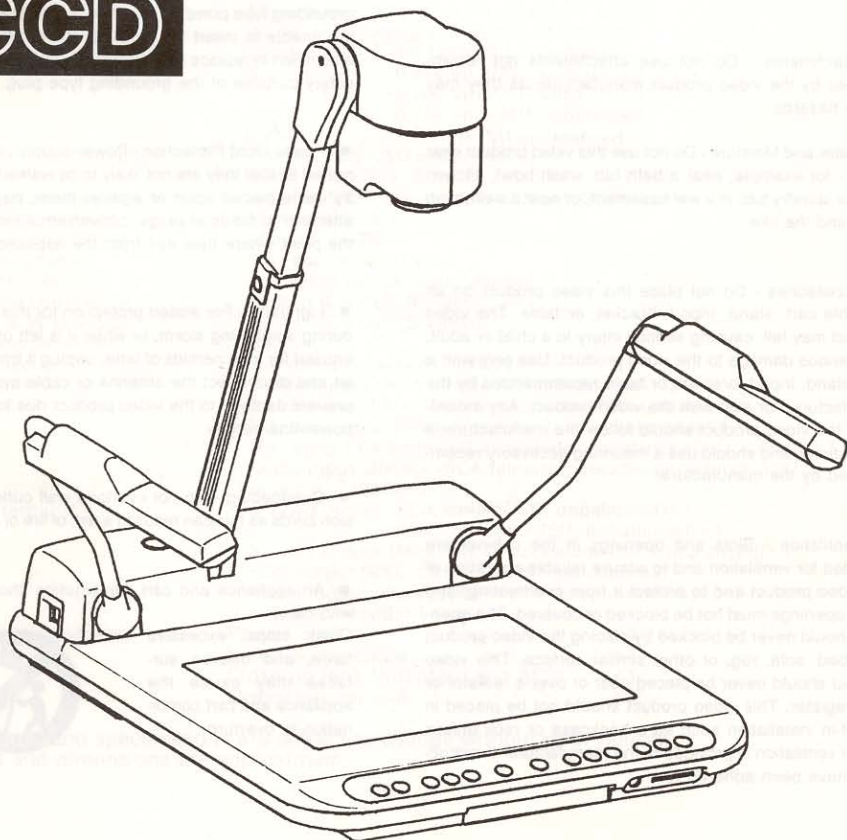# ELMO

# VISUAL PRESENTER

# EV-500AF

## OPERATION MANUAL

**CCD**

# 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 appliance and in the operating instructions should be adhered to.

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

■ Cleaning - Unplug this video 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 video product manufacturer as they may cause hazards.

■ Water and Moisture - Do not use this video 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 video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the video product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the video 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 video 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 video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video 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 video 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 video products intended to operate from battery power, or other sources, refer to the operating instructions.

■ Grounding or Polarization - This video 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 appliance.

■ Lightning - For added protection for this video 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 video product due to lightning and power-line surges.

■ Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

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

■ Object and Liquid Entry - Never push objects of any kind into this video 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 video product.
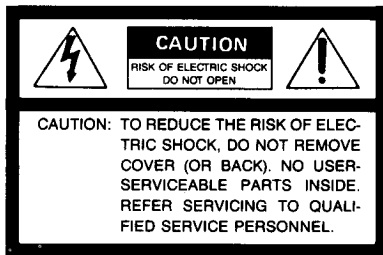
■ Servicing - Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

■ Damage Requiring Service - Unplug this video 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 video product.

● If the video product has been exposed to rain or water.

● If the video 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 video product to its normal operation.

● If the video product has been dropped or the cabinet has been damaged.

● When the video 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 video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.



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.

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 appliance.

**WARNING:**

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OF 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.

## INTRODUCTION

Thank you for purchasing the ELMO Visual Presenter EV-500AF.
To use the Visual Presenter properly, carefully read this operation manual before use.
After reading the manual, keep it in a convenient place for quick reference.

The EV-500AF is the easy-to-operate and portable video presentation unit, equipped with a high-resolution CCD (Charge Coupled Device) camera.
Featuring a 10X magnification zoom lens and a high accuracy auto focusing system, the EV-500AF captures all types of presentation materials, ex: 3-D objects, small material as a stamp, transparencies, to show or record through monitor TV, VCR, etc.

## BEFORE YOUR USE

Follow the instructions in this section to ensure safe operation. (Failure to follow these instructions may result in incorrect operation or malfunction of the Presenter.)
∗ Apply to the specified AC power source.
∗ Disassembling or modifying the Visual Presenter may results in electrical shock and machine malfunction.
   We are not responsible for any deterioration or failure of the Visual Presenter caused by disassembling or modifying by the user.
∗ Connecting or disconnecting the power cord should be carried out while firmly holding the plug.
∗ If the Presenter is left unused for a long period, disconnect the power cord for safety. Do not expose the Presenter to direct sunlight, high temperature, high humidity, or dust.
∗ Avoid storing or using the Presenter where vibration occurs.
∗ Install the Presenter in the following conditions.
        Temperature : 5°C~40°C (41°F~104°F)
        Humidity : 30%~85% (Avoid humid places, since himidity inside the products
                            may cause failure of the set.)
∗ If the Presenter is used for purposes other than specified, we cannot guarantee its performance, service life, or safety.
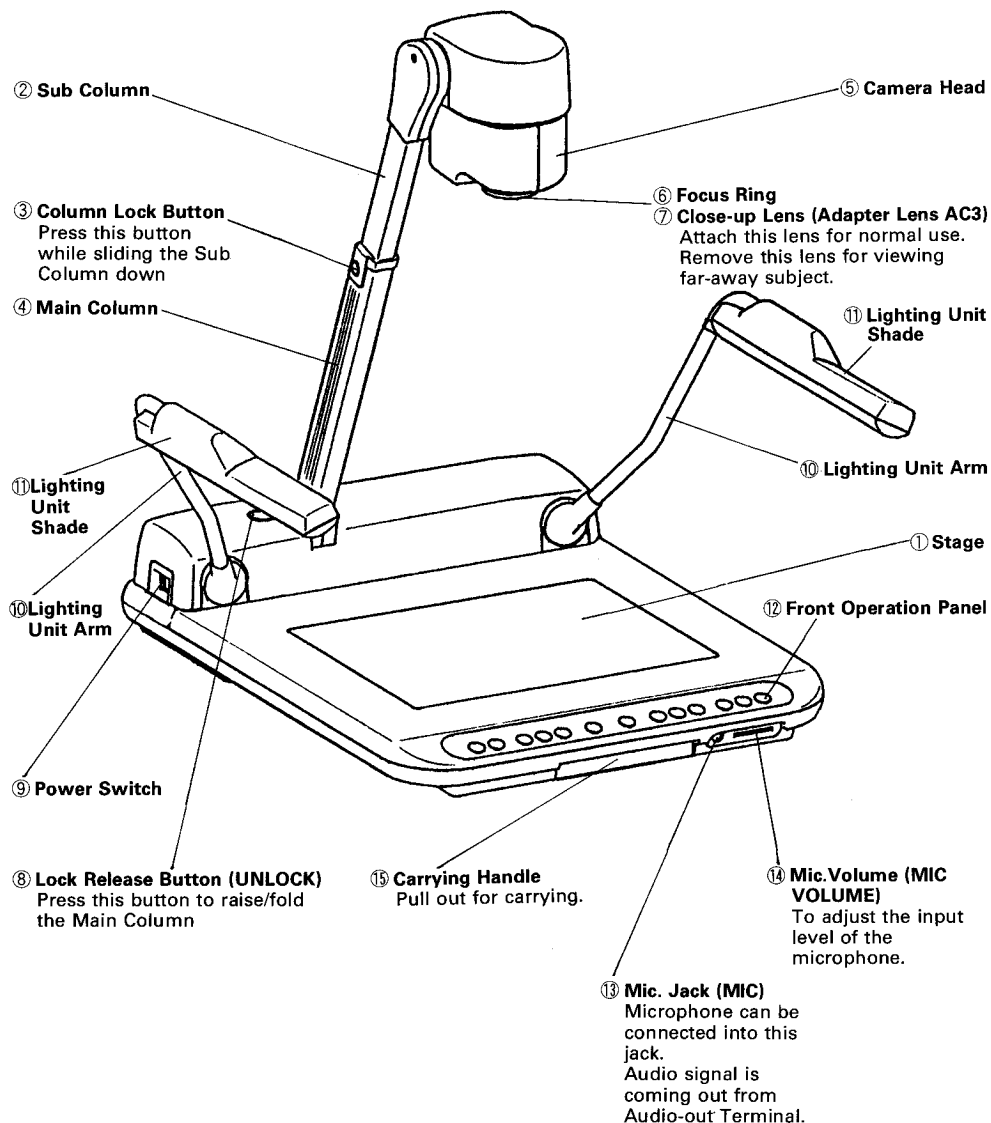∗ Do not place or drop heavy objects or containers of other liquids on the stage.
∗ Use only a soft, dry cloth for cleaning. Using benzine or thinner for cleaning may damage the coating or resin.
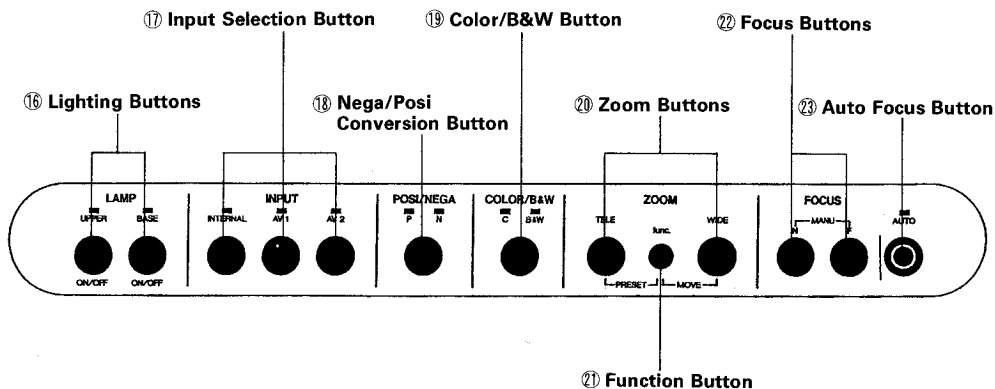∗ Do not directly point the camera lens into the sun or similar since the camera will be damaged.

# CONTENTS

# PART NAMES AND FUNCTIONS

② **Sub Column**

⑤ **Camera Head**

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

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

④ **Main Column**

⑪ **Lighting Unit Shade**

⑪ **Lighting Unit Shade**

⑩ **Lighting Unit Arm**

① **Stage**

⑩ **Lighting Unit Arm**

⑫ **Front Operation Panel**

⑨ **Power Switch**

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

⑮ **Carrying Handle**
Pull out for carrying.

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

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

## ◯Front Operation Panel

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

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



㉑ Function Button

| | Part Name | Function | Reference Page |
|---|---|---|---|
| ⑯ | Lighting Buttons | To turn on/off the light. | 13 |
| ⑰ | Input Selection Button | To change input line. | 13 |
| ⑱ | Nega/Posi Conversion Button | For viewing negative films. | 14 |
| ⑲ | Color/B&W Button | For viewing black and white material, such as documents. | 14 |
| ⑳ | Zoom Buttons | To adjust the image size. | 14 |
| ㉑ | Function Button | To memorize the zoom size (Preset) and also to move the preset zoom size (Move). | 14 |
| ㉒ | Focus Buttons | To adjust focus (Powered). | 15 |
| ㉓ | Auto Focus Button | One-step auto focus for automatic focusing. | 15 |

## ○Rear Panel

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

㊱ LCD Monitor TV Shoe
Socket (for attaching
optional LCD monitor
shoe MS-100)

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

㉔ Video-in Terminal 2
S-Video/C-Video
(RCA female)

㉚RGB Output Terminal/
RGB SYNC Terminal

㉟ AC Outlet

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

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

㉜ Remote Terminal

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

㉛ Ext. Sync. Input
Terminal

㉝ Power Cord
Receptacle

| | Part Name | Function | Reference Page |
|---|---|---|---|
| ㉔ | Video-in Terminal 2 S-Video/C-Video | Video signal is output from the video-out terminal ㉘ when input selection is set at AV2. | 10 |
| ㉕ | Audio-in Terminal 2 | Audio signal is output from the audio-out terminal ㉙ when input selection is set at AV2. | |
| ㉖ | Video-in Terminal 1 S-Video/C-Video | Video signal is output from the video-out terminal ㉘ when input selection is set at AV1. | 10 |
| ㉗ | Audio-in Terminal 1 | Audio signal is output from the audio-out terminal ㉙ when input selection is set at AV1. | |
| ㉘ | Video-out Terminal S-Video/C-Video | Connected to monitor TV, etc. | 10 |
| ㉙ | Audio-out Terminal | Audio-out terminal, Mic. (monaural), AV1, AV2 (stereo) connected to monitor TV. | |
| ㉚ | RGB Output Terminal/ RGB SYNC Terminal | Independently of the input selection, outputs the RGB and its sync. signals. | 10 |
| ㉛ | Ext. Sync. Input Terminal | GEN-LOCK terminal for external synchronization. | 19 |
| ㉜ | Remote Terminal | Input terminal for external control signal. | 20 |
| ㉝ | Power Cord Receptacle | Connected to power cord connector. | |
| ㉞ | | | |
| ㉟ | AC Outlet | Max 400W | |
| ㊱ | LCD Monitor TV Shoe Socket | For attaching optional LCD monitor shoe MS-100 | 18 |

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## ○Camera Head



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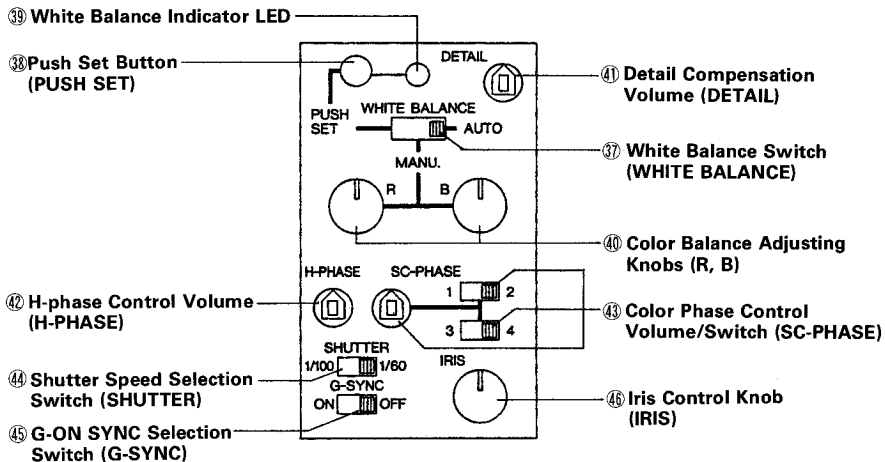
| | Part Name | Function | Reference Page |
|---|---|---|---|
| ㊲ | White Balance Switch | Select the mode for white balance adjustment. Set at [AUTO] for normal use. | 16 |
| ㊳ | Push Set Button | To push-set the white balance. (With the white balance switch at [PUSH SET] position.) | 16 |
| ㊴ | White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

## SETTING UP

1. Press the lock release button [UNLOCK] and raise the column.
   Raise the column until the lock release button gets back to the original position.
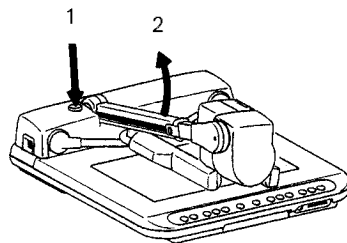


2. Extend the column until it is locked.
3. Adjust the camera head to the required position.
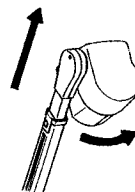


4. Set up the lighting unit to stop positions.
5. Connect the power cord to the AC outlet.
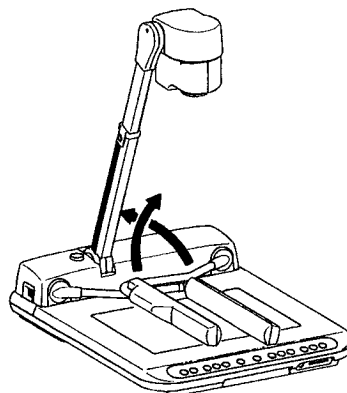
# CONNECTION TO MONITOR TV

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

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

○**Connection to composite video-in terminal**
Connect with the supplied RCA video/audio cable or a commercially-available BNC cable. (The Visual Presenter has two type of composite video-out jack, BNC and RCA jacks, and either jack is selectable.)
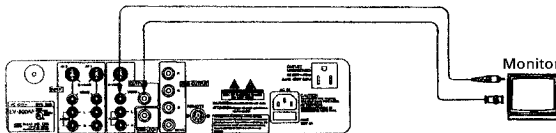


○**Connection to S video-in terminal**
S video-out terminal (mini DIN 4P) of the Visual Presenter is connected to the S video-in terminal of the TV monitor / video.
For S video mode, use a commercially-available S video connection cable.
If the device to be used is provided with a Y/C separate connector, a conversion adapter is necessary.
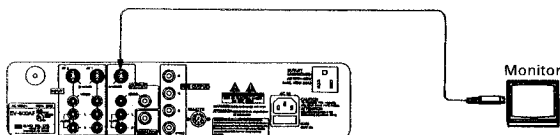


○**Connection to RGB input terminal**
Use a commercially-available BNC cable.
 • G-ON SYNC Selection Switch (Located on Camera Head)
  ON: The sync. signal is added to the G signal output of the BNC terminal of the RGB.
  OFF: The sync. signal is not added to the G output (Original setting).
   Set at OFF for normal use.
 • RGB Output Terminal
  Even if more than 2 sets of video equipment are connected and any image selected through outputs of AV1 or AV2, the RGB output terminal always outputs the image from the Visual Presenter only.
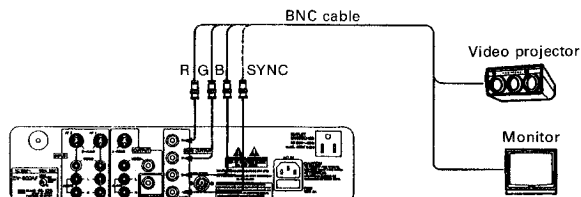
# OPERATING PROCEDURES

○**Simple steps for presenting printed materials**
1. Turn the power switch of the Visual presenter ON. (Connection to the monitor should be previously executed.)
    * Various functions of the Visual Presenter are initialized.
      The initial settings of those functions are displayed by their respective indicators.
2. Place the object on the stage.
   While observing the image on the TV monitor, adjust the zoom button to obtain the optimum size.
3. Press the auto focus button for focusing.
    * The covered area of the auto focus function is up to approx. 10 cm above the stage surface.
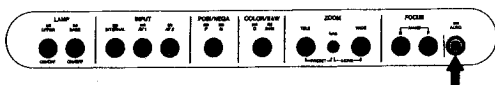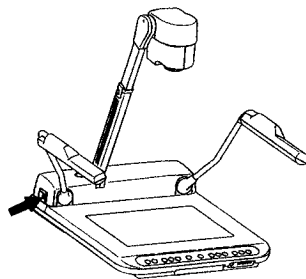
○**Simple steps for viewing transparencies as slide film**
1. Press the lighting button [BASE].
   The [BASE] indicator lights on, and then the built-in baselight are turned ON.
2. Press the nega/posi conversion button, and the indicator shows [N] (Negative) mode.
    * Nega/posi conversion is not possible with RGB output.
3. When turning off the baselight, press the lighting button [BASE].
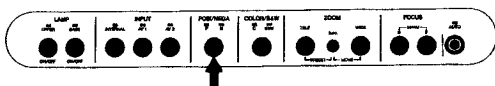
○**For shooting the mouth towards yourself**
   Turn the camera head towards yourself. Turn over the lens part to obtain the proper image.
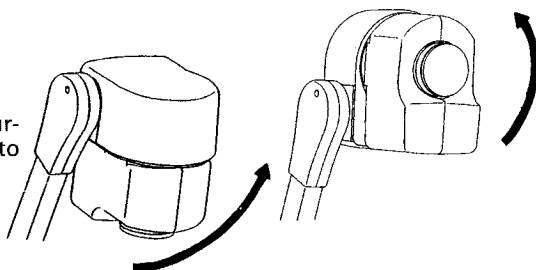
○**For use as a conventional video camera**
1. Remove the close-up lens when shooting the object at telephoto position.
2. Turn the camera head to horizontal position.
   This allows you to capture pictures on the wall, etc.

− 11 −
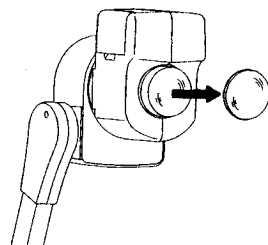
## STOWING

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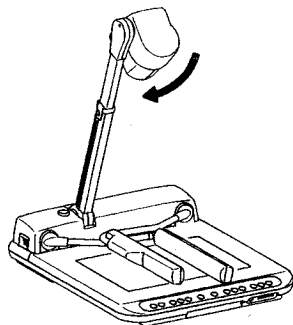2. Fold down the lighting unit arms.
   Note: The arm, which is first folded down, should be turned and then the other as per the illustration so that two arms are closely located to the stage.
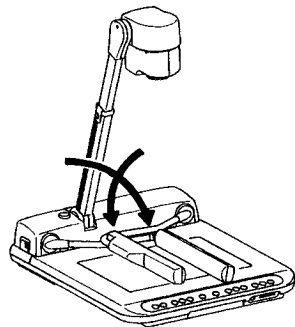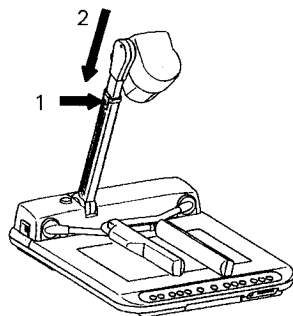


3. Turn the camera head to the illustrated position.
   Note: Stowing the camera head as per the illustration, or the stage surface or the lens may be damaged.



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



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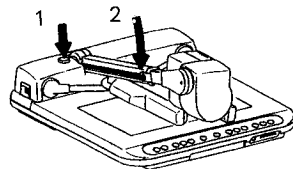
## VARIOUS FUNCTIONS

### ○Lighting

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

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

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

Select the [UPPER] or [BASE] mode.

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

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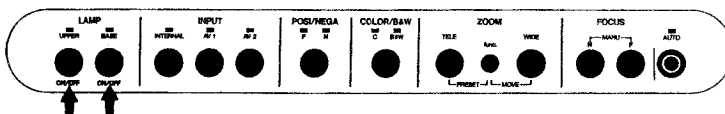


### ○Input selection

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

Note: Input selection covers the following selections, however, it cannot select the RGB output.
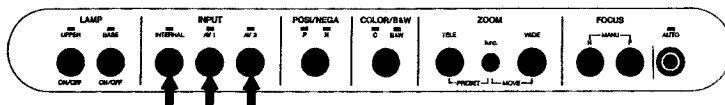


List of Video-In/Out Terminal Selections

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

## ○Nega/posi conversion

This function is used to view negative film as positive images.
Press the nega/posi conversion button, and the indicator shows [N] (negative).
Pressing the button again changes to normal [P] (positive) mode.
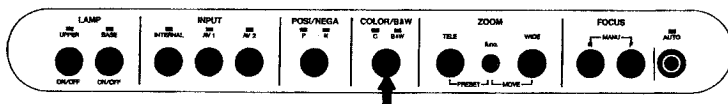Note: Nega/posi conversion is not available for RGB output.
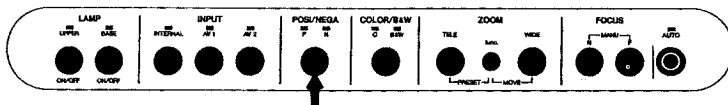


## ○Color/B&W selection

It is advisable to use this mode for viewing the B&W materials as documents, and clear image with no color blur is obtained.
For normal use, set to [C] (color) mode.
Pressing the color/B&W button changes to [B&W] or [C] mode in succession.
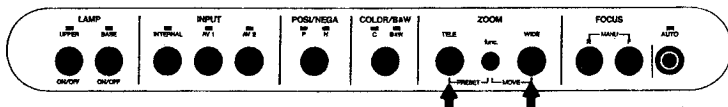Note: Color/B&W selection is not available for RGB output.



## ○Zoom

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



## ○Zoom size preset

By pressing the function button and the zoom button [TELE] simultaneously, the zooming size of the viewed image is memorized (preset).
Even after the zooming is re-done with the zoom button, the preset zoom size is available by pressing the function button and the zoom button [WIDE] simultaneously. New presetting will release the previously-memorized zoom size.
Note: The preset zoom size is cancelled when the power is turned off.
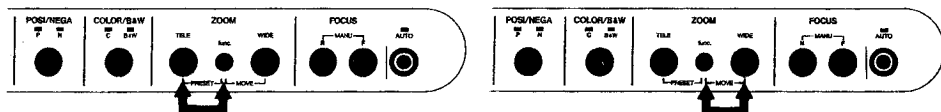
## ○Focus
### (1) Auto Focus

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



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

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

- It is difficult to automatically focus on an object under the following conditions. Select the focus mode to manual focus on objects in these conditions.
  - * Object bearing little contrast.
  - * Object with a fine repeated pattern such as lateral stripes, or a checkered pattern.
  - * Bright object one or one reflecting strong light.
  - * The background of the object is bright, or the contrast is too clear.
  - * Picture plane itself is dark.
  - * The positions of the objects are far and near.
  - * Moving object.

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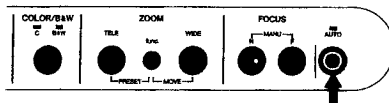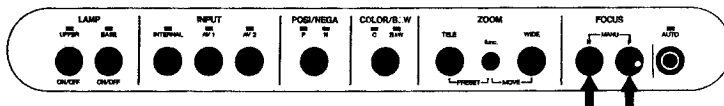
### (2) Powered Manual Focus

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

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

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

### ○White balance

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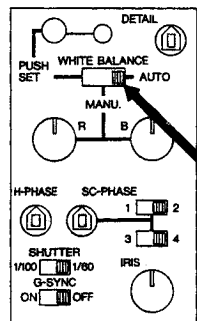Three modes are selectable.

**(1) Full-Auto mode:**

With the white balance switch at [AUTO] position, the camera automatically adjusts to the color temperature and adjusts the white balance. The camera will then automatically follow the change in color temperature of the object.
Set [AUTO] position for normal use.
With this setting, the indicator lights on.

**(2) Push-set Auto mode**

With the white balance switch at [PUSH SET] position, press the push set button while shooting a completely white object.
The white balance indicator lights on when the white balance is completed. If the indicator will not light on, the camera will not follow the change in color temperature of the object properly.
Start shooting while looking at the monitor screen or select the manual mode for precise adjustment.
The camera will not follow the change in color temperature at this mode.
Note: Reset the white balance once the power is turned off and on, or the color temperature of object is changed.
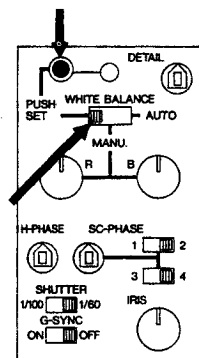
**(3) Manual mode**

With the white balance switch at [MANU.] position, turn the R (red) and B (blue) knobs while observing the white object on the monitor screen.
With this setting, the white balance indicator is not lit.
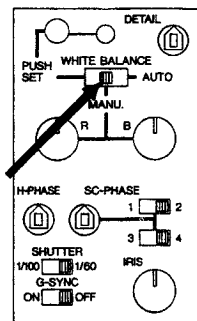
## ○Detail compensation

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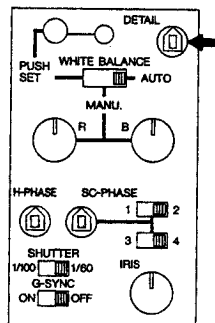
## ○Electronic shutter speed

Under the 50Hz electrical condition area, the flickering may appear under the fluorescent lamps, etc. with the EV-500AF set at "1/60" mode.
In this case, select "1/100" sec. shutter speed.
Leave the 1/60 sec. mode (original setting) for the use under the 60Hz area.
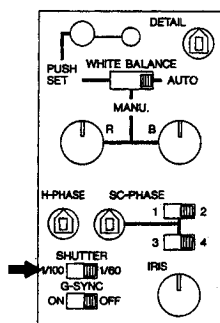
## ○Iris

Exposure is automatically compensated when the iris control knob is kept at middle position.
Exposure can be manually adjusted by turning the iris control knob.
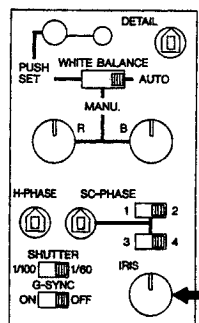
## ◯Microphone

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

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

The audio signal of the microphone is output in monaural either from the left or right audio-out terminal.
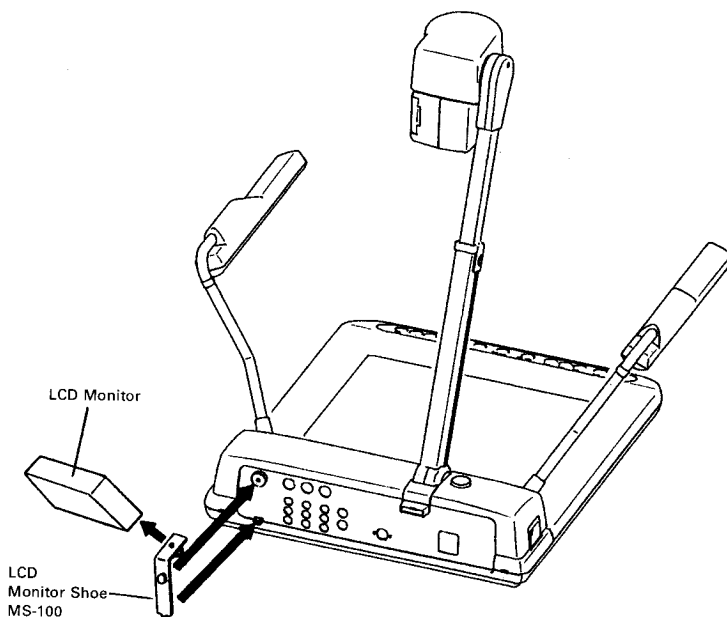
When the indicator of input selection is lit, the microphone can be used.
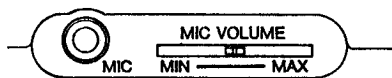


## ◯LCD monitor shoe

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

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

# EXTERNAL SYNC. ADJUSTMENT

This adjustment is necessary when images from several AV sources, such as the Visual Presenter, video cameras, and other equipment (including ELMO film-to-video converter TRV-35G,TRV-16G), are composed to be projected on a single monitor.
Horizontal sync. position adjustment and sub carrier position adjustment are required to match the color phases of each image.
A video mixer is necessary to reproduce a composite image. The connection method differs depending on the type of the video mixer. Refer to the instruction manual of the respective video mixer for additional information on connection method.

● **Horizontal sync. phase adjustment**

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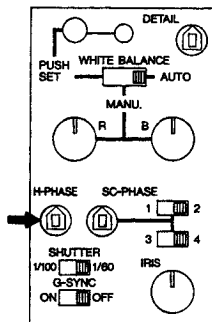


● **Sub-Carrier Phase Adjustment**

This adjustment is carried out if the color phase of the image output signal of the Visual Presenter is not appropriately adjusted to the base signal when overlapping images.
Set the color phase control switch for adjusting the color phase of the image to color phase of the base signal to bring each color phase as close as possible.
Fine adjusting by color phase volume is further carried out.
When adjusting the sub-carrier phase, use an adequate (−) screwdriver or the like.

| SC-phase | 0° | 90° | 180° | 270° |
|---|---|---|---|---|
| Switch positions | 1▦2  3▦4 | 1▦2  3▦4 | 1▦2  3▦4 | 1▦2  3▦4 |
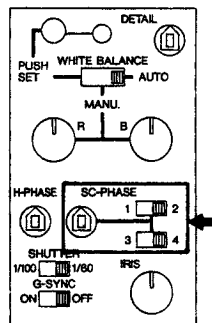
# REMOTE

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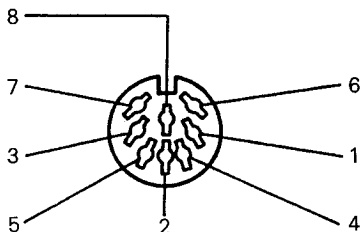


## ○Function between contacts

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

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

# TROUBLE SHOOTING HINTS

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

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

# SPECIFICATIONS

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

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

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

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

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

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

**EIMO**

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