Multimedia Projector

MODEL PLC-XU116

SANYO

Owner's Manual

PJLink™

Features and Design

This Multimedia Projector is designed with the most advanced technology for portability, durability, and ease of use. This projector utilizes built-in multimedia features, a palette of 16.77 million colors, and matrix liquid crystal display (LCD) technology.

♦ **Compact Design**

This projector is designed compact in size and weight. It is easy to carry and installed anywhere you wish to use.

♦ **Capable of 360-degree Projection**

This projector is capable of 360-degree projection. *Some restriction required, see page 7.

♦ **Simple Computer System Setting**

The projector has the Multi-scan system to conform to almost all computer output signals quickly (p.33). Up to WUXGA resolution can be accepted.

♦ **Power Management**

The Power management function reduces power consumption and maintains the lamp life (p.55).

♦ **Quick Termination**

The AC power cord can be unplugged immediately after turning off the projector without waiting for the termination of the cooling fan rotation (p.23).

♦ **Logo Function**

The Logo function allows you to customize the screen logo (pp.51-53). You can capture an image for the screen logo and use it for the starting-up display or between presentations.

♦ **Multilanguage Menu Display**

Operation menu is available in 17 languages; English, German, French, Italian, Spanish, Portuguese, Dutch, Swedish, Finnish, Polish, Hungarian, Romanian, Russian, Chinese, Korean, Japanese and Thai (p.48).

♦ **Security Function**

The Security function helps you to ensure security of the projector. With the Key lock function, you can lock the operation on the top control or the remote control (p.58). PIN code lock function prevents unauthorized use of the projector (pp.22, 58-59).

♦ **Helpful Maintenance Functions**

Lamp and filter maintenance functions provide for better and proper maintenance of the projector.

♦ **LAN Network Function**

This projector is loaded with the Wired and Wireless LAN network functions.

- You can project an image on a computer as well as operate and manage the projector via network.

- The projector provides the "USB display" function that the image and sound are sent to the projector by connecting the computer to the projector with a USB cable.

- This projector is capable of the wireless LAN simple setting function by attaching the supplied USB memory to a computer.

For details, refer to the owner's manual of "Network Set-up and Operation."

♦ **Memory Viewer Function**

Insert the dedicated USB memory into the projector to project images or movie files stored within. You do not have to carry computers or other equipment for a presentation.

For details, refer to the owner's manual of "Memory viewer function".

♦ **Auto setup Function**

This function enables Input search, Auto Keystone correction and Auto PC adjustment by simple pressing the AUTO SETUP button (pp. 26,49).

♦ **Colorboard Function**

At the time of simple projection on the colored wall, you can get the close color image to the color image projected on a white screen by selecting the similar color to the wall color from the preset four colors.

♦ **Closed Caption**

This is a printed version of the program sound or other information displayed on the screen. You can turn on the feature and switch the channels (p.56).

♦ **Corner Correction**

With the "Horizontal and vertical keystone correction function" and "Corner keystone correction function" of this projector, you can correct the keystone distortion even when projecting from the diagonal to the screen (pp.27, 50).

✓**Note:**

 • The On-Screen Menu and figures in this manual may differ slightly from the product.
 • The contents of this manual are subject to change without notice.

Table of Contents

Trademarks

Each name of corporations or products in this book is either a registered trademark or a trademark of its respective corporation.
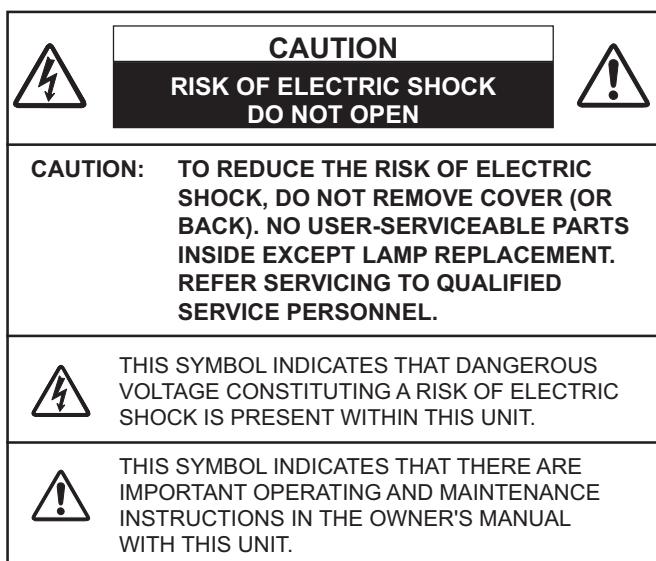
To the Owner

Before installing and operating this projector, read this manual thoroughly.

This projector provides many convenient features and functions. Operating the projector properly enables you to manage those features and maintains it in good condition for many years to come.

Improper operation may result in not only shortening the product-life, but also malfunctions, fire hazard, or other accidents.

If your projector seems to operate improperly, read this manual again, check operations and cable connections and try the solutions in the "Troubleshooting" section on pages 68-70 of this manual. If the problem still persists, contact the dealer where you purchased the projector or the service center.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:	TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE EXCEPT LAMP REPLACEMENT. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT.
	THIS SYMBOL INDICATES THAT THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE OWNER'S MANUAL WITH THIS UNIT.

FOR EU USERS
The symbol mark and recycling systems described below apply to EU countries and do not apply to countries in other areas of the world.
Your product is designed and manufactured with high quality materials and components which can be recycled and/or reused.
The symbol mark means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste.

Note:
If a chemical symbol is printed beneath the symbol mark, this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows: Hg: mercury, Cd: cadmium, Pb: lead
In the European Union there are separate collection systems for used electrical and electronic equipment, batteries and accumulators.
Please, dispose of them correctly at your local community waste collection/recycling centre.

Please, help us to conserve the environment we live in!

READ AND KEEP THIS OWNER'S MANUAL FOR LATER USE.

⚠ Safety Precaution

WARNING: • **THIS APPARATUS MUST BE EARTHED.**
• **TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

–This projector produces intense light from the projection lens. Do not stare directly into the lens, otherwise eye damage could result. Be especially careful that children do not stare directly into the beam.
–Install the projector in a proper position. Otherwise it may result in fire hazard.
–Allowing the proper amount of space on the top, sides, and rear of the projector cabinet is critical for proper air circulation and cooling of the unit. The dimension shown here indicate the minimum space required. If the projector is to be built into a compartment or similarly enclosed, these minimum distances must be maintained.
–Do not cover the ventilation slot on the projector. Heat build-up can reduce the service life of your projector, and can also be dangerous.

SIDE and TOP   REAR

0.7'(20cm)

1.5'(50cm)   3'(1m)   3'(1m)
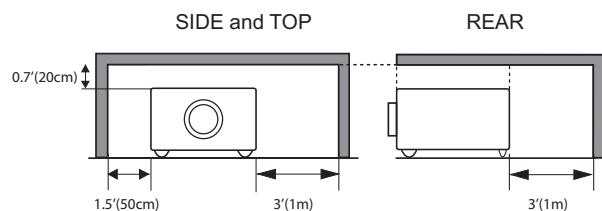
–If the projector is unused for an extended time, unplug the projector from the power outlet.
–Do not project the same image for a long time. The afterimage may remain on the LCD panels by the characteristic of panel.

⚠ CAUTION

DO NOT SET THE PROJECTOR IN GREASY, WET, OR SMOKY CONDITIONS SUCH AS IN A KITCHEN TO PREVENT A BREAKDOWN OR A DISASTER. IF THE PROJECTOR COMES IN CONTACT WITH OIL OR CHEMICALS, IT MAY BECOME DETERIORATED.

⚠ IMPORTANT NOTE

THIS EQUIPMENT COMPLIES WITH FCC RADIATION EXPOSURE LIMITS SET FORTH FOR AN UNCONTROLLED ENVIRONMENT. THIS EQUIPMENT SHOULD BE INSTALLED AND OPERATED WITH MINIMUM DISTANCE 20 CM BETWEEN THE RADIATOR & YOUR BODY.

⚠ CAUTION

Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/Data Processing Equipment, ANSI/NFPA 75.

Safety Instructions

All the safety and operating instructions should be read before the product is operated.

Read all of the instructions given here and retain them for later use. Unplug this projector from AC power supply before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

Follow all warnings and instructions marked on the projector.

For added protection to the projector during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage due to lightning and power line surges.

Do not expose this unit to rain or use near water... for example, in a wet basement, near a swimming pool, etc...

Do not use attachments not recommended by the manufacturer as they may cause hazards.

Do not place this projector on an unstable cart, stand, or table. The projector may fall, causing serious injury to a child or adult, and serious damage to the projector. Use only with a cart or stand recommended by the manufacturer, or sold with the projector. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturers.

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

Slots and openings in the back and bottom of the cabinet are provided for ventilation, to ensure reliable operation of the equipment and to protect it from overheating.

The openings should never be covered with cloth or other materials, and the bottom opening should not be blocked by placing the projector on a bed, sofa, rug, or other similar surface. This projector should never be placed near or over a radiator or heat register.

This projector should not be placed in a built-in installation such as a book case unless proper ventilation is provided.

Never push objects of any kind into this projector through cabinet slots 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 projector.

Do not install the projector near the ventilation duct of air-conditioning equipment.

This projector 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 supplied, consult your authorized dealer or local power company.

Do not overload wall outlets and extension cords as this can result in fire or electric shock. Do not allow anything to rest on the power cord. Do not locate this projector where the cord may be damaged by persons walking on it.

Do not attempt to service this projector yourself as opening or removing Covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Unplug this projector from wall outlet and refer servicing to qualified service personnel under the following conditions:
a. When the power cord or plug is damaged or frayed.
b. If liquid has been spilled into the projector.
c. If the projector has been exposed to rain or water.
d. If the projector does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the projector to normal operation.
e. If the projector has been dropped or the cabinet has been damaged.
f. When the projector exhibits a distinct change in performance-this indicates a need for service.

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or injury to persons.

Upon completion of any service or repairs to this projector, ask the service technician to perform routine safety checks to determine that the projector is in safe operating condition.

NOTE FOR CUSTOMERS IN THE US
(Hg) LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS.

Air Circulation

Openings in the cabinet are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered.

⚠️ **CAUTION**

Hot air is exhausted from the exhaust vent. When using or installing the projector, the following precautions should be taken.

– Do not put any flammable object or spray can near the projector, hot air is exhausted from the air vents.
– Keep the exhaust vent at least 3' (1 m) away from any objects.
– Do not touch a peripheral part of the exhaust vent, especially screws and metallic parts. These areas will become hot while the projector is being used.
– Do not put anything on the cabinet. Objects put on the cabinet will not only get damaged but also may cause fire hazard by heat.

Cooling fans are provided to cool down the projector. The fans' running speed is changed according to the temperature inside the projector.

Air Intake Vent

Air Intake Vent

Exhaust Vent
(Hot air exhaust)

Air Intake Vent
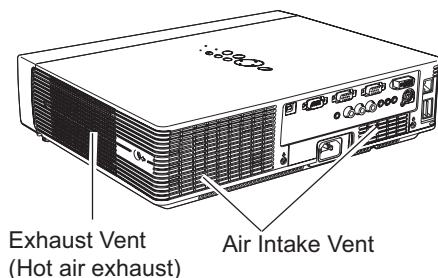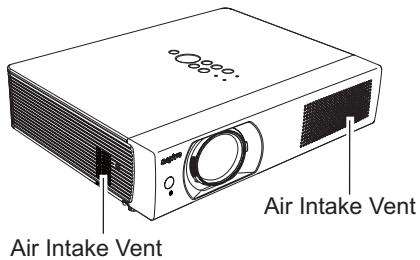
Moving the Projector

When moving the projector, replace the Lens Cap and retract adjustable feet to prevent damage to the lens and cabinet.
When the projector is not in use for an extended period, put it into the supplied carrying case with the lens side up.

⚠️ **CAUTION**

The carrying case (supplied) is intended for protection against dust and scratches on surface of the cabinet, and it is not designed to protect an appliance from external forces. Do not transport the projector by courier or any other transport service with this case, otherwise the projector can be damaged. When handling the projector, do not drop, bump, subject it to strong forces, or put other things on the cabinet.

⚠️ **CAUTION IN CARRYING OR TRANSPORTING THE PROJECTOR**

– Do not drop or bump the projector, otherwise damages or malfunctions may result.
– When carrying the projector, use a suitable carrying case.
– Do not transport the projector by courier or any other transport service in an unsuitable transport case. This may cause damage to the projector. For information about transporting the projector by courier or any other transport service, consult your dealer.
– Do not put the projector in a case before the projector is cooled enough.
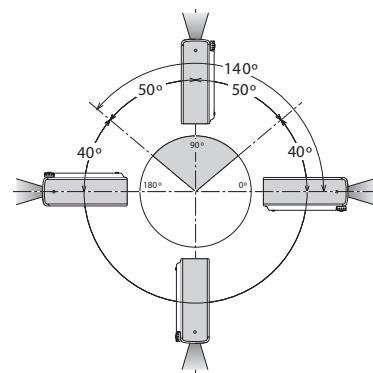
Installing the Projector in Proper Directions

Use the projector properly in specified positions. Improper positioning may reduce the lamp life and result in severe accident or fire hazard.
This projector can project the picture upward, downward or backward, perpendicular to the plane of the screen as shown in the figure below.

Bottom Downward (Usual)   **Front Upward**   **Bottom Upward**   **Front Downward**
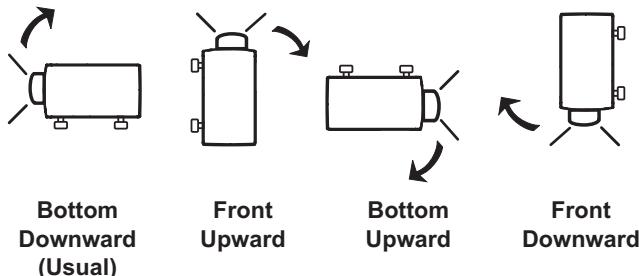
Be sure to set the Lamp control in High and the Fan control in **On 3** in the setting menu when using the projector inclined at between +40 degrees to +140 degrees to the horizontal plane at altitudes between 0 and approximately 1,600 meters above sea level.

Be sure to set the Fan control in **On 2** when using the projector at higher altitudes than the altitudes described above, regardless of the installation position of the projector. (p.60).

Positioning Precautions
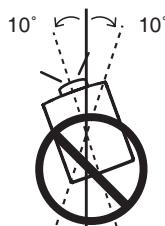
Avoid positioning the projector as described below when installing.
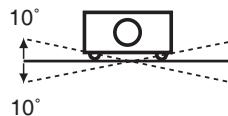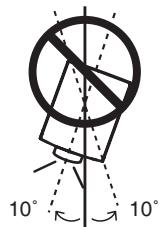
10°
10°
Do not roll the projector more than 10 degrees from side to side.

Do not put the projector on either side to project an image.

10°   10°
In upward projection, do not tilt the projector over 10 degrees right and left.

In downward projection, do not tilt the projector over 10 degrees right and left.
10°   10°

Compliance

AC Power Cord Requirement

The AC Power Cord supplied with this projector meets the requirement for use in the country you purchased it.

AC Power Cord for the United States and Canada:

AC Power Cord used in the United States and Canada is listed by the Underwriters Laboratories (UL) and certified by the Canadian Standard Association (CSA).
AC Power Cord has a grounding-type AC line plug. This is a safety feature to be sure that the plug will fit into the power outlet. Do not try to defeat this safety feature. Should you be unable to insert the plug into the outlet, contact your electrician.
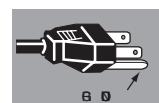
AC Power Cord for the United Kingdom:

This cord is already fitted with a moulded plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA approved BS 1362 fuse must be used of the same rating, marked thus ⊛. If the fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is of the same colour as that visible on the pin face of the plug (i.e. red or orange). Fuse covers are available from the Parts Department indicated in your User Instructions.
If the plug supplied is not suitable for your socket outlet, it should be cut off and destroyed.
The end of the flexible cord should be suitably prepared and the correct plug fitted.
WARNING : A PLUG WITH BARED FLEXIBLE CORD IS HAZARDOUS IF ENGAGED IN A LIVE SOCKET OUTLET.
The Wires in this mains lead are coloured in accordance with the following code:
  Green-and-yellow Earth
  Blue . . . . Neutral
  Brown . . . . Live
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
WARNING: THIS APPARATUS MUST BE EARTHED.

THE SOCKET-OUTLET SHOULD BE INSTALLED NEAR THE EQUIPMENT AND EASILY ACCESSIBLE.

Part Names and Functions

Front
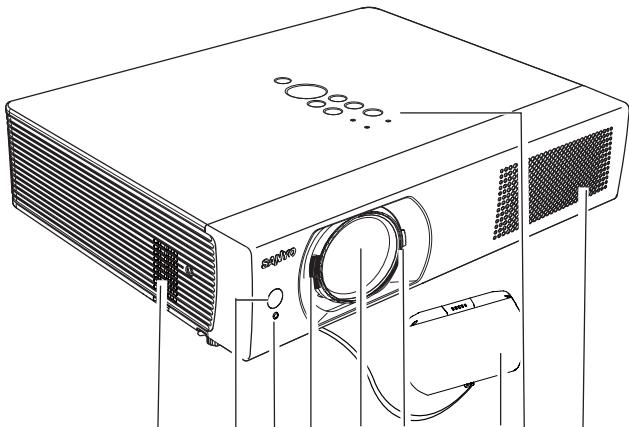
Infrared Remote Receiver
WIRELESS Indicator
Focus Ring
Projection Lens
Zoom Lever
Lens Cap

⚠ **CAUTION**

Do not turn on a projector with lens cap attached. High temperature from light beam may damage lens cap and result in fire hazard.

Top Controls and Indicators
Air Intake Vent

Back
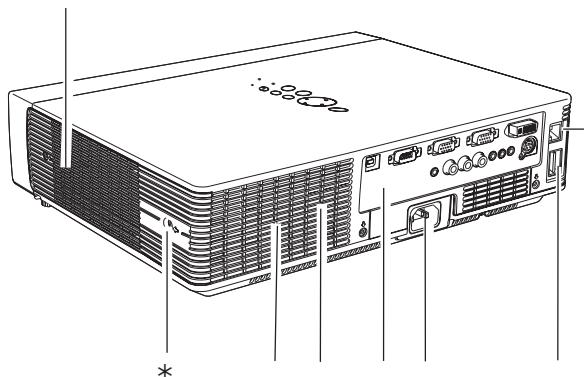
Exhaust vent

⚠ **CAUTION**

Hot air is exhausted from the exhaust vents. Do not put heat-sensitive objects near this side.

Speaker
Air Intake Vent (back and bottom)
Terminals and Connectors
Power Cord Connector
USB Connector (Series A)
LAN Connection Terminal

∗

Bottom
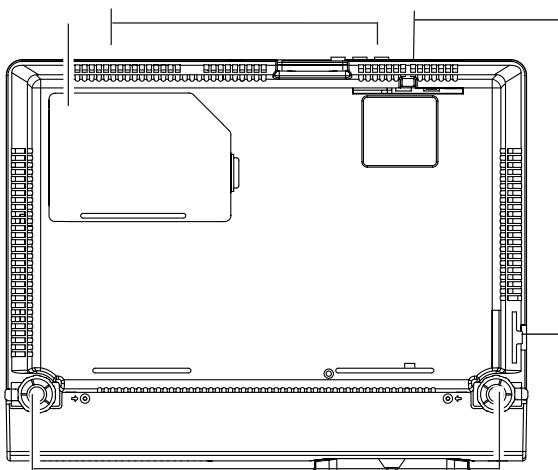
Lamp Cover
Filters
Adjustable Feet

✓ **Note:**

WIRELESS Indicator and LAN Connection Terminal are for the Network function. Refer to the owner's manual of "Network Set-up and Operation".

USB Connector (Series A) is for the Memory Viewer function. Refer to the owner's manual of "Memory Viewer function".

∗ **Kensington Security Slot**

This slot is for a Kensington lock used to deter theft of the projector.

* Kensington is a registered trademark of ACCO Brands Corporation.

Rear Terminal

USB CONTROL PORT COMPUTER IN 1 COMPONENT IN MONITOR OUT COMPUTER IN 2 DVI-I

R/C JACK VIDEO IN L(MONO) R COMPONENT COMPUTER AUDIO OUT (VARIABLE) S-VIDEO IN
— AUDIO IN —

USB
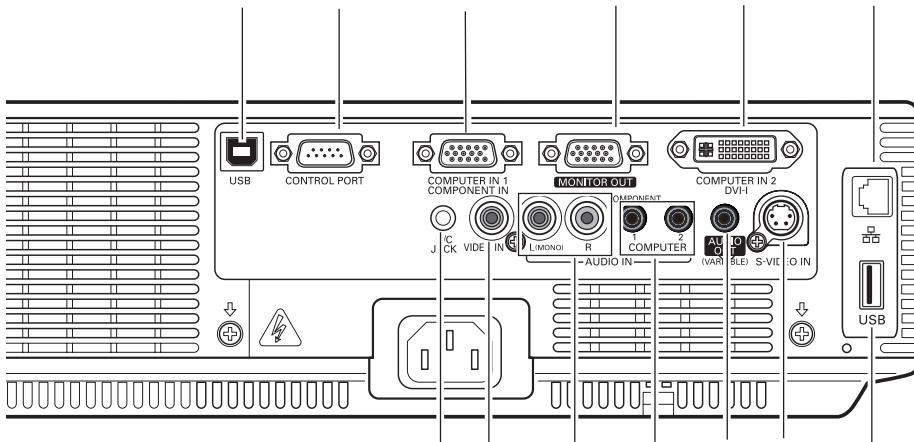
USB Connector (Series B)

This terminal is switchable. Set up this terminal as either "Mouse control" (p.15) or "USB display" (refer to "Network Set-up and Operation") in "USB terminal" of "Setting" menu.

CONTROL PORT

When controlling the projector with RS-232C, connect the control equipment to this connector with the serial control cable.

COMPUTER IN 1 / COMPONENT IN

Connect output signal from a computer, RGB scart 21-pin video output or component video output to this terminal (pp.17,19).

MONITOR OUT

This terminal can be used to output the incoming analog RGB and component signals from COMPUTER IN 1/COMPONENT IN or COMPUTER 2/DVI-I terminal to the other monitor (p.17).

COMPUTER IN 2 / DVI-I

Connect computer output (Digital/Analog DVI-I type) to this terminal (p.17).

LAN Connection Terminal

Connect the LAN cable (refer to the owner's manual of "Network Set-up and Operation").

USB Connector (Series A)

Connect the USB menory (refer to the owner's manual "Memory Viewer function").

S-VIDEO IN

Connect the S-VIDEO output signal from video equipment to this jack (p.18).

AUDIO OUT (VARIABLE)

Connect an external audio amplifier to this jack (pp.17-19).
This terminal outputs sound from AUDIO IN terminal (or   ).

COMPUTER 1 COMPONENT / COMPUTER 2 AUDIO IN

Connect the audio output (stereo) from a computer or video equipment connected to   ,
    or   to this jack. (pp17, 19)

AUDIO IN

Connect the audio output signal from video equipment connected to   or   to this jack.

For a mono audio signal (a single audio jack), connect it to the L (MONO) jack (p.18).

VIDEO IN

Connect the composite video output signal to this jack (p.18).

R/C JACK

When using the wired remote control, connect the wired remote control to this jack with a remote control cable (not supplied).

Top Control

LAMP REPLACE   WARNING

ON / STAND-BY   POWER

INPUT   AUTO SETUP/CANCEL

KEYSTONE   MENU

VOLUME –   VOLUME +
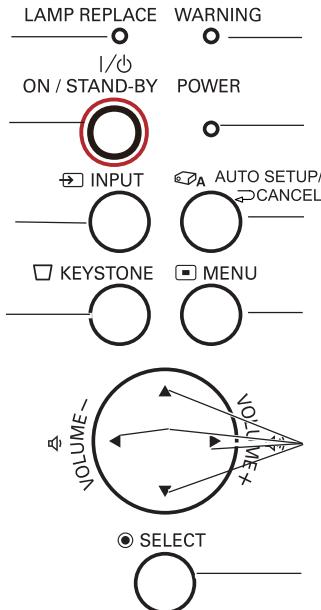
SELECT

SELECT button

–Execute the selected item (p.24).
–Expand or compress the image in the Digital zoom mode (p.40).

POINT ▲▼◄► (VOLUME +/–) buttons

–Select an item or adjust the value in the On-Screen Menu (p.24).
–Pan the image in the Digital zoom + mode (p.40).
–Adjust the volume level (Point ◄► buttons) (p.28).

MENU button

Open or close the On-Screen Menu (p.24).

AUTO SETUP/CANCEL button

–Correct vertical keystone distortion and adjust computer display parameters such as **Fine sync**, **Total dots**, **Horizontal** and **Vertical** position (pp.26, 49).
–Display the image in USB thumb drive or return to the menu bar in Memory Viewer menu.
 Refer to the owner's manual of "Memory Viewer function".

POWER indicator

–Lights red when the projector is in stand-by mode.
–Lights green during operations.
–Blinks green in the Power management mode (p.55).

WARNING indicator

–Lights red when the projector detects an abnormal condition.
–Blinks red when the internal temperature of the projector exceeds the operating range (pp.63, 74).

KEYSTONE button

Correct keystone distortion (pp.27, 50).

INPUT button

Select an input source (pp.31-32, 41-42).

ON/STAND–BY button

Turn the projector on or off (pp.21-23).

LAMP REPLACE indicator

Lights yellow when the projection lamp reaches its end of life (pp.66, 74).

Part Names and Functions

<div style="text-align:center">**Remote Control**</div>

COMPUTER VIDEO NETWORK
INFO. KEYSTONE AUTO SET
CANCEL

VOL.– VOL.+

MENU SELECT R-CLICK
FREEZE LASER NO SHOW
P-TIMER
PAGE D.ZOOM MUTE
LAMP SCREEN IMAGE
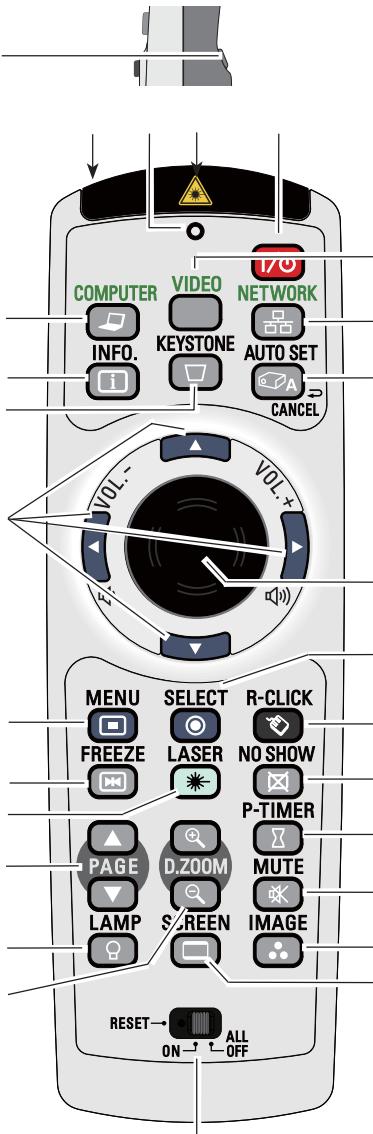
RESET → ON ⌐ ALL OFF

LASER LIGHT window
A laser beam is emitted from here (p.14).

COMPUTER button
Select the COMPUTER input source. (pp.31-32, 42)

INFO. button
Operate the information function. (p.62)

KEYSTONE button
Correct keystone distortion. (pp.26, 50)

Point ▲▼◄► (VOLUME + / –) buttons
–Select an item or adjust the value in the On-Screen Menu. (p.24)
–Pan the image in the Digital zoom + mode. (p.40)
–Adjust the volume level. (Point◄►buttons) (p.28)

MENU button
Open or close the On-Screen Menu. (p.24)

FREEZE button
Freeze the picture on the screen. (p.29)

LASER button
 – Operate the Laser pointer function. Laser beam is emitted while pressing this
    button within 1 minute. When using this laser pointer for more than 1 minute,
    release the LASER button and press it again. (p.14)
 – Display the Pointer on the screen. (p.14)

PAGE ▲▼ buttons
Scroll back and forth the pages on the screen when giving a presentation. To use
these buttons, connect the projector and your computer with a USB cable. (pp.10,
17)

LAMP button
Select a lamp mode. (pp.29, 57)

D.ZOOM +/- buttons
Zoom in and out the images. (pp.29, 40)

RESET/ON/ALL-OFF switch
When using the remote control, set this switch to "ON." Set it to "ALL OFF" for
power saving when it is not used. Slide this switch to "RESET" to initialize the
remote control code or switch Spotlight and Pointer to the Laser pointer function.
(pp.13-14)

SCREEN button
Select a screen mode. (pp.30,39-40,47)

IMAGE button
Select the image mode. (pp.30,37,44)

MUTE button
Mute the sound. (p.28)

P-TIMER button
Operate the P-timer function. (p.30)

NO SHOW button
Temporarily turn off the image on the screen. (p.30)

R-CLICK button
Act as the right mouse button for wireless mouse operation. (p.15)

SELECT button
– Execute the selected item. (p.24)
– Expand or compress the image in Digital zoom mode. (p.40)

PRESENTATION POINTER button
Move a pointer of the projector or a pointer for wireless mouse operation. (pp.14-15)

AUTO SET/CANCEL button
– Correct vertical keystone distortion and adjust computer display parameters such
   as **Fine sync**, **Total dots**, **Horizontal** and **Vertical** position. (pp.26, 49)
– Display the image in USB thumb drive or return to the menu bar in Memory
   Viewer menu.
   Refer to the owner's manual of "Memory viewer function".

NETWORK button
Select the Network input. See the owner's manual of "Network Set-up and
Operation" and owner's manual of "Memory viewer function".

VIDEO button
Select the VIDEO input source. (pp.29,41)

L-CLICK button
Act as the left mouse button for wireless mouse
operation. (p.15)

ON/STAND-BY button
Turn the projector on or off. (pp.21-23)

WIRED REMOTE jack
Connect the remote control cable(not supplied)
to this jack when using as a wired remote control.
Wireless remote control does not work when the
remote control cable is connected to the projector.

SIGNAL EMISSION indicator
Lights red while the laser beam is being emitted
from the laser light window or a signal is being sent
from the remote control to the projector.

✓**Note:**
   To ensure safe operation, please observe the
   following precautions:
– Do not bend, drop, or expose the remote control to
   moisture or heat.
– For cleaning, use a soft dry cloth. Do not apply
   benzene, thinner, spray, or any chemical material.

Remote Control Battery Installation

1 Open the battery compartment lid.

Press the lid downward and slide it.
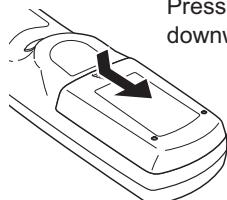
2 Install new batteries into the compartment.
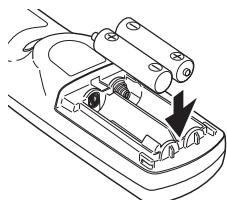
Two AAA size batteries
For correct polarity (+ and –), be sure battery terminals are in contact with pins in compartment.

3 Replace the compartment lid.
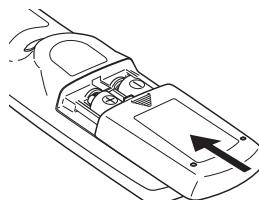
⚠ To ensure safe operation, please observe the following precautions :
- Use two (2) AAA or LR03 type alkaline batteries.
- Always replace batteries in sets.
- Do not use a new battery with a used battery.
- Avoid contact with water or liquid.
- Do not expose the remote control to moisture or heat.
- Do not drop the remote control.
- If the battery has leaked on the remote control, carefully wipe the case clean and install new batteries.
- Risk of an explosion if battery is replaced by an incorrect type.
- Dispose of used batteries according to the instructions or your local disposal rule or guidelines.

Remote Control Operating Range

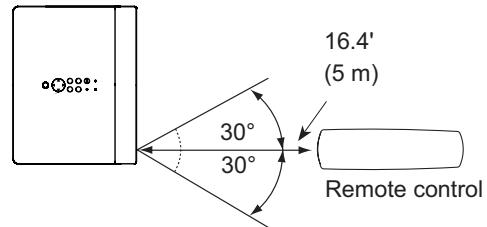Point the remote control toward the projector when pressing the buttons. Maximum operating range for the remote control is about 16.4'(5 m) and 60 degrees in front of the projector.

16.4'
(5 m)

30°
30°

Remote control

Remote Control Code

The eight different remote control codes (Code 1 – Code 8) are assigned to this projector. Switching the remote control codes prevents interference from other remote controls when several projectors or video equipment next to each other are operated at the same time. Change the remote control code for the projector first before changing that for the remote control. See "Remote control" in the Setting Menu on page 57.

1 While pressing the MENU button, press the IMAGE button number of times corresponding to the remote control code. See the list below.

2 To initialize the remote control code, slide the RESET/ ON/ALL-OFF switch to **RESET**, and then to **ON**. The initial code is set to **Code 1**.

Remote Control Code	Number of Times Pressing IMAGE Button
Code 1	1
Code 2	2
Code 3	3
Code 4	4
Code 5	5
Code 6	6
Code 7	7
Code 8	8
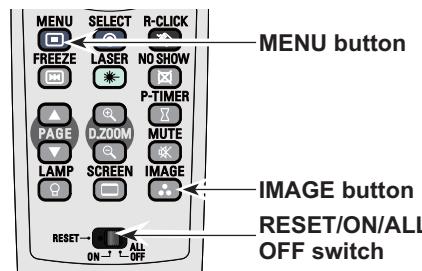
MENU button

IMAGE button

RESET/ON/ALL-OFF switch

While pressing the MENU button, press the IMAGE button number of times corresponding to the remote control code.

✓**Note:**
When using as a wired remote control while the standby mode is set to "Eco", the same remote control code should be set on both the projector and the remote control to turn on the projector. (p.55)

Laser Pointer Function

This remote control emits a laser beam from the laser light window. Press the LASER button to activate the laser pointer. The signal emission indicator lights red and the red laser beam is emitted. If the LASER button is pressed for more than one minute or if it is released, the laser light goes off.

The laser emitted is a Class II laser. Do not look into the laser light window or point the laser beam at yourself or other people. The following is the caution label for the laser beam.

CAUTION: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Never look directly into the laser light window while a laser is emitted, otherwise eye damage may result.

The caution label is put on the remote control.

Signal Emission Indicator

Laser Light Window
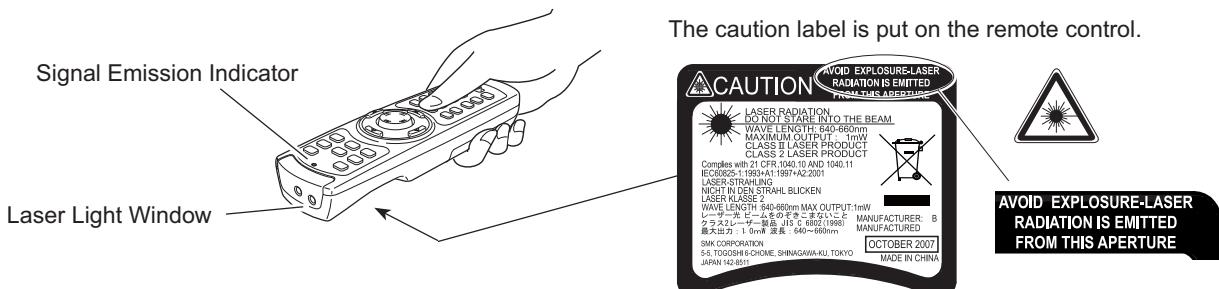
Pointer Function

You can move the Spotlight or Pointer of the projector with the remote control to emphasize a part of the projected image.

1 Press and hold the MENU and the NO SHOW buttons for more than 5 seconds to activate the Pointer function. (The Laser pointer has switched to the Pointer function.)

2 Press the LASER button on the remote control pointing toward the projector. The Spotlight or Pointer is displayed on the screen with the LASER button lighting green. Then move the Spotlight or Pointer with the PRESENTATION POINTER button. If the LASER button does not light green and continues to emit a laser beam, try the abovementioned procedure until the LASER button lights green.

3 To clear the Spotlight or Pointer out the screen, press the LASER button pointing toward the projector and see if the LASER button lighting is turned off.

To switch to the Laser pointer again, press and hold the NO SHOW and MENU buttons for more than 5 seconds or slide the RESET/ON/ALL-OFF switch to **RESET** and then to **ON**.

When you reset the Pointer function, the remote control code will be reset, as well.

PRESENTATION POINTER button

MENU button

NO SHOW button

Press and hold the MENU and NO SHOW buttons for more than 5 seconds.

PRESENTATION POINTER button

LASER button

After the Laser pointer has switched to the Pointer, use the LASER button as the Pointer function ON-OFF switch. Press the LASER button pointing toward the projector and see if it lights green.
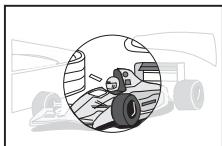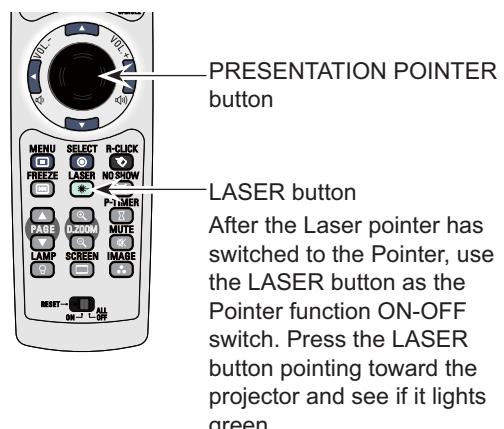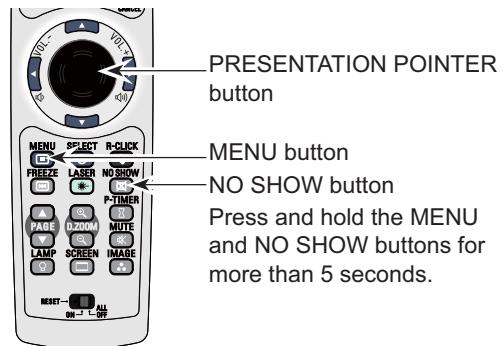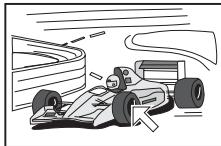
Spotlight   **Pointer**

✓**Note:**

You can choose the size of Spotlight (Large/Middle/Small) and the pattern of Pointer (Arrow/Finger/Dot) in the Setting Menu. See "Pointer" on page 54.

Wireless Mouse Operation

The remote control can be used as a wireless mouse for your computer.

1 Make sure that **Mouse control** is selected in "USB terminal" of Setting menu.

2 Before operating the wireless mouse, connect your computer and the projector with a USB cable (not supplied). See "Connecting to a Computer" on page 17. When the Pointer function is used, the wireless mouse is not available.

3 When a USB cable is connected to the computer and the projector, turn on the projector first, then the computer. If you turn on the computer first, the wireless mouse function may not operate correctly.
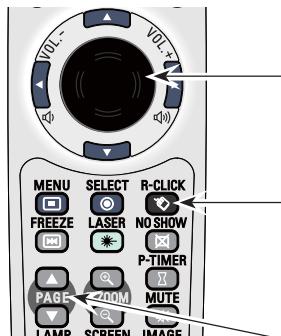
PRESENTATION POINTER button
Move the pointer on the screen with this button.

R-CLICK button
Act as right (click) mouse button while the projector and a computer are connected with a USB cable.

PAGE ▲▼ buttons
Scroll back and forth the pages on the screen when giving a presentation.
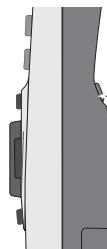
L-CLICK button
Act as left (click) mouse button while the projector and a computer are connected with a USB cable.

Adjustable Feet

Projection angle can be adjusted up to 8.9 degrees with the adjustable feet.

Lift the front of the projector and pull the feet lock latches on both side of the projector.

Release the feet lock latches to lock the adjustable feet and rotate the adjustable feet to a proper height and tilt.

Keystone distortion can be adjusted automatically with the Auto setup function or manually by using the remote control or the menu operation (see pages 26-27, 49-50).

Adjustable Feet   Feet Lock Latches
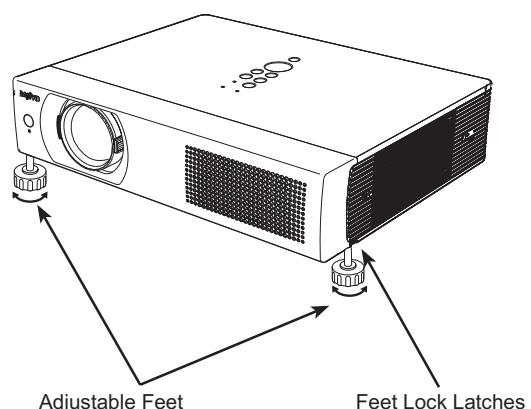
Installation

Positioning the Projector

For projector positioning, see the figures below. The projector should be set perpendicularly to the plane of the screen.

✓**Note:**

- The brightness in the room has a great influence on picture quality. It is recommended to limit ambient lighting in order to obtain the best image.
- All measurements are approximate and may vary from the actual sizes.

A:B = 9:1
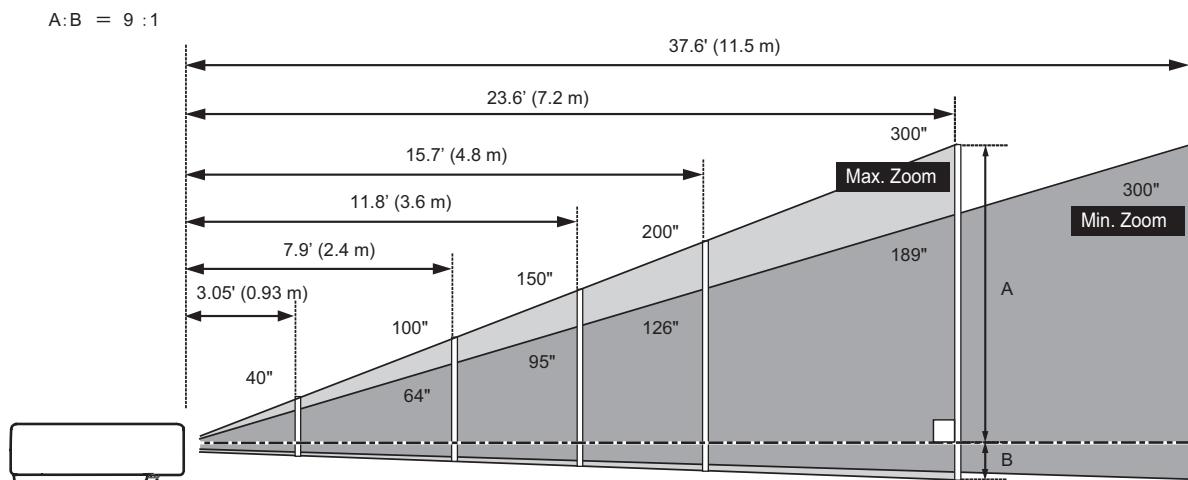
Screen Size (W x H) mm 4 : 3 aspect ratio	40"	100"	150"	200"	300"
	813 x 610	2032 x 1524	3048 x 2286	4064 x 3048	6096 x 4572
Zoom (min)	4.9' (1.5m)	12.5' (3.8 m)	18.7' (5.7 m)	24.9' (7.6 m)	37.6' (11.5 m)
Zoom (max)	3.05' (0.93 m)	7.9' (2.4 m)	11.8' (3.6 m)	15.7' (4.8 m)	23.6' (7.2 m)

Connecting to a Computer

Cables used for connection
• VGA cables (Mini D-sub 15 pin) *
• USB cable
• Audio cables
• VGA cable
• DVI cable
• VGA-DVI cable
(*One cable is supplied; other cables are not supplied with the projector.)

Audio Output

Monitor
Output

Monitor
Input

Monitor Output

External Audio Equipment

USB cable

VGA
cable

VGA
cable

DVI
cable

VGA-DVI
cable

Audio Input

Audio cable
(stereo)

USB

COMPUTER IN 1
COMPONENT

MONITOR
OUT

COMPUTER IN 2 /
DVI-I

Audio cable
(stereo)

USB   CONTROL PORT   COMPUTER IN 1
COMPONENT IN   MONITOR OUT   COMPUTER IN 2
DVI-I

R/C
JACK   VIDEO IN   L(MONO)   R   COMPUTER   1   2   AUDIO
OUT
(VARIABLE)   S-VIDEO IN
AUDIO IN

AUDIO OUT
(stereo)

COMPUTER 1 COMPONENT/
COMPUTER 2 AUDIO IN

✓**Note:**
• Input sound to the COMPUTER1 COMPONENT or
COMPUTER 2 AUDIO IN terminal when using the
COMPUTER 1/COMPONENT IN or the COMPUTER IN 2/DVI
terminal as input.
• When the AUDIO OUT is plugged-in, the projector's built-in
speaker is not available.
• USB cable connection is needed when operating the computer
with the remote control or using the PAGE ▲▼ buttons on the
remote control.

⚠ Unplug the power cords of both the
projector and external equipment
from the AC outlet before connecting
cables.

Installation

Connecting to Video Equipment

Cables used for connection
- Video and Audio cable (RCA x 3)
- S-video cable
- Audio cable

(Cables are not supplied with the projector.)

External Audio Equipment

Video and Audio Output

(Video) (L) (R)   Audio Input

S-video Output

Video and Audio cable   Audio cable (stereo)   S-video cable

VIDEO AUDIO IN   AUDIO OUT (stereo)

S-video

CONTROL PORT

COMPUTER IN 1
COMPONENT IN   MONITOR OUT   COMPUTER IN 2
DVI-I

COMPONENT

R/C
JACK   VIDEO IN   L (MONO) R   1   2
COMPUTER   AUDIO
OUT
(VARIABLE)   S-VIDEO IN

AUDIO IN

USB

✓ Note:
When the AUDIO OUT is plugged-in, the projector's built-in speaker is not available.

⚠ Unplug the power cords of both the projector and external equipment from the AC outlet before connecting cables.

Connecting to Component Video Equipment

Cables used for connection
• Audio cables
• Scart-VGA cable
• Component cable
• Component-VGA cable
(Cables are not supplied with this projector.)

RGB Scart 21-pin Output

Component Video Output (Y, Pb/Cb, Pr/Cr)

Audio Output

Component cable

Scart-VGA cable

Audio cable (stereo)

Component-VGA cable

External Audio Equipment

Audio Input

COMPUTER IN 1/ COMPONENT IN

COMPUTER 1 COMPONENT/ AUDIO IN

Audio cable (stereo)

CONTROL PORT

COMPUTER IN 1 COMPONENT IN

MONITOR OUT

COMPUTER IN 2 DVI-I

R/C JACK

VIDEO IN

L(MONO)

R

COMPUTER

AUDIO OUT (VARIABLE)

S-VIDEO IN

AUDIO IN

AUDIO OUT (stereo)

✓**Note:**

• When the AUDIO OUT is plugged-in, the projector's built-in speaker is not available.
• See page 78 for ordering optional cables.

Unplug the power cords of both the projector and external equipment from the AC outlet before connecting cables.

Installation

Connecting the AC Power Cord
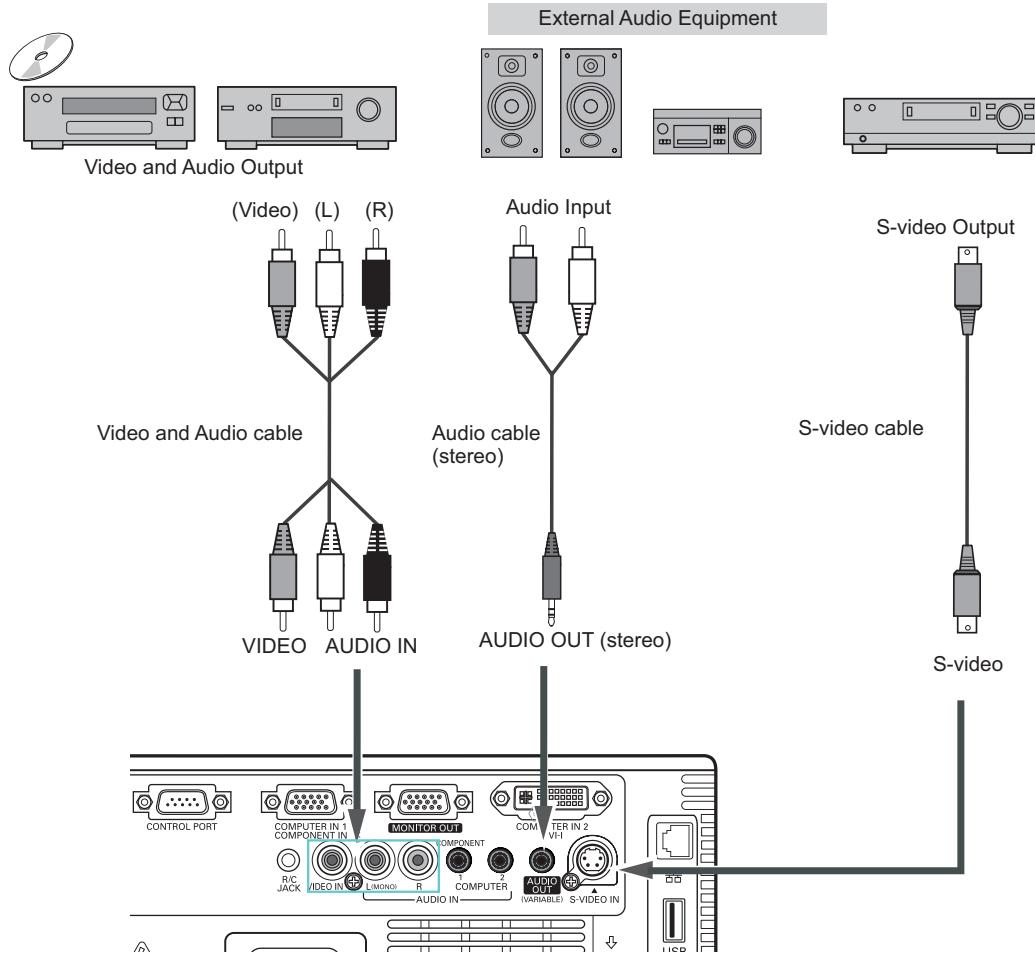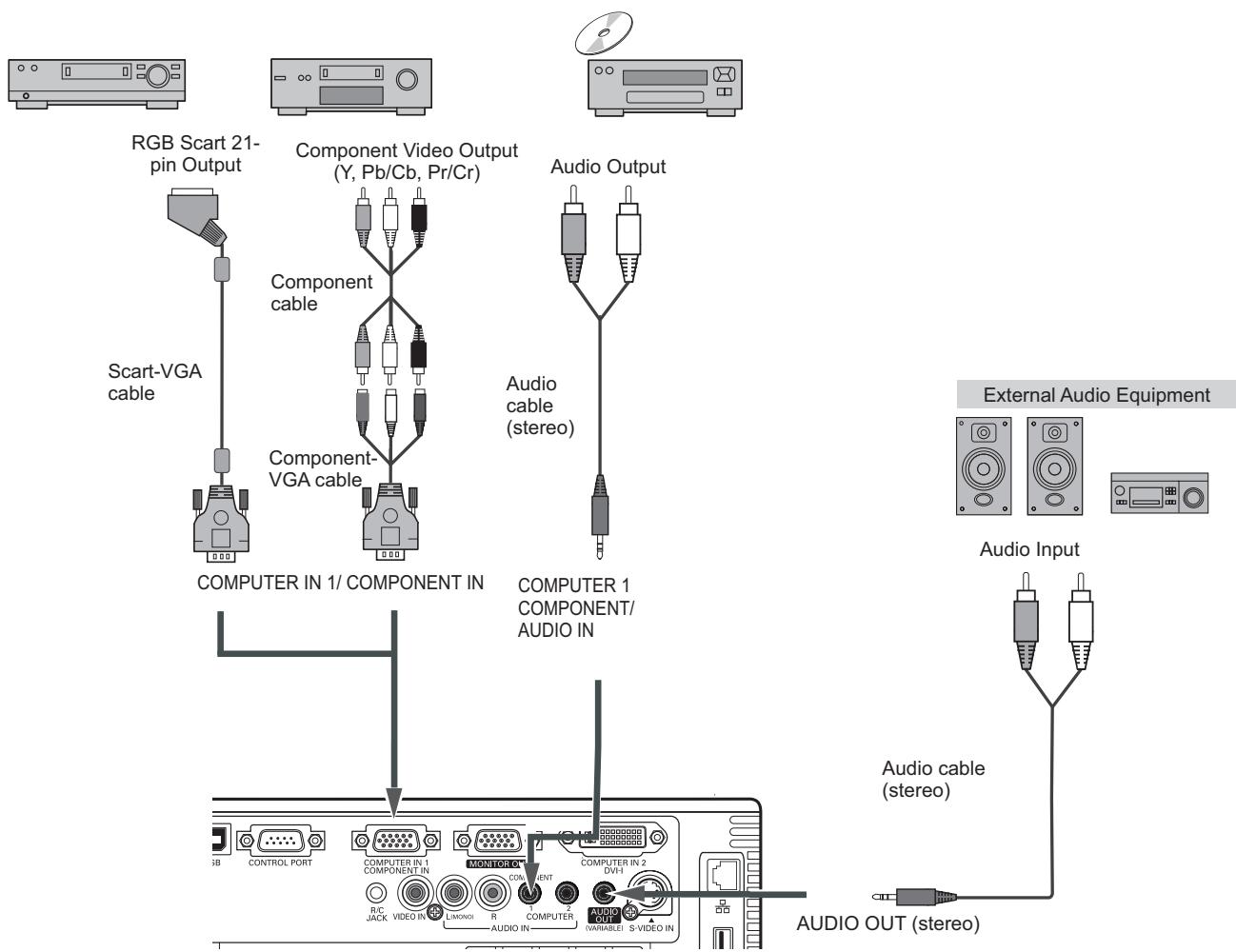
This projector uses nominal input voltages of 100-120 V or 200–240 V AC and it automatically selects the correct input voltage. It is designed to work with single-phase power systems having a grounded neutral conductor. To reduce the risk of electrical shock, do not plug into any other type of power system.
If you are not sure of the type of power being supplied, consult your authorized dealer or service station.
Connect the projector with all peripheral equipment before turning the projector on.
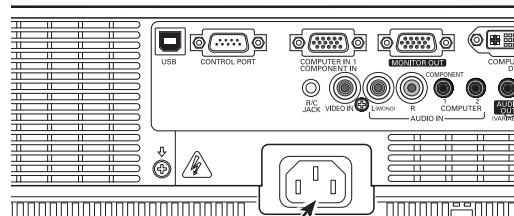
Connect the AC power cord (supplied) to the projector.

⚠ **CAUTION**

The AC outlet must be near this equipment and must be easily accessible.
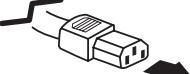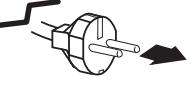
✓**Note:**
Unplug the AC power cord when the projector is not in use. When this projector is connected to an outlet with the AC power cord, it is in Stand-by mode and consumes a little electric power.

NOTE ON THE POWER CORD
AC power cord must meet requirement of the country where you use the projector.
Confirm the AC plug type with the chart below and proper AC power cord must be used.
If supplied AC power cord does not match your AC outlet, contact your sales dealer.

Projector side	AC outlet side		
  To power cord connector on your projector.	**For the U.S.A. and Canada** Ground To the AC outlet. **(120 V AC)**	**For Continental Europe** To the AC outlet. **(200 - 240 V AC)**	**For the U.K.** To the AC outlet. **(200 - 240 V AC)**

Basic Operation

Turning On the Projector

1 Complete peripheral connections (with a computer, VCR, etc.) before turning on the projector.

2 Connect the projector's AC power cord into an AC outlet. The POWER indicator lights red. Open the lens cap (see pages 9, 65).

3 Press the ON/STAND-BY button on the top control or on the remote control. The POWER indicator lights green and the cooling fans start to operate. The preparation display appears on the screen and the count down starts.

4 After the countdown, the input source that was selected the last time and the lamp control status icon (see page 57) appear on the screen.

5 If there is no signal input when start on the projector, or the current signal is missed while operating the projector, the Video/PC selection window will be displayed on the screen, please move the pointer to input source desired by pressing the Point ▲▼ buttons and press the SELECT button. And then follow the input signal guidance window to correct the signal and connection.

If the projector is locked with a PIN code, PIN code input dialog box will appear. Enter the PIN code as instructed on the next page.

16

SANYO
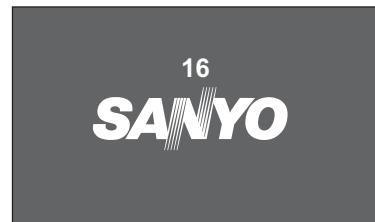
The preparation display will disappear after 30 seconds.

Selected Input Source and Lamp Control
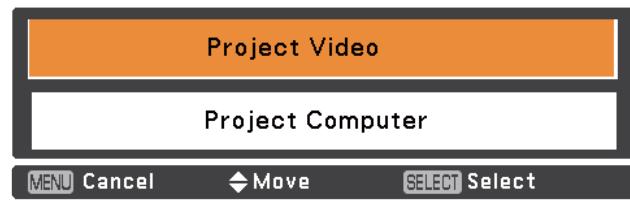
Video ← Lamp control status

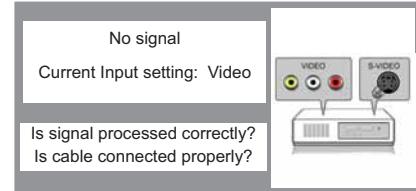(See page 57 for Lamp control status.)

✓**Note:**
The Filter warning and Lamp replacement icons may appear on the screen depending on the usage state of the projector.
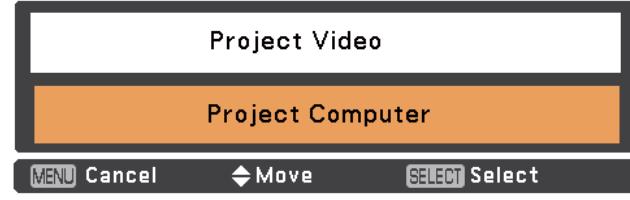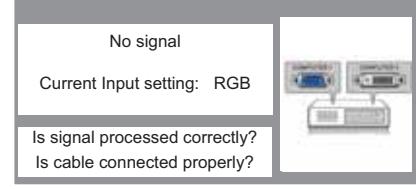
Video / PC selection window

Project Video
Project Computer

MENU Cancel   ◆Move   SELECT Select

Input signal guidance window

No signal
Current Input setting: Video

Is signal processed correctly?
Is cable connected properly?

Video / PC selection window

Project Video
Project Computer

MENU Cancel   ◆Move   SELECT Select

Input signal guidance window

No signal
Current Input setting: RGB

Is signal processed correctly?
Is cable connected properly?

✓**Note:**
• When the Logo select function is set to **Off**, the logo will not be shown on the screen (p.51).
• When **Countdown off** or **Off** is selected in the Display function, the countdown will not be shown on the screen (p.51).
• When the Input Search function is set to **On2**, the input signal will be searched automatically (p.49).
• When **Off** is selected in the Display function, the Video/PC selection window and the input signal guidance window are not shown on the screen (p.51).
• If you press the ON/STAND-BY button on the top control or the remote control during the countdown period, you can skip the countdown and go to the normal operations.

21

Enter a PIN code

Use the Point ▲▼ buttons to enter a number. Press the Point ► button to fix the number and move the red frame pointer to the next box. The number changes to ✻. If you fixed an incorrect number, use the Point ◄ button to move the pointer to the number you want to correct, and then enter the correct number.

Repeat this step to complete entering a four-digit number.

After entering the four-digit number, move the pointer to **Set**. Press the SELECT button so that you can start to operate the projector.

If you entered an incorrect PIN code, **PIN code** and the number (✻✻✻✻) will turn red for a moment. Enter the correct PIN code all over again.

What is PIN code?

PIN (Personal Identification Number) code is a security code that allows the person who knows it to operate the projector. Setting a PIN code prevents unauthorized use of the projector.
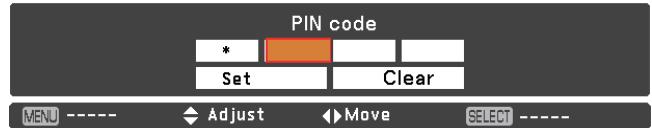
A PIN code consists of a four-digit number. Refer to the PIN code lock function in the Setting Menu on pages 58-59 for locking operation of the projector with your PIN code.

PIN Code Input Dialog Box

After the OK icon disappears, you can operate the projector.

✓**Note:**
- If the PIN code number is not entered within three minutes after the PIN code dialog box appeared, the projector will be turned off automatically.
- The "1234" is set as the initial PIN code at the factory.

⚠ **CAUTION ON HANDLING PIN CODE**
If you forget your PIN code, the projector can no longer be started. Take a special care in setting a new PIN code; write down the number in a column on page 81 of this manual and keep it on hand. Should the PIN code be missing or forgotten, consult your dealer or service center.
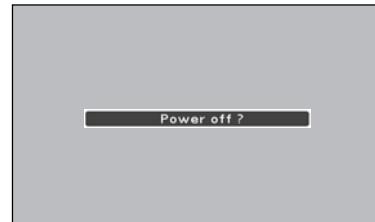
Turning Off the Projector

1 Press the ON/STAND-BY button on the top control or on the remote control, and **Power off?** appears on the screen.

2 Press the ON/STAND-BY button again to turn off the projector. The POWER indicator starts to blink red, and the cooling fans keep running (You can select the level of fans' quietness and speed. See "Fan" on page 60.). At this time, you can unplug the AC power cord even if the fans are still running.

3 When the projector has cooled down enough, the POWER indicator stops blinking and you can turn on the projector.

⚠ TO MAINTAIN THE LIFE OF THE LAMP, ONCE YOU TURN THE PROJECTOR ON, WAIT AT LEAST FIVE MINUTES BEFORE TURNING IT OFF.

⚠ DO NOT OPERATE THE PROJECTOR CONTINUOUSLY WITHOUT REST. CONTINUOUS USE MAY RESULT IN SHORTENING THE LAMP LIFE. TURN OFF THE PROJECTOR AND LET STAND FOR ABOUT AN HOUR IN EVERY 24 HOURS.

Power off ?

Power off? disappears after 4 seconds.

✓**Note:**
- When the On start function is set to **On**, the projector will be turned on automatically by connecting the AC power cord to an AC outlet (p.56).
- The running speed of cooling fans is changed according to the temperature inside the projector.
- Do not put the projector in a case before the projector is cooled enough.
- If the WARNING indicator blinks or lights red, see "WARNING indicator" on page 63.
- While the POWER indicator is blinking, the lamp is being cooled down and the projector can not be turned on. Wait until the POWER indicator stops blinking to turn on the projector again.
- The fan rotation will terminate directly if the AC power cord is unplugged immediately after the projector is turned off.
- The projector can be turned on after the POWER indicator turns red. The waiting time to restart will be shortened when the normal power-off processing for fan cooling is completed, compared with the time the AC power cord is immediately unplugged after the power-off.
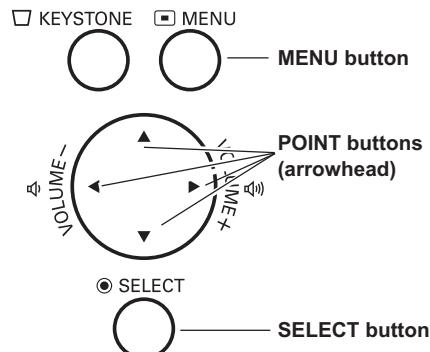
Basic Operation

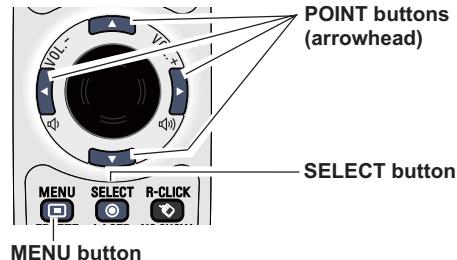### How to Operate the On-Screen Menu

The projector can be adjusted or set via the On-Screen Menu. The menus have a hierarchical structure, with a main menu that is divided into submenus, which are further divided into other submenus. For each adjustment and setting procedure, refer to respective sections in this manual.

1 Press the MENU button on the top control or the remote control to display the On-Screen Menu.

2 Use the Point ▲▼ buttons to highlight or select a main menu item. Press the Point ► or the SELECT button to access the submenu items. (The selected item is highlighted in orange.)

3 Use the Point ▲▼ buttons to select the desired submenu item and press the SELECT button to set or access the selected item.

4 Use the Point ▲▼◄► buttons to adjust the setting or switch between each option and press the SELECT button to activate it and return to the submenu.

5 Press the Point ◄ button to return to the main menu. Press the MENU button to exit the On-Screen Menu.

Top Control

KEYSTONE   MENU

MENU button

POINT buttons
(arrowhead)

SELECT

SELECT button

Remote Control

POINT buttons
(arrowhead)

SELECT button

MENU   SELECT   R-CLICK

MENU button

On-Screen Menu

Point
► or SELECT
button

The currently set item is check marked.

The selected item is highlighted in orange.
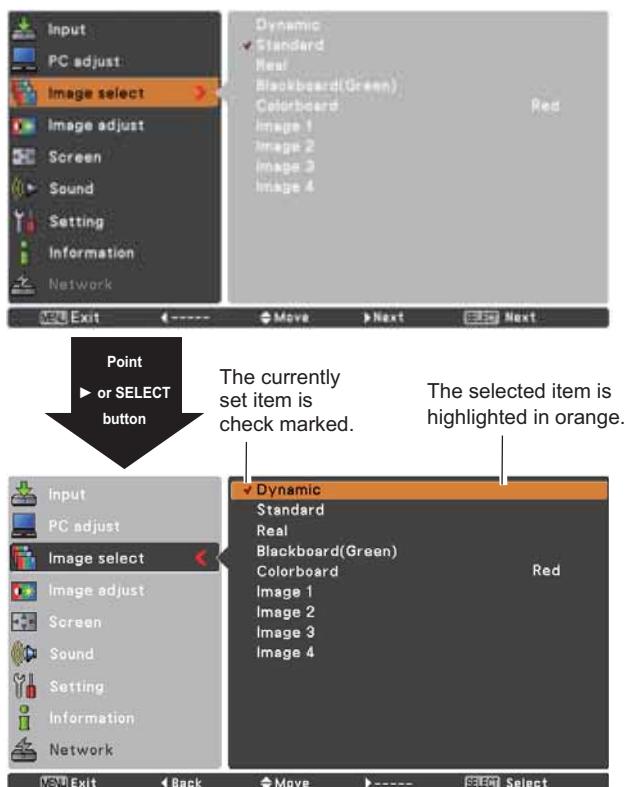
Menu Bar

For detailed functions of each menu, see "Menu Tree" on pages 72-73.

Main Menu   Sub-Menu

```
①  —— Input              ›    Computer 1              RGB
                              Computer 2              RGB(PC digital)
②  —— PC adjust          ✓    Video
                              S-video
③  —— Image select            Network                 Wired 1
④  —— Image adjust
⑤  —— Screen
⑥  —— Sound
⑦  —— Setting
⑧  —— Information
⑨  —— Network                 System                  NTSC
⑩  —— MENU Exit    ◄ -----   ♦ Move    ► Next    SELECT Next
```
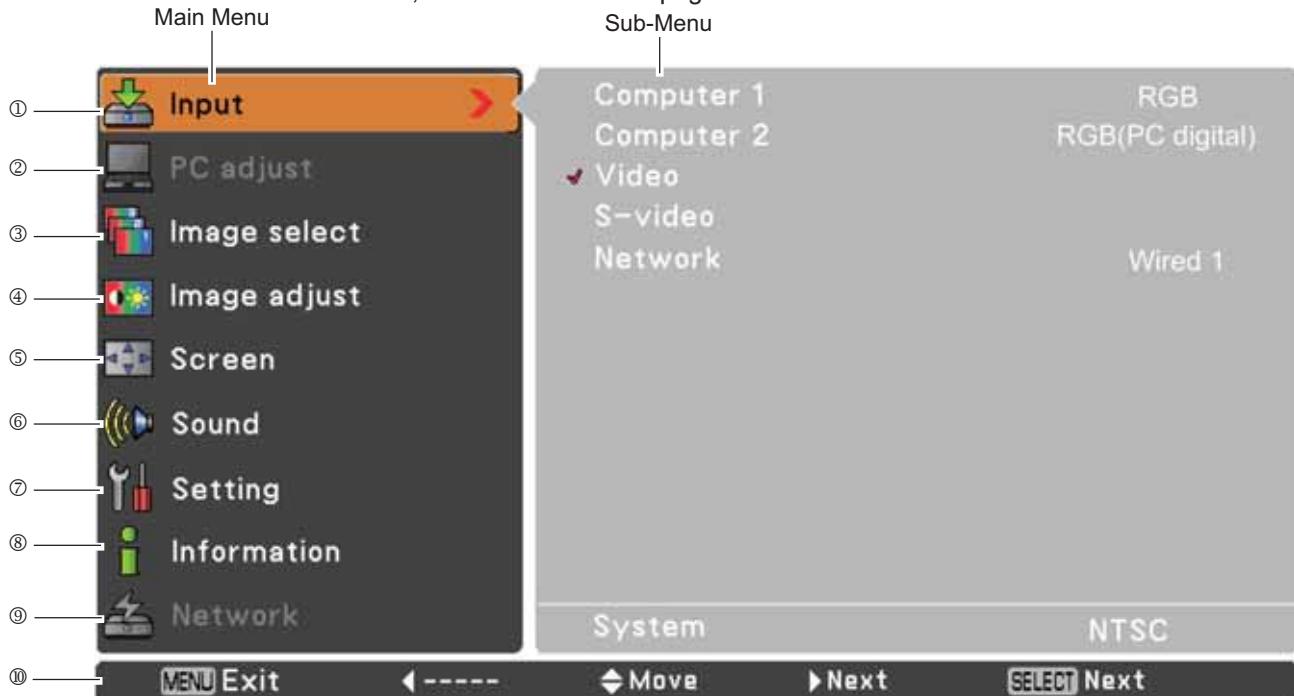
① **Input**

　　Used to select an input source from **Computer 1**, **Computer 2**, **Video**, **S-video** or **Network** (pp.31-32, 41-42).

② **PC adjust**

　　Select **Auto PC adj.**, **Fine sync**, **Total dots**, **Horizontal**, **Vertical**, **Clamp**, **Display area H** and **Display area V** to adjust the parameters to match with the PC input signal format (p.33-36).

③ **Image select**

　　For computer source, used to select an image mode among **Dynamic**, **Standard**, **Real**, **Blackboard(Green)**, **Colorboard** and **image 1 - 4** (p.37).
　　For Video source, used to select an image mode among **Dynamic**, **Standard**, **Cinema**, **Blackboard(Green)** , **Colorboard** and **Image 1- 4** (p.44).

④ **Image adjust**

　　For computer source, used to adjust computer image [**Contrast**, **Brightness**, **Color temp.**, **White balance (R/G/B)**, **Sharpness** and **Gamma**] (pp.38-39).
　　For Video source, used to adjust picture image [**Contrast**, **Brightness**, **Color**, **Tint**, **Color temp.**, **White balance (R/G/B)**, **Sharpness**, **Gamma**, **Noise reduction** and **Progressive**] (pp.45-46).

⑤ **Screen**

　　For computer source, used to adjust size of the image [**Normal**, **True**, **Wide**, **Full**, **Custom** and **Digital zoom +/–**] (pp.39-40).
　　For Video source, used to set size of image [**Normal**, **Wide** and **Custom**] (p.47).

⑥ **Sound**

　　Used to adjust the volume or mute the sound (p.28).

⑦ **Setting**

　　Used to set the projector's operating configurations (pp.48-61).

⑧ **Information**

　　Display the input source information: **Input**, **H-sync freq.**, **V-sync freq.**, **Screen**, **Language**, **Lamp status**, **Lamp counter**, **Power management**, **Key lock**, **PIN code lock** and **Remote control** (p.62).

⑨ **Network**

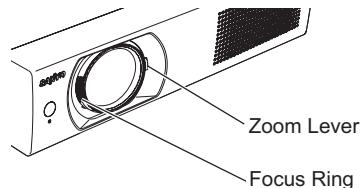　　See the owner's manual of "Network Set-up and Operation".

⑩ **Guide**

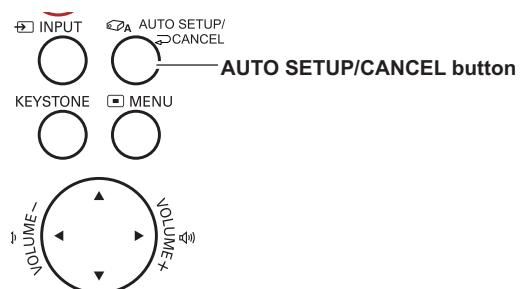　　The key operation is displayed.

25

Zoom and Focus Adjustment

Rotate the Zoom Lever to zoom in and out.
Rotate the Focus Ring to adjust the focus of the image.
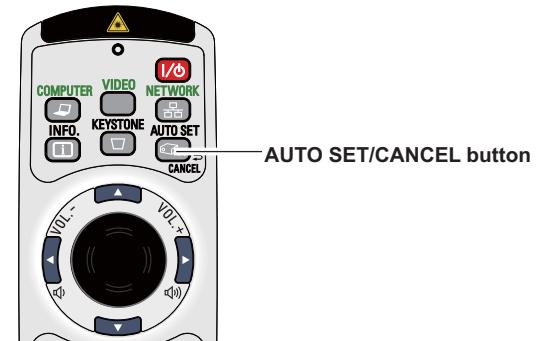
Zoom Lever

Focus Ring

Auto Setup Function

Auto setup function is provided to automatically execute the setting of Auto setup (includes Input search, Auto PC adj. and Auto Keystone functions) in the setting menu by just pressing the AUTO SETUP/CANCEL button on the top control or the AUTO SET/CANCEL button on the remote control. Refer to page 49 for the setting of the Auto setup function.

Top Control

INPUT   AUTO SETUP/
             CANCEL
                        AUTO SETUP/CANCEL button
KEYSTONE   MENU

VOLUME –   VOLUME +

Remote Control

COMPUTER VIDEO NETWORK
INFO. KEYSTONE AUTO SET
                 CANCEL   **AUTO SET/CANCEL button**

VOL. –   VOL. +

✓**Note:**
  • Auto Keystone corrects vertical distortion only; it does not correct horizontal distortion.
  • Auto Keystone can not work when Ceiling feature is set to **On** in the Setting menu (p.54).
  • Perfect correction of the image distortion can not be ensured with the Auto setup function. If the distortion can not be corrected properly by pressing the AUTO SETUP/CANCEL or AUTO SET/CANCEL button, adjust manually by pressing the KEYSTONE button on the remote control or selecting **Keystone** in the Setting menu (p.50).
  • **Fine sync**, **Total dots**, **Horizontal** and **Vertical** position of some computers can not be fully adjusted with the Auto PC adjustment function. When the image is not provided properly with this operation, manual adjustments are required (pp.35-36).

Keystone Correction

If a projected picture still has keystone distortion after pressing the AUTO SETUP/CANCEL button on the top control or the AUTO SET/CANCEL button on the remote control, correct the image manually as follows:
Press the KEYSTONE button on the top control or on the remote control to switch the Standard (for Vertical/Horizontal) /Corner adjustment. The Standard or Corner adjustment dialog box appears. Use the Point ▲▼◄► buttons to correct the Standard or Corner distortion. The Standard or Corner adjustment can be stored (see page 50).
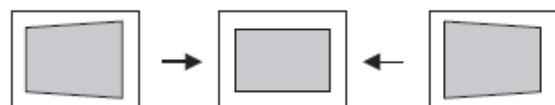
Standard

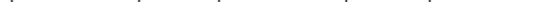Reduce the lower width with the Point ▼ button.
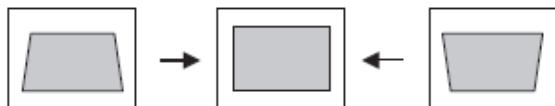
Reduce the upper width with the Point ▲ button.

Reduce the right part with Point ► button.
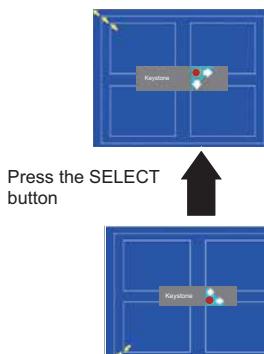
Reduce the left part with Point ◄ button.
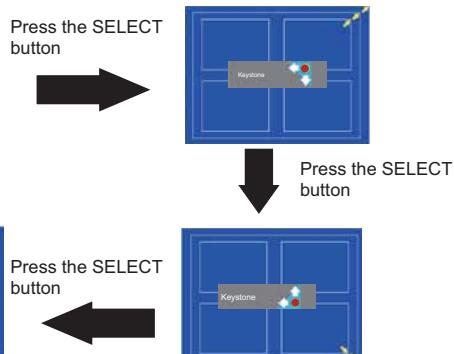
Corner

Press the KEYSTONE button on the top control or on the remote control to switch Corner adjustment, press the SELECT button on the remote control to select the corner you want to adjust.
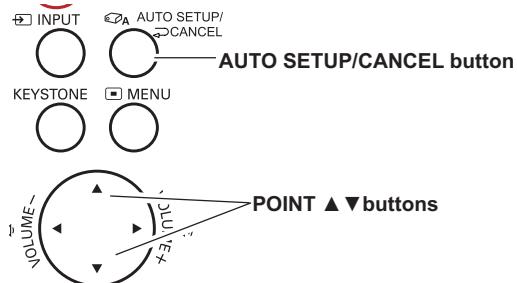
Reduce the top left corner part with the Point ►▼ buttons.

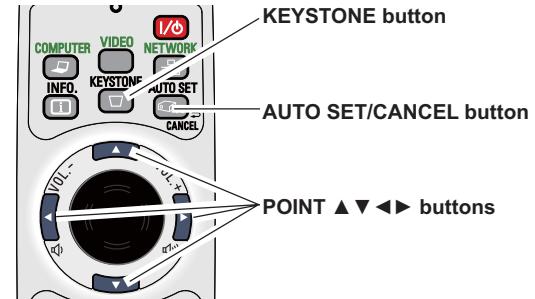Reduce the top right corner part with the Point ◄▼ buttons.

Press the SELECT button

Press the SELECT button

Press the SELECT button

Press the SELECT button

Reduce the bottom left corner part with the Point ►▲ buttons.

Reduce the bottom right corner part with the Point ◄▲ buttons.

Top Control

INPUT   AUTO SETUP/CANCEL

AUTO SETUP/CANCEL button

KEYSTONE   MENU

POINT ▲▼ buttons

VOLUME −

VOLUME +

Remote Control

KEYSTONE button

COMPUTER   VIDEO   NETWORK

INFO.   KEYSTONE   AUTO SET

CANCEL

AUTO SET/CANCEL button

POINT ▲ ▼ ◄► buttons

✓Note:
• The white arrows indicate that there is no correction.
• A red arrow indicates the direction of correction.
• An arrow disappears at the maximum correction.
• If you press and hold the KEYSTONE button for more than 3 seconds while the Standard or Corner dialog box is being displayed, the Standard or Corner correction will be released.
• The Corner pattern can be set to **Off**, **Red**, **White** or **Blue** in the Corner pattern function. See "Keystone" on page 50.
• The adjustable range is limited depending on the input signal.
• Standard and Corner functions can not be adjusted at the same time. If one of the functions is adjusted, and then the other one will be reset automatically.
• The corner keystone function may be canceled when you set the Auto keystone function to Auto or Manual. To avoid this, it is recommended to set the Auto keystone function to Off while the corner keystone function is activated.

The top left corner adjustment as an example:

Press the Point ▼ button
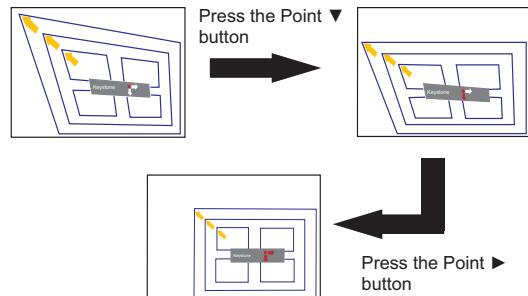
Press the Point ► button
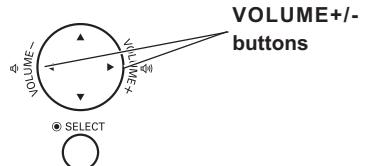
Sound Adjustment

Direct Operation

Volume
Press the VOLUME+/– buttons on the top control or on the remote control to adjust the volume. The volume dialog box appears on the screen for a few seconds.
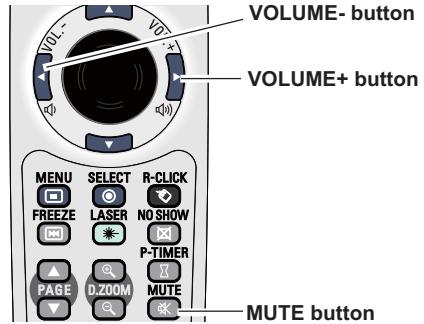
Mute
Press the MUTE button on the remote control to select **On** to temporarily turn off the sound. To turn the sound back on, press the MUTE button again to select **Off** or press the VOLUME +/– buttons. The Mute function is also effective for the AUDIO OUT jack.
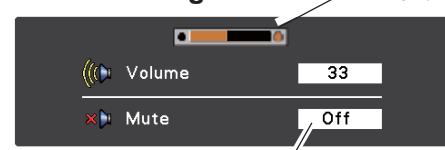
Menu Operation

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Sound**. Press the Point ► or the SELECT button to access the submenu items.

2 Use the Point ▲▼ buttons to select the desired submenu item and press the SELECT button to access the selected item.

Volume

Press the Point ▲ button to turn up the volume; press the Point ▼ button to turn down the volume.

Mute

Press the SELECT button to switch the mute function **On**/**Off**. When the sound is turned off, **On** is displayed. Press the VOLUME +/– buttons again to turn the sound back on.

Top Control

VOLUME+/- buttons

Remote Control

VOLUME- button

VOLUME+ button

MUTE button

Volume Dialog Box

Approximate level of the volume.

Press the MUTE button to set the Mute function **On** or **Off**. The dialog box disappears after 4 seconds.

Sound Menu
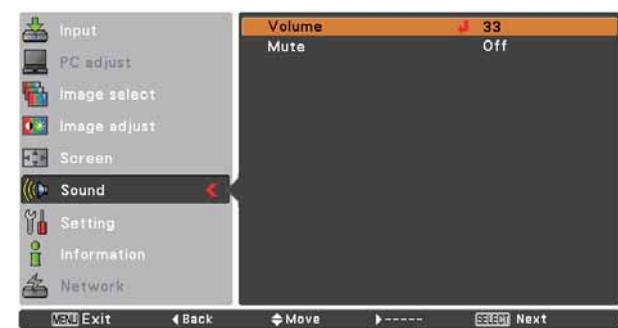
Remote Control Operation

Using the remote control for some frequently used operations is advisable. Just pressing one of the buttons enables you to make the desired operation quickly without calling up the On-Screen Menu.

COMPUTER/VIDEO/NETWORK button

Press the COMPUTER, VIDEO or NETWORK button on the remote control to select the input source. See pages 31-32, 41-42 for details.
Refer to the owner's manual of "Network Set-up and Operation" for details about the network input.

FREEZE button

Press the FREEZE button on the remote control to freeze the picture on the screen. To cancel the Freeze function, press the FREEZE button again or press any other button. Fig.1 will appear on the Screen menu while the Freeze function is working.

Fig.1

INFO. button

Display the input source information: **Input**, **H-sync freq.**, **V-sync freq.**, **Screen**, **Language**, **Lamp status**, **Lamp counter**, **Power management**, **Key lock**, **PIN code lock** and **Remote control** (p.62).

D.ZOOM +/- buttons

Press the D.ZOOM +/- buttons on the remote control to enter to the Digital zoom +/– mode. See page 40 for details.

LAMP button

Press the LAMP button on the remote control to select the lamp mode for changing the brightness on the screen.

  High .... Brighter than the Normal mode.
  Normal .... Normal brightness.
  Eco .... Lower brightness reduces the lamp power
                     consumption and extends the lamp life.

Remote Control

COMPUTER button
VIDEO button
NETWORK button
INFO. button
FREEZE button
D.ZOOM+/- buttons
LAMP button
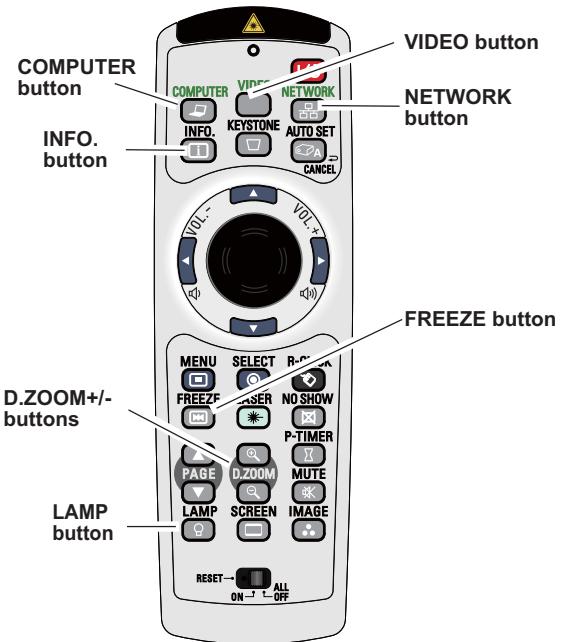
✓**Note:**

  See the next page for the description of other buttons.

Basic Operation

NO SHOW button

Press the NO SHOW button on the remote control to black out the image. To restore to normal, press the NO SHOW button again or press any other button. The screen changes each time you press the NO SHOW button as follows.

black out → normal → black out·····

No show disappears after 4 seconds.

P-TIMER button

Press the P-TIMER button on the remote control. The P-Timer display **00:00** appears on the screen and the countdown starts (**00:00–59:59**).
To stop the countdown, press the P-TIMER button. To cancel the P-Timer function, press the P-TIMER button again.

02:02

P-Timer display

IMAGE button

Press the IMAGE button on the remote control to select a desired image mode of the screen. See pages 37, 44 for details.

NO SHOW button
P-TIMER button

IMAGE button
SCREEN button

SCREEN button

Select the screen size (See pages 39-40, 47 for details).
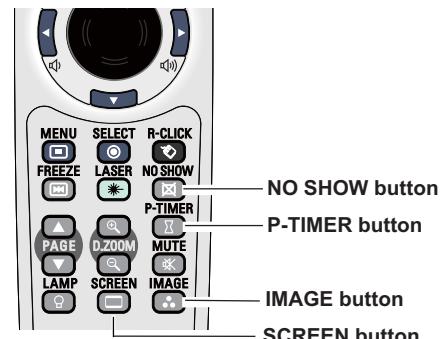
✓Note:
  See the previous page for the description of other buttons.

Computer Input
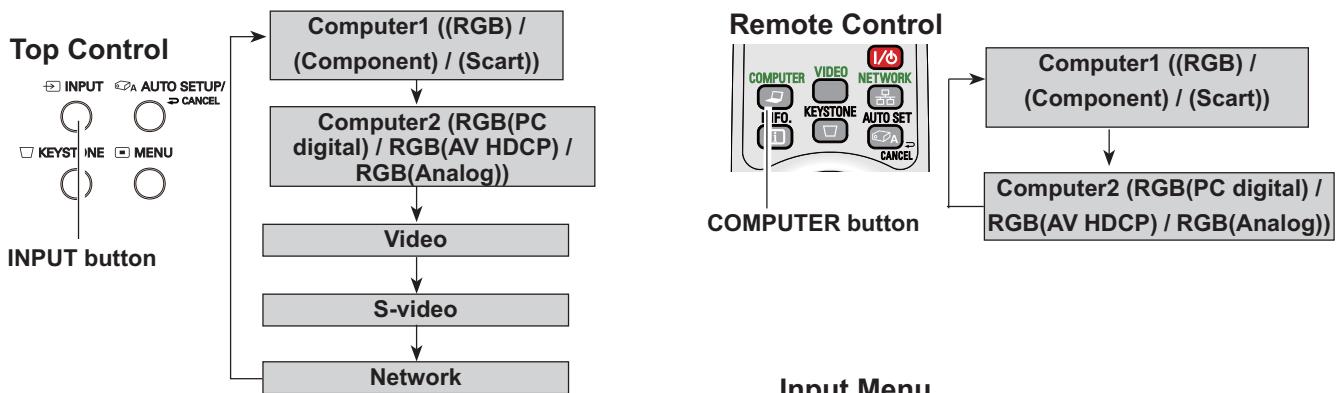
Input Source Selection (RGB: Computer 1/Computer 2(Analog))

Direct Operation

Choose either **Computer 1(RGB)** or **Computer 2 (RGB(Analog))** by pressing the INPUT button on the top control or press the COMPUTER button on the remote control.
Before using these buttons, correct input source should be selected through Menu operation as described below.

Top Control

INPUT button

Computer1 ((RGB) / (Component) / (Scart))

↓

Computer2 (RGB(PC digital) / RGB(AV HDCP) / RGB(Analog))

Video

S-video

Network

Remote Control

COMPUTER button

Computer1 ((RGB) / (Component) / (Scart))

↓

Computer2 (RGB(PC digital) / RGB(AV HDCP) / RGB(Analog))

Input Menu

Menu Operation

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Input** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select either **Computer 1** or **Computer 2** and then press the Point ► button to access the submenu items.

3 When **Computer 1** is selected, use the Point ▲▼ buttons to select **RGB** and then press the SELECT button.

When **Computer 2** is selected, use the Point ▲▼ buttons to select **RGB(Analog)** and then press the SELECT button.
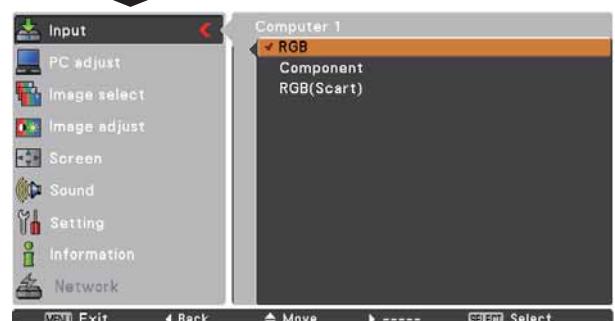
✓**Note:**
   When the Input Search function is set to **On1** or **On2** in the Auto setup function, the input signal will be searched automatically (p.49).

Input Source Selection (RGB(PC digital), RGB(AV HDCP))

Direct Operation

Choose **Computer 2(RGB(PC digital)) or Computer 2(RGB(AV HDCP))** by pressing the INPUT button on the top control or press the COMPUTER button on the remote control.
Before using these buttons, correct input source should be selected through Menu operation as described below.
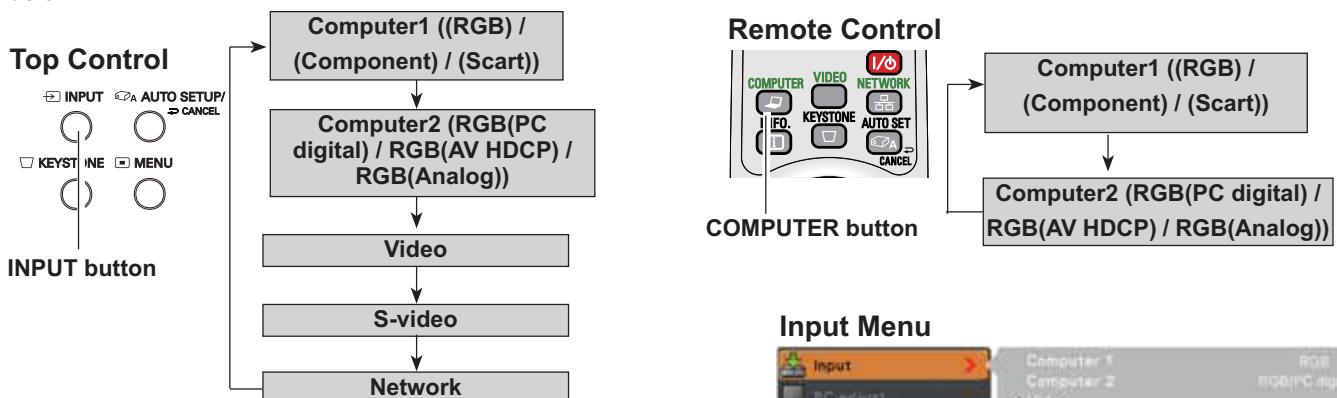
Top Control

INPUT   AUTO SETUP/ CANCEL

KEYSTONE   MENU

INPUT button

Computer1 ((RGB) / (Component) / (Scart))

Computer2 (RGB(PC digital) / RGB(AV HDCP) / RGB(Analog))

Video

S-video

Network

Remote Control

COMPUTER   VIDEO   NETWORK

KEYSTONE   AUTO SET

INFO.

CANCEL

COMPUTER button

Computer1 ((RGB) / (Component) / (Scart))

Computer2 (RGB(PC digital) / RGB(AV HDCP) / RGB(Analog))

Input Menu

Menu Operation

1   Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Input** and then press the Point ► or the SELECT button.

2   Use the Point ▲▼ buttons to select **Computer 2** and then press the Point ► button to access the submenu item.

3   Use the Point ▲▼ buttons to select **RGB(PC digital)** or **RGB(AV HDCP)** and then press the SELECT button.

Computer 2

✓**Note:**
 • HDCP (High-bandwidth Digital Content Protection) is a system for protecting digital entertainment content delivered by DVI (Digital Visual Interface) from being copied. The specification of HDCP is decided and controlled by Digital Content Protection, LLC. Should the specification be changed, this projector may not display the digital content protected by HDCP.
 • When the Input Search function is set to **On1** or **On2**, the input signal will be searched automatically (p.49).

Computer System Selection

This projector automatically tunes to various types of computers with its Multi-scan system and Auto PC adjustment. If a computer is selected as a signal source, this projector automatically detects the signal format and tunes to project a proper image without any additional settings. (Signal formats provided in this projector are shown on pages 75-76)

One of the following messages may appear when:

PC System Menu

| Auto | The projector can not recognize the connected signal conforming to the provided PC Systems. **Auto** is displayed on the System Menu box and the Auto PC adjustment function works to display proper images. If the image is not projected properly, a manual adjustment is required (pp.35-36). |

| ----- | There is no signal input from the computer. Check the connection between your computer and the projector. (See "Troubleshooting" on pp.68-70.) |

| Mode 1 | The preset system is manually adjusted in the PC adjust Menu. The adjusted data can be stored in **Mode 1-5** (pp.35-36). |

| SVGA 1 | PC Systems provided in this projector is chosen. The projector chooses a proper system provided in the projector and displays it. |

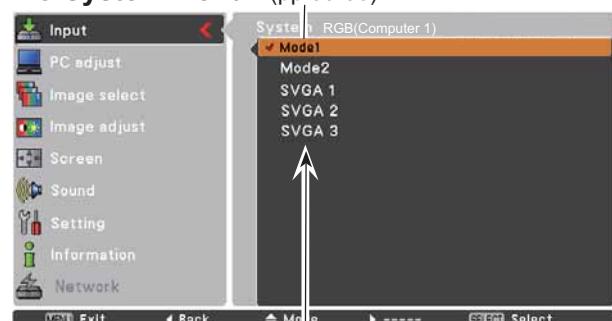***Mode 1** and **SVGA 1** are examples.
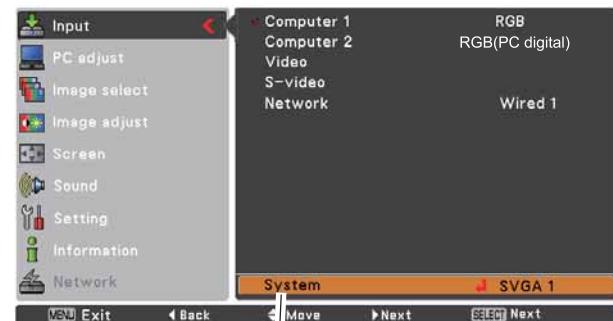
The PC System Menu
Selected system is
displayed.

Selecting Computer System Manually

PC system can also be selected manually.

PC System Menu

Customized **Mode (1–5)** set in the PC adjust Menu (pp.35-36).

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Input** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select **System** and then press the Point ► or the SELECT button.

3 Use the Point ▲▼ buttons to select the desired system and then press the SELECT button.

Systems in this dialog box can be selected.

Auto PC adjustment

Auto PC adjustment function is provided to automatically adjust **Fine sync**, **Total dots**, **Horizontal** and **Vertical** to conform to your computer.

Menu Operation

PC adjust Menu

Auto PC adj.

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **PC adjust** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select **Auto PC adj.** and then press the SELECT button.

To store adjustment parameters
The adjusted parameters from the Auto PC adjustment can be stored in the projector. Once the parameters are stored, the setting can be done just by selecting a **Mode (1–5)** in the PC System Menu (see page 33). See also **Store** on page 36.

Use Point ▲▼ buttons to select **Auto PC adj.** and press the SELECT button. **Please wait...** appears while the Auto PC adjustment is in process.

✓**Note:**
 • **Fine sync**, **Total dots**, **Horizontal** and **Vertical** position of some computers can not be fully adjusted with the Auto PC adjustment function. When the image is not provided properly with this operation, manual adjustments are required (pp.35-36).
 • The Auto PC adjustment can not be operated when **480i, 575i, 480p, 575p, 720p, 1035i** or **1080i** is selected in the PC System Menu (p.33), or when the signal is coming from the DVI terminal.

Manual PC adjustment

Some computers employ special signal formats which may not be tuned by Multi-scan system of this projector. Manual PC adjustment enables you to precisely adjust several parameters to match those signal formats. The projector has five independent memory areas to store those parameters manually adjusted. It allows you to recall the setting for a specific computer.

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **PC adjust** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select the desired item and then press the SELECT button to display the adjustment dialog box. Use the Point ◄► buttons to adjust the setting value.

Fine sync

Use the Point ◄► buttons to adjust the value, eliminating a flicker from the image displayed (from 0 to 31).

Total dots

Use the Point ◄► buttons to adjust the number of total dots in one horizontal period to match your PC image.

Horizontal

Use the Point ◄► buttons to adjust the horizontal picture position.

Vertical

Use the Point ◄► buttons to adjust the vertical picture position.

Clamp

Use the Point ◄► buttons to adjust the clamp level. When the image has dark bars, try this adjustment.

Display area H

Use the Point ◄► buttons to adjust the horizontal area displayed by this projector.

Display area V

Use the Point ◄► buttons to adjust the vertical area displayed by this projector.

PC adjust Menu

Reset

To reset the adjusted data, select **Reset** and press the SELECT button. A confirmation box appears and then select **Yes**. All adjustments will return to their previous figures.

Mode free

To clear the stored data, select **Mode free** and then press the Point ► or the SELECT button. Move the highlight to the mode that you want to clear and then press the SELECT button.
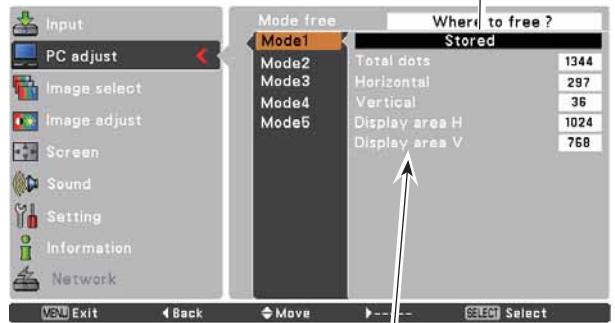
Store

To store the adjusted data, select **Store** and then press the Point ► or the SELECT button. Move the highlight to one of the Modes 1 to 5 in which you want to store, and then press the SELECT button.
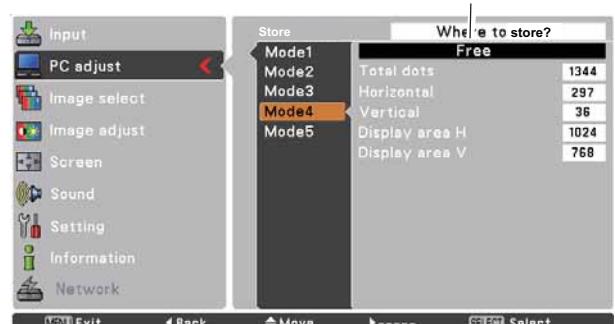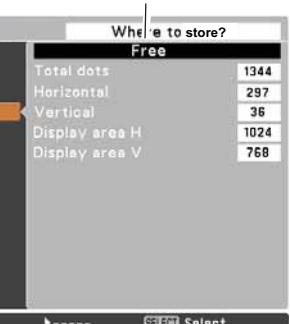
Mode free
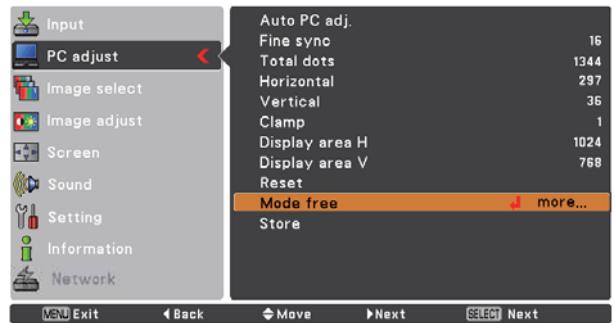
This mode has stored parameters.

Values of **Total dots**, **Horizontal**, **Vertical**, **Display area H** and **Display area V**.

Store   Vacant

Press MENU button to close this dialog box.

Press SELECT button to store adjusted data.

✓**Note:**
• **Display area (H/V)** can not be selected when **480i, 575i, 480p, 575p, 720p, 1035i** or **1080i** is selected in the PC System Menu (p.33).
• When input computer signal to the projector, **PC adjust** will become available.

Image Mode Selection

Direct Operation

Select the desired image mode among **Dynamic**, **Standard**, **Real**, **Blackboard (Green)**, **Colorboard**, **Image 1**, **Image 2**, **Image 3** and **Image 4** by pressing the IMAGE button on the remote control.
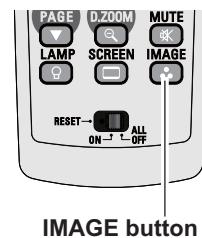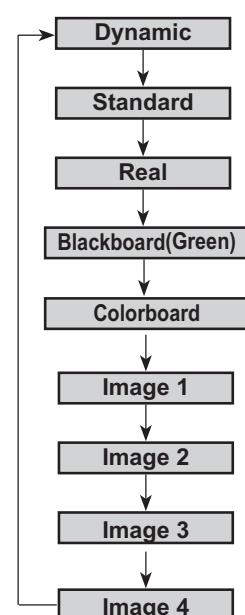
Remote Control

IMAGE button

IMAGE button

Dynamic
↓
Standard
↓
Real
↓
Blackboard(Green)
↓
Colorboard
↓
Image 1
↓
Image 2
↓
Image 3
↓
Image 4

Menu Operation

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Image select** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select the desired item and then press the SELECT button.

Dynamic

For viewing pictures in a bright room.

Standard

Normal picture mode preset on the projector.

Real

Picture mode with improved halftone for graphics.

Blackboard (Green)

For the image projected on a blackboard.
This mode helps enhance the image projected on a blackboard. This is mainly effective on a green colored board, not truly effective on a black colored board.
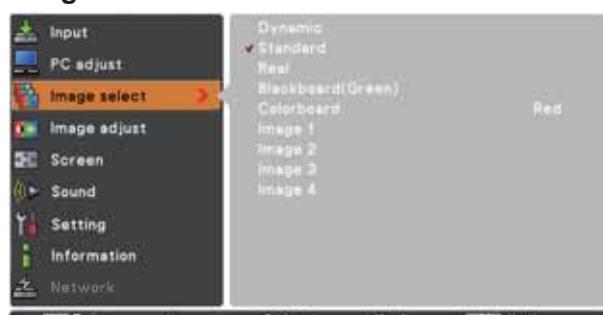
Colorboard

Use the Point ▲▼ buttons to select **Colorboard** and then press the Point ► or the SELECT button. Use the Point ▲▼ buttons to select the desired item and then press the SELECT button.
At the time of simple projection on the colored wall, you can get the close color image to the color image projected on a white screen by selecting the similar color to the wall color from the preset four colors.

Image 1–4

For viewing with the user preset image mode in the Image adjust Menu (see pages 38-39). This Image memory is provided in each computer, component and video input source.

Image Select Menu

Image Adjustment

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Image adjust** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons select the desired item and then press the SELECT button to display the adjustment dialog box. Use the Point ◄► buttons to adjust the setting value.

Contrast

Press the Point ◄ button to decrease the contrast; press the Point ► button to increase the contrast (from 0 to 63).

Brightness

Press the Point ◄ button to decrease the brightness; press the Point ► button to increase the brightness (from 0 to 63).

Color temp.

Use the Point ◄► buttons to select the desired Color temp. level (XLow, Low, Mid or High).

White balance (Red)

Press the Point ◄ button to lighten red tone; press the Point ► button to deepen red tone (from 0 to 63).

White balance (Green)

Press the Point ◄ button to lighten green tone; press the Point ► button to deepen green tone (from 0 to 63).

White balance (Blue)

Press the Point ◄ button to lighten blue tone; press the Point ► button to deepen blue tone (from 0 to 63).

Sharpness

Press the Point ◄ button to decrease the sharpness of the image; press the Point ► button to increase the sharpness of the image (from 0 to 15).

Gamma

Use the Point ◄► buttons to adjust the gamma value to obtain a better balance of contrast (from 0 to 15).

Reset
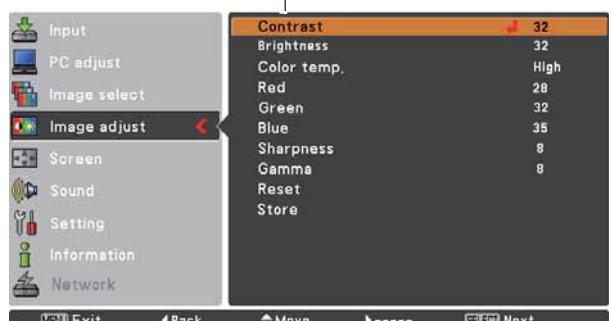
To reset the adjusted data, select **Reset** and press the SELECT button. A confirmation box appears and then select **Yes**. All adjustments will return to their previous figures.

Image Adjust Menu

Selected Image mode

Use the Point ◄► buttons to adjust the setting value.

✓**Note:**
  • When **White balance Red**, **Green** or **Blue** is adjusted, **Color temp.** will change to **User**.
  • When **Blackboard(Green)** or **Colorboard** is selected in Image select, **Color temp.** will change to **Blackboard** or **Colorboard**.

Store

To store the adjusted data, select **Store** and press the Point ► or the SELECT button. Use the Point ▲▼ buttons to select one from Image 1 to 4 and press the SELECT button. A confirmation box appears and then select **Yes**. Stored data can be called up by selecting an **Image (1–4)** in the Image Mode Selection on page 37.

A confirmation box appears and then select **Yes**.

Screen Size Adjustment

This projector has the picture screen resize function, which enables you to customize the image size.

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Screen** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons select the desired item and then press the SELECT button .

Screen Menu

Normal

Provide the image to fit the screen size.

True

Provide the image in its original size. When the original image size is larger than the screen size (1024 x 768), the projector enters to the panning mode automatically. Use the Point ▲▼◄►buttons to pan the image. When adjusted, the arrows will turn red. When reached to the correction limits, the arrows will disappear.

Wide

Provide the image to fit the wide video aspect ratio (16:9) by expanding the image width uniformly. This function can be used for providing a squeezed video signal at 16:9.

Full

Provide the full screen image.

✓**Note:**
- The Screen Menu, except for **Normal** and **Custom**, can not be operated when **720p**, **1035i** or **1080i** is selected in the PC System Menu (p.33).
- This projector can not display any resolution higher than 1920 x 1200. If your computer's screen resolution is higher than it, reset the resolution to the lower before connecting to the projector.
- The image data in other than 1024 x 768 is modified to fit the screen size in initial mode.
- **True**, **Full** and **Digital zoom +/–** can not be selected when **480i**, **575i**, **480p** or **575p** is selected in the PC System Menu (p.33).

Custom

Adjust the screen scale and position manually with this function.
Press the Point ►button at **Custom** and the **Custom** is displayed on the screen, you can use the Point ▲▼ buttons to choose the item you want to adjust.

Scale H/V .... Adjust the Horizontal/Vertical screen scale.

H&V .... When set to **On**, the aspect ratio is fixed. **Scale V** appears dimmed and becomes unavailable. Adjust **Scale H**, then the screen scale is automatically modified based on the aspect ratio.

Position H/V ..... Adjust the Horizontal/Vertical screen position.

Common .... Save the adjusted scale to all the inputs. Press the SELECT button at **Common** to display a confirmation box. To save the scale, press the SELECT button at **Yes**. When **Custom** is selected, the saved scale is used.

Reset .... Reset the all adjusted values. Press the SELECT button at **Reset** to display a confirmation box. To reset, press the SELECT button at **Yes**.

For zooming in and out the images

Digital zoom +

Select **Digital zoom +**. The On-Screen Menu disappears and **D. zoom +** appears. Press the SELECT button to expand the image size. Use the Point ▲▼◄► buttons to pan the image. The Panning function can work only when the image is larger than the screen size.
A projected image can be also expanded by pressing the D.ZOOM + button on the remote control.

Digital zoom -

Select **Digital zoom -**. The On-Screen Menu disappears and **D. zoom –** appears. Press the SELECT button to compress image size.
The projected image can be also compressed by pressing the D.ZOOM - button on the remote control.

To exit the Digital zoom +/– mode, press any button except the D.ZOOM +/- buttons, SELECT and Point buttons.

To return to the previous screen size, select a screen size from the Screen Size Adjustment Menu or select an input source from the Input Source Selection Menu (see pages 31-32) again or adjust the screen size with the D.ZOOM +/- buttons.
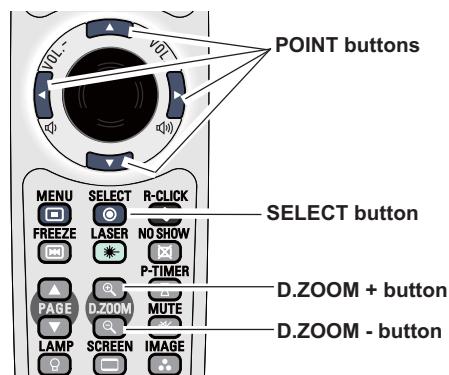
Custom
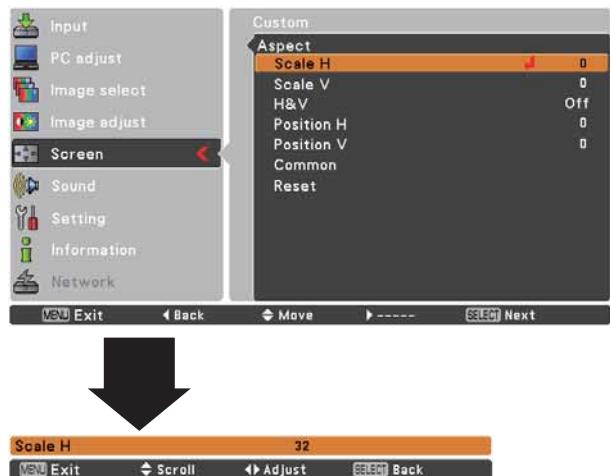
✓**Note:**
 • When no signal is detected, **Normal** is set automatically and the Aspect dialog box disappears.
 • The adjustable range for **Scale H/V** and **Position H/V** is limited depending on the input signal.

Remote Control

POINT buttons

SELECT button

D.ZOOM + button

D.ZOOM - button

✓**Note:**
 • The panning function may not operate properly if the stored Mode in the PC adjust Menu is used (p.36).
 • The minimum compression ratio is limited depending on the input signal, when the Keystone function is working or when the custom is selected for the screen size.
 • **True**, **Full** and **Digital zoom +/–** can not be selected when **480i**, **575i**, **480p** or **575p** is selected in the PC System Menu (p.33).
 • **Digital zoom +/-** can not be selected when **Full** or **True** is selected.
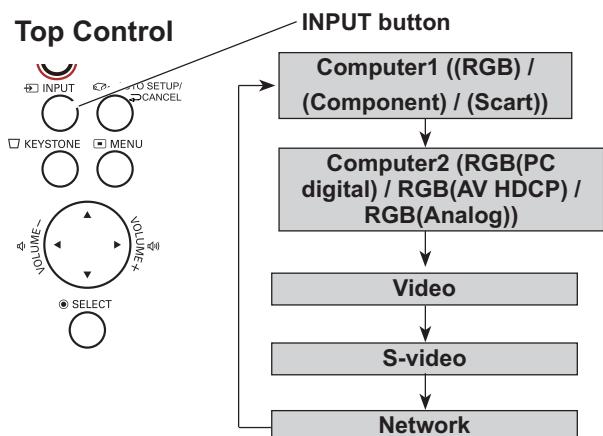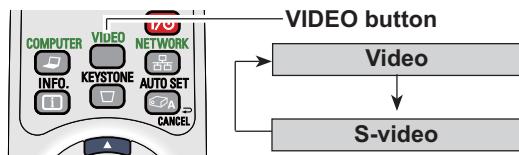 • **Digital zoom –** can not be operated when Custom is selected.

Video Input

Input Source Selection (Video, S-video)

Direct Operation

Choose **Video** or **S-video** by pressing the INPUT button on the top control or the VIDEO button on the remote control.

Top Control   **INPUT button**

Remote Control

VIDEO button

Video

↓

S-video

Computer1 ((RGB) / (Component) / (Scart))

↓

Computer2 (RGB(PC digital) / RGB(AV HDCP) / RGB(Analog))

↓

Video

↓

S-video

↓

Network

Menu Operation

1 Press the MENU button to display the On-Screen Menu. Use the Point ▲▼ buttons to select **Input** and then press the Point ► or the SELECT button.

2 Use the Point ▲▼ buttons to select either **Video** or **S-video** and then press the SELECT button.
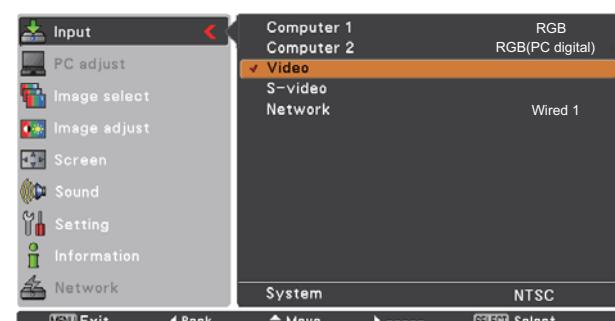
| Video | When video input signal is connected to the VIDEO jack, select **Video**. |

| S-video | When video input signal is connected to the S-VIDEO jack, select **S-video**. |

Input Menu

Video

✓**Note:**
 • **Network** is for the Network function. See the owner's manual of "Network Set-up and Operation" .
 • When the Input Search function is set to **On1** or **On2** in the Auto setup function, the input signal will be searched automatically (p.49).