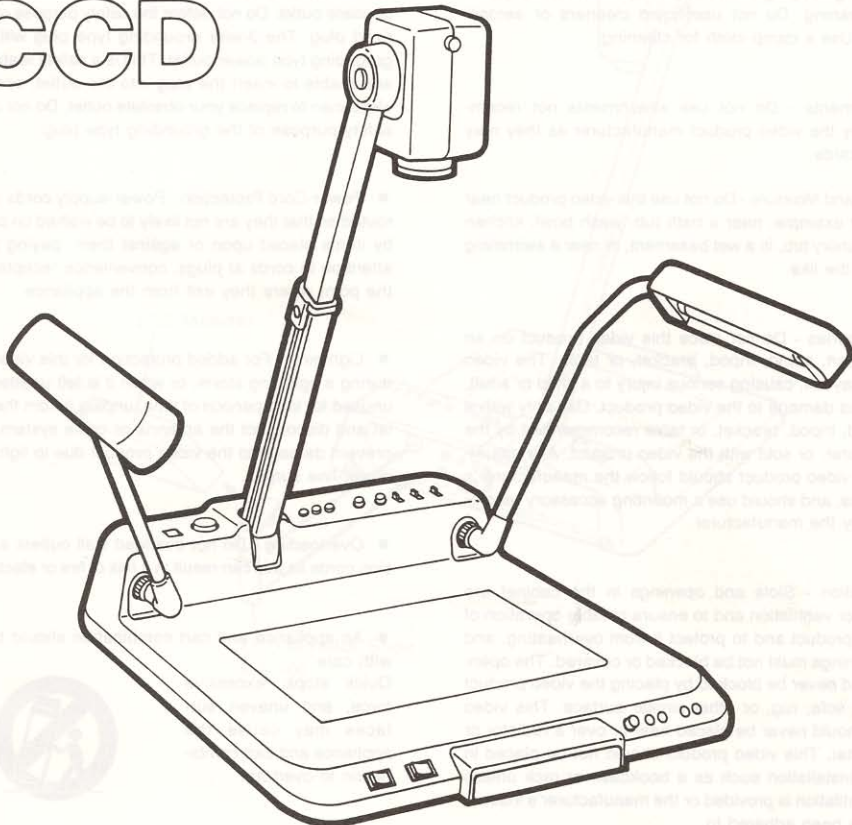


VISUAL PRESENTER

EV-368

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.



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.

Thank you for purchasing the Elmo Visual Presenter, model EV-368. To use the Visual Presenter properly, carefully read this operation manual before use. After reading the manual, we suggest you keep it in a convenient place for quick reference.

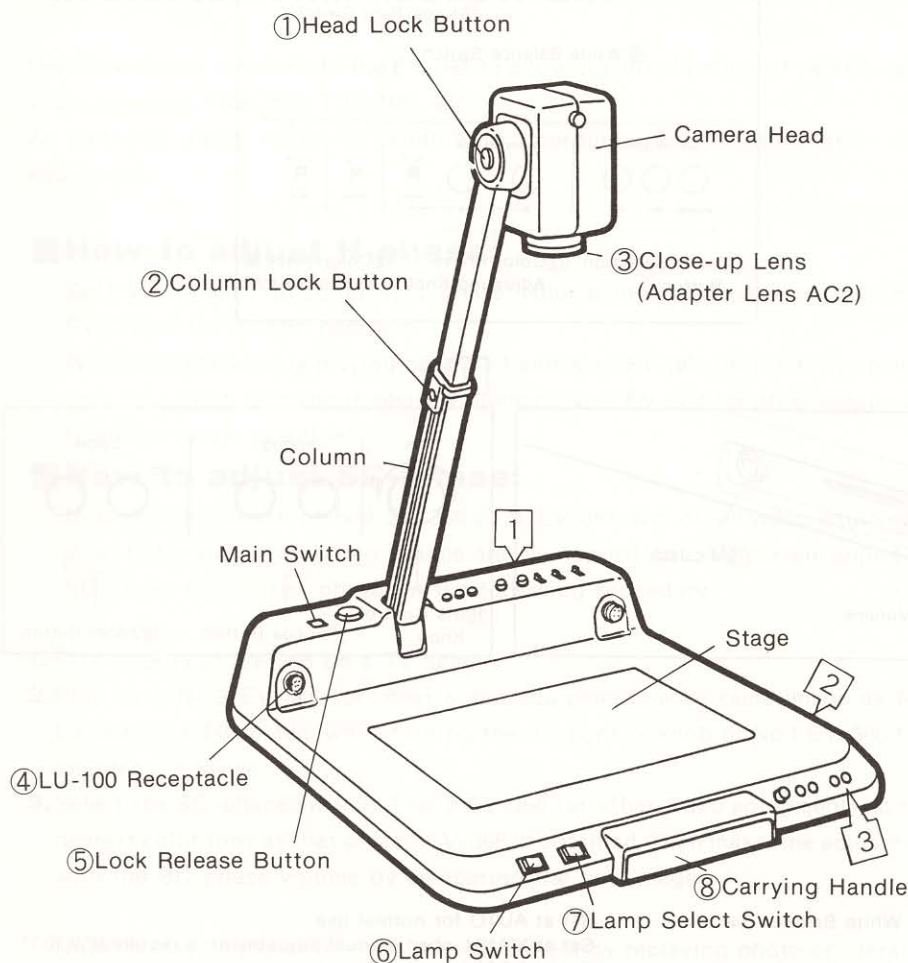
Features:

1. Unlimited applications for all needs of video transfer with VCR, still video recorder, video printer or any other video equipment.
2. The motor-powered 8-time zoom lens for close-up viewing.
3. Built-in transmissive lighting source allowing vivid reproduction of color slides/transparencies.
4. A high-resolution color CCD (approx. 360,000 pixels) offering sharp image reproduction.

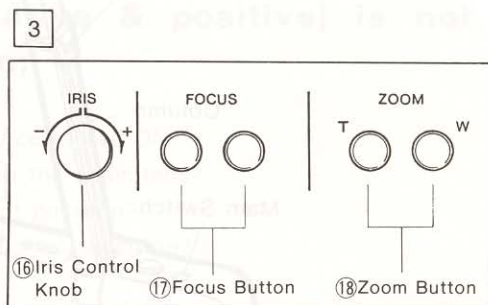
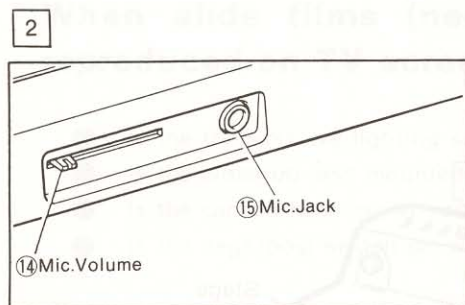
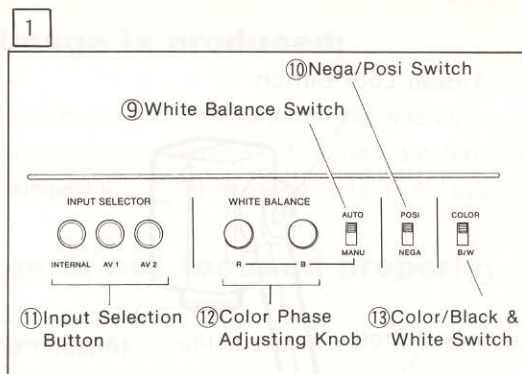
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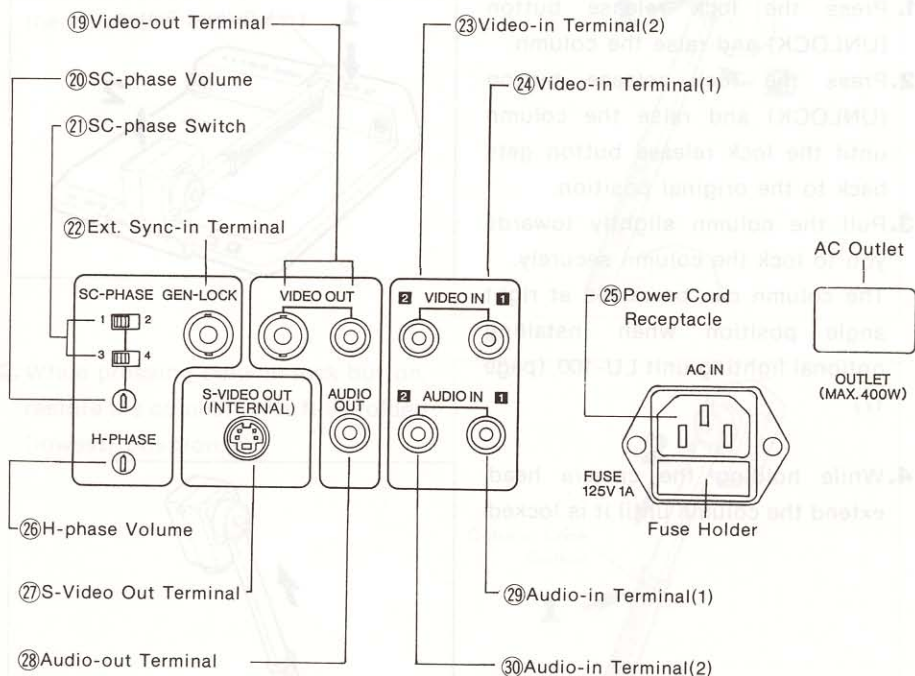
MAJOR PARTS DESCRIPTIONS



- | | |
|-----------------------|---|
| ① Head Lock Button | :Press this button to move the Camera Head P.7,11,12 |
| ② Column Lock Button | :Press this button to slide the Sub Column up/down ... P.10,12 |
| ③ Close-up Lens | :Attach this lens for normal use
Remove this lens for viewing far-away subject P.9,10,11 |
| ④ LU-100 Receptacle | :Receptacle for Elmo Lighting Unit LU-100(optional) P.17 |
| ⑤ Lock Release Button | :Press this button to raise/fold the Main Column P.7,12 |
| ⑥ Lamp Switch | :To turn the lamp on for the transmissive/LU-100 P.10,17 |
| ⑦ Lamp Select Switch | :Set at the BASE for using the transmissive lighting source
Set at OPT. for using LU-100 P.10,17 |
| ⑧ Carrying Handle | :Pull out for carrying |



- ⑨ White Balance Switch :Set at AUTO for normal use
Set at MANU when manual adjustment is required P.9,10,11
- ⑩ Nega/Posi Switch :Set at POSI for normal use
Set at NEGA when negative film is viewed P.9,10,11
- ⑪ Input Selection Button :Set at INTERNAL for normal use
Two optional video sources can be selected P.9,10,11
- ⑫ Color Phase Adjusting Knob :To adjust white balance for manual adjustment P.10
- ⑬ Color/Black&White Switch :Set at COLOR for normal use
Set at B/W when black & white literature is viewed P.9,11
- ⑭ Mic.Volume :To adjust the input level of the microphone P.11
- ⑮ Mic.Jack :Microphone can be connected into this jack
Audio signal is coming out from Audio-out Terminal P.11
- ⑯ Iris Control Knob :To adjust the brightness of image P.9,10
- ⑰ Focus Button :To adjust the focus of image P.9,10
- ⑱ Zoom Button :To adjust the image size P.9,10



- | | |
|-------------------------|--|
| ⑲ Video-out Terminal | :Connect with a monitor TV, video projector, VCR,etc. P.8 |
| ⑳ SC-phase Volume | :For fine adjustment of the sub carrier phase P.14 |
| ㉑ SC-phase Switch | :For rough adjustment of the sub carrier phase.....P.14 |
| ㉒ Ext.Sync-in Terminal | :GEN-LOCK terminal for external synchronization P.14 |
| ㉓ Video-in Terminal(2) | :When the Input Select Button is set at 2,
this video signal is output from the video-out terminal ... P.13 |
| ㉔ Video-in Terminal(1) | :When the Input Select Button is set at 1,
this video signal is output from the video-out terminal ... P.13 |
| ㉕ Power Cord Receptacle | :Connect the power cord P.7 |
| ㉖ H-phase Volume | :To adjust the horizontal sync. phase P.14 |
| ㉗ S-Video Out Terminal | :Connect with a monitor TV with S-Video input terminal ... P.8 |
| ㉘ Audio-out Terminal | :Connect with a monitor TV,video projector, VCR,etc.....P.8,13 |
| ㉙ Audio-in Terminal(1) | :When the Input Select Button is set at 1,
this audio signal is output from the audio-out terminal ... P.13 |
| ㉚ Audio-in Terminal(2) | :When the Input Select Button is set at 2,
this audio signal is output from the audio-out terminal ... P.13 |

PREPARATION

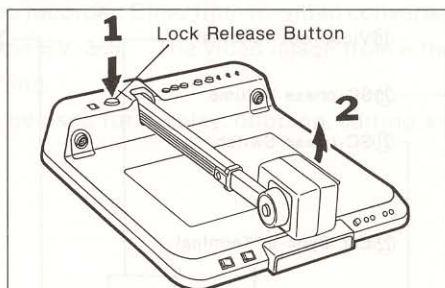
SETTING VISUAL PRESENTER

1. Press the lock release button (UNLOCK) and raise the column.

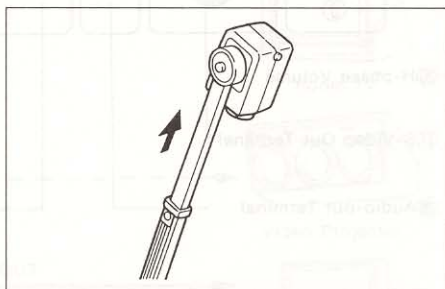
2. Press the lock release button (UNLOCK) and raise the column until the lock release button gets back to the original position.

3. Pull the column slightly towards you to lock the column securely.

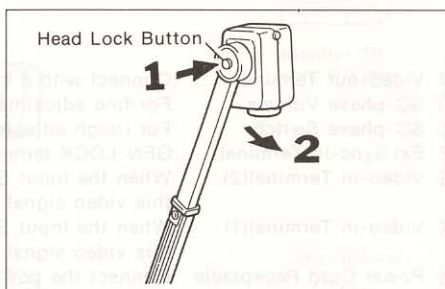
The column can be raised at right angle position when installing optional lighting unit LU-100. (page 17)



4. While holding the camera head, extend the column until it is locked.



5. Press the head lock button and adjust the camera head to the required position.



6. Connect the power cord.

CONNECTION TO MONITOR TV

Connect the EV-368 to a monitor TV with the supplied video-audio cable.

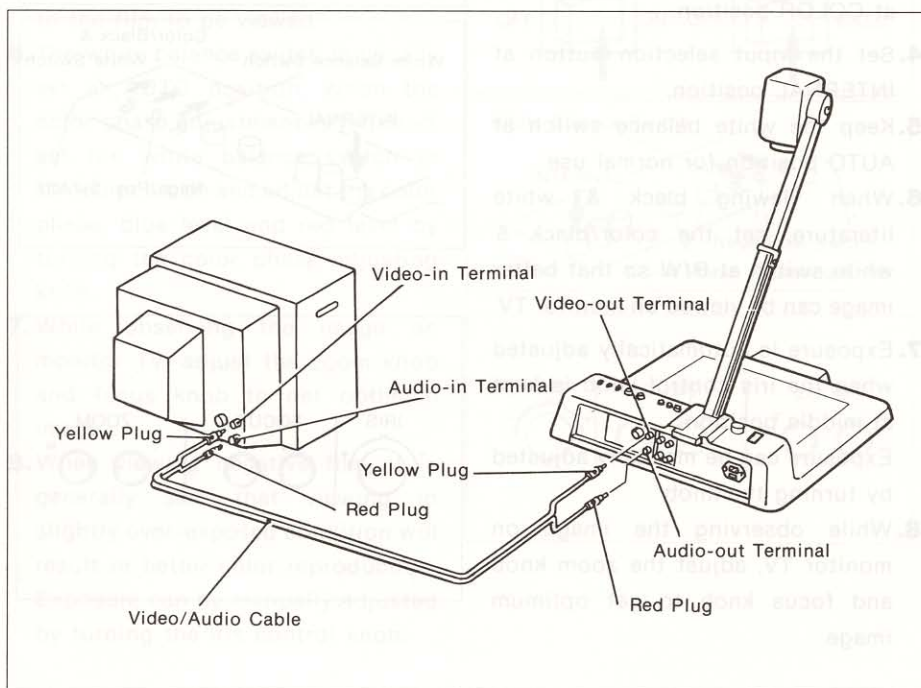
1. Plug in the yellow plug to the video-out terminal and the red plug to the audio-out terminal of the EV-368 respectively.
2. Plug in yellow plug to the video-in terminal and the red plug to the audio-in terminal of the monitor TV.

Note: ●The EV-368 has three video-out terminals(BNC/RCA Female/S-Video terminal)and any of them may be used. Three monitor TV's can be connected.

●S-VIDEO OUT TERMINAL

When the S-Video terminal is used, only the image from EV-368 (INTERNAL) is output through, and the input selection buttons of the EV-368 is inoperative.

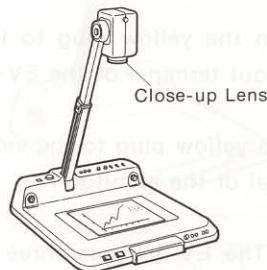
(Use the S-Video connection cable which is available on the market.)



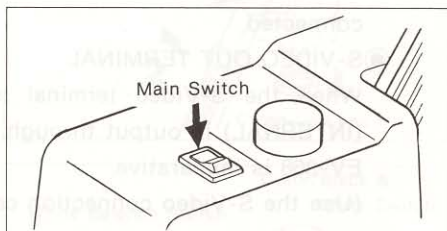
PRESENTATIONS

LITERATURE AND PHOTO VIEWING

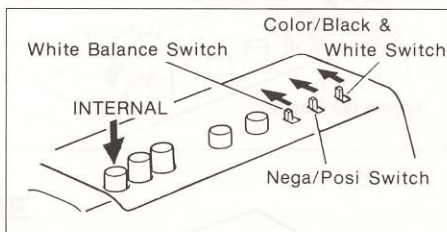
With the 8-time zoom lens built-in, materials in various size, from a half of name card to B4 sheet can be viewed on monitor TV.



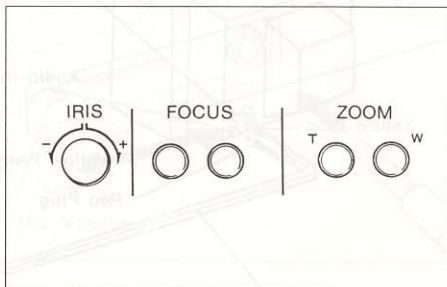
1. Set the main switch to ON.
2. Make sure the close-up lens is mounted.
3. Set the nega/posi switch at POSI position.
Set the color/black & white switch at COLOR position.



4. Set the input selection button at INTERNAL position.
5. Keep the white balance switch at AUTO position for normal use.
6. When viewing black & white literature, set the color/black & white switch at B/W so that better image can be viewed on monitor TV.

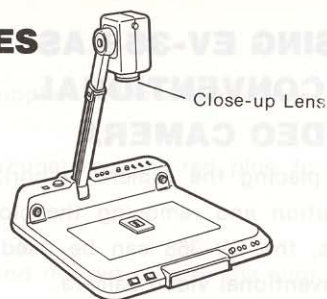


7. Exposure is automatically adjusted when the iris control knob is kept at middle position.
Exposure can be manually adjusted by turning the knob.
8. While observing the image on monitor TV, adjust the zoom knob and focus knob to get optimum image.

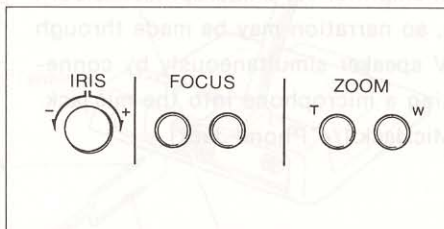
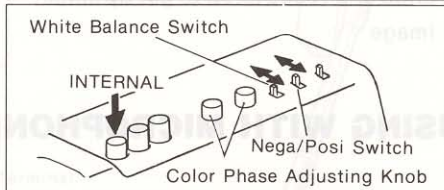
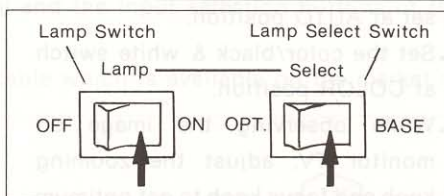
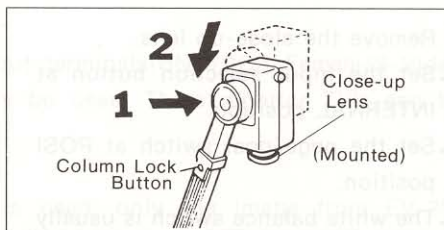


SLIDE FILMS/TRANSPARENCIES (POSITIVE & NEGATIVE) VIEWING

With the transmissive lighting source built in the stage, from 35mm to A4 size negative/positive films can be viewed without any optional adapter.



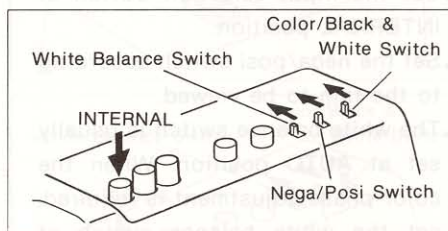
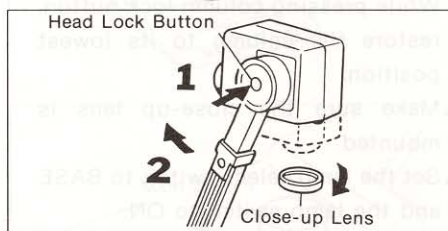
1. While pressing column lock button, restore the column to its lowest position.
2. Make sure the close-up lens is mounted.
3. Set the lamp select switch to BASE and the lamp switch to ON.
4. Set the input selection button at INTERNAL position.
5. Set the nega/posi switch according to the film to be viewed.
6. The white balance switch is usually set at AUTO position. When the color phase adjustment is required, set the white balance switch at MANU position and adjust the color phase, blue level and red level by turning the color phase adjusting knob.
7. While observing the image on monitor TV, adjust the zoom knob and focus knob to get optimum image.
8. When viewing negative film, it is generally said that viewing in slightly over-exposed condition will result in better color reproduction. Exposure can be manually adjusted by turning the iris control knob.



USING EV-368 AS A CONVENTIONAL VIDEO CAMERA

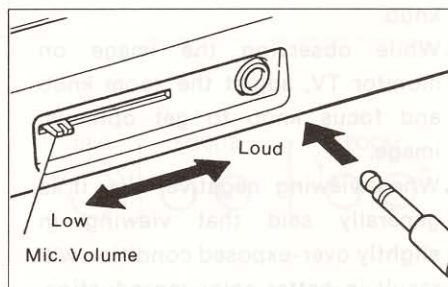
By placing the camera in horizontal position and removing the close-up lens, the EV-368 can be used as a conventional video camera.

1. Remove the close-up lens.
2. Set the input selection button at INTERNAL position.
3. Set the nega/posi switch at POSI position.
4. The white balance switch is usually set at AUTO position.
5. Set the color/black & white switch at COLOR position.
6. While observing the image on monitor TV, adjust the zooming knob and focus knob to get optimum image.



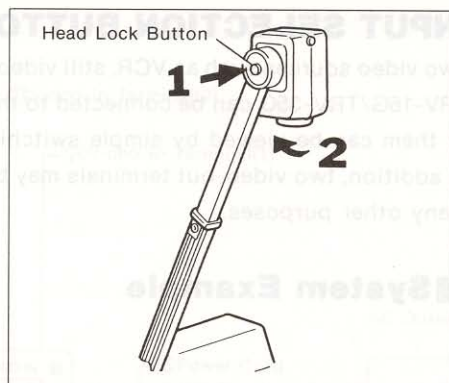
USING WITH MICROPHONE

An amplifier for a microphone is built in, so narration may be made through TV speaker simultaneously by connecting a microphone into the mic.jack. (Mic.Jack:1/4"Phone Jack)

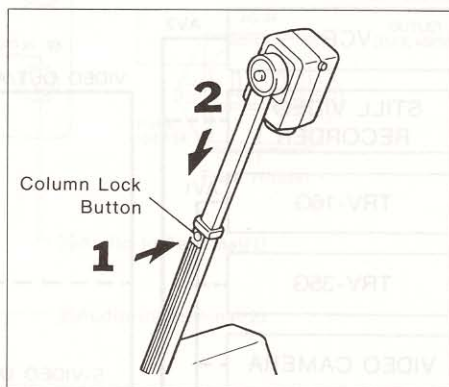


STOWING

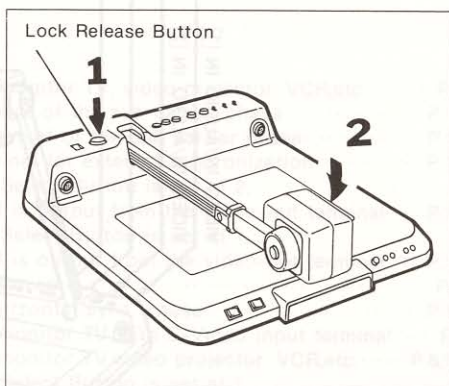
1. Press the head lock button and place the camera head parallel with the column.



2. While pressing column lock button, restore the column to its fully folded (lowest) position.



3. Slightly raise the column and press the lock release button (UNLOCK). While holding the column, fold it down to the stage.



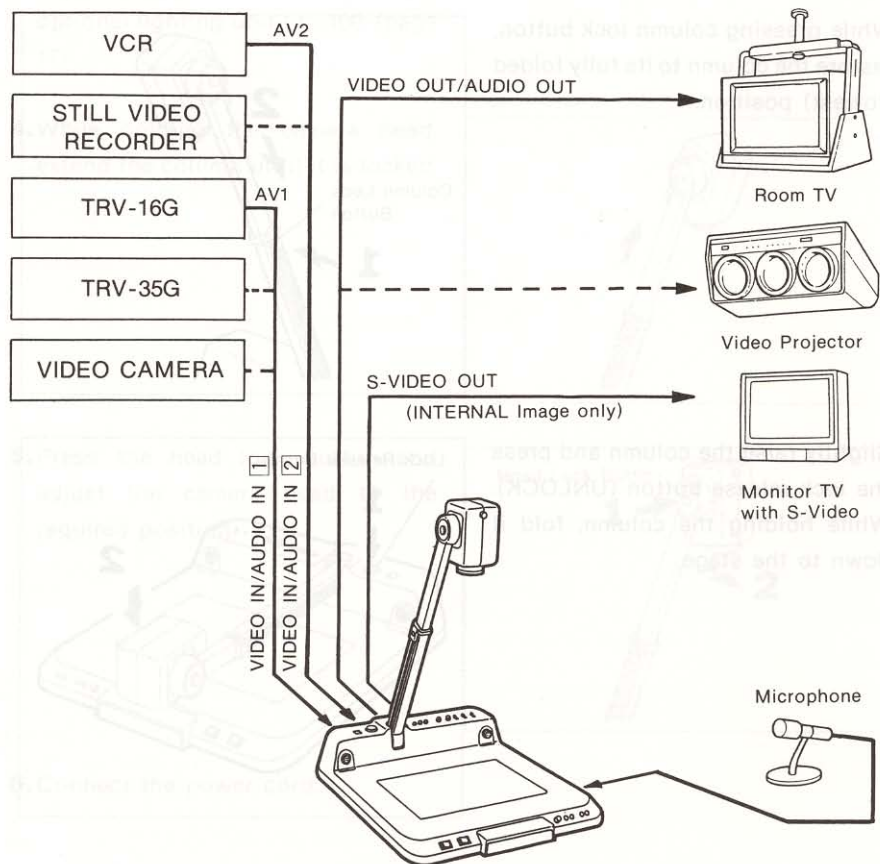
OTHER APPLICATIONS

INPUT SELECTION BUTTON SETTING

Two video sources such as VCR, still video recorder, Elmo film-to-video converters TRV-16G/TRV-35G can be connected to the EV-368. The video image from either of them can be viewed by simple switching.

In addition, two video-out terminals may be used for display, dubbing, editing and many other purposes.

■ System Example



EXTERNAL SYNC. ADJUSTMENT

Gen-lock circuit is built into the EV-368 to allow combination use of two EV-368's, video cameras, TRV-35G, TRV-16G, etc.

An optional video mixer is required to coordinate EV-368 and other video equipment.

■ How to adjust H-phase:

Set the H-phase (horizontal sync. phase) volume on the rear panel of No.1 (main) EV-368 at the middle position.

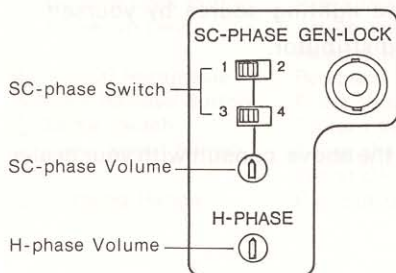
While simultaneously playing back No.1 and No.2 EV-368 (or other equipment) on a TV screen, turn the H-phase volume of No.2 EV-368 (or other equipment) to adjust image position.

■ How to adjust SC-phase:

In case color phase of two EV-368's (or EV-368 and other video equipment) does not match when video images are overlapped on a TV screen, adjust the SC-phase (subcarrier phase) in the following procedure.

1. Play back No.1 EV-368 on a TV screen.
2. Play back No.2 EV-368 (or other video equipment) with same image as No.1 EV-368 on a TV screen, while turning the iris control knob of No.1 EV-368 fully counter clockwise.
3. Select the SC-phase switch of No.2 EV-368 (or other video equipment) so that nearest color tone as that of No.1 EV-368 is obtained. Then make fine adjustment with the SC-phase volume by comparing the two images.

Note: It may be easier to make the adjustment by replaying photo or literature in skin color. Keep the SC-phase switch and SC-phase volume of No.1 (main) EV-368 unchanged.



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

TROUBLE-SHOOTING HINTS

When no image is produced;

- Is the iris control knob positioned at the middle?
- Is the video cable connected to the video-out terminal properly?
- Is the input selection button set at INTERNAL position?

When image is not focused properly;

- Is the close-up lens mounted properly?

When slide films (negative & positive) is not reproduced on TV screen;

- Is the transmissive lighting source turned ON?
- Is the close-up lens mounted on the zoom lens?
- Is the camera head set at correct position?
- Is the nega/posi switch set at correct position?

When image is not produced or disturbed for unknown reason;

- Once turn off the power switch, and turn it on again.

When lamp is not quickly turned on/off at operating the lamp switch or the lamp select switch;

- This is not a fault.
- This is caused by built-in safety circuit for protecting the lamp.
- Do not replace the lamp of transmissive lighting source by yourself.
Contact your dealer or nearest ELMO distributor.

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

SPECIFICATIONS

■ POWER

Power source
Power consumption

AC 120V 60Hz
43W

■ OPTICS

Lens
Shooting area
Zooming
Focusing
Iris
Transmissive lighting source

F1.4~2.1, $f = 8.5 \sim 68\text{mm}$
330 × 250mm max.
Powered
Powered/manual
Auto (with fine adjustment)
Built-in(A4 size)

■ VIDEO

Television system
Image pick-up element
Picture element
Sync. system
Resolution

NTSC compatible
1/2" Interline-transfer CCD
682(H) × 492(V)
Internal/external sync.
More than 400 TV lines (Horizontal)
More than 350 TV lines (Vertical)

S/N ratio
Output signal

46dB
C-VIDEO VBS 1.0Vp-p/75Ω unbalanced
S-VIDEO Y:1.0Vp-p/75Ω unbalanced
C:0.286Vp-p/75Ω unbalanced

External sync.input condition
External sync. frequency

C-VIDEO (75Ω unbalanced)
Sync.: 0.3V±0.1V, Burst: 0.3V±0.1V
Against NTSC standard H±20ppm
SC±50ppm

H-phase adjustment
SC-phase adjustment
White balance
Nega/posi conversion
B&W/Color selector
Input selection button
Input terminals

Manual(0~4μs)
Manual(0~360°)
Full-auto/manual
Built-in
Built-in
3 buttons

Output terminals

Video-in(RCA Female/75Ω unbalanced)×2
Ext.sync.input(BNC connector/75Ω unbalanced)×1
Mic.input(1/4" Phone Jack/600Ω, -65dB)×1
Audio-in (RCA Female/10KΩ, -10dB)×2
C-Video output
(BNC connector/75Ω unbalanced)×1
(RCA Female/75Ω unbalanced)×1
S-Video output:Independent terminal
(Mini DIN 4P connector/75Ω unbalanced)×1
Audio-out(RCA Female/10KΩ, -10dB)×1
+5°C~40°C
30%~90%

■ OPERATING AMBIENT

Temperature
Humidity

■ DIMENSIONS & WEIGHT

Dimensions

Approx. 450(W) × 565(D) × 665(H)mm
-when set-up
Approx. 450(W) × 565(D) × 137(H)mm
-when folded

Weight

Approx.9.6kgs (21.1lbs)

■ Supplied accessories

Power cord × 1
Video-audio cable × 1
Close-up lens × 1
Dust cover × 1
Connector cap × 2
Operation manual × 1

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

OPTIONAL ACCESSORIES

When the lighting unit LU-100 (optional accessory) is not used, please put the connector caps (supplied) onto both receptacles of the EV-368.

- Do not put a chip of metal or similar into the receptacle.

INSTRUCTION GUIDE FOR OPTIONAL ACCESSORIES LIGHTING UNIT : LU-100

LU-100 is designed for combination-use with EV-368 to obtain better video image, especially when a three-dimensional object is presented or the stage-lighting is insufficient, mount the optional lighting unit LU-100 on the EV-368.

HOW TO INSTALL

1. Insert the lighting unit (left) into the left receptacle of EV-368 and turn the fastening ring securely.
2. Insert the lighting unit (right) into the right receptacle of EV-368 and turn the fastening ring securely.

HOW TO STOW

1. Press the lock release button and raise the column fully.
2. Fold the lighting unit (left) down to the stage, and then fold the lighting unit (right) down to the stage.
3. Fold the column down to the stage.

HOW TO USE

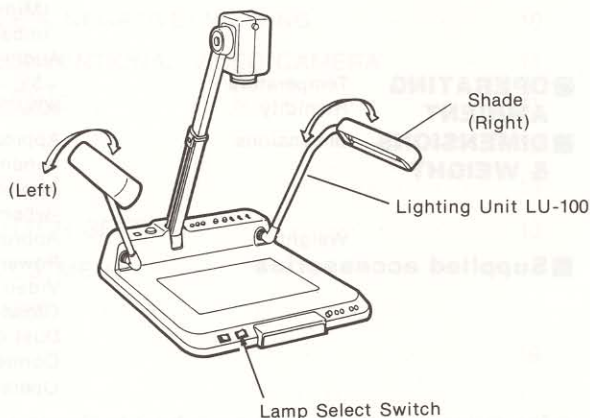
1. Press the lock release button and raise the column fully.
2. Raise the lighting unit (right) fully, and then raise the lighting unit (left) fully.
3. Set the column at locked position.
4. Set the lamp select switch to 'OPT.' and set the lamp switch to ON.
5. Adjust the lamp shades.

NOTE: Be sure to use the specified 6w Fluorecent lamp for replacement.

Specifications:

Lamp 6W (type:FL6W)

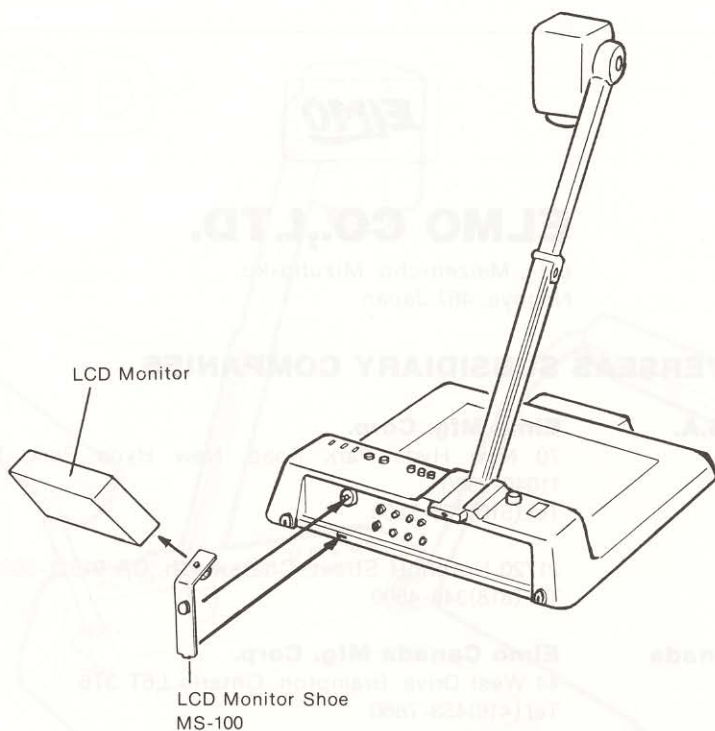
Weight Approx 1.3Kgs (2.9lbs)



LCD MONITOR SHOE : MS-100

When LCD monitor TV is used, attach this shoe for mounting. (LCD monitor TV which has a screw hole for a tripod, can be mounted.)

For connecting cables, please refer to the instruction manual of LCD monitor TV.



WARNING:

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