

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 S62A 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 S62A 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 System Board :

Since the software is loaded to the flash memory of the system board, check the version of the software after replacing the board.

To check the version of the software, Enter service mode press the key on the remote control according to the following sequenu.(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_OZPEU_1000 refers to

"OZ BASIC MODEL Europe. ver.1000".

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 Deflection Board :

Tilt adjustment, focus adjustment, screen voltage setting and W/B adjustment are all required.

4. When replacing the Power Board : No adjustments required.

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

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

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

8. 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.

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Service/ T-OZPEU-XXXX
Deflection
480i/576p Defle off
1080i Defle off
Video Adjust 1
Video Adjust 2
Video Adjust 3
Video Adjust 4
Video Adjust 5
Video Adjust 6
VGA Video Adjust
DTV Video Adjust
Video Adjust DNle
DNle Enhancement
YC Delay
EEPROM
Option (XX XX XX)
ROM Checksum (0000)
Reset / XX-XX-XX
    
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3. Functions of the Keys within Service Mode

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

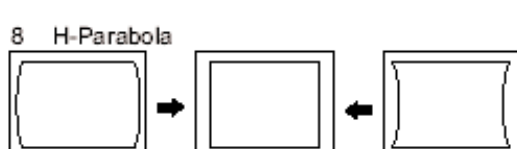
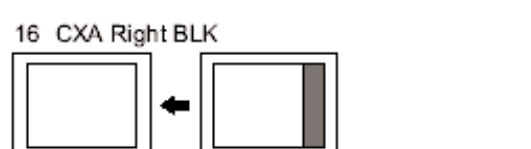
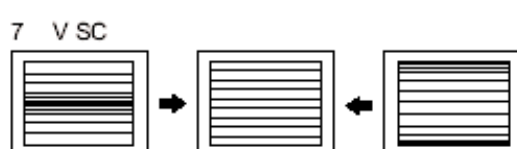
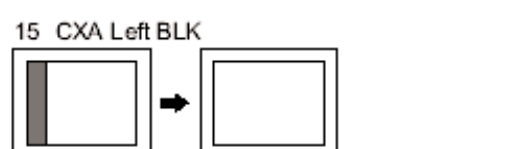
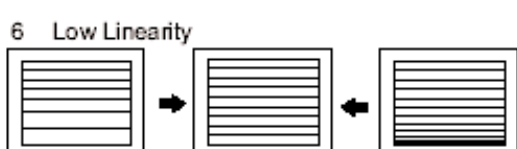
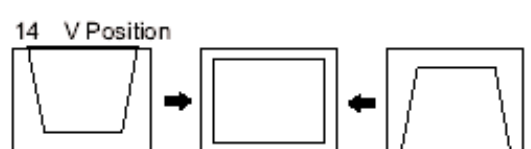
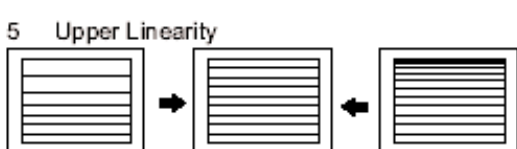
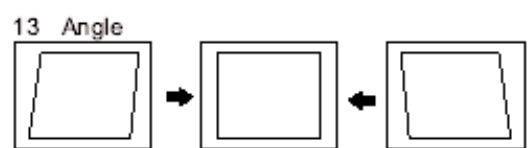
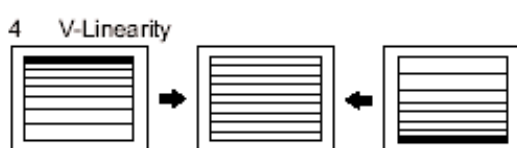
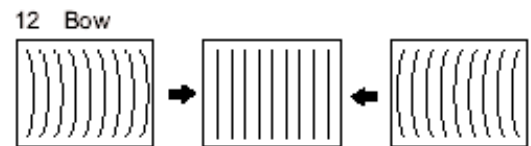
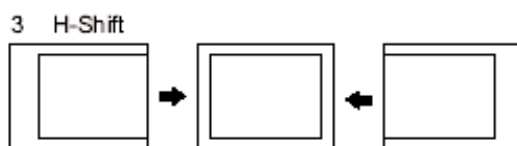
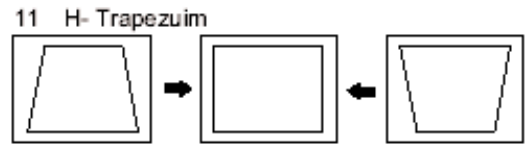
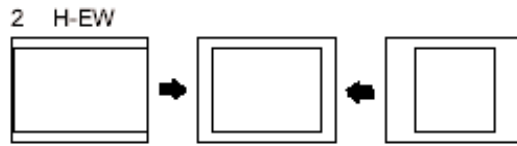
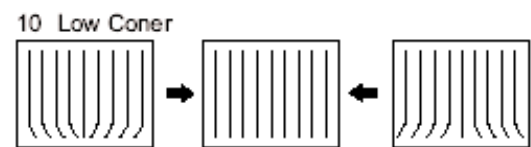
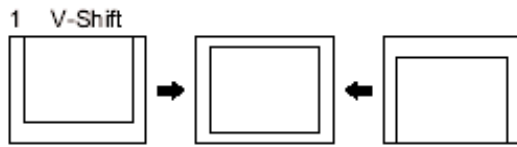
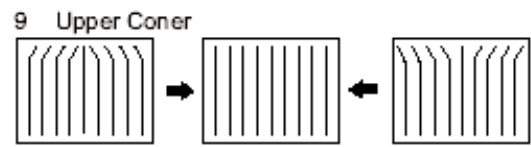
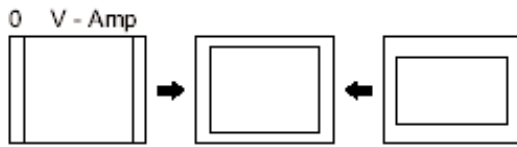
3-3 Factory Data

1. Deflection(PAL)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	V Amp	0~63	42	42	42	Adjust
1	V Shift	0~63	23	23	23	Adjust
2	H EW	0~63	45	45	45	Adjust
3	H Shift	0~63	37	37	37	Adjust
4	V Linearity	0~15	6	6	6	FIX
5	Upper Linearity	0~15	4	4	4	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	6	6	6	FIX
8	H Parabola	0~63	47	47	47	Adjust
9	Upper Corner	0~63	33	33	33	Adjust
10	Lower Corner	0~63	39	39	39	Adjust
11	H Trapezium	0~63	22	22	22	Adjust
12	Bow	0~63	34	34	34	Adjust
13	Angle	0~63	28	28	28	Adjust
14	V Position	0~63	35	35	35	FIX
15	CXA 2151 Sub01	0~255	68	68	68	FIX
16	CXA 2151 Sub01	0~255	1	1	1	FIX
17	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
18	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
19	UP-UCP (Up Corner position Control)	0~3	0	0	0	FIX
20	LO-UCP (Low Corner position Control)	0~3	0	0	0	FIX

2. Deflection(NTSC)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	V Amp	0~63	-1	-1	-1	Adjust
1	V Shift	0~63	-2	-2	-2	Adjust
2	H EW	0~63	5	5	5	Adjust
3	H Shift	0~63	8	8	8	Adjust
4	V Linearity	0~15	-2	-2	-2	Adjust
5	Upper Linearity	0~15	-4	-4	-4	FIX
6	Lower Linearity	0~15	1	1	1	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	2	2	2	Adjust
9	Upper Corner	0~63	2	2	2	Adjust
10	Lower Corner	0~63	-1	-1	-1	Adjust
11	H Trapezium	0~63	2	2	2	Adjust
12	Bow	0~63	2	2	2	Adjust
13	Angle	0~63	2	2	2	Adjust
14	V Position	0~63	0	0	0	FIX
15	CXA 2151 Sub01	0~255	68	68	68	FIX
16	CXA 2151 Sub01	0~255	1	1	1	FIX
17	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
18	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
19	UP-UCP (Up Corner position Control)	0~3	0	0	0	FIX
20	LO-UCP (Low Corner position Control)	0~3	0	0	0	FIX



3. 480P DEFLECTION OFFSET

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	V Amp	0~63	-3	-3	-3	Adjust
1	V Shift	0~63	-1	-1	-1	Adjust
2	H EW	0~63	2	2	2	Adjust
3	H Shift	0~63	-2	-2	-2	Adjust
4	V Linearity	0~15	-2	-2	-2	Adjust
5	Upper Linearity	0~15	-3	-3	-3	FIX
6	Lower Linearity	0~15	0	0	0	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	-1	-1	-1	Adjust
9	Upper Corner	0~63	2	2	2	Adjust
10	Lower Corner	0~63	-2	-2	-2	Adjust
11	H Trapezium	0~63	9	9	9	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	CXA 2151 Sub01	0~255	232	232	232	FIX
16	CXA 2151 Sub01	0~255	97	97	97	FIX
17	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
18	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
19	UP-UCP (Up Corner position Control)	0~3	0	0	0	FIX
20	LO-UCP (Low Corner position Control)	0~3	0	0	0	FIX

4. 576P DEFLECTION OFFSET

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	V Amp	0~63	1	1	1	Adjust
1	V Shift	0~63	-3	-3	-3	Adjust
2	H EW	0~63	-1	-1	-1	Adjust
3	H Shift	0~63	-1	-1	-1	Adjust
4	V Linearity	0~15	2	2	2	Adjust
5	Upper Linearity	0~15	-1	-1	-1	FIX
6	Lower Linearity	0~15	-1	-1	-1	FIX
7	V SC	0~15	0	0	0	FIX
8	H Parabola	0~63	-3	-3	-3	Adjust
9	Upper Corner	0~63	0	0	0	Adjust
10	Lower Corner	0~63	-1	-1	-1	Adjust
11	H Trapezium	0~63	5	5	5	Adjust
12	Bow	0~63	2	2	2	Adjust
13	Angle	0~63	2	2	2	Adjust
14	V Position	0~63	0	0	0	FIX
15	CXA 2151 Sub01	0~255	232	232	232	FIX
16	CXA 2151 Sub01	0~255	97	97	97	FIX
17	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
18	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
19	UP-UCP (Up Corner position Control)	0~3	0	0	0	FIX
20	LO-UCP (Low Corner position Control)	0~3	0	0	0	FIX

5. 1080I DEFLECTION OFFECT

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	V Amp	0~63	8	8	8	Adjust
1	V Shift	0~63	-2	-2	-2	Adjust
2	H EW	0~63	-35	-35	-35	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	-3	-3	-3	FIX
8	H Parabola	0~63	-20	-20	-20	Adjust
9	Upper Corner	0~63	2	2	2	Adjust
10	Lower Corner	0~63	-2	-2	-2	Adjust
11	H Trapezium	0~63	5	5	5	Adjust
12	Bow	0~63	-2	-2	-2	Adjust
13	Angle	0~63	1	1	1	Adjust
14	V Position	0~63	0	0	0	FIX
15	CXA 2151 Sub01	0~255	196	196	196	FIX
16	CXA 2151 Sub01	0~255	97	97	97	FIX
17	UP-UCG (Up Corner Semi Control)	0~3	0	0	0	FIX
18	LO-UCG (Low Corner Semi Control)	0~3	0	0	0	FIX
19	UP-UCP (Up Corner position Control)	0~3	0	0	0	FIX
20	LO-UCP (Low Corner position Control)	0~3	0	0	0	FIX

6. VIDEO ADJUST 1

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	R CutOff	0~63	35	35	35	Adjust
1	G CutOff	0~63	32	32	32	FIX
2	B CutOff	0~63	33	33	33	Adjust
3	Color On/Off	0~01	1	1	1	FIX
4	CR OffSet	0~63	28	28	28	Adjust
5	CB OffSet	0~63	28	28	28	Adjust
6	R Drive	0~63	37	37	37	Adjust
7	G Drive	0~63	38	38	38	FIX
8	B Drive	0~63	32	32	32	Adjust
9	Sub Bright	0~63	21	21	21	Adjust
10	Sub Contrast	0~15	9	9	9	Adjust
11	Sub secam color		16	16	16	
12	Sub Color	0~23	5	5	5	FIX
13	Sub Tint	0~63	29	29	29	FIX
14	CTI Level	0~03	1	1	1	FIX
15	COL Axis	0~03	1	1	1	FIX
16	LTI mode	0~03	1	1	1	FIX
17	LTI Level	0~03	3	3	3	FIX

7. Video Adjust 2

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	ABL Mode	0~03	3	3	3	FIX
1	Gamma	0~03	2	2	2	FIX
2	DPIC Level	0~03	3	3	3	FIX
3	DC Trans	0~03	1	1	1	FIX
4	ABL TH	0~15	14	14	14	FIX
5	VM Level	0~03	1	1	1	FIX
6	VM Coring	0~03	0	0	0	FIX
7	VM f0	0~03	0	0	0	FIX
8	VM Limit	0~03	0	0	0	FIX
9	VM Delay	0~03	3	3	3	FIX
10	SHP CD	0~03	1	1	1	FIX
11	SHP f0	0~01	1	1	1	FIX
12	SHP f1 & P/O	0~15	11	11	11	FIX
13	AKB Time	0~31	16	16	16	FIX
14	V-Peaking	0~31	21	21	21	FIX

8. Video Adjust 3

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	H_EHT comp	0~15	3	3	3	FIX
1	V_EHT comp	0~15	5	5	5	FIX
2	PIN EHT comp	0~07	5	5	5	FIX
3	AFC EHT comp	0~07	0	0	0	FIX
4	Sync Phase	0~1	0	0	0	FIX
5	NR Value	0~09	6	6	6	FIX
6	Sync Phase (480)	0~1	0	0	0	FIX
7	Sync Phase (576P)	0~1	0	0	0	FIX
8	Sync Phase (1080)	0~1	0	0	0	FIX
9	Sync Phase (VGA)	0~1	0	0	0	FIX
10	RF_DNIe R_active HP HI	0~15	0	0	0	FIX
11	RF_DNIe R_active HP LO	0~255	214	214	214	FIX
12	RF_DNIe H_Sync out P HI	0~15	11	11	11	FIX
13	RF_DNIe H_Sync out P LO	0~255	190	190	190	FIX
14	RF_DNIe_HSYNC_OUT_W HI	0~15	0	0	0	FIX
15	RF_DNIe_HSYNC_OUT_W HI	0~255	5	5	5	FIX

9. Video Adjust 4

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	VSU	0~15	4	4	4	FIX
1	Melody Volume	0~15	7	7	7	FIX
2	TTX Bright	0~07	0	0	0	FIX
3	TTX Contrast	0~07	3	3	3	FIX
4	OSD Level	0~1	13	13	13	FIX
5	Band Pass 9407	0~09	0	0	0	FIX
6	High Pass 9407	0~1	42	42	42	FIX
7	Band Pass 9407(AV)	0~1	0	0	0	FIX
8	High Pass 9407(AV)	0~1	42	42	42	FIX
9	Band Pass 9407(DVD)	0~1	0	0	0	FIX
10	High Pass 9407(DVD)	0~15	42	42	42	FIX
11	Peak DeNoise_TH	0~255	1	1	1	FIX

10. VIDEO ADJUST 5(color tone setting)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	R drive offset Warm2	-20~+20	3	3	3	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	2	FIX
5	B drive offset Warm1	-20~+20	-2	-2	-2	FIX
6	R cutoff offset Warm1	-20~+20	3	3	3	FIX
7	B cutoff offset Warm1	-20~+20	-2	-2	-2	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	0	FIX
13	B drive offset Cool 1	-20~+20	4	4	4	FIX
14	R cutoff offset Cool 1	-20~+20	2	2	2	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

11. VIDEO ADJUST 6(DTV W/B offset)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	R drive offset 1080i	-30~+30	0	0	0	FIX
1	G drive offset 1080i	-30~+30	0	0	0	FIX
2	R cutoff offset 1080i	-30~+30	3	3	3	FIX
3	G cutoff offset 1080i	-30~+30	0	0	0	FIX
4	R drive offset 480P	-30~+30	-1	-1	-1	FIX
5	G drive offset 480P	-30~+30	-1	-1	-1	FIX
6	R cutoff offset 480P	-30~+30	5	5	5	FIX
7	G cutoff offset 480P	-30~+30	6	6	6	FIX
8	R drive offset 576P	-30~+30	-1	-1	-1	FIX
9	G drive offset 576P	-30~+30	0	0	0	FIX
10	R cutoff offset 576P	-30~+30	5	5	5	FIX
11	G cutoff offset 576P	-30~+30	4	4	4	FIX
12	R drive offset 480i	-30~+30	1	1	1	FIX
13	G drive offset 480i	-30~+30	0	0	0	FIX
14	R cutoff offset 480i	-30~+30	5	5	5	FIX
15	G cutoff offset 480i	-30~+30	7	7	7	FIX
16	R drive offset 576i	-30~+30	1	1	1	FIX
17	G drive offset 576i	-30~+30	0	0	0	FIX
18	R cutoff offset 576i	-30~+30	5	5	5	FIX
19	G cutoff offset 576i	-30~+30	6	6	6	FIX

12. DTV ADJUST(480P)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	Sub Bright	0~63	21	21	21	FIX
1	Sub Contrast	0~15	4	4	4	FIX
2	Sub Color	0~23	15	15	15	FIX
3	Sub Tint (Hue)	0~63	29	29	29	FIX
4	Color AXIS	0~03	1	1	1	FIX
5	LTI mode	0~03	1	1	1	FIX
6	VM-Level	0~03	2	2	2	FIX
7	VM-Coring	0~03	0	0	0	FIX
8	VM-f0	0~03	0	0	0	FIX
9	VM-Limit	0~03	0	0	0	FIX
10	VM-Delay	0~03	3	3	3	FIX
11	SHP CD	0~03	1	1	1	FIX
12	SHP f0	0~01	1	1	1	FIX
13	SHP f1& p10	0~15	11	11	11	FIX
14	LTI level	0~03	3	3	3	FIX

13. DTV ADJUST(576P)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	Sub Bright	0~63	21	21	21	FIX
1	Sub Contrast	0~15	4	4	4	FIX
2	Sub Color	0~23	15	15	15	FIX
3	Sub Tint (Hue)	0~63	29	29	29	FIX
4	Color AXIS	0~03	1	1	1	FIX
5	LTI mode	0~03	1	1	1	FIX
6	VM-Level	0~03	2	2	2	FIX
7	VM-Coring	0~03	0	0	0	FIX
8	VM-f0	0~03	0	0	0	FIX
9	VM-Limit	0~03	0	0	0	FIX
10	VM-Delay	0~03	3	3	3	FIX
11	SHP CD	0~03	1	1	1	FIX
12	SHP f0	0~01	1	1	1	FIX
13	SHP f1& p10	0~15	11	11	11	FIX
14	LTI level	0~03	3	3	3	FIX

14. DTV ADJUST(1080i)

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	Sub Bright	0~63	19	19	19	FIX
1	Sub Contrast	0~15	5	5	5	FIX
2	Sub Color	0~23	15	15	15	FIX
3	Sub Tint (Hue)	0~63	29	29	29	FIX
4	Color AXIS	0~03	1	1	1	FIX
5	LTI mode	0~03	1	1	1	FIX
6	VM-Level	0~03	2	2	2	FIX
7	VM-Coring	0~03	0	0	0	FIX
8	VM-f0	0~03	0	0	0	FIX
9	VM-Limit	0~03	0	0	0	FIX
10	VM-Delay	0~03	3	3	3	FIX
11	SHP CD	0~03	1	1	1	FIX
12	SHP f0	0~01	1	1	1	FIX
13	SHP f1& p10	0~15	11	11	11	FIX
14	LTI level	0~03	3	3	3	FIX
15	H_EHT comp_1080i		2	2	2	FIX
16	V_EHT comp_1080i		4	4	4	FIX
17	PIN EHT comp_1080i		5	5	5	FIX
18	ABL TH_1080i		14	14	14	FIX

15. Video Adjustment DNle

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	AD9883 R Gain	0~255	140	140	140	FIX
1	AD9883 G Gain	0~255	140	140	140	FIX
2	AD9883 B Gain	0~255	140	140	140	FIX
3	AD9883 R Offset	0~127	128	128	128	Adjust
4	AD9883 G Offset	0~127	128	128	128	FIX
5	AD9883 B Offset	0~127	128	128	128	Adjust
6	AD9883_Nomal_REG05	0~255	32	32	32	FIX
7	AD9883_Nomal_REG06	0~255	20	20	20	FIX
8	AD9883_1080i_REG05	0~255	44	44	44	FIX
9	AD9883_1080i_REG06	0~255	32	32	32	FIX
10	AD9883_480p_50_REG05	0~255	32	32	32	FIX
11	AD9883_480p_50_REG06	0~255	62	62	62	FIX
12	AD9883_576p_50_REG05	0~255	32	32	32	FIX
13	AD9883_576p_60_REG06	0~255	52	52	52	FIX
14	AD9883_VGA_REG05	0~255				FIX
15	AD9883_VGA_REG06	0~255				FIX

16. DNle Lite Enhancement Adjust

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	Alpha L	0 ~ 255	80	80	80	FIX
1	Alpha U	0 ~ 255	80	80	80	FIX
2	CE_Cut off	0 ~ 255	32	32	32	FIX
3	CE_Upper	0 ~ 255	196	196	196	FIX
4	CE_Gain Max L	0 ~ 255	90	90	90	FIX
5	CE_Gain Max U	0 ~ 255	90	90	90	FIX
6	Gain 1X	0 ~ 63	16	16	16	FIX
7	Gain 1Y	0 ~ 63	16	16	16	FIX
8	Gain 2X	0 ~ 63	2	2	2	FIX
9	Gain 2Y	0 ~ 63	1	1	1	FIX
10	Gain 3X	0 ~ 63	2	2	2	FIX
11	Coring_On	1 ~ 1	1	1	1	FIX
12	Coring_th1	0 ~ 7	3	3	3	FIX
13	Coring_th2	0 ~ 7	4	4	4	FIX
14	Coring_th3	0 ~ 7	4	4	4	FIX
15	SD3_K	1 ~ 255	8	8	8	FIX
16	Skin_X	0 ~ 63	23	23	23	FIX
17	Skin_Y	0 ~ 63	28	28	28	FIX
18	CTE	1 ~ 255	50	50	50	FIX

17. YC Delay

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	P.YC(AV) Delay	-16~15	1	1	1	FIX
1	S.YC(AV) Delay	-16~15	-5	-5	-5	FIX
2	N.YC(AV) Delay	-16~15	2	-3	-3	FIX
3	P.BG.YC Delay	-16~15	2	0	0	FIX
4	P.DK.YC Delay	-16~15	2	0	0	FIX
5	P.I.YC Delay	-16~15	0	2	2	FIX
6	P.L.YC Delay	-16~15	1	0	0	FIX
7	S.BG.YC Delay	-16~15	-4	0	0	FIX
8	S.DK.YC Delay	-16~15	-6	-1	-1	FIX
9	S.I.YC Delay	-16~15	-9	-8	-8	FIX
10	S.L.YC Delay	-16~15	-6	-9	-9	FIX
11	N.M.YC Delay	-16~15	7	7	7	FIX
12	P.60.YC Delay	-16~15	0	-5	-5	FIX
13	N.443.YC Delay	-16~15	0	0	0	FIX

18. EEPROM

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
0	System		1	1	1	FIX
1	VGA System		3	3	3	FIX
2	System_480		2	2	2	FIX
3	System_1080		2	2	2	FIX
4	Dynamic Contrast		100	100	100	FIX
5	Dynamic Brightness		50	50	50	FIX
6	Dynamic Sharpness		50	50	50	FIX
7	Dynamic Color		50	50	50	FIX
8	Dynamic Tint		50	50	50	FIX
9	Dynamic Color Tone		2	2	2	FIX
10	Standard Contrast		50	50	50	FIX
11	Standard Brightness		50	50	50	FIX
12	Standard Sharpness		50	50	50	FIX
13	Standard Color		45	45	45	FIX
14	Standard Tint		50	50	50	FIX
15	Standard Color Tone		2	2	2	FIX
16	Movie Contrast		45	45	45	FIX
17	Movie Brightness		50	50	50	FIX
18	Movie Sharpness		40	40	40	FIX
19	Movie Color		40	40	40	FIX
20	Movie Tint		50	50	50	FIX
21	Movie Color Tone		0	0	0	FIX
22	Left_Blank		30	30	30	FIX
23	Right_Blank		10	10	10	FIX
24	Left Blanking (VGA)		-	-	-	FIX
25	Right Blanking (VGA)		-	-	-	FIX
26	Left Blanking (480)		26	26	26	FIX
27	Right Blanking (480)		22	22	22	FIX
28	Left Blanking (1080)		44	44	44	FIX
29	Right Blanking (1080)		25	25	25	FIX
30	Brightness (RGB)		0	0	0	FIX
31	Conrast (RGB)		124	124	124	FIX
32	U Saturation (RGB)		117	117	117	FIX
33	V Saturation RGB)		240	240	240	FIX
34	Brightness (DVD)		12	12	12	FIX
35	Conrast (DVD)		132	132	132	FIX
36	U Saturation (DVD)		25	25	25	FIX
37	V Saturation (DVD)		32	32	32	FIX
38	9407 Y Gain		93	93	93	FIX
39	9407 U Gain		82	82	82	FIX
40	Luminance Delay		8	8	8	FIX
41	9407 V Gain		81	81	81	FIX
42	CrCb_Gain_480p,576p		119	119	119	FIX
43	CrCb_Gain_1080i		119	119	119	FIX
44	480i sub_bright		29	29	29	FIX
45	480i sub_contrast		6	6	6	FIX

No	Item	Range	WS32Z308P (EU)	WS32Z30HE (EAST-ASIA)	WS32Z30HE (CIS)	Remark
46	576i sub_bright		29	29	29	FIX
47	576i sub_contrast		6	6	6	FIX
48	Start Value of Lum LUT (Main) - NR_ON		255	255	255	FIX
49	Noise Reduction (Main) - NR_ON		95	95	95	FIX
50	Start Value of Lum LUT (Main) - NR_Off		255	255	255	FIX
51	Noise Reduction (Main) - NR_Off		255	255	255	FIX
52	Start Value of Lum LUT (PIP) - NR_ON		255	255	255	FIX
53	Noise Reduction (PIP) - NR_ON		102	102	102	FIX
54	Start Value of Lum LUT (PIP) - NR_Off		255	255	255	FIX
55	Noise Reduction (PIP) - NR_Off		255	255	255	FIX
56	GMD Hysteresis		28	28	28	FIX
57	SECAM Color Sensitivity (Main)		28	28	28	FIX
58	FMD Thre		28	28	28	FIX
59	SECAM Color Sensitivity (PIP)		28	28	28	FIX
60	S - ABL		0	0	0	FIX
61	P - ABL		48	48	48	FIX
62	Clamping duration(PIP)		113	113	113	FIX
63	TTX V-Position		35	35	35	FIX
64	TTX H-Position		181	181	181	FIX
65	4:3 Normal Parabola		0	0	0	FIX
66	50_Trap		4	4	4	FIX
67	60_Trap		4	4	4	FIX
68	WISE_LINK NR(ON)		-	-	-	FIX
69	WISE_LINK NR(ON)		-	-	-	FIX
70	LNA PLUS STEP2		54	54	54	FIX
71	LNA PLUS STEP3		54	54	54	FIX
72	LNA PLUS STEP4		47	47	47	FIX
73	LNA PLUS STEP5		15	15	15	FIX
74	LNA PLUS STEP6		15	15	15	FIX
79	Clamping duration(main)		120	120	120	FIX
170	HV looping counter		250	250	250	FIX
171	HV Range Min		40	40	40	FIX
172	HV Range Max		150	150	150	FIX
						FIX
246	H-PLL(AV)		28	28	28	FIX
248	RF color sens		208	208	208	FIX
249	AV color sens		217	217	217	FIX
250	SDV (PROGRESSIVE MODE)		75	75	75	FIX
251	SDH (PROGRESSIVE MODE)		181	181	181	FIX
253	LPF adjustment(MST9883)		96	96	96	FIX

19. OPTION (Europe)

No	Option Byte1	Alterable Change mode	Initial value	Europe	
0	CRT	Wide / 4:3	4:3	Wide	4:3,WIDE
1	PIP	On / Off	On	On	On/Off
2	LNA	On / Off	On	On	On : 2T PIP All Model Off: 1TUNER / No PIP
3	Sound	Vertual Dolby/Nicam	V/D	Virtual Dolby	V-DOLBY/A2-NICAM
4	Auto FM	On / Off	On	On	On : FM Auto change (All model) Off : MODE on(Currently nothing)
5	Carrier mute	On / Off	On	On	On:Europe/CIS Off: Thailand.,india etc. Southeast Asia.
6	Speaker	Dome Spk/Non Dome Spk	Dome Spk	Direct type	
7	TTX Group	Table	Osd Language	Osd Language	TTX Language Group
8	TTX LIST	On / Off	Off	OFF	ON : Australia, Newzealand OFF : Other Area
9	DTV	On / Off	Off	ON	
10	SEARCH_LNA	On / Off	On	On	On : 2T PIP LNA All Model Off: 1TUNER / No PIP
11	DNle option	On / Off	On	On	

OPTION (CIS)

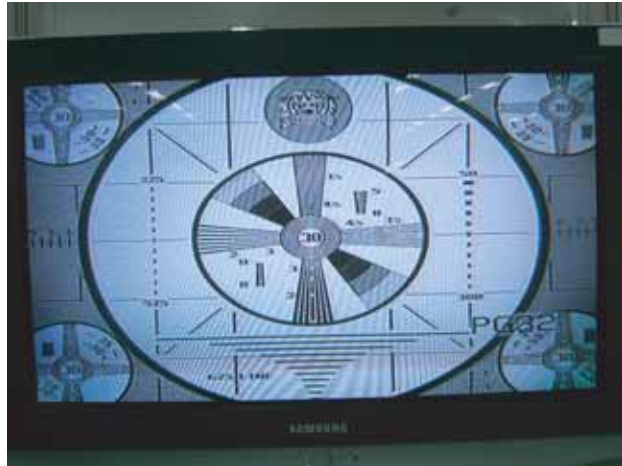
No	Option Byte1	Alterable Change mode	CIS	Southeast Asia	
0	CRT	Wide / 4:3	Wide	Wide	4:3,WIDE
1	PIP	CIS / Arab / Persia / East Asia / China	CIS	East Asia	On/Off
2	LNA	ENGLISH / CIS	CIS	ENGLISH	On : 2T PIP All Model Off: 1TUNER / No PIP
3	Sound	Vertual Dolby/Nicam	Virtual Dolby	Virtual Dolby	V-DOLBY/A2-NICAM
4	Auto FM	On / Off	On	On	On : FM Auto change (All model) Off : MODE on(Currently nothing)
5	Carrier mute	Scart / RCA	Scart	RCA	On:Europe/CIS Off: Thailand.,india etc. Southeast Asia.
6	Speaker	Dome Spk/Non Dome Spk	Non Dom	Non Dom	
7	TTX Group	Table	Russian	Osd Language	TTX Language Group
8	TTX LIST	On / Off	Off	Off	ON : Australia, Newzealand OFF : Other Area
9	DTV	On / Off	On	On	
10	SEARCH_LNA	On / Off	On	On	On : 2T PIP LNA All Model Off: 1TUNER / No PIP
11	DNle option	On / Off	Off	Off	

3-4 Service Adjustment

3-4-1 Adjusting the Picture Size

■ Since the S62A 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.

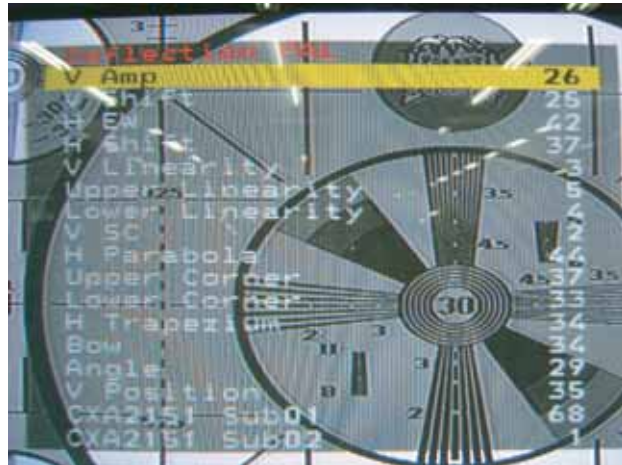
① Display the Lion pattern.



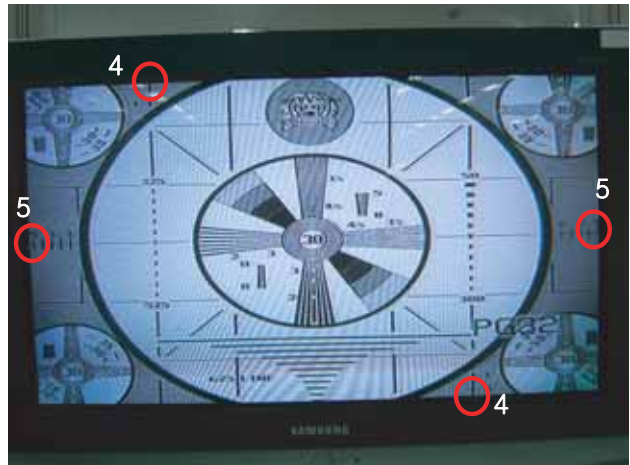
② Press "Info → Menu → Mute → Power On" using the remote control and enter Factory Mode.



③ Enter Deflection Mode.

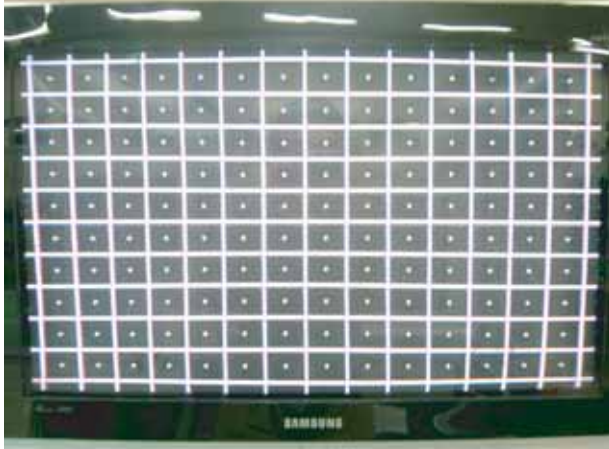


④ Adjust the V-AMP, V-SHIFT, H-AMP and H-SHIFT items so that the width becomes 5 and the height becomes 4.



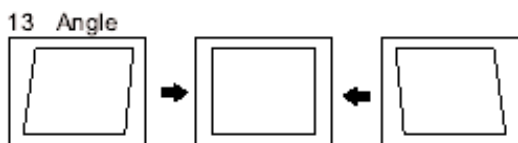
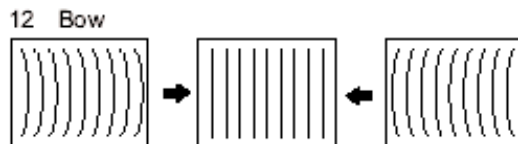
3-4-2 Adjusting the Picture Straight Lines

- ① Display the Cross Hatch pattern.

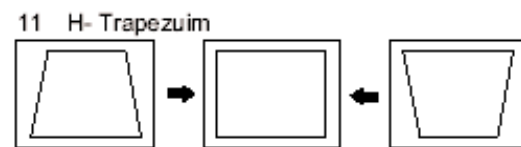
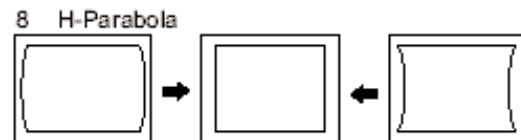


- ② Adjust settings other than V-AMP, V-SHIFT, H-AMP and H-SHIFT so that straight lines are displayed without curves.

- 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.



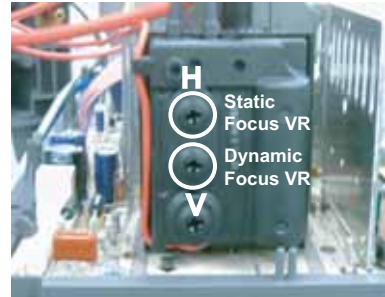
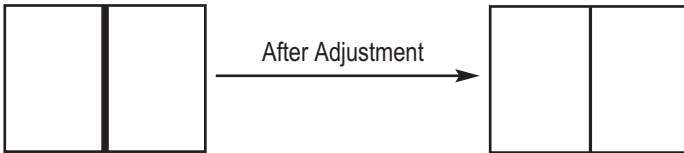
- ⑦ When the adjustments are complete, display the Lion pattern and check that the picture size has not been changed. If there is no change, finish the adjustments.

3-5 Replacements & Calibration

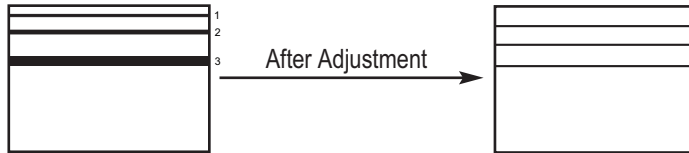
3-5-1 Adjusting the Focus

■ Since the S62A 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.



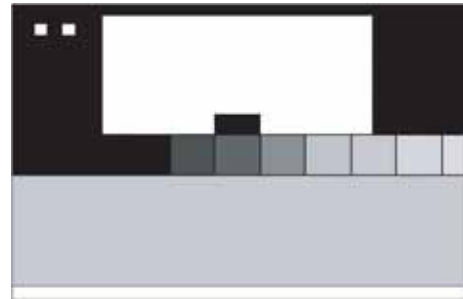
6. Slowly turn the Dynamic Focus VR clockwise so that the 2nd line is the most clearly displayed.



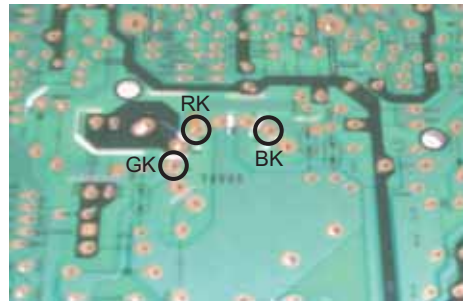
7. Check the entire screen focus and repeat steps 3 to 6, if necessary.

3-5-2 Adjusting the Screen Voltage

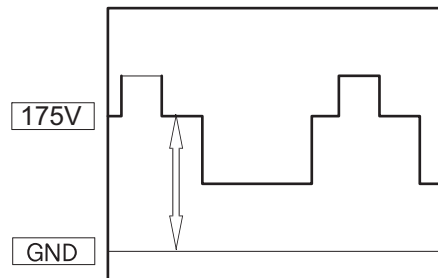
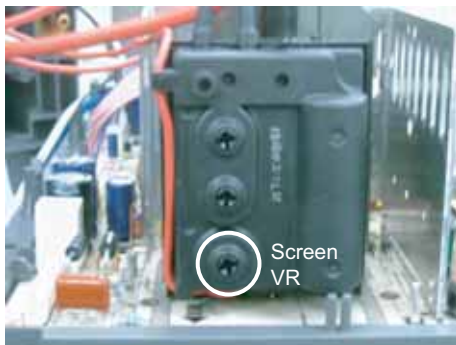
1. Select "Info → Menu → Mute → Power On" to enter Service Mode.
2. Initialize all settings to the values appropriate to the corresponding model.
3. Display the Toshiba pattern.



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 175V.



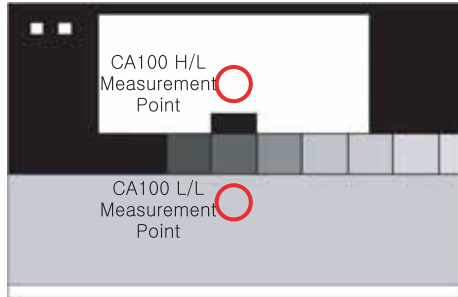
Adjust Method the Screen Voltage for Toshiba Pattern by Oscilloscope

※ Screen Voltage Measurement Data

No	Item	Data	Required Adjustment
1	Screen Voltage	The Highest Voltage among RK, GK and BK 175V _{p-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:302± 3 / 40± 3 x:282± 5 / y:302± 5 / 1.6± 0.2	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.