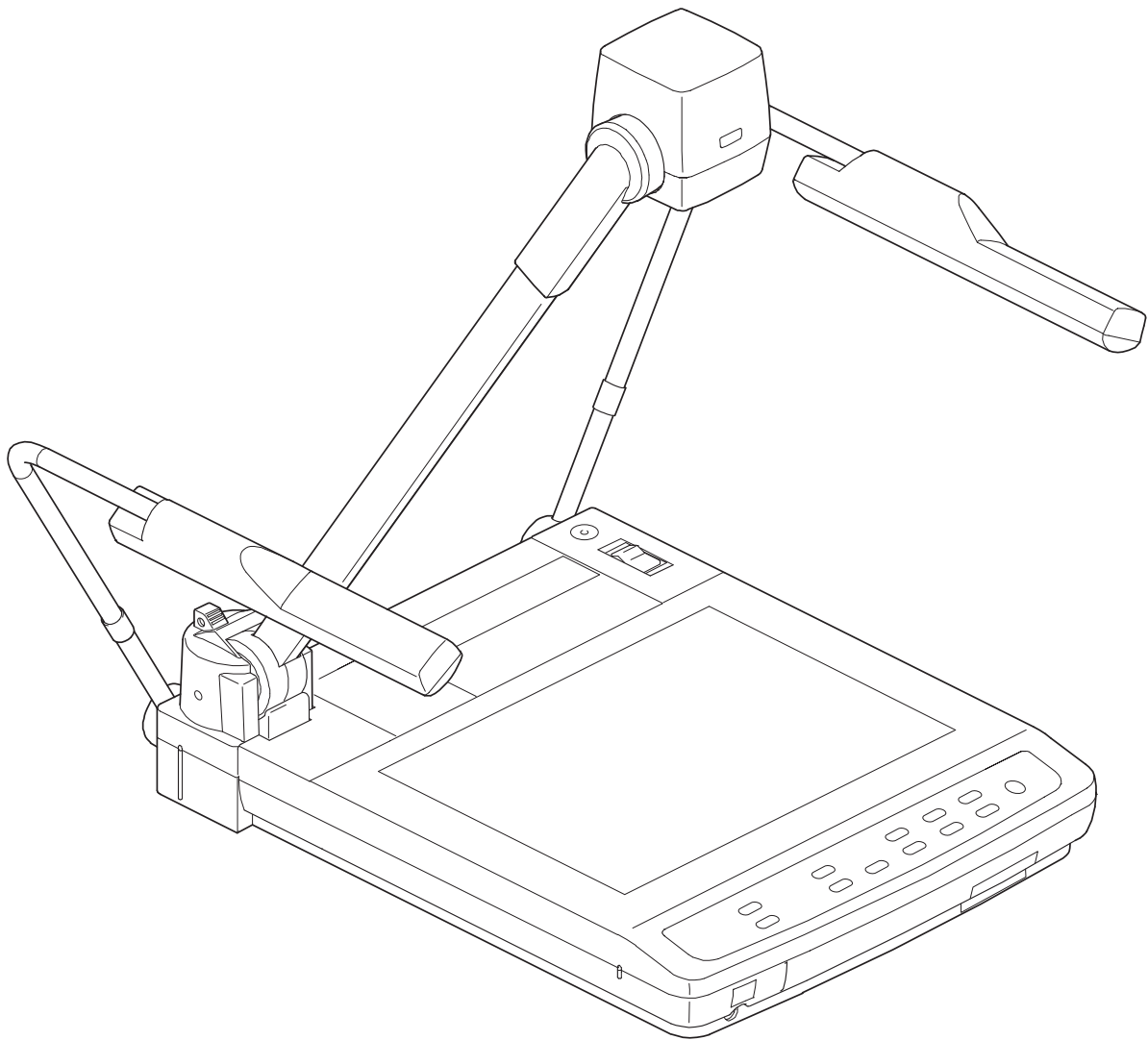


VISUAL PRESENTER

HV-5000XG

INSTRUCTION MANUAL



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

IMPORTANT SAFEGUARDS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

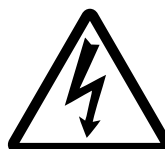
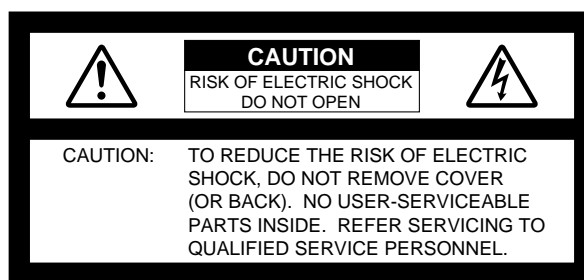
■ **Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

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

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

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

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



SA 1965

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



SA 1966

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

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

INFORMATION

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

USER-INSTALLER CAUTION:

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

BEFORE YOU USE

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

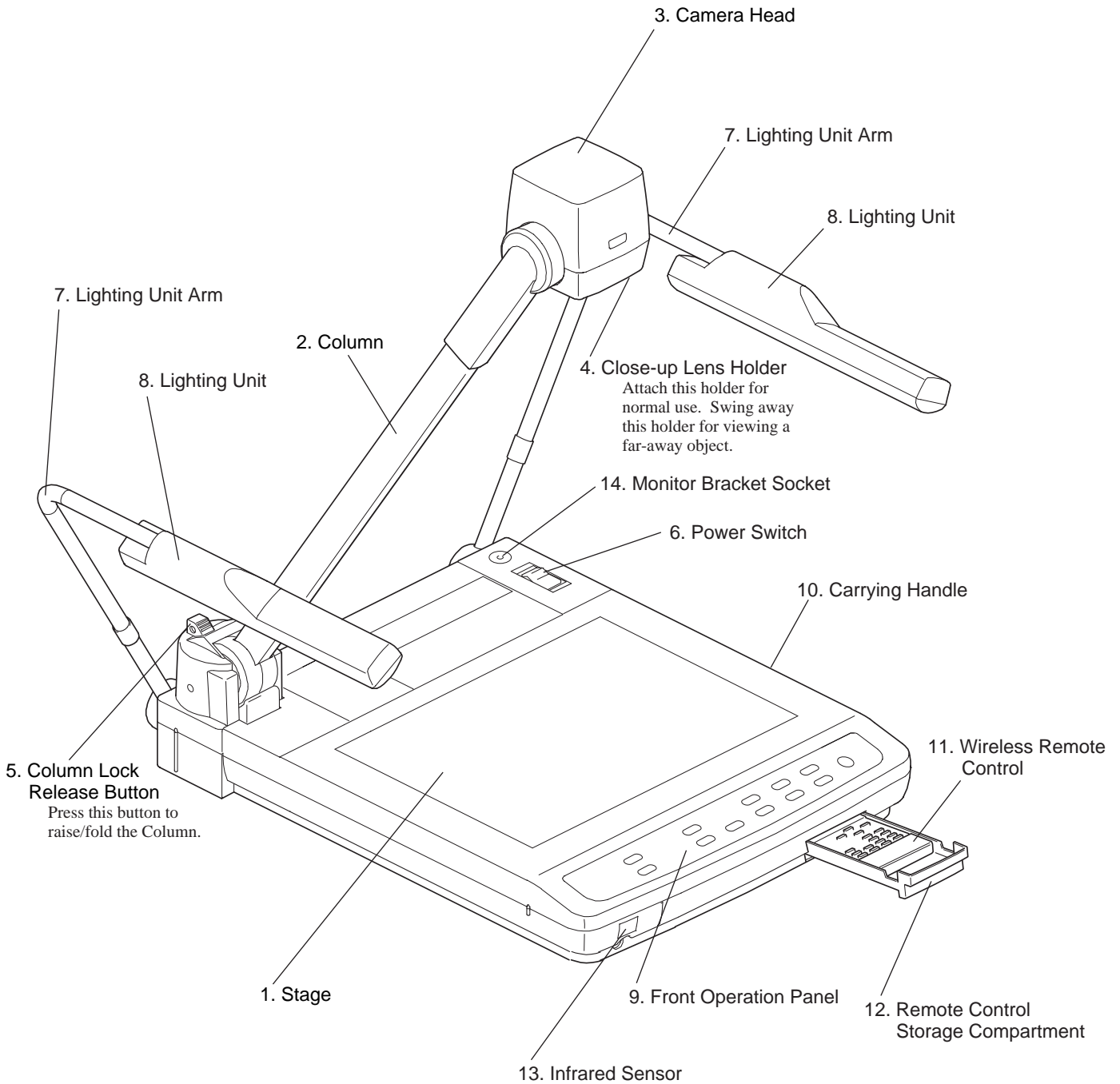
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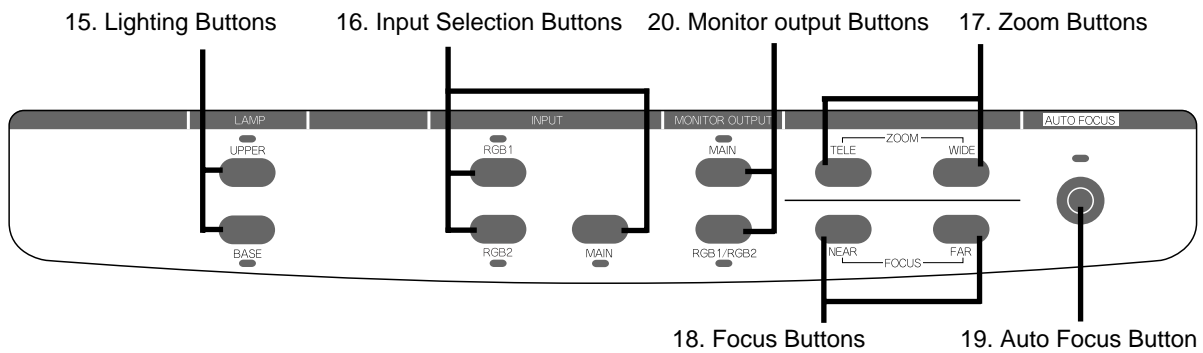
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1. PART NAMES AND FUNCTIONS

○ Appearance



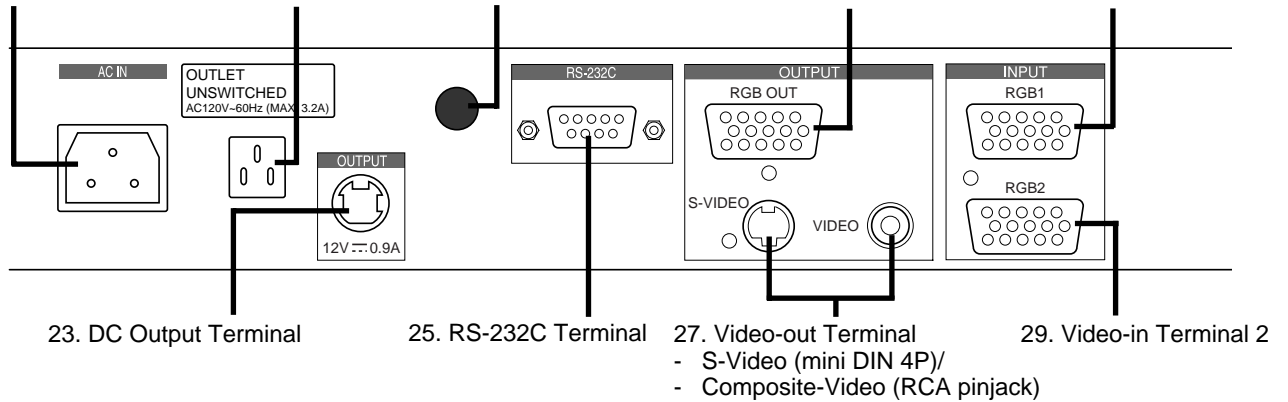
○ Front Operation Panel



	Part Name	Function	Reference Page
15	Lighting Buttons	To turn ON/OFF the lighting unit.	P.19
16	Input Selection Buttons	To change the input line.	P.19
17	Zoom Buttons	To change the image size.	P.22
18	Focus Buttons	To adjust focus (powered).	P.23, P.24
19	Auto Focus Button	To focus automatically. This is of one-shot auto focus system (FOCUSFREE).	P.23
20	Monitor output Buttons	To select the signal to be output to the NTSC/PAL monitor. To change the Monitor output mode (NTSC/PAL) using the built-in camera button.	P.20, P.22 P.21

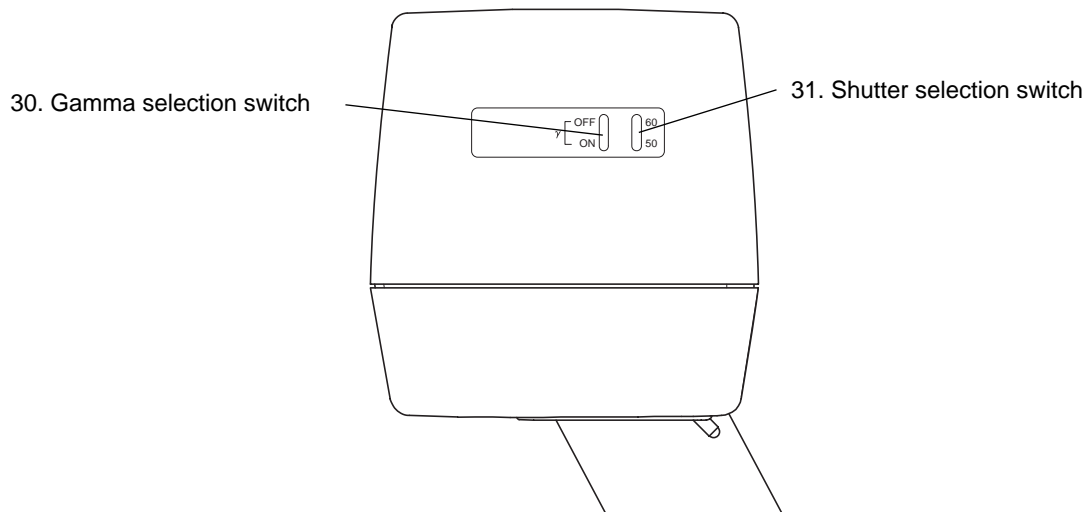
○ Rear Panel

21. Power Cord Receptacle 22. AC Outlet 24. Infrared Sensor 26. Analog RGB Output Terminal 28. Video-in Terminal 1



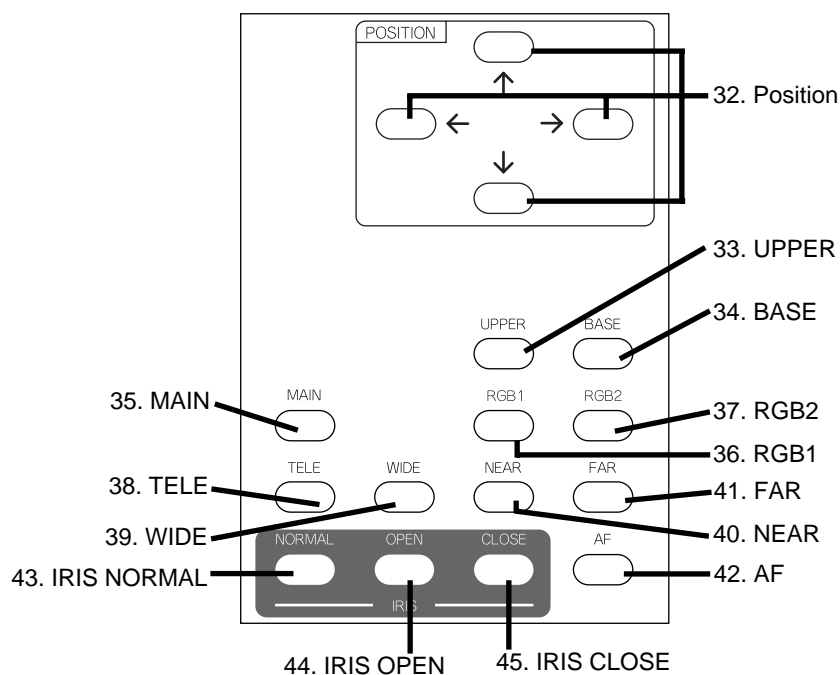
	Part Name	Function	Reference Page
21	Power Cord Receptacle [AC IN]	Connected to the power cord.	
22	AC Outlet	To supply power up to 400W (Not interlocked with the power switch).	
23	DC Output Terminal [OUTPUT]	To output 12VDC. The LCD Color Monitor (LM-5011N) or ELMO Desk-top Presenter (HD-80XG) can be connected with the supplied DC cable. Note: Do not connect any equipment other than LM-5011N and HD-80XG.	
24	Infrared Sensor	The light receiver of the wireless remote control. When operating the Presenter from behind, aim the wireless remote control at this light receiver.	P.11
25	RS-232C Terminal [RS-232C]	To connect a PC with an RS-232C cable to control the Presenter from the PC.	P.25
26	Analog RGB Output Terminal [OUTPUT · RGB OUT]	To connect RGB input equipment, such as an LCD Projector and a Multi-SYNC Monitor, to output the image.	
27	Video-out Terminal [OUTPUT · S-VIDEO/VIDEO] S-Video (mini DIN 4P) Composite-Video (RCA pinjack)	To connect a NTSC/PAL conformable monitor, such as a TV monitor and the LCD Color Monitor (LM-5011N), to output the image.	
28	Video-in Terminal 1 [INPUT · RGB1]	Video signal from this terminal is output when input selection is set at RGB1.	P.19
29	Video-in Terminal 2 [INPUT · RGB2]	Video signal from this terminal is output when input selection is set at RGB2.	P.19

○ **Head**



	Part Name	Function	Reference Page
31	Gamma selection switch	Gamma selection is used for adjusting the luminance shade with the device to connect RGB output to. Generally, it is recommended to use ON when connecting to the CRT monitor; use OFF when connecting to the LCD projector. The luminance shade may not match depending on the type of projector. Use ON in such a case.	
32	Shutter selection switch	In an area where power frequency is 50Hz, using the unit with flicker correction switch set to [60] may cause flickering due to illumination of AC power discharge tube, such as a fluorescent or a mercury lamp. Using the unit the flicker correction switch set to [50] may reduce the flickering. This switch is factory-set to 60Hz.	

○ Wireless Remote Control



	Button Name	Function	Reference Page
32	POSITION	To adjust the screen position and image size of the video output.	P.22
33	UPPER	To turn ON/OFF the upper lighting unit.	P.19
34	BASE	To turn ON/OFF the base lighting unit.	P.19
35	MAIN	To select the image from the built-in camera.	P.19
36	RGB1	To select the RGB1 image input.	P.19
37	RGB2	To select the RGB2 image input.	P.19
38	TELE	To zoom in.	P.22
39	WIDE	To zoom out.	P.22
40	NEAR	To move the focus near.	P.23, P.24
41	FAR	To move the focus far.	P.23, P.24
42	AF	To focus automatically.	P.23
43	IRIS NORMAL	To iris automatically.	P.24
44	IRIS OPEN	To open the iris manually.	P.24
45	IRIS CLOSE	To close the iris manually.	P.24

2. WIRELESS REMOTE CONTROL

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

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

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

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

○ Preparation

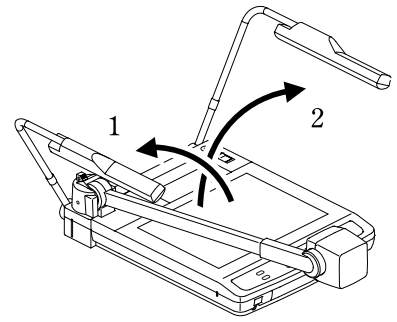
Remove the battery case cover by pressing downward on the [▼] mark part in the direction as indicated by the arrow. Install 2 pcs. of batteries (type R03, AAA) into the case in the direction as indicated there.

Notes:- Install the batteries with the right polarity.

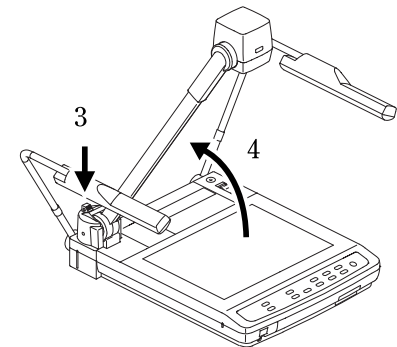
- Change the batteries once a year.
- The batteries supplied with the Presenter are only for use in initially confirming the operation of the Presenter. It is not guaranteed that these batteries can work effectively for the indicated period.

3. SETTING UP

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



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



- (3) Rotate the camera head to direct the lens unit to the stage.

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

○ Connection to the monitor and the projector

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

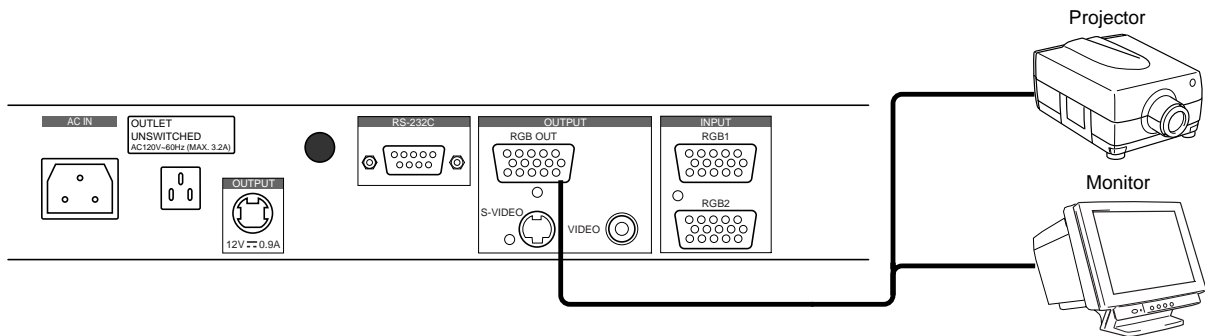
- Hold the cable plug part when connecting or disconnecting the cables.

● Connection to the RGB-in terminal

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

If the display image shifts from the center, manually adjust the horizontal/vertical positions through the connected equipment.

If vertical stripes appear on the screen with the use of video projector, it may be improved by manually adjusting the dot-clock frequency of the projector.

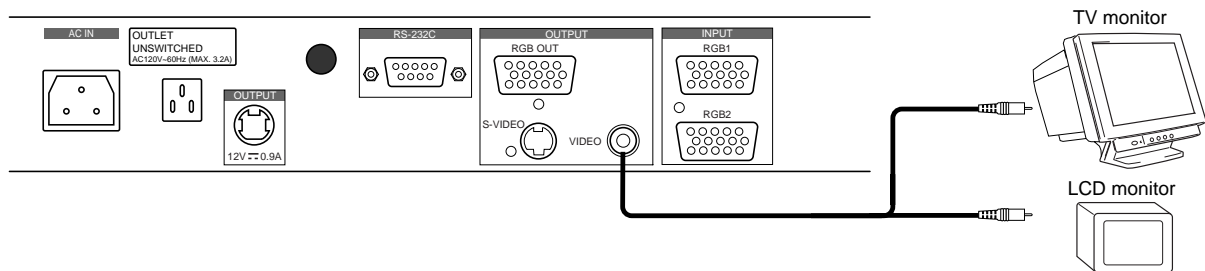


● Connection to the composite video-in terminal

Use the supplied RCA video cable with RCA pin plug.

Note: The video output of this Presenter is set to NTSC before shipment from our factory. To connect to the PAL monitor, switch the down converter output mode from NTSC to PAL.

Reference Page - NTSC/PAL switching P.21

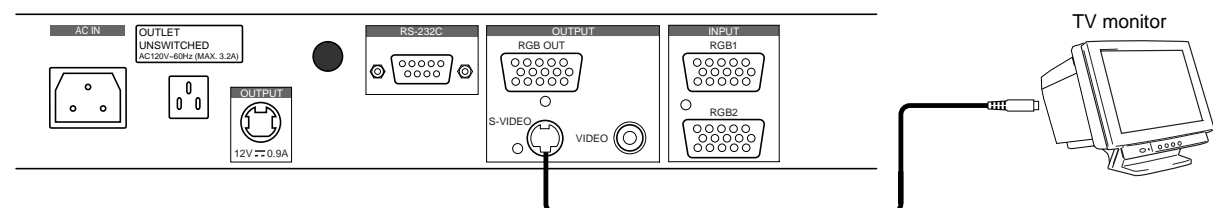


● Connection to the S-video-in terminal

Connect the S-video-out terminal (mini DIN 4P) of the Presenter to the S-video-in terminal of the monitor.

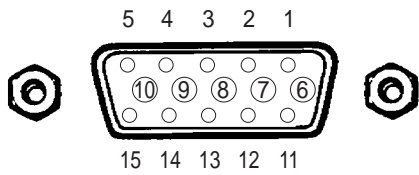
For the S-video output mode, use the supplied 4P mini DIN cable (for S-video) or an S-vide connection cable available on the market.

If the equipment to be used is provided with a Y/C separate connector, a conversion adapter is necessary.



○ RGB input signal

● Signal assignment



DSUB 15P shrinking terminal (Female)

Input signal

Video signal	Analog	0.7V(p-p)	75Ω
Horizontal synchronizing signal	TTL level	(positive/negative polarity)	
Vertical synchronizing signal	TTL level	(positive/negative polarity)	
Composite synchronizing signal	TTL level	(positive/negative polarity)	

● Pin arrangement

Pin No.	Name	Pin No.	Name	Pin No.	Name
1	Video input (Red)	6	GND (Red)	11	GND
2	Video input (Green)	7	GND (Green)	12	NC
3	Video input (Blue)	8	GND (Blue)	13	Horizontal synchronizing/ composite synchronizing signal
4	NC	9	NC	14	
5	GND	10	GND	15	NC

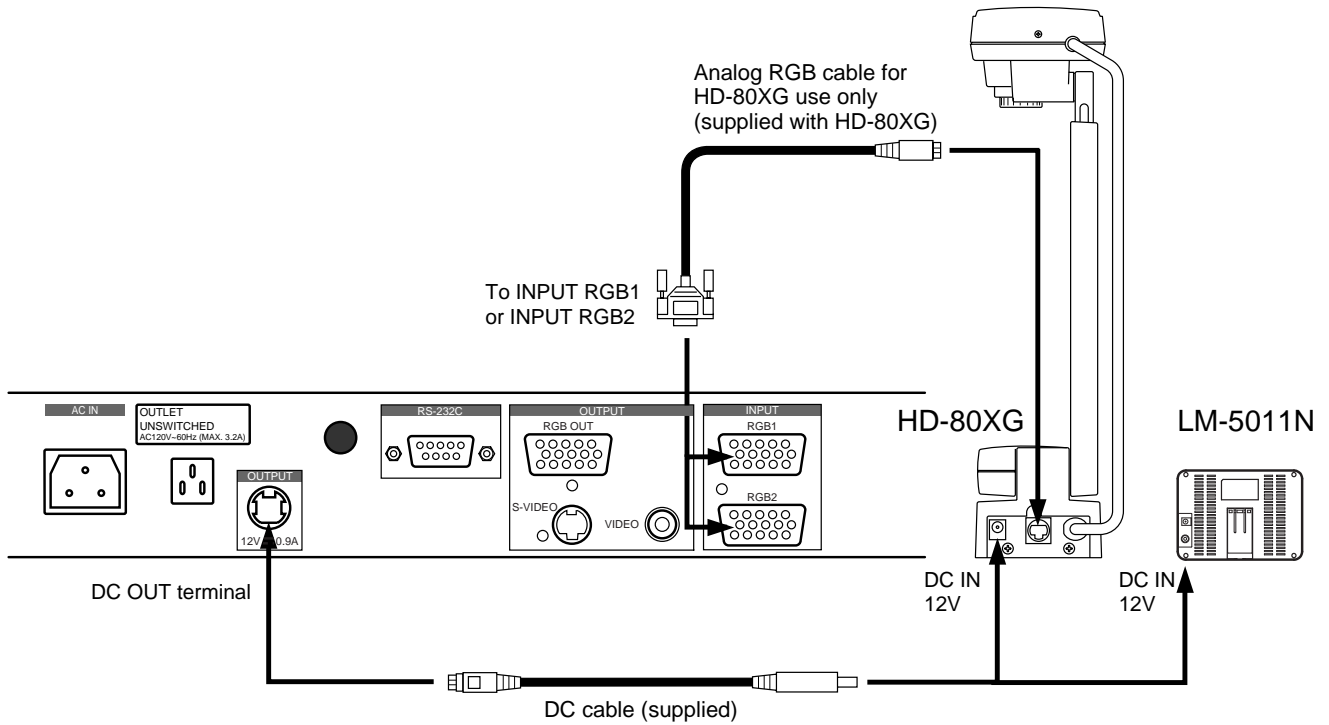
○ RGB output signal

● Signal assignment (DSUB 15P shrinking terminal)

Pin No.	Name	Pin No.	Name	Pin No.	Name
1	Video output (Red)	6	GND (Red)	11	GND
2	Video output (Green)	7	GND (Green)	12	NC
3	Video output (Blue)	8	GND (Blue)	13	Horizontal synchronizing signal
4	NC	9	NC	14	Vertical synchronizing signal
5	GND	10	GND	15	NC

○ Connection to DC OUT Terminal

Use the DC OUT terminal to connect ELMO Desk-top Presenter (HD-80XG) and the LCD Monitor (LM-5011N).



- Notes:** - When using the DC cable (supplied), AC adapter supplied with HD-80XG/LM-5011N is not used.
- Do not connect any equipment other than HD-80XG and LM-5011N to the DC OUT terminal.

4. OPERATION PROCEDURES

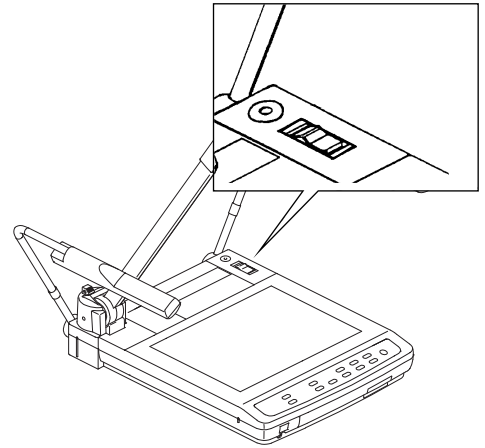
○ Simple steps for presenting printed material

(1) Turn ON the power switch.

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

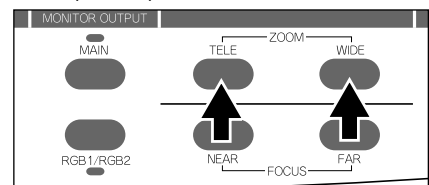
- The indication lamp (green LED) on the front operation panel shows the initial setting condition of each function of the Presenter.

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

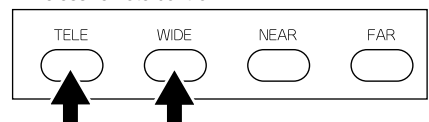


(2) Place the object on the stage. Adjust the image size according to the object size using the zoom buttons **[TELE]** and **[WIDE]** on the operation panel or wireless remote control, while watching the image on the monitor.

Front operation panel



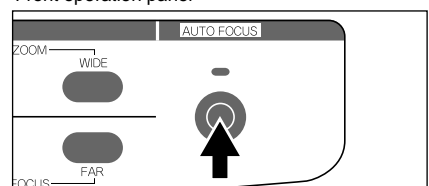
Wireless remote control



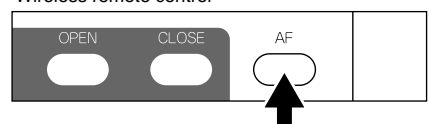
(3) Press the auto focus button **[AF]** on the front operation panel or remote control for focusing.

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

Front operation panel

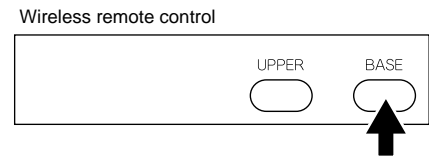
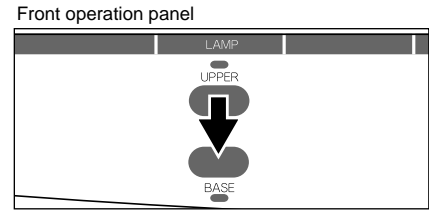


Wireless remote control

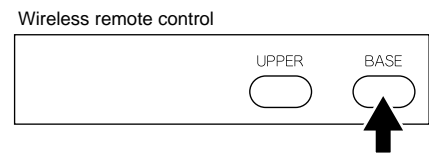
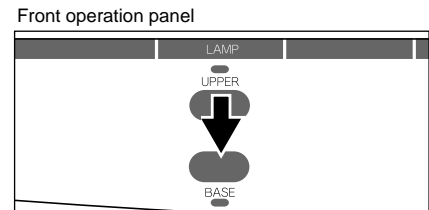


○ Simple steps for showing transparent material, such as overhead transparency

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



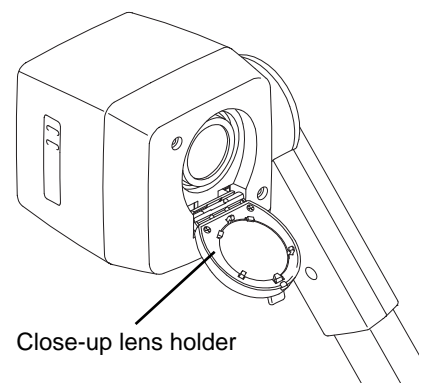
- (3) To turn OFF the baselight, press the base button **[BASE]** on the front operation panel or wireless remote control.



○ Using the main camera as a conventional video camera

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

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



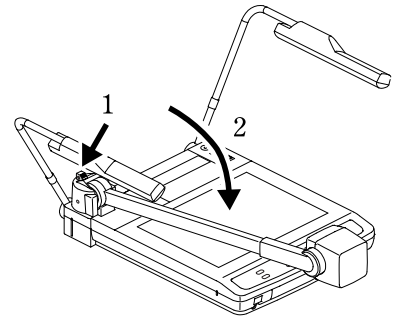
○ Storing the Presenter

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

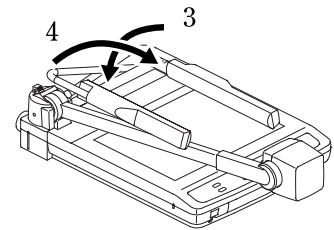
(1) Turn OFF the power switch, and unplug the power cord and the video cable.

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

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



(3) Fold down the lighting unit arms 3 and 4. Be sure to fold down arm 3 first as per the illustration.



5. VARIOUS FUNCTIONS

○ Lighting

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

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

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

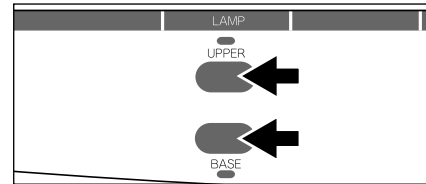
It has been so set before shipment that the lighting unit lights up when the power supply is turned ON.

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

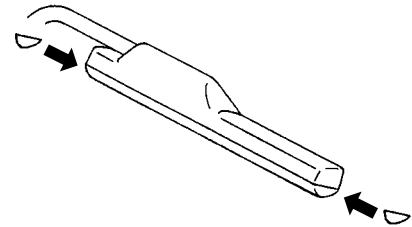
- When the lightness of the material surface is not sufficiently high or a 3-D object is presented, a sharp image with good color rendering can be obtained with the upper lighting unit.

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

Front operation panel



Wireless remote control



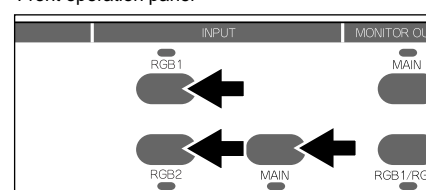
○ Input selection

The respective images from two different AV sources, such as PC and ELMO Presenter [HD-80XG], connected to Video-in Terminal 1 [INPUT] **[RGB1]** and Video-in Terminal 2 [INPUT] **[RGB2]** respectively, can be alternately presented on the Monitor by simply selecting the AV source by pressing the input selection button without changing cable connections.

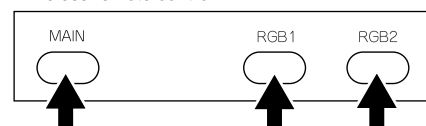
Press the input selection button **[RGB1]** / **[RGB2]** on the front operation panel or wireless remote control.

When the built-in camera button **[MAIN]** on the front operation panel or wireless remote control is pressed, the image by the built-in camera is resumed.

Front operation panel



Wireless remote control



○ Monitor output

The signal to be outputted to the NTSC/PAL monitor is selected. When the input has been set to RGB1 or RGB2 and the monitor output button **[RGB1/RGB2]** on the front operation panel is pressed, the indicator lamp is switched accordingly, and the images by the equipment connected to the external input terminals **[RGB1]** and **[RGB2]** are presented on the NTSC/PAL monitor.

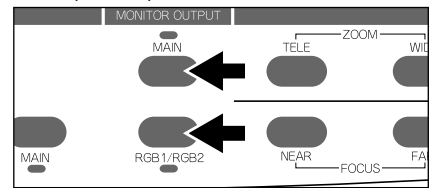
The signals to be outputted are as shown in Table below on the next page.

When the built-in camera button **[MAIN]** in the monitor output on the front operation panel is pressed, the indicator lamp is switched accordingly, and the image by the built-in camera is displayed on the NTSC/PAL monitor.

Notes: - When the built-in camera button **[MAIN]** in the input selection on the front operation panel or wireless remote control is pressed, the image by the built-in camera is resumed.

- Of all signals inputted into the external input terminals **[RGB1]** and **[RGB2]**, those signals having the frequencies as specified in the following page can be outputted to the NTSC/PAL monitor.

Front operation panel



● Table of video-in/out terminal selections

Input		Output signal	RGB output terminal	Composite output terminal	S-video terminal
Input selection MAIN	Monitor output : When MAIN is selected	Main camera input image	Main camera input image	Main camera input image	Main camera input image
	Monitor output : When RGB1/RGB2 is selected	Main camera input image	Main camera input image *	Main camera input image *	Main camera input image *
Input selection RGB1	Monitor output : When MAIN is selected	RGB1 input image	RGB1 input image	Main camera input image	Main camera input image
	Monitor output : When RGB1/RGB2 is selected	RGB1 input image	RGB1 input image	RGB1 input image	RGB1 input image
Input selection RGB2	Monitor output : When MAIN is selected	RGB2 input image	RGB2 input image	Main camera input image	Main camera video
	Monitor output : When RGB1/RGB2 is selected	RGB2 input image	RGB2 input image	RGB2 input image	RGB2 input image

Note: *When the input selection is the built-in camera (MAIN), RGB1/RGB2 cannot be selected for the monitor output.

● Table of signal correspondence

Signal	Frequency			Resolution (number of lines)		Polarity of synchronizing signal (P: Positive N: Negative)
	Fh	Fv	Pixels clock	Fh	Fv	
Mode	kHz	Hz	MHz	Fh	Fv	H/V
VGA1	37.861	85.080	31.500	640	350	P/N
VGA2	37.861	85.080	31.500	640	400	N/P
VGA3	37.927	85.039	35.500	720	400	N/P
VGA@60Hz	31.469	59.940	25.175	640	480	N/N
VGA@72Hz	37.861	72.809	31.500	640	480	N/N
VGA@75Hz	37.500	75.000	31.500	640	480	N/N
VGA@85Hz	43.269	85.008	36.000	640	480	N/N
SVGA@56Hz	35.156	56.250	36.000	800	600	P/P
SVGA@60Hz	37.879	60.317	40.000	800	600	P/P
SVGA@72Hz	48.077	72.188	50.000	800	600	P/P
SVGA@75Hz	46.875	75.000	49.500	800	600	P/P
SVGA@85Hz	53.674	85.061	56.250	800	600	P/P
XGA@60Hz	48.363	60.004	65.000	1024	768	P/P
XGA@70Hz	56.476	70.069	75.000	1024	768	N/N
XGA@75Hz	60.023	75.029	78.750	1024	768	N/N
XGA@85Hz	68.677	84.997	94.500	1024	768	P/P
SXGA1	67.500	75.000	108.000	1152	864	P/P
SXGA2	60.000	60.000	108.000	1280	960	P/P
SXGA3	85.938	85.002	148.500	1280	960	P/P
SXGA@60Hz	63.981	60.020	108.000	1280	1024	P/P
SXGA@75Hz	79.976	75.025	135.000	1280	1024	P/P
SXGA@85Hz	91.146	85.024	157.500	1280	1024	P/P
UXGA@60Hz	75.000	60.000	162.000	1600	1200	P/P
UXGA@65Hz	81.250	65.000	175.500	1600	1200	P/P
UXGA@70Hz	87.500	70.000	189.000	1600	1200	P/P
UXGA@75Hz	93.750	75.000	202.500	1600	1200	P/P
UXGA@85Hz	106.250	85.000	229.500	1600	1200	P/P
Mac 13	35.000	66.667	30.240	640	480	P/P
Mac 16	49.725	74.550	57.283	832	624	N/N
Mac 19	60.241	74.927	80.000	1024	768	N/N
Mac 21	68.682	75.062	100.000	1152	870	N/N
PC98	24.825	56.420	21.052	640	400	N/N

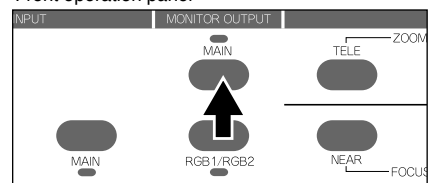
○ NTSC/PAL switching

To switch the monitor output mode (NTSC/PAL.) It is set to NTSC before shipment from our factory.

To switch the NTSC mode to PAL, turn the power switch ON, while pressing the monitor output button **[MAIN]** on the operation panel.

To return to NTSC, repeat the same operation.

Front operation panel



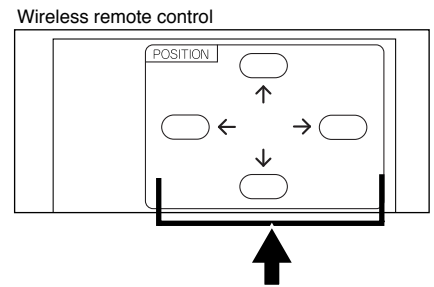
Note: When the power supply is turned on the next time, the lastly selected TV mode is maintained.

NTSC is the TV standards in North America.

○ Position adjustment

To adjust the display position of the image outputted on the NTSC/PAL monitor.
Press the buttons **[POSITION]** ([↑], [↓], [←], [→]) to adjust the image to the proper position.

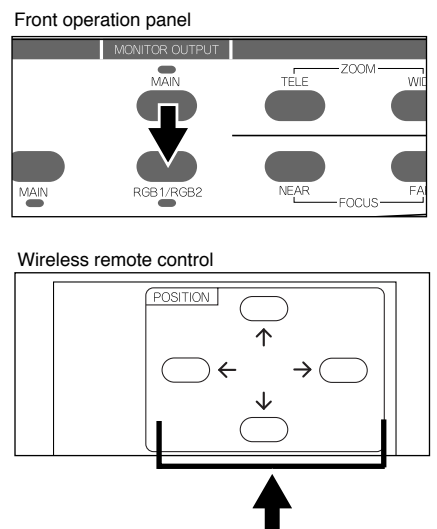
- Notes:**
- The adjusted position is memorized in the Presenter. However, if the frequency of the signal to be inputted into the external input terminal [RGB1] or [RGB2], readjust the position.
 - The image from the built-in camera cannot be adjusted.



○ Image size adjustment

To adjust the display size of the image outputted on the NTSC/PAL monitor.
Press position buttons **[POSITION]** ([↑], [↓], [←], [→]) on the wireless remote control while holding down the monitor output buttons **[RGB1/RGB2]** on the front operation panel to adjust the display size of the image to the proper size.

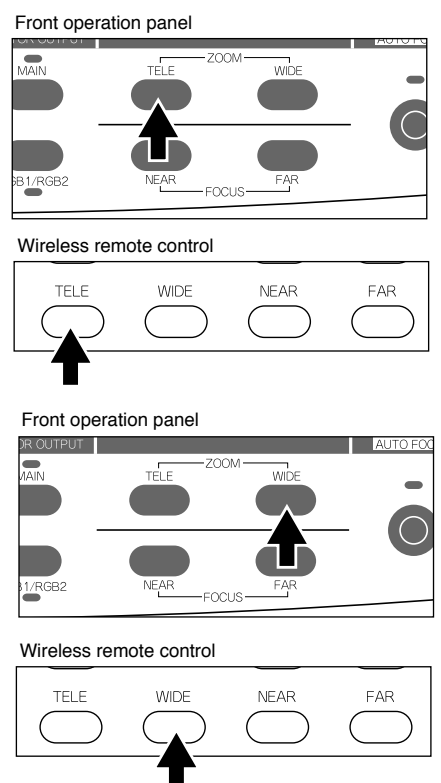
- Notes:**
- When the image size is adjusted, the image center may be displaced. If the image center is displaced, execute the position adjustment to correct the displacement of the image center.
 - The adjusted position is memorized in the Presenter. However, if the frequency of the signal to be inputted into the external input terminal [RGB1] or [RGB2], readjust the position.
 - The image from the built-in camera cannot be adjusted.



○ Zoom

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

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



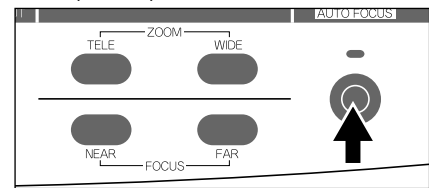
○ Focus

● Auto Focus

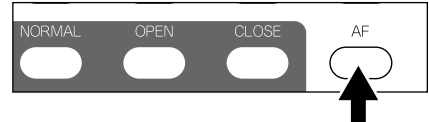
To operate Auto-Focus, press the auto focus button **[AF]** on the front operation panel or wireless remote control, and the Auto-Focus will be activated.

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

Front operation panel



Wireless remote control



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

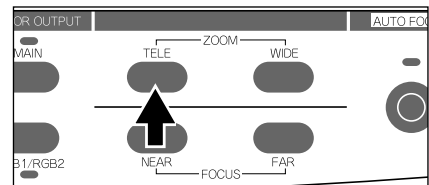
(FOCUSFREE)

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

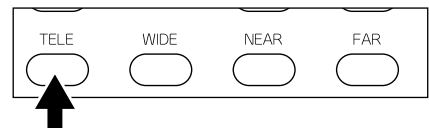
However, the objects listed below may not be brought into focus in the auto focus mode. In these cases, use the manual focus mode.

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

Front operation panel



Wireless remote control

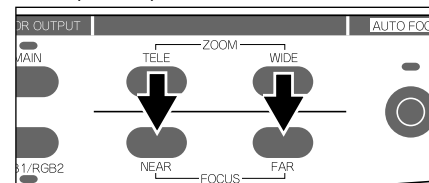


If the focus button **[NEAR]** or **[FAR]** on the front operation panel or wireless remote control is pressed during the auto focus, the auto focus will be released.

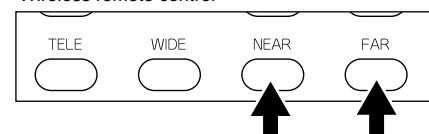
Notes: - The auto focus functions up to approx. 10cm above the stage surface.

- If the camera head gets heavy shock by accident, there is a possibility of out of focus. In such a case, once turn the power OFF and then re-set to ON.
- It may take some time to bring the camera into focus in the auto focus mode. Roughly bring the camera into focus manually and then press the auto focus button **[AF]**.

Front operation panel



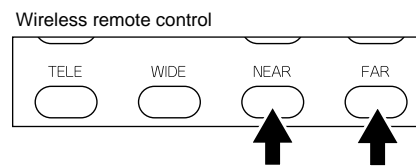
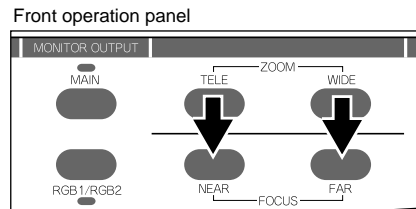
Wireless remote control



● **Powered Manual Focus**

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

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



○ **Iris**

The iris can be manually adjusted.

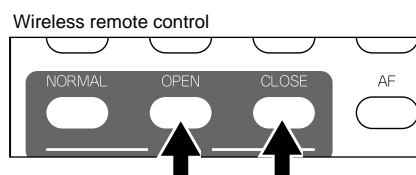
To open the iris, press the manual iris button **[OPEN]**.

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

In the manual mode, the iris is fixed and does not vary according to the change in the lightness of the object.

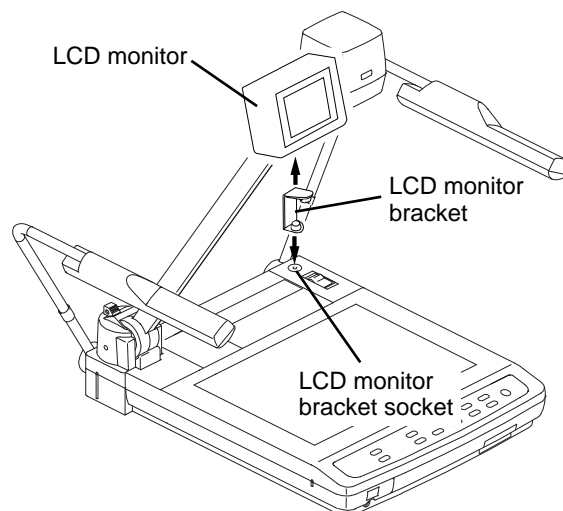
The initial setting is "auto iris."

Note: If the screen looks dark, press the iris open button **[OPEN]** on the wireless remote control to adjust the brightness of the screen.



○ **LCD monitor bracket socket**

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



6. RS-232C SPECIFICATIONS

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

○ Setting up

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

Notes:

- When using an RS-232C cable available in the market, make sure of the connection shown in the page.
- To protect the Presenter and the PC, be sure to turn OFF all the power switches of all equipment before connecting.

- (2) Start up the PC, and set the RS-232C baud rate (transmission rate) to 9600bps.

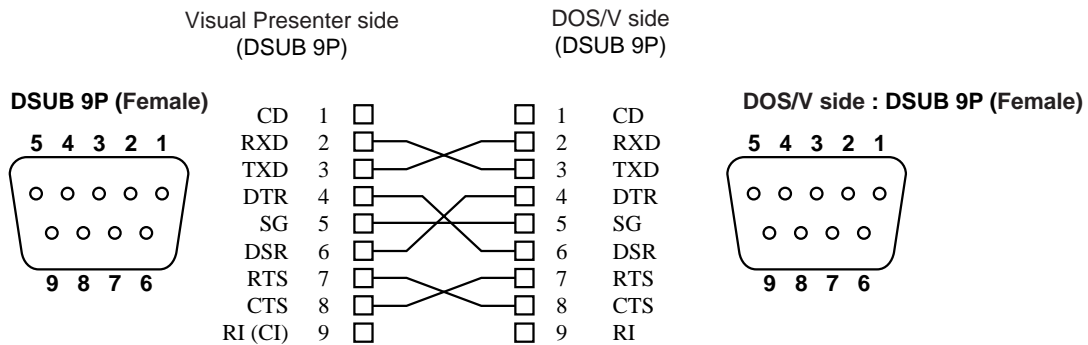
Note: For the information how to set the communication mode of the RS-232C, refer to the instruction manual of the PC.

- (3) Send the command to operate the Presenter from the PC (Refer to the list of communication commands).

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

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

○ Cable connection



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

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

○ **Table of the communication commands**

Function	Command	Parameter	Data	Comments
Auto Focus	AF	0	■ ■	Command to execute the one-step auto focus.
Focus adjustment	FO	+ (NEAR) - (FAR) 0 (STOP)	■ ■	Command to adjust the focus.
Zoom adjustment	ZO	+ (TELE) - (WIDE) 0 (STOP)	■ ■	Command to adjust the Zoom.
Iris adjustment	IR	+ (OPEN) - (CLOSE) 0 (STOP) 1 (AUTO)	■ ■	Command to adjust the Iris.
Lighting selection	PL	0 (OFF) 1 (BASE) 0 (UPPER)	■ ■	Command to select the Lighting.
Input selection	AV	0 (MAIN) 1 (RGB1) 2 (RGB2)	■ ■	Command to select the Input.
Monitor output selection	MO	0 (MAIN) 1 (RGB1) 2 (RGB2)	■ ■	Command to switch the monitor output.
TV mode switching	TV	0 (NTSC) 1 (PAL)	■ ■	Command to switch the TV mode of the monitor output.
Monitor output screen position and size adjustment	PM	0 (STOP) 1 (Position rightward move) 2 (Position leftward move) 3 (Position upward move) 4 (Position downward move) 5 (Horizontal size expansion) 6 (Horizontal size compression) 7 (Vertical size expansion) 8 (Vertical size compression)	■ ■	Command to adjust the position and size of the monitor screen.
Local lockout	LL	0 (OFF) 1 (ON)	■ ■	Command to invalidate the switches on the front operation panel and wireless remote control.
Default	DF	0	■ ■	Command to reset to the initialized mode.
Status request	QS	0 2	■ ■	Command to inquire the status of the equipment.
ROM version	QR	0	■ ■	Command to refer to the ROM version.

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

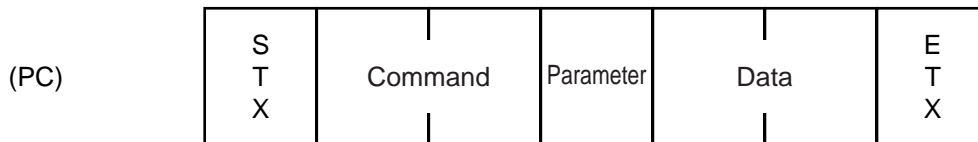
○ Data format specifications

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

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

● Transmission Command (PC → Visual Presenter)

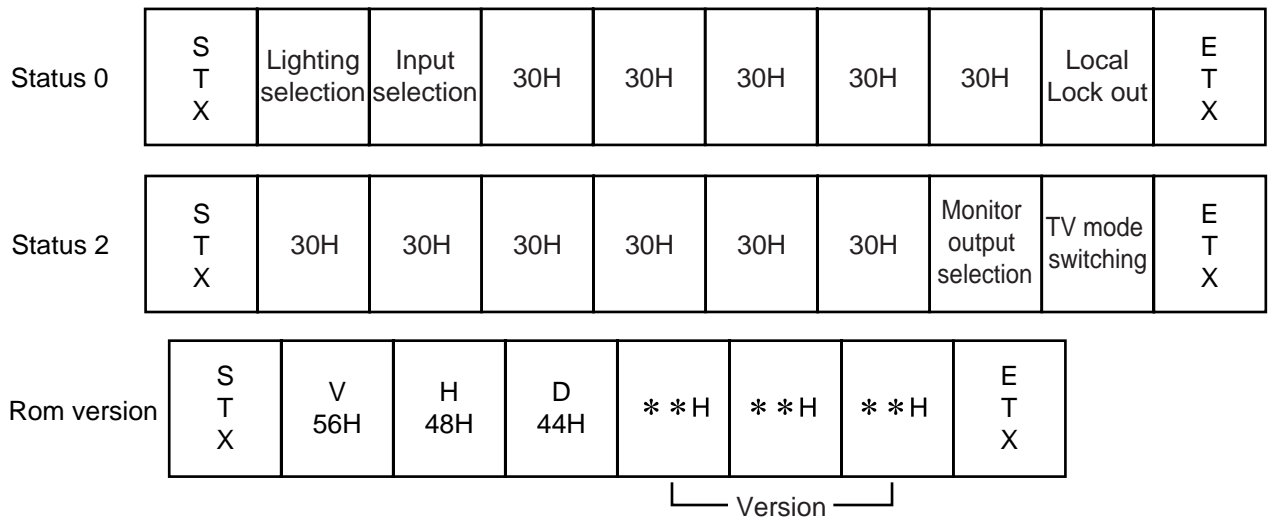
Each operation command is executed in ASCII code, and transmitted in a set of 7 bytes as follows:



(Visual Presenter) → ACK

● Response data format (Visual Presenter → PC)

All response data are sent in the ASCII code in correspondence to the parameters in the list of operation commands.



○ Transmission specifications

- Full duplex start-stop sync. mode
- Start bit : 1 bit
- Data bit : 8 bit
- Stop bit : 1 bit
- Parity bit : None
- X parameter : None
- Baud rate (Communication speed) : 9600bps

○ Connection

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

7. TROUBLESHOOTING HINTS

Symptom	Possible cause/countermeasure
No Images on TV monitor	<ul style="list-style-type: none"> · Cable is not properly connected to the video-in terminal of monitor. · The power cord is disconnected from the wall AC outlet. · The plug is disconnected from the power cord receptacle of the Presenter. · The power switch is not turned ON. · Zoom is set at TELE to display only white/black part of the material. · The switch is turned ON immediately after it is turned OFF. In this case, the Presenter may not start. Wait several seconds after turning OFF the power switch, and then turn ON the power switch.
Out of focus	<ul style="list-style-type: none"> · The object is too close to the lens. Check if it does not stand higher than 10cm above the stage surface. · Zoom is set at TELE after focusing at WIDE angle. Focus on the point of max. TELE. · In the auto-focus, focusing is difficult in some cases.
The monitor doesn't display Video-output image normally	<ul style="list-style-type: none"> · Try switching NTSC/PAL setting of the main unit. If you connect a PAL-set (monitor output setting) main unit to an NTSC-only monitor, you might not get normal images (with vertical/horizontal eye-soring lines, or no color, etc.). Switch the monitor output setting from PAL to NTSC, referring to "NTSC/PAL switching" on P.21.
The lamp is not quickly turned ON	<ul style="list-style-type: none"> · For protection purposes, the lamp is turned ON after preheating for 2 seconds. This is not a fault.
Image is too dark	<ul style="list-style-type: none"> · The ambient light is not sufficient. Press the upper lighting unit button [UPPER] to turn ON the upper lamp.
Moire pattern appears on the screen image	<ul style="list-style-type: none"> · This is caused by the interference fringe between the meshed pattern of the object and the CCD elements. This is normal. This may be reduced by changing the projecting range. · Vertical stripes may appear on the liquid crystal projector screen. This can be reduced by manually adjusting the dot clock frequency on the projector side. (Refer to P.13)
Brightness tone is off the setting	<ul style="list-style-type: none"> · This may be reduced by switching the gamma setting.

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

8. SPECIFICATIONS

● General

Item	Specifications		
Power source	AC120V 60Hz		
Power consumption	Power 43W		
AC outlet	1 pce. (Max. 400W/Unswitched)		
DC output terminal	DC12V (Max. 0.9A)		
Outside dimensions	400mm(W) X 660mm(D) X 168mm(H) (15.7 X 26.0 X 6.6 in.) - When folded 700mm(W) X 542mm(D) X 625mm(H) (27.6 X 21.3 X 24.6 in.) - When set up		
Weight	10 kgs (22.1 lbs) (main body only)		
Input selection	Internal/RGB1/RGB2		
Output terminal	RGB output	DSUB 15P connector female	1
	Composite-video output	RCA pinjack/75Ω unbalanced (NTSC/PAL)	1
	S-video output	Mini DIN 4P connector/75Ω unbalanced (NTSC/PAL)	1
Input terminal	RGB inputs	DSUB 15P connector female	2
Ext. control terminal	RS-232C	DSUB 9P connector male	1

● Camera

Item	Specifications		
Lens	f=5.8 ~ 58mm(10-time zoom) F2.8		
Shooting speed	15 frames/sec		
Shooting area	350mm x 260mm (13.8 X 10.2 in.) max., 38mm x 28mm (1.5 X 1.1 in.) min.		
Limit of focus adjustment	At the range of stage surface - 100mm from the stage surface (Camera positioned sideways with no close-up lens) 1.1m - ∞		
Zoom	Powered (with double speed function)		
Focusing	Auto/manual		
Iris	Auto/manual		
Image pick-up element	1/3" CCD		
Total picture elements	1077(H) x 788(V) (approx. 850,000 pixels)		
Effective picture element	1024 (H) x 768(V)		
Sync. system	Internal		
Resolution	Analog RGB output More than 600 TV lines (Horizontal) More than 600 TV lines (Vertical) Video output More than 400 TV lines (Horizontal) More than 400 TV lines (Vertical)		
Analog RGB output	Signal frequency XGA Horizontal frequency 60.023kHz Vertical frequency 75.029kHz (1024 x 768@75Hz) VESA conformable		
Composite-video output	NTSC/PAL conformable		
S-video output	NTSC/PAL conformable		
White balance	Full auto		
Gamma adjustment	Provided (OFF : 1.0/ON : 0.6)		
Video output selection	Provided (NTSC/PAL)		
Electronic shutter speed	Provided (50/60)		

● **Lighting**

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

● **Supplied accessories**

Name	Quantity
Power cord	1
DC cable	1
Video-RCA cable	1
Mini DIN 4P (S-video) cable	1
Infrared wireless remote control (RCW-502)	1
Batteries (Type R03, AAA)	2
VGA cable (DSUB 15P connector)	1
Stickers of toplights	4
Instruction manual	1

● **Options**

- 5" LCD COLOR MONITOR [LM-5011N]
- LCD monitor bracket

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

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VESA is a registered trademark of Video Electronics Standards Association.
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