

ADJUSTMENT MANUAL

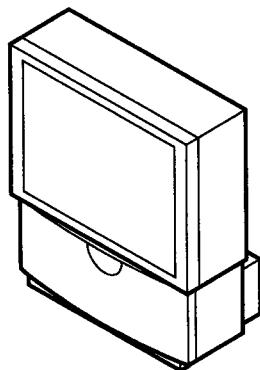
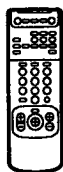
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<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KP-53XBR45	RM-Y128	US	SCC-H53G-A	KP-61XBR48	RM-Y128	US	SCC-H53H-A
KP-53XBR45	RM-Y128	Canadian	SCC-H58F-A	KP-61XBR48	RM-Y128	Canadian	SCC-H58G-A

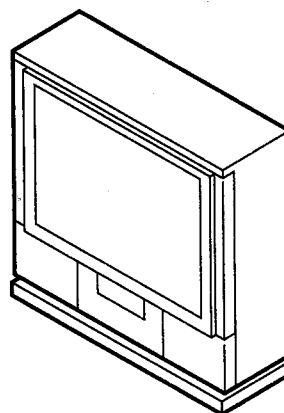
Note :

1. Service Manual for this model is separately published.

Service Manual	
Part No.	9-965-073-01



KP-53XBR45



KP-61XBR48



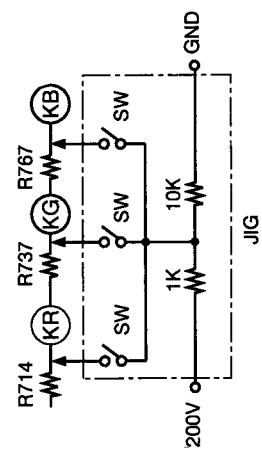
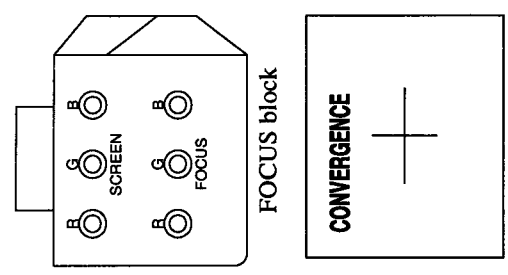
COLOR REAR VIDEO PROJECTOR
SONY®

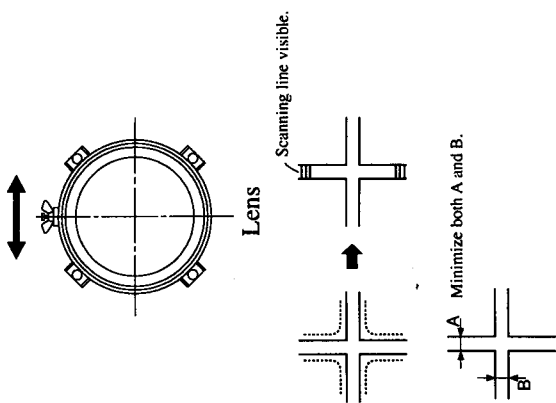
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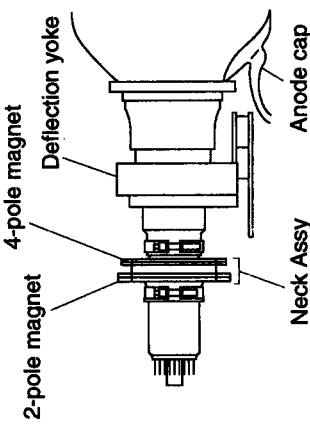
TABLE OF CONTENTS

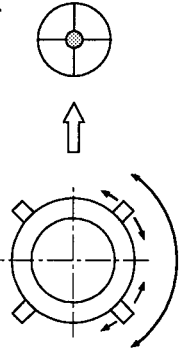
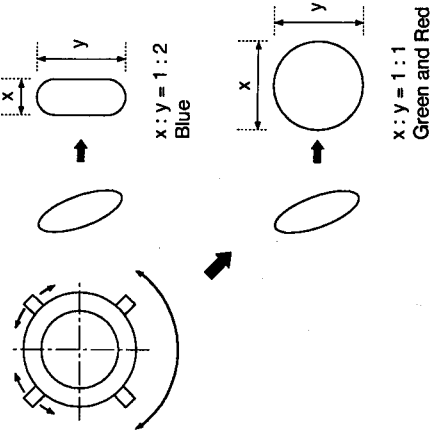
<u>Title</u>	<u>Page</u>	<u>Title</u>	<u>Page</u>
SET-UP ADJUSTMENTS			
SCREEN (G2) ADJUSTMENT	3	CIRCUIT ADJUSTMENTS	
LENS AND ELECTRICAL FOCUS ADJUSTMENT	3	ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER	20
DEFLECTION YOKE TILT ADJUSTMENT	5	1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE	20
2-POLE MAGNET ADJUSTMENT	5	2. MEMORY WRITE CONFIRMATION METHOD	20
4-POLE MAGNET ADJUSTMENT	6	3. ADJUST BUTTONS AND INDICATOR	21
BLUE DEFOCUS ADJUSTMENT	7	4. AN ITEM OF ADJUSTMENTS	22
CONVERGENCE ADJUSTMENT	7	RF AGC	24
CONVERGENCE MAIN ADJUSTMENT	7	SUB-CONTRAST ADJUSTMENT	24
CONVERGENCE SUB ADJUSTMENT	10	SUB-HUE AND SUB-COLOR ADJUSTMENT	25
SCREEN CENTER SECTION GREEN VERTICAL LINE ADJUSTMENT	11	SUB BRIGHT ADJUSTMENT	25
SCREEN CENTER SECTION GREEN HORIZONTAL LINE ADJUSTMENT ..	12	WHITE BALANCE ADJUSTMENT	25
GREEN SIZE AND LINEARITY ADJUSTMENT	12	MENU POSITION ADJUSTMENT	26
GREEN HORIZONTAL SIZE ADJUSTMENT	13	P-IN-P HORIZONTAL POSITION ADJUSTMENT	26
GREEN VERTICAL LINEARITY ADJUSTMENT	13	(1) P in P position adjustment	26
GREEN VERTICAL SIZE ADJUSTMENT	14	(2) P in P OSD position adjustment	26
GREEN HORIZONTAL TRAPEZOIDAL DISTORTION ADJUSTMENT	14	(3) P in P COL and HUE adjustment	27
GREEN HORIZONTAL QUATERNARY ADJUSTMENT	15	(4) P in P level adjustment	27
GREEN HORIZONTAL ASYMMETRICAL PIN			
DISTORTION ADJUSTMENT	15		
GREEN HORIZONTAL SYMMETRICAL PIN			
DISTORTION ADJUSTMENT	16		
GREEN VERTICAL WAVE (TERTIARY DISTORTION) ADJUSTMENT	16		
GREEN VERTICAL QUATERNARY DISTORTION ADJUSTMENT	17		
GREEN VERTICAL TRAPEZOIDAL DISTORTION ADJUSTMENT	17		
GREEN VERTICAL ASYMMETRICAL PIN DISTORTION			
(SECONDARY DISTORTION) ADJUSTMENT	18		
GREEN VERTICAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT	18		
GREEN AND RED REGISTRATION ADJUSTMENT	19		
GREEN AND BLUE REGISTRATION ADJUSTMENT	19		

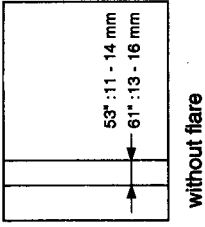
SET-UP ADJUSTMENT

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>● For details on how to put the unit into service mode, see Page 20.</p> <p>SCREEN (G2) ADJUSTMENT</p> <ol style="list-style-type: none"> 1 Set to *Video 1. 2 Connect the *tool between +200V, KR, KG, KB and ground. 3 Adjust with the focus block R, G, and B SCREEN controls to just before where the screen return lines disappear. <p>Or</p> <ol style="list-style-type: none"> 1 In service mode, selects *G2SW and set the data to "1". 2 Adjust *G2AJ so that the KG and KB cathode voltages are 170V-175VDC. 3 Adjust with the focus block R, G, and B *SCREEN controls to just before where the screen return lines disappear. 	<p>* No signal</p>		<p>SCREEN</p> <p>* G2SW " 1 "</p> <p>* G2AJ</p> <p>* SCREEN</p>	
<p>LENS AND ELECTRICAL FOCUS ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Press the remote command MENU button and carry out the *adjustments, select the *convergence adjustment, and display the signal. 			<p>* PICTUREMaximum BRIGHTNESSMaximum * CONVERGENCE</p> <p>* ROFF " 0 "</p> <p>G OFF " 1 "</p> <p>BOFF " 0 "</p>	
<ol style="list-style-type: none"> 2. Select the *adjustment item in service mode and adjust. 				

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>3. Turn the *Green Lens and adjust to eliminate the test signal *flare.</p> <p>4. Turn the *FOCUS block Green FOCUS knob and adjust to minimize the *test signal A and B sections.</p> <p>5. Repeat Steps 3 and 4 two or three times and optimize the focus while tracking.</p> <p>6. Adjust in the same manner for *Red and *Blue.</p>			<p>* Green Lens</p> <p>* Green FOCUS</p> <p>* Red adjustment ROFF " 1 " GOFF " 0 " BOFF " 0 "</p> <p>* Blue adjustment ROFF " 0 " GOFF " 0 " BOFF " 1 "</p>	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>DEFLECTION YOKE TILT ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Receive the *signal. 2. Select the *adjustment item in service mode and adjust. 3. Loosen the *Deflection Yoke fastening screw and adjust the Deflection Yoke tilt to optimize the horizontal and vertical pattern. 4. After adjustment, fasten the Deflection Yoke with the screw so that it is fast against the funnel section. 5. Adjust in the same manner for *Red and *Blue. 	<p>*Dot pattern</p>		<p>*Green tilt adjustment ROFF "0" GOFF "1" BOFF "0" *Deflection yoke</p> <p>*Red tilt adjustment ROFF "1" GOFF "0" BOFF "0" *Blue tilt adjustment ROFF "0" GOFF "0" BOFF "1"</p>	 <p>2-pole magnet 4-pole magnet Deflection yoke Neck Assy Anode cap</p>
<p>2-POLE MAGNET ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Receive the *signal. 2. Select the *adjustment item in service mode and adjust. 3. Turn the FOCUS knob counter-clockwise so that the dot bright point is easy to see. 	<p>*Dot pattern</p>		<p>*Green adjustment ROFF "0" GOFF "1" BOFF "0" PICTURE Maximume *FOCUS VR (Green)</p>	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>4. Adjust with the green *2-pole magnet so that the bright point is at the center of the dot.</p> <p>5. Adjust the *Red and *Blue dots in the same way.</p> <p style="text-align: center;">4-POLE MAGNET ADJUSTMENT</p> <p>1. Receive the *signal.</p> <p>2. Select the *adjustment item in service mode and adjust.</p>	<p style="text-align: center;">*Dot pattern</p>		<p>* 2-pole magnet</p> <p>* Red adjustment ROFF " 1 " GOFF " 0 " BOFF " 0 "</p> <p>* Blue adjustment ROFF " 0 " GOFF " 0 " BOFF " 1 "</p>	<p>* Use the center dot</p> 
<p>3. Adjust the FOCUS block *green FOCUS knob so that the dot is as in the *figure on the right.</p> <p>4. Adjust the green 4-pole magnet.</p> <p>5. Adjust in the same manner for *Red and *Blue.</p>			<p>* Green adjustment ROFF " 0 " GOFF " 1 " BOFF " 0 "</p> <p>PICTURE Maximum</p> <p>* FOCUS VR (Green)</p> <p>* Red adjustment ROFF " 1 " GOFF " 0 " BOFF " 0 "</p> <p>* FOCUS VR (Red)</p> <p>* Blue adjustment ROFF " 0 " GOFF " 0 " BOFF " 1 "</p> <p>* FOCUS VR (Blue)</p>	<p>* Use the center dot</p> 

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>BLUE DEFOCUS ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Receive the *signal. 2. Select the *adjustment item in service mode and adjust. 3. Adjust the FOCUS knob so that the crosshatch pattern vertical line width is as in the figure on the right. 	<p>* Crosshatch pattern</p>		<p>*ROFF " 0 " GOFF " 0 " BOFF " 1 " FOCUS VR (Blue)</p>	
<p>CONVERGENCE ADJUSTMENT</p> <p>● When replacing the deflection yoke, always perform "DEFLECTION YOKE TILT ADJUSTMENT" before adjusting the convergence.</p> <p>Adjustment procedure</p> <pre> G MAIN ↑ ↓ GH (SUB), GV (SUB) ↓ RH (SUB), RV (SUB) ↓ BH (SUB), BV (SUB) </pre> <p>CONVERGENCE MAIN ADJUSTMENT</p> <p>Receive the *signal, select the *adjustment item in service mode, adjust, and display a green single-color screen.</p>	<p>* Monoscope pattern or Crosshatch pattern</p>		<p>* PJTV " 1 " ROFF " 0 " GOFF " 1 " BOFF " 0 " VZOM " 0 "</p>	

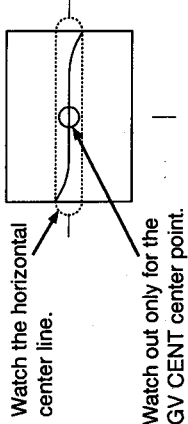
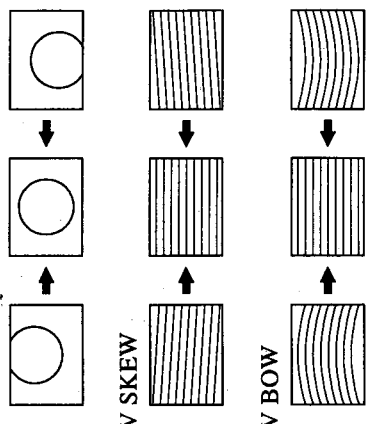
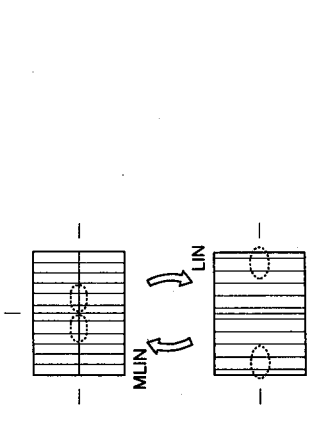
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<ul style="list-style-type: none"> • V-SHIFT adjustment • V-LINEARITY adjustment • V-SIZE, V-CORRECTION adjustment While tracking, adjust so that the lattice intervals for V-SIZE and VSCO are equal. • H-SHIFT adjustment • H-SIZE adjustment Finely adjust with SUB MSIZE. • PIN-AMP adjustment Finely adjust with SUB MPIN. 			<p>VPOS</p> <p>VLIN</p> <p>VSIZ VSCO</p> <p>HPOS</p> <p>HSIZE</p> <p>PAMP</p>	

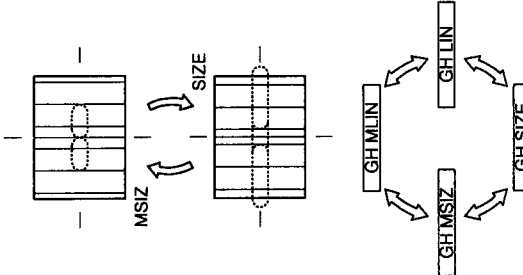
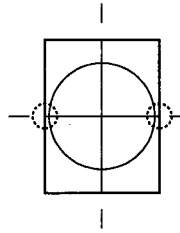
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<ul style="list-style-type: none"> UPPER/LOWER-CORNER PIN adjustment Correct the screen top and bottom section line bow. However, if this adjustment is overdone, distortion may occur with the PIN-AMP adjustment that can not be adjusted away. <p>Note : The PIN-AMP adjustment adjusts the overall screen from top to bottom, but the UPPER/LOWER-CORNER PIN adjustments have just large movement in the top and bottom sections, so be careful.</p> <ul style="list-style-type: none"> V-ANGLE, V-BOW adjustment Correct the tilt and bow of the vertical line at the center of the screen. <ul style="list-style-type: none"> TILT adjustment Adjust to eliminate the tilt of one of the two vertical lines at both ends of the screen. 			<p>UPIN LPIN</p> <p>VANG VBOW</p> <p>PPHA</p>	<p>The diagrams show the following adjustments:</p> <ul style="list-style-type: none"> UPIN and LPIN: Adjusting the bow of the top and bottom sections of the screen. UPIN shows a top section with a bow being corrected to a straight line. LPIN shows a bottom section with a bow being corrected to a straight line. VANG and VBOW: Adjusting the tilt and bow of the vertical lines. VANG shows a vertical line that is tilted being corrected to be vertical. VBOW shows a vertical line with a bow being corrected to be straight. PPHA: Adjusting the tilt of one of the two vertical lines at both ends of the screen. PPHA shows two vertical lines, one of which is tilted, being corrected to be parallel to each other.

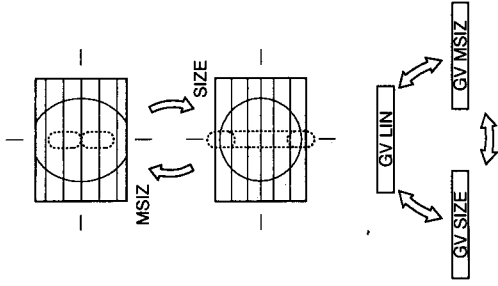
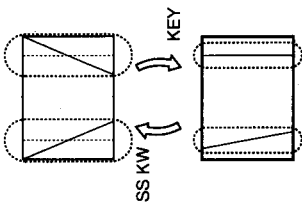
1 Display 2 Adjustment item 3 Adjustment type

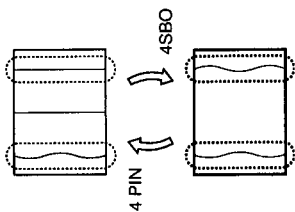
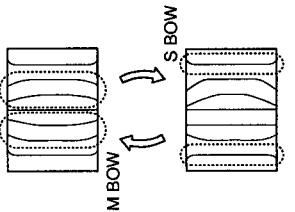
ADJUSTMENT ITEM AND PROCEDURE		EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER		
CONVERGENCE SUB ADJUSTMENT							
Adjustment O : Yes - : No							
		Adjustment type					
Display	Adjustment item	GH	GV	RH	RV	BH	BV
CENT	CENT	0	0	0	0	0	0
SKEW	SKEW	0	0	0	0	0	0
BOW	BOW	0	0	0	0	0	0
4BOW	4TH BOW	0	-	0	-	0	-
SSXW	SUB SKEW	0	0	0	0	0	0
KEY	KEY	0	0	0	0	0	0
MKEY	MID KEY	-	0	-	0	-	0
SBOW	SUB BOW	0	0	0	0	0	0
MBOW	MID BOW	0	-	0	-	0	-
4SBOW	4TH SUB BOW	0	-	0	-	0	-
4PIN	4TH PIN	0	0	0	0	0	0
LIN	LIN	0	0	0	0	0	0
SIZE	SIZE	0	0	0	0	0	0
MSIZ	MID SIZE	0	0	0	0	0	0
MLIN	MID LIN	0	-	0	-	0	-
PIN	PIN	0	0	0	0	0	0
MPIN	MID PIN	0	0	0	0	0	0
WAVE	WAVE	-	0	-	0	-	0

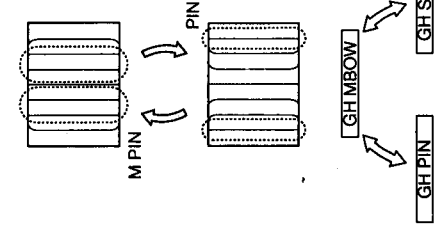
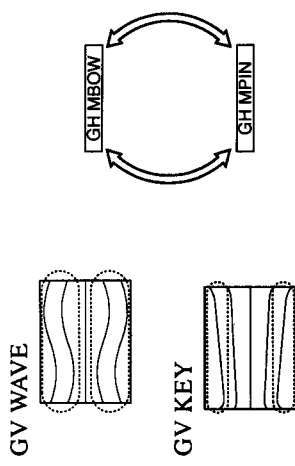
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>SCREEN CENTER SECTION GREEN VERTICAL LINE ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Finely adjust with *GH CENT, GH BOW, GH SKEW. Adjust watching out for the GH CENT screen center section. 2. *GH 4TH BOW adjustment Correct the corner distortion that could not be adjusted away with the GH BOW adjustment. 			<p>*GH CENT GH BOW GH SKEW</p> <p>*GH 4BOW</p>	<p>Watch out only for the GH CENT center point.</p> <p>Watch the vertical center line.</p> <p>GH CENT</p> <p>GH BOW</p> <p>GH SKEW</p> <p>GH 4BOW</p>

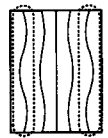
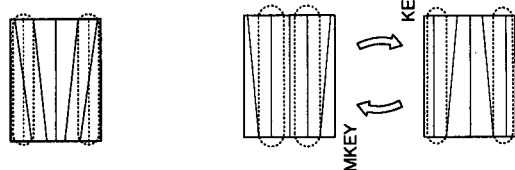
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>SCREEN CENTER SECTION GREEN HORIZONTAL LINE ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Finely adjust the center position of the vertical line at the center of the screen with *GV CENT. 			*GV CENT	
<ol style="list-style-type: none"> 2. Correct the tilt and bow of the horizontal line at the center of the screen with *GV SKEW and GV BOW. 			*GV SKEW GV BOW	
<p>GREEN SIZE AND LINEARITY ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Balance the sizes at both sides of the center section of the screen with *GH MLIN. 2. Balance the sizes on both end sections of the screen with *GH LIN. 3. While tracking, adjust with GH MLIN and GH LIN so that the sizes of the horizontal line at the center of the screen are symmetrical left and right. 			*GH MLIN *GH LIN	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>GREEN HORIZONTAL SIZE ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust with *GH MSIZ so that the sizes of both ends and of both sides of the center section of the screen are equal. 2. Adjust with *GH SIZE so that the horizontal sizes of both ends and of both sides of the center section of the screen are equal. 3. While tracking, adjust with GH MSIZ and GH SIZE so that the lattice intervals for the horizontal line section of the center section of the screen are equal and so that the horizontal size is the prescribed value. 4. If M LIN is changed when the GH MSIZ and GH SIZE adjustment is complete, adjust again while tracking. 			<p>*GH MSIZ *GH SIZE</p>	
<p>● With just the H SIZE adjustment in MAIN, if there is no need to adjust GH SIZE in SUB this can save power.</p> <p>GREEN VERTICAL LINEARITY ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust *GV LIN so that the vertical lines at the top and bottom of the screen are symmetrical. 			<p>*GV LIN</p>	

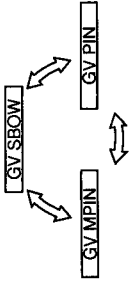
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>GREEN VERTICAL SIZE ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust with *GV MSIZE so that the sizes for the top and bottom sections of the screen and for both sides of the center section of the screen are equal. 2. Set the vertical size to the prescribed value with *GV SIZE. 3. Adjust GV MSIZ and GV SIZE watching the vertical line at the center section of the screen. 4. While tracking, adjust with GV MSIZ and GV SIZE so that the lattice intervals for the vertical line section of the center section of the screen are equal and so that the vertical size is the regulation value. 5. If GV LNJ is out of place when the GV MSIZ and GV SIZE adjustment is complete, adjust again while tracking. <p>● If there is no need to adjust GV SIZE in SUB with just the V SIZE adjustment in MAIN, this can save power.</p>			<p>*GV MSIZ</p> <p>*GV SIZE</p>	
<p>GREEN HORIZONTAL TRAPEZOIDAL DISTORTION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust with *GH SSKW so that the tilt of the vertical lines at both ends of the screen is symmetrical left and right. 2. Adjust with *GH KEY so that there is no tilt in the vertical lines at both ends of the screen. 3. If there is a tilt on either the left or right after the GH KEY adjustment, adjust while tracking. 			<p>*GH SSKW</p> <p>*GH KEY</p>	

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<p>GREEN HORIZONTAL QUATERNARY ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Correct the quaternary distortion with *GH 4PIN. 2. While balancing, correct the quaternary distortion of both end sections of the screen with *GH 4SBO. 3. While tracking, adjust with GH 4PIN and GH 4SBO. 			<p>*GH 4PIN *GH 4SBO</p>	
<p>GREEN HORIZONTAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust with *GH MBOW so that the pin asymmetry at both sides of the center section of screen is symmetrical. 2. Adjust with *GH SBOW so that the bow at both end sections of the screen is symmetrical left and right. 3. While tracking, adjust with GH MBOW and GH SBOW so that the bow of vertical lines on the entire screen is symmetrical left and right. 			<p>*GH MBOW *GH SBOW</p>	

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<p>GREEN HORIZONTAL SYMMETRICAL PIN DISTORTION ADJUSTMENT</p> <ol style="list-style-type: none"> Adjust the pin distortion at both sides of the center section of the screen with *GH MPIN. Adjust the pin distortion at both end sections of the screen with *GH PIN. While tracking, adjust with GH MPIN and GH PIN so that the PIN of vertical lines on the entire screen have no bowing. If there is asymmetrical pin distortion after the GH MPIN and GH PIN adjustments, adjust with GH MBOW and GH SBOW while tracking. 			<p>*GH MPIN *GH PIN GH MBOW GH SBOW</p>	
<p>● With just the PIN AMP adjustment in MAIN, if there is no need to adjust GV PIN in SUB, this can save power.</p> <p>GREEN VERTICAL WAVE (TERTIARY DISTORTION) ADJUSTMENT</p> <ol style="list-style-type: none"> Take the screen top and bottom horizontal lines with *GV WAVE and find the secondary and quaternary waveform. There is KEY distortion after the GV WAVE adjustment, so adjust with GV WAVE and *GV KEY while tracking. 			<p>*GV WAVE *GV KEY</p>	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>GREEN VERTICAL QUATERNARY DISTORTION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Correct the quaternary distortion of the horizontal lines at the top and bottom sections of the screen with *GV 4PIN. <ul style="list-style-type: none"> • Since there is no 4SBO for vertical correction, there will be a slight imbalance, but adjust to eliminate the distortion from the horizontal line at either the top or the bottom of the screen. • In many cases, the horizontal lines at the top and bottom sections of the screen are not straight lines after the adjustment. As long as the secondary distortion is mild enough that it can be corrected with the PIN adjustment, this is OK. 			*GV 4PIN	 <p>GV 4PIN</p>
<p>GREEN VERTICAL TRAPEZOIDAL DISTORTION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Adjust with *GV SSKW so that the tilt of the horizontal lines at the top and bottom sections of the screen is symmetrical about the center position horizontal line. 2. Adjust with *GV MKEY so that there is no tilt for the line sections at both sides of the horizontal lines at the center section of the stream. 3. Adjust with *GV KEY so that there is no tilt for the horizontal lines at the top and bottom sections of the screen. 4. While tracking, adjust with GV MKEY and GV KEY so that there is no tilt for the horizontal lines on the entire screen. 			*GV SSKW *GV MKEY *GV KEY	 <p>GV SSKW</p>

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>5. If the tilt is unbalanced after the GV MKEY and GV KEY adjustment, adjust again with *GV SSKW.</p> <p>GREEN VERTICAL ASYMMETRICAL PIN DISTORTION (SECONDARY DISTORTION) ADJUSTMENT</p> <p>1. Correct the asymmetrical pin distortion at the top and bottom sections of the screen with *GV SBOW.</p>			*GV SSKW	
<p>GREEN VERTICAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT</p> <p>1. Adjust the pin distortion for both side sections and the center of the screen with *GV MPIN.</p> <p>2. Adjust with *GV PIN so that the horizontal lines at the top and bottom sections of the screen are straight lines.</p> <p>3. Adjust with GV MPIN and GV PIN so that there is no curve in the horizontal lines on the entire screen.</p>			*GV SBOW	
<p>GREEN VERTICAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT</p> <p>1. Adjust the pin distortion for both side sections and the center of the screen with *GV MPIN.</p> <p>2. Adjust with *GV PIN so that the horizontal lines at the top and bottom sections of the screen are straight lines.</p> <p>3. Adjust with GV MPIN and GV PIN so that there is no curve in the horizontal lines on the entire screen.</p>			*GV MPIN *GV PIN	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>4. After the adjustments in Items 1-3, adjust the tracking with *GV SBOW, GV MPIN, and GV PIN.</p> <p>GREEN AND RED REGISTRATION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Switch *ROFF and GOFF to "1" (ON) so that red and green appear on the screen. 2. Adjust so that the red lines lay on the green lines. Adjust with the same procedure as the GREEN SUB adjustment. <p>Notes: 1 The main correction is not carried out during red registration adjustment. 2 Beware. The green adjustment items can be changed by mistake. 3 Unlike for green, adjust within the range -124 ~ +124.</p> <p>GREEN AND BLUE REGISTRATION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Switch *BOFF, ROFF, and GOFF "1" (ON) so that blue, green, and red appear on the screen. In this case, if the red makes the display hard to view, change ROFF to "0" (OFF). 2. Adjust so that the blue and green lines are on top of each other. <p>Notes: 1 The main correction is not carried out during RED registration adjustment. 2 Beware. The GREEN and RED adjustment items can be changed by mistake.</p>			<p>*GV SBOW</p> <p>*ROFF "1" GOFF "1" BOFF "0"</p> <p>*ROFF "1" GOFF "1" BOFF "1"</p>	

CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander (RM-Y118) can be performed circuit adjustments about this model.

NOTE : Test Equipment Required.

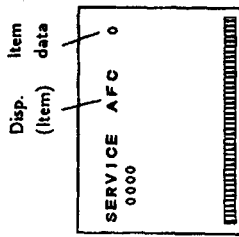
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

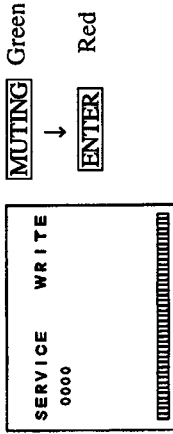
1. Standby mode. (Power off)
2. **[DISPLAY]** → **[5]** → **[VOL(+)]** → **[POWER]** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN



3. The CRT displays the item Being adjusted.
4. Press **[1]** or **[4]** on the Remote Commander to select the item.
5. Press **[3]** or **[6]** on the Remote Commander to change the data.
6. If you want to recover the latest values press **[0]** then **[ENTER]** to lead the memory.
7. Press **[MUTING]** then **[ENTER]** to write into memory.

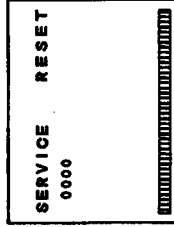
SERVICE ADJUSTMENT MODE MEMORY



8. Press **[8]** then **[ENTER]** on the Remote Commander to initialize.

Carry out step 8) when adjusting IDs 0 to 4 and when replacing and adjusting IC3002.

Factory original setting

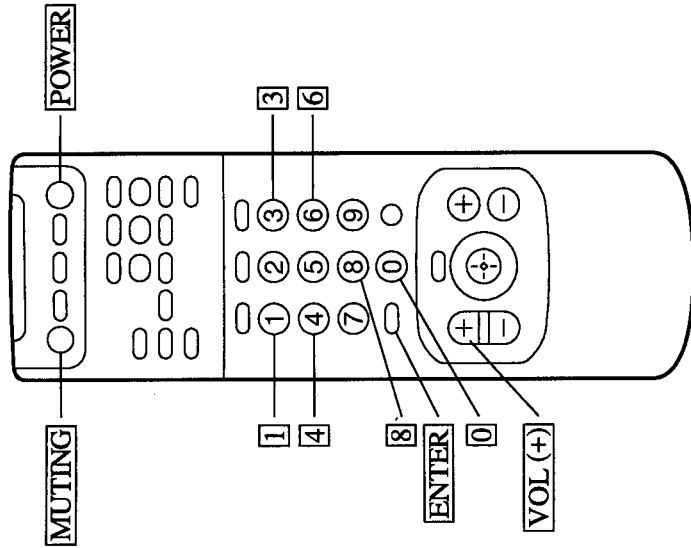


9. Turn set off and on to exit.

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again, confirm they were adjusted.

3. ADJUST BUTTONS AND INDICATOR



RM-Y128

4. AN ITEM OF ADJUSTMENTS

DISP.	Item	Data range	Ave.data	Remarks
PDTV	Registration Adjust	0-1	1	
VPOS	V.Shift	0-63	21	
VSIZ	V.Size	0-63	35	
VZOM	HV-comp-V	0-15	0	
VLIN	V.Linearity	0-15	9	
VSCO	S.Correction	0-15	9	
HPOS	H.Shift	0-63	36	
HSIZ	H.Size	0-63	14	
HZOM	HV-comp-H	0-15	0	
PAMP	Pin Amp.	0-63	33	
UPIN	Upper Corner Pin	0-15	4	
LPIN	Lower Corner Pin	0-15	8	
PPHA	Tilt	0-15	8	
VBOW	V.Bow	0-15	7	
VANG	V.Angle	0-15	7	
HKEY	H.Keystone	0-63	31	
AFCG	AFC Loop Gain	0-3	0	
AKRF	AKB Reference	0-15	7	
G2SW	G2 SW.	0,1	0	
G2AJ	G2 Set	0-15	7	
GAMP	G.Drive	0-63	30	
BAMP	B.Drive	0-63	30	
GCUT	G.Cut off	0-15	4	
BCUT	B.Cut off	0-15	9	
SPIX	Sug Picture	0-15	8	
SHUE	Sub Hue	0-15	7	
SCOL	Sub Color	0-15	4	
SBRT	Sub Brightness	0-63	32	
SSHP	Sub Sharpness	0-3	3	
GMMA	Gamma Level	0-15	5	
DPIX	D.Picture	0-3	1	
Y-DC	DC Tran	0-3	3	
ABLM	ABL Mode	0-3	1	
R-YR	R-Y/R	0-15	6	
R-YB	R-Y/B	0-15	13	
G-YR	G-Y/R	0-15	11	
G-YB	G-Y/B	0-15	10	
CTRP	C.Trap	0,1	1	
TOTF	TOT f ₀	0-3	1	
TOTQ	TOT Q	0-3	1	
PREL	PreOver Level	0-15	3	
SHPF	SHP f ₀	0-3	2	
SHPL	SHP Limit	0,1	0	
ROFF	Red SW.	0,1	1	
GOFF	Green SW.	0,1	1	
BOFF	Blue SW.	0,1	1	
AGI 1	Aging Mode	0,1	0	
AGI 2	CH.Block	0,1	0	
OSDL		0-3	-	
MSYC	V.Sync.	0,1	0	
VMLV	VM Level	0-3	3	
NRLV	NR Level	0-3	1	
DCOL	D.COL	0,1	0	
CVOL	Center Volume	0-15	0	
SVOL	Surround Volume	0-15	0	
SBAS	Bass	0-15	*1	
STRE	Treble	0-15	*1	
UYBO		0-63	-	
LYBO		0-63	-	
HAMP		0-63	-	
HTIL		0-63	-	
UCBO		0-63	-	
UTIL		0-63	-	
LCBO		0-63	-	
LTIL		0-63	-	
DCSH		0-63	-	
WBSW		0,1	-	
YPED		0-127	-	
VW/B		0-127	-	
UW/B		0-127	-	
MS	Mode Set	0-3	0	
BPFS	BPF Set	0,1	0	
YDLL	Y Delay Level	0-7	1	
DYCO	Y Coring Level	0-15	5	
DYGA	Y Gain	0-15	8	
DCCO	C Coring Level	0-15	5	
DCGA	C Gain	0-15	6	
VTR	VTR STD.	0-3	0	
VTRR	VTR Reference	0-31	7	
HSDR	H.Sync.Detection Level	0-31	6	

DISP.	Item	Data range	Ave.data	Remarks
WSCO	Weak Signal Coring Level	0-7	0	
WSR1	Weak Signal Reference 1	0-15	1	
WSR2	Weak Signal Reference 2	0-15	1	
VAPG	V.Aperture Gain	0-7	3*	
VAPI	V.Aperture Inv.	0-31	11*	
KILS	Color Killer	0-1	0	
HSDR	H.Sync.Detection Level	0-31	7	
DISP		0-15	-	
NSCO		0-63	-	
VPIN		0-63	-	
YADC		0-63	-	
ECAB		0,1	-	
SNSR		0,1	-	

- : Don't Care

* STANDARD	MOVIE	SPORTS	NEWS	GAME
VAPG	3	4	3	3
VAPI	11	12	11	11

*1	53"	61"
SBAS	9	7
STRE	5	7

DISP.	Item	Data range	Ave.data	Remarks
D/A0		0-63	0	
D/A1		0-63	0	
D/A2		0-63	0	
D/A3		0-63	0	
GH CENT	GREEN H CENT	-127--+127	-3	
GH SKEW	GREEN H SKEW	-127--+127	+15	
GH BOW	GREEN H BOW	-127--+127	-19	
GH 4BOW	GREEN 4TH BOW	-127--+127	-1	
GH SIZE	GREEN H SIZE	-127--+127	-11	
GH LIN	GREEN H LIN	-127--+127	+16	
GH MSIZ	GREEN H MID SIZE	-127--+127	0	
GH MLIN	GREEN H MID LIN	-127--+127	+16	
GH KEY	GREEN H KEY	-127--+127	+9	
GH SSKW	GREEN H SUB SKEW	-127--+127	+17	
GH MPIN	GREEN H MID PIN	-127--+127	+16	
GH PIN	GREEN H PIN	-127--+127	-50	
GH SBOW	GREEN H SUB BOW	-127--+127	-12	
GH MBOW	GREEN H MID BOW	-127--+127	+1	
GH 4PIN	GREEN H 4TH PIN	-127--+127	-17	
GH 4SBO	GREEN H 4TH SUB BOW	-127--+127	+3	
GV CENT	GREEN V CENT	-127--+127	+9	
GV SKEW	GREEN V SKEW	-127--+127	+10	
GV BOW	GREEN V BOW	-127--+127	+17	
GV SIZE	GREEN V SIZE	-127--+127	+10	
GV LIN	GREEN V LIN	-127--+127	-17	
GV MSIZ	GREEN V MID SIZE	-127--+127	-7	
GV MKEY	GREEN V MID KEY	-127--+127	-2	
GV KEY	GREEN V KEY	-127--+127	-5	
GV SSKW	GREEN V SUB SKEW	-127--+127	0	
GV MPIN	GREEN V MID PIN	-127--+127	+7	
GV PIN	GREEN V PIN	-127--+127	+55	
GV SBOW	GREEN V SUB BOW	-127--+127	+10	
GV WAVE	GREEN V WAVE	-127--+127	-5	
GV 4PIN	GREEN V 4TH PIN	-127--+127	-9	
RH CENT	RED H CENT	-63--+63	+3	
RH SKEW	RED H SKEW	-127--+127	+8	
RH BOW	RED H BOW	-127--+127	-13	
RH 4BOW	RED 4TH BOW	-127--+127	-6	
RH SIZE	RED H SIZE	-127--+127	-1	

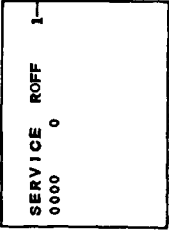
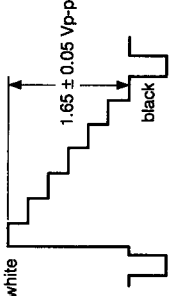
DISP.	Item	Data range	Ave.data	Remarks
RH LIN	RED H LIN	-127--+127	+11	
RH MSIZ	RED H MID SIZE	-127--+127	-13	
RH MLIN	RED H MID LIN	-127--+127	-19	
RH KEY	RED H KEY	-127--+127	+4	
RH SSKW	RED H SUB SKEW	-127--+127	+16	
RH MPIN	RED H MID PIN	-127--+127	+42	
RH PIN	RED H PIN	-127--+127	-40	
RH SBOW	RED H SUB BOW	-127--+127	+18	
RH MBOW	RED H MID BOW	-127--+127	+14	
RH 4PIN	RED H 4TH PIN	-127--+127	-13	
RH 4SBO	RED H 4TH SUB BOW	-127--+127	-3	
RV CENT	RED V CENT	-63--+63	-23	
RV SKEW	RED V SKEW	-127--+127	-5	
RV BOW	RED V BOW	-127--+127	+15	
RV SIZE	RED V SIZE	-127--+127	+16	
RV LIN	RED V LIN	-127--+127	-17	
RV MSIZ	RED V MID SIZE	-127--+127	-6	
RV MKEY	RED V MID KEY	-127--+127	+10	
RV KEY	RED V KEY	-127--+127	-51	
RV SSKW	RED V SUB SKEW	-127--+127	0	
RV MPIN	RED V MID PIN	-127--+127	+4	
RV PIN	RED V PIN	-127--+127	+42	
RV SBOW	RED V SUB BOW	-127--+127	+6	
RV WAVE	RED V WAVE	-127--+127	+26	
RV 4PIN	RED V 4TH PIN	-127--+127	-8	
BH CENT	BLUE H CENT	-63--+63	-28	
BH SKEW	BLUE H SKEW	-127--+127	+1	
BH BOW	BLUE H BOW	-127--+127	-26	
BH 4BOW	BLUE H 4TH BOW	-127--+127	-4	
BH SIZE	BLUE H SIZE	-127--+127	-19	
BH LIN	BLUE H LIN	-127--+127	+7	
BH MSIZE	BLUE H MID SIZE	-127--+127	-23	
BH MLIN	BLUE H MID LIN	-127--+127	+25	
BH KEY	BLUE H KEY	-127--+127	+13	
BH SSKW	BLUE H SUB SKEW	-127--+127	+24	
BH MPIN	BLUE H MID PIN	-127--+127	+36	
BH PIN	BLUE H PIN	-127--+127	-42	
BH SBOW	BLUE H SUB BOW	-127--+127	-46	
BH MBOW	BLUE H MID BOW	-127--+127	-3	

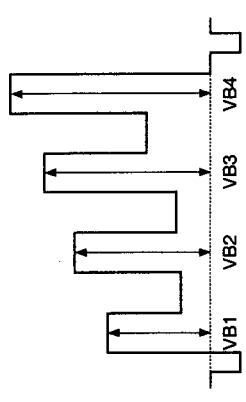
DISP.	Item	Data range	Ave.data	Remarks
BH 4PIN	BLUE H 4TH PIN	-127--+127	-7	
BH 4SBO	BLUE H 4TH SUB BOW	-127--+127	+8	
BV SENT	BLUE V SENT	-63--+63	+4	
BV SKEW	BLUE V SKEW	-127--+127	-10	
BV BOW	BLUE V BOW	-127--+127	+10	
BV SIZE	BLUE V SIZE	-127--+127	0	
BV LIN	BLUE V LIN	-127--+127	-15	
BV MSIZ	BLUE V MID SIZE	-127--+127	-9	
BV MKEY	BLUE V MID KEY	-127--+127	-11	
BV KEY	BLUE V KEY	-127--+127	-2	
BV SSKW	BLUE V SUB SKEW	-127--+127	+2	
BV MPIN	BLUE V MID PIN	-127--+127	0	
BV PIN	BLUE V PIN	-127--+127	+26	
BV SBOW	BLUE V SUB BOW	-127--+127	+8	
BV WAVE	BLUE V WAVE	-127--+127	-33	
BV 4PIN	BLUE V 4TH PIN	-127--+127	-9	
MODE	P IN P MODE	0-255	0	
FILT	V Filter	0-33	3	
DHFP	H Fine Position	0-63	9	
DVFP	V Fine Position	0-63	12	
MBCR	Main Border Color	0-127	71	
SBCR	Sub Border Color	0-127	71	
CBCR	Channel Border Color	0-127	71	
BGCR	BackGround BC	0-255	96	
DF	Display HVV Fine Pos	0-255	170	
MAAH	Acq.Area H Fine Pos	0-15	2	
MAAV	Acq.Area V Fine Pos	0-15	3	
SAAH	Acq.Area H Fine Pos	0-15	7	
SAAV	Acq.Area V Fine Pos	0-15	6	
YAMP	Y AMP	0-63	32	
VAMP	V AMP	0-63	32	
UAMP	U AMP	0-63	32	
CPSW	WHITE BALANCE ADJ.sw	0.1	0	
YCLP	Y CLP	0-127	75	
VCLP	V CLP	0-127	75	
UCLP	U CLP	0-127	75	
MSHU	Main.Sub HUE(DAC05)	0-63	27	
SSHU	Sub.Sub HUE(DAC04)	0-63	27	
MSCO	Main.Sub COL(PIPOD)	0-63	31	

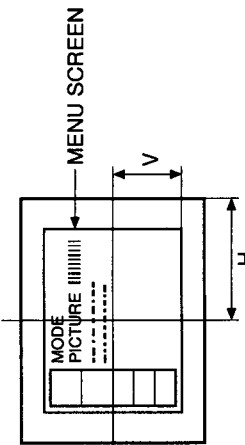
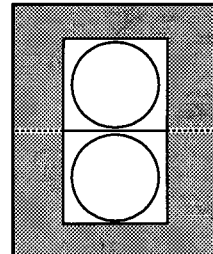
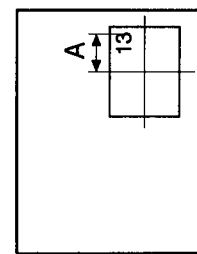
DISP.	Item	Data range	Ave.data	Remarks
SSCO	Sub.Sub COL (PIPOE)	0-63	31	
LATT	L VOLUME	0-15	0	
RATT	R VOLUME	0-15	0	
BASS	BASS	0-15	*1	
TREB	TREBLE	0-15	*1	
MVPO	MENU V POSITION	0-127	19	
MHPO	MENU H POSITION	0-127	9	
CPO 1	CC/TEXT H POSITION	0-63	-	
CPO 2	CC/TEXT H POSITION	0-63	-	
SHPO	PinP OSD POSITION	0-15	8	
YUV	RGB/YUV switch	0.1	-	
XDSZ	XDS:Zilog/Motorola	0.1	1	

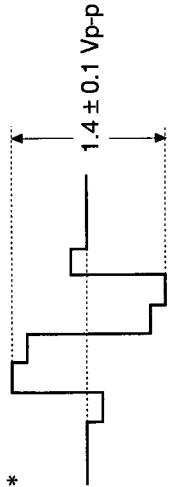
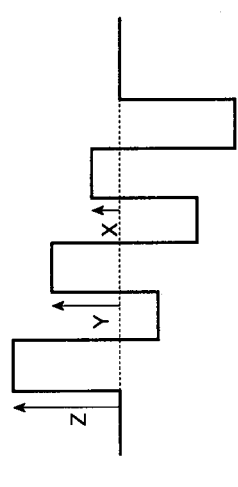
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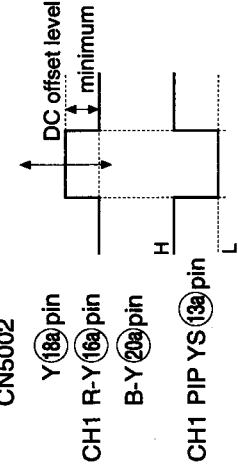
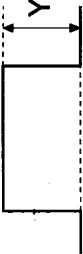
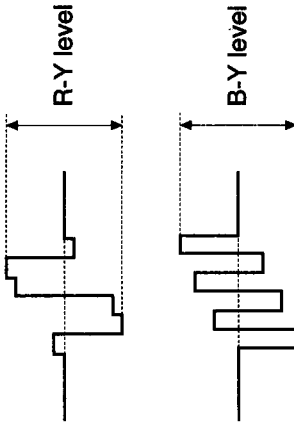
*1	53"	61"
BASS	9	7
TREB	5	7

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>RF AGC</p> <ol style="list-style-type: none"> 1. Input the *signal. 2. Adjust with the *TU7201 AGC control so that there is no snow noise or cross modulation on the screen. 3. Verify by changing the channel. 	<p>*Color Bar pattern *TU7201 AGC VR</p>			
<p>SUB-CONTRAST ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Input the *signal and put the unit into service mode. 2. Set the set as on *the right. 	<p>*Color Bar pattern (75%)</p>		<p>*PICTUREmaximum COLORminimum BRIGHTNESSminimum TRINITRONmedium ROFF " 1 " GOFF " 0 " BOFF " 0 "</p>	
<ol style="list-style-type: none"> 3. Connect an *oscilloscope between the M board *connector and ground. 4. Select *SPIX and adjust so that the wave form level is *1.65 ± 0.05 Vp-p. 5. *Write the data into memory. 	<p>* Oscilloscope</p>	<p>*CN3006 @ pin (M Board)</p>	<p>* SPIX * MUTING ↓ ENTER</p>	<p>*</p> 

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>6. Set the *set as on the right and verify.</p> <p>SUB-HUE AND SUB-COLOR ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Input the *signal and put the set into service mode. 2. Connect an oscilloscope between *connector on the M board. 3. Adjust SHUE and SCOL so that VB1 = VB4 and VB2 = VB3 in the *waveform levels. 4. *Write the data to memory 	<p>*Color Bar pattern Oscilloscope</p>	<p>CN3006 (M Board)</p>	<p>*COLORcenter BRIGHTNESScenter TRINITRONmideum GOFF " 1 " BOFF " 1 "</p> <p>SHUE: VB1=VB4 SCOL: VB2=VB3</p> <p>* MUTING ↓ ENTER</p>	
<p>SUB BRIGHTNESS ADJUSTMENT</p> <ol style="list-style-type: none"> 1 Receive the *signal and adjust the picture quality with the menu. 2 Adjust service mode *SBRT so that the signal 10IRE section barely glows. 	<p>*Monoscope pattern</p>		<p>PICTUREMinimum *SBRT</p>	
<p>WHITE BALANCE ADJUSTMENT</p> <ol style="list-style-type: none"> 1 Receive the *signal. 2 Adjust the white balance with service mode *GCUT and BCUT. 3 Change the *signal. 4 Adjust the white balance with service mode *GAMP and BAMP. 5 Repeatedly adjust the white balance for the 20IRE and 100IRE Signal settings. 	<p>*All-white pattern 20 IRE</p> <p>*All-white pattern 100 IRE</p>		<p>*GCUT BCUT PICTUREMaximum *GAMP BAMP</p>	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>MENU POSITION ADJUSTMENT</p> <ol style="list-style-type: none"> 1. Set the MENU mode. 2. *Adjust the position of MENU SCREEN with *MHPO and MVPO. 3. Write the data into memory. 	Monoscope pattern		<p>* MHPO MVPO</p> <p>* MUTING → ENTER</p>	 <p>H = 6.7 ± 0.15 SQ V = 5.0 ± 0.10 SQ</p>
<p>P-IN-P ADJUSTMENT</p> <p>(1) Pin P position adjustment</p> <ol style="list-style-type: none"> 1. Set to P in P mode to obtain 2 frame sub picture. 2. Receive the *signal on both screen and set into service mode. 3. Adjust the P in P position with *DHFP, DVFP, MAAH, MAAV, SAAH, SAAV. 4. *Write the data into memory. 	* Monoscope pattern		<p>* DHFP, DVFP, MAAH, MAAV, SAAH, SAAV</p> <p>* MUTING → ENTER</p>	
<p>(2) P in P OSD position adjustment</p> <ol style="list-style-type: none"> 1. Turn on P in P (1/4 size). 2. Set the DISPLAY MODE to DISPLAY ON. 3. *Adjust the position of SUB CH DISPLAY with *SHPO. 4. *Write the data into memory. 			<p>* SHPO</p> <p>* MUTING → ENTER</p>	 <p>A = 5.0 ± 0.3 SQ</p>

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<p>(3) P in P COL and HUE adjustment () : Sub ch display</p> <ol style="list-style-type: none"> 1. Receive the *signal on both screen and set into service mode. 2. Connect an *oscilloscope to *Q5039 (IC5016). 3. Adjust *MSCO (SSCO) for the *specified level. 4. Connect an oscilloscope to *Q5034 (IC5014). 5. Adjust *MSHU (SSHU) for the specified. 6. *Write the data into memory. 	<p>* Color bar * Oscilloscope</p>	<p>* Q5039 Emitter (IC5016 (4) pin) (X Board) * Q5034 Emitter (IC5014 (8) pin) (X Board)</p>	<p>* MSCO (SSCO) * MSHU (SSHU)</p>	 <p>* Z = 3X ± 0.1 Vp-p * Y = 2X ± 0.1 Vp-p</p> 
<p>(4) P in P level adjustment No mark : Y signal () : R-Y signal [] : B-Y signal</p> <ol style="list-style-type: none"> 1. Receive the *signal on both screen and set into service mode. 2. Connect an *oscilloscope to *CN5002 (16) pin (16) pin [16) pin]. 	<p>* All Black pattern (Ø IRE) * Oscilloscope</p>	<p>* CN5002 (16) pin (CN5002 (16) pin) [CN5002 (16) pin] (X Board)</p>	<p>* MUTING ↓ * ENTER</p>	

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<p>3. Adjust *YCLP (VCLP) [UCLP] to minimize the *DC off set level.</p> <p>4. *Write the data into memory.</p> <p>5. Add 25 to the adjusted data YCLP.</p> <p>6. Write the added data into YCLP of memory.</p> <p>7. Change the *signal.</p> <p>8. Connect an oscilloscope to *CN5002 (18) pin.</p>	<p>* All White pattern</p>	<p>*CN5002 (18) pin</p>	<p>* YCLP (VCLP) [UCLP]</p> <p>* MUTING</p> <p>↓</p> <p>ENTER</p>	<p>*DC offset level minimum (5mVp-p on less)</p> <p>CN5002</p> <p>Y (18) pin</p> <p>CH1 R-Y (18) pin</p> <p>B-Y (20) pin</p> <p>CH1 PIP YS (13) pin</p> <p>H</p> <p>L</p> 
<p>9. Adjust *YAMP to the *specified level.</p> <p>10. Change the *signal.</p> <p>11. Connect an oscilloscope to *CN5002 (18) pin) (20) pin].</p> <p>12. Adjust *(VAMP) [UAMP] to the *specified level.</p>	<p>* Color-bar</p>	<p>*(CN5002 (18) pin) [CN5002 (20) pin]</p>	<p>* YAMP</p> <p>*(VAMP) [UAMP]</p> <p>* MUTING</p> <p>↓</p> <p>ENTER</p>	<p>* Y level 1.2 ± 0.05 Vp-p</p>  <p>* R-Y level 1.1 ± 0.05 Vp-p</p> <p>B-Y level 1.2 ± 0.05 Vp-p</p> 
<p>13. *Write the data into memory.</p>			<p>* MUTING</p> <p>↓</p> <p>ENTER</p>	