

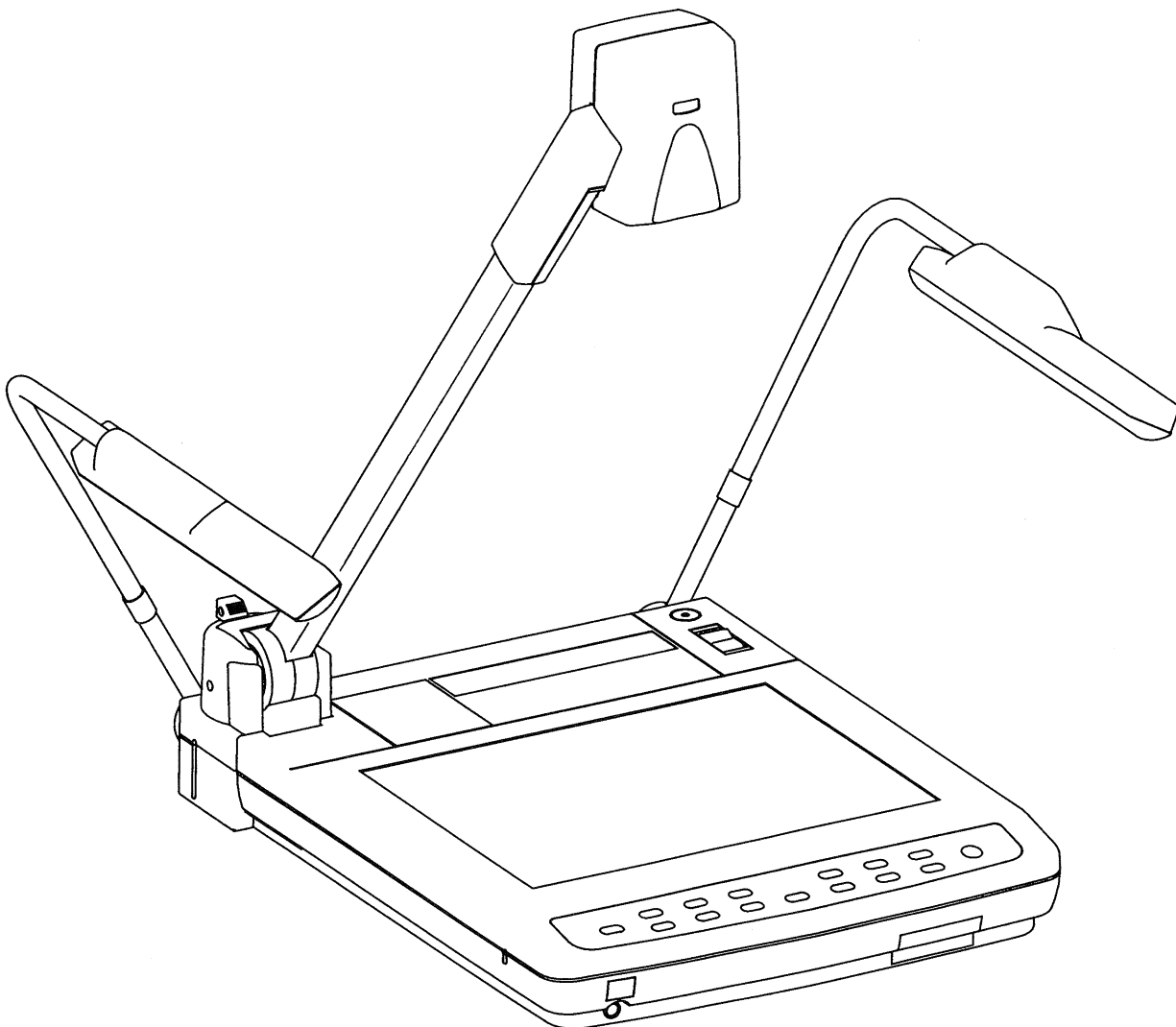
VISUAL PRESENTER

**3CCD**

EV-8000AF

**INSTRUCTION MANUAL**

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Please read this instruction manual carefully before using this Visual Presenter and keep it for future reference.

# IMPORTANT SAFEGUARDS

■ **Read Instructions** — All the safety and operating instructions should be read before the appliance is operated.

■ **Retain Instructions** — The safety and operating instructions should be retained for future reference.

■ **Heed Warnings** — All warnings on the product and in the operating instructions should be adhered to.

■ **Follow Instructions** — All operating and use instructions should be followed.

■ **Cleaning** — Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

■ **Attachments** — Do not use attachments not recommended by the product manufacturer as they may cause hazards.

■ **Water and Moisture** — Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

■ **Accessories** — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

■ **Ventilation** — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

■ **Power Sources** — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home consult your appliance dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

■ **Grounding or Polarization** — This product may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. The 2-wire polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

■ **Power-Cord Protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

■ **Lightning** — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

■ **Overloading** — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

■ **A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.**



■ **Object and Liquid Entry** — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

■ **Servicing** — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

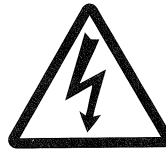
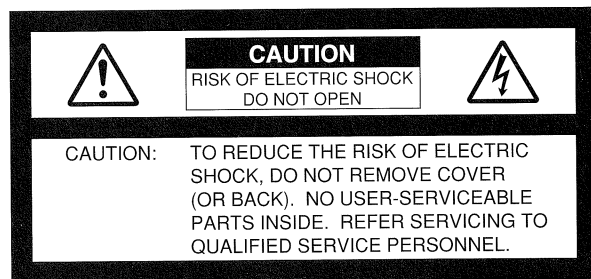
■ **Damage Requiring Service** — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance - this indicates a need for service.

■ **Replacement Parts** — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

■ **Safety Check** — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

■ **Heat** — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. This marking is located at the bottom of product.



SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**WARNING:**  
**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.**

#### **INFORMATION**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### **USER-INSTALLER CAUTION:**

Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC rules.

## **BEFORE YOU USE**

- Use the Visual Presenter under the rated electrical conditions and TV system.
- Do not leave the Presenter under direct sunlight or by heaters, or the Presenter may be discolored, deformed, or damaged.
- Do not place the Presenter in any humid, dusty, windy or vibrating location. Use the Presenter in the following environmental conditions:
  - Temperature: 5° C~40° C (41° F~104° F)
  - Humidity: 30~85% (No condensation)
- Use a soft, dry cloth for cleaning. Do not use any volatile solvent, such as thinner or benzine.
- Do not directly point the camera lens into the sun, or the camera may be damaged.
- Caring for the batteries :
  - If the Presenter is not used for a long time, take out the batteries from the case.
  - Do not use rechargeable Ni-Cd batteries.
  - Do not use new and old batteries, or batteries of different types together.
  - Do not try to recharge or short-circuit the batteries.

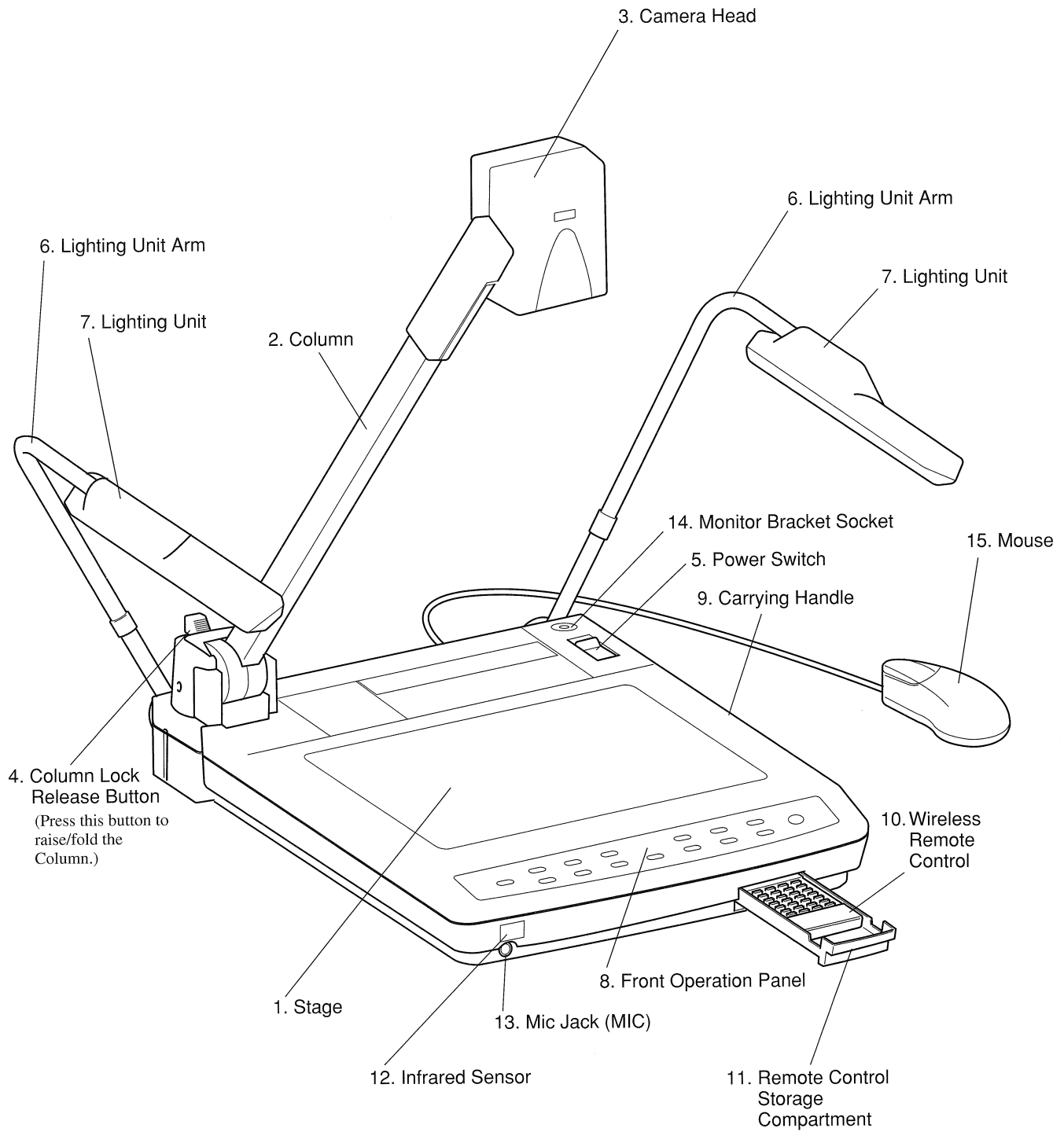
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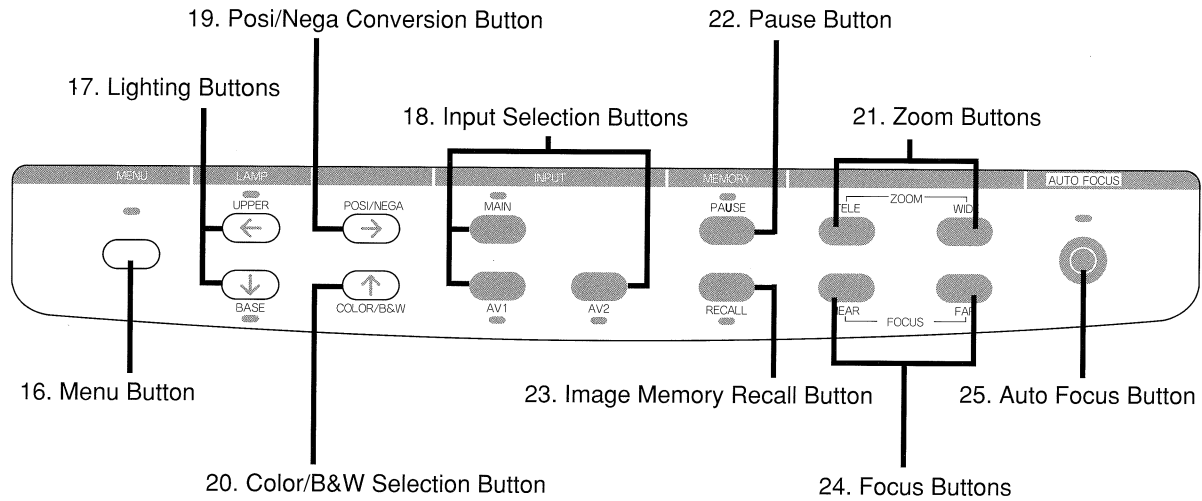
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# 1. PART NAMES AND FUNCTIONS

## ○ Appearance



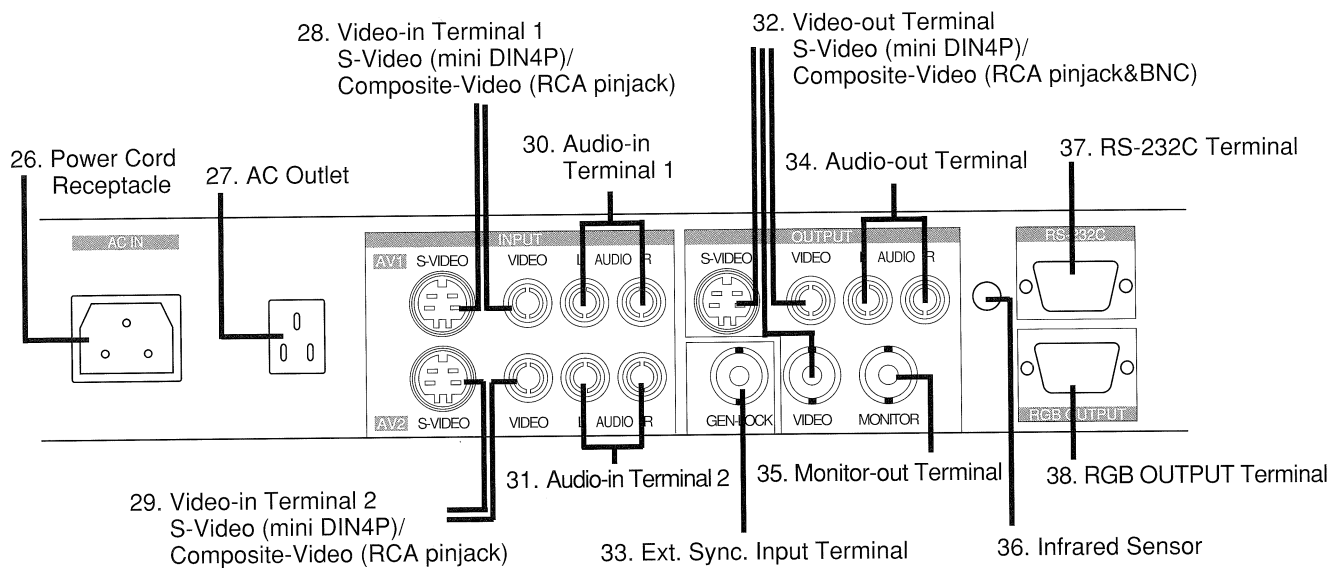
## ○ Front Operation Panel



	Part Name	Function	Reference Page
16	Menu Button	To set the item of each function in the OSD(On-Screen Display) menu.	P.26
17	Lighting Buttons [←],[↓] (Direction Buttons)	To turn ON/OFF the lighting. In the OSD menu, these buttons turn to the direction buttons [←][↓].	P.19 P.26
18	Input Selection Buttons	To change the input line.	P.19
19	Posi/Nega Conversion Button [→](Direction Button)	To show negative films. In the OSD menu, this button turns to the direction button [→].	P.23 P.26
20	Color/B&W Selection Button [↑] (Direction Button)	To present black-and-white material, such as documents. In the OSD menu, this button turns to direction button [↑].	P.23 P.26
21	Zoom Buttons	To change the image size.	P.21
22	Pause Button	To temporarily hold the image.	P.24
23	Image Memory Recall Button	To recall the images memorized in the image memory.	P.23, 31
24	Focus Buttons	To adjust focus (powered).	P.22
25	Auto Focus Button	To focus automatically (One-push auto focus).	P.21

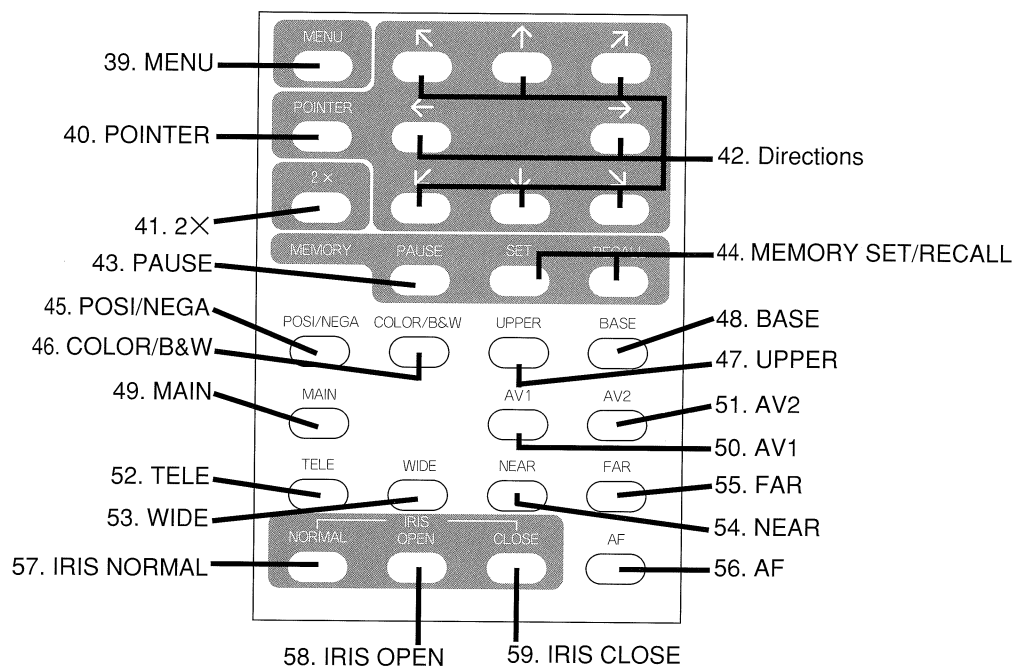


## ○ Rear Panel



	Part Name	Function	Reference Page
26	Power Cord Receptacle <b>[AC IN]</b>	Connected to the power cord connector.	
27	AC Outlet	To supply power up to 400W (Not interlocked with the power switch).	
28	Video-in Terminal 1 <b>[INPUT·AV1·S-VIDEO/VIDEO]</b> S-Video (mini DIN4P)/ Composite-Video (RCA pinjack)	Video signal from this terminal is output through the video-out terminal when input selection is set at AV1.	
29	Video-in Terminal 2 <b>[INPUT·AV2·S-VIDEO/VIDEO]</b> S-Video (mini DIN4P)/ Composite-Video (RCA pinjack)	Video signal from this terminal is output through the video-out terminal when input selection is set at AV2.	
30	Audio-in Terminal 1 <b>[INPUT·AV1·AUDIO]</b>	Audio signal from this terminal is output through the video-out terminal when input selection is set at AV1.	
31	Audio-in Terminal 2 <b>[INPUT·AV2·AUDIO]</b>	Audio signal from this terminal is output through the video-out terminal when input selection is set at AV2.	
32	Video-out Terminal <b>[OUTPUT·S-VIDEO/VIDEO]</b> S-Video (mini DIN4P)/ Composite-Video (RCA pinjack&BNC)	Connected to a TV monitor or the like.	P.13
33	Ext. Sync. Input Terminal <b>[GEN-LOCK]</b>	To input external synchronizing signal.	
34	Audio-out Terminal <b>[OUTPUT·AUDIO]</b>	Connected to a TV monitor audio-input terminal or the like.	
35	Monitor-out Terminal <b>[OUTPUT·MONITOR]</b>	This terminal is connected to an LCD monitor (option) or the like for checking the image at hand. The freeze function does not work on the output from this terminal.	P.13
36	Infrared Sensor	The light receiving part of the wireless remote control. When operating the Presenter from behind, aim the wireless remote control at this light receiving part.	P.11
37	RS-232C Terminal <b>[RS-232C]</b>	Connected to the supplied mouse. Controllable from a general-purpose personal computer.	P.38
38	RGB Output Terminal <b>[RGB OUTPUT]</b>	To output the RGB signal of the video output from the camera independently of the input selection.	P.15

## ○Wireless Remote Control



	Button Name	Function	Reference Page
39	<b>MENU</b>	To call the OSD (On-Screen Display) menu, and to fix the settings.	P.26
40	<b>POINTER</b>	To display the pointer on the screen.	P.24
41	<b>2X</b>	To electronically double the image size.	P.25
42	Directions	To move the video pointer and to scroll the enlarged image. When the pointer is displayed on the screen, and any of these keys is pressed, the pointer moves in the direction. The image, when double-sized, is scrolled in the direction of the pressed key. To remove the items in the OSD menu.	P.24
43	<b>PAUSE</b>	To temporarily hold the images.	P.24
44	<b>MEMORY SET/RECALL</b>	SET: To memorize images in the image memory. RECALL: To recall images memorized in the image memory.	P.31, 32
45	<b>POS/NEGA</b>	To convert posi/nega modes.	P.23
46	<b>COLOR/B&amp;W</b>	To select Color/B&W (Black&White) modes.	P.23
47	<b>UPPER</b>	To turn ON/OFF the upper light.	P.19
48	<b>BASE</b>	To turn ON/OFF the baselight.	P.19
49	<b>MAIN</b>	To select the images from the built-in camera.	
50	<b>AV1</b>	To select the AV1 image input.	P.19
51	<b>AV2</b>	To select the AV2 image input.	P.19
52	<b>TELE</b>	To zoom in.	P.21
53	<b>WIDE</b>	To zoom out.	P.21
54	<b>NEAR</b>	To move the focus near.	P.22
55	<b>FAR</b>	To move the focus far.	P.22
56	<b>AF</b>	To focus automatically.	P.21
57	<b>IRIS NORMAL</b>	To iris automatically.	P.24
58	<b>IRIS OPEN</b>	To open the iris manually.	P.24
59	<b>IRIS CLOSE</b>	To close the iris manually.	P.24

## 2. WIRELESS REMOTE CONTROL

Point the infrared emitting part of the wireless remote control unit at the infrared sensor of the Presenter, located at the front, and the rear panel, and press the button for the desired function.

The infrared sensor at the front can receive the infrared light if it comes from the wireless remote control within 7 meters at an angle of 30 degrees or less right and left. (5 degrees or less right and left for rear panel sensor.)

The sensitivity may be degraded when the Presenter is located under sunlight, or near inverter fluorescent lamps, or in any other unfavorable surroundings.

Depending on the conditions of fluorescent lamps, etc. the sensor may fail to receive the infrared light. In such a case, relocate the Presenter, or take other countermeasures.

### ○ Preparation

Remove the battery case cover by pressing downward on the [▼] mark part in the direction as indicated by the arrow. Install 2 pcs. of batteries (type R03, AAA) into the case in the direction as indicated there.

**Note:** Install the batteries with the right polarity.

**Note:** Change the batteries once a year.

**Note:** The batteries supplied with the Presenter are only for use in initially confirming the operation of the Presenter. It is not guaranteed that these batteries can work effectively for the indicated period.

## 3. MOUSE

Connect the mouse to the RS-232C terminal on the rear panel.

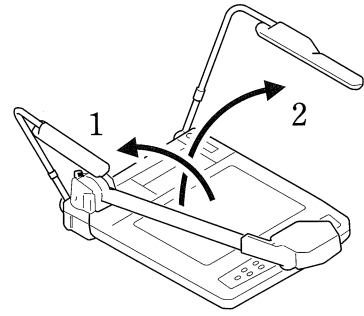
The mouse can control the display and movement of the video pointer and the enlarged digital image.

Reference Page	
	• Selecting the RS-232C setting P.35
	• Video pointer P.24
	• Enlarging the image P.25

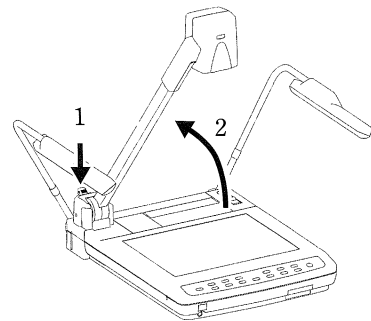
**Note:** This mouse can not be used when the Presenter is connected to a personal computer.

## 4. SETTING UP

- (1) Unfold the lighting unit arms fully until they come to the deadend. Unfold arm 1 and then arm 2 as illustrated.



- (2) Press the column lock release button, and raise the column until the column lock release button returns to the original position. Make sure that the column has been completely locked.



- (3) Plug the power cord into the power cord receptacle of the Presenter and the AC outlet.

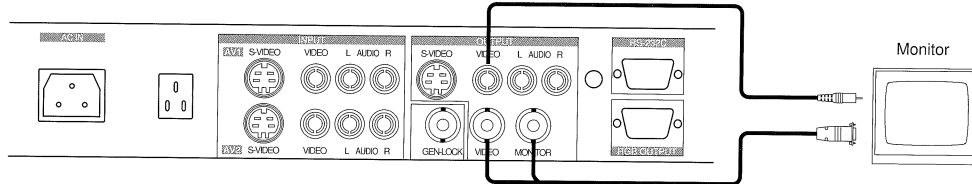
## ○ Connection to the monitor TV

**Note:** Be sure to turn OFF the power supply to all equipment before making any connections to protect the Presenter and all the connected equipment.

**Note:** Hold the cable plug part when connecting or disconnecting the cables.

## ● Connection to the composite video-in terminal

Use the supplied RCA video/audio cable or a BNC cable available on the market. (Either the RCA jack or the BNC jack can be used. For the information of the restrictions, see P. 15.)



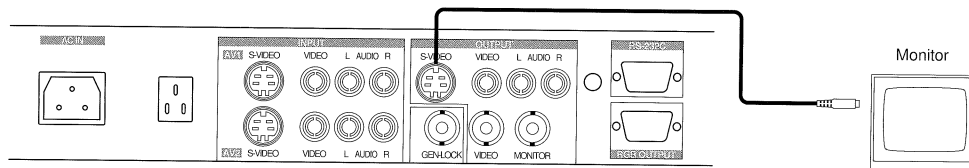
## ● Connection to the monitor-out terminal

The freeze (pause) function will not act on the signal output from this terminal. (For the information of the restrictions, see P. 15.)

When an LCD monitor (option) or the like is used, even if an image in the monitor connected to other output terminal is frozen (paused), the material can be replaced while watching the image on the monitor.

## ● Connection to the S-video-in terminal

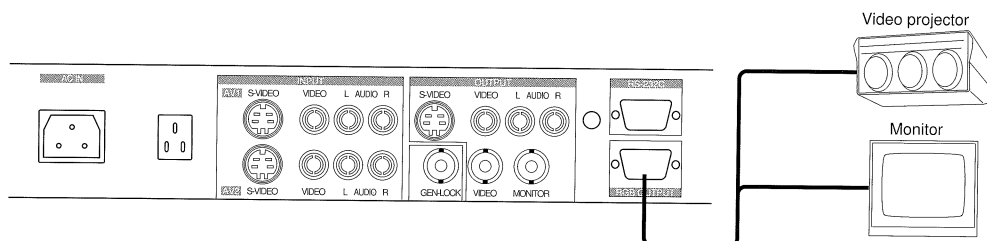
Connect the S-video-out terminal (mini DIN 4P) of the Presenter to the S-video-in terminal of the TV/video monitor. For the S-video mode, use the supplied 4P mini DIN cable or an S-video connection cable available on the market. If the equipment to be used is provided with a Y/C separate connector, a conversion adapter is necessary.



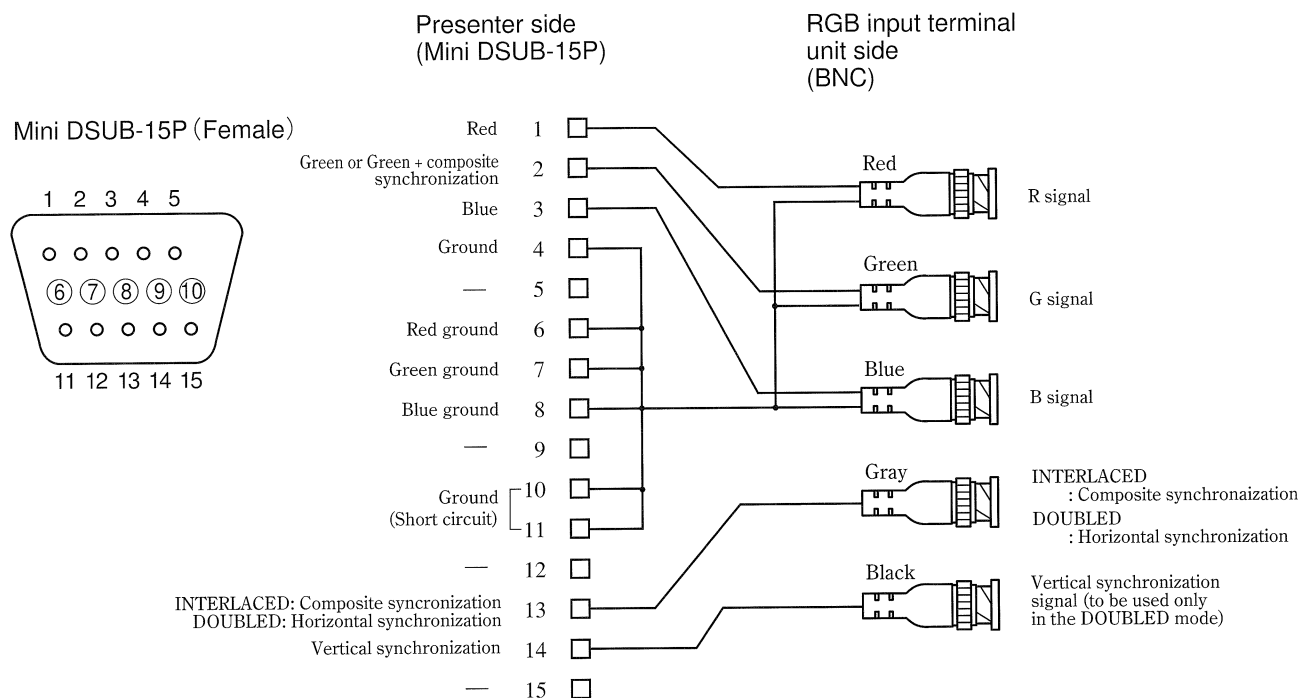
## ● Connection to the RGB-in terminal

Connect the RGB output terminal of the Presenter to the RGB input terminal of the equipment with the supplied BNC cable or a BNC connection cable available on the market.

In case the Presenter is connected to the equipment with RGB input signal horizontal sync. frequency of 30kHz or more (such as video projector, multi-synch. monitor), set the RGB output at DOUBLED, referring to "Outputting the RGB" on P.36. If the display image shifts from the center, manually adjust the horizontal/vertical positions through the connected equipment. If vertical stripes appear on the screen with the use of video projector, it may be improved by manually adjusting the dot-clock frequency of the projector.



## ●Connection of analog RGB cable



## ●Specifications of analog RGB cable connector (Mini DSUB-15P)

Pin No.	Name	Pin No.	Name
1	Red	9	—
2	Green or Green + composite synchronization	10	Ground (Short circuit)
3	Blue	11	
4	Ground	12	—
5	—	13	INTERLACED: Composite synchronization DOUBLED: Horizontal synchronization
6	Red ground	14	Vertical synchronization
7	Green ground	15	—
8	Blue ground		

## ○ Restrictions on image output

**Note:** The specifications with "—" are not effective.

- Restrictions on signal outputs (Composite video, S-video, monitor video, RGB)

		Normal mode	Doubling	Pausing	Recalling	B&W mode	Nega mode
Posi/Nega selection		○	—	—	—	○	○
Color/B&W selection		○	○	—	○	○	○
2X ON/OFF		○	○	—	○	○	○
Sub menu adjustment on MENU screen	CHROMA	○	○	—	—	○	○
	WHITE BALANCE	○	○	—	—	○	○
	EXT. SYNC	○	○	○	○	○	○
	VIDEO EFFECT	○	○	—	—	○	○
	VIDEO OPTION	○	○	—	—	○	○
	AUDIO	○	○	○	○	○	○
	MEMORY RECALL	○	○	○	○	○	○
	MEMORY SET	○	○	○	○	○	○
	OPTION	○	○	○	○	○	○

- Restrictions on RGB OUT output set in <DOUBLED>

		Normal mode	Doubling	Pausing	Recalling	B&W mode	Nega mode
MENU screen display		○	—	—	—	—	—
Video pointer display		○	—	—	—	—	—

<G ON SYNC> function on menu display is inoperative. (Synchronous signal is not added to the G signal.)

- Restrictions on monitor output images

		Normal mode	Doubling	Pausing	Recalling	B&W mode	Nega mode
MENU screen display		○	○	—	○	○	○
Video pointer display		○	○	—	○	○	○

## ● RGB output terminals

Even if the image is selected through the output from the AV1 or the AV2 by the input selection button, the RGB output terminal outputs the image from the Presenter only.

Reference page

- Outputting the RGB P.36
- Selecting the G ON SYNC P.30



## 5. OPERATION PROCEDURES

### ○ Simple steps for presenting printed material

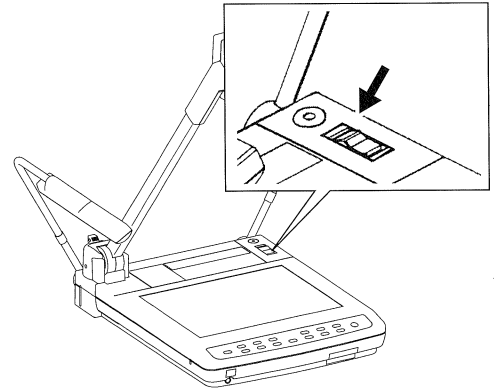
- (1) Turn ON the power switch.

**Note:** Before turning ON the power switch, connection to the monitor should have been completed.

**Note:** The indication lamp (green LED) on the front operation panel shows the initial setting condition of each function of the Presenter.

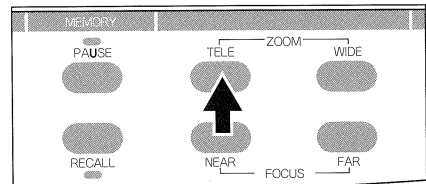
After the power switch is turned ON, the indication lamp of the main camera only is illuminated.

**Note:** If the power switch is turned ON immediately after being turned OFF, the Presenter may not operate. For restarting, turn ON the power switch several seconds after turning OFF.

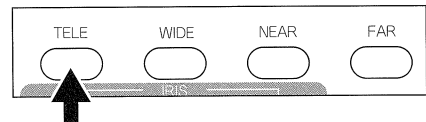


- (2) Place the object on the stage. Adjust the image size according to the object size using the zoom buttons [TELE/WIDE] on the operation panel or wireless remote control, while watching the image on the TV monitor.

Front operation panel



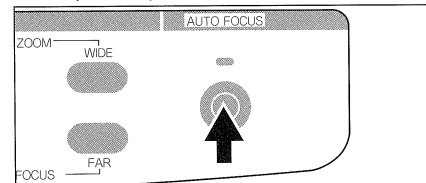
Wireless remote control



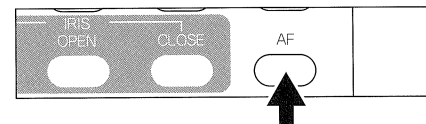
- (3) Press the auto focus button [AF] on the front operation panel or remote control for focusing.

**Note:** The auto focus function works up to a height of approx. 10 cm above the stage surface.

Front operation panel



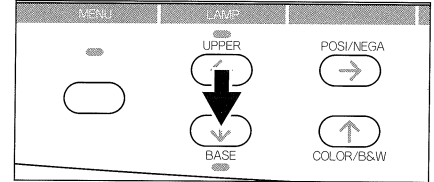
Wireless remote control



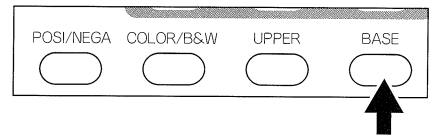
○ Simple steps for showing transparent material, such as overhead transparency or slide film

- (1) Press the base button **[BASE]** on the front operation panel or wireless remote control. The indicator of the base button **[BASE]** will blink, and the built-in baselight will light up.

Front operation panel

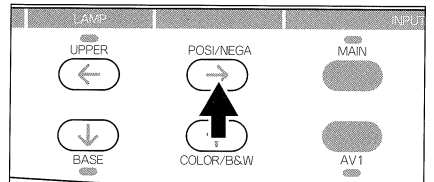


Wireless remote control

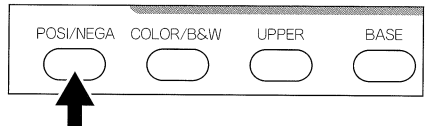


- (2) To present a nega film, press the posi/nega conversion button **[POSI/NEGA]** on the front operation panel or wireless remote control to change the mode to [N] (Negative).

Front operation panel

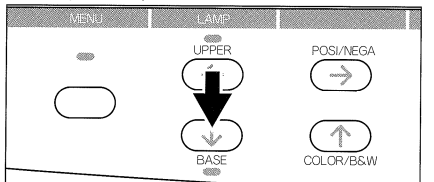


Wireless remote control

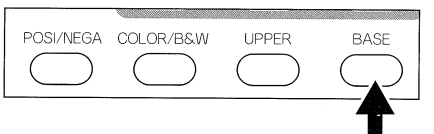


- (3) To turn OFF the baselight, press the base button **[BASE]** on the front operation panel or wireless remote control.

Front operation panel



Wireless remote control

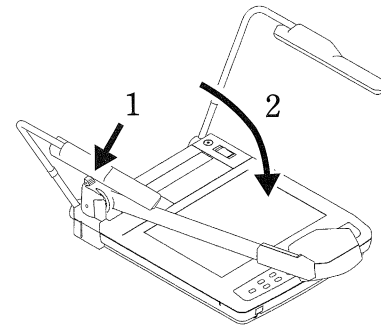


## ○ Storing the Presenter

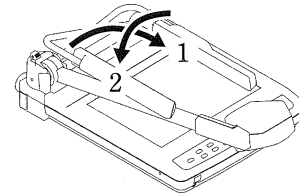
**Note:** The Presenter can not be stored with the LCD monitor (optional) attached. Before storing, detach the LCD monitor (optional) and monitor bracket (optional), if connected.

- (1) Turn OFF the power switch, and unplug the power cord and the video cable.
- (2) Press the column lock release button, and fold down the main column.

**Note:** The illustration shows the storage position of the column. Never apply excessive force to the column.



- (3) Fold down the lighting unit arms 1 and 2. Be sure to fold down arm 1 first as per the illustration.



## 6. VARIOUS FUNCTIONS

### ○ Lighting

The upper lighting unit for presenting material such as printed matter and 3-D object, and the baselight for presenting transparent material, such as slide, and negative film, are built in the Presenter.

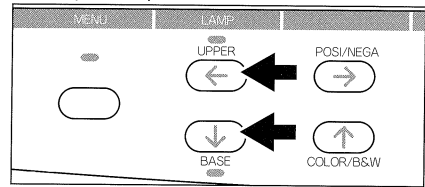
Depending on the material to be presented, press the button **[UPPER]** or **[BASE]** on the front operation panel or wireless remote control. The indication lamp will blink for a few seconds, and then the fluorescent lamp will light up. To turn OFF the lamp, press the button for the respective lamp.

**Note:** It is impossible to have the upper lighting unit and the baselight lit up together.

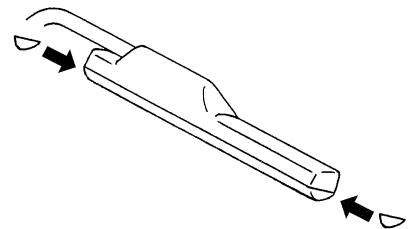
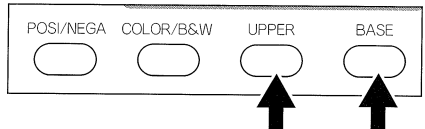
**Note:** When the lightness of the material surface is not sufficiently high or a 3-D object is presented, a sharp image with good color rendering can be obtained with the upper lighting unit.

**Note:** To reduce glare, attach enclosed stickers, as shown, to the outside ends, of toplights.

Front operation panel



Wireless remote control

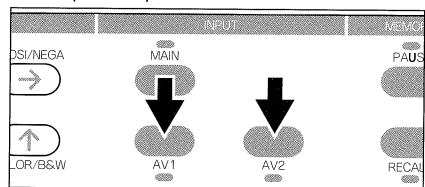


### ○ Input selection

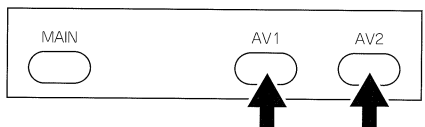
The respective images from two different AV sources such as a VCR and a video camera can be alternately presented on a monitor by selecting the AV source by pressing the desired input selection buttons without changing cable connections. Press the input selection button **[AV1]/[AV2]** on the front operation panel or wireless remote control.

Input selection is possible as shown in the table on the next page, but RGB output can not be selected. Signal change, such as "from Composite-video input to S-video output" is not available.

Front operation panel



Wireless remote control



● Table of video-in/out terminal selections

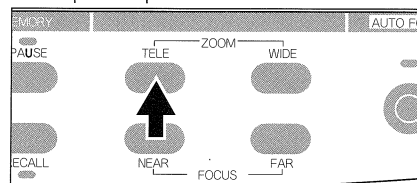
Input \ Output			Video-out terminal					Audio-out terminal	
			S-VIDEO	Composite-VIDEO			RGB	Channel	
				RCA jack	BNC	MONITOR		L	R
INTERNAL	Camera video signal	S-VIDEO	○	—	—	—	—	—	—
		Composite-VIDEO	—	○	○	○	—	—	—
		RGB	—	—	—	—	○	—	—
	Mic.	Monaural	—	—	—	—	—	○	○
A V 1	Ext. video signal	S-VIDEO	○	—	—	—	—	—	—
		Composite-VIDEO	—	○	○	○	—	—	—
	Ext. audio signal (Stereo)	L Channel	—	—	—	—	—	○	—
		R Channel	—	—	—	—	—	—	○
	Mic.	Monaural	—	—	—	—	—	○	○
A V 2	Ext. video signal	S-VIDEO	○	—	—	—	—	—	—
		Composite-VIDEO	—	○	○	○	—	—	—
	Ext. audio signal (Stereo)	L Channel	—	—	—	—	—	○	—
		R Channel	—	—	—	—	—	—	○
	Mic.	Monaural	—	—	—	—	—	○	○

**Note:** The RGB output terminal receives the images from the main camera regardless of the input selection.

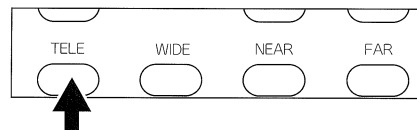
## ○ Zoom

Press the zoom button **[TELE]** on the front operation panel or wireless remote control, and the image will gradually be enlarged.

Front operation panel

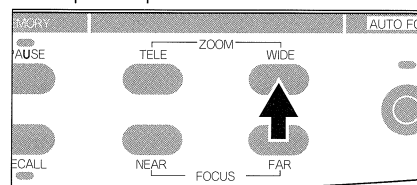


Wireless remote control

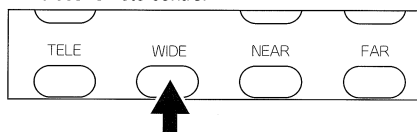


Press the zoom button **[WIDE]** on the front operation panel or wireless remote control, and the image will be gradually reduced.

Front operation panel



Wireless remote control



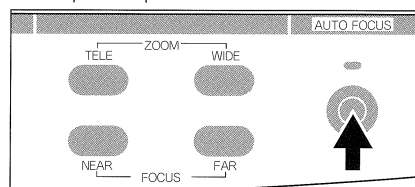
## ○ Focus

### ● Auto Focus

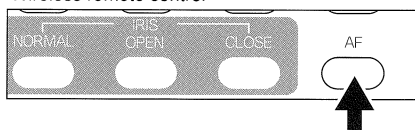
To operate Auto-Focus, press the auto focus button **[AF]** on the front operation panel or wireless remote control, and the Auto-Focus will be activated.

While the auto-focus is in operation, the indication lamp blinks until the object is brought into focus.

Front operation panel



Wireless remote control



The Presenter features a one-push auto focus function. Once focusing is completed, the auto focus function is released, and the focused position maintains unchanged.

To obtain sharper image, zoom in on the object in the auto-focus mode while pressing the zoom button **[TELE]** on the front operation panel or wireless remote control.

However, the objects listed below may not be brought into focus in the auto focus mode. In these cases, use the manual focus mode.

- Objects bearing little contrast
- Objects with fine repeated patterns, such as lateral stripes and cross stripes
- Objects glittering or reflecting strong light
- Objects with bright background, or excessive contrast
- Objects in a dark picture plane
- Objects located near and far away at the same time.
- Objects in motion

If the focus button **[NEAR]** or **[FAR]** on the front operation panel or wireless remote control is pressed during the auto focus, the auto focus will be released.

**Note:** The auto focus functions up to approx. 10cm above the stage surface.

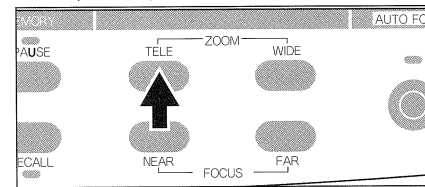
**Note:** If the camera head gets heavy shock by accident, there is a possibility of out of focus. In such a case, once turn the power OFF and then re-set to ON.

## ● Powered Manual Focus

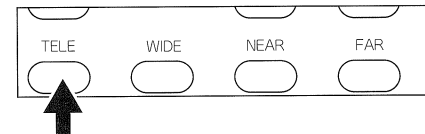
To focus on any part of the material, such as 3-D material, press the focus button **[NEAR]** or **[FAR]** on the front operation panel or wireless remote control.

**Note:** The manual focus works up to approx. 10cm above the stage surface.

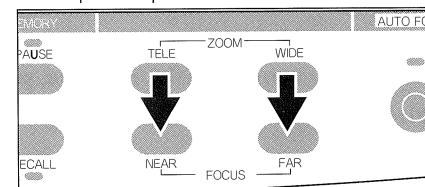
Front operation panel



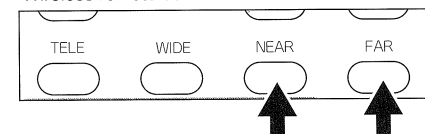
Wireless remote control



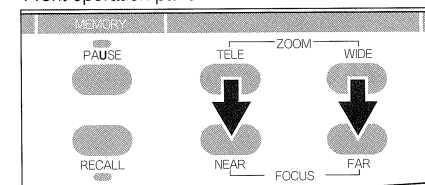
Front operation panel



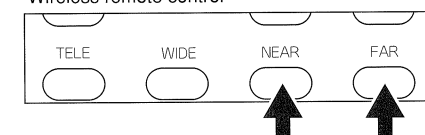
Wireless remote control



Front operation panel



Wireless remote control



## ○ Posi/Nega conversion

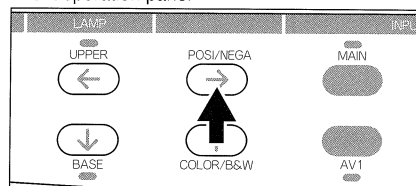
To show a negative film.

Press the posi/nega conversion button **[POSI/NEGA]** on the front operation panel or wireless remote control, and the image will be converted accordingly.

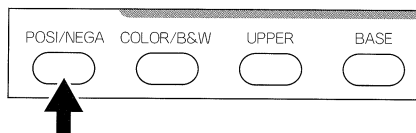
To return to the normal (POSI) mode, press the posi/nega conversion button **[POSI/NEGA]** again.

**Note:** The resolution of any nega/posi converted image will be degraded in comparison with the POSI mode.

Front operation panel



Wireless remote control



## ○ Color/B&W selection

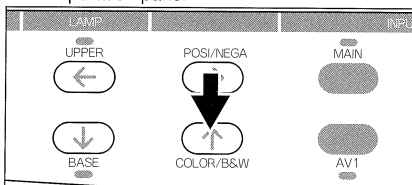
To present the B&W (Black&White) material such as documents in sharper image with no color blur on the monitor, set to color mode for normal use.

To change to B&W mode, press the color/B&W selection button **[COLOR/B&W]** on the front operation panel or wireless remote control.

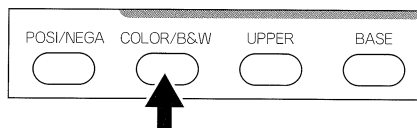
To return to normal (COLOR) mode, press the color/B&W selection button **[COLOR/B&W]** again.

**Note:** The resolution of any color/B&W converted image will be degraded in comparison with the COLOR mode.

Front operation panel



Wireless remote control



## ○ Recalling the image

Upper case show the memory No. of the image that is recalled by pressing the image memory recall button **[RECALL]** on the front operation panel or wireless remote control.

The initial value is 1.

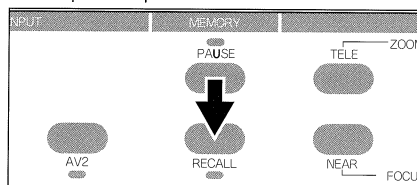
Each time the recall button **[RECALL]** is pressed, the image memory No. augments by +1 increment.

If a vacant image memory No. is recalled, this No. will be skipped.

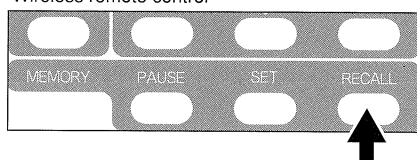
When the image memory is recalled and the image memory No. is changed by using the direction buttons **[→]/[←]** and the recall button **[RECALL]**, the image memory of the selected No. of the image memory appears.

**Note:** For the information of recalling from the menu <OSD>, see P.31 .

Front operation panel



Wireless remote control





## ○ Iris

The iris can be manually adjusted.

To open the iris, press the manual iris button **[OPEN]**.

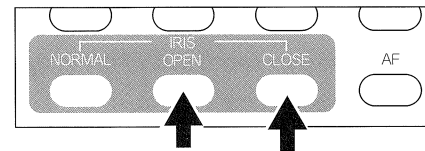
To close the iris, press the manual iris button **[CLOSE]**.

In the manual mode, the iris is fixed regardless of the change in lightness of object.

The initial setting is "auto iris."

**Note:** For the information of adjusting by means of the OSD, see P.35 .

Wireless remote control



## ○ Video pointer

When the pointer button **[POINTER]** on the wireless remote control is pressed, the video pointer appears .

The video pointer is moved by using the direction buttons **[↑]**, **[↓]**, **[→]**, **[←]**.

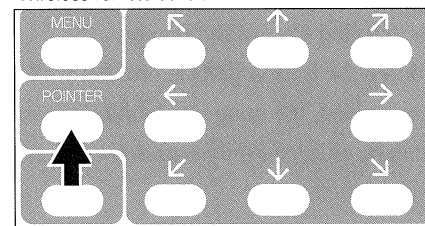
When the pointer button **[POINTER]** on the wireless remote control is pressed again, the video pointer disappears.

When the left button on the mouse is clicked, the video pointer appears. When the mouse is moved, the video pointer moves accordingly.

When the left button on the mouse is clicked while the video pointer is on the screen, the video pointer disappears.

**Note:** For the information of setting the arrow/color of the video pointer, see P.36 .

Wireless remote control



## ○ Pause

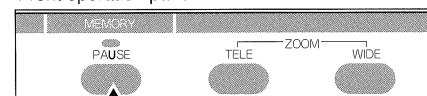
When the pause button **[PAUSE]** on the front operation panel or wireless remote control is pressed, the image of the main camera is stored in pause mode.

When the pause button **[PAUSE]** is pressed again, the pause mode is released.

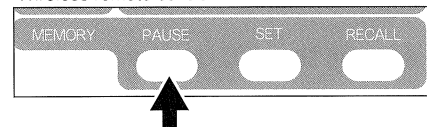
**Note:** In the pause mode, the image enlargement and scrolling functions can not work.

When the image is enlarged and paused, the screen of the enlarged image will not return to the screen of the normal-sized image unless the pause mode is released.

Front operation panel



Wireless remote control



## ○ Enlarging the image

To double the image.

To double the central part of the image, press the button **[2X]** on the wireless remote control.

The screen is scrolled by using the direction buttons on the wireless remote control. The screen can be scrolled within the shooting area of the built-in camera.

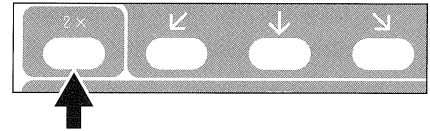
The image can also be doubled by clicking the right button on the mouse.

When the right button on the mouse is clicked when viewing the doubled image, the previous image (normal magnification) appears again.

When the pointer is placed at the corner of the screen, the image is scrolled toward the corner.

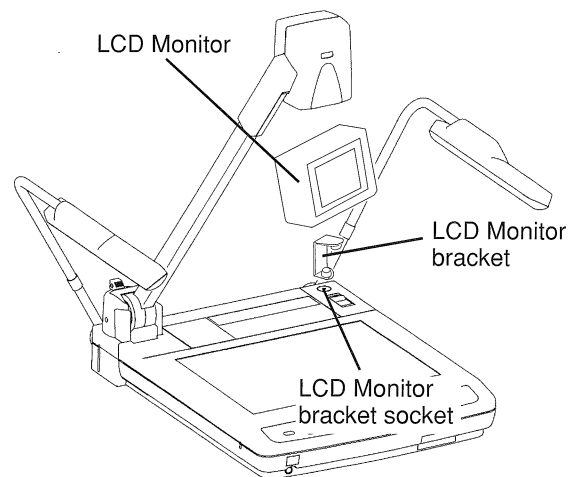
When the button **[2X]** is pressed while the video pointer is on the screen, the image is doubled around the pointer. The image can be enlarged only within the shooting area of the main camera.

Wireless remote control



## ○ LCD monitor bracket socket

The LCD monitor bracket socket is used for attaching an LCD monitor (optional) with an LCD monitor bracket (optional). For the connection method and cables, refer to the instruction manual of the LCD monitor.



## ○ About the PC software "Image Mate"

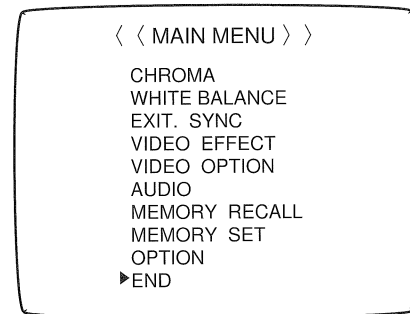
For the information, see "manual. pdf" in the CD-ROM of "Image Mate."

## 7. OSD (On-Screen Display)

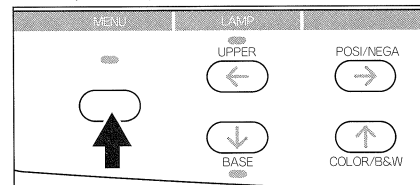
Press the menu button **[MENU]** on the front operation panel or wireless remote control, and the OSD main menu **[MAIN MENU]** will appear.

Choose the item of each function in the main menu.

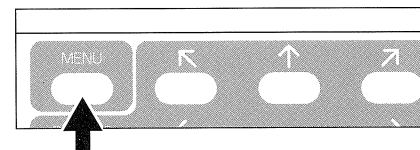
OSD Menu (on the monitor)



Front operation panel



Wireless remote control



Use the following buttons to set the item of each function in the main menu.

- **[↑] [↓]**---For selection (SELECT)
- **[→] [←]**---For adjustment (ADJUST)
- **[MENU]**---For entry (ENTER)

After setting the item of each function, quit the OSD menu.

The settings in the OSD menu will be memorized and maintained. These settings remain effective for the next operation.

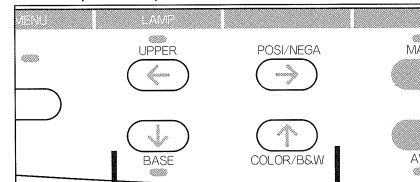
(To disappear the menu screen, press the button **[MENU]** in the position <END>.

To disappear the menu <SUB MENU>, press the button **[MENU]** in the position [END], and when the menu <MAIN MENU> appears, press the button **[MENU]** again in the position [END].)

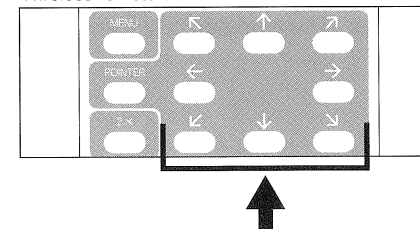
**Note:** Unless quitting the OSD menu normally, the settings are not memorized.

**Note:** For the information of the menu <EXT. SYNC>, see "8. EXTERNAL SYNC. ADJUSTMENT" on P.37.

Front operation panel



Wireless remote control



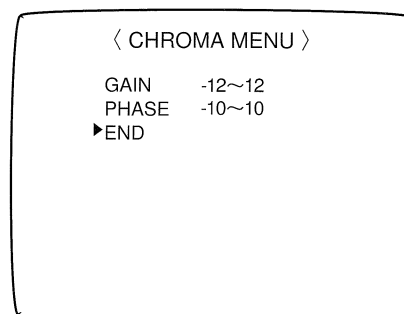
## ○ Color adjustment <CHROMA MENU>

- Menu sequence <MAIN MENU>→<CHROMA MENU>

To adjust the color of the video output image of the main camera.

Menu displayed	Functions
<GAIN>	To adjust color gain (color depth).
<PHASE>	To adjust the hue (tint).

OSD Menu (on the monitor)

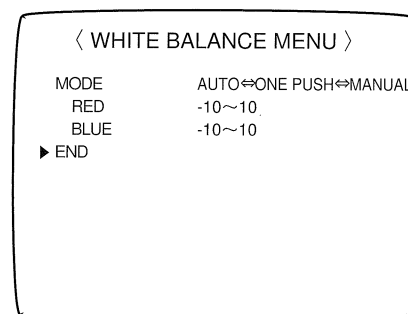


## ○ White balance <WHITE BALANCE MENU>

- Menu sequence <MAIN MENU>→<WHITE BALANCE MENU>

To set the focusing point of the white component.

OSD Menu (on the monitor)

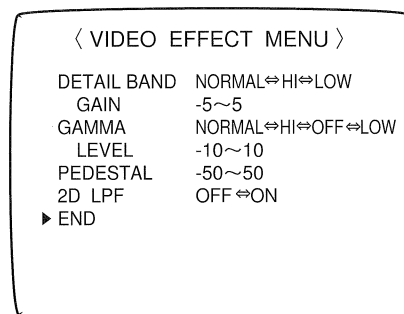


Menu displayed	Functions	
<MODE>	To set the white balance mode.	
	<AUTO>	To set the white balance in the auto follow mode (Initial setting).
	<ONE PUSH>	To set the push-set white balance. In the mode <ONE PUSH>, press the button <b>[MENU]</b> when the cursor is in the position <MODE>, the white balance for the then color temperature is fixed.
	<MANUAL>	To set the white balance by turning the knob <RED>/<BLUE>.
<RED>	To adjust the red component in the mode MANUAL. (-105 ~ 105)	
	To adjust the offset of the red component in the mode <ONE PUSH>. (-10 ~ 10)	
<BLUE>	To adjust the blue component in the mode MANUAL. (-105 ~ 105)	
	To adjust the offset of the blue component in the mode <ONE PUSH>. (-10 ~ 10)	

**Note:** The automatically followed color temperature ranges from approx. 3000k to 6000k.

## ○ Video effect setting <VIDEO EFFECT MENU>

OSD Menu (on the monitor)



### ● Adjusting the Detail (Outline-accent function)

- Menu sequence <MAIN MENU>→<VIDEO EFFECT MENU>→<DETAIL BAND>→<GAIN>

To adjust the intensity of the image contour.

Select the detail frequency band from among 3 levels of NORMAL/HI/LOW in the menu <DETAIL BAND>.

Adjust the gain of each detail in the menu <GAIN>.

The gain can be adjusted to any of the 11 levels.

### ● Adjusting the Gamma

- Menu sequence <MAIN MENU>→<VIDEO EFFECT MENU>→<GAMMA>→<LEVEL>

To correct the tone of the black part of the image. Select the tone from among 4 levels of NORMAL/HI/OFF/LOW.

Adjust the gamma characteristics of each black part in the correction mode in the menu <LEVEL>.

**Note:** When <GAMMA> is set in <OFF>, the adjustment of <LEVEL> is disabled.

### ● Adjusting the Pedestal

- Menu sequence <MAIN MENU>→<VIDEO EFFECT MENU>→<PEDESTAL>

To adjust the black level of the image.

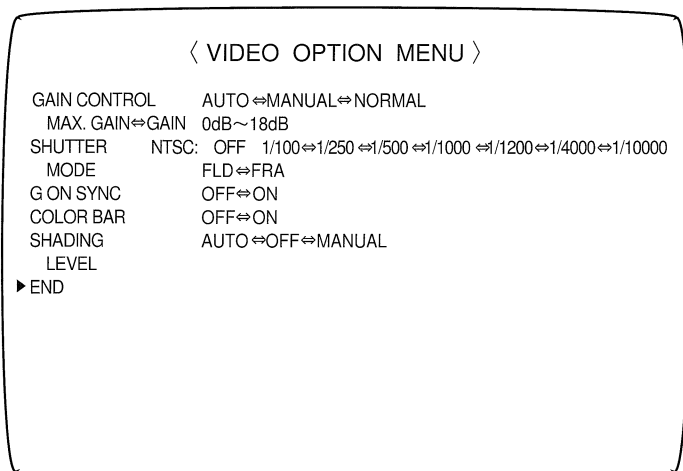
### ● 2D LPF

- Menu sequence <MAIN MENU>→<VIDEO EFFECT MENU>→<2D LPF>

To select the ON/OFF of the 2D low-pass filter. Moire that may appear in shooting printed matter with fine dots or striped patterns can be reduced.

## ○ Video option setting <VIDEO OPTION MENU>

OSD Menu (on the monitor)



### ● Gain control

- Menu sequence <MAIN MENU>→<VIDEO OPTION MENU>→<GAIN CONTROL>

To set the auto gain control. When the object is dark, the AGC can gain up the image of the object to be lighter. Select the gain control mode from among AUTO/MANUAL/NORMAL in the menu <**GAIN CONTROL**>.

Menu displayed	Functions
< <b>MAX. GAIN</b> >	Adjust the maximum gain value for the gain control mode <AUTO>.
< <b>GAIN</b> >	Adjust the gain value for the gain control mode <MANUAL>.

**Note:** The gain-up will increase noise on the screen.

### ● Electronic shutter

- Menu sequence <MAIN MENU>→<VIDEO OPTION MENU>→<SHUTTER>

To set the shutter speed. When the position <OFF> is selected, the shutter speed is 1/60s (initial setting).

In the areas with power frequency of 50Hz, flicker phenomenon may occur when the Presenter is used with the mode <**OFF**> lighting of discharging tubes, such as fluorescent lamps and mercury lamps.

Set to the 1/1000s, and the flicker phenomenon may be reduced.

In areas with power frequency of 60Hz, leave the Presenter in the mode <**OFF**>.

**Note:** When the shutter speed is changed, flicker or color shimmer may occur. In this case, slow the shutter speed. Change the CCD charge storage mode in the menu <MODE>.

Menu displayed	Functions
< <b>FLD</b> >	Field storage mode.
< <b>FRM</b> >	Frame storage mode. In this case, the shutter speed is slowed to 1/2.

**Note:** In the frame storage mode, the vertical resolution is improved but the frame lag occurs. Normally, use the shutter in the field storage mode.

## ● Selecting the G ON SYNC

- Menu sequence <MAIN MENU>→<VIDEO OPTION MENU>→<G ON SYNC>

Set to <ON> to add the sync. signal to the G signal output in the BNC terminal of the RGB.

The initial setting is <OFF>.

**Note:** When <RGB OUTPUT> on the menu <OPTION MENU> is set in <DOUBLED>, the selection of this function is disabled. (Synchronous signal is not added to the G signal.)

## ● Color bar

- Menu sequence <MAIN MENU>→<VIDEO OPTION MENU>→<COLOR BAR>

To call out the color bar chart built in the Presenter, select <ON>.

The initial setting is <OFF>.

## ● Shading

- Menu sequence <MAIN MENU>→<VIDEO OPTION MENU>→<SHADING>

To correct the white shading.

Select the level from among 3 levels of AUTO/OFF/MANUAL in the menu <SHADING>.

When the shading level is <AUTO> and the cursor is in the position <SHADING>, press the button [MENU], and the AUTO SHADING will start.

When the mode is MANUAL, the correction level can be adjusted in the mode MANUAL in the menu <LEVEL> to reduce the color unevenness in the upper and lower parts of the screen.

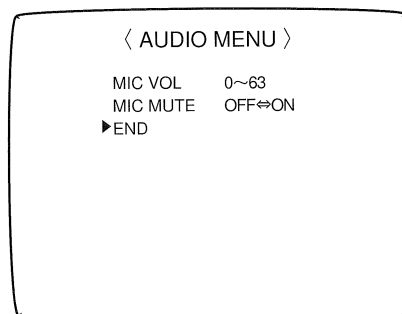
## ○ Microphone input <AUDIO MENU>

- Menu sequence <MAIN MENU>→<AUDIO MENU>

To set the sound volume from the Mic Jack.

Menu displayed	Functions
<b>MIC VOL</b>	To set the monaural sound volume from the Mic Jack. Initial value <b>41</b>
<b>MUTE</b>	To set the sound volume from the Mic Jack to zero. Initial setting <b>&lt;OFF&gt;</b>

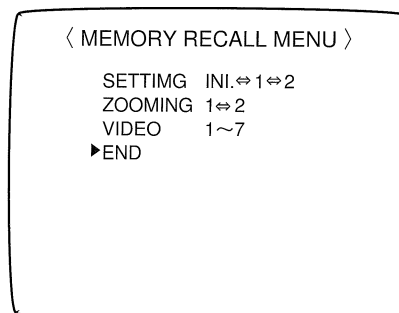
OSD Menu (on the monitor)



**Note:** If the input selection is set to anything other than [MAIN], the sound will be output from the Mic audio output terminal.

## ○ Recalling the image memories <MEMORY RECALL MENU>

OSD Menu (on the monitor)



### ● Recalling the memories of the function settings

- Menu sequence <MAIN MENU>→<MEMORY RECALL MENU>→<SETTING>

Select <SETTING> in the <MEMORY SET MENU> by using the direction buttons [↑]/[↓].

Set the mode figure to be called to <1> or <2>, and press the menu button [MENU].

Select <INI.>, and the initial settings will be resumed.

### ● Recalling the angle of view (size of image)

- Menu sequence <MAIN MENU>→<MEMORY RECALL MENU>→<ZOOMING>

To recall the preset angle of view (size of image) of the image, select <1> or <2> from among the preset sizes of images, then press the menu button [MENU].

### ● Recalling the image

- Menu sequence <MAIN MENU>→<MEMORY RECALL MENU>→<VIDEO>

Upper case show the memory No. of the image that is recalled by pressing the image memory recall button [RECALL] on the front operation panel or wireless remote control.

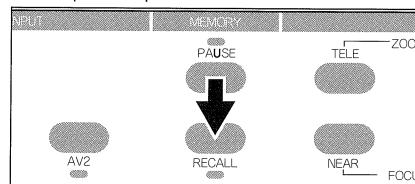
The initial value is 1.

Each time the recall button [RECALL] is pressed, the image memory No. augments by +1 increment.

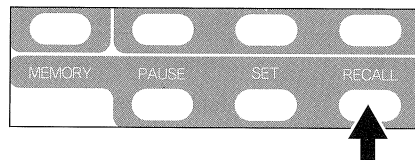
If a vacant image memory No. is recalled, this No. will be skipped.

When the image memory is recalled and the image memory No. is changed by using the direction buttons [→]/[←] and the recall button [RECALL], the image memory of the selected No. of the image memory appears.

Front operation panel



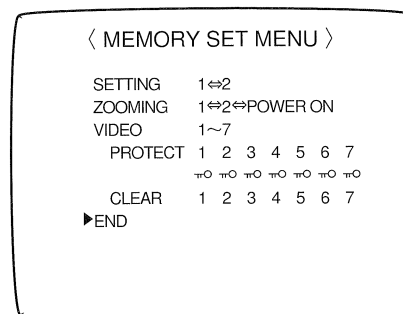
Wireless remote control





## ○ Setting the image memories <MEMORY SET MENU>

OSD Menu (on the monitor)



### ● Memorizing the function settings

- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<SETTING>

The status set in the OSD menu can be memorized in 2 modes.

Select <SETTING> in the <MEMORY RECALL MENU> by using the direction buttons [↑]/[↓].

Select <1> or <2> with each menu set, then press the menu button [MENU]. The setting value is recorded in the then selected No.

#### NOTE : The items that can be memorized in setting [1] or [2]

Refer to the "Table of the functional settings." (P.33)

Even if the power switch is turned OFF, the setting is maintained. The maintained setting can be recalled by turning ON the power switch again.

For information on how to recall the setting, refer to the "Recalling of the memories of the function settings" (P.31).

### ● Memorizing the view angle (video size)(view angle presetting)

- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<ZOOMING>

To preset the size of image up to 2 positions.

Select <1> or <2> with the image zoomed in or out to the preset size, then press the menu button [MENU].

The present video angle is written in the then selected No.

The initial zooming position taken when the power switch is turned ON is set by selecting <POWER ON>.

● Table of the function settings

		Item memorized in the status when <MAIN MENU> is quitted. ※1	Item memorable in <SETTING> [1]/[2]	Item initialized in <SETTING> <INI.> ※2
Adjustment value of <CHROMA MENU>		○	○	○
Adjustment value of <WHITE BALANCE MENU>		○	○	○
Adjustment value of <EXT.SYNC MENU>		○	○	○
Adjustment value of <VIDEO EFFECT MENU>		○	○	○
Adjustment value of <VIDEO OPTION MENU>		○※3	○	○
Adjustment value of <AUDIO MENU>		○	○	○
Setting value of <MEMORY RECALL MENU>		—	—	—
<MEMORY SET MENU>	SETTING	—	—	—
	ZOOMING	—	—	—
	VIDEO	—	—	—
	PROTECT	○	○	○
	CLEAR	○	—	—
Adjustment value of <OPTION MENU>		○	○	○
Upper/base lighting status		○	○	○
Input selection status		—	—	—
Posi/Nega conversion status		○	○	○
Color/B&W selection status		○	○	○
Manual iris adjustment status		—	—	—
Pause status		—	—	—
Contents of image memories		Not affected		Not affected
Zoom position		—		—

※1 When <MAIN MENU> is normally quitted, the setting status is memorized. When the power switch is turned ON again, the memorized settings will be resumed.

※2 The menu sequence in initializing the contents memorized in SETTING[1]/[2] in the <SETTING> <INI.> status: <MEMORY SET>→<SETTING>→[1] or [2]

※3 The status ON/OFF of <COLOR BAR> is excluded.

## ● Memorizing the images

- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<VIDEO>

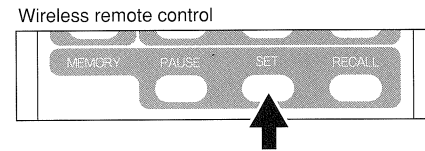
Have the menu <MEMORY SET MENU> on the monitor, then select <VIDEO> by using the direction buttons [↑]/[↓].

Select the image memory No. by using the direction buttons [→]/[←], and press the button [SET] on the remote control. The image from the main camera will be memorized in the image memory.

On the monitor, a display of [MEMORY] blinks for approx. 4 seconds.

**Note:** While the image memory is being recalled, the image cannot be memorized in the image memory. Select the main camera, then memorize the image.

As long as the key mark (⌘) is not displayed under the image memory No. in the item <PROTECT>, image memory set can be redone any number of times (overwrite enabled).



## ● Protecting the image memories (PROTECT)

Have the menu <MEMORY SET MENU>, and then select <PROTECT> by using the direction buttons [↑]/[↓].

Select the image memory No. to be protected by using the direction buttons [→]/[←]. Each time pressing the menu button [MENU], the indication under the image memory No. alternately changes between [Empty] and [⌘ (Key mark)].

The image memory No. (indicated as "⌘ (Key mark)") can not be overwritten, even if the image memory is set (in the protected condition).

## ● Deleting the image memories (CLEAR)

Have the menu <MEMORY SET MENU> on the monitor, and then select <CLEAR> by using the direction buttons [↑]/[↓].

Select the image memory No. by using the direction buttons [→]/[←]. (The color of the selected No. changes from green to red.)

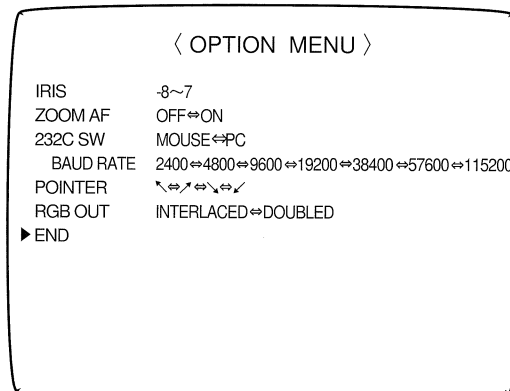
Press the menu button [MENU], and the image of the then selected No. will be deleted.

The No. of the deleted image memory changes to a display of "—".

**Note:** A protected image can not be deleted.

## ○ Option <OPTION MENU>

OSD Menu (on the monitor)



### ● Iris

- Menu sequence <MAIN MENU>→<OPTION MENU>→<IRIS>

To adjust the iris.

The auto iris level can be adjusted in the OSD menu.

Set the auto iris level by changing the value by using the direction buttons [→]/[←].

The initial setting is <0>.

### ● Selecting the AF mode

- Menu sequence <MAIN MENU>→<OPTION MENU>→<ZOOM AF>

Set to <ON> to activate the AF each time the zoom button [TELE] or [WIDE] is pressed.

The initial setting is <OFF>.

### ● Selecting the RS-232C setting

- Menu sequence <MAIN MENU>→<OPTION MENU>→<232C SW>

Select <MOUSE> or <PC> to choose the device to be connected to the RS-232C terminal.

The initial setting is <MOUSE>.

The baud rate (communication speed) in the mode <PC> is set in the menu <BAUD RATE>.

Set the baud rate to that of the PC. The initial value is 9600bps.

After setting the baud rate, quit the OSD menu.

**Note:** <BAUD RATE> menu will not appear unless <232C SW> is set to <PC>.

When the supplied PC software "Image Mate" is used, image transfer from a PC to the Presenter at the baud rate <115200> is disabled.

## ● Setting the direction and color of the pointer

- Menu sequence           <MAIN MENU>→<OPTION MENU>→<POINTER>

In <**POINTER**>, the direction of the pointer is changed by using the direction button [→].  
(4 directions: ↖, ↗, ↘, ↙)

In <**POINTER**>, the color of the pointer is changed by using the direction button [←].  
(4 colors: Magenta, blue, green, yellow)

## ● Outputting the RGB

- Menu sequence           <MAIN MENU>→<OPTION MENU>→<RGB OUT>

The horizontal frequency of the RGB output can be selected. The default is "INTERLACED."  
When the interlace RGB output is selected, set it to DOUBLED.

**Note:** For the information of the RGB output terminal, see P.13 "Connection to the RGB-in terminal."

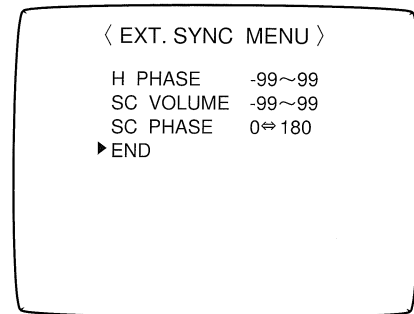
## 8. EXTERNAL SYNC. ADJUSTMENT

### ○ Adjusting the external sync. <EXT. SYNC MENU>

The adjustment of the external sync. is necessary when the images from several Visual Presenter and/or video cameras (including ELMO Film-to-Video converters, TRV-35H and TRV-16H) are mixed and projected on a single monitor.

To coordinate the images from the Presenters and/or video cameras, the horizontal sync. phase adjustment and sub carrier phase adjustment are necessary. To mix and reproduce the images, a video mixer is necessary. Refer to the instruction manual of each video mixer, for installation requirements.

OSD Menu (on the monitor)



### ● Adjusting the horizontal sync. phase

- Menu sequence           <MAIN MENU>→<EXT. SYNC MENU>→<H PHASE>

To adjust the horizontal phase during the external sync.

Adjustment is available in 198 steps.

### ● Adjusting the sub-carrier phase

- Menu sequence           <MAIN MENU>→<EXT. SYNC MENU>→<SC PHASE>

To match the color phase of the image output signal of the Presenter with the base signal during the external sync.

Set the SC-phase in the menu <SC PHASE> at every 180° to adjust the color phase of the image and then fine adjust it in the menu <SC VOLUME> (198 steps) to be closest to that of the base signal.

## 9. RS-232C SPECIFICATIONS

The Presenter can be controlled by a PC connected to the Presenter through the RS-232C terminal [RS-232C].

### ○ Setting up

- (1) Connect the Presenter to a PC with an RS-232C connection cable.

**Note:** When using an RS-232C cable available in the market, make sure of the connection shown in the page.

**Note:** To protect the Presenter and the PC, be sure to turn OFF all the power switches of all equipment before connecting.

- (2) Referring to P.35, change the menu sequence of <MAIN MENU>→<OPTION MENU>→<232C SW> to <PC> by using the buttons [→]/[←].

<BAUD RATE> appears. Set the baud rate by using the buttons [→]/[←].

- (3) Start the PC, and set the communication mode of the RS-232C to the communication mode of the Presenter.

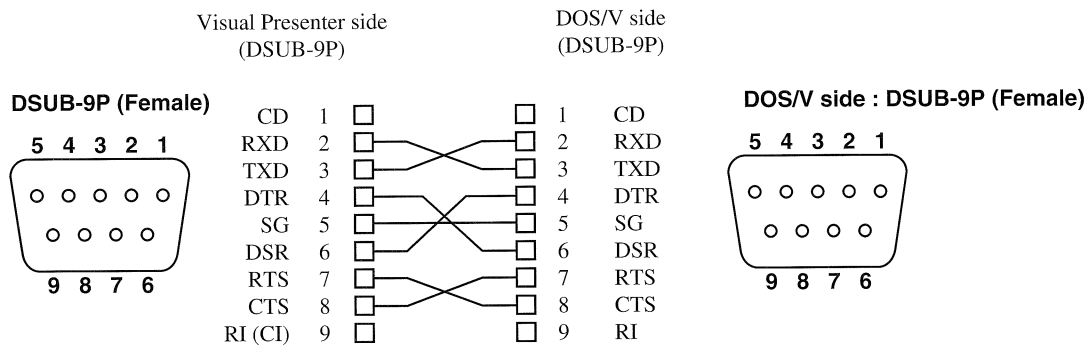
**Note:** For the information how to set the communication mode of the RS-232C, refer to the instruction manual of the PC.

- (4) Start the PC program to operate the Presenter.

- (5) Control through the RS-232C will start.

**Note:** For communication control, be sure to take the above steps for setting.

### ○ Cable connection



### ○ RS-232C connector specifications (DSUB-9P)

Pin No.	Code	Name	Direction of data	
			Visual Presenter	PC
1	CD	Carrier Detect	—	—
2	RXD	Received Data	←	—
3	TXD	Transmitted Data	—	→
4	DTR	Data Terminal Ready	—	→
5	SG	Signal Ground	—	—
6	DSR	Data Set Ready	←	—
7	RTS	Request To Send	—	→
8	CTS	Clear To Send	←	—

## ○ Table of the communication commands

Function	Command	Parameter	Data	Comments
Auto Focus	AF	0	■■■	Command to execute the one-step auto focus
Focus adjustment	FO	+ (NEAR) - (FAR) 0 (STOP)	■■■	Command to adjust the focus
Zoom adjustment	ZO	+ (TELE) - (WIDE) 0 (STOP)	■■■	Command to adjust the Zoom
Iris adjustment	IR	+ (OPEN) - (CLOSE) 0 (STOP) 1 (AUTO)	■■■	Command to adjust the Iris
Lighting selection	PL	0 (OFF) 1 (BASE) 0 (UPPER)	■■■	Command to select the Lighting
Input selection	AV	0 (MAIN) 1 (AV1) 2 (AV2)	■■■	Command to select the Input
Posi/Nega conversion	NP	0 (POSI) 1 (NEGA)	■■■	Command to convert Posi/Nega
Color/B&W selection	CB	0 (COLOR) 1 (B&W)	■■■	Command to select Color/B&W
Pointer display	PO	0 (OFF) 1 (ON)	■■■	Command to turn ON/OFF the Pointer display
Enlarged image movement	PM	0 (STOP) 1 (→) 2 (←) 3 (↑) 4 (↓) 5 (↗) 6 (↖) 7 (↘) 8 (↙)	■■■	<ul style="list-style-type: none"> <li>• <b>When the pointer is ON</b> The pointer moves.</li> <li>• <b>When the image enlargement is ON</b> The enlarged image moves.</li> </ul> 1: To the right side. 2: To the left side. 3: To the upper side. 4: To the lower side. 5: To the upper right. 6: To the upper left. 7: To the lower right. 8: To the lower left.
Image enlargement	MA	0 (OFF) 1 (ON)	■■■	Command to enlarge the image to double the area around the pointer position
Image memory/display	CE	0 (COMP.) 1 (EXTE.) 2 (CLEAR)	01-07	Command to compress or extend the image 0: To memorize (Compress) 1: To display(Extend) 2: To delete.



Function	Command	Parameter	Data	Comments
Pause	FZ	0 (OFF) 1 (ON)	■■■	Command to pause the image
Local lockout	LL	0 (OFF) 1 (ON)	■■■	Command to invalidate the switches on the front operation panel and wireless remote control
Default	DF	0 0	■■■	Command to reset to the initialized mode
Status request	QS	0 1	■■■	Command to inquire the status of the equipment
ROM version	QR	0	■■■	Command to refer to the ROM version
Acknowledge check	SA	0 (OFF) 1 (ON)	■■■	Command to select the command acknowledge for each operation command
Add CR command	SC	0 (OFF) 1 (ON)	■■■	Command to add CR [0Dh] to the end of the acknowledge data Default is OFF

**Note:** "■■■" in the data column means that SPACE [20H] should be transmitted twice.

When the supplied PC software "Image Mate" is used, the sending and receiving of the above functions and image is enabled. For the information, see "manual. pdf" in the CD-ROM of "Image Mate."

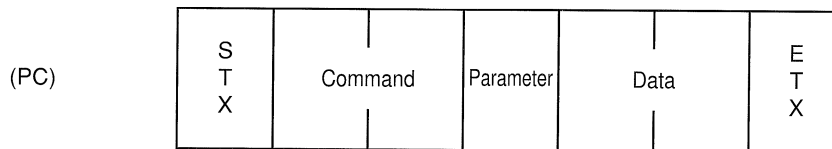
## ○ Data format specifications

This command is executed in the form of 1-command/1 packet. The next command is not accepted until the previous processing is completed.

- The communication command always starts with STX (Start of Text), and ends with ETX (END of Text).
- If the communication format or command name is wrong, NAK (Negative Acknowledgement) will be sent from the Presenter as a result of failing to receive correctly.
- When the communication format is correctly received, the Presenter sends ACK (Normal Acknowledgement).

## ● Transmission Command (PC→Visual Presenter)

Each operation command is executed in ASCII code, and transmitted in a set of 7 bytes as follows:



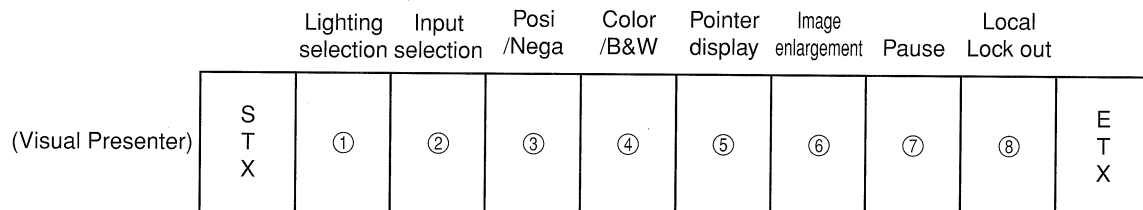
(Visual Presenter) → ACK

NAK is sent in the following cases:

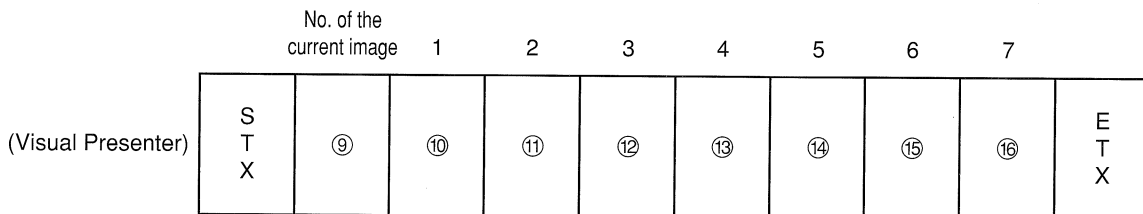
- The image is protected by the command CE0 (Memorize).
- The image memories are recalled by the command CE0 (Memorize).
- The image is not memorized by the command CE1 (Display).
- The image is protected by the command CE2 (Delete).

## ● Response data format (Visual Presenter→PC)

- Status request format (Parameter 0)



- Status request format (Parameter 1)



① ~ ⑧ . . . . . Corresponds to the parameter of the communication command.

⑨ . . . . . 0 (OFF), 1~7 (Image No.)

⑩ ~ ⑯ . . . . . 0 (No memory), 1 (Memory), P (Protected)

- ROM version

	V	I	H	N	*	*	
(Visual Presenter)	S T X	56H	49H	48H	4EH		E T X

## ○ Transmission specifications

- Full duplex start-stop sync. mode
- Start bit : 1 bit
- Data bit : 8 bit
- Stop bit : 1 bit
- Parity bit : None
- X parameter : None
- Baud rate (Communication speed) : 2400bps, 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps

**Note:** When the baud rate is set to 115200 bps, image transfer from a PC to the Presenter by using the attached software "Image Mate" is disabled.

When the baud rate is set to 38400 bps or more, image sending and receiving may be disabled depending on the PC type. If disabled, lower the set baud rate.

## ○ Connection

If the RS-232C cable is not correctly connected between the Presenter and the PC, no acknowledgement is transmitted. Connect the RS-232C cable correctly, and fix it firmly with the connector set screws before the operation.

## 10. TROUBLESHOOTING HINTS

Symptom	Possible cause/countermeasure
No Images on TV monitor	<ul style="list-style-type: none"> <li>• Cable is not properly connected to the video-in terminal of monitor.</li> <li>• The power cord is disconnected from the wall AC outlet.</li> <li>• The plug is disconnected from the power cord receptacle of the Presenter.</li> <li>• The power switch is not turned ON.</li> <li>• Zoom is set at TELE to display only white/black part of the material.</li> <li>• The switch is turned ON immediately after it is turned OFF. In this case, the Presenter may not start. Wait several seconds after turning OFF the power switch, and then turn ON the power switch.</li> </ul>
Out of focus	<ul style="list-style-type: none"> <li>• The object is too close to the lens. Check if it does not stand higher than 10cm above the stage surface.</li> <li>• Zoom is set at TELE after focusing at WIDE angle. Focus on the point of max. TELE.</li> <li>• In the auto-focus, focusing is difficult in some cases.</li> </ul>
The lamp is not quickly turned ON	<ul style="list-style-type: none"> <li>• For protection purposes, the lamp is turned ON after preheating for 2 seconds. This is not a fault.</li> </ul>
Image is too dark.	<ul style="list-style-type: none"> <li>• The ambient light is not sufficient. Press the upper lighting unit button <b>[UPPER]</b> to turn ON the upper lamp.</li> </ul>
Input selection can not be made.	<ul style="list-style-type: none"> <li>• Inputting to S-video while connecting output of Composite-video to the monitor or vice versa. (Refer to the "Table of video-in/out terminal selections" on P.20.)</li> </ul>
Moire pattern appears on the screen image.	<ul style="list-style-type: none"> <li>• This is caused by the interference fringe between the meshed pattern of the object and the CCD elements. This is normal. Set the 2D LPF to ON. (Refer to P.28)</li> <li>• Vertical stripes may appear on the liquid crystal projector screen. This can be reduced by manually adjusting the dot clock frequency on the projector side. (Refer to P.13)</li> </ul>
The image flickers.	<ul style="list-style-type: none"> <li>• The light from the discharge tube (50Hz) does not come to the screen. Set the shutter speed to 1/100s, and this symptom may be eased. (Refer to P.29)</li> </ul>

If the trouble still remains after checking the above, consult your dealer or an authorized ELMO service center.

# 11. SPECIFICATIONS

## ● General

Item	Specifications		
Power source	AC120V±10% 60Hz		
Power consumption	58W		
AC outlet	1 pce. (Max. 400W/Unswitched)		
Outside dimensions	400mm(W) X 655mm(D) X 187mm(H) (15.7 X 25.8 X 7.4 in.) - When folded 700mm(W) X 542mm(D) X 615mm(H) (27.6 X 21.3 X 24.2 in.) - When set up		
Weight	10.5 kgs (23.1 lbs) (main body only)		
Television system	NTSC compatible		
Input selection	Internal/AV1/AV2		
Output terminal	Composite-video output	RCA pinjack/75Ω unbalanced	1
		BNC connector/75Ω unbalanced	1
	S-video output	Mini DIN 4P connector/75Ω unbalanced	1
	RGB output	Mini DSUB 15P connector female	1
	Audio output (stereo)	RCA pinjack/applicable impedance 10kΩ or more, -10dB	1 pair
	Monitor output	BNC connector/75Ω unbalanced	1
Input terminal	S-video input	Mini DIN4P connector/75Ω unbalanced	2
	Composite-video input	RCA pinjack/75Ω unbalanced	2
	Ext. sync. input	BNC connector/75Ω unbalanced	1
	Audio input (stereo)	RCA pinjack/applicable impedance 10kΩ or more, -10dB	2 pairs
	Mic. input	6.3mm jack/applicable impedance 600Ω-65dB	1
Ext. control terminal	RS-232C	DSUB 9P connector male	1

## ● Camera

Item	Specifications
Lens	f=5.5~66mm(12-time zoom) F2.2
Shooting area	350mm x 260mm (13.8 X 10.2 in.) max., 34mm x 26mm (1.3 X 1.0 in.) min.
Limit of focus adjustment	At the range of stage surface~100mm from the stage surface
Zoom	Powered (with double speed function)
Focusing	Auto (2 modes)/manual
Iris	Auto (with level adjustment)/manual
Image pick-up element	1/3" Interline-transfer 3CCD
Effective picture element	768 (H) x 494(V)
Total picture elements	811(H) x 508(V) (approx. 410,000 pixels)
Image signal processing	Digital signal processing (DSP)
Sync. system	Internal/External sync. (automatic selection)
Resolution	More than 750 TV lines (Y signal with horizontal) More than 350 TV lines (Vertical)
S/N ratio	62 dB (with adjusting the detail min.)
Output signal	Composite-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 CMOS output G ON SYNC 0.286 Vp-p/75Ω unbalanced
Non-interlace RGB output	Horizontal sync. frequency : 31.4685kHz Vertical sync. Frequency : 59.94Hz
Ext. sync. frequency range	SYNC H 15.734kHz ±50ppm
	BURST 3.579545MHz ±50ppm
Ext. sync. input condition	VBS: (75Ω unbalanced)
	SYNC: 0.286V±0.1V Burst: 0.286V±0.1V
H-phase adjustment	Provided (Manual adjustment) (0μs~2μs)
SC-phase adjustment	Provided (Manual adjustment) (0°~360°)
White balance	Full auto/One push/Manual
Color gain control	Provided
Color phase adjustment	Provided
Electronic shutter speed	OFF mode(1/60s)1/100s~1/10,000s (Electric charge storage mode selection provided)
Posi/Nega conversion	Provided (Composite-video, S-video, RGB)
Color/B&W selection	Provided (Composite-video, S-video, RGB)
Gain control	Provided (NORMAL↔AUTO↔MANUAL)
Detail adjustment	Boost frequency selection provided (NORMAL↔HI↔LOW)
Pedestal adjustment	Provided
Gamma adjustment	Provided (NORMAL↔HI↔OFF↔LOW)
Color Bar ON/OFF	Provided
Shading	Provided (AUTO↔OFF↔MANUAL)
2D LPF selection	Provided
Presetting the angle of view	2 positions with memory
Pause mode	Provided
Image memory	Provided (7 compressed images)
Enlargement of the image	Provided (double, can be scrolled)
Pointer	Controllable by wireless remote controller, mouse, or RS-232C. 4 directions, 4 selectable colors

## ● Lighting

Item	Specifications
Upper	High frequency lighting mode, 3-wave-length type fluorescent lamp 6W (Type:FHL6EX-N)
Base	High frequency lighting mode, 3-wave-length type fluorescent lamp Area size: 296mm(W) x 216mm(H) 11.65in(W) x 8.50in(H)

## ● Supplied accessories

Name	Quantity
Power cord	1
Video-audio cable	1
Mini DIN 4P (S-video) cable	1
Mouse	1
Infrared wireless remote control (RCW-702)	1
Batteries (Type R03, AAA)	2
Analog RGB cable	1
PC link software 「Image Mate」 Ver.2 CD-ROM	1
RS-232C cable	1
Stickers of toplights	4
Instruction manual for EV-8000AF	1

## ● Options

- 4" LCD color monitor, type LM-403N
- LCD monitor bracket

**Note:** The specifications are subject to change without notice.  
Dimensions and weight are approximate.

**WARNING:**

■ Unauthorized recording of copyrighted slide films, materials, photographs, etc. may infringe on the rights of copyright owners and be contrary to copyright laws.



**ELMO CO., LTD.**

6-14, Meizen-cho, Mizuho-ku,  
Nagoya, 467-8567, Japan

**OVERSEAS SUBSIDIARY COMPANIES**

**U.S.A.**

**Elmo Mfg. Corp.**

1478 Old Country Road, Plainview, NY 11803-5034

Tel:(516)501-1400 Fax:(516)501-0429

21720 Nordhoff Street, Chatsworth, CA 91331-5826

Tel:(818)346-4500 Fax:(818)998-4186

E-mail : [elmo@elmo-corp.com](mailto:elmo@elmo-corp.com)

Web : <http://www.elmo-corp.com>

**Canada**

**Elmo Canada Mfg. Corp.**

44 West Drive, Brampton, Ontario L6T 3T6

Tel:(905)453-7880 Fax:(905)453-2391

E-mail : [elmo.canada@cimtegration.com](mailto:elmo.canada@cimtegration.com)

**Germany**

**Elmo (Europe) G.m.b.H**

Neanderstr. 18

40233 Düsseldorf

Tel.(0211)376051 Fax.(0211)376630

E-mail : [elmoeurope@AOL.com](mailto:elmoeurope@AOL.com)

Web : <http://www.elmo.de/>