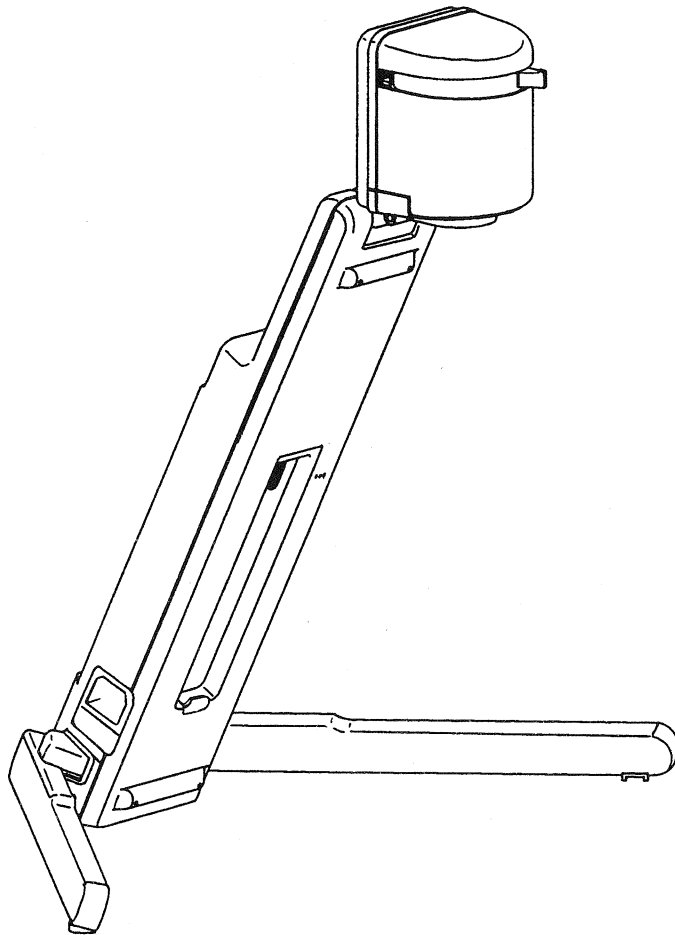


DESK-TOP PRESENTER

DT-100AF

INSTRUCTION MANUAL



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 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 never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

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

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

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

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

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

■ **A product and cart combination should be moved with care.**

Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



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

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

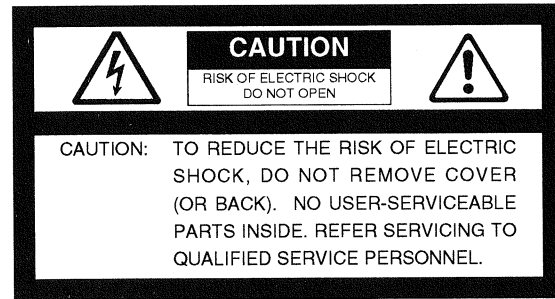
■ **Damage Requiring Service** – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

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

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

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

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



SA 1965

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



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.

Handling Precautions

- Be sure to use the specified AC power source.
- Cut off power supply and unplug the power cord when a thunder storm occurs during use.
- Disassembling or modifying the Presenter may result in electrical shock and machine malfunction. We are not responsible for any deterioration or failure of the 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 used for purposes other than specified, we cannot guarantee its performance, service life, or safety.
- Do not expose the Presenter to direct sunlight or leave it in close proximity to a heater. Doing so may cause discoloration, deformation, or mechanical problems.
- Set the Presenter in a place free from excessive humidity and dust, sea air, and strong vibration. Install the Presenter in the following conditions:
 - Temperature: 0°C ~ 40°C (32°F ~ 104°F)
 - Humidity: 30% ~ 85% (No condensation allowed)
- Use only a soft, dry cloth for cleaning. Using benzine or thinner for cleaning may damage the coating or resin.
- Do not point the camera lens directly at the sun. Doing so may damage the camera.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

Batteries

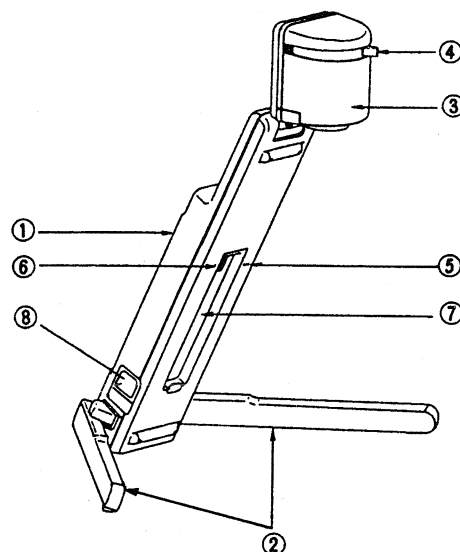
- Remove the batteries when not using the Presenter for long periods.
- Do not use Ni-Cd batteries.
- When changing the batteries, replace both batteries at the same time. It is suggested not to mix an old battery and a new one, or mix batteries of different types.
- Do not short circuit or charge the battery.

Contents

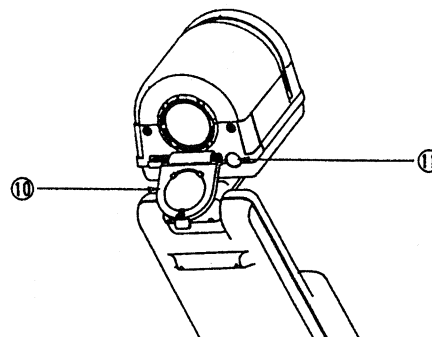
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Part Names

- ① Main unit
- ② Legs
- ③ Camera head
- ④ Lens lever
- ⑤ Microphone
- ⑥ Remote control receiver (from wireless remote control)
- ⑦ Remote control storage compartment
Store the wireless remote control with the transmitter facing the receiver ⑥ on the main unit.
- ⑧ Power cord receptacle (for power cord connection)

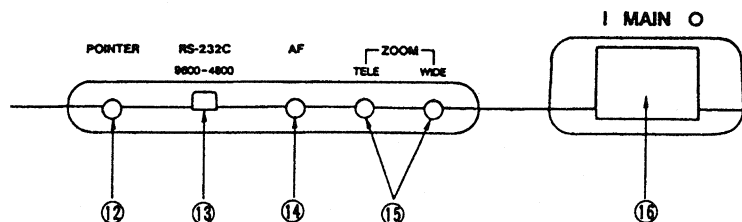


- ⑩ Close-up lens
Attach this lens for normal use, and remove it when viewing distant objects.
- ⑪ LED light indicator
Emits a flashing red light.



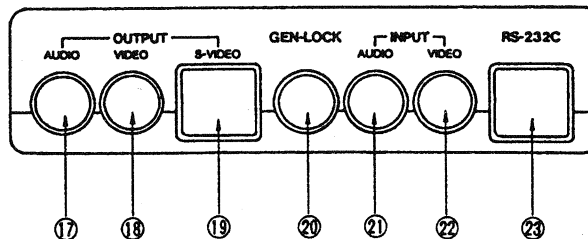
Operation panel

- ⑫ LED light indicator button [POINTER]
A red LED flashes for about five seconds as a reference point so that the material can be set in the center of the monitor screen.
- ⑬ RS-232C baud rate setting switch [RS-232C]
- ⑭ Auto focus button [AF]
One-step automatically focusing.
- ⑮ Zoom buttons [ZOOM]
Adjust the image size.
- ⑯ Power switch [MAIN]
[I] – power ON, [O] – power OFF.



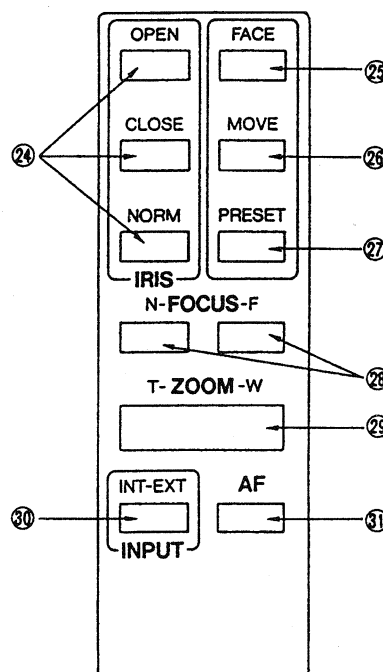
Terminal panel

- ⑰ Audio-out terminal [OUTPUT AUDIO]
Connected to audio-in terminal of TV monitor, etc.
- ⑱ Video-out (composite) terminal [OUTPUT VIDEO]
Connected to video-in terminal of TV monitor, etc.
- ⑲ S-video out terminal [OUTPUT S-VIDEO]
Connected to S-video in terminal of TV monitor, etc.
- ⑳ Ext. sync. input terminal [GEN-LOCK]
GEN-LOCK terminal for external synchronization.
- ㉑ Audio-in terminal [INPUT AUDIO]
Audio signal is output from the audio-out terminal ⑰ when input selection is set to EXT.
- ㉒ Video-in (composite) terminal [INPUT VIDEO]
Video signal is output from the video-out terminal ⑱ when input selection is set to EXT.
- ㉓ RS-232C terminal [RS-232C]
Input terminal for external control signal.



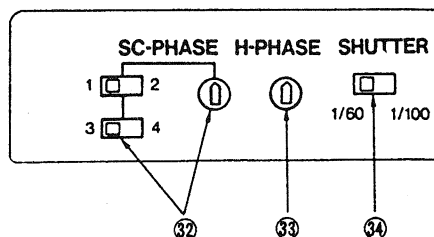
Remote control

- ㉔ Iris adjustment buttons [IRIS]
[OPEN] : Open the manual iris.
[CLOSE] : Close the manual iris.
[NORM] : Auto-iris mode.
- ㉕ Face mode button [FACE]
Sets the image size when the Presenter is used as a face camera.
- ㉖ Move button [MOVE]
Zooms to the preset image size.
- ㉗ Preset button [PRESET]
Stores the zoom size of the image.
- ㉘ Focus buttons [FOCUS]
Adjust the focus manually.
[N] : Focuses on a close object.
[F] : Focuses on a distant object.
- ㉙ Zoom buttons [ZOOM]
Adjust the image size.
[T] : Telephoto zoom.
[W] : Wide angle zoom.
- ㉚ Input selection button [INPUT]
Changes the input line.
- ㉛ Auto focus button [AF]
One-step automatic focusing.



Rear panel

- ㉜ Color phase control volume/switches [SC-PHASE]
Adjust the sub carrier phase.
- ㉝ Horizontal phase control volume [H-PHASE]
Adjusts the horizontal sync. phase.
- ㉞ Shutter speed selection switch [SHUTTER]
Sets the shutter speed.



Remote Control

- Aim the remote control at the infrared receiver on the main unit, and press the desired operation button.
The signal is effective within 7 m of the receiver, and within the area 30° to the right and left from directly in front of the receiver. Effective distance may be shortened depending on room conditions (fluorescent lighting, direct sunlight, etc.). When fluorescent lighting interferes with the remote control signal, set the main unit in another place.
- The remote control can be used even when stored in the main unit. Pull the remote control toward you, while pressing the transmitter down to remove the remote control from the main unit.

Preparation

Remove the battery compartment cover. Push the [↓ OPEN] mark on the rear cover of the remote control in the direction of the arrow. Place two batteries (type R03, AAA) in the compartment in the correct direction.

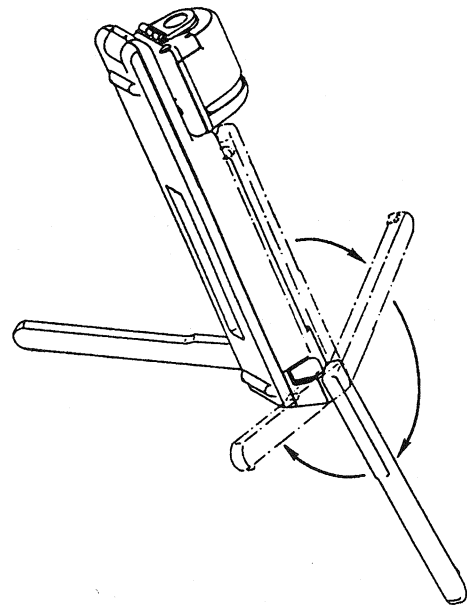
[Note] Be sure to place batteries in direction indicated.

Battery service life varies depending on its type and operation condition. Replace the batteries annually.

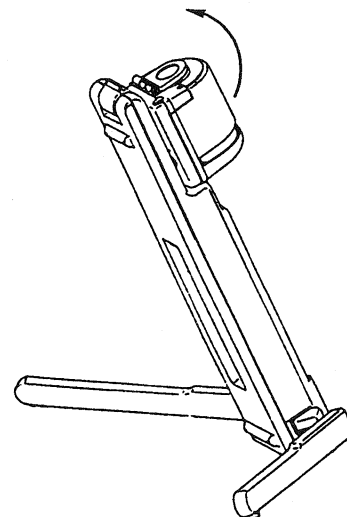
Batteries are provided with the Presenter. These batteries are only for checking the operation of the Presenter. The service life of them is not covered under warranty.

Setting Up

- ① Turn the legs until they are fully open. Move only one leg at a time and never apply excessive force in the wrong direction.



- ② Turn the camera head as shown.



- ③ Connect the power cord to the AC outlet.

Connection to TV Monitor

Use the video-out terminal [OUTPUT VIDEO] or S-video out terminal [OUTPUT S-VIDEO] for connection. An image can be output to each side even when both composite video and S-video output terminals are connected.

[Note] Turn the power switch off [O] before connection to protect the Presenter and any peripheral devices connected.

Hold the cable plug firmly when disconnecting the video cable.

Connection to composite video-in terminal

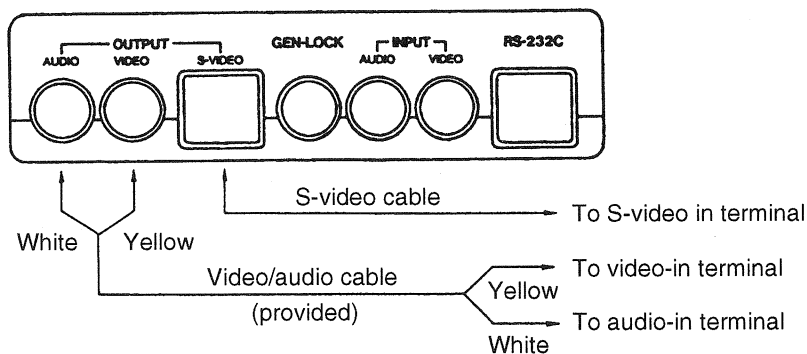
Use the provided video/audio cable with RCA pin plugs.

Connection with S-video in terminal

Connect the S-video out terminal [OUTPUT S-VIDEO] (mini DIN 4P) on the Presenter and the S-video in terminal on the TV monitor.

Use a commercially available S-video connection cable for S-video connection.

If the device to be used has a Y/C separate connector, a conversion adapter is required.



Operation

Simple steps for presenting printed materials

Connecting the Presenter to the monitor should be completed previously.

- ① Turn the power switch on [I].
- ② Place the object. Adjust the image size using the [ZOOM] buttons while observing the monitor screen.
- ③ Press the auto focus button [AF] for focusing.

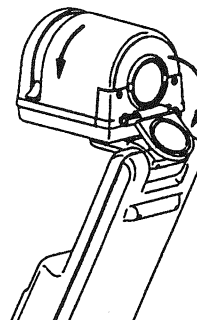
[Note] Focusing range is up to approximately 10 cm above the stage surface.

For shooting the face towards yourself

Turn the camera head towards yourself. Turn over the lens lever to obtain the proper image.

For use as a conventional video camera

Remove the close-up lens when shooting an object in the telephoto position. Set the camera head to the horizontal position to capture pictures on the wall, or distant objects, etc.



Functions

Input selection

Images from separate AV sources, such as a VCR and video camera, can be selected to be viewed on the TV monitor by simply pressing the input selection button [INPUT], without changing any cable connections. This can be done using the remote control.

Input selection cannot be used to convert signals. For example, a video-in signal cannot be converted and output as an S-video out signal, or vice versa.

Input/output terminal selection list

Input selection \ Output			Video-out terminal		Audio-out terminal
			S-video	Composite video	
Internal	Built-in camera image signal	S-video	○	—	—
		Composite video	—	○	—
	Microphone	Monaural	—	—	○
External	External video signal	Composite video	—	○	—
	External audio signal	Monaural	—	—	○

The image from the main camera is output to the S-video out terminal, regardless of the input selection.

Zoom [ZOOM]

Pressing [TELE] ([T] on remote control) enlarges the image.

Pressing [WIDE] ([W] on remote control) reduces the image.

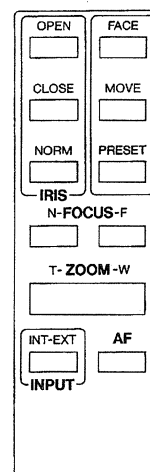
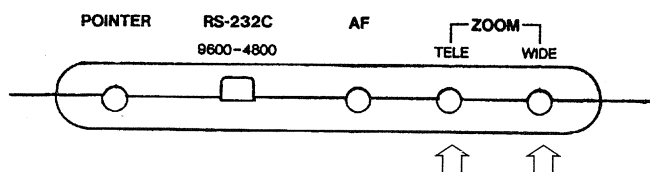


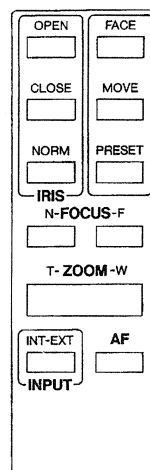
Image size presetting

The image size can be preset from the remote control.

Pressing the [PRESET] button stores the current image size. Even after changing the image size with the [ZOOM] button, pressing the [MOVE] button returns the image to the preset size.

Pressing the [PRESET] button again automatically updates the preset image size.

[Note] The preset image size is retained when power is turned off.



Microphone

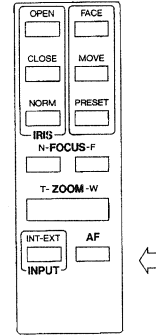
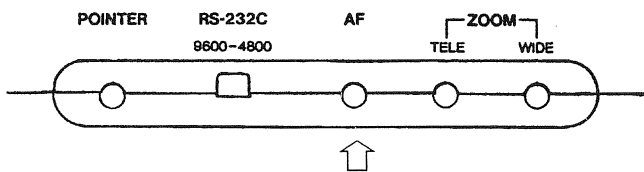
The monaural audio signal of the microphone is output to the audio-out terminal. Connect the audio-out terminal [OUTPUT AUDIO] and audio-in terminal on the TV monitor.

Auto focus [AF]

- The Presenter features a one-step auto focus function. Once the Presenter has correctly focused on an object, the focused point is retained. The auto focus works each time you push [AF].

[Note] Focusing range is up to approximately 10 cm above the stage surface.

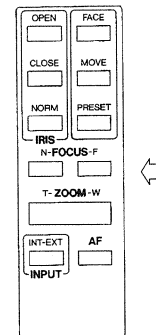
- Press [TELE] ([T] on remote control) to obtain the largest image of the object for more accurate focusing.
- It may be difficult to automatically focus on objects below under the following conditions. Focus on these manually
 - Object bearing little contrast
 - Object with a fine repeated pattern, such as lateral stripes or a checkered pattern
 - Bright object or one reflecting strong light
 - Object in front of a bright background, or bearing too much contrast
 - Dark picture plane
 - An image including both distant and close objects
 - Moving object
- Pressing the manual focus button during auto focus cancels automatic focusing.



Manual focus [FOCUS]

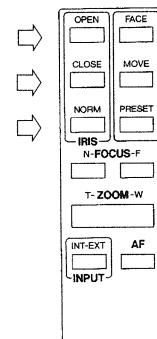
Press the focus buttons ([N] or [F]) to focus on the desired position of three dimensional materials.

[Note] Focusing range is up to approximately 10 cm above the stage surface.



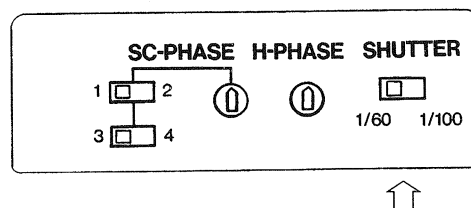
Iris [IRIS]

Press the [OPEN] and [CLOSE] buttons to correct the exposure. Press the [NORM] button to return to the initial status. This can be done using the remote control.



Shutter speed switch [SHUTTER]

When the switch is set to [1/60] in areas with a 50 Hz power supply, flickering may occur under fluorescent lamps and mercury lamps. Setting the shutter speed switch to [1/100] may reduce this flickering. Set the switch to [1/60] (original setting) in areas with a 60 Hz power supply.



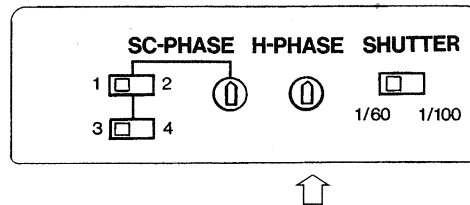
External Sync. Adjustment

External sync. adjustment is required when projecting composite images from multiple AV sources, such as the Presenter, video cameras (including TRV-35H and TRV-16H) to a single TV monitor.

Horizontal sync. phase adjustment and sub carrier phase adjustment are required to match the color phases of each image. A video mixer is required to reproduce composite images. Refer to the instruction manual of the respective video mixer for additional information on connection method.









Horizontal sync. phase adjustment volume

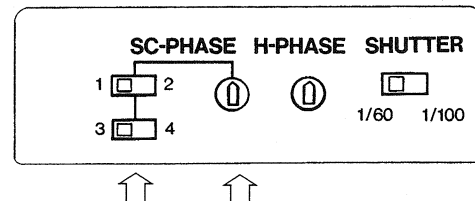
Used to adjust the horizontal phase when presenting composite images. Use a \ominus screwdriver of the appropriate size.



Sub carrier phase adjustment

Used to adjust the color phase of the image output signal of the Presenter to the base signal when presenting composite images. Set the color phase control switch [SC-PHASE] so that the image color phase is as close to that of the base signal as possible. Fine adjust them with the color phase volume. Use a \ominus screwdriver of the appropriate size.

SC-phase	0°	90°	180°	270°
Switch position	<div>1  2</div> <div>3  4</div>	<div>1  2</div> <div>3  4</div>	<div>1  2</div> <div>3  4</div>	<div>1  2</div> <div>3  4</div>



RS-232C Connection

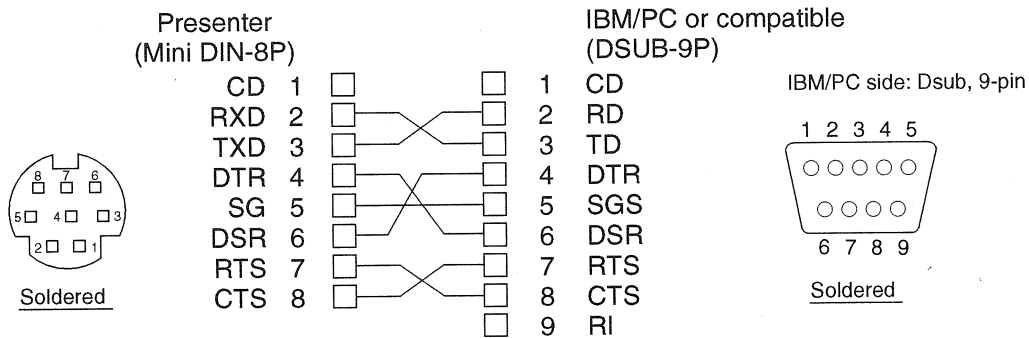
The Presenter can be controlled by a personal computer by connecting it to the [RS-232C] terminal.

Set up

- ① Connect the Presenter to the personal computer with the RS-232C connection cable. Refer to the connection diagram below. When using a commercially available RS-232C cable, make sure that it is correctly connected as described below.
- ② Start the personal computer to set the RS-232C communication mode identical to that of the Presenter. Refer to the instruction manual of the personal computer for setting the RS-232C mode.
- ③ Set the transmission speed of the Presenter identical to that of the personal computer, and turn the power on.
- ④ Start the program of the personal computer to operate the Presenter.
- ⑤ Control via RS-232C is started.

[Note] Be sure to observe the steps above for communication control from the personal computer.

Connection diagram



[Note] No response is received when the Presenter is not correctly connected to the personal computer.

RS-232C connector specifications (Mini DIN-8P)

Pin No.	Code	Name	Direction of data	
			Presenter	PC
1	CD	Carrier detection	—	
2	RXD	Received data	←	
3	TXD	Transmitted data	→	
4	DTR	Data terminal ready	→	
5	SG	Signal ground	—	
6	DSR	Data set ready	←	
7	RTS	Request to send	→	
8	CTS	Clear to send	←	

Transmission mode

All double synchronization system

Start bit : 1 bit

Data bit : 8 bits

Stop bit : 1 bit

Parity bit : None

X parameter : None

Baud rate (transmission speed) : 4800 bps, 9600 bps

Baud rate setting

- Set the baud rate for the RS-232C identical to that of the personal computer using the baud rate setting switch [RS-232C 9600-4800], and supply power.
- The baud rate setting will be effective upon power supply. Turn the Presenter off, change the baud rate, and then supply power again when changing the baud rate during operation.

[Note] The baud rate is preset to 4800 bps when shipped from factory.

Data format

Commands are in a data format of 1-command/1-packet.

The next command is not received until the one being currently processed is completed.

Communication response

- The Presenter and the personal computer communicate in ASCII code according to the format below.
- Communication response (Presenter → Personal computer)

ACK [06H] Sent upon normal acknowledgement.

NAK [15H] Sent upon negative acknowledgement.

Transmission format (Personal computer → Presenter)

- One 7 byte operation command set is transmitted.

[STX]	Command	Parameter	Data	[ETX]
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>
02H				03H

- (1) The communication command must start with STX (Start of Text) and end with ETX (End of Text).
- (2) If the transmission format or the command name is wrong, NAK (Negative Acknowledgement) is sent from the Presenter as a result of failing to receive correctly.
- (3) If the sent format is correct, the Presenter sends ACK (Acknowledgement).

Response data format (Presenter → Personal computer)

- Status request format

[STX]	Zoom	Focus	Iris	Iris A/M	Video selection	Audio selection	Pointer	Local lockout	[ETX]
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02H									03H

The response data for zoom, focus, and iris correspond to the communication command data. Other response data corresponds to the communication command parameter.

- ROM version

[STX]								[ETX]
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02H								03H

Communication command list

Function	Command	Parameter	Data	Comments
Auto focus	AF	0	■■	Automatic one-step focusing.
Focus	FO	+ (NEAR) - (FAR) 0 (OFF)	■■	Manual focusing.
Focus position control	FP	0	△△	Sets the focus position directly. <Setting range △△> NEAR: 80H (End of TELE ~ 54H) 9AH (54H ~ End of WIDE) FAR: 00H Setting accuracy varies depending on zoom position.
Zoom	ZO	+ (TELE) - (WIDE) 0 (OFF)	■■	Executes zooming.
Zoom position control	ZP	0	△△	Sets the zoom position directly. <Setting range △△> TELE: 06H WIDE: EAH Setting accuracy: ± 3H
Iris	IR	+ (OPEN) - (CLOSE) 0 (OFF)	■■	Adjusts the iris.
Iris position control	IP	0 (AUTO) 1 (MANU.)	△△	Sets the iris position directly. <Setting range △△> • Auto iris (in increments of 10H) Insufficient exposure: 00H Standard exposure: 80H Excessive exposure: F0H • Manual iris OPEN: CDH ± 4H CLOSE: 33H ± 4H Setting accuracy: ± 2H
Iris selection	AI	0 (AUTO) 1 (MANU.)	■■	Switches Auto iris and Manual iris.
Auto iris ALC setting	ID	0 (NORM.) 1 (PEAK) 2 (AVER.)	■■	Sets ALC for Auto iris. Valid only when auto iris is selected.

Function	Command	Parameter	Data	Comments
Video selection	VS	0 (INT.) 1 (EXT.)	■■	Changes the video-in selection.
Audio selection	AS	0 (INT.) 1 (EXT.)	■■	Changes the audio-in selection.
Pointer control	PO	0 (OFF) 1 (ON)	■■	Invalidates the pointer switch. Note: The pointer cannot be turned on/off by this command.
Local lock-out	LL	0 (OFF) 1 (ON)	■■	Invalidates switches on main unit (POINTER, AF, TELE, WIDE).
Default	DF	0	■■	Returns to status at initial power supply.
Status request	QS	0	■■	Requests information on unit condition.
ROM version	QR	0	■■	ROM version reference.
Response data 1	SA	0 (OFF) 1 (ON)	■■	Checks response of each function command. Default: ON
Response data 2	SC	0 (OFF) 1 (ON)	■■	Adds CR [0DH] to end of response data. Default: OFF

[Note] ■■■ in the data column above represents transmission of SPACE [20H] twice.

Troubleshooting

Problem	Check item
No image on monitor.	<ul style="list-style-type: none"> • Is video cable connected correctly? • Is power plug connected to AC socket? • Is power cord connected to receptacle on Presenter? • Is power switch turned on? • Is zoom set to [TELE] and focusing only on white part of material? Set an object.
Out of focus	<ul style="list-style-type: none"> • Is distance from lens to object appropriate? • Is object within 10 cm above the stage surface? • Is zoom set to [WIDE] after focusing? Set zoom to [TELE] limit when focusing. • Is object included in list on page 10? The Presenter cannot automatically focus on some objects (see page 10).
Input selection cannot be made	<ul style="list-style-type: none"> • Is S-video out terminal connected to monitor although composite video input is required? The image from the main camera is already output to the S-video out terminal.
Striped pattern appears on image of printed material.	Is this due to interference between resolution of material and scanning lines? If so, this is not a fault.

If any problem still persists even after checking the above items, consult your nearest dealer or an authorized Elmo service center.

Specifications

<General>

Power supply:	AC Single phase, 50/60 Hz
Power consumption:	9.5 W
External dimensions:	Approx. 370 mm (W) x 370 mm (D) x 495 mm (H) (14.6 x 14.6 x 19.5 in.) - When set up Approx. 116 mm (W) x 126 mm (H) x 458 mm (D) (4.6 x 5.0 x 18.0 in.) - When folded
Weight:	1.9 kg (4.2 lbs) (w/o remote control)

<Optics>

Lens:	F 1.8 ~ 2.7, f = 5.8 mm ~ 58 mm
Scanning area:	300 mm x 225 mm max. (WIDE, Scan 100%)
(On stage surface)	34 mm x 26 mm min. (TELE)
Limit of focus adjustment:	Up to 100 mm above stage surface (lens facing down, with close-up lens) ∞ ~ 1.0 m (camera facing sideways, w/o close-up lens, TELE) ∞ ~ 0.3 m (w/o close-up lens, WIDE)
Zooming:	Powered
Focusing:	Auto/powered
Iris:	Auto/manual fine adjustment from remote control

<Video>

TV system:	NTSC compatible
Image pick-up element:	1/3" interline-transfer CCD
Picture element:	811 (H) x 508 (V) (approx. 410,000 pixels)
Effective pixels:	768 (H) x 494 (V)
Sync. system:	Internal/external sync. (automatic changeover)
Resolution:	Horizontal: Over 450 TV lines (Y signal)
S/N ratio:	47 dB or more
Image output level:	Composite video VBS 1.0 Vp-p/75 Ω unbalanced S-video Y 0.714 Vp-p/75 Ω unbalanced C 0.286 Vp-p/75 Ω unbalanced
Ext. sync. input condition:	Composite video VBS (75 Ω unbalanced) Sync.: 0.3 V \pm 0.1 V, Burst: 0.3 V \pm 0.1 V
Ext. sync. frequency range:	(NTSC standard) H \pm 50 ppm, SC \pm 50 ppm
H-phase adjustment:	Manual (0 ~ 5 μ s)
SC-phase adjustment:	Manual (0 ~ 360 $^\circ$)
Electronic shutter:	1/60 s or 1/100 s
White balance:	Fully automatic
Input selection:	Available
Input terminal:	Composite video-in (RCA pin jack/75 Ω unbalanced) Monaural audio-in (RCA pin jack/applicable impedance: 10 k Ω or more, - 10 dB) Ext. sync. input (RCA pin jack/75 Ω unbalanced)
Output terminal:	S-video out (mini DIN 4P connector/75 Ω unbalanced) Composite video-out (RCA pin jack/75 Ω unbalanced) Monaural audio-out (RCA pin jack/applicable impedance: 10 k Ω or more, - 10 dB)

<Accessories>

Remote control (IR) RCW-102	x 1
Power cord	x 1
Video/audio cable	x 1
Batteries (type R03, AAA)	x 2
Dust cover	x 1
Instruction manual	x 1

Design and specifications are subject to change without prior notice.

Dimensions and weight are approximate.

WARNING:

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