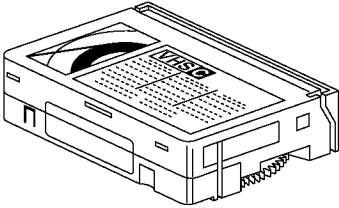
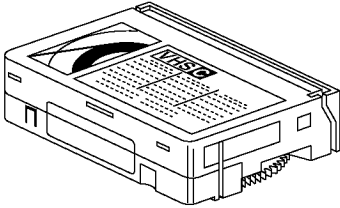
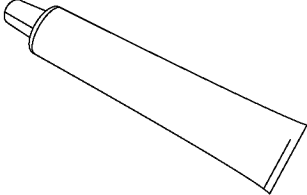
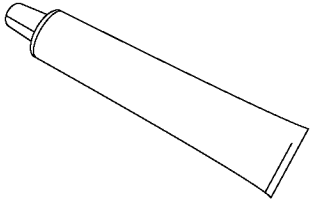


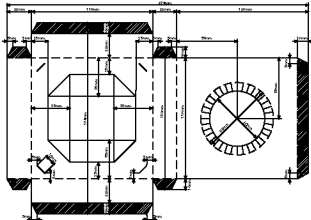
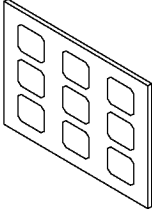
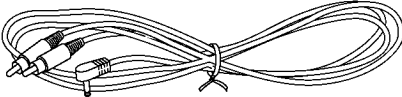
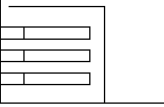
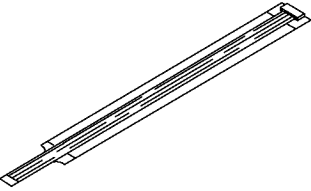
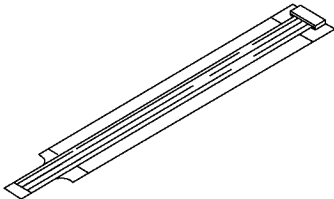
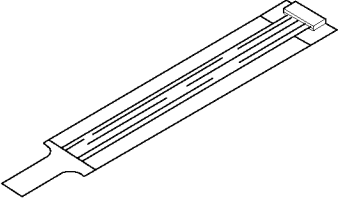
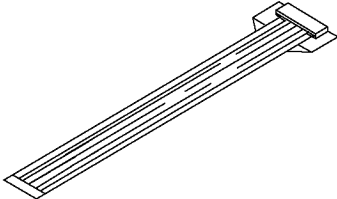
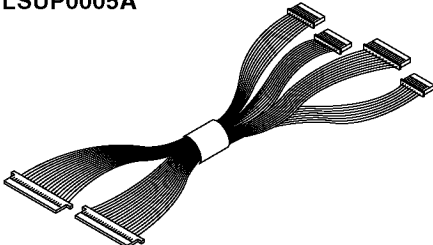
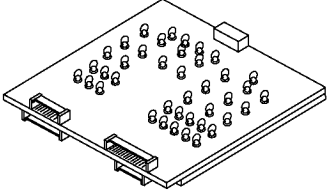
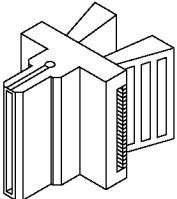


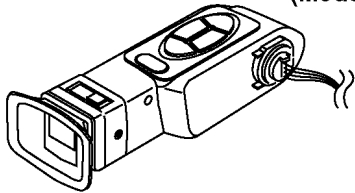
7 ADJUSTMENT PROCEDURES

7.1. SERVICE FIXTURES & TOOLS

<p>VHS-C Alignment Tape VFMS0004H6C</p> 	<p>VHS-C Alignment Tape VFMW0001C</p> 	<p>Molytone Grease VFK1024</p> 
<p>Grease LSUQ0002</p> 	<p>Grease VFKS0081</p> 	<p>Lock Screw VHDW0125</p> 
<p>A.W.B. Adjustment Fixture VFKW0066</p> 	<p>Color Chip Chart VFKW0116</p> 	<p>Audio Video Cable VJAW0032</p> 
<p>Head Cleaning Stick VFK27</p> 	<p>Extension Cable 12P VUVS0007</p> 	<p>Extension Cable 20P LSUA0020</p> 
<p>Extension Cable 26P LSUA0021</p> 	<p>Extension Cable 28P VUVS0015</p> 	
<p>TP Board Kit TP Adjustment Cable 40P LSUP0005A</p> 	<p>TP Adjustment P.C.B. 40P VFKW0123B</p> 	<p>TP Clip 36P LSUP0005C</p> 

EVF Unit

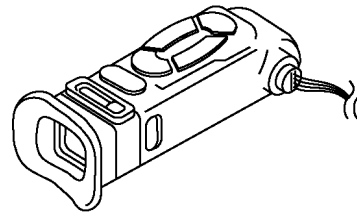
LSYK0232
(Model: A, C, D)



The part number of the monochrome EVF Unit for **Model A, C, D** is different from that of the monochrome EVF Unit (LSYK0232) which is supplied as a representative service fixture.

Color EVF Unit

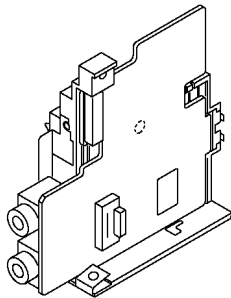
LSYK0234
(Model: B)



The part number of the color EVF Unit for **Model B** is different from that of the color EVF Unit (LSYK0234) which is supplied as a representative service fixture.

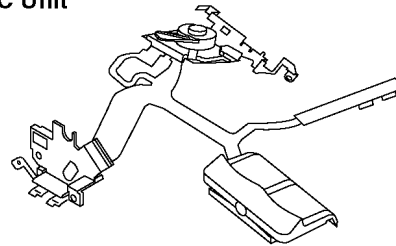
Battery Catcher Unit

LSEQ0551



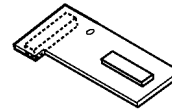
Side L FPC Unit

LSEQ0557



Relay C.B.A.

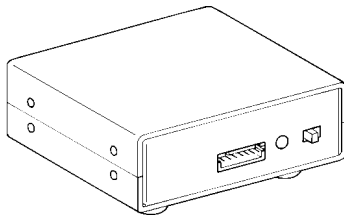
LSEP8033A1



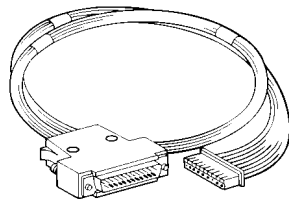
CAAS Kit

VFKW1000

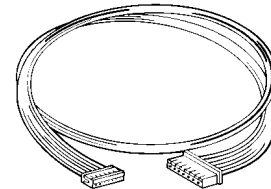
Interface Box
VFKW1000A



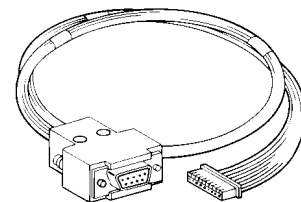
25pin RS-232C Cable
VFKW1000D



Camera Connecting Cable
VFKW1000B



9pin RS-232C Cable
VFKW1000C



7.2. MECHANICAL ADJUSTMENT

7.2.1. CLEANING PROCEDURE FOR THE UPPER CYLINDER UNIT

1. While slowly turning the Upper Cylinder Unit counterclockwise by hand, gently rub the Video Heads with a Head Cleaning Stick (VFK27) moistened with Isopropyl Alcohol 91 %.

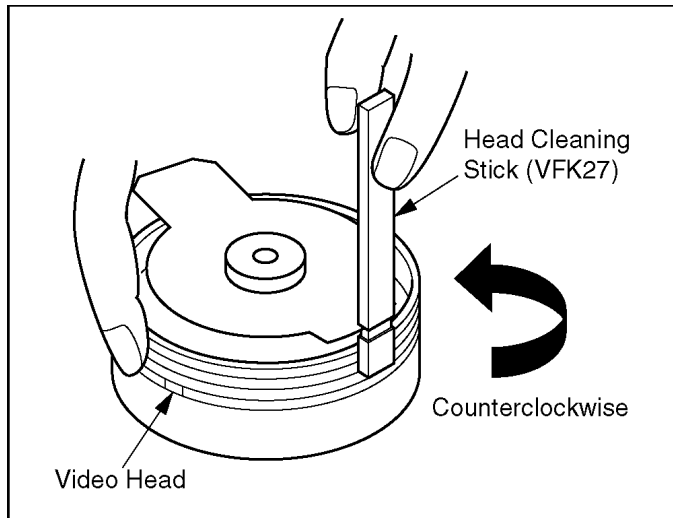


Fig. M1

Note:

- a. Do not rub vertically or apply excess pressure to the Video Heads.
Do not turn the Upper Cylinder Unit clockwise while cleaning.
- b. After cleaning, use a Dry Head Cleaning Stick (VFK27) to remove any Isopropyl Alcohol 91 % remaining on the cylinder tape path. Otherwise, tape damage will occur.

7.2.2. ADJUSTMENT PROCEDURES

7.2.2.1. TAPE INTERCHANGEABILITY ADJUSTMENT

Before perform these Adjustment/Confirmation procedures, be sure to complete following items.

1. Connect the TP Board Kit to S301 on the camcorder. Refer to "HOW TO USE TP BOARD KIT" in "SERVICE NOTES."

It is possible to perform S Post, T Post, and A/C Head Unit adjustment with only the Cassette Cover removed.

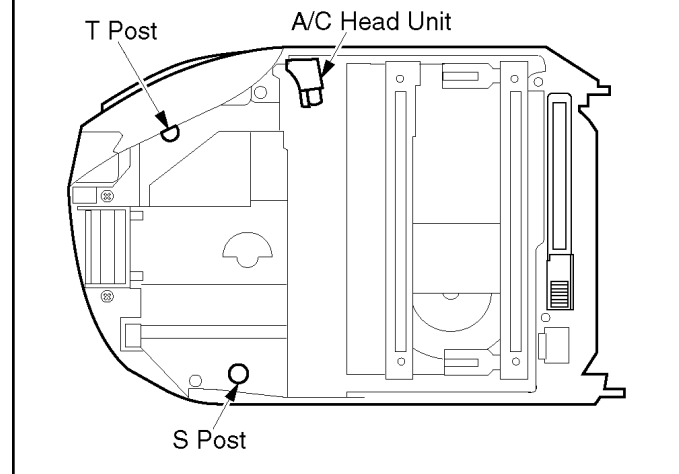


Fig. M2-1

2. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "SERVICE MODE SPECIFICATION" in "SERVICE NOTES."
3. Remove the Cassette Lid Cover from the Cassette Tape or the Alignment Tape.

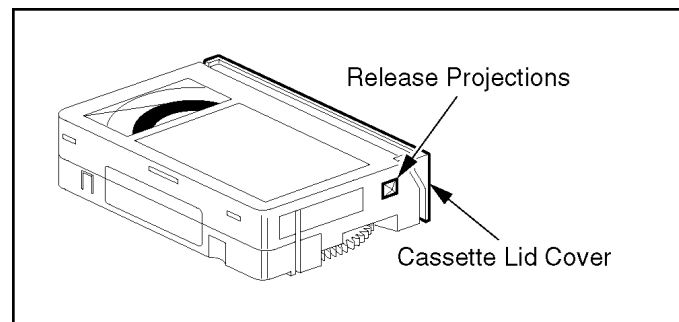


Fig. M2-2

Equipment Required:	Dual Trace Oscilloscope
	VHS-C Alignment Tape (VFMS0004H6C)
	VHS-C Alignment Tape (VFMW0001C)
	Screwdriver Set (Purchase Locally)
	TP Board Kit
	TP Adjustment Cable 40P (LSUP0005A)
	TP Adjustment P.C.B. 40P (VFKW0123B)
	TP Clip 36P (LSUP0005C)

7.2.2.2. ENVELOPE OUTPUT ADJUSTMENT

The height of the S and T Posts replacement part is preset at the factory.

Purpose: To achieve a satisfactory picture and secure precise tracking.

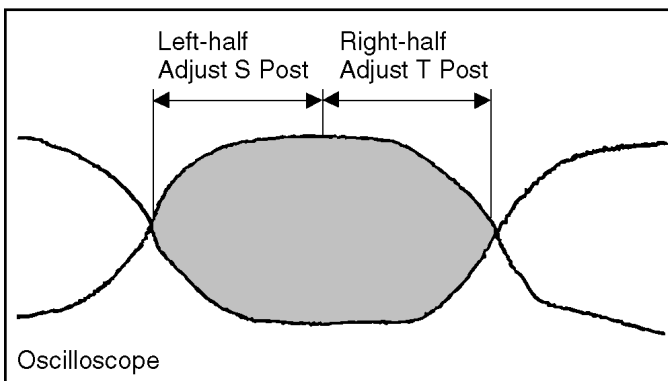
Symptom of Misadjustment: If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

1. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "SERVICE MODE SPECIFICATION" in "SERVICE NOTES."
2. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
3. Play back the Alignment Tape (VFMS0004H6C).
4. Confirm that the RF envelope is flat enough. If not, with Flat Headed (—) Screwdriver, adjust S and T post height so that the envelope waveform becomes as flat as possible (No envelope drop). If the envelope drop appears on the left-half of the waveform, adjust S post height. If the envelope drop appears on the right-half of the waveform, adjust T post height.

CAUTION:

Do not apply excessive pressure onto the S and T Posts when adjusting S and T post height.

Before Adjustment



After Adjustment

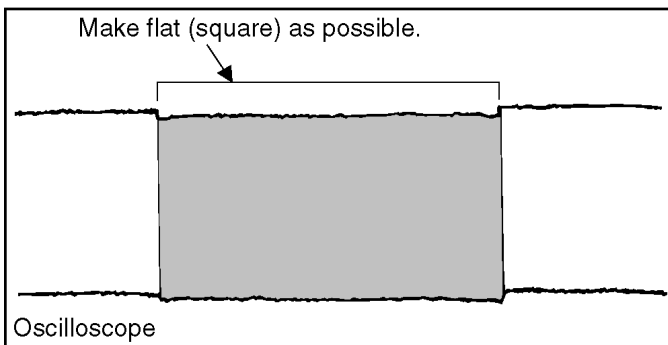


Fig. M3-1

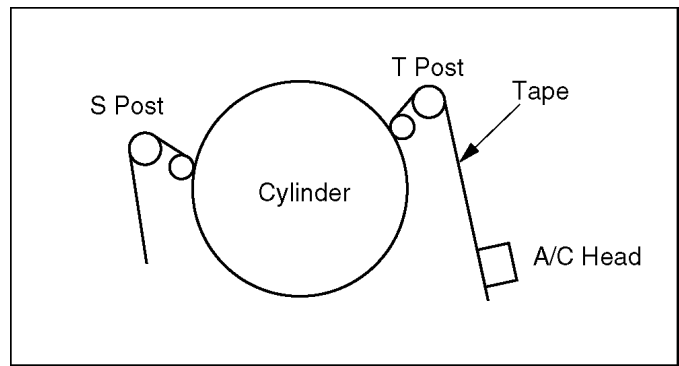


Fig. M3-2

Note:

It will be possible to confirm step 4) after performing the following steps.

- a. Exit the "I. Tracking Fix" mode, then skip the "J. PG Shifter" mode to enter other modes (except these 2). Or, close the service mode.
 - b. Press the Tracking Control Up or Down button on the camcorder. Make sure that the envelope waveform remains flat. If not, readjust S and/or T post heights.
5. After adjustment, confirm that the tape travels without curing at S and T posts.

If curing is apparent, readjust the height of posts.

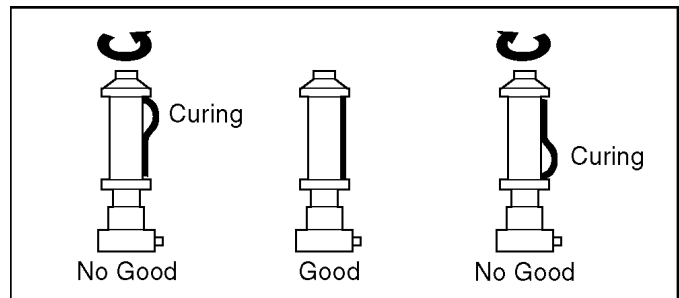


Fig. M3-3

7.2.2.3. A/C HEAD HEIGHT ADJUSTMENT

The height of the A/C Head replacement part is preset at the factory.

Purpose: To be sure the tape runs properly along the Control Head.

Symptom of Misadjustment: If the control signal is not properly picked up, Servo Operation can not be achieved.

1. Connect the oscilloscope to Pin 25 (PB Control signal) on the TP Adjustment P.C.B.
2. Play back the Alignment Tape (VFMW0001C)
3. Confirm that the Sub Control Signal is $500\text{ mV} \pm 200\text{ mV}$. If not, **slightly and equally** adjust Screw A, Screw B, and Screw C on the A/C Head Unit to achieve the sub control signal level of $500\text{ mV} \pm 200\text{ mV}$.

(Sub Control Signal level will decrease when rotating screws clockwise, and increase when rotating screws counterclockwise.)

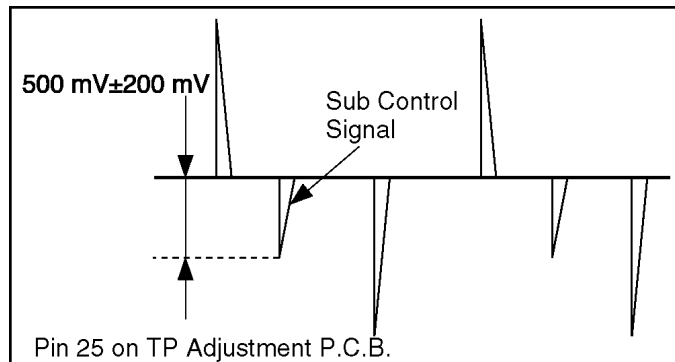


Fig. M4-1

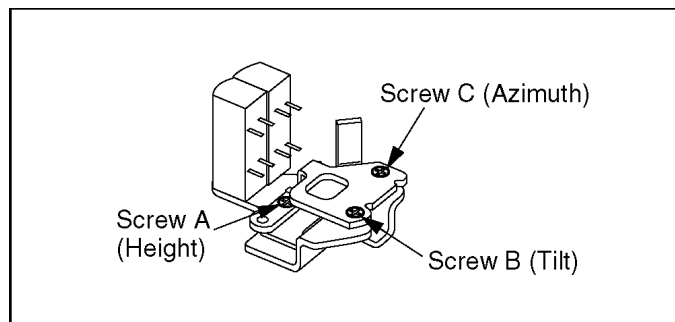


Fig. M4-2

7.2.2.4. A/C HEAD AZIMUTH ADJUSTMENT

Purpose: To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment: If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio will be poor.

1. Connect the Audio/Video Cable on the camcorder.
2. Connect the oscilloscope to audio output jack.
3. Playback the Alignment Tape (VFMS0004H6C).
4. Adjust Screw C (Azimuth) on the A/C Head Unit so that the output level is at maximum.

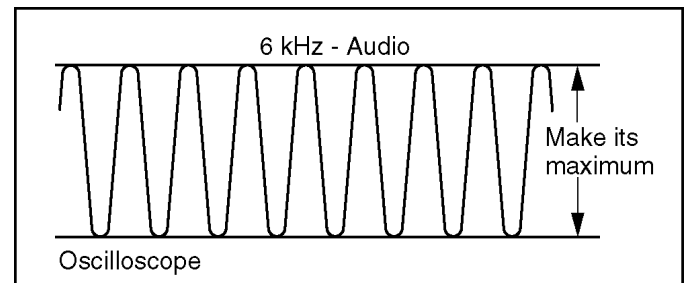


Fig. M5

5. Confirm and readjust the A/C Head height.
6. Confirm and readjust Screw C (Azimuth) on the A/C head so that the output audio becomes is maximum.

7.2.2.5. A/C HEAD HORIZONTAL POSITION ADJUSTMENT

Purpose: To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment: If the Horizontal Position of the A/C Head is not properly adjusted, maximum envelope can not be obtained at the Neutral Position of the Tracking Control Circuit.

1. Put the unit into the service mode "I. Tracking Fix" to defeat Auto Tracking. Refer to "SERVICE MODE SPECIFICATION" in "SERVICE NOTES."
2. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
3. Play back the Alignment Tape (VFMS0004H6C).
4. Set the Screwdriver into the Hole (A) as shown.

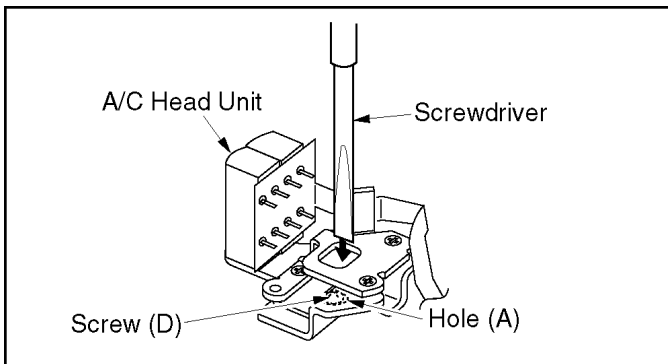


Fig. M6-1

5. Slowly move the A/C Head Unit to the direction "A" or "B" as shown so that the envelope is at maximum.

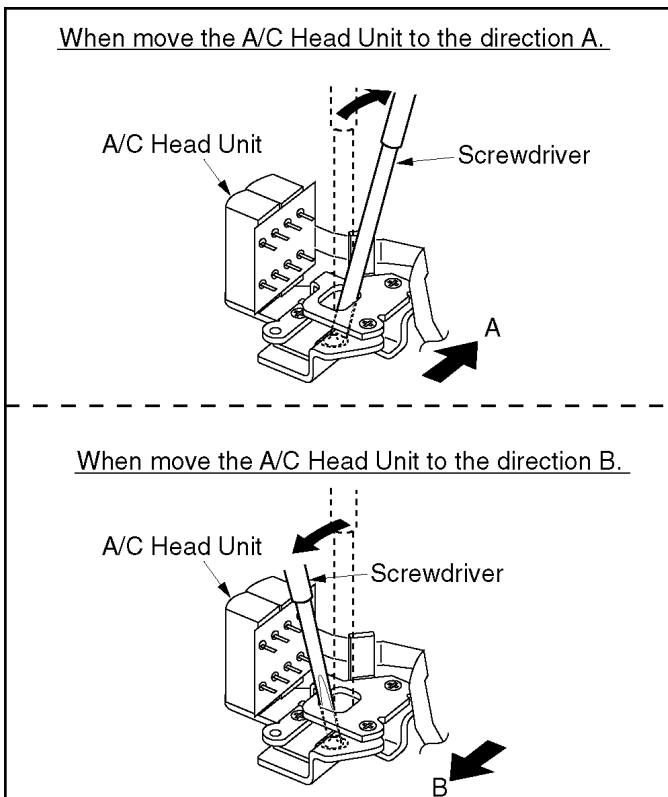


Fig. M6-2

6. To find the center of the maximum period of the envelope, move the A/C Head Unit to confirm the limits on either side of the maximum period.

Note:

It will be possible to confirm step 6) after performing the following steps.

- a. Exit the "I. Tracking Fix" mode, then skip the "J. PG Shifter" mode to enter other modes (except these 2). Or, close the service mode.
- b. Press the Tracking Control Up Button on the camcorder several times (count the number of times pressed) until the maximum envelope is reduced to 1/2.
- c. Press the Tracking Control Down Button on the camcorder several times (count the number of times pressed) until the maximum envelope is reduced to 1/2.
- d. If the number of pressing is not the same, readjust A/C Head horizontal position.

7.2.2.6. CONFIRMATION OF ENVELOPE OUTPUT

Purpose: To achieve a satisfactory picture and secure precise tracking.

Symptom of Misadjustment: If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

1. Connect the oscilloscope to Pin 30 (Envelope signal) on the TP Adjustment P.C.B. Use Pin 33 (Head Switch signal) as a trigger.
2. Play back the Alignment Tape (VFMS0004H6C).
3. Confirm that the envelope waveform is as flat as possible ($V1/V(\max) > 0.7$).

If adjustment is required, adjust S Post and/or T Post with "—" Screwdriver. Refer to "ENVELOPE OUTPUT ADJUSTMENT."

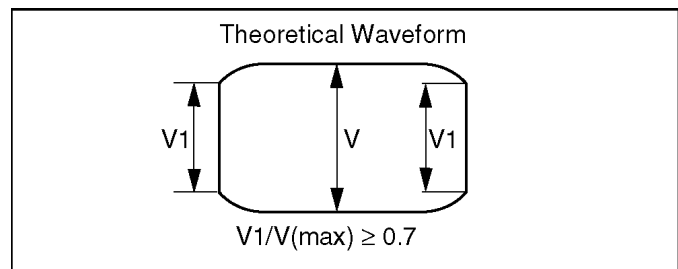


Fig. M7

7.3. ELECTRICAL ADJUSTMENT

7.3.1. INTRODUCTION

Most of Electrical adjustments can be adjusted using Personal Computer with PC-EVR Adjustment Software. The Set-up of PC-EVR Adjustment and the VR (Variable Resister) Adjustment Procedure are described in this section. For adjustment item (section) for the model you are servicing, please refer to the following table.

ADJUSTMENT ITEM (Section)	ADJUSTMENT SYTEM	MODEL			
		PV-L750	-----	PV-L780	PV-L850
Electrical Adjustment for CAMERA Section	Frequency Adjustment: VR Adjustment	○	○	○	—
	w/o Frequency Adjustment: PC-EVR Adjustment	○	○	○	○
Electrical Adjustment for VCR Section	PC-EVR Adjustment	○	○	○	○
Electrical Adjustment for COLOR EVF Section	PC-EVR Adjustment	—	○	—	—
Electrical Adjustment for MONOCHROME EVF Section	VR Adjustment	○	—	○	○
Electrical Adjustment for LCD MONITOR Section	PC-EVR Adjustment	○	○	○	○

7.3.2. INITIAL GUIDELINE

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

Adjustment Item		Replacement Parts																					
		MAIN C.B.A.	IC306(EEPROM)	IC309(HALL AMP)	IC504(CAMERA MICROCONTROLLER)	IC602(TIMING SIGNAL GENERATOR)	IC605(SAMPLING HOLD&AGC CONTROL)	IC3001(LUMINANCE/CHROMINANCE SIGNAL PROCESS)	IC3002(TWIN CCD 1H DELAY)	X601	ELECTRONIC VIEWFINDER C.B.A	IC901(EVF DRIVE)	CCD C.B.A.	IC601(CCD IMAGE SENSOR)	COLOR ELECTRONIC VIEWFINDER C.B.A	LCD C.B.A.	IC9001(RGB SIGNAL PROCESS/LCD PANEL INDICATOR CONTROL)	IC9002(OP. AMP)	LENS UNIT	EVF UNIT	LCD UNIT	CYLINDER UNIT	
Camera Section	Frequency Adjustment																						
	VCO Adjustment																						
	Burst/Sync Level Adjustment																						
	Hall Amp Adjustment																						
	Auto Focus Adjustment																						
	Gamma Adjustment																						
	A/D Input Adjustment																						
	Iris PWM Adjustment																						
	Pedestal Level Adjustment																						
	YH Level Adjustment																						
Auto white balance Adjustment																							
VCR Section	Playback Video Adjustment																						
	Sync Tip Frequency Adjustment																						
	Deviation Adjustment																						
	Rec Level Adjustment																						
	Comb Filter Gain Adjustment																						
	YNR Adjustment																						
	Head Switching Position Adjustment																						
Color EVF Section	VCO Adjustment																						
	EVF Pedestal/Contrast Adjustment																						
	RB Sub Pedestal Adjustment																						
	RB Sub Contrast Adjustment																						
	Color Gain Adjustment																						
Monochrome EVF Section	EVF White Balance Adjustment																						
	Vertical Size Adjustment																						
	Centering Adjustment																						
	Brightness Adjustment																						
LCD Section	Focus Adjustment																						
	PLL Adjustment																						
	Pedestal Level Adjustment																						
	Contrast Adjustment																						
	RB Sub Pedestal Adjustment																						
	RB Sub Contrast Adjustment																						
	Color Gain Adjustment																						
	VCOM bias Adjustment																						
White Balance Adjustment																							

Note: ○ : Adjustment Item

7.3.3. TEST EQUIPMENT

To do all of the Electrical Adjustment, the following equipments are required.

1. Dual-Trace Oscilloscope
Voltage Range: 0.001 to 50 V/Div.
Frequency Range: DC to 50 MHz
Probes: 10:1, 1:1
2. DVM (Digital Volt Meter)
3. Frequency Counter
4. Color TV Monitor
5. VHS-C Alignment Tape (VFMS0004H6C)

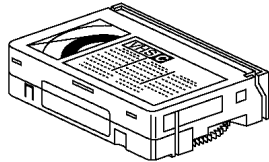


Fig. E1-1

6. Vectorscope
7. Plastic Tip Driver
8. Audio Video Cable (VJAW0032)

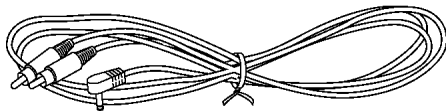


Fig. E1-2

9. Power Supply for Interface Box.
10. Side L FPC Unit (LSEQ0557)

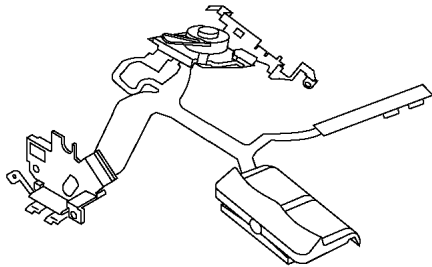


Fig. E1-3

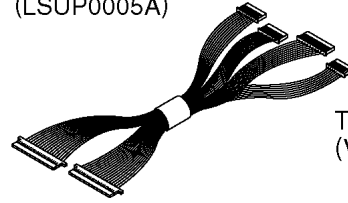
11. EVF Unit (LSYK0232 : **Model A,C,D**)
12. Color EVF Unit (LSYK0234 : **Model B**)
13. Personal Computer
PC: IBM PC/AT or compatible
OS: MS-DOS or MS-Windows
CPU: 486 or higher
Drive: 3.5 inch 1.44 MB floppy disk drive
Port: D-Sub-9-pin Serial or D-Sub-25-pin Serial
Monitor: VGA Color
14. PC-EVR Adjustment Program (VF0C2000DV10)

Note:

Ask latest version when placing order for PC-EVR Adjustment program.

15. CAAS Kit (VFKW1000)
Interface Box (VFKW1000A)
Camera Connecting Cable (VFKW1000B)

- 9 Pin RS-232C Cable (VFKW1000C)
- 25 Pin RS-232C Cable (VFKW1000D)
16. TP Board Kit
TP Adjustment Cable 40P (LSUP0005A)



TP Adjustment PCB 40P (VFKW0123B)



TP Clip 36P (LSUP0005C)

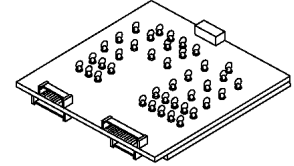


Fig. E1-4

(adjustment equipment with using Infinity Lens)

17. Lighting (Light Box (VFK1164LBX1) is recommended)
18. Infinity Lens (VFK1164TCM02)
(with Focus Chart)
19. 49 mm Ring (VFK1164TAR49)
20. Gray Scale Chart (VFK1164TFGS2)
21. Color Bar Chart (VFK1164TFCB2)
22. White Chart (VFK1164TFWC2)
23. Color Conversion Filter (VFK1164TFCT2)

(adjustment equipment without using Infinity Lens)

24. Lighting (Halogen Lamp (2000 lux))
25. Reflection Chart
Reflection Chart Set (VFKS003-N)
(Reflection Chart Set consists of Gray Scale Chart (VFKS003A), Color Bar Chart (VFKS003B), Registration Chart (VFKS003C), and Resolution Chart (VFKS003D))
Gray Scale Chart (VFKS003A)
Color Bar Chart (VFKS003B)
Registration Chart (VFKS003C)
Resolution Chart (VFKS003D)
Color Chip Chart (VFKW0116)
26. Color Temperature Conversion Filter 80A or equivalent
Color Temperature Conversion Filter
27. Color Compensating Filter CC05M
28. A.W.B. Adjustment Fixture (VFKW0066)

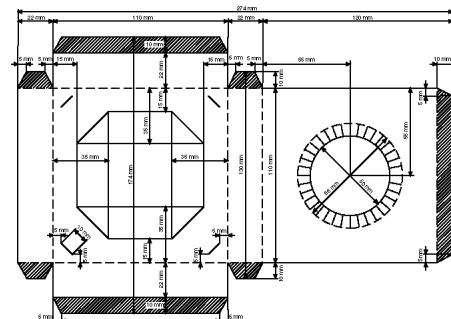


Fig. E1-5

7.3.4. PREPARATION

1. Connect the Interface Box to the TP Board Kit with Camera Connecting cable (VFKW1000B).
2. Connect the Interface Box to the Personal Computer with RS-232C cable (VFKW1000C or VFKW1000D).
3. Connect the TP Board Kit to S301 on the camcorder. Refer to "HOW TO USE TP BOARD KIT" in "SERVICE NOTES."
4. Connect the AC Adaptor and camcorder, and apply DC +6 V to the Interface Box.
5. Power on the camcorder.

Note:

In case that the camcorder is in DEMO mode, release DEMO mode as follows:

Power off the camcorder first. Then, disconnect the TP Board Kit, and power on the camcorder. Then, press the STOP button over 5 seconds.

CAUTION:

- a. Do not connect or disconnect any cables while the camcorder is powered on.
- b. Before using the TP Board Kit, be sure to clean S301 pattern with alcohol and confirm that there is no dust in the TP Clip.
- c. To achieve the best adjustment results, warm up the camcorder for approx. 30 minutes before adjustment.
- d. When removing the TP Clip from S301 on the camcorder, be sure to pinch the grips.

<Computer Assisted Adjustment System>

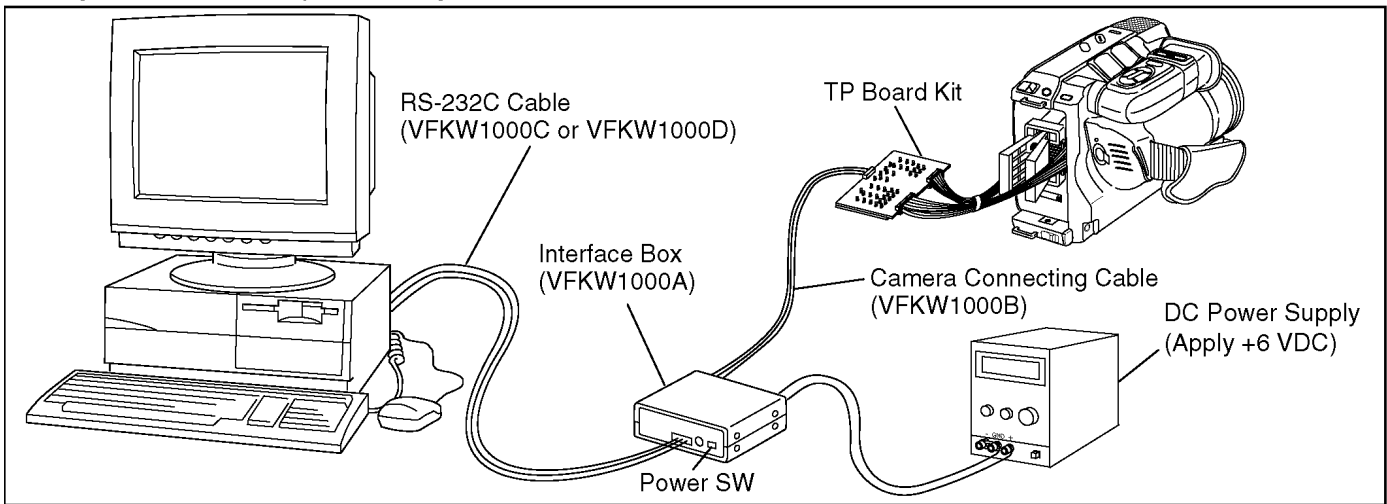


Fig. E2-1

6. Set up the camcorder for adjustment as follows:

Method 1 (with using Infinity Lens)

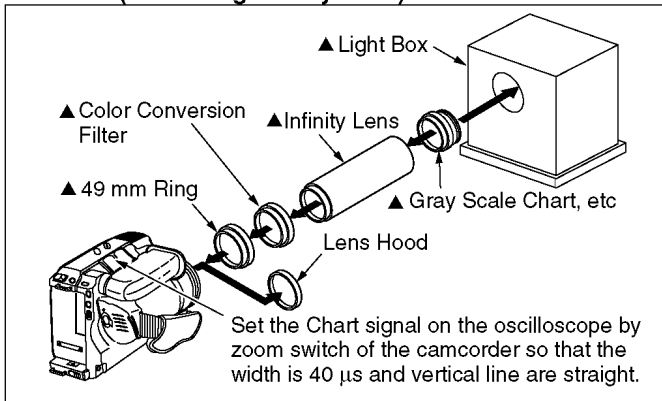


Fig. E2-2

Method 2 (without using Infinity Lens)

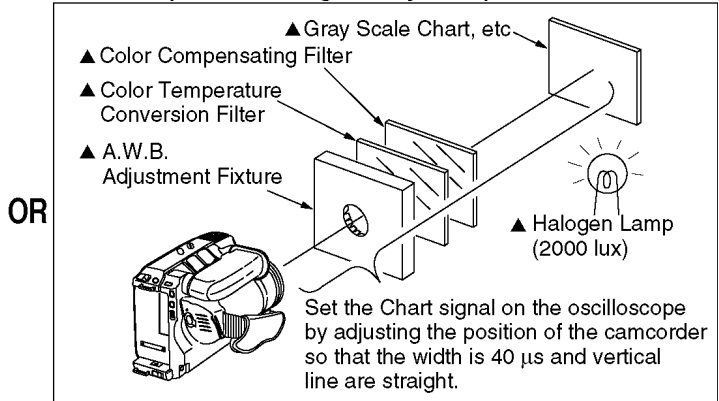


Fig. E2-3

For necessary equipments marked ▲ in Fig. E2-2 and E2-3, refer to the following table.

Adjustment Item		Method 1										Method 2									
		Light Box	Infinity Lens / 49 mm Ring	Focus Chart	Gray Scale Chart	Color Bar Chart	White Chart	Color Conversion Filter	Halogen Lamp	Any object (High contrast)	Gray Scale Chart	Color Bar Chart	Color Chip Chart	White Chart	Color Temperature Conversion Filter	Color Compensating Filter	A.W.B. Adjustment Fixture				
Camera Section	Frequency Adjustment	※																			
	VCO Adjustment	Not used																			
	Burst/Sync Level Adjustment	Not used																			
	Hall Amp Adjustment	Not used																			
	Auto Focus Adjustment (Automatic Adjustment)		○	○						Not available (Note 1)											
	Gamma Adjustment	○	○		○				○	○											
	A/D Input Adjustment	○	○		○				○	○											
	Iris PWM Adjustment	○	○		○				○	○											
	Pedestal Level Adjustment	○	○		○				○	○											
	YH Level Adjustment	○	○		○				○	○											
	Auto white balance Adjustment	Not used																			
	1 Indoor Preset Adjustment	○	○		○				○	○											
	2 Indoor Input Adjustment	○	○		○				○	○											
	3 Outdoor Preset Adjustment	○	○		○			○	○	○				○	○	○	○				
4 Outdoor Input Adjustment	○	○		○			○	○	○				○	○	○	○					
5 Color Phase & R-Y, B-Y Gain Adjustment (Indoor Mode)	○	○			○			○				○									
6 Color Phase & R-Y, B-Y Gain Adjustment (Outdoor Mode)	○	○			○		○	○				○		○	○	○					
VCR Section	Playback Video Adjustment	Not used																			
	Sync Tip Frequency Adjustment	Not used																			
	Deviation Adjustment	○	○		○				○	○											
	Rec Level Adjustment	Not used																			
	Comb Filter Gain Adjustment	Not used																			
	YNR Adjustment	○				○			○			○									
Color EVF Section	Head Switching Position Adjustment	Not used																			
	VCO Adjustment	Not used																			
	EVF Pedestal/Contrast Adjustment	○	○		○				○	○											
	RB Sub Pedestal Adjustment	○	○		○				○	○											
	RB Sub Contrast Adjustment	○	○		○				○	○											
	Color Gain Adjustment	○	○			○			○			○									
Monochrome EVF Section	EVF White Balance Adjustment	Not used																			
	Vertical Size Adjustment	※																			
	Centering Adjustment	※																			
	Brightness Adjustment	※																			
	Focus Adjustment	※																			
LCD Monitor Section	PLL Adjustment	Not used																			
	Pedestal Level Adjustment	○	○		○				○	○											
	Contrast Adjustment	○	○		○				○	○											
	RB Sub Pedestal Level Adjustment	○	○		○				○	○											
	RB Sub Contrast Level Adjustment	○	○		○				○	○											
	Color Gain Adjustment	○	○			○			○			○									
	VCOM Level Adjustment	○	○		○				○	○											
	White Balance Adjustment	○	○		○				○	○											

Note 1: Auto Focus adjustment (Automatic adjustment) is available for only Method 1.

7.3.5. SET UP OF PC-EVR ADJUSTMENT PROGRAM

1. Turn on the Personal Computer.
Windows® 95 will be set up automatically.
2. Restart it in MS-DOS mode.
3. Change the current directory to the one including the PC-EVR Adjustment Program and start up the PC-EVR Adjustment Program as follows.
- 1) If MS-DOS is Japanese mode, input "us," and then press "ENTER" key to be US mode on.

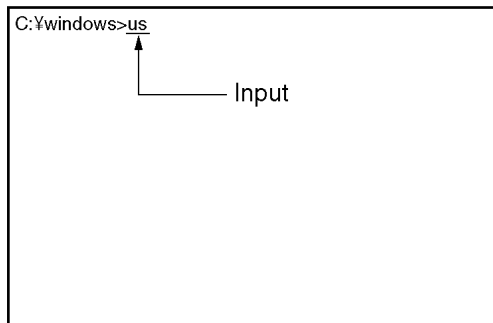


Fig. E3-1

- 2) Input "cd *****," and then press "ENTER" key to change the directory to the one including the PC-EVR Adjustment Program.

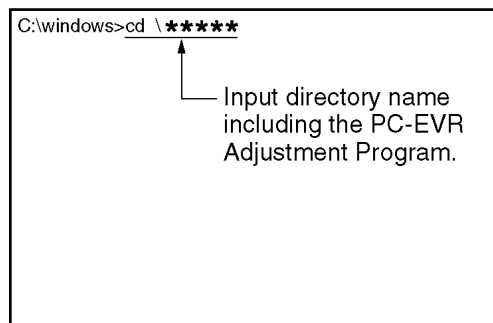


Fig. E3-2

- 3) Input "kc2000," and then press "ENTER" key to start up the PC-EVR Adjustment Program.

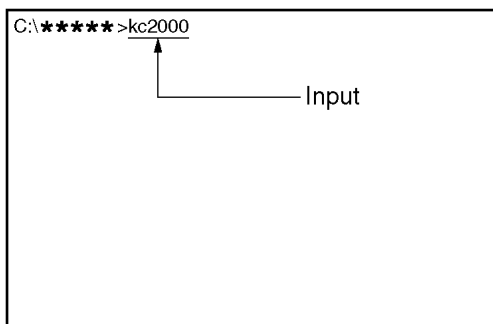


Fig. E3-3

"Select Model Number Menu" will be displayed.

4. Select the model number which you are servicing, and then press "Enter" key. The starting display will be displayed.
5. Perform set up items according to menu until "Main Menu" is displayed.
6. Select "Sub Menu" to adjust or check, etc. the camcorder.

Note:

The adjusted data is stored to EEPROM IC after each adjustment.

7.3.6. HOW TO USE MAIN MENU

Main Menu

Select "Sub Menu" by pressing ↑ ↓ (UP/DOWN) key in Main Menu. Then, adjust or check the camcorder according to the menu. Then, press "ENTER" key. "Sub Menu" will be displayed.

Note:

Menu 5 through 8 are needed for adjustment.

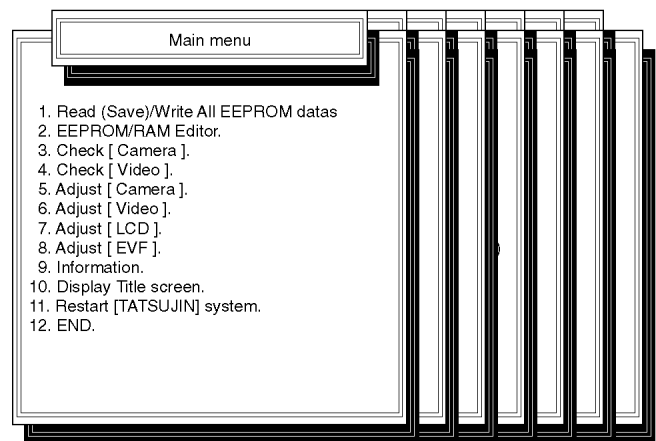


Fig. E4-1

Also, by pressing ← → key, "Sub Menu" can be seen in order below.

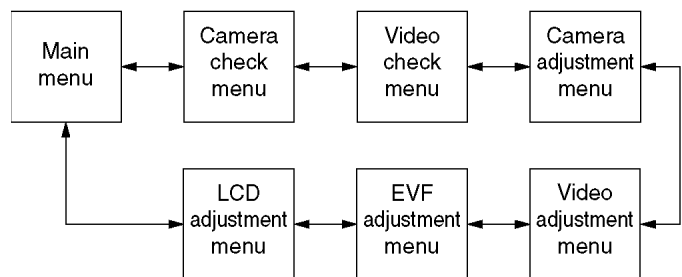


Fig. E4-2

7.3.7. VR ADJUSTMENT

7.3.7.1. CAMERA SECTION

7.3.7.1.1. Frequency Adjustment (Model: A, B, C)

Purpose:	To set the chroma subcarrier.
Symptom of Misadjustment:	The picture will be no color. (The burst shifts)
Specifications:	14.31818 MHz±80 Hz

Adjustment Procedure:

1. Remove the Side Case (L) Unit. Refer to "CABINET SECTION" in DISASSEMBLY/ASSEMBLY PROCEDURES.
Connect the Side L FPC unit to the camcorder as shown in Fig. E5-1
2. Connect the Frequency counter to TP601 of Main C.B.A.
3. Adjust C610 on the Main C.B.A. so that the frequency becomes 14.31818 MHz±80 Hz.

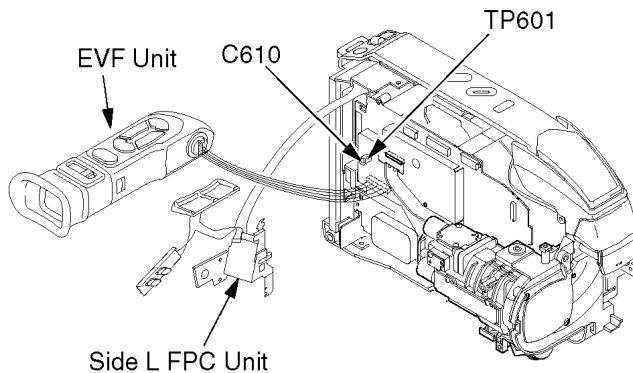


Fig. E5-1

7.3.8. MONOCHROME EVF SECTION

Note:

Camcorder need NOT to be powered off and on after each adjustment procedure.

Preparation

1. Before adjusting the Monochrome EVF, Camera section and VCR section adjustments must be completely adjusted.
2. Remove the EVF Case B Unit to gain access to VRs on the EVF C.B.A. (Refer to "DISASSEMBLY/ASSEMBLY PROCEDURES OF CABINET".)

7.3.8.1. Vertical Size Adjustment

Purpose: To set the standard vertical size on the EVF picture.

Symptom of Misadjustment: The vertical EVF picture size will be abnormal.

Test Point: -----

Adjustment: VR901 (EVF C.B.A.)

Specification: Best Vertical size

Input: Gray Scale Chart

Mode: SP REC

Equipment: Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the gray scale chart.
2. Adjust the VERTICAL SIZE CONTROL (VR901) so that the vertical picture size becomes correct.

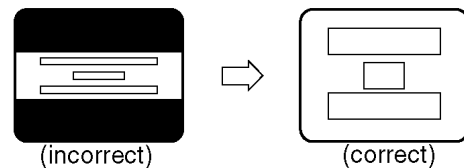


Fig. E5-2

7.3.8.2. Centering Adjustment

Purpose: To set the optimum picture position on the EVF picture.

Symptom of The EVF picture will be shifted.

Misadjustment:

Test Point: -----

Adjustment: Deflection Yoke Centering Magnet

Specification: The picture position becomes centered on the EVF picture

INPUT: Gray Scale Chart

Mode: SP REC

Equipment: Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the gray scale chart.
2. Adjust the Deflection Yoke Centering Magnet by turning them so that the picture is centered in the Viewfinder.

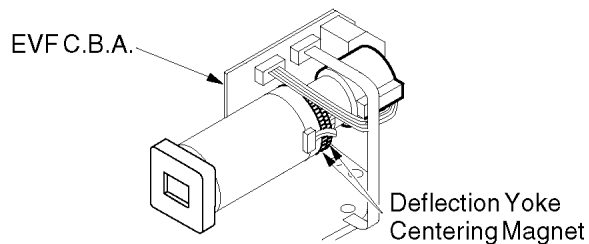


Fig. E5-3

7.3.8.3. Brightness Adjustment

Purpose: To set the optimum EVF brightness level.

Symptom of The EVF picture will be too white or

Misadjustment: black.

Test Point: -----

Adjustment: VR903 (EVF C.B.A.)

Specification: Natural Gradation

INPUT: Color Bar Chart

Mode: SP REC

Equipment: Viewfinder

Adjustment Procedure:

1. Aim the camcorder at the color bar chart.
2. Adjust the BRIGHTNESS CONTROL (VR903) so that the brightness in the Viewfinder becomes natural gradation.

7.3.8.4. Focus Adjustment

Purpose: To set the optimum focus on the EVF picture.

Symptom of The EVF picture will be out of focus.

Misadjustment:

Test Point: -----

Adjustment: VR902 (EVF C.B.A.)

Specification: Optimum focus

INPUT: Gray Scale Chart

Mode: SP REC

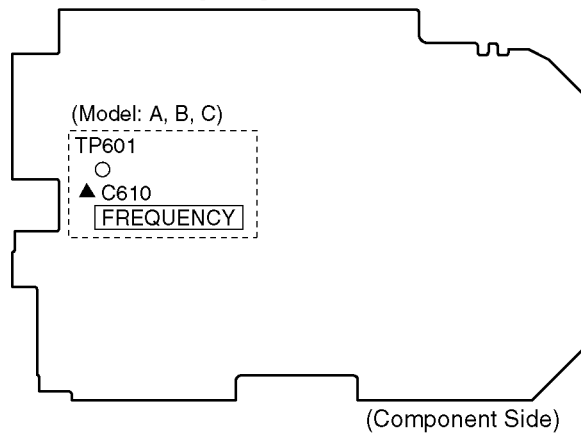
Equipment: Viewfinder

Adjustment Procedure:

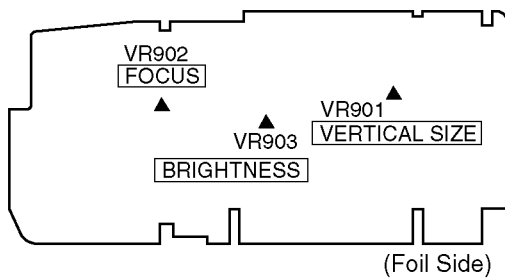
1. Aim the camcorder at the gray scale chart.
2. Adjust the FOCUS CONTROL (VR902) to optimum focus in the Viewfinder.

7.4. TEST POINTS AND CONTROL LOCATION

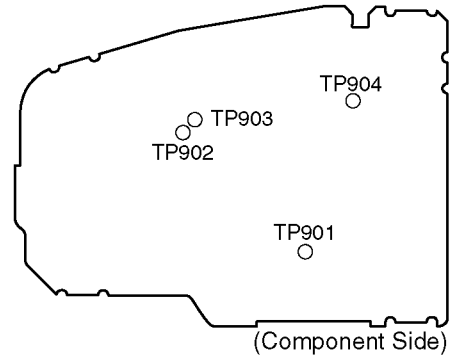
Main C.B.A.



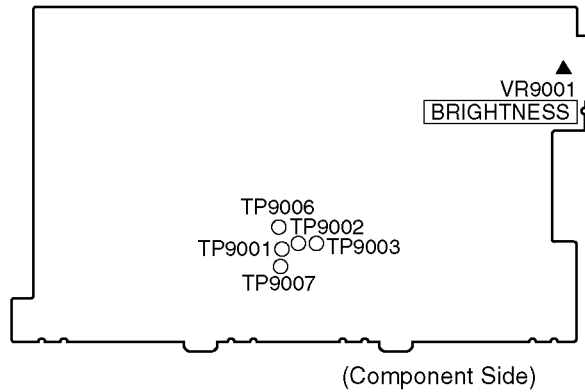
EVF C.B.A. (A, C, D)



Color EVF A C.B.A. (B)



LCD C.B.A.



Test Point Information

○ Test Point with no Test Pin.