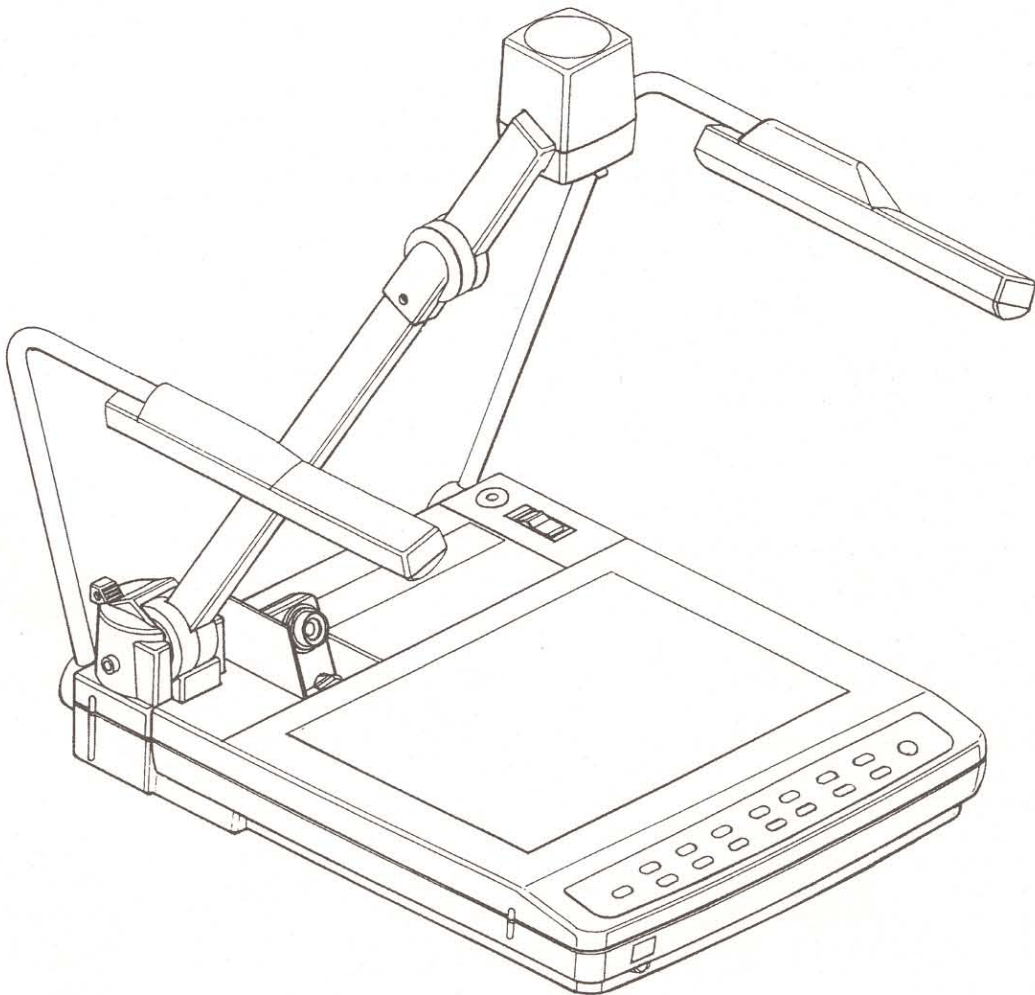


VISUAL PRESENTER
EV-6000AF

INSTRUCTION MANUAL



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.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



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.

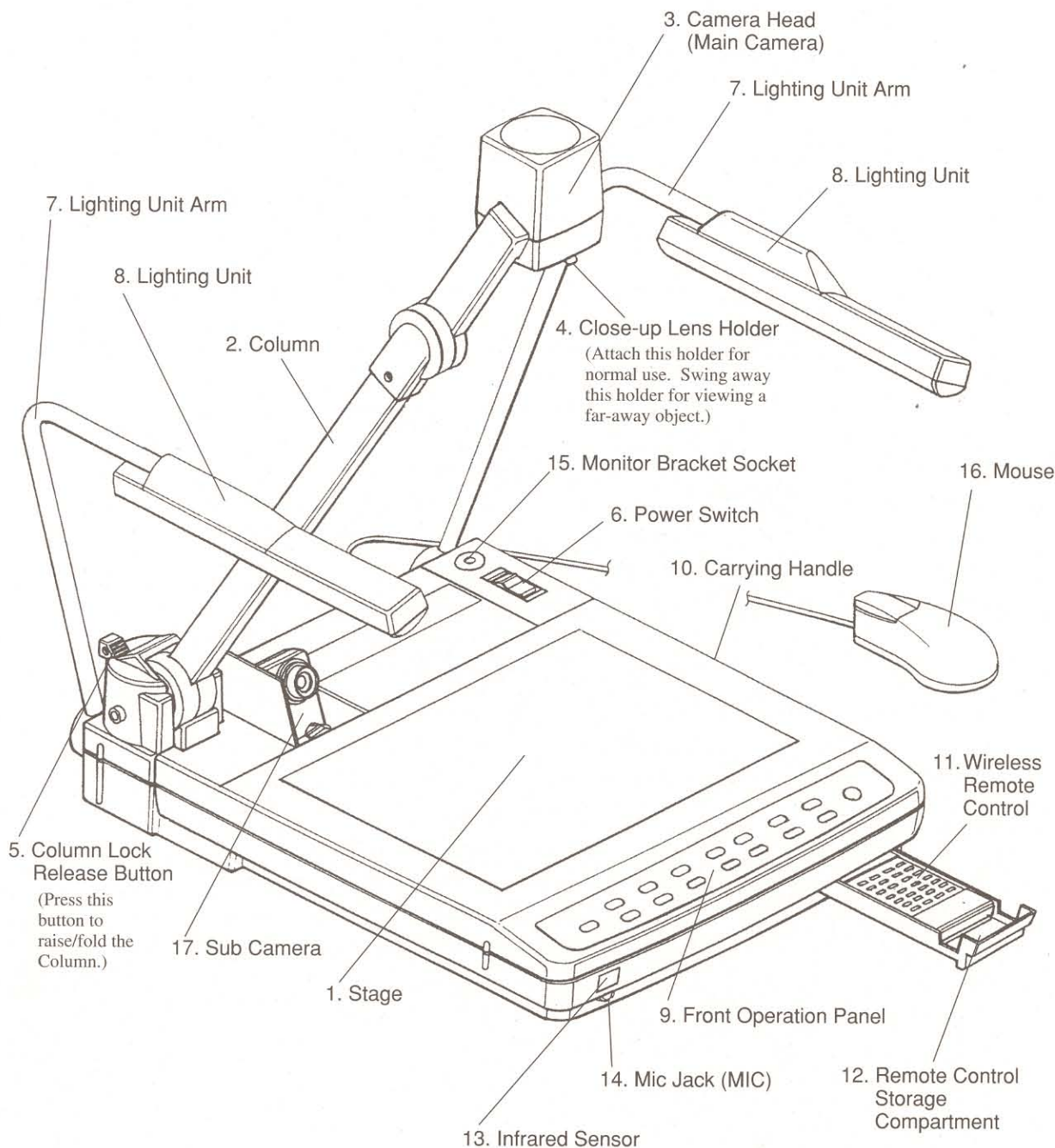
CONTENTS

1. PaRT NAMES AND FUNCTIONS	6
Appearance	6
Sub Camera	7
Front Operation Panel	8
Rear Panel	9
Wireless Remote Control	11
2. WIRELESS REMOTE CONTROL	13
3. MOUSE	13
4. SETTING UP	14
Connecting to the monitor TV	15
Connection to the composite video-in terminal	
Connection to the S video-in terminal	
Connection to the RGB-in terminal	
RGB output terminals	
5. OPERATING PROCEDURES	16
Simple steps for presenting printed material	16
Simple steps for showing transparent material, such as slide film	17
Using the main camera as a conventional video camera	18
Using the sub camera	18
Using the sub camera as a movable video camera	20
Storing the Presenter	21
6. VARIOUS FUNCTIONS	22
Lighting	22
Input selection	22
Table of video-in/out terminal selections	
Zoom	24
Focus	24
Auto Focus	
Powered Manual Focus	
Nega/posi conversion	26
Color/B&W selection	26
OSD (On-Screen Display)	27
Color adjustment <VIDEO MENU>	28
Microphone input <AUDIO MENU>	28
White balance <WHITE BALANCE MENU>	29
Recalling the image memories	29
Setting the image memories (MEMORY)	30

Protecting the image memories (PROTECT)	30
Deleting the image memories (CLEAR)	30
Iris	31
Electronic shutter	31
AGC (Auto Gain Control)	32
BLC (Backlight Control)	32
Adjusting the detail (Outline-accent function)	32
Adjusting the pedestal	33
Selecting the G ON SYNC	33
Selecting the AF mode	33
Selecting the RS-232C setting	33
Presetting the angle of view (size of image)	34
Recalling the angle of view (size of image)	34
Memorizing the function settings	34
The items that can be memorized in setting [1] or [2]	
Recalling the memories of the function settings	34
Table of the function settings	35
Video pointer	36
Setting the directions and color of the pointer	36
Enlarging the image	37
Pause	37
LCD monitor bracket socket	38
7. EXTERNAL ADJUSTMENT	39
Adjusting the external sync. <EXT.SYNC MENU>	39
Adjusting the horizontal sync. phase	
Adjusting the sub-carrier phase	
8. RS-232C SPECIFICATIONS	40
Setting up	40
Setting the baud rate	40
Cable connection	41
RS-232C connector specifications (DSUB-9P)	41
Table of the communication commands	42
Data format specifications	44
Transmission command (PC→Visual Presenter)	
Response data format (Visual Presenter→PC)	
Transmission specifications	46
Connection	46
9. TROUBLESHOOTING HINTS	47
10. SPECIFICATIONS	48

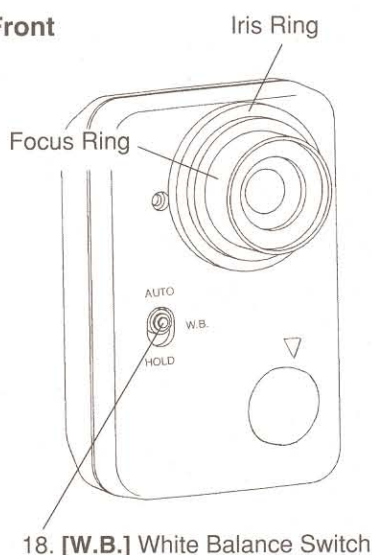
1. PART NAMES AND FUNCTIONS

○ Appearance



○ Sub camera

● Front

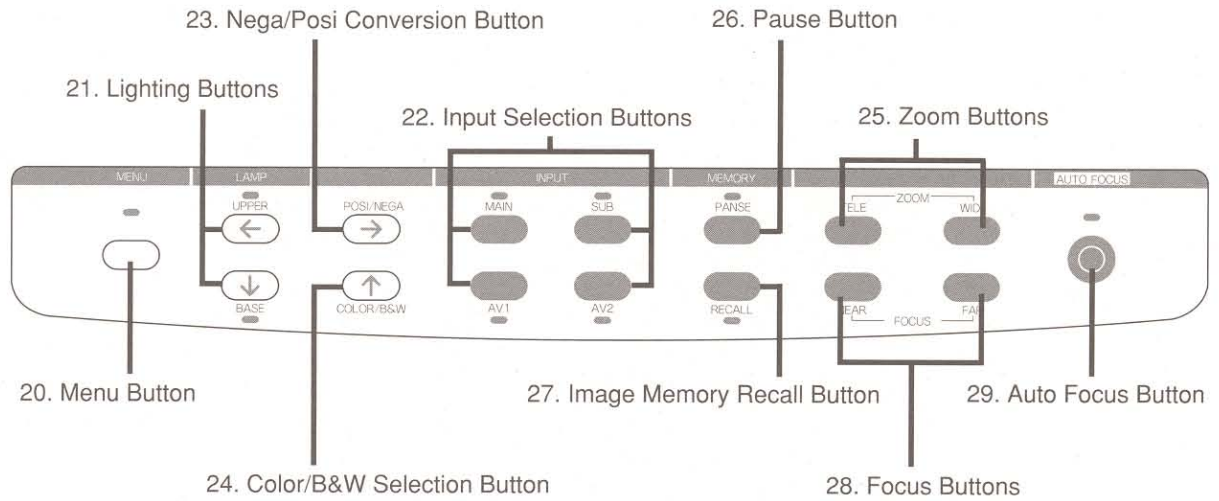


● Back



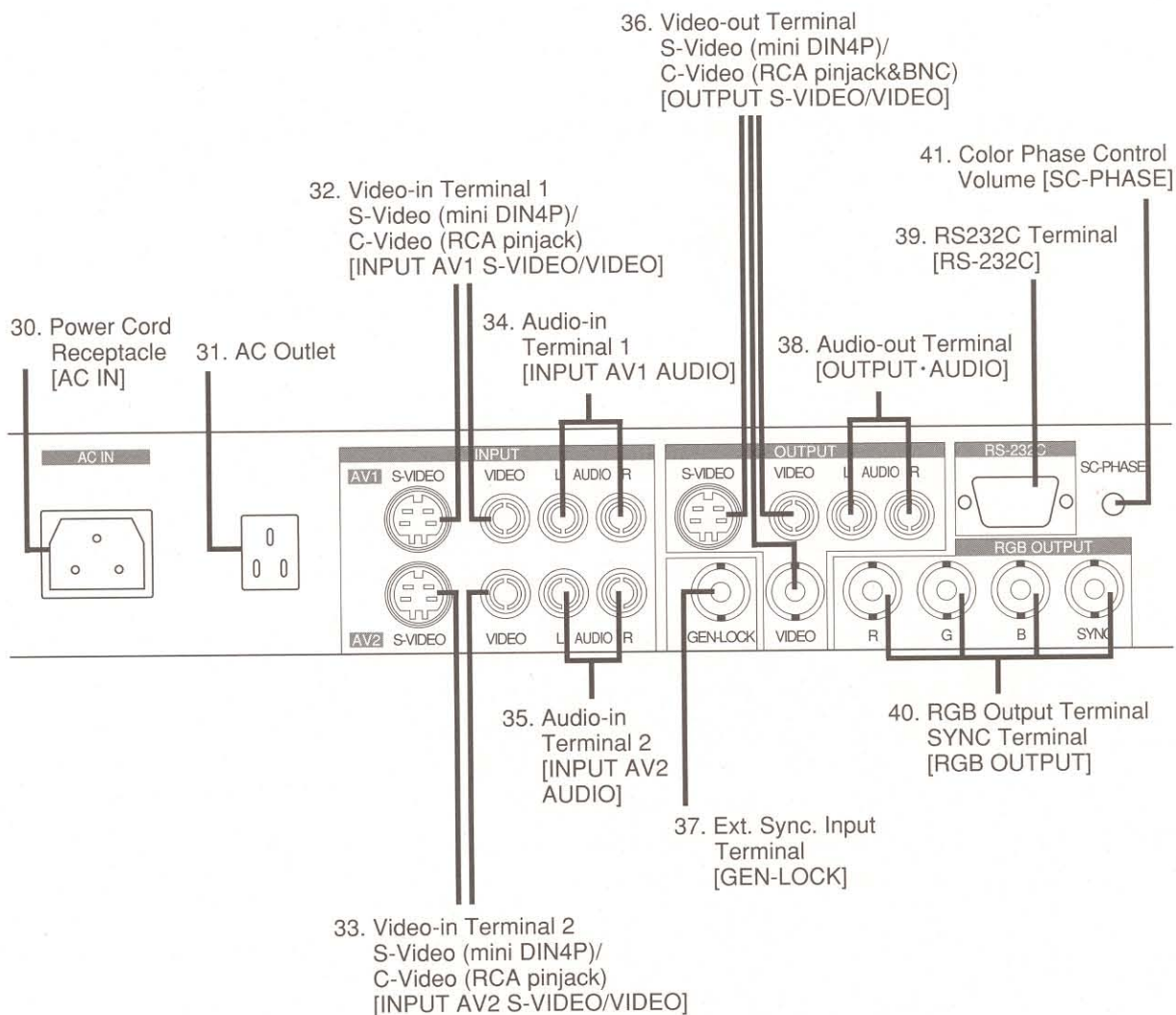
	Part Name	Function	Reference Page
18	White Balance Switch [W.B.]	To select the white balance adjustment mode.	
		AUTO To automatically adjust the white balance. The sub camera automatically senses the color temperature, and adjusts the white balance.	
		HOLD When this switch is set to [HOLD] while viewing a white object, the most accurate white balance can be obtained. In this case, the white balance is fixed, and the sub camera does not automatically follow the change in color temperature. Note: It takes a few seconds to obtain the adequate white balance with AUTO mode, and set then, this switch to [HOLD] .	
19	Shutter Selector [50/60]	To select the shutter speed. Set this switch to [60] for use under 60Hz power frequency. In the areas using a power frequency of 50Hz, setting this switch to [50] may reduce the flicker phenomenon.	

○ Front Operation Panel



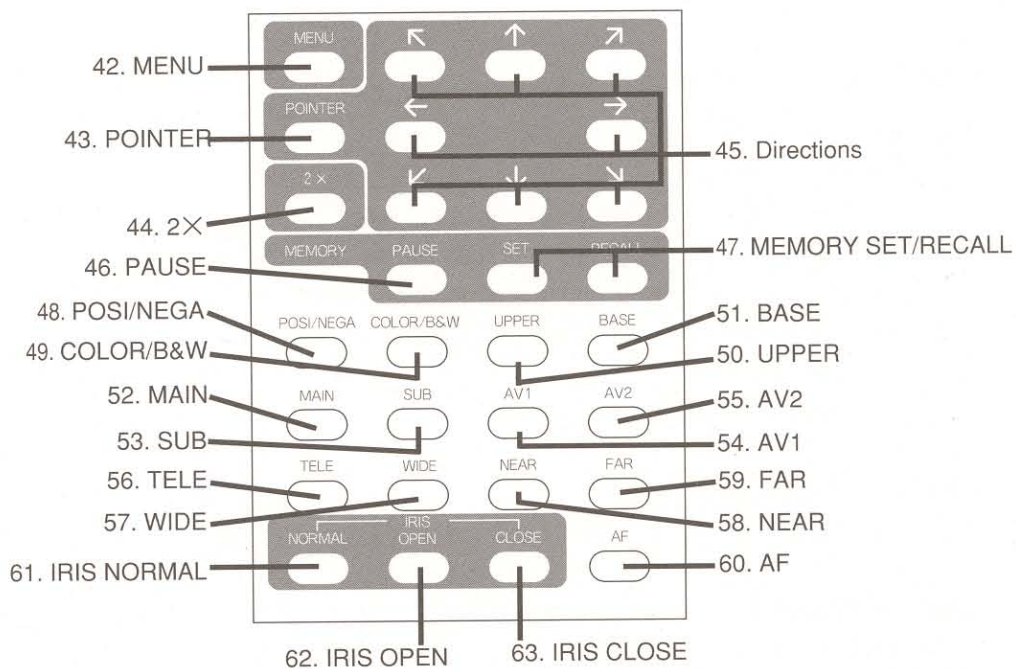
	Part Name	Function	Reference Page
20	Menu Button	To set the item of each function in the OSD(On-Screen Display) menu.	P.27
21	Lighting Buttons /[←],[↓] (Direction Buttons)	To turn ON/OFF the lighting. In the OSD menu, these buttons turn to the direction buttons [←][↓].	P.22 P.27
22	Input Selection Buttons	To change the input line.	P.22
23	Nega/Posi Conversion Button /[→](Direction Button)	To show negative films. In the OSD menu, this button turns to the direction button [→].	P.26 P.27
24	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.26 P.27
25	Zoom Buttons	To change the image size.	P.24
26	Pause Button	To temporarily hold the image.	P.37
27	Image Memory Recall Button	To recall the images memorized in the image memory.	P.29
28	Focus Buttons	To adjust focus (powered).	P.25,26
29	Auto Focus Button	To focus automatically (One-shot auto focus).	P.24

○ Rear Panel



	Part Name	Function	Reference Page
30	Power Cord Receptacle [AC IN]	Connected to the power cord connector.	
31	AC Outlet	To supply power up to 400W (Not interlocked with the power switch).	
32	Video-in Terminal 1 [INPUT·AV1·S-VIDEO/VIDEO] S-Video (mini DIN4P)/ C-Video (RCA pinjack)	Video signal from this terminal is output through the video-out terminal when input selection is set at AV1.	
33	Video-in Terminal 2 [INPUT·AV2·S-VIDEO/VIDEO] S-Video (mini DIN4P)/ C-Video (RCA pinjack)	Video signal from this terminal is output through the video-out terminal when input selection is set at AV2.	
34	Audio-in Terminal 1 [INPUT·AV1·AUDIO]	Audio signal from this terminal is output through the audio-out terminal when input selection is set at AV1.	
35	Audio-in Terminal 2 [INPUT·AV2·AUDIO]	Audio signal from this terminal is output through the audio-out terminal when input selection is set at AV2.	
36	Video-out Terminal [OUTPUT·S-VIDEO/VIDEO] S-Video (mini DIN4P)/ C-Video (RCA pinjack&BNC)	Connected to a TV monitor or the like.	P.15
37	Ext. Sync. Input Terminal [GEN-LOCK]	To input external synchronizing signal.	
38	Audio-out Terminal [OUTPUT·AUDIO]	Connected to a TV monitor audio-input terminal or the like.	
39	RS232C Terminal [RS-232C]	Connected to the supplied mouse. Controllable from a general-purpose personal computer.	P.40
40	RGB Output Terminal·SYNC Terminal [RGB OUTPUT]	To output video-out RGB signal and its synch signal through the main camera.	P.15
41	Color Phase Control Volume [SC-PHASE]	To fine adjust sub-carrier phase for external synchronization.	P.39

○Wireless Remote Control



	Button Name	Function	Reference Page
42	MENU	To call the OSD (On-Screen Display) menu, and to fix the settings.	P.27
43	POINTER	To display the pointer on the screen.	P.36
44	2X	To electronically double the image size.	P.37
45	Directions	To move the lower case 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.	
46	PAUSE	To temporarily hold the images.	P.37
47	MEMORY SET/RECALL	SET: To memorize images in the image memory. RECALL: To recall images memorized in the image memory.	P.29,30
48	POSI/NEGA	To convert posi/nega modes.	P.26
49	COLOR/B&W	To select Color/B&W (Black&White) modes.	P.26
50	UPPER	To turn ON/OFF the upper light.	P.22
51	BASE	To turn ON/OFF the baselight.	P.22
52	MAIN	To select the images from the main camera.	P.19
53	SUB	To select the images from the sub camera.	P.19
54	AV1	To select the AV1 image input.	P.22
55	AV2	To select the AV2 image input.	P.22
56	TELE	To zoom in.	P.24
57	WIDE	To zoom out.	P.24
58	NEAR	To move the focus near.	P.24
59	FAR	To move the focus far.	P.24
60	AF	To focus automatically.	P.24
61	IRIS NORMAL	To iris automatically.	P.31
62	IRIS OPEN	To open the iris manually.	P.31
63	IRIS CLOSE	To close the iris manually.	P.31

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, left hand side of the control panel, and press the button for the desired function.

The infrared sensor 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.

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.

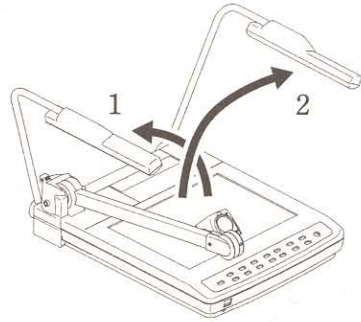
Reference Page

- | | |
|---------------------------------|------|
| • Selecting the RS-232C setting | p.33 |
| • Video pointer | p.36 |
| • Enlarging the image | p.37 |

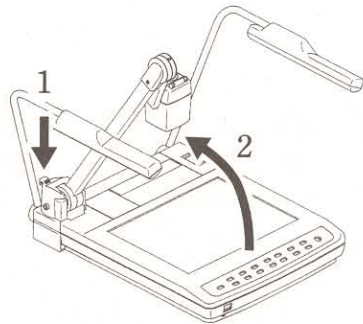
Note: This mouse can not be used when the Presenter is connected to a personal computer.

4. SETTING UP

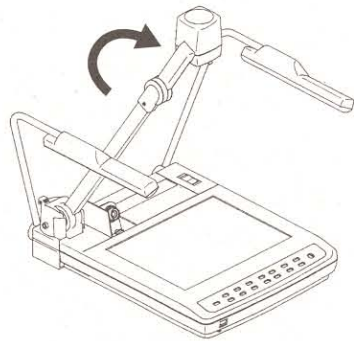
- (1) Unfold the lighting unit arms fully until they come to the deadend. Unfold arm 1 and then arm 2 as illustrated.



- (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) Face the main camera head in the upright position, and point the lens at the stage.



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

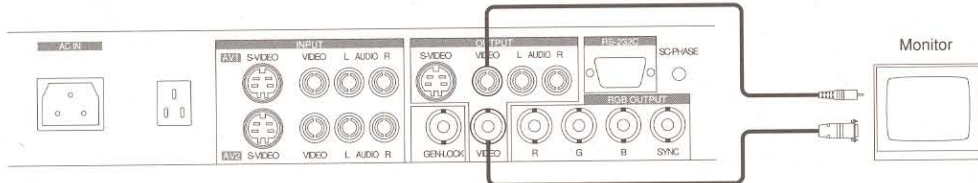
○ Connection to the monitor TV

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.

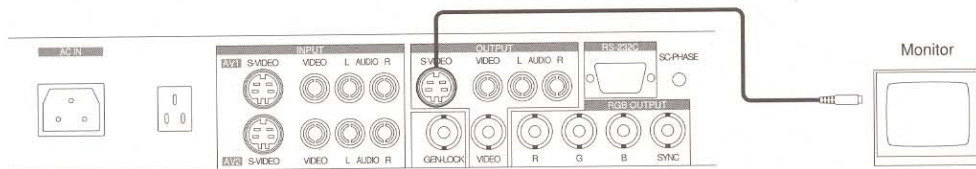
● Connection to the composite video-in terminal

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.)



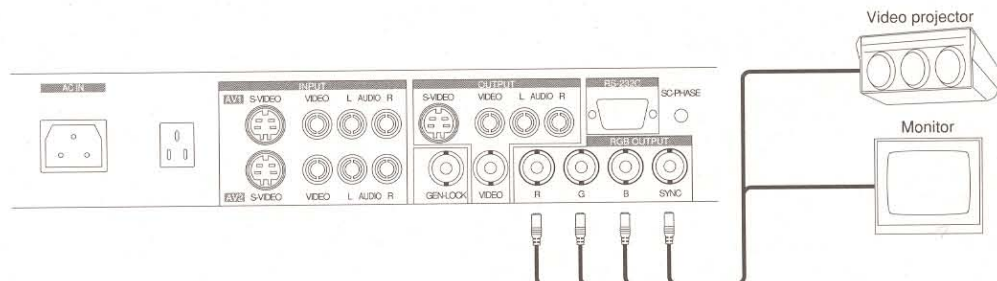
● Connection to the S video-in terminal

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 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 a BNC cable. Use a BNC cable available on the market.



● RGB output terminals

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

5. OPERATION PROCEDURES

○ Simple steps for presenting printed material

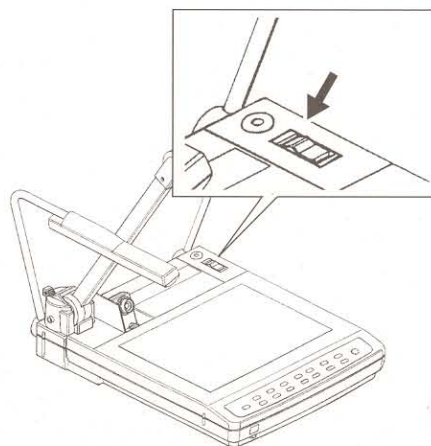
- (1) Turn ON the power switch.

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.

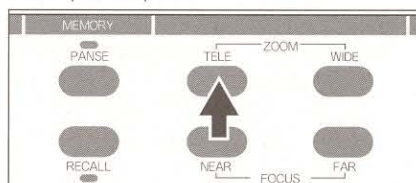
After the power switch is turned ON, the indication lamp of the main camera only is illuminated.

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.

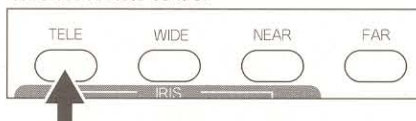


- (2) Place the object on the stage. Adjust the image size according to the object size using the zoom buttons [TELE/WIDE] on the operation panel or wireless remote control, while watching the image on the TV monitor.

Front operation panel



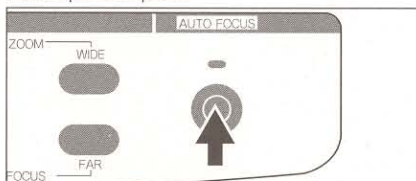
Wireless remote control



- (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 (when the close-up lens is attached).

Front operation panel



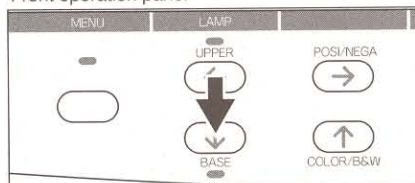
Wireless remote control



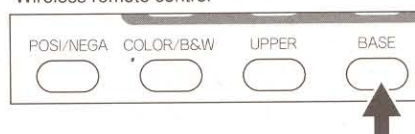
○ Simple steps for showing transparent material, such as overhead transparencies or slide film

- (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

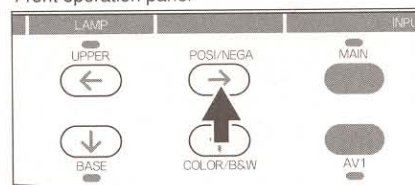


Wireless remote control

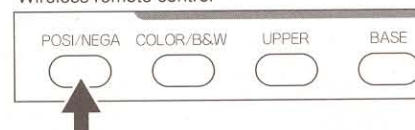


- (2) To present a nega film, press the posi/nega conversion button **[POSI/NEGA]** on the front operation panel or wireless remote control to change the mode to [N] (Negative).

Front operation panel

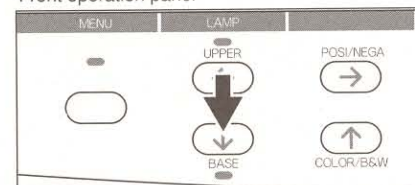


Wireless remote control

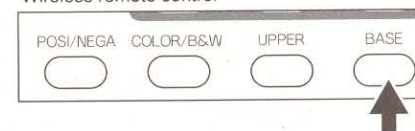


- (3) To turn OFF the baselight, press the base button **[BASE]** on the front operation panel or wireless remote control.

Front operation panel



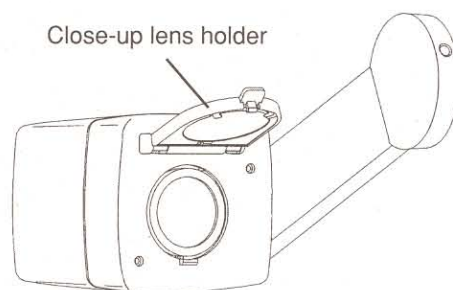
Wireless remote control



○ Using the main camera as a conventional video camera

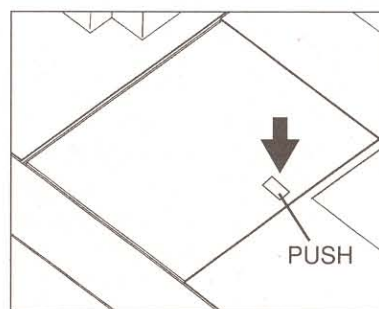
Set the main camera head horizontally to shoot the objects, such as walls and distant views. To shoot distant objects, swing up the close-up lens holder.

Reference The focus can be achieved from 1.1m to ∞ .

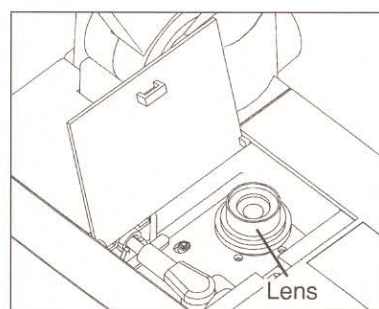


○ Using the sub camera

- (1) Press down on the **[PUSH]** part of the cover of the sub camera storage.

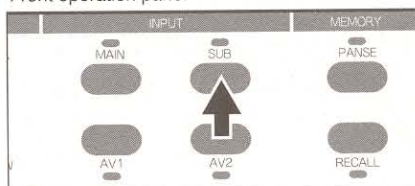


- (2) Open the cover of the sub camera storage.
- (3) Raise the sub camera by holding the lens and pulling gently upwards.

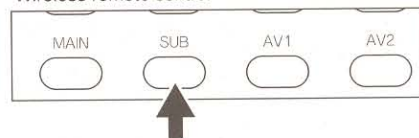


- (4) Press the sub camera button **[SUB]** on the front operation panel or wireless remote control.

Front operation panel



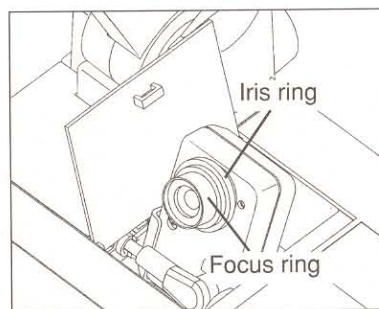
Wireless remote control



- (5) Turn the iris ring to adjust the lightness. Turn the focus ring to adjust the focus.

Note: To change into the main camera mode, press the main camera button **[MAIN]** on the front operation panel or wireless remote control.

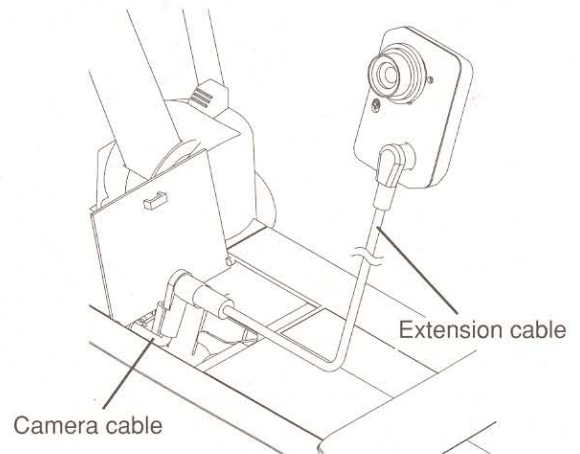
Note: The sub camera is one of the input selection functions. In the sub camera mode, the main camera functions, such as OSD menu setting, image memory, pointer, image enlargement, and pause are not operative.



○ Using the sub camera as a movable video camera

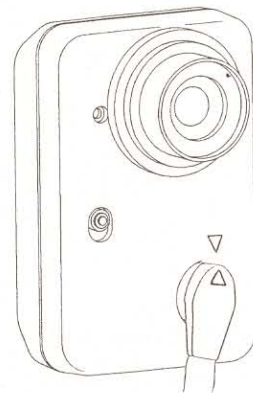
Note: Turn OFF the power switch of the Presenter before connecting the supplied extension cable.
Failure to turn off the power may damage the presenter, the sub camera or both.

- (1) Remove the camera cable from the sub camera while the camera is in the lowered position of the sub camera storage.
- (2) Remove the sub camera from the sub camera storage.
- (3) Connect the extension cable to the camera cable.
(Match the △ mark on the extension cable to the △ mark on the camera cable.)



- (4) Match the △ mark on the extension cable to the ▽ mark on the sub camera, and then connect the extension cable to the sub camera.

Note: Store the sub camera by reversing the above procedures.



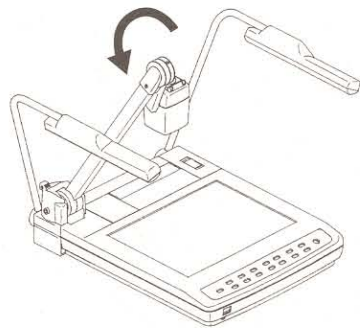
○ Storing the Presenter

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.

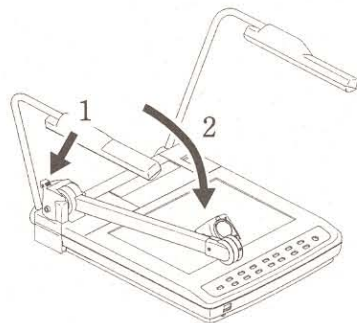
- (2) Turn the main camera head to the illustrated position.

Note: Be sure to set the camera head in the illustrated position before storing. Storing the main camera head in any other position may damage the stage surface or the lens.

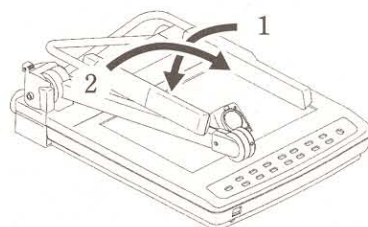


- (3) Press the column lock release button, and fold down the main column.

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



- (4) 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 objects, and the baselight for presenting transparent material, such as slide, and negative films, are built in to 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 a few seconds, and then the fluorescent lamp will light up.

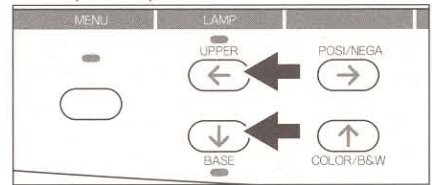
To turn OFF the lamp, press the button for the respective lamp.

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

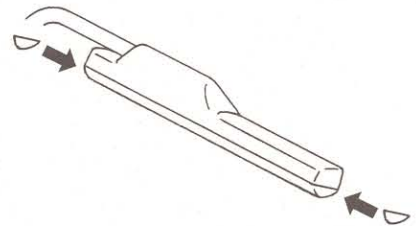
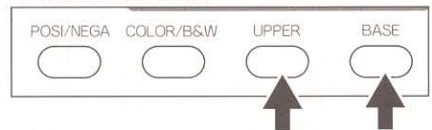
Note: When the lightness of the material surface is not sufficiently high or a 3-D object is presented, a sharp image with good color rendering can be obtained with the upper lighting unit.

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

Front operation panel



Wireless remote control



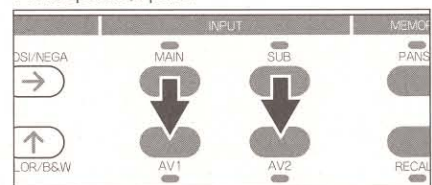
○ Input selection

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.

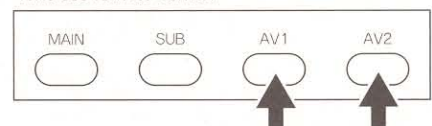
Press the input selection button **[AV1]**/**[AV2]** on the front operation panel or wireless remote control.

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 C-video input to S-video output" is not available.

Front operation panel



Wireless remote control



● Table of Video-in/out Terminal Selections

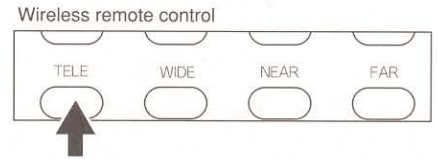
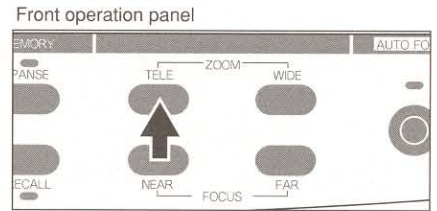
Input \ Output			Video-out terminal				Audio-out terminal	
			S-VIDEO	C-VIDEO		RGB	Channel	
				RCA jack	BNC		L	R
INTERNAL	Main camera video signal	S-VIDEO	○	—	—	—	—	—
		C-VIDEO	—	○	○	—	—	—
		RGB	—	—	—	○	—	—
	Mic.	Monaural	—	—	—	—	○	○
Sub camera	Video signal	S-VIDEO	○	—	—	—	—	—
		C-VIDEO	—	○	○	—	—	—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

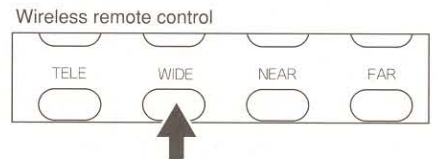
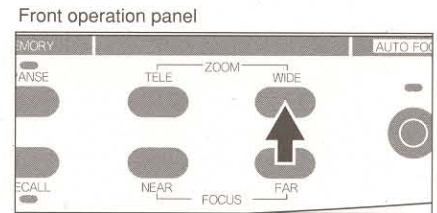
Note: Instructions given in the pages 24 to 37 are applicable only to the main camera.

○ Zoom

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



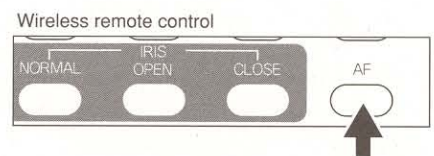
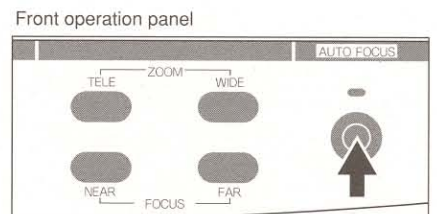
Press the zoom button **[WIDE]** on the front operation panel or wireless remote control, and the image will gradually be reduced.



○ 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.



The Presenter features a one-step 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.

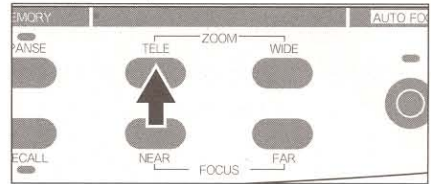
- Objects bearing little contrast
- Objects with fine repeated patterns, such as lateral stripes and cross stripes
- Objects glittering or reflecting strong light
- Objects with bright background, or excessive contrast
- Objects in a dark picture plane
- Objects located near and far away at the same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

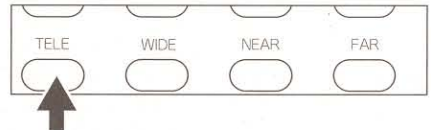
Note: The auto focus functions up to approx. 10cm above the stage surface (with the close-up lens attached).

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.

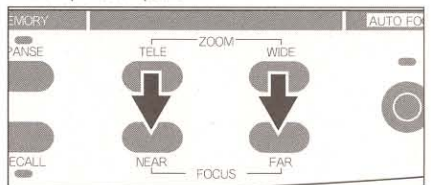
Front operation panel



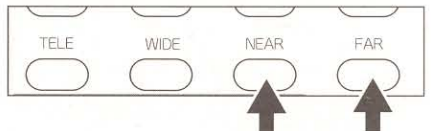
Wireless remote control



Front operation panel



Wireless remote control

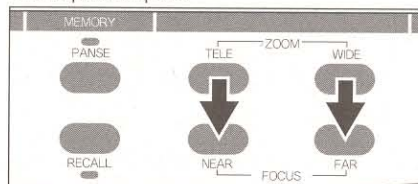


● Powered Manual Focus

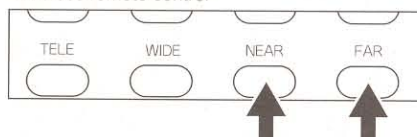
To focus on any part of the material, such as 3-D material, press the focus button **[NEAR]** or **[FAR]** on the front operation panel or wireless remote control.

Note: The manual focus works up to approx. 10cm above the stage surface (with the close-up lens attached).

Front operation panel



Wireless remote control



○ Nega/posi conversion

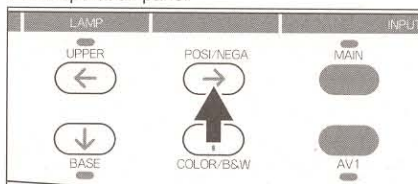
To show a negative film.

Press the posi/nega conversion button

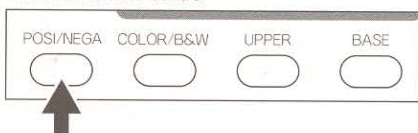
[POSI/NEGA] on the front operation panel or wireless remote control, and the image will be converted accordingly.

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

Front operation panel



Wireless remote control



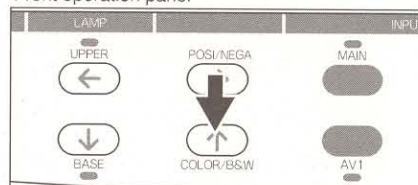
○ Color/B&W selection

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.

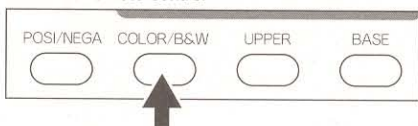
To change to B&W mode, press the color/B&W selection button **[COLOR/B&W]** on the front operation panel or wireless remote control.

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

Front operation panel



Wireless remote control



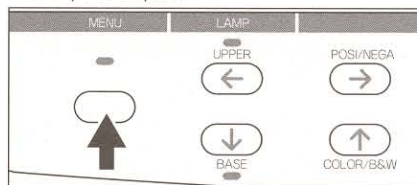
○ OSD (On-Screen Display)

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.

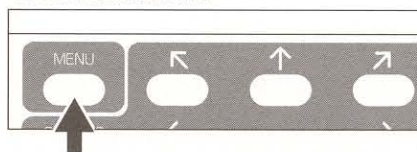
OSD Menu (on the monitor)



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)

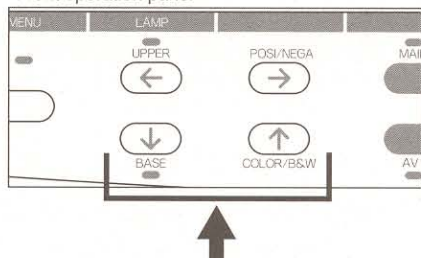
After setting the item of each function, quit the OSD menu.

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

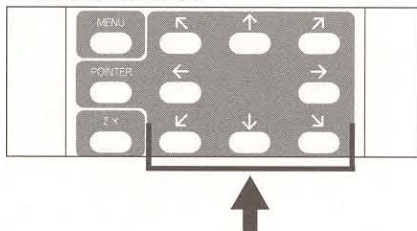
Note: Unless quitting the OSD menu normally, the settings are not memorized.

Note: The OSD letter color may change for some items after adjustment.

Front operation panel



Wireless remote control



○ Color adjustment <VIDEO MENU>

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

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

Menu displayed	Functions
R-GAIN	To adjust color gain (color depth) of the red component.
G-GAIN	To adjust the color gain of the green component.
B-GAIN	To adjust the color gain of the blue component.
Ye-GAIN	To adjust the color gain of the yellow component.
R-PHASE	To adjust the hue (tint) of the red component.
G-PHASE	To adjust the hue (tint) of the green component.
B-PHASE	To adjust the hue (tint) of the blue component.
Ye-PHASE	To adjust the hue (tint) of the yellow component.

○ Microphone input <AUDIO MENU>

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

To set the sound volume from the Mic Jack.

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

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

○ White balance <WHITE BALANCE MENU>

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

To set the focusing point of the white component.

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. To fix the white balance of color temperature, set by pressing the button [MENU].
	<USER AUTO>	To set the focusing point of the white balance in the auto follow mode by turning the knob <RED>/<BLUE>.
	<MANUAL>	To set the white balance by turning the knob <RED>/<BLUE>.
<RED>	To adjust the red component (effective only in the modes <MANUAL> and <USER AUTO>).	
<BLUE>	To adjust the blue component (effective only in the modes <MANUAL> and <USER AUTO>).	

Note: The automatically followed color temperature ranges from approx. 3000k to 8000k.

○ Recalling the image memories

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

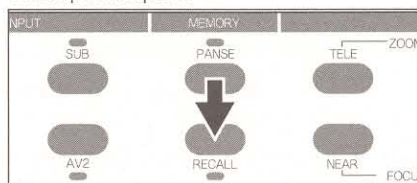
Upper case show the memory No. of the image that is recalled by pressing the image memory recall button [RECALL] on the front operation panel or wireless remote control.

The initial value is 1.

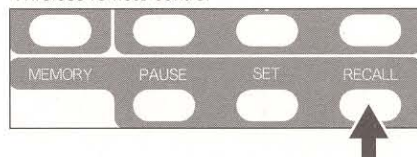
Each time the recall button [RECALL] is pressed, the image memory No. augments by +1 increment.

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

Front operation panel



Wireless remote control



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.

○ Setting the image memories (MEMORY)

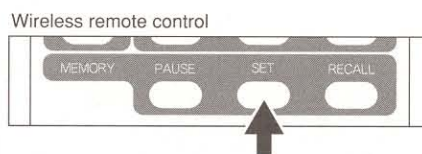
- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<VIDEO>

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.

As long as [E] is displayed under the image memory No. in the item of <PROTECT>, the image can be rememorized indefinitely (can be overwritten).



○ Protecting the image memories (PROTECT)

- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<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 [E] and [P].

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

○ Deleting the image memories (CLEAR)

- Menu sequence <MAIN MENU>→<MEMORY SET MENU>→<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 memory will be deleted.

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

Note: A protected image can not be deleted.

○ Iris

- Menu sequence <MAIN MENU>→<OPTION1 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>.

Manual Iris

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."

○ Electronic shutter

- Menu sequence <MAIN MENU>→<OPTION1 MENU>→<SHUTTER>

To set the shutter speed.

Menu displayed	Functions
<OFF>	1/60s(Initial setting)
<FL>	1/100s, flickerless 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 mode <FL>, and the flicker phenomenon may be reduced. In areas with power frequency of 60Hz, leave the Presenter in the mode <OFF>.
<HS>	To change the shutter speed to: 1/100s, 1/125s, 1/250s, 1/500s, 1/1000s, 1/2000s, 1/4000s or 1/10000s

Note: In the mode <HS>, flickering or color shimmering may occur.
In this case, slow the shutter speed.

○ AGC (Auto Gain Control)

- Menu sequence <MAIN MENU>→<OPTION1 MENU>→<AGC>

To set the auto gain control.

When the object is dark, The AGC can gain up the image of the object to be lighter.

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

Menu displayed	Functions
<OFF>	No gain-up(initial setting)
<6dB, 12dB, 18dB>	To select gain-up from among 3 levels

○ BLC (Backlight Control)

- Menu sequence <MAIN MENU>→<OPTION1 MENU>→<BLC>

To set the backlight control.

Menu displayed	Functions
<MODE1>	When the dark object comes into the upper area of the screen, this function raises the lightness of the screen according to the darkness of the object.
<MODE2>	When the dark object comes into the central area of the screen, this function raises the lightness of the screen according to the darkness of the object.
<MODE3>	When the dark object comes into the lower area of the screen, this function raises the lightness of the screen according to the darkness of the object.
<AUTO>	When the dark object comes into the upper, central or lower area of the screen through automatic area judgment, this function raises the lightness of the screen according to the darkness of the object.

Note: The BLC does not work when the AGC is in OFF.

○ Adjusting the detail (Outline-accent function)

- Menu sequence <MAIN MENU>→<OPTION1 MENU>→<DETAIL>

To adjust the contour intensity (Selectable in 16 levels).

The initial value is <0>.

○ Adjusting the pedestal

- Menu sequence <MAIN MENU>→<OPTION1 MENU>→<PEDESTAL>

To adjust the black level in 16 levels.

The initial value is <0>.

○ Selecting the G ON SYNC

- Menu sequence <MAIN MENU>→<OPTION1 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>.

○ Selecting the AF mode

- Menu sequence <MAIN MENU>→<OPTION2 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>→<OPTION2 MENU>→<232C SW>

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

The initial setting is <MOUSE>.

○ Presetting the angle of view (size of image)

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

○ 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].

○ Memorizing the function settings

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

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

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

Two modes can be set.

Select <1> or <2> with each menu set, then press the menu button [MENU]. The setting value will be memorized.

● The items that can be memorized in setting [1] or [2]

Refer to the "Table of functional settings." (p.35)

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" in the next section.

○ 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 [↑]/[↓].

Select <1> or <2>, and press the menu button [MENU]. The memories of the settings will be recalled.

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

○ Table of 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 <VIDEO MENU>		○	○	○
Adjustment value of <AUDIO MENU>		○	○	○
Adjustment value of <WHITE BALANCE MENU>		○	○	○
Adjustment value of <EXT.SYNC MENU>		○	○	○
Setting value of <MEMORY RECALL MENU>		—	—	—
<MEMORY SET MENU>	SETTING	—	—	—
	ZOOMING	—	—	—
	VIDEO	—	—	—
	PROTECT	○	—	○
	CLEAR	○	—	—
Adjustment value of <OPTION 1 MENU>		○	○	○
<OPTION 2 MENU>	ZOOM AF	○	○	○
	232C SW	○	○	○
	BAUD RATE	○	○	○
	POINTER	○	—	○
Upper/base lighting status		—	—	—
Input selection status		—	—	—
Nega/posi 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]

○ 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.

○ Setting the direction and color of the pointer

- Menu sequence <MAIN MENU>→<OPTION2 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: red, blue, green, yellow)

○ 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.

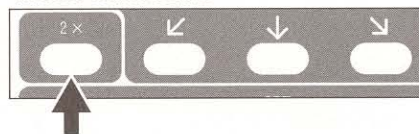
The image can also be doubled by clicking the right button on the mouse.

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



○ 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.

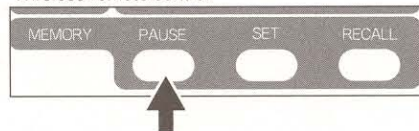
Note: In the pause mode, the image enlargement and scrolling functions can not work.

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

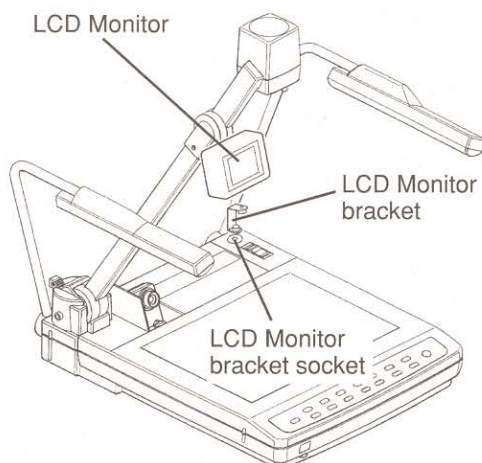


Wireless remote control



○ 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.



7. 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.

● Adjusting the horizontal sync. phase

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

To adjust the horizontal phase during the external sync.

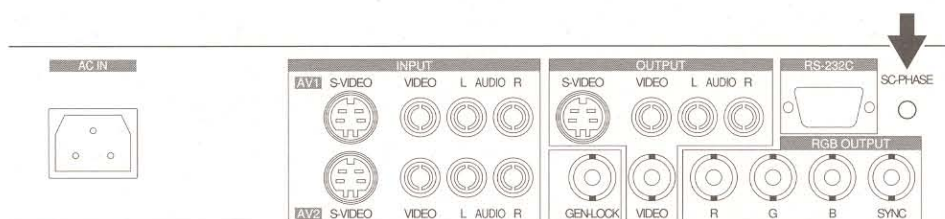
Adjustment is available in 112 steps.

● 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 <SC PHASE> menu every 90° to adjust the color phase of the image to that of the base signal, so that the color phase of the image can become the closest to the color phase of the base signal. Then, using a screwdriver, the color phase is fine adjusted by using the color phase volume [SC-PHASE] on the rear panel.



8. 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 next page.

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

- (2) Change the menu sequence of <MAIN MENU>→<OPTION2 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.

○ Setting the baud rate

Set the baud rate, by using the menu sequence of <MAIN MENU>→<OPTION2 MENU>→<BAUDRATE> in the OSD menu.

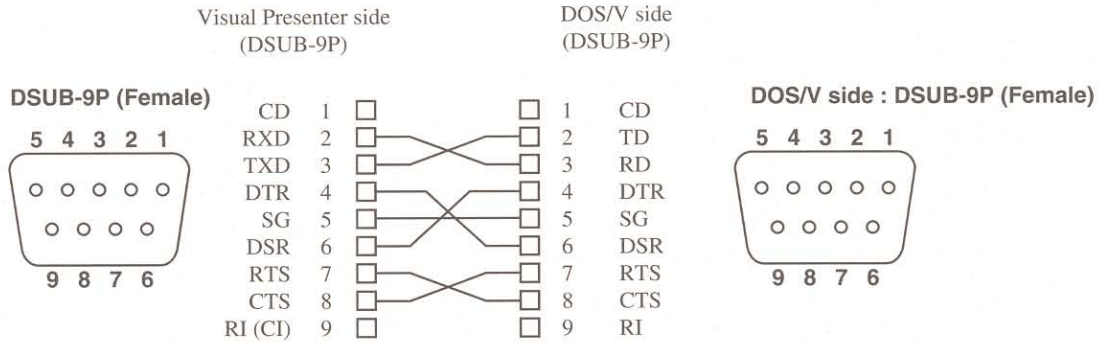
After setting the baud rate, quit the OSD menu.

The initial value is 9600bps.

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

Set the baud rate to that of the PC.

○ Cable connection



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

Pin No.	Code	Name	Direction of data		Comments
			Visual Presenter	PC	
1	CD	Carrier Detect	—		CD : Carrier Detect
2	RXD	Received Data	←		RXD : Received Data
3	TXD	Transmitted Data	→		TXD : Transmitted Data
4	DTR	Data Terminal Ready	→		DTR : Data Terminal Ready
5	SG	Signal Ground	—		SG : Signal Ground
6	DSR	Data Set Ready	←		DSR : Data Set Ready
7	RTS	Request To Send	→		RTS : Request To Send
8	CTS	Clear To Send	←		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) 2 (UPPER)	■■	Command to select the Lighting
Input selection	AV	0 (MAIN) 1 (AV1) 2 (AV2) 3 (SUB)	■■	Command to select the Input
Nega/Posi conversion	NP	0 (POSI) 1 (NEGA)	■■	Command to convert Nega/Posi
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"> • When the pointer is ON The pointer moves. • When the image enlargement is ON The enlarged image moves. 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.

Function	Command	Parameter	Data	Comments
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.
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

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

○ 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)

		Lighting selection	Input selection	Nega /Posi	Color /B&W	Pointer display	Image enlargement	Freeze	Local Lock out	
(Visual Presenter)	S T X	①	②	③	④	⑤	⑥	⑦	⑧	E T X

● Status request format (Parameter 1)

		No. of the current image	1	2	3	4	5	6	7	
(Visual Presenter)	S T X	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	E T X

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	K	N	*	*	
(Visual Presenter)	S T X	56H	49H	4BH	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

○ 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.

EV-6000AF features "Video-Image Output to PC", which an Optional CD-ROM is available.
Please contact your ELMO dealer for detailed information.

9. TROUBLESHOOTING HINTS

Symptom	Possible cause/countermeasure
No Images on TV monitor	<ul style="list-style-type: none"> • 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 power cord receptacle of the Presenter. • The power switch is not turned ON. • Zoom is set at TELE to display only white/black part of the material. • 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.
Out of focus	<ul style="list-style-type: none"> • The object is too close to the lens. Check if it does not stand higher than 10cm above the stage surface. • Zoom is set at TELE after focusing at WIDE angle. Focus on the point of max. TELE. • In the auto-focus, focusing is difficult in some cases.
The lamp is not quickly turned ON	<ul style="list-style-type: none"> • For protection purposes, the lamp is turned ON after preheating for 2 seconds. This is not a fault.
Image is too dark.	<ul style="list-style-type: none"> • The ambient light is not sufficient. Press the upper lighting unit button [UPPER] to turn ON the upper lamp.
Input selection can not be made.	<ul style="list-style-type: none"> • Inputting to S-video while connecting output of C-video to the monitor or vice versa. (Refer to the "Table of video-in/out selections" on P.23.)
The image of printed matter is striped	<ul style="list-style-type: none"> • This is caused by the interference between the dots of printed matter and the scanning line.
The image flickers.	<ul style="list-style-type: none"> • 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.7 and 31.)

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

10. SPECIFICATIONS

● General

Item	Specifications		
Power source	AC120V 60Hz		
Power consumption	48W		
AC outlet	1 pce. (Max. 400W/Unswitched)		
Outside dimensions	400mm(W) X 542mm(D) X 165mm(H) (15.8 X 21.3 X 6.5 in.) - When folded 700mm(W) X 542mm(D) X 610mm(H) (27.6 X 21.3 X 24.0 in.) - When set up		
Weight	9 kgs (19.8 lbs) (main body only)		
Television system	NTSC compatible		
Input selection	Internal/sub camera/AV1/AV2		
Output terminal	C-video output	RCA pinjack/75Ω unbalanced	1
		BNC connector/75Ω unbalanced	1
	S-video output	Mini DIN 4P connector/75Ω unbalanced	1
	R/G/B/ SYNC output	BNC connector/75Ω unbalanced (only for the main camera).	1 pair
	Audio output (stereo)	RCA pinjack/applicable impedance 10kΩ or more, -10dB	1 pair
Input terminal	S-video input	Mini DIN4P connector/75Ω unbalanced	2
	C-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

● Main camera

Item	Specifications
Lens	f=5.8-70mm(12-time zoom) F1.9-2.6
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 ∞-1.1m(with the camera facing sideways and with no close-up lens)
Zoom	Powered (with double speed function)
Focusing	Auto (2 modes)/manual
Iris	Auto (with level adjustment)/manual

● Main camera (continued)

Item	Specifications
Image pick-up element	1/3" Interline-transfer CCD
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 470 TV lines (Y signal with horizontal) More than 350 TV lines (Vertical)
S/N ratio	48 dB (with adjusting the detail min.)
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 G ON SYNC 0.286 Vp-p/75Ω unbalanced
Ext. sync. frequency range	SYNC H 15.734kHz ±50ppm
	BURST 3.579545MHz ±50ppm
Ext. sync. input condition	VBS: (75Ω unbalanced) SYNC: 0.3V±0.1V, Burst: 0.3V±0.1V
H-phase adjustment	Manual (0-10μs)
SC-phase adjustment	Manual (0-360°)
White balance	Full auto/User auto/One push/Manual
Color gain control	Provided
Color phase adjustment	Provided
Electronic shutter speed (1/100s~1/10,000s)	OFF mode(1/60s)/FL mode(1/100s)/HS mode
Nega/pose conversion	Enabled (C-video, S-video, RGB)
Color/B&W selection	Enabled (C-video, S-video, RGB)
AGC	Selectable(OFF/6dB/12dB/18dB)
BLC	Selectable(OFF/AUTO/MODE1/MODE2/MODE3)
Detail adjustment	Provided
Pedestal adjustment	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

● Sub camera

Item	Specifications
Lens	f=4.3mm F1.9
Image pick-up element	1/3 " Interline-transfer CCD
Effective picture element	768 (H) x 494(V)
Total picture element	811(H) x 508(V) (approx. 410,000 pixels)
Image signal process	Digital signal processing (DSP)
Sync. system	Synchronized with built-in camera
Output signal	C-video VBS 1.0Vp-p/75Ω unbalanced
	S-video Y 0.714Vp-p/75Ω unbalanced
	C 0.286Vp-p/75Ω unbalanced

● Lighting

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

● Supplied accessories

Name	Quantity
Power cord	1
Video-audio cable	1
Mouse	1
Infrared wireless remote controller (RCW-602)	1
Batteries (Type R03, AAA)	2
Dust cover	1
Extension cable for the sub camera	1
Instruction manual for EV-6000AF	1
Stickers of toplighs	4

● Options

EV-6000AF features "Video-Image Output to PC", which an Oprional CD-ROM is available.
Please contact your ELMO dealer for detailed information.

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.

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