ELMO

VISUAL PRESENTER

cev.fr

EV-500AF

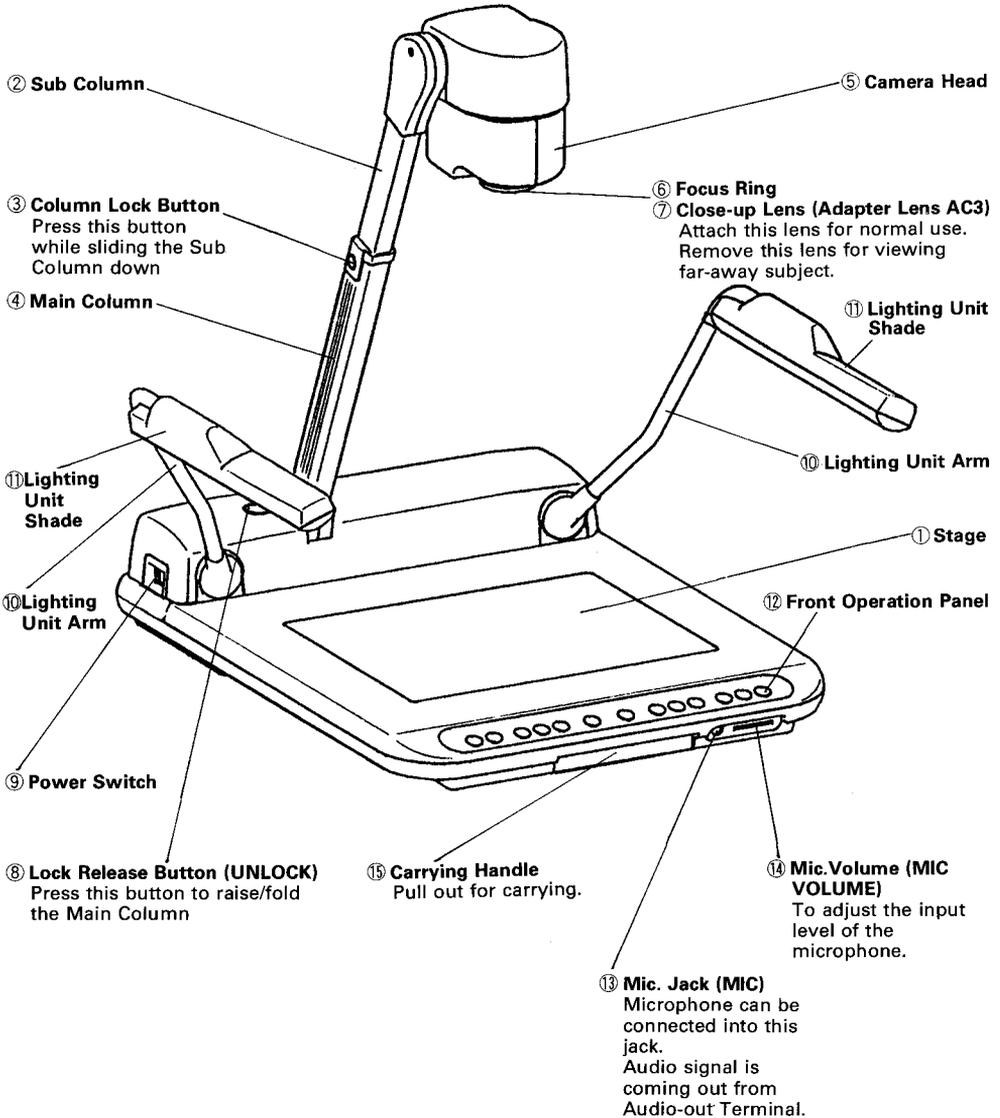## OPERATION MANUAL
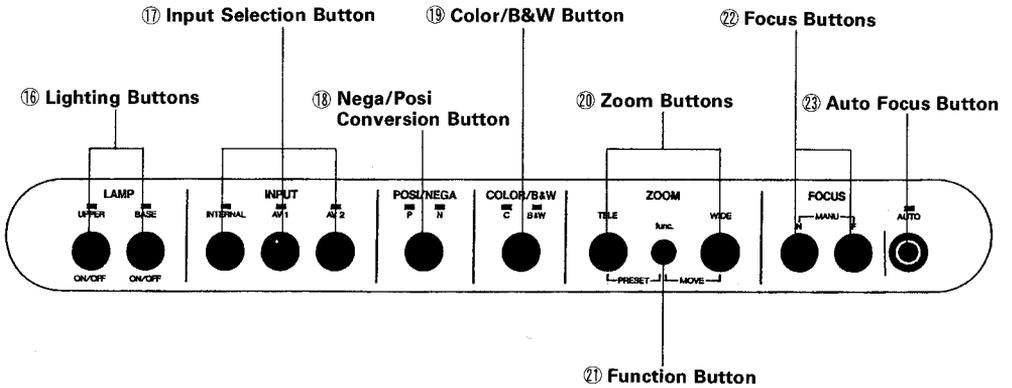
CCD

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PART NAMES AND FUNCTIONS

② Sub Column

⑤ Camera Head

③ **Column Lock Button**
Press this button
while sliding the Sub
Column down

④ Main Column

⑥ **Focus Ring**
⑦ **Close-up Lens (Adapter Lens AC3)**
Attach this lens for normal use.
Remove this lens for viewing
far-away subject.

⑪ **Lighting Unit
Shade**

⑪ **Lighting
Unit
Shade**

⑩ **Lighting Unit Arm**

① **Stage**

⑩ **Lighting
Unit Arm**

⑫ **Front Operation Panel**

⑨ **Power Switch**

⑧ **Lock Release Button (UNLOCK)**
Press this button to raise/fold
the Main Column

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Pull out for carrying.

⑭ **Mic.Volume (MIC
VOLUME)**
To adjust the input
level of the
microphone.

⑬ **Mic. Jack (MIC)**
Microphone can be
connected into this
jack.
Audio signal is
coming out from
Audio-out Terminal.

◯Front Operation Panel

⑰ Input Selection Button   ⑲ Color/B&W Button   ㉒ Focus Buttons

⑯ Lighting Buttons   ⑱ Nega/Posi   ⑳ Zoom Buttons   ㉓ Auto Focus Button
                   Conversion Button

LAMP	INPUT	POSI/NEGA	COLOR/B&W	ZOOM	FOCUS
UPPER BASE	INTERNAL AV1 AV2	P N	C B&W	TELE func. WIDE	MANU AUTO
ON/OFF ON/OFF				PRESET MOVE	

㉑ Function Button

	Part Name	Function	Reference Page
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⑲	Color/B&W Button	For viewing black and white material, such as documents.	14
⑳	Zoom Buttons	To adjust the image size.	14
㉑	Function Button	To memorize the zoom size (Preset) and also to move the preset zoom size (Move).	14
㉒	Focus Buttons	To adjust focus (Powered).	15
㉓	Auto Focus Button	One-step auto focus for automatic focusing.	15

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㊱ LCD Monitor TV Shoe
   Socket (for attaching
   optional LCD monitor
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㉔ Video-in Terminal 2
   S-Video/C-Video
   (RCA female)

㉖ Video-in Terminal 1
   S-Video/C-Video (RCA female)

㉘ Video-out Terminal
   S-Video/C-Video
   (RCA female &
   BNC)

㉚RGB Output Terminal/
   RGB SYNC Terminal

㉟ AC Outlet

㉕ Audio-in Terminal 2
   left: white, right: red

㉙ Audio-out Terminal
   left: white, right: red

㉗Audio-in Terminal 1
   left: white, right: red

㉛ Ext. Sync. Input
   Terminal

㉜ Remote Terminal

㉝ Power Cord
   Receptacle

	Part Name	Function	Reference Page
㉔	Video-in Terminal 2 S-Video/C-Video	Video signal is output from the video-out terminal ㉘ when input selection is set at AV2.	10
㉕	Audio-in Terminal 2	Audio signal is output from the audio-out terminal ㉙ when input selection is set at AV2.	
㉖	Video-in Terminal 1 S-Video/C-Video	Video signal is output from the video-out terminal ㉘ when input selection is set at AV1.	10
㉗	Audio-in Terminal 1	Audio signal is output from the audio-out terminal ㉙ when input selection is set at AV1.	
㉘	Video-out Terminal S-Video/C-Video	Connected to monitor TV, etc.	10
㉙	Audio-out Terminal	Audio-out terminal, Mic. (monaural), AV1, AV2 (stereo) connected to monitor TV.	
㉚	RGB Output Terminal/ RGB SYNC Terminal	Independently of the input selection, outputs the RGB and its sync. signals.	10
㉛	Ext. Sync. Input Terminal	GEN-LOCK terminal for external synchronization.	19
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㉝	Power Cord Receptacle	Connected to power cord connector.	
㉞			
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㊱	LCD Monitor TV Shoe Socket	For attaching optional LCD monitor shoe MS-100	18

○Camera Head

39 White Balance Indicator LED

38 Push Set Button (PUSH SET)

41 Detail Compensation Volume (DETAIL)

37 White Balance Switch (WHITE BALANCE)

40 Color Balance Adjusting Knobs (R, B)

42 H-phase Control Volume (H-PHASE)

43 Color Phase Control Volume/Switch (SC-PHASE)

44 Shutter Speed Selection Switch (SHUTTER)

46 Iris Control Knob (IRIS)

45 G-ON SYNC Selection Switch (G-SYNC)
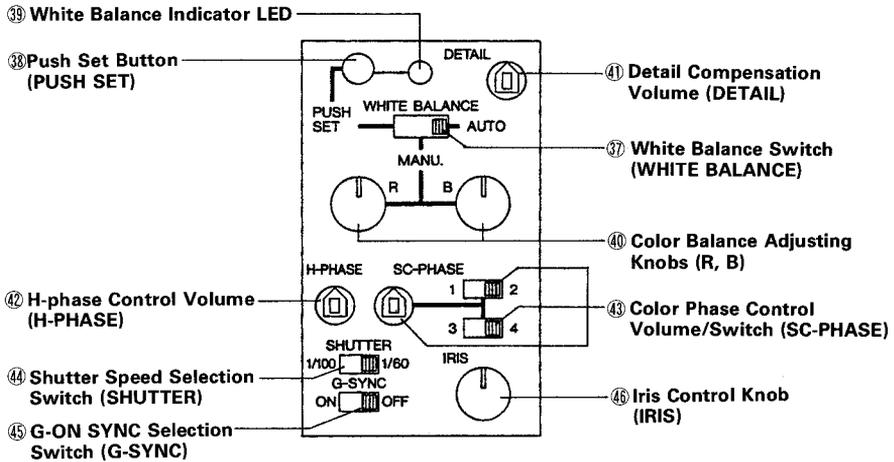
|	Part Name	Function	Reference Page
37	White Balance Switch	Select the mode for white balance adjustment. Set at [AUTO] for normal use.	16
38	Push Set Button	To push-set the white balance. (With the white balance switch at [PUSH SET] position.)	16
39	White Balance Indicator LED	Lights on when the white balance is completed.	16
40	Color Balance Adjusting Knobs	To adjust white balance for manual adjustment.	16
41	Detail Compensation Volume	To adjust the detail (contour) of the image.	17
42	H-phase Control Volume	To adjust the horizontal sync. phase.	19
43	Color Phase Control Volume/Switch	To adjust the sub carrier phase.	19
44	Shutter Speed Selection Switch	To select 1/60 sec. or 1/100 sec. electronic shutter speed.	17
45	G-ON SYNC Selection Switch	Turned ON when using the monitor without sync. signal input terminal.	10
46	Iris Control Knob	To adjust the brightness of image. Set at middle position for normal setting.	17

SETTING UP

1. Press the lock release button [UNLOCK] and raise the column.
   Raise the column until the lock release button gets back to the original position.
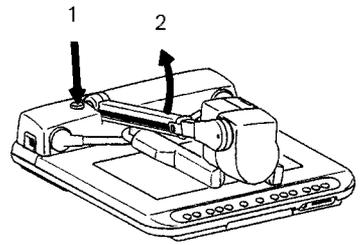
2. Extend the column until it is locked.
3. Adjust the camera head to the required position.
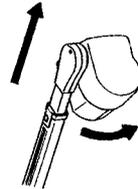
4. Set up the lighting unit to stop positions.
5. Connect the power cord to the AC outlet.
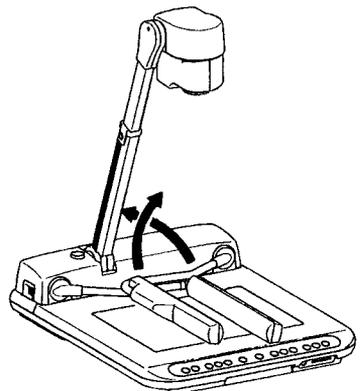
CONNECTION TO MONITOR TV

Connect the supplied video cable to the video-out terminal of the Visual Presenter and to the video-in terminal of the monitor TV.

■ Be sure to turn the power off before making connections (in order to protect the Visual Presenter and the other connected machines).
■ Hold the cable plug firmly when disconnecting the video cable.

○**Connection to composite video-in terminal**
Connect with the supplied RCA video/audio cable or a commercially-available BNC cable. (The Visual Presenter has two type of composite video-out jack, BNC and RCA jacks, and either jack is selectable.)
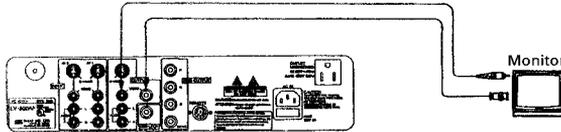
○**Connection to S video-in terminal**
S video-out terminal (mini DIN 4P) of the Visual Presenter is connected to the S video-in terminal of the TV monitor / video.
For S video mode, use a commercially-available S video connection cable.
If the device to be used is provided with a Y/C separate connector, a conversion adapter is necessary.
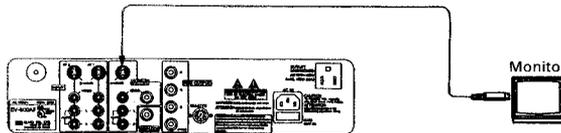
○**Connection to RGB input terminal**
Use a commercially-available BNC cable.
 • G-ON SYNC Selection Switch (Located on Camera Head)
   ON: The sync. signal is added to the G signal output of the BNC terminal of the RGB.
    OFF: The sync. signal is not added to the G output (Original setting).
            Set at OFF for normal use.
 • RGB Output Terminal
    Even if more than 2 sets of video equipment are connected and any image selected through outputs of AV1 or AV2, the RGB output terminal always outputs the image from the Visual Presenter only.
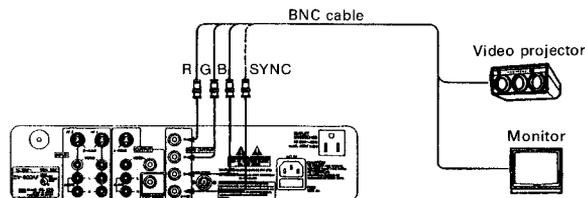
OPERATING PROCEDURES

○Simple steps for presenting printed materials

1. Turn the power switch of the Visual presenter ON. (Connection to the monitor should be previously executed.)
   * Various functions of the Visual Presenter are initialized.
     The initial settings of those functions are displayed by their respective indicators.
2. Place the object on the stage.
   While observing the image on the TV monitor, adjust the zoom button to obtain the optimum size.
3. Press the auto focus button for focusing.
   * The covered area of the auto focus function is up to approx. 10 cm above the stage surface.
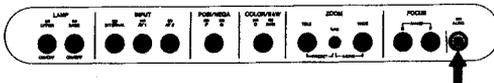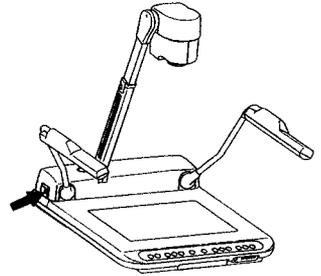
## ○Simple steps for viewing transparencies as slide film

1. Press the lighting button [BASE].
   The [BASE] indicator lights on, and then the built-in baselight are turned ON.
2. Press the nega/posi conversion button, and the indicator shows [N] (Negative) mode.
   * Nega/posi conversion is not possible with RGB output.
3. When turning off the baselight, press the lighting button [BASE].
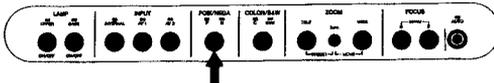
○For shooting the mouth towards yourself

Turn the camera head towards yourself. Turn over the lens part to obtain the proper image.
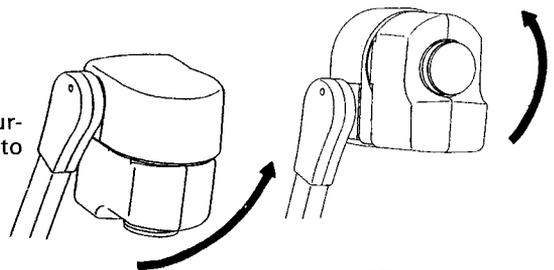
○For use as a conventional video camera

1. Remove the close-up lens when shooting the object at telephoto position.
2. Turn the camera head to horizontal position.
   This allows you to capture pictures on the wall, etc.
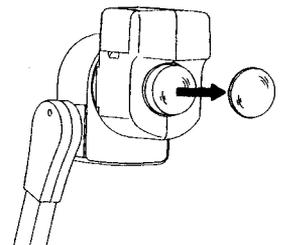
STOWING

1. Turn the power switch OFF before disconnecting the power cord and the video cable.
   Note: Be sure to hold the cable firmly when disconnecting. Do not pull the cord out carelessly.
2. Fold down the lighting unit arms.
   Note: The arm, which is first folded down, should be turned and then the other as per the illustration so that two arms are closely located to the stage.
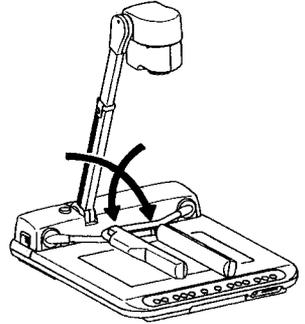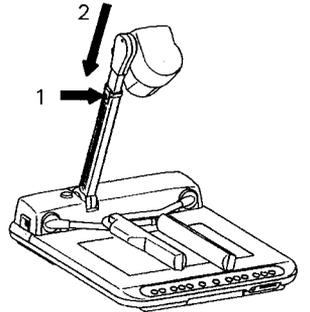

3. Turn the camera head to the illustrated position.
   Note: Stowing the camera head as per the illustration, or the stage surface or the lens may be damaged.
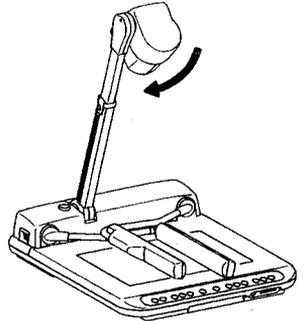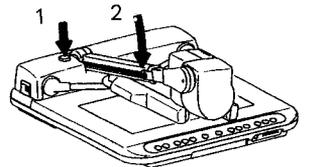

4. Pressing the column lock button, fully shorten the sub column.

5. Pressing the lock release button [UNLOCK], fold down the main column.
   Note: The illustration shows the fixed folded-down position for the column.
   Do not further press the column with excessive strength.

VARIOUS FUNCTIONS

○Lighting

Lighting unit for viewing materials such as printed matter, 3-D object,and Baselight for viewing slide and negative film (transparencies) are built-in.

With the lighting button pressed, the indicator flashes, and after a few seconds, the fluorescent lamps light on.

To turn the lamps off, press the lighting button again.

Select the [UPPER] or [BASE] mode.

(It is not possible to simultaneously use both the upper lighting unit and the baselight.)

It is advisable to use the upper lighting unit to obtain the clear image with better color rendering especially when the stage is not sufficiently illuminated by room lights or 3-D object is to be viewed.
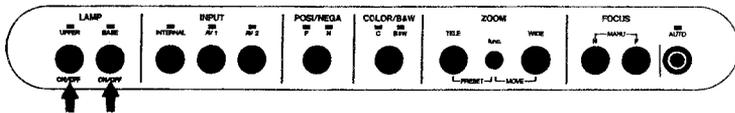
○Input selection

Images from two separate AV sources, such as a VCR and video camera, are selected to be projected on the monitor by pressing the input selection button.

Note: Input selection covers the following selections, however, it cannot select the RGB output.
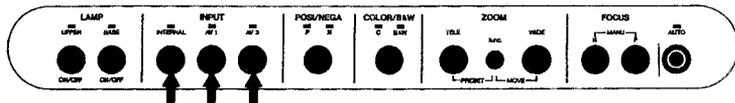
List of Video-In/Out Terminal Selections

| Output Input			Video-out terminal				Audio-out terminal	
			RGB	S-VIDEO	C-VIDEO		Channel	
					RCA	BNC	L	R
INTERNAL	Built-in camera	RGB	○	—	—	—	—	—
		S-VIDEO	—	○	—	—	—	—
		C-VIDEO	—	—	○	○	—	—
	Mic.	Monaural	—	—	—	—	○	○
AV 1	Ext. video signal	S-VIDEO	—	○	—	—	—	—
		C-VIDEO	—	—	○	○	—	—
	Ext. audio signal (Stereo)	L Channel	—	—	—	—	○	—
		R Channel	—	—	—	—	—	○
AV 2	Ext. video signal	S-VIDEO	—	○	—	—	—	—
		C-VIDEO	—	—	○	○	—	—
	Ext. audio signal (Stereo)	L Channel	—	—	—	—	○	—
		R Channel	—	—	—	—	—	○

○Nega/posi conversion

This function is used to view negative film as positive images.

Press the nega/posi conversion button, and the indicator shows [N] (negative).

Pressing the button again changes to normal [P] (positive) mode.

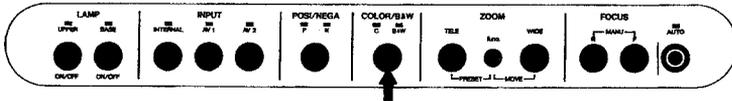Note: Nega/posi conversion is not available for RGB output.
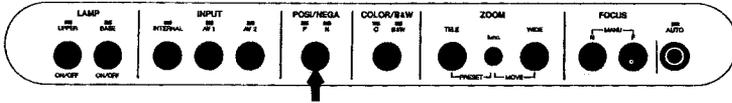
○Color/B&W selection

It is advisable to use this mode for viewing the B&W materials as documents, and clear image with no color blur is obtained.

For normal use, set to [C] (color) mode.

Pressing the color/B&W button changes to [B&W] or [C] mode in succession.
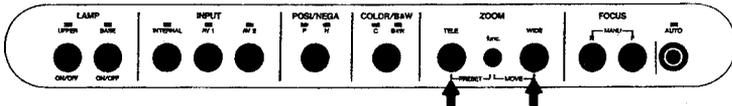
Note: Color/B&W selection is not available for RGB output.

○Zoom

When the zoom button is pressed to select [TELE], the image gets larger.

When the zoom button is pressed to select [WIDE], the image gets smaller.

○Zoom size preset

By pressing the function button and the zoom button [TELE] simultaneously, the zooming size of the viewed image is memorized (preset).

Even after the zooming is re-done with the zoom button, the preset zoom size is available by pressing the function button and the zoom button [WIDE] simultaneously. New presetting will release the previously-memorized zoom size.

Note: The preset zoom size is cancelled when the power is turned off.
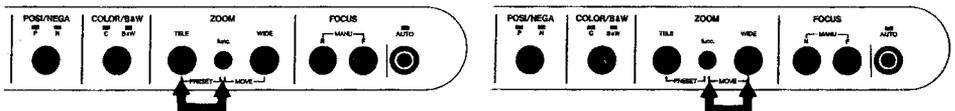
○Focus

(1) Auto Focus

- When the auto focus button is pressed, the indication lamp is turned ON and OFF during focusing.

- The Visual Presenter features a one-step auto focus function. Once focusing is completed, the auto focus function is released. Even if the object is moved, the focus remains unchanged.

- To focus the image with auto focus setting, set the zoom button at extreme telephoto position so that more accurate image can be obtained.

- It is difficult to automatically focus on an object under the following conditions. Select the focus mode to manual focus on objects in these conditions.

  * Object bearing little contrast.

  * Object with a fine repeated pattern such as lateral stripes, or a checkered pattern.

  * Bright object one or one reflecting strong light.

  * The background of the object is bright, or the contrast is too clear.

  * Picture plane itself is dark.

  * The positions of the objects are far and near.

  * Moving object.

- When using the manual focus during auto focusing, the auto focus function is cancelled.
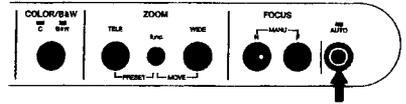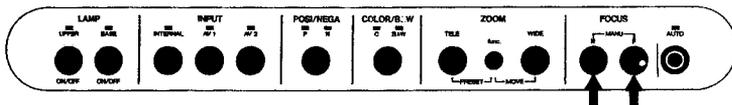
(2) Powered Manual Focus

Press the focus button [N] or [F] for manual focusing.

This function is used to view 3-D object of which any part can be focused.

Note: The coverage area of manual focusing is up to approx. 10cm above from the stage surface.

○**White balance**

To obtain the proper color tone, adjust the white balance before use.
Three modes are selectable.

(1) Full-Auto mode:

With the white balance switch at [AUTO] position, the camera automatically adjusts to the color temperature and adjusts the white balance. The camera will then automatically follow the change in color temperature of the object.

Set [AUTO] position for normal use.

With this setting, the indicator lights on.
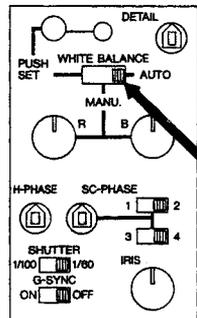

(2) Push-set Auto mode

With the white balance switch at [PUSH SET] position, press the push set button while shooting a completely white object.

The white balance indicator lights on when the white balance is completed. If the indicator will not light on, the camera will not follow the change in color temperature of the object properly.

Start shooting while looking at the monitor screen or select the manual mode for precise adjustment.

The camera will not follow the change in color temperature at this mode.
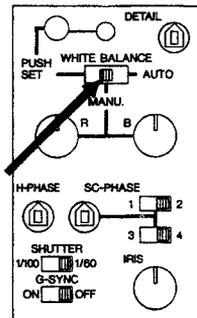
Note: Reset the white balance once the power is turned off and on, or the color temperature of object is changed.
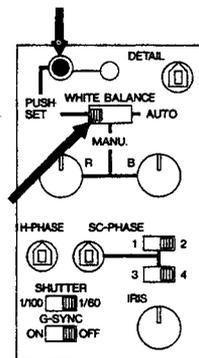

(3) Manual mode

With the white balance switch at [MANU.] position, turn the R (red) and B (blue) knobs while observing the white object on the monitor screen.

With this setting, the white balance indicator is not lit.

○Detail compensation

To adjust the detail (contour) of the image.

By adjusting the detail compensation volume [DETAIL], the softer or harder image will be available on the monitor screen. Use an adequate (−) screwdriver or the like for adjusting the detail of the image.
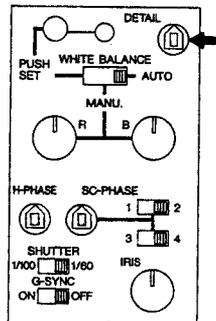
○Electronic shutter speed

Under the 50Hz electrical condition area, the flickering may appear under the fluorescent lamps, etc. with the EV-500AF set at "1/60" mode.

In this case, select "1/100" sec. shutter speed.

Leave the 1/60 sec. mode (original setting) for the use under the 60Hz area.
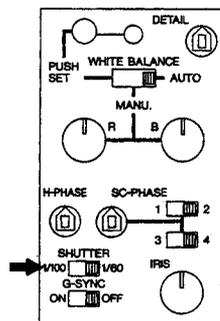
○Iris

Exposure is automatically compensated when the iris control knob is kept at middle position.

Exposure can be manually adjusted by turning the iris control knob.
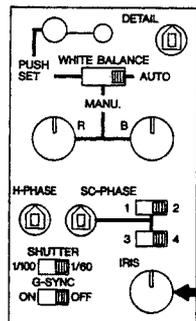
◯Microphone

When using the video monitor with the audio-in terminal, connecting the microphone into the mic. jack allow the simultaneous output of the audio signal from the monitor speaker and video signals.

Adjust the mic. volume to obtain the optimum volume of the microphone.

The audio signal of the microphone is output in monaural either from the left or right audio-out terminal.

When the indicator of input selection is lit, the microphone can be used.

MIC VOLUME

MIC   MIN ———— MAX
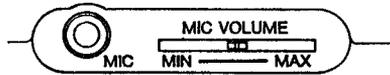
◯LCD monitor shoe

The optional LCD monitor shoe, type MS-100 is available for attaching an LCD monitor with a tripod screw hole (commercially-available) onto the EV-500AF.

(Refer to the operation manual for the LCD monitor for connection.)

LCD Monitor

LCD
Monitor Shoe—
MS-100
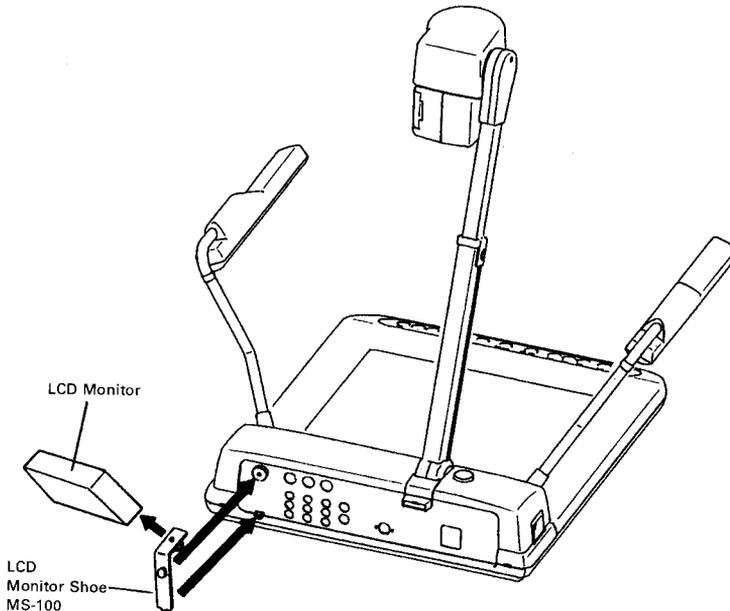
EXTERNAL SYNC. ADJUSTMENT

This adjustment is necessary when images from several AV sources, such as the Visual Presenter, video cameras, and other equipment (including ELMO film-to-video converter TRV-35G,TRV-16G), are composed to be projected on a single monitor.

Horizontal sync. position adjustment and sub carrier position adjustment are required to match the color phases of each image.

A video mixer is necessary to reproduce a composite image. The connection method differs depending on the type of the video mixer. Refer to the instruction manual of the respective video mixer for additional information on connection method.

● **Horizontal sync. phase adjustment**

This adjustment is used to adjust the horizontal phase when the Visual Presenter is subject to ext. sync. (GEN-LOCK). When adjusting the phase, use an adequate (−) screwdriver or the like.
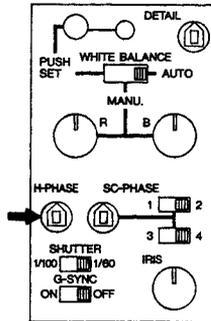
● **Sub-Carrier Phase Adjustment**

This adjustment is carried out if the color phase of the image output signal of the Visual Presenter is not appropriately adjusted to the base signal when overlapping images.

Set the color phase control switch for adjusting the color phase of the image to color phase of the base signal to bring each color phase as close as possible.

Fine adjusting by color phase volume is further carried out.

When adjusting the sub-carrier phase, use an adequate (−) screwdriver or the like.

SC-phase	0°	90°	180°	270°
Switch positions	1▥2 3▥4	1▥2 3▥4	1▥2 3▥4	1▥2 3▥4

— 19 —
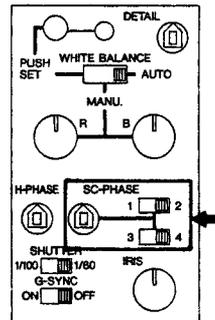
REMOTE

Terminal for wired remote.
The remote receptacle comes with a DIN8P (DIN No. 45326) connector outlet.
These functions will work when the relative contacts are shorted.
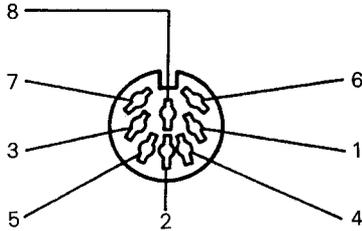
○Function between contacts

Close contact	Functions	
1 & 8	Focus	to FAR
2 & 8		to NEAR
3 & 8	Zoom	to WIDE
4 & 8		to TELE
6 & 8	Auto Focus	
	Function keys	
7&8 / 4&8 ※	Zoom size preset	
7&8 / 3&8	Zoom size move	
7&8 / 1&8	Base light ON/OFF	
7&8 / 2&8	Upper lighting ON/OFF	
7&8 / 6&8	Input selection	
	[Internal→AV1→AV2]	
5	No Use (OPEN)	
8	COMMON	

※ 7&8/4&8 means, close contact #4&#8 with close contact #7&#8.

TROUBLE SHOOTING HINTS

Symptom	Possible Cause/Countermeasure
No Images on TV monitor	• Cable is not properly connected to the video-in terminal of monitor. • The power cord is disconnected from the wall AC outlet. • The plug is disconnected from the outlet. • Power is not turned on. • Zoom is set at tele to display only white part of the material.
Out of focus	• The object is too close to the lens. Check that does not stand higher than 100mm from stage surface. • The 3-D object is not focused unless the sub column (camera head) is extended. • The object on the stage is not focused if the close-up lens is removed from the camera head. • Zoom is set at Tele after focusing at Wide angle. Focus on the point of max. Tele. • It is difficult to automatically focus on such objects as referred on page 15.
The lamp is not quickly turned on.	• This is caused by the built-in safety circuit for protecting the lamp. This is not a fault.
Image is too dark.	• The iris control knob (IRIS) is set at dark side (CLOSE). • The illumination is not sufficient. Use the lighting unit.
Input selection can not be made.	• Inputting to S-video while connecting output of C-video to the monitor or vice versa.
The playback image is stripped looking.	This is caused by the interference strips between the dot of printed material and the scanning line. This is not fault. Turn the volume [DETAIL] counterclockwise slightly.
Flickers on TV monitor.	Set the shutter speed to 1/100 to reduce flickers.

*If trouble still persists even after checking the above, consult your dealer or an authorized Elmo service center.

SPECIFICATIONS

General
Power source	: 120V AC 60Hz
Power consumption	: 35W
AC outlet	: Provided 1 pce max. 400W (3.2A)/Unswitched
Outside Dimensions	: Approx. 690mm (W) 545mm (D) 653mm (H) -when set up
	Approx. 450mm (W) 545mm (D) 203mm (H) -when folded
Weight	: Approx. 8.5kgs

Optics
Lens	: F1.8~f2.3, f=8mm~80mm
Shooting area	: 345mm×255mm max. (WIDE·Scan100%)
Zoom	: Powered
Focusing	: Auto/manual
Iris	: Auto/manual (with fine adjustment)

Lighting
Upper lighting unit	: High frequency lighting method. Fluorescent lamp 6W×2, (type: FHL6EX-N)
Built-in baselight	: High frequency lighting method.

Video
Television system	: NTSC compatible
Image pick-up element	: 1/2″ Interline-transfer CCD
Picture element	: 811 (H)×508 (V)
Sync.system	: Internal/External sync. (automatic changeover)
Resolution	: More than 450 TV lines (Y signal with horizontal) More than 350 TV lines (Vertical)
S/N ratio	: 46 dB (Min. setting with detail adjustment)
Output signal	: C-video VBS 1.0 Vp-p/75Ω unbalanced
	S-video Y 0.714 Vp-p/75Ω unbalanced
	C 0.286 Vp-p/75Ω unbalanced
	R/G/B 0.714 Vp-p/75Ω unbalanced
	SYNC 2.5 Vp-p/75Ω unbalanced
Ext. sync. input condition	: C-video VBS (75Ω unbalanced) Sync: 0.3V±0.1V, Burst: 0.3V±0.1V
Ext.sync.frequency range	: (against NTSC standard) H±20ppm, SC±50ppm
H-phase adjustment	: Manual (0~10μs)
SC-phase adjustment	: Manual (0~360°)
Electronic shutter	: 1/60 sec. or 1/100 sec.
White balance	: Full auto/Push-set auto/Manual
Nega/posi conversion	: Built-in (C-video, S-video)
Color/B & W selection	: Built-in (C-video, S-video)
Detail compensation	: Built-in
Input selection	: 3 systems (Internal/AV1/AV2)
Input terminal	: C-video input (RCA female/75Ω unbalanced)×2 S-video input (Mini DIN 4P connector/75Ω, unbalanced)×2 Ext. sync. input (BNC connector/75Ω, unbalanced)×1 Mic. input (φ6.3mm jack/applicable impedance 600Ω, −65dB)×1 Audio input (stereo) (RCA female/applicable impedance 10KΩ or more, −10dB)×2
Output terminal	: C-video output (RCA female/75Ω, unbalanced)×1 (BNC connector/75Ω, unbalanced)×1 S-video output (Mini DIN 4P connector/75Ω, unbalanced)×1 RGB output (BNC connector/75Ω, unbalanced) Audio output (stereo) (RCA female/applicable impedance 10KΩ or more, −10dB)×1

Supplied accessories
	Power cord	×1
	Video-audio cable	×1
	Close-up lens (Adapter Lens AC3)	×1
	Operation manual	×1

*The design and specifications are subject to change without prior notice.
Weight and dimensions are approximate.