
XGA Digital Presenter

DV11G

User's Manual

English



Introduction

Thank you for purchasing NEC's XGA digital presenter DV11G ("this equipment" in the following).

Connected to a projector, display monitor or TV, this presenter captures images of documents, teaching materials or other data and shows them large and clear on the screen.

For safe and proper use of this equipment, please read this user's manual carefully. Also, be sure to keep this manual at hand. You can always consult it whenever a question or trouble arises.

DOC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Acoustic Noise Information Ordinance-3. GSGV:

The sound pressure level is less than 70 dB (A) according to ISO 3744 or ISO 7779.

RF Interference

WARNING

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Solutions (America), Inc. in this manual. Failure to comply with this government regulation could void your right to operate this equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In UK, a BS approved power cable with moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cable is not supplied with this equipment please contact your supplier.

- Windows Me, Windows 2000 or Windows XP are trademarks or registered trademarks of Microsoft Corporation.
- Other product and company names mentioned in this user's manual may be the trademarks or registered trademarks of their respective holders.



WARNING

Do not use with any power voltage other than the indicated voltage.

The equipment is designed to operate on a power supply of 100-120 or 200-240 V 50/60 Hz AC. Ensure that your power supply fits this requirement before attempting to use the equipment.

Handle power cord with care.

Handle the power cord carefully.

Damaged cord may cause fire or electric shocks.

- Use only the supplied power cord.
- Do not place any heavy object on the power cord.
- Do not lead the power cord under the equipment body.
- Do not cover the power cord with a carpet or like object.
- Do not damage or transform the power cord.
- Do not forcibly bend, twist or pull at the power cord.
- Do not heat the power cord.

When the power cord is damaged (exposed core, disconnection, etc.), contact your dealer for replacement.

Disconnect power plug in case of trouble.

When the equipment is developing smoke, smell or noise or when the equipment has been dropped accidentally or the cabinet damaged, turn off the power to the equipment first and then disconnect the power plug from the outlet. Fire or electric shocks may occur if you continue to use it. Please contact your dealer for repair.

Do not place equipment where it can get wet.

Do not use the equipment in places where it can get wet with water (see examples below). Also, never place a vessel containing water above this equipment. Otherwise fire or electric shocks may occur.

- Do not use this equipment in the rain or snow or on the shore of an ocean, lake or river.
- Do not use this equipment in the bathroom or shower room.
- Do not place a vase or flowerpot above this equipment.
- Do not place glasses, cosmetics or chemicals above this equipment.

Should water or other foreign matter have entered the equipment, turn off the power to the equipment first and then disconnect the power plug from the outlet. Also, contact your dealer immediately for instructions.

Do not use equipment in places as follows.

Do not use the equipment in places as follows. Otherwise fire or electric shocks may occur.

- On a shaky table or in an inclined or unstable position
- Near a heater or in exposure to vibration
- In exposure to moisture or dust
- In exposure to oil mist or steam
- Near a kitchen table or humidifier

Do not allow any foreign matter to enter equipment.

Do not attempt to insert or drop foreign objects, such as metal or inflammable objects into the equipment. Otherwise fire or electric shocks may occur. Take special care when this equipment is used in places where there are children.

Should any foreign matter have entered the equipment, turn off the power to the equipment first and then disconnect the power plug from the outlet. Also, contact your dealer immediately for instructions.

Never open the cabinet.

Do not remove or open the cabinet of the equipment. Also, never remodel the cabinet. Otherwise fire or electric shocks may occur.

Please contact your dealer for checks, adjustments or repairs of the equipment inside.

Do not cover the camera head.

Do not cover the camera head with a cloth or other object. Heating can cause fire.

Do not touch power plug when you hear thunders.

Do not touch the power plug when you hear thunders.

Otherwise electric shocks may occur.



CAUTION

Ground equipment properly.

Please ground the equipment properly for safety reasons. See page E-13 for details.

Do not touch power plug with a wet hand.

Do not connect or disconnect the power plug with a wet hand. Electric shocks may occur.

Do not store equipment by leaning it against wall or other object.

Do not store the equipment by leaning it against a wall or other object. It may topple and cause injury.

Be sure to disconnect power cord before carrying equipment.

When moving this equipment, be sure you have turned off the power switch, disconnect the power plug from the outlet and disconnected cables which are connected to another equipment.

Disconnect power plug when equipment is not used for a long time.

Be sure to disconnect the power plug from the outlet for safety when the equipment is not to be used for a long period of time.

Before maintenance, be sure to disconnect power plug.

Before carrying out maintenance, be sure to disconnect the power plug from the outlet as a safety precaution.

Do not carry this equipment by camera arm or camera head.

Do not carry this equipment by the camera arm or camera head. Otherwise the camera arm or camera head may get deformed and break the cord inside the camera arm, thus causing fire or electric shocks.

Handling of batteries

Handle the batteries with care. Otherwise fire, injuries or pollution may occur.

- Do not allow the batteries shorted, disassembled or thrown into fire.
- Always use batteries of the specified type.
- Do not use a new and an old battery at the same time.
- Set the batteries with polarity (+ and –) oriented correctly as indicated.

Notes for Use

Do not locate this equipment in a place where it may be exposed to vibration or shocks.

Do not place this equipment subject to vibration from any drive system or on board a vehicle or ship. The vibration or shocks that work on the equipment may damage the internal parts, which will eventually lead to a failure. Be sure to use this equipment in places free from vibration or shocks.

Do not use this equipment near high-voltage lines or motor power sources.

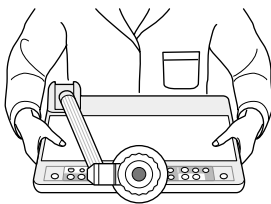
Use of this equipment near a high-voltage line or motor power source may subject the equipment to interference.

Take adequate measures to prevent external light from reaching the stage surface.

Make sure that the stage surface is not exposed to strong light from the outside of the equipment.

Carry the equipment with care.

Please carry the equipment by holding the sides of the body. Also take care not to give strong shocks to the body.



Do not touch the camera lens directly with your hand. Also, do not use this equipment in a place containing much dust or cigarette smoke.

Fingerprints or smear on the camera lens will make normal image shooting impossible.

When the camera lens has become dirty, clean it with a commercially available camera lens cleaner. In doing so, take care not to damage the lens.

Stage surface

Clean images cannot be obtained if the stage surface is smeared, damaged or discolored. Take care to protect the stage surface from a splash of any volatile substance, damage or dirt.

Do not leave the equipment in places where the equipment may be exposed to direct sunshine or any heating equipment.

When the body becomes dirty, wipe the dirt off with a well-wrung cloth wetted with a neutral detergent or suchlike and then wipe with a dry cloth. Do not splash thinner, benzene, insecticide or other volatile substance on it. Otherwise the equipment may deform, discolor or develop trouble. Also never wash the equipment in water, which will lead to a failure.

Disposal

For the disposal of the equipment, please contact your dealer or your municipality for instructions.

Contents

Introduction	E-2
Safety Notes	E-3
Notes for Use	E-5
Contents	E-6
Features	E-7
On this Manual	E-7
Checking of Accessories	E-8
Names of Parts	E-8
Control Panel	E-9
Back Panel	E-10
Remote Control	E-11
Preparations before Use	E-12
Connecting the Cable and Setting the Output Mode	E-12
Connecting the Power Cord	E-13
Setting the Camera Arm	E-14
How to Use	E-14
Turning Power On	E-14
Shooting the Material (Data)	E-14
Shooting the Surroundings	E-15
Correcting Trapezoidal Distortion at Oblique Shooting	E-16
Using Image Memory	E-17
Transferring Image Memory Contents to PC	E-17
Turning Power Off	E-18
Troubleshooting	E-19
Appendixes	E-21
Specifications	E-21
Dimensions	E-22

Features

High image quality and clear image display

Shooting at high image quality of XGA (1024×768) and displaying clear images

45-power zooming

The optical 15-power and digital 3-power zoom function allows you to enlarge details of the material.

Camera with illumination

The light provided on the camera head allows you to use the space freely.

Rotatable camera head and movable arm

Image shooting in all directions is possible without moving this equipment.

Trapezoidal correction function

Data shot from an oblique direction can be corrected such that it looks as if shot from right above.

Long-life cold-cathode lamp used

Image memory capable of storing eight images

Images can be stored in the body in advance.

You can perform a speedy presentation by switching from camera image to still image from image memory and back to camera image.

Paper holder function

The material can be held down by a commercially available magnet.

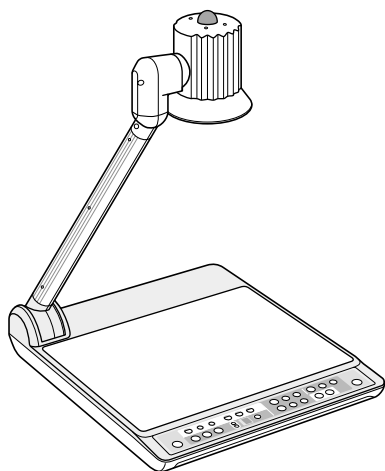
On This Manual

The buttons on the control panel and the remote control are indicated in ‘ ’.

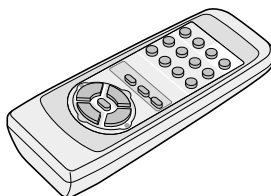
Checking of Accessories

Check the equipment body and the accessories as shown below. If you find any missing item, please contact your dealer and get it supplied.

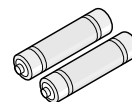
Equipment body



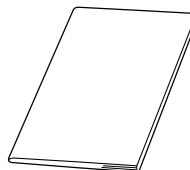
Remote control
(09N999215)



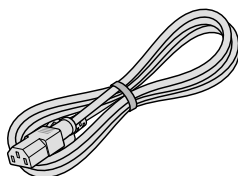
Two SUM-3 (AA) batteries
(for remote control)



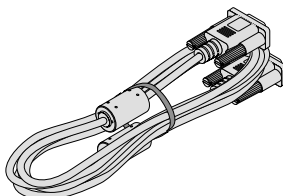
Guarantee policy



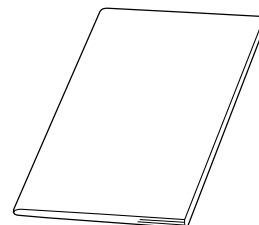
Power cord
(07N080003)



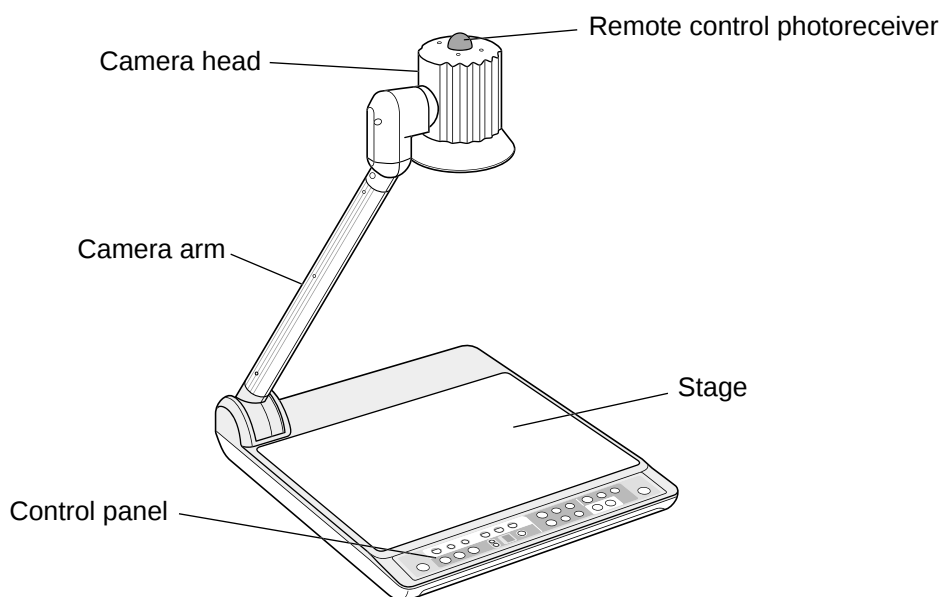
RGB signal cable (mini D-sub 15-pin)
(07N520001)



User's Manual (this manual)



Names of Parts



Control Panel

WHITE BALANCE

Adjusts the tone of white.

'AUTO'

Adjusts the tone of white automatically. Before pushing the button, project a white sheet of paper fully on the screen and adjust the brightness. The indicator lights up during the adjustment.

- Adjust WHITE BALANCE again when the ambient illumination has changed.

'BLUE'

Adds a slightly blue shade to white.

'RED'

Adds a slightly yellow shade to white.

(NOTE) With power to this equipment turned off, white balance will be reset to factory setting. See page E-15 for storage of adjusted value.

BRIGHTNESS

Adjusts the brightness of image.

'AUTO'

Adjusts the brightness of image automatically. The indicator lights up during the adjustment.

'DARK'

Darkens the image.

'BRIGHT'

Brightens the image.

KEYSTONE

Corrects trapezoidal distortion when shot obliquely. Or cancels correction. (See page E-16)

'ON / OFF'

Turns trapezoidal correction on or off. The indicator lights up with trapezoidal correction on.

'+' '-'

Makes fine adjustment of trapezoidal correction.

'REAL / FREEZE'

Selects between moving image mode and still image mode. The indicator for the moving image mode selected light up.

'LIGHT'

Turns on the light. At each press, the illumination changes as follows:

"Main light lights up and base light goes out." → "Main light goes out and base light lights up." → "Both main light and base light go out."

SOURCE

Selects a source input for output. The indicator for the currently selected input lights up.

'CAMERA'

Selects camera image.

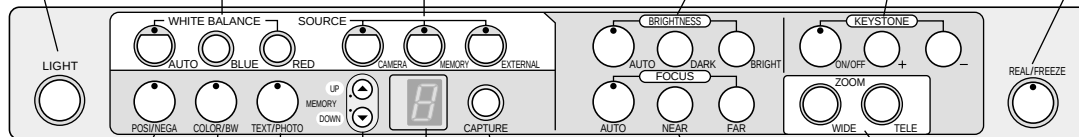
'MEMORY'

Selects the image stored in image memory. (NOTE) Digital zoom is cancelled.

'EXTERNAL'

Selects the image being inputted to the RGB input terminal.

(NOTE) EXTERNAL cannot be selected when video output is selected by dip switch 4. (See page E-10)



'POSI / NEGA'

Produces an output after negative conversion. Press this button again and the output will return to positive. The indicator lights up when positive is on.

'COLOR / BW'

Produces black-and-white output. Press again and the output will return to color. The indicator lights up when color is on.

'TEXT / PHOTO'

Selects output for text or photo. The indicator lights up when text is on. (NOTE) When the negative mode is selected using the 'POSI/NEGA' button, the 'TEXT/PHOTO' button is not available.

'CAPTURE'

Writes image into image memory. (NOTE) Turning power off will erase memory contents.

Image Memory No. Display

Displays the No. of the image memory selected.

MEMORY

Selects image memory.

'UP'

Selects the next image memory.

'DOWN'

Selects the previous image memory.

ZOOM

Changes the range of image to be shot.

'WIDE'

Shoots a wider range.

'TELE'

Shoots an enlarged portion of an area.

(NOTE) For zooming above optical 15-power zoom, use digital zoom. In digital zoom, change magnification by pressing button step by step. Digital zoom may sometimes produce inferior image quality.

FOCUS

Adjusts the focus of camera image.

'AUTO'

Adjusts the focus of camera image automatically. The indicator lights up during the adjustment.

'NEAR'

Moves the focus nearer to the camera.

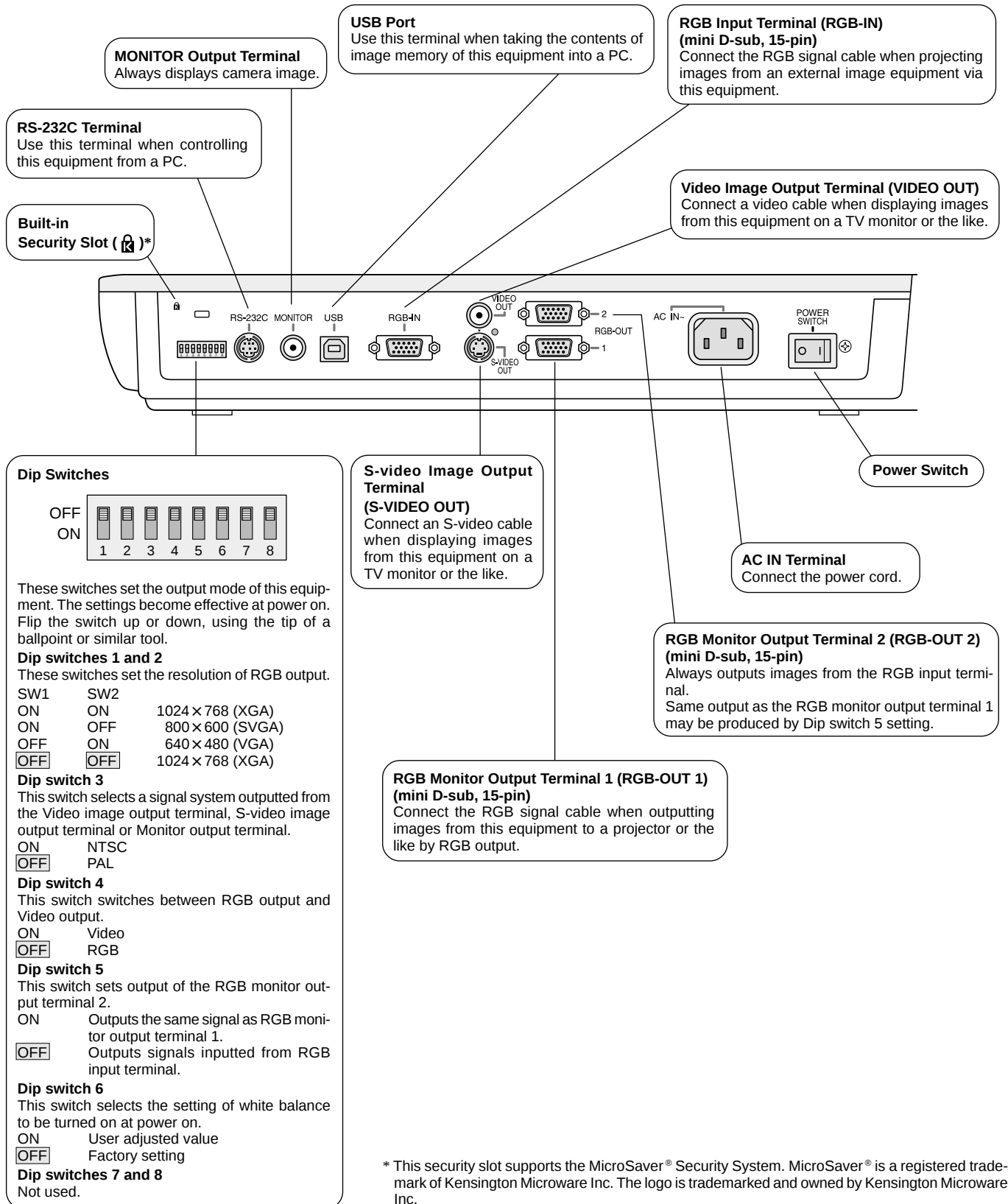
'FAR'

Moves the focus farther from the camera.

NOTE:

- The main light is provided within the camera head. Turn it on when shooting printed matter. The base light is provided within the stage, which is to be turned on when shooting see-through material. For the combination of ON and OFF of the lights, please refer to the "lighting guidelines" in the NOTE on page E-15.

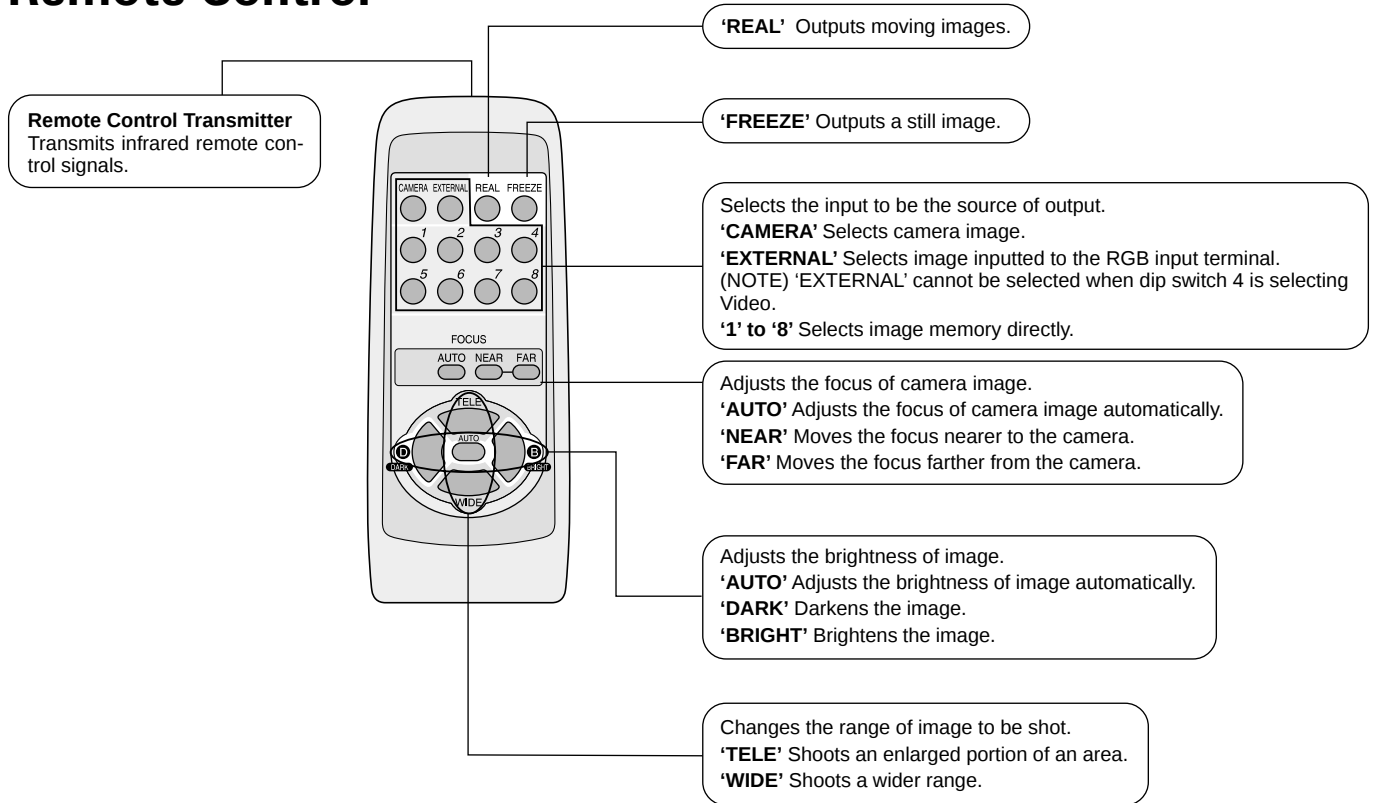
Back Panel



* This security slot supports the MicroSaver® Security System. MicroSaver® is a registered trademark of Kensington Microware Inc. The logo is trademarked and owned by Kensington Microware Inc.

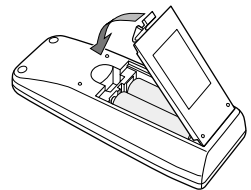
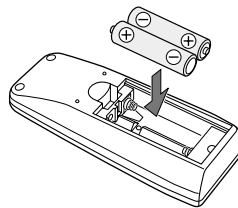
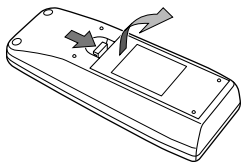
Items in a ruled box () indicate factory default settings.

Remote Control



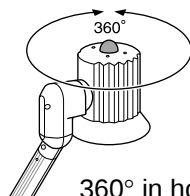
How to set batteries

- ① Remove the lid of the battery case on the back of the remote control.
- ② Enter the batteries in correct + and – orientation as indicated on the case inside.
- ③ Place the lid back on.

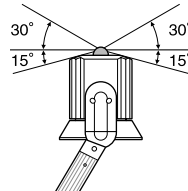


Effective range

Operate the remote control by directing the remote control transmitter toward the remote control photoreceiver on the equipment. Signals from the remote control can be received within an approximate range as shown below. The transmission distance of remote control signals is 4 meters.



360° in horizontal directions



30° in upward direction
15° in downward direction

Notes on the use of remote control:

- The remote control may not function well when the remote control photoreceiver is exposed to direct sunshine, strong light (inverter fluorescent lamp, strobe light, etc.) or infrared rays. In such a case, change the direction of light or the equipment body.
- A person or object between the remote control and the remote control photoreceiver may obstruct the transmission/reception. Also, the transmission/reception may be hindered in the shooting of a surrounding object if the camera head is turned or the camera arm angle is changed in such a direction as to hide the remote control photoreceiver.
- Handle the remote control with care. Dropping it or giving shock to it may damage the internal structure or electronic parts.
- Low voltage of the batteries may result in failed transmission. In such a case, replace the batteries with new ones.

Preparations before Use

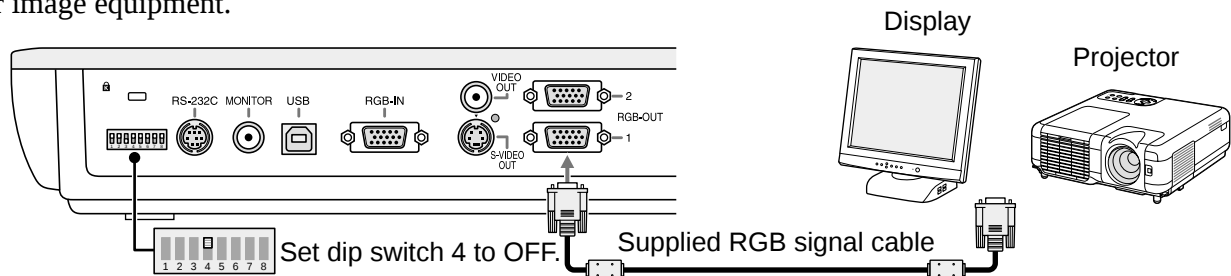
Connecting the Cable and Setting the Output Mode

Connect the cable to the equipment that displays the image from this equipment. A selection can be made from the RGB output and the video output. However, it is necessary to set the output method with the dip switch on the back panel before turning on the power to this equipment.

■ For RGB output

Set the dip switch 4 to OFF.

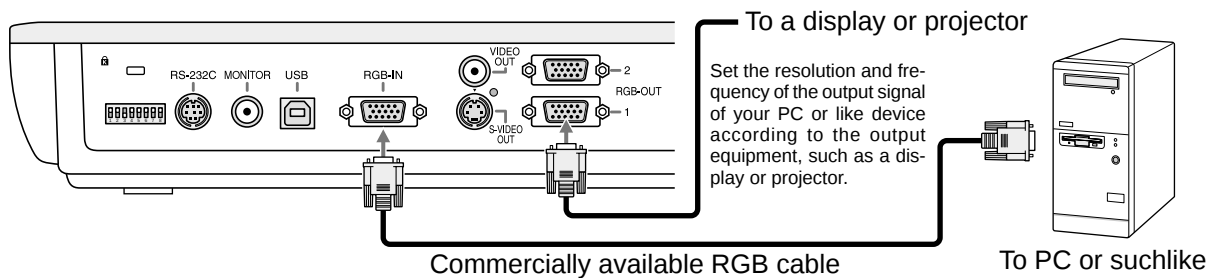
Connect the RGB monitor output terminal 1 (RGB-OUT 1) to the RGB input terminal of a projector, display or other image equipment.



With dip switch 5 set to ON, the same signal can be outputted from two systems by connecting a projector or display to the RGB monitor output terminal 2 (RGB-OUT 2).

NOTE:

- In the case of RGB output only, the RGB output signals from a PC, for instance, may be outputted via this equipment. For such an application, connect the RGB input terminal to the RGB output terminal on a PC or suchlike.

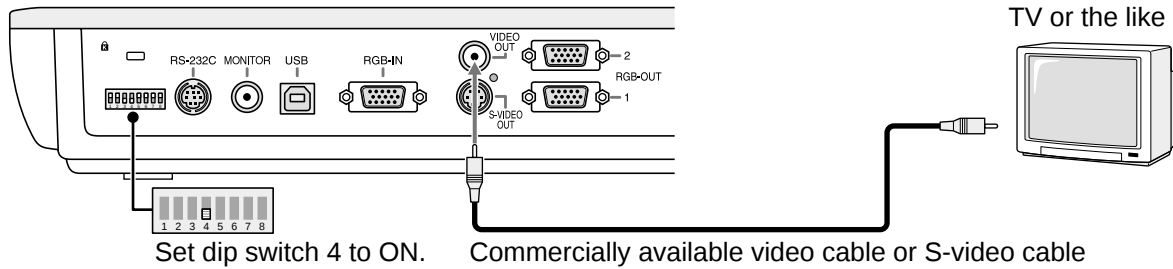


- With dip switch 5 set to OFF, the output signal from RGB monitor output terminal 2 is always the same as the signal of the RGB input terminal.
- When it is necessary to frequently switch between camera image and RGB signal, connect the display for PC control to the RGB monitor output terminal 2 (RGB-OUT 2), then the PC can be controlled while watching the display even when the camera image is on.
- The settings at dip switches 1 and 2 on the back of the equipment will not be reflected.
- Signals (display screen) inputted from the RGB input terminal of the equipment cannot be stored in memory.

■ For video signal output

Set the dip switch 4 to ON.

Connect the Video image output terminal to the Video image input terminal of a TV or other image equipment.

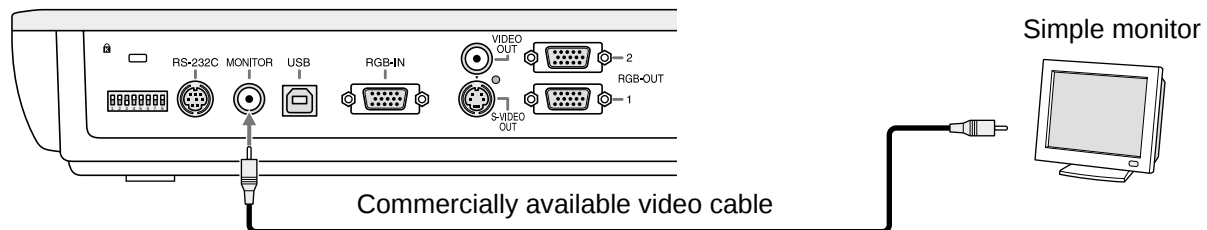


NOTE:

- With dip switch 4 set to ON, the source selection 'EXTERNAL' cannot be selected.

■ Connection of a simple monitor

A simple monitor may be connected to the Monitor output terminal for use with RGB output or video signal output.



Camera image is always being displayed, so that when replacing data, it is possible to see in advance whether the next data, larger in size, will be within the display range or not.

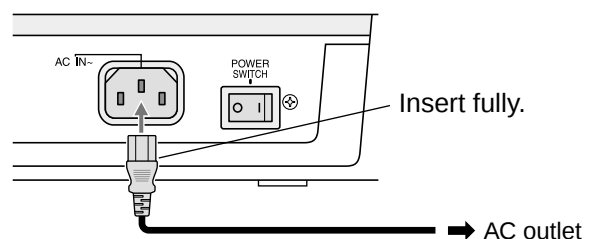
NOTE:

- The display image on a simple monitor may be slightly wider in the horizontal direction than that of a projector or a display.
- The display range may sometimes vary depending on the performance characteristics of a simple monitor or the type of output signals. Please confirm the display position by actually displaying it by your projector or display.
- Trapezoidal correction function does not work.
- Image quality is lower than the image from the RGB monitor output terminal 1/2.
- Image quality may drop and the tone of color may change from the video output terminal.

Connecting the Power Cord

Connect the power cord to the AC IN terminal on the back panel, and connect the plug to the outlet.

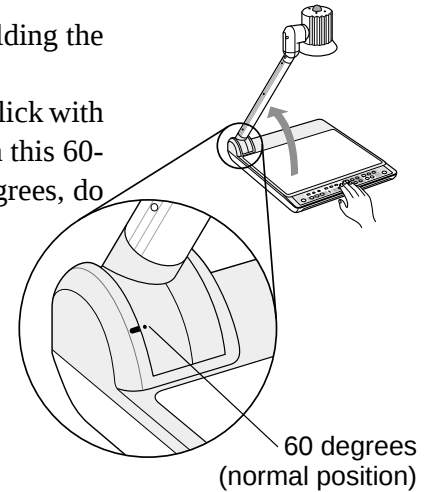
 CAUTION
Be sure to ground the equipment properly to ensure safety. To avoid electric shocks, ask a professional to carry out the grounding.
Be sure to make ground connection before connecting the power plug to the outlet.
Also, when disconnecting the grounding, be sure to do so only after disconnecting the power plug from the outlet.



Setting the Camera Arm

As illustrated, raise the camera arm gently in the indicated direction while holding the body down with your hand.

When the angle between the stage and the camera arm is 60 degrees, there is a click with which the camera arm gets fixed momentarily. Normally use the equipment in this 60-degree position. Though the camera arm may be raised to a position of 80 degrees, do not attempt to raise it any further.



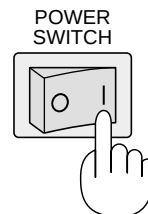
CAUTION

Be sure to hold the body down with your hand when raising the camera arm.
Otherwise, the body may lift up to cause injury.

How to Use

Turning Power On

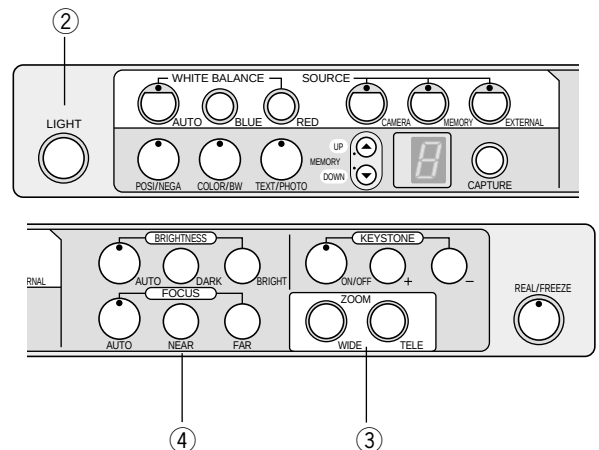
Set the power switch on the back panel to ON (I).



All the indicators on the control panel light up for about ten seconds.

Shooting the Material (Data)

- ① Place your material on the stage.
- ② Turn on the main light or turn on the base light, depending on the lighting in the room or the condition of the material to be shot.
- ③ Determine the size for the zoom shooting.
- ④ Adjust the focus.

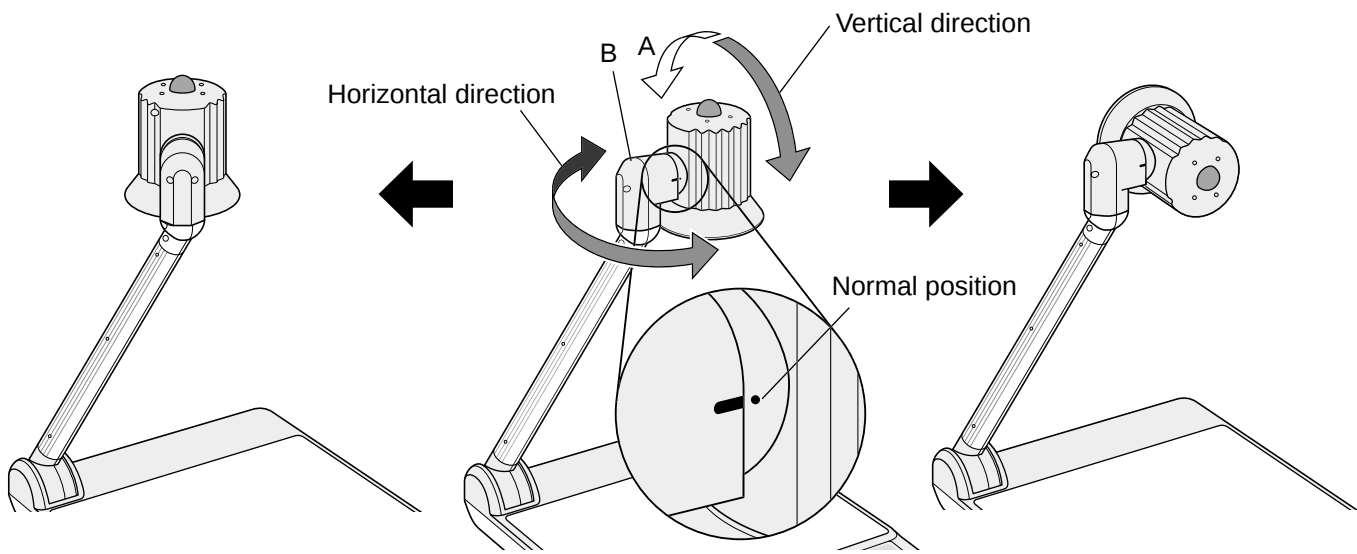


NOTE:

- For shooting a material with many characters, turn on the text mode, which will show the characters clearly for easier reading.

Shooting the Surroundings

Turn the camera head toward the object you want to shoot.



NOTE:

- The camera head does not turn vertically in your direction (A). Forcible turning may cause trouble.
- For turning in the horizontal direction, do so by holding the part B of the camera head.

NOTE:

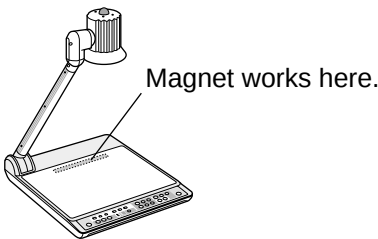
- When the material reflects light, turn off the main light. Also, try shooting obliquely by adjusting the camera arm angle.

Lighting Guidelines

	Main light *	Base light
Printed matter	ON	OFF
Three-dimensional object	ON	OFF
OHP film and other see-through material	OFF	ON
Reflective material, such as glossy paper	OFF	OFF

* When the room is full of light, better images may be obtained by turning off the main light.

- Adjust the brightness by using both the ON/OFF of the main light and the 'BRIGHTNESS' button.
- To store the adjustment of white balance, press the 'CAMERA' button three seconds or longer. The adjusted setting is stored as the indicator of the 'AUTO' button of WHITE BALANCE blinks once.
Set dip switch 6 to ON, and the adjusted setting will be turned on at the next power on.
- When changing the material, the scene of the material change can be hidden by turning on a still image by pressing the 'REAL/FREEZE' button.
- You can have the material fixed by using a commercially available magnet.

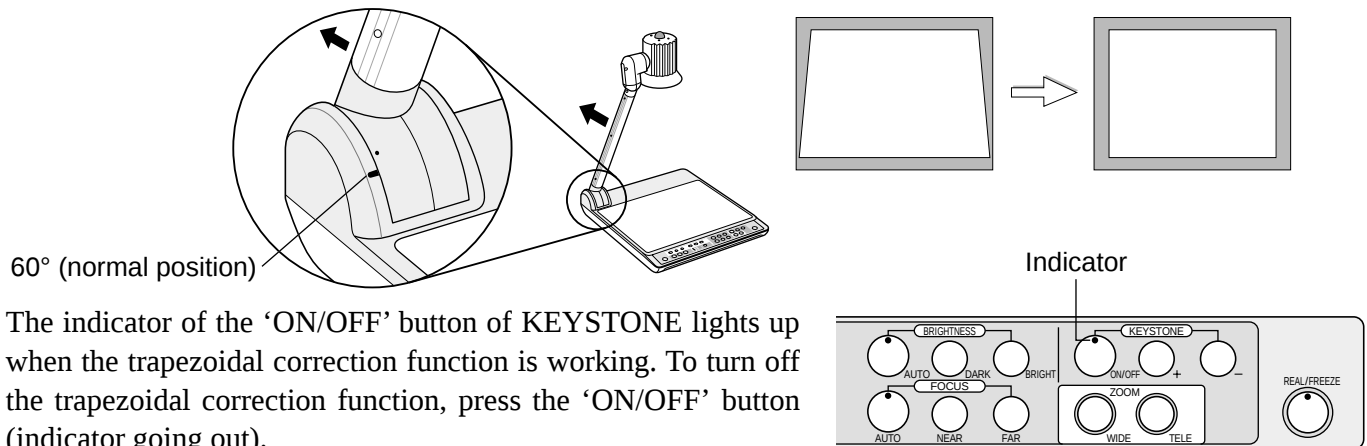


Correcting Trapezoidal Distortion at Oblique Shooting

The trapezoidal correction function can be used to correct trapezoidal distortion that occurs when the camera arm is moved from the normal position (60°) to a higher position (80°) and material is shot from an oblique direction.

The wider base is adjusted to the narrower base to obtain an image with reduced distortion.

Use this function when showing a material of A4 vertical size within a screen or when avoiding the reflection of external light or light from the main light on the material to be shot.



The indicator of the 'ON/OFF' button of KEYSTONE lights up when the trapezoidal correction function is working. To turn off the trapezoidal correction function, press the 'ON/OFF' button (indicator going out).

If the trapezoidal correction function has not corrected distortion completely, make fine adjustment with '+' / '-' button of KEYSTONE.

NOTE:

- The trapezoidal correction function does not work when the camera arm is lower than the normal position and material is shot from an oblique direction.
- Turn off the trapezoidal correction function when shooting a solid body from an oblique direction.
- If you adjust the input signal using an auto adjusting function of a projector or display during the operation of the trapezoidal correction function, the image may not sometimes be displayed properly when the camera arm is returned to the normal position. In such a case, please carry out the automatic adjustment again.

During the use of trapezoidal correction function:

- Image width narrows.
- Image quality may sometimes drop.
- Magnification of optical zooming lowers.
- Focusing sometimes fails.

Using Image Memory

You can store images (up to 8 images) in advance and output them later.

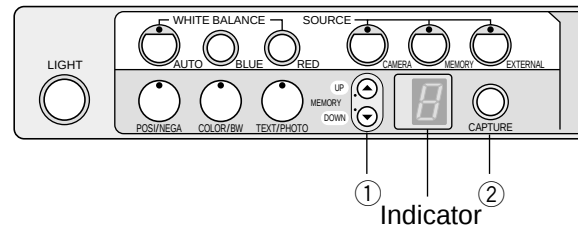
■ Storing images

- ① Select the image memory to be used by operating 'UP' or 'DOWN'.

The No. of the image memory selected is displayed by the indicator.

- ② Press the 'CAPTURE' button.

The image is stored in the image memory.



NOTE:

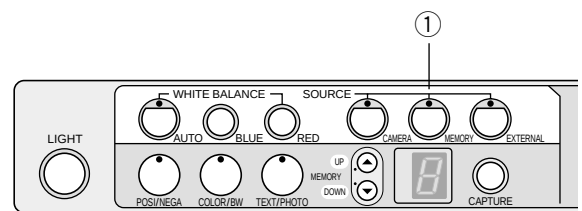
- Image cannot be stored when EXTERNAL or MEMORY has been selected in source selection.
- Capturing during the use of digital zoom will result in the storage of image before the use of digital zoom.

■ Outputting images stored in image memory

- ① Press the 'MEMORY' button in source selection.

The contents of the image memory currently selected are outputted.

Select the image memory by pressing the 'UP' or 'DOWN' button.



NOTE:

- Image memories can be selected directly by pressing the buttons '1' to '8' on the remote control.
- The stored images will be deleted by turning power off.

Transferring Image Memory Contents to PC

By the use of a USB cable, the contents of image memory can be transferred to a PC in the form of a JPEG file.

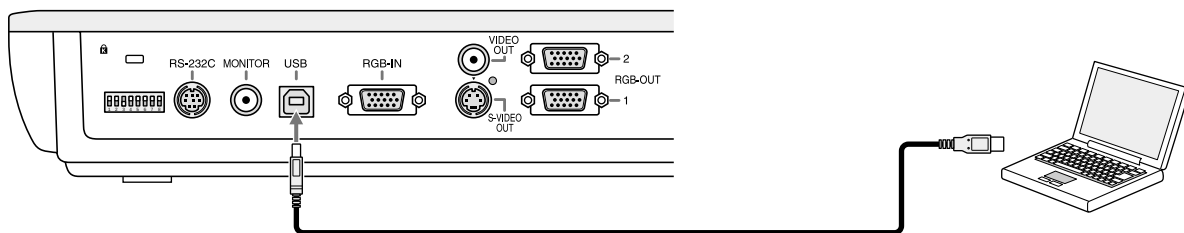
NOTE:

- Transfer of memory contents is only possible to PCs running on Windows Me, Windows 2000 Professional, Windows XP Home Edition and/or Windows XP Professional and compatible with USB Ver. 1.1.

■ Connecting the cable

Connect the square terminal (type B) of the commercially available USB cable (USB standard Ver. 1.1 or equivalent) to the USB port on the back panel.

Connect the other end of the USB cable to the USB port (type A) of your PC.



■ How to transfer

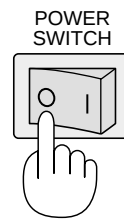
This equipment will be recognized as the drive by “My Computer” on the PC and the contents of image memory are displayed as a JPEG file. Copy the JPEG file and transfer it to your PC.

NOTE:

- “U” will be displayed by the indicator for an applicable image memory No. during communication with a PC, such as when the contents of an image memory are being transferred to the PC.
During the display of “U,” you cannot operate this equipment. Please wait.
 - The date and time captured is not stored as data for JPEG file.
 - Images captured during the use of the trapezoidal correction function are displayed in the state before correction on a PC display.
-

Turning Power Off

Set the power switch on the back panel to OFF (○).



Troubleshooting

Before asking for repair, please make the following checks. If you cannot correct the trouble, contact your dealer.

Symptom	Check for the cause	See page
Image is not projected.	- Power plug is not properly connected to outlet. - Power switch is not on. - Projector or display is not properly connected. - Brightness setting is not correct. 'EXTERNAL' or 'MEMORY' is selected in source selection. Select 'CAMERA'. - Mode setting of image is not correct. Set according to projector or display to be connected. - Settings of dip switches on back panel are not correct.	E-13 E-14 E-12 E-9 E-9 — E-10
Image is not focused.	- Material is too close to lens (it is 88mm or higher from stage surface). - ZOOM has been changed after focusing. Carry out focusing with ZOOM set. - In 'AUTO' of focusing, some object may not allow easy focusing. Adjust by 'NEAR' or 'FAR' button of FOCUS. - When projector is used, projector is not properly focused. Adjust focus as instructed in projector manual. - Camera image cannot be adjusted when FREEZE mode is selected ('REAL/FREEZE' indicator off) or when 'EXTERNAL' or 'MEMORY' is selected in source selection. Turn on REAL mode by pressing 'REAL/FREEZE' button, and select camera image by pressing 'CAMERA' button of source selection.	— E-14 E-9 — E-9
Zoom cannot be adjusted.	- Zoom is at down end or up end. - Digital zoom is selected. Change magnification of digital zoom by pressing button step by step.	— E-9
Image is blurred or dust is shown.	Camera lens is dirty. Clean with commercially available camera lens cleaner.	—
Image is dark	- Main light is not on. - BRIGHTNESS is not properly adjusted.	E-9 E-9
Stripes appear in image of printed matter.	Interference between mesh points of printed matter and image of camera shooting elements may sometimes produce color stripes. In such a case, change image size a little by ZOOM.	E-9
Color tone is not correct.	- White balance is incorrectly adjusted. - Negative mode or black-and-white mode is on.	E-9 E-9
Beating appears in image.	Beating may appear in image when equipment is used near source of strong radio waves. Separate from such source.	—
Image cannot be adjusted.	- Camera image cannot be adjusted when FREEZE mode is selected ('REAL/FREEZE' indicator off) or when 'EXTERNAL' or 'MEMORY' is selected in source selection. Turn on REAL mode by pressing 'REAL/FREEZE' button, and select camera image by pressing 'CAMERA' button of source selection. - There are cases where BRIGHTNESS adjustment cannot raise brightness sufficiently.	E-9 E-9
Operation does not occur at button press.	Correct operation may not follow if two buttons are pressed simultaneously or if a button is hit in quick succession. Operate buttons one by one with sufficient intervals.	—
Remote control does not work.	- Batteries are not set in remote control. - Voltage of batteries is low. - Batteries attached are for operation check only. Use batteries available on the market. - Remote control is operated outside usable range.	— — — E-11
White or black dots appear in camera image.	Due to characteristics of moving image high-pixel CCD, white or black dots may appear on rare occasions and can be conspicuous when enlarged by digital zoom.	—
All indicators remain lit even a few minutes after power on.	The equipment is in trouble. Contact your dealer for instructions.	—

Symptom	Check for the cause	See page
Screen blinks.	• Darken screen by adjusting brightness to 'DARK' side.	E-9
Drive does not open when USB-connected.	• Disconnect USB cable once, turn on power to this equipment and connect USB cable again. (NOTE) Memory contents will be erased by turning off power to the equipment.	—
Image distorts into trapezoid.	• Indicator of 'ON/OFF' button of KEYSTONE is off. • Make fine adjustment with '+' / '-' button of KEYSTONE.	E-16 E-16

Appendixes

Specifications

General specifications

Power requirement	100-120/200-240V AC, 50/60 Hz
Power consumption	20W
Input current	0.43 A (100-120V AC) / 0.27 A (200-240V AC)
Dimensions	W420mm × D489mm × H650mm (service) W420mm × D680mm × H190mm (storage)
Net weight	5.2 kg

Optical specifications

Lens	F1.6-2.6
Shooting range	Max. 344mm × 252mm (equal to B4) Min. 16mm × 12mm
Focus adjustment range	88mm (above stage surface)
Zoom	Motor-driven, × 15 (optical), × 3 (digital)
Focus	Auto / Manual
Brightness	Auto / Manual

Camera specifications

Output operation mode	Progressive mode (analog RGB) • 1024 × 768 (XGA) • 800 × 600 (SVGA) • 640 × 480 (VGA) Interlace mode • NTSC • PAL
Camera element	1/3 inch CCD
Total number of pixels	850,000 pixels
Frame rate	15 fps
Synchronous system	Internal synchronization
White balance	Auto / Manual
Input selection	Possible (built-in camera / External input / Memory 8 images)

I/O terminal specifications

Input terminal	RGB (mini D-sub 15-pin) × 1
Output terminal	RGB (mini D-sub 15-pin) × 2 S-video (mini DIN 4-pin) × 1 Video (RCA-phono) × 1 Monitor (RCA-phono) × 1 USB (type B) × 1
Control terminal	Remote input (mini DIN 8-pin RS-232C female)

Environmental conditions

Operating ambience	Temperature 5°C to 35°C Humidity 30% to 80% (no condensation)
Storage ambience	Temperature -10°C to 50°C Humidity 20% to 80% (no condensation)

Regulations

UL Approved (UL 60950, CSA 60950)
Meets DOC Canada Class B requirements
Meets FCC Class B requirements
Meets AS/NZS3548 Class B
Meets EMC Directive (EN55022:1998, EN55024-1998, EN61000-3-2, EN61000-3-3)
Meets Low Voltage Directive (EN60950, TUV GS Approved)



* These specifications and designs are subject to change without advance notice.

Dimensions

