-20~+20	0	0	0	FIX
110	R cutoff offset 576i	-20~+20	0	0	0	FIX
111	G cutoff offset 576i	-20~+20	0	0	0	FIX
112	H_EHT comp_720p		1	1	1	
113	V_EHT comp_720p		5	5	5	
114	PIN EHT comp_720p		1	1	1	
115	ABL TH_1080i		3	3	3	
116	Color On_NTSC		2	2	2	
117	Color Killer Threshold_NTSC		210	210	210	
118	ACC Limitation_NTSC		16	16	16	
119	Color Killer Threshold_AV		230	230	230	
120	120~146 not available		4			
146	VIDEO ADJUST6 720P50		226			
148	148~166 not available		2			
166	NTSC DEFLECTION		125			
168	168~186 not available		1			
186	480P DEFLECTION		50			
187	187~205 not available		0			
205	576P DEFLECTION		26			
206	206~224 not available		2			
224	720P DEFLECTION		30			
225	225~243 not available		0			
243	1080I DEFLECTION		240			
244	PIP CONT	0~255	128	128	128	FIX
245	PIP-Bright	0~255	245	245	245	FIX
246	PIP-SCURVE	0~1	1	1	1	FIX
247	PIP-CTI	0~3	2	2	2	FIX
248	PIP-Sharp	0~7	0	0	5	FIX
249	PIP-Tint	0~255	0	0	0	FIX

No	item	Range	intial	WS32Z30/40 (32")	CW29Z30/40 (29")	Remark
				Data	Data	
250			21	21	21	
251			255	255	255	
252			255	255	255	
253			0	0	0	
254			0	0	0	
255	HD_P-ABL		9	9	9	FIX

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1. DEFLECTION(PAL)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	30	30	34	Adjust
1	V Shift	0~63	26	26	27	Adjust
2	H EW	0~63	30	30	21	Adjust
3	H Shift	0~63	36	36	42	Adjust
4	V Linearity	0~15	6	6	6	FIX
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	1	1	1	FIX
7	V SC	0~15	3	3	6	FIX
8	H Parabola	0~63	32	32	48	Adjust
9	Upper Corner	0~63	37	37	38	Adjust
10	Lower Corner	0~63	34	34	35	Adjust
11	H Trapezium	0~63	40	40	37	Adjust
12	Bow	0~63	32	32	34	Adjust
13	Angle	0~63	30	30	28	Adjust
14	V Position	0~63	32	32	32	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

2. DEFLECTION(NTSC)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	-4	-4	-6	Adjust
1	V Shift	0~63	-3	-3	-3	Adjust
2	H EW	0~63	0	0	-2	Adjust
3	H Shift	0~63	-3	-3	0	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	4	4	4	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

3. DTV DEFLECTION OFFSET(480P)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	-63~63	2	2	0	Adjust
1	V Shift	-63~63	0	0	0	Adjust
2	H EW	-63~63	0	0	0	Adjust
3	H Shift	-63~63	0	0	0	Adjust
4	V Linearity	-15~15	0	0	0	Adjust
5	Upper Linearity	-15~15	0	0	0	FIX
6	Lower Linearity	-15~15	0	0	0	FIX
7	V SC	-15~15	0	0	0	FIX
8	H Parabola	-63~63	0	0	0	Adjust
9	Upper Corner	-63~63	0	0	0	Adjust
10	Lower Corner	-63~63	0	0	0	Adjust
11	H Trapezium	-63~63	0	0	0	Adjust
12	Bow	-63~63	0	0	0	Adjust
13	Angle	-63~63	0	0	0	Adjust
14	V Position	-63~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

4. DTV DEFLECTION OFFSET(576P)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	-63~63	6	6	-2	Adjust
1	V Shift	-63~63	-4	-4	-4	Adjust
2	H EW	-63~63	0	0	-3	Adjust
3	H Shift	-63~63	0	0	4	Adjust
4	V Linearity	-15~15	0	0	0	Adjust
5	Upper Linearity	-15~15	0	0	0	FIX
6	Lower Linearity	-15~15	0	0	0	FIX
7	V SC	-15~15	0	0	0	FIX
8	H Parabola	-63~63	0	0	0	Adjust
9	Upper Corner	-63~63	0	0	0	Adjust
10	Lower Corner	-63~63	0	0	0	Adjust
11	H Trapezium	-63~63	3	3	8	Adjust
12	Bow	-63~63	0	0	0	Adjust
13	Angle	-63~63	0	0	0	Adjust
14	V Position	-63~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	-3~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	-3~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	-3~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	-3~3	0	0	0	FIX

5. DEFLECTION OFFSET(720P)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	0	0	0	Adjust
1	V Shift	0~63	0	0	0	Adjust
2	H EW	0~63	0	0	0	Adjust
3	H Shift	0~63	0	0	0	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	0	0	0	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	0~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	0~3	0	0	0	FIX

6. DEFLECTION OFFSET(1080I)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	V Amp	0~63	-15	-15	-15	Adjust
1	V Shift	0~63	-5	-5	-5	Adjust
2	H EW	0~63	4	4	4	Adjust
3	H Shift	0~63	-3	-3	-3	Adjust
4	V Linearity	0~15	0	0	0	Adjust
5	Upper Linearity	0~15	0	0	0	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	0	0	0	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	0	0	0	Adjust
11	H Trapezium	0~63	5	5	5	Adjust
12	Bow	0~63	0	0	0	Adjust
13	Angle	0~63	0	0	0	Adjust
14	V Position	0~63	0	0	0	FIX
15	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
16	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
17	UP-UCP (Up Corner posiotion Control)	0~3	0	0	0	FIX
18	LO-UCP (Low Corner posiotion Control)	0~3	0	0	0	FIX

7. 4:3 OFFSET_VIXLIM

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
1	H Parabola	-20~20	0	0	0	Adjust
2	Upper Corner	-20~20	0	0	1	Adjust
3	Lower Corner	-20~20	0	0	2	Adjust
4	Bow	-20~20	0	0	3	Adjust
5	Angle	-20~20	0	0	4	Adjust
6	H Shift	-20~20	0	0	5	Adjust
7	H Parabola NT	-20~20	0	0	6	Adjust
8	Upper Corner NT	-20~20	0	0	7	Adjust
9	Lower Corner NT	-20~20	0	0	8	Adjust
10	Bow NT	-20~20	0	0	9	Adjust
11	Angle NT	-20~20	0	0	10	Adjust
12	H Shift	-20~20	0	0	11	Adjust

8. VIDEO ADJUST 1

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	R CutOff	0~63	20	20	20	Adjust
1	G CutOff	0~63	20	20	20	FIX
2	B CutOff	0~63	20	20	20	Adjust
3	R Drive	0~63	32	32	32	Adjust
4	G Drive	0~63	32	32	32	FIX
5	B Drive	0~63	32	32	32	Adjust
6	Sub Bright	0~63	15	15	15	Adjust
7	Sub Contrast	0~15	9	9	9	Adjust
8	Bright VCTP	0~256	140	140	140	FIX
9	Contrast VCTP	0 ~ 63	28	30	30	FIX
10	SAT-VCTP	0 ~ 63	23	11	11	FIX
11	Tint VCTP	0 ~ 23	10	10	10	FIX
12	RGB Bright	-128 ~ 127	128	128	128	FIX
13	RGB Contrast	0 ~ 63	45	45	45	FIX
14	RGB U_Sat	0 ~ 63	42	32	32	FIX
15	RGB V_Sat	0 ~ 63	42	32	32	FIX
16	RGB24_BRTADJ	0~255	14	14	14	FIX
17	RGB24_CONADJ	0 ~ 63	30	30	30	FIX
18	RGB24_ USATADJ	0 ~ 63	30	30	30	FIX
19	RGB24_ VSATADJ	0 ~ 63	30	30	30	FIX
20	RGB24_BR_HD	0~255	14	14	14	FIX
21	RGB24_CO_HD	0 ~ 63	30	30	30	FIX
22	RGB24_ USA_HD	0 ~ 63	30	30	30	FIX
23	RGB24_ VSA_HD	0 ~ 63	30	30	30	FIX

9. VIDEO ADJUST 2

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	ABL Mode	0~03	3	3	3	FIX
1	Gamma	0~03	0	0	2	FIX
2	ABL TH	0~15	14	14	3	FIX
3	AKB Time	0~31	15	15	15	FIX
4	S - ABL		3	3	3	FIX
5	P - ABL		6	6	9	FIX
6	VSU		0	0	0	FIX
7	LNA EXE	0 ~ 4	3	3	3	FIX
8	H_EHT comp	0~15	3	3	3	FIX
9	V_EHT comp	0~15	5	5	5	FIX
10	PIN EHT comp	0~07	3	3	3	FIX
11	AFC EHT comp	0~07	0	0	0	FIX
12	Sync Phase	0~1	0	0	0	FIX
13	Sync Phase (480)	0~1	1	1	1	FIX
14	Sync Phase (576P)	0~1	0	0	0	FIX
15	Sync Phase (720P)	0~1	1	1	1	FIX
16	Sync Phase (1080)	0~1	0	0	0	FIX

10. VIDEO ADJUST 3

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	TNR Enable	0 ~ 1	1	1	1	FIX
1	TNR Chroma	0 ~ 15	10	11	10	FIX
2	TNR Luma	0 ~ 15	11	11	7	FIX
3	LTI Enable	0 ~ 1	1	1	1	FIX
4	LTI Gain	0 ~ 15	15	15	15	FIX
5	LTI Gain x2	0 ~ 1	1	1	1	FIX
6	LTI Coring	0 ~ 7	2	2	3	FIX
7	Lmix gain		3	3	3	FIX
8	Lmix offset	0 ~ 31	13	13	13	FIX
9	Peak Center Freq	0~3	3	3	3	FIX
10	Peaking Coring	0 ~ 31	2	2	2	FIX
11	CTI BW	0 ~ 1	1	4 → 1	1	FIX
12	CTI LP	0 ~ 1	1	1	1	FIX
13	CTI Gain	0 ~ 15	5	5	5	FIX
14	CTI Coring	0 ~ 15	2	2	2	FIX
15	V Peaking	0 ~ 15	3	3	3	FIX
16	V Peak Coring gain	0~7	0	0	0	FIX
17	V Peak high gain	0~15	0	0	0	FIX
18	V Peak coring high	0~15	0	0	0	FIX
19	IF Comp Filter	0 ~ 7	4	4	4	FIX
20	DHYAPRESC	0~3	2	2	2	FIX
21	DHCAPRESC	0~3	2	2	2	FIX
22	Neg Peaking	0 ~ 7	11	11	11	FIX
23	DCE Gain	0~255	45	45	45	FIX
24	CORBP	0~1	0	0	0	FIX

11. VIDEO ADJUST 4

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	SVM RW	0 ~ 7	2	2	2	FIX
1	SVM Delay	0 ~ 7	0	0	0	FIX
2	SVM Coring	0 ~ 15	2	2	2	FIX
3	SVM Gain	0 ~ 63	45	45	45	FIX
4	SVM C_Gain	0 ~ 3	0	0	0	FIX
5	OSD Contrast	0 ~ 127	30	30	30	FIX
6	OSD Bright	-512 ~ 511	127	127	127	FIX
7	TTX Contrast	0 ~ 127	17	17	17	FIX
8	TTX Bright	-512 ~ 511	127	127	127	FIX
9	Melody Volume	0 ~ 127	10	10	10	FIX
10	VCR Mode Cnt		30	30	30	FIX
11	SLLTHD		2	2	2	FIX
12	SLLTHDV		3	3	3	FIX
13	THRSEL		0	0	0	FIX
14	LPCDEL		0	0	0	FIX
15	Pilot High		13	13	13	FIX
16	Pilot Low		7	7	7	FIX
17	AM_Prescale		22	22	22	FIX

12. Video Adjust5 (60i/100i)

No	item	Range	PAL_RF	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		50	50	50	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		26	26	26	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		65	65	65	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		29	29	29	FIX
8	NAPPLIP_H		2	2	2	FIX
9	NAPPLIP_L		94	94	94	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		18	18	18	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		70	70	70	FIX
14	VSCPOSC_H		31	31	31	FIX
15	VSCPOSC_L		100	100	100	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		50	50	50	FIX
18	VERWIDTH_M_H		1	1	1	FIX
19	VERWIDTH_M_L		39	39	39	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		60	60	60	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		23	23	23	FIX
24	VSCPRESC_H		0	0	0	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		128	128	128	FIX
27	SD_CONADJ		32	32	32	FIX
28	SD_USATADJ		32	32	32	FIX
29	SD_VSATADJ		32	32	32	FIX

13. Video Adjust5 (NTSC)

No	item	Range	NTSC	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		75	75	75	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		235	235	235	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		50	50	50	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		30	30	30	FIX
8	NAPPLIP_H		2	2	2	FIX
9	NAPPLIP_L		18	18	18	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		10	10	10	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		45	45	45	FIX
14	VSCPOSC_H		12	12	12	FIX
15	VSCPOSC_L		20	80	20	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		88	88	88	FIX
18	VERWIDTH_M_H		2	2	2	FIX
19	VERWIDTH_M_L		5	5	5	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		30	30	30	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		10	15	10	FIX
24	VSCPRESC_H		4	4	4	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		128	128	128	FIX
27	SD_CONADJ		32	32	32	FIX
28	SD_USATADJ		32	32	32	FIX
29	SD_VSATADJ		32	32	32	FIX

14. Video Adjust5 (576i)

No	item	Range	576i	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	5
1	HORWIDTHP_L		50	50	50	5
2	VERIWDTHP_H		1	1	1	50
3	VERIWDTHP_L		30	30	30	50
4	HORPOSP_H		1	1	1	1
5	HORPOSP_L		65	65	65	1
6	VERPOSP_H		0	0	0	30
7	VERPOSP_L		26	26	26	30
8	NAPPLIP_H		1	1	1	1
9	NAPPLIP_L		176	176	176	1
10	NALPFIP_H		0	0	0	65
11	NALPFIP_L		16	16	16	65
12	HSCPOSC_H		8	8	8	0
13	HSCPOSC_L		125	125	125	0
14	VSCPOSC_H		31	31	31	26
15	VSCPOSC_L		100	100	100	26
16	HORWIDTH_M_H		5	5	5	1
17	HORWIDTH_M_L		50	50	50	1
18	VERWIDTH_M_H		1	1	1	176
19	VERWIDTH_M_L		38	38	38	176
20	HORPOS_M_H		1	1	1	0
21	HORPOS_M_L		55	55	55	0
22	VERPOS_M_H		0	0	0	16
23	VERPOS_M_L		23	23	23	16
24	VSCPRESC_H		0	0	0	8
25	VSCPRESC_L		0	0	0	8
26	SD_BRTADJ		145	145	145	125
27	SD_CONADJ		45	45	45	125
28	SD_USATADJ		52	52	52	31
29	SD_VSATADJ		54	54	54	31

15. Video Adjust5 (480i)

No	item	Range	480i	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	
1	HORWIDTHP_L		48	48	48	FIX
2	VERIWDTHP_H		1	1	1	FIX
3	VERIWDTHP_L		246	246	246	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		60	60	60	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		21	21	21	FIX
8	NAPPLIP_H		1	1	1	FIX
9	NAPPLIP_L		101	101	101	FIX
10	NALPFIP_H		0	0	0	FIX
11	NALPFIP_L		16	16	16	FIX
12	HSCPOSC_H		8	8	8	FIX
13	HSCPOSC_L		125	125	125	FIX
14	VSCPOSC_H		12	12	12	FIX
15	VSCPOSC_L		0	0	0	FIX
16	HORWIDTH_M_H		5	5	5	FIX
17	HORWIDTH_M_L		48	48	48	FIX
18	VERWIDTH_M_H		1	1	1	FIX
19	VERWIDTH_M_L		241	241	241	FIX
20	HORPOS_M_H		1	1	1	FIX
21	HORPOS_M_L		41	41	41	FIX
22	VERPOS_M_H		0	0	0	FIX
23	VERPOS_M_L		24	24	24	FIX
24	VSCPRESC_H		4	4	4	FIX
25	VSCPRESC_L		0	0	0	FIX
26	SD_BRTADJ		146	146	146	FIX
27	SD_CONADJ		45	45	45	FIX
28	SD_USATADJ		52	52	52	FIX
29	SD_VSATADJ		52	52	52	FIX

16. Video Adjust6 (comp_HD)

No	item	Range	480P_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		45	45	45	FIX
2	VERWIDTHP_H		1	1	1	FIX
3	VERWIDTHP_L		226	226	226	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		104	104	104	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		11	11	11	FIX
9	DHSCPRESC_L		100	100	100	FIX
10	DNAPPLIP_H		1	1	1	FIX
11	DNAPPLIP_L		11	11	11	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		1	1	1	FIX
16	HORPOS_S_L		41	41	41	FIX
	HPULLINMODE		0	0	0	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		131	131	131	FIX
19	DVSCPOSC_LO_L		17	17	17	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		255	255	255	FIX
22	HD_BRTADJ		145	145	145	FIX
23	HD_CONADJ		45	45	45	FIX
24	HD_USATADJ		52	52	52	FIX
25	HD_VSATADJ		52	52	52	FIX

17. Video Adjust6 (comp_HD)

No	item	Range	576P_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		20	20	20	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		68	68	68	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		85	85	85	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		11	11	11	FIX
9	DHSCPRESC_L		210	210	210	FIX
10	DNAPPLIP_H		1	1	1	FIX
11	DNAPPLIP_L		35	35	35	FIX
12	DVOFPOSC		100	100	100	FIX
13	VERPOS_S		5	5	5	FIX
14	VEROFFS_S		6	6	6	FIX
15	HORPOS_S_H		0	0	1	FIX
16	HORPOS_S_L		255	255	1	FIX
	HPULLINMODE		0	0	0	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		66	66	66	FIX
19	DVSCPOSC_LO_L		203	203	203	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		215	215	215	FIX
22	HD_BRTADJ		146	146	146	FIX
23	HD_CONADJ		46	46	46	FIX
24	HD_USATADJ		53	53	53	FIX
25	HD_VSATADJ		54	54	54	FIX

18. Video Adjust6 (comp_HD)

No	item	Range	720P 50_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		226	226	226	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		125	125	125	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		50	50	50	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		2	2	2	FIX
9	DHSCPRESC_L		30	30	30	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		240	240	240	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		1	1	1	FIX
16	HORPOS_S_L		15	15	15	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		71	71	71	FIX
18	DVSCPOSC_LO_H		60	60	60	FIX
19	DVSCPOSC_LO_L		178	178	178	FIX
20	DHSCPOSC_HI		15	15	15	FIX
21	DHSCPOSC_LO		255	255	255	FIX
22	HD_BRTADJ		142	142	142	FIX
23	HD_CONADJ		50	50	50	FIX
24	HD_USATADJ		50	50	50	FIX
25	HD_VSATADJ		50	50	50	FIX

19. Video Adjust6 (comp_HD)

No	item	Range	720P 60_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		225	225	225	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		16	16	16	FIX
4	HORPOSP_H		1	1	1	FIX
5	HORPOSP_L		53	53	53	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		3	3	3	FIX
9	DHSCPRESC_L		210	210	210	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		214	214	214	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		24	24	24	FIX
14	VEROFFS_S		1	1	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		240	240	240	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		85	85	85	FIX
18	DVSCPOSC_LO_H		70	90	70	FIX
19	DVSCPOSC_LO_L		255	255	255	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		162	162	162	FIX
22	HD_BRTADJ		142	142	142	FIX
23	HD_CONADJ		50	50	50	FIX
24	HD_USATADJ		50	50	50	FIX
25	HD_VSATADJ		50	50	50	FIX

20. Video Adjust6 (comp_HD)

No	item	Range	1080i 50_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		4	4	4	FIX
1	HORWIDTHP_L		220	220	220	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		129	129	129	FIX
4	HORPOSP_H		0	0	0	FIX
5	HORPOSP_L		250	250	250	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		15	15	15	FIX
9	DHSCPRESC_L		30	30	30	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		0	0	0	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		131	131	131	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		53	53	53	FIX
18	DVSCPOSC_LO_H		69	69	69	FIX
19	DVSCPOSC_LO_L		255	255	255	FIX
20	DHSCPOSC_HI		13	13	13	FIX
21	DHSCPOSC_LO		246	246	246	FIX
22	HD_BRTADJ		143	143	143	FIX
23	HD_CONADJ		49	49	49	FIX
24	HD_USATADJ		50	50	50	FIX
25	HD_VSATADJ		50	50	50	FIX

21. Video Adjust6 (comp_HD)

No	item	Range	1080i 60_HD	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
			intial	Data	Data	
0	HORWIDTHP_H		5	5	5	FIX
1	HORWIDTHP_L		30	30	30	FIX
2	VERWIDTHP_H		2	2	2	FIX
3	VERWIDTHP_L		17	17	17	FIX
4	HORPOSP_H		0	0	0	FIX
5	HORPOSP_L		180	180	180	FIX
6	VERPOSP_H		0	0	0	FIX
7	VERPOSP_L		26	26	26	FIX
8	DHSCPRESC_H		14	14	14	FIX
9	DHSCPRESC_L		130	130	130	FIX
10	DNAPPLIP_H		0	0	0	FIX
11	DNAPPLIP_L		100	100	100	FIX
12	DVOFPOSC		128	128	128	FIX
13	VERPOS_S		6	6	6	FIX
14	VEROFFS_S		0	0	0	FIX
15	HORPOS_S_H		0	0	0	FIX
16	HORPOS_S_L		190	190	190	FIX
	HPULLINMODE		1	1	1	FIX
17	DVSCPOSC_HI		64	64	64	FIX
18	DVSCPOSC_LO_H		0	0	0	FIX
19	DVSCPOSC_LO_L		183	183	183	FIX
20	DHSCPOSC_HI		14	14	14	FIX
21	DHSCPOSC_LO		66	66	66	FIX
22	HD_BRTADJ		143	143	143	FIX
23	HD_CONADJ		49	49	49	FIX
24	HD_USATADJ		50	50	50	FIX
25	HD_VSATADJ		50	50	50	FIX

22. VIDEO ADJUST 7(color tone setting)

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	R drive offset Warm2	-20~+20	8	8	8	FIX
1	B drive offset Warm2	-20~+20	-9	-9	-9	FIX
2	R cutoff offset Warm2	-20~+20	6	6	6	FIX
3	B cutoff offset Warm2	-20~+20	-11	-11	-11	FIX
4	R drive offset Warm1	-20~+20	4	4	4	FIX
5	B drive offset Warm1	-20~+20	-3	-3	-3	FIX
6	R cutoff offset Warm1	-20~+20	4	4	4	FIX
7	B cutoff offset Warm1	-20~+20	-3	-3	-3	FIX
8	R drive offset Normal	-20~+20	0	0	0	FIX
9	B drive offset Normal	-20~+20	0	0	0	FIX
10	R cutoff offset Normal	-20~+20	0	0	0	FIX
11	B cutoff offset Normal	-20~+20	0	0	0	FIX
12	R drive offset Cool 1	-20~+20	-5	-5	-5	FIX
13	B drive offset Cool 1	-20~+20	4	4	4	FIX
14	R cutoff offset Cool 1	-20~+20	0	0	0	FIX
15	B cutoff offset Cool 1	-20~+20	6	6	6	FIX
16	R drive offset Cool 2	-20~+20	-2	-2	-2	FIX
17	B drive offset Cool 2	-20~+20	6	6	6	FIX
18	R cutoff offset Cool 2	-20~+20	0	0	0	FIX
19	B cutoff offset Cool 2	-20~+20	9	9	9	FIX

23. VIDEO ADJUST8

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	LTI Gain NTSC	NT RF	15	15	15	FIX
1	Peak_f0_NTSC	NT RF	3	3	3	
2	Peak_cor_NTSC	NT RF	2	2	2	FIX
3	CTI_gain_NTSC	NT RF	5	5	5	FIX
4	Lmix gain_NTSC	NT RF	3	3	3	FIX
5	Lmix offset_NT	NT RF	13	13	13	FIX
6	LTI Gain AV	AV(CVBS,DVD)	15	15	15	FIX
7	Peak_f0_AV	AV(CVBS,DVD)	3	3	3	FIX
8	Peak_cor_AV	AV(CVBS,DVD)	2	2	2	FIX
9	CTI_gain_AV	AV(CVBS,DVD)	5	5	5	FIX
10	Lmix gain_AV	AV(CVBS,DVD)	6	3	3	FIX
11	Lmix offset_AV	AV(CVBS,DVD)	13	13	13	FIX
12	LTI Gain SD	480P,576P	15	15	15	FIX
13	Peak_f0_SD	480P,576P	0	0	0	FIX
14	Peak_cor_SD	480P,576P	2	2	2	FIX
15	CTI_gain_SD	480P,576P	1	5 → 1	1	FIX
16	Lmix gain_SD	480P,576P	3	3	3	FIX
17	Lmix offset_SD	480P,576P	13	13	13	FIX
18	LTI Gain HD	720P,1080I	15	15	15	FIX
19	Peak_f0_ HD	720P,1080I	3	3	3	FIX
20	Peak_cor_ HD	720P,1080I	2	2	2	FIX
21	CTI_gain_ HD	720P,1080I	5	5	5	FIX
22	Lmix gain_ HD	720P,1080I	3	3	3	FIX
23	Lmix offset_ HD	720P,1080I	13	13	13	FIX

24. YC Delay

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	P.YC (AV) Delay	-8 ~ 7	-1	4 → -1	-1	FIX
1	S.YC (AV) Delay	-8 ~ 7	-2	0 → -2	-2	FIX
2	N.YC (AV) Delay	-8 ~ 7	1	1	1	FIX
3	P.BG.YC Delay	-8 ~ 7	-3	4 → -3	-3	FIX
4	P.DK.YC Delay	-8 ~ 7	0	4 → 0	0	FIX
5	P.I.YC Delay	-8 ~ 7	-1	2 → -1	-1	FIX
6	P.M.YC Delay	-8 ~ 7	0	0	0	FIX
7	P.L.YC Delay	-8 ~ 7	0	3 → 0	0	FIX
8	S.BG.YC Delay	-8 ~ 7	-5	-1 → -5	-5	FIX
9	S.DK.YC Delay	-8 ~ 7	-3	-1 → -3	-3	FIX
10	S.I.YC Delay	-8 ~ 7	-4	-2 → -4	-4	FIX
11	S.M.YC Delay	-8 ~ 7	0	0	0	FIX
12	S.L.YC Delay	-8 ~ 7	0	0	0	FIX
13	N.M.YC Delay	-8 ~ 7	0	-1 → 0	0	FIX
14	SD YFDEL	0 ~ 127	60	60	60	FIX
15	SD_UVDEL	0 ~ 127	60	60	60	FIX
16	RGB Y_Delay	0 ~ 127	118	118	118	FIX
17	RGB UV_Delay	0 ~ 127	118	118	118	FIX
18	HD_DELB	0 ~ 3	0	0	0	FIX
19	HD_DELG	0 ~ 3	0	0	0	FIX
20	HD_DELR	0 ~ 3	0	0	0	FIX

25. EEPROM

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
0	System		1	1	1	FIX
1	System_480		2	2	2	FIX
2	System_1080		3	3	3	FIX
3	Dynamic Contrast		90	100	90	FIX
4	Dynamic Brightness		50	40	50	FIX
5	Dynamic Shapness		75	65	75	FIX
6	Dynamic Color		50	50	50	FIX
7	Dynamic Tint		50	50	50	FIX
8	Dynamic Color Tone		2	2	2	FIX
9	Standard Contrast		70	70	70	FIX
10	Standard Brightness		50	50	50	FIX
11	Standard Shapness		50	50	50	FIX
12	Standard Color		45	45	45	FIX
13	Standard Tint		50	50	50	FIX
14	Standard Color Tone		2	2	2	FIX
15	Movie Contrast		50	50	50	FIX
16	Movie Brightness		50	50	50	FIX
17	Movie Shapness		40	40	40	FIX
18	Movie Color		40	40	40	FIX
19	Movie Tint		50	50	50	FIX
20	Movie Color Tone		4	4	4	FIX
21	Left _Blank		17	17	17	FIX
22	Right_Blank		25	25	25	FIX
23	Left Blanking (480)		25	25	25	FIX
24	Right Blanking (480)		25	25	25	FIX
25	Left Blanking (720)		44	44	44	FIX
26	Right Blanking (720)		25	25	25	FIX
27	Left Blanking (1080)		44	44	44	FIX
28	Right Blanking (1080)		25	25	25	FIX
29	RGB Tint	0 ~ 127	0	0	0	FIX
30	DVD Tint	0 ~ 127	0	0	0	FIX
31	Bypass Deint	0 ~ 1	0	0	0	FIX
32	SLMCSW	0 ~ 1	1	1	1	FIX
33	DCE Gain		30	30	30	FIX
34	TTX V-Position		41	41	41	FIX
35	TTX H-Position		222	222	222	FIX
36			255	255	255	FIX
37	37~64 not available		4	4	4	FIX
38	VIDEO ADJUST6 1080I 50		220	220	220	FIX
39			2	2	2	FIX
40			129	129	129	FIX
41			0	0	0	FIX
42	-		250	250	250	FIX
43	-		0	0	0	FIX
44	-		26	26	26	FIX
45	-		15	15	15	FIX

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
46	-		30	30	30	FIX
47	-		0	0	0	FIX
48	-		0	0	0	FIX
49	-		128	128	128	FIX
50	-		6	6	6	FIX
51	-		0	0	0	FIX
52	-		0	0	0	FIX
53	-		131	131	131	FIX
54	-		1	1	1	FIX
55	-		53	53	53	FIX
56	-		69	69	69	FIX
57	-		255	255	255	FIX
58	-		13	13	13	FIX
59	-		246	246	246	FIX
60	-		145	145	145	FIX
61	-		49	49	49	FIX
62	-		32	32	32	FIX
63	-		32	32	32	FIX
64	TTX_Bow offset		-1	-1	-1	
65	TTX_H_Para offset		-1	-1	-1	
66	TTX_Up corner offset		-1	-1	-1	
67	TTX_Low corner offset		-1	-1	-1	
68	SECAM Dr	0~3	1	1	1	FIX
69	SECAM Db	0~3	2	2	2	FIX
70	PIP-Threshold	0~63	45	45	45	FIX
71			0	0	0	
72	LNA PLUS STEP2		15	15	15	FIX
73	LNA PLUS STEP3		16	16	16	FIX
74	LNA PLUS STEP4		30	30	30	FIX
75	LNA PLUS STEP5		32	32	32	FIX
76	LNA PLUS STEP6		32	32	32	FIX
77	H-PLL(AV)		255	255	255	FIX
78	RF color sens	0~255	255	255	255	FIX
79	AV color sens	0~255	255	255	255	FIX
80	R drive offset 1080P	-20~+20	0	0	0	FIX
81	G drive offset 1080P	-20~+20	0	0	0	FIX
82	R cutoff offset 1080P	-20~+20	7	7	7	FIX
83	G cutoff offset 1080P	-20~+20	6	6	6	FIX
84	R drive offset 1080i	-20~+20	0	0	0	FIX
85	G drive offset 1080i	-20~+20	0	0	0	FIX
86	R cutoff offset 1080i	-20~+20	7	7	7	FIX
87	G cutoff offset 1080i	-20~+20	6	6	6	FIX
88	R drive offset 720P-60HZ	-20~+20	0	0	0	FIX
89	G drive offset 720P-60HZ	-20~+20	0	0	0	FIX
90	R cutoff offset 720P-60HZ	-20~+20	0	7	7	FIX
91	G cutoff offset 720P-60HZ	-20~+20	7	6	6	FIX

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
92	R drive offset 720P-50HZ	-20~+20	6	0	0	FIX
93	G drive offset 720P-50HZ	-20~+20	0	0	0	FIX
94	R cutoff offset 720P-50HZ	-20~+20	7	7	7	FIX
95	G cutoff offset 720P-50HZ	-20~+20	6	6	6	FIX
96	R drive offset 480P	-20~+20	0	0	0	FIX
97	G drive offset 480P	-20~+20	0	0	0	FIX
98	R cutoff offset 480P	-20~+20	0	0	0	FIX
99	G cutoff offset 480P	-20~+20	0	0	0	FIX
100	R drive offset 576P	-20~+20	0	0	0	FIX
101	G drive offset 576P	-20~+20	0	0	0	FIX
102	R cutoff offset 576P	-20~+20	0	0	0	FIX
103	G cutoff offset 576P	-20~+20	0	0	0	FIX
104	R drive offset 480i	-20~+20	0	0	0	FIX
105	G drive offset 480i	-20~+20	0	0	0	FIX
106	R cutoff offset 480i	-20~+20	0	0	0	FIX
107	G cutoff offset 480i	-20~+20	0	0	0	FIX
108	R drive offset 576i	-20~+20	0	0	0	FIX
109	G drive offset 576i	-20~+20	0	0	0	FIX
110	R cutoff offset 576i	-20~+20	0	0	0	FIX
111	G cutoff offset 576i	-20~+20	0	0	0	FIX
112	H_EHT comp_720p		1	1	1	
113	V_EHT comp_720p		5	5	5	
114	PIN EHT comp_720p		1	1	1	
115	ABL TH_1080i		3	3	3	
116	Color On_NTSC		2	2	2	
117	Color Killer Threshold_NTSC		210	210	210	
118	ACC Limitation_NTSC		16	16	16	
119	Color Killer Threshold_AV		230	230	230	
120	120~146 not available		4			
146	VIDEO ADJUST6 720P50		226			
148	148~166 not available		2			
166	NTSC DEFLECTION		125			
168	168~186 not available		1			
186	480P DEFLECTION		50			
187	187~205 not available		0			
205	576P DEFLECTION		26			
206	206~224 not available		2			
224	720P DEFLECTION		30			
225	225~243 not available		0			
243	1080I DEFLECTION		240			
244	PIP CONT	0~255	128	128	128	FIX
245	PIP-Bright	0~255	245	245	245	FIX
246	PIP-SCURVE	0~1	1	1	1	FIX
247	PIP-CTI	0~3	2	2	2	FIX
248	PIP-Sharp	0~7	0	0	5	FIX
249	PIP-Tint	0~255	0	0	0	FIX

No	item	Range	intial	WS32Z30/40 (32")	CS29Z30/40 (29")	Remark
				Data	Data	
250			21	21	21	
251			255	255	255	
252			255	255	255	
253			0	0	0	
254			0	0	0	
255	HD_P-ABL		9	9	9	FIX

3-4 Service Adjustment

3-4-1 Adjusting the Picture Size

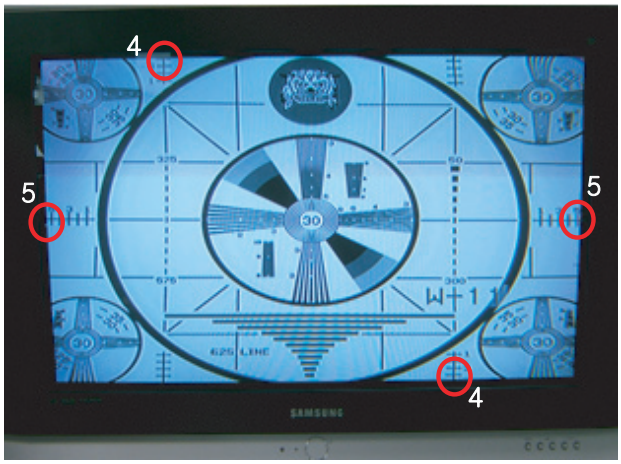
■ Since the S63A chassis has the deflection settings data within the Factory Data, the picture size has to be adjusted when replacing the System Board or the Deflection Board, according to the following procedures.

① Display the Lion pattern.

② Press "Info → Menu → Mute → Power On" using the remote control and enter Factory Mode.

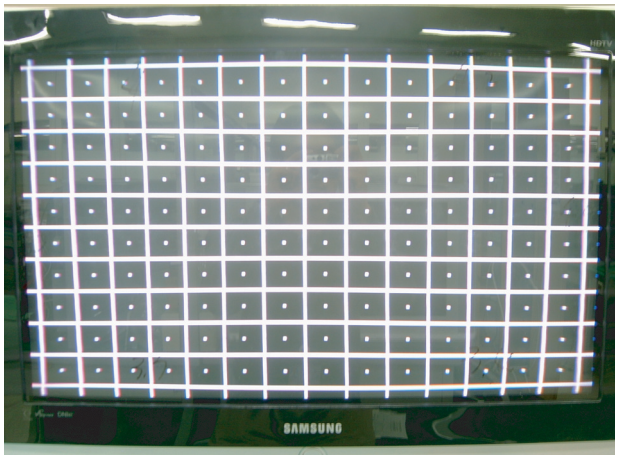
③ Enter Deflection Mode.

④ Adjust the V-AMP, V-SHIFT, H-AMP and H-SHIFT items so that the width becomes 5 and the height becomes 4.



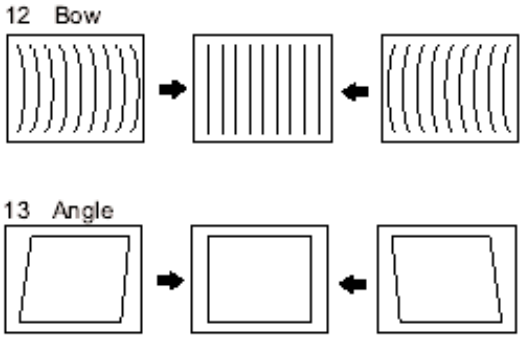
3-4-2 Adjusting the Picture Straight Lines

① Display the Cross Hatch pattern.

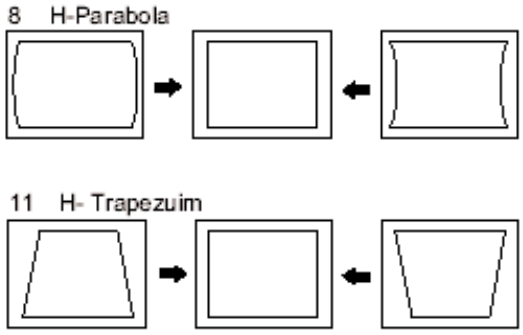


② Adjust settings other than V-AMP, V-SHIFT, H-AMP and H-SHIFT so that straight lines are displayed without curves.

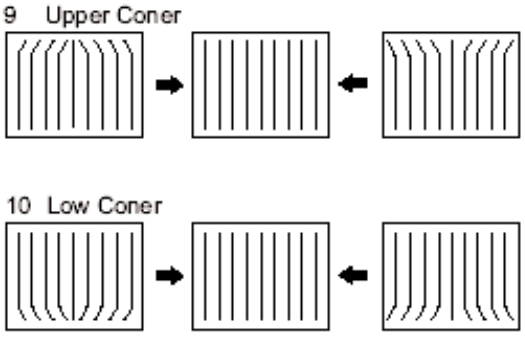
③ Adjust BOW and the Angle settings so that the center line becomes a straight line.



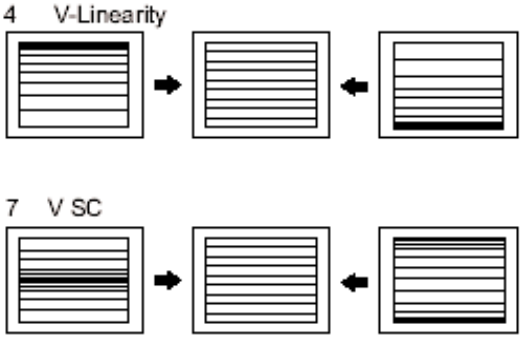
④ Adjust the H-Parabola and H-Trapezium settings so that the left and right lines become straight.



⑤ Adjust the Upper Corner and the Low Corner settings so that the end of the lines become straight.



⑥ Adjust the V-Linearity and V-SC settings so that the intervals of the horizontal lines become uniform.

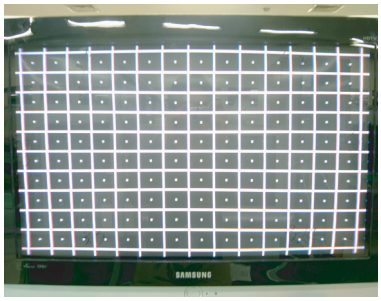


⑦ When the adjustments are complete, display the Lion pattern and check that the picture size has not been changed. If there is no change, finish the adjustments.

3-5 Replacements & Calibration

3-5-1 Adjusting the Focus

■ Since the S63A chassis has a built-in dynamic focus circuit, take care when adjusting the focus. When the CRT PCB, FBT or CRT has been replaced, the focus has to be adjusted according to the following procedures.

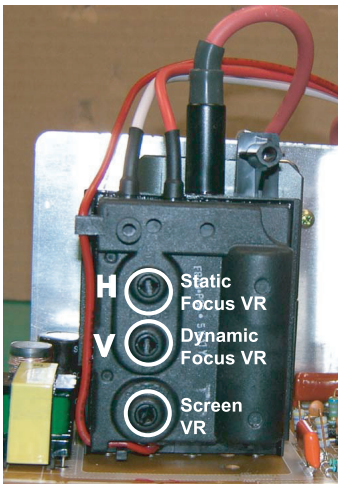


1. Display the CROSS Hatch pattern.

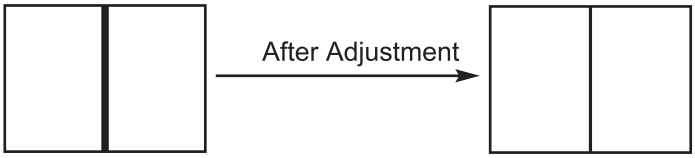
2. Set the Screen Adjustment to "View as Standard".

3. Turn the Static Focus VR clockwise to the maximum position.
   (End of clockwise direction)

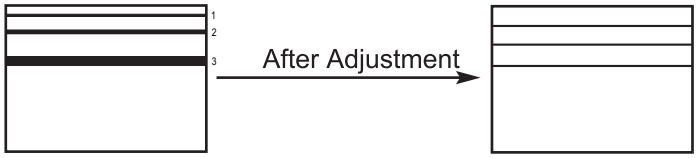
4. Turn the Dynamic Focus VR counter clockwise to the maximum position.
   (End of counter clockwise direction)



5. Slowly turn the Static Focus VR counter clockwise so that the center vertical line is the most clearly displayed.



6. Slowly turn the Dynamic Focus VR clockwise so that the 2nd line is the most clearly displayed.



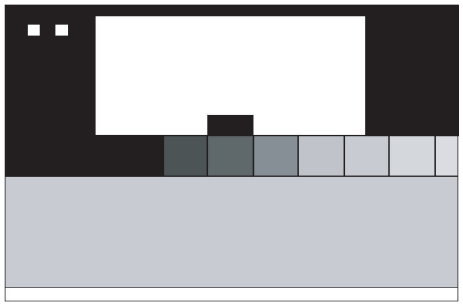
7. Check the entire screen focus and repeat steps 3 to 6, if necessary.

3-5-2 Adjusting the Screen Voltage

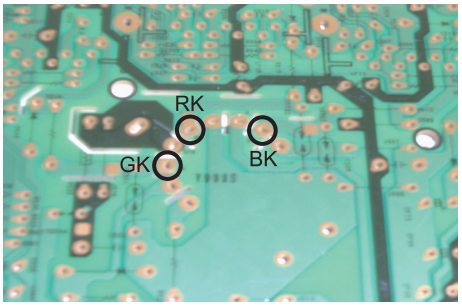
1. Select "Info → Menu → Mute → Power On" to enter Service Mode.

2. Initialize all settings to the values appropriate to the corresponding model.

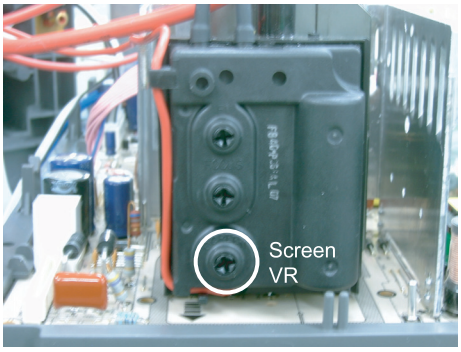
3. Display the Toshiba pattern.

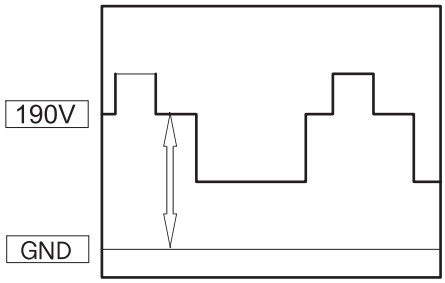


4. Using an Oscilloscope, measure the size of RK, BK and GK to the Pedestal Level.



5. Adjust the Screen VR of FEB so that the highest point of the Pedestal Level is 190V. (29" : 180V)





Adjust Method the Screen Voltage for Toshiba Pattern by Oscilloscope

※ Screen Voltage Measurement Data

No	Item	Data	Required Adjustment
1	Screen Voltage	The Highest Voltage among RK, GK and BK 190Vp-p-3V	Screen Voltage

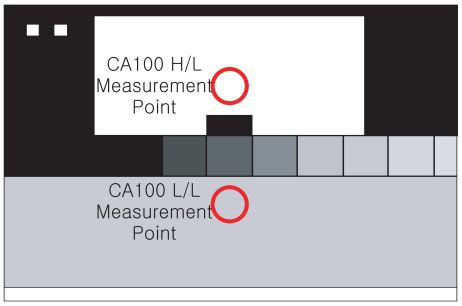
3-5-3 Adjusting the White Balance

1. Initialize all settings to the values appropriate to the corresponding model.

2. Select "Info → Menu → Mute → Power On" to enter Service Mode.

3. Initialize all settings to the values appropriate to the corresponding model.

4. Display the Toshiba pattern and adjust the White Balance using CA100 with the coordinates of the corresponding model.



[CA100]

5. Enter Video Adjust1 of Service Mode. Adjust Low/Light.
   - Adjust Sub Bright to set Y.
   - Adjust B Cutoff to set y.
   - Adjust R Cutoff to set x.

6. Enter Video Adjust1 of Service Mode. Adjust High/Light.
   - Adjust Sub Contrast to set Y.
   - Adjust B Drive to set y.
   - Adjust R Drive to set x.

7. Check Low/Light and readjust it if its value has been changed.

8. If you have readjusted Low/Light, readjust High/Light until the two values are identical to the coordinates of the corresponding model.

※ White Balance Standard Data

No	Item	Data	Required Adjustment
1	White Balance	x:282± 3 / y:290± 3 / 40± 3(High) x:282± 3 / y:290± 3 / 2.5± 0.2(Low)	White Balance (Europe)

3-5-4 Check List for the Screen Voltage and White Balance Adjustment

1. The Screen Voltage and White Balance are connected each other, and both of them have to be configured to the correct values.

2. Adjust the White Balance after the Screen Voltage was adjusted, and check if the Screen Voltage is normal after adjusting the White Balance.

3. If the White Balance is readjusted, check the Screen Voltage again.

4. When the adjustment is finished, check the following checklist.
   - If there is a spot on the screen when turning the TV set off/on, adjust the Screen Voltage again.
   - If there is a ghost line on the screen, adjust the Screen Voltage again.