

Video Projector

Operating Instructions

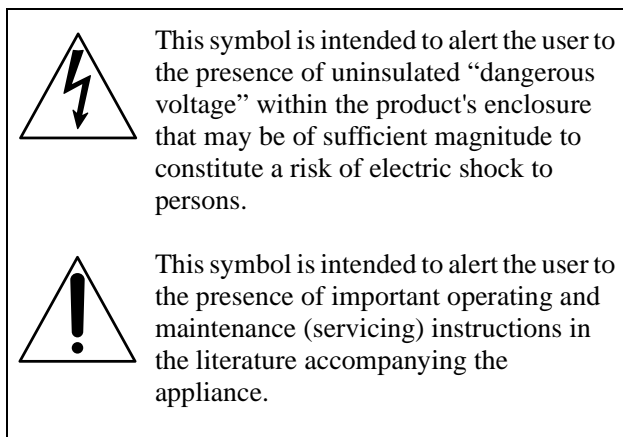
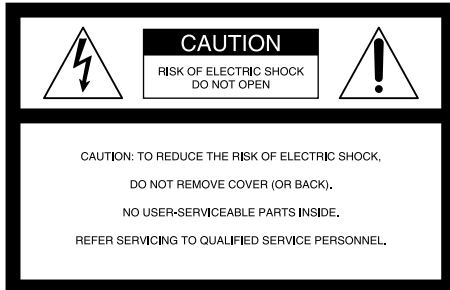
GB

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

VPL-HS3

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



For the customers in the USA

If you have any questions about this product, you may call; Sony Customer Information Services Center 1-800-222-7669 or <http://www.sony.com/>

The number below is for FCC related matters only.

Declaration of Conformity

Trade Name: SONY
Model No.: VPL-HS3
Responsible Party: Sony Electronics Inc.
Address: 16450 W.Bemardo Dr, San Diego, CA 92127
U.S.A
Telephone Number: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

Voor de klanten in Nederland

Dit apparaat bevat een vast ingebouwde batterij die niet vervangen hoeft te worden tijdens de levensduur van het apparaat.

Raadpleeg uw leverancier indien de batterij toch vervangen moet worden. De batterij mag alleen vervangen worden door vakbekwaam servicepersoneel.

Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).

Lever het apparaat aan het einde van de levensduur in voor recycling, de batterij zal dan op correcte wijze verwerkt worden.



The socket-outlet should be installed near the equipment and be easily accessible.

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Precautions

On safety

- Check that the operating voltage of your unit is identical with the voltage of your local power supply.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- The wall outlet should be near the unit and easily accessible.
- The unit is not disconnected to the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Do not look into the lens while the lamp is on.
- Do not place your hand or objects near the ventilation holes. The air coming out is hot.

On preventing internal heat build-up

After you turn off the power with the I /  (on/standby) switch, do not disconnect the unit from the wall outlet while the cooling fan is still running.

Caution

The projector is equipped with ventilation holes (intake) and ventilation holes (exhaust). Do not block or place anything near these holes, or internal heat build-up may occur, causing picture degradation or damage to the projector.

On repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your unit. For maximum protection, repack your unit as it was originally packed at the factory.

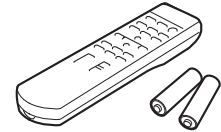
Connections and Preparations

This section describes how to install the projector and screen, how to connect the equipment from which you want to project the picture, etc.

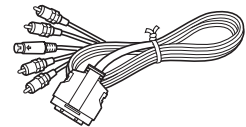
Unpacking

Check the carton to make sure it contains the following items:

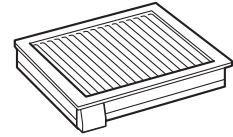
Remote control (1),
Size AA (R6)
batteries (2)



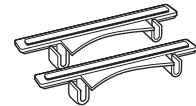
Signal interface
cable (1)



Air filter (for
replacement) (1)



Adjuster spacers (2)

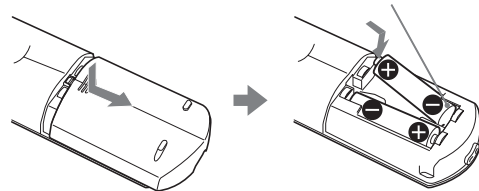


AC power cord (1)
Operating Instructions (this manual) (1)

Inserting the batteries into the remote control

Insert the batteries **+** side first as shown in the illustration.

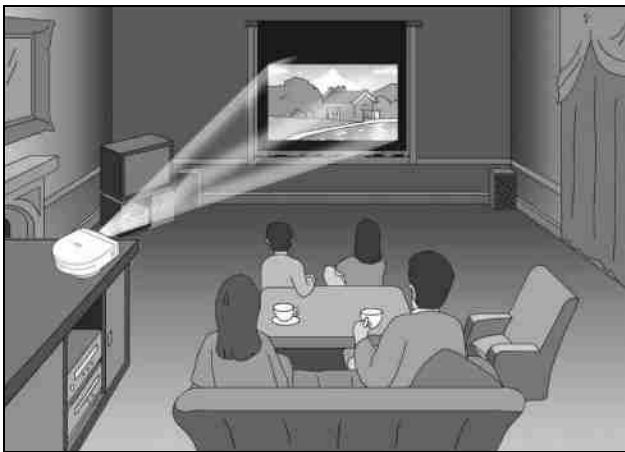
Inserting them forcibly or with the polarities reversed may cause a short circuit and may generate heat.



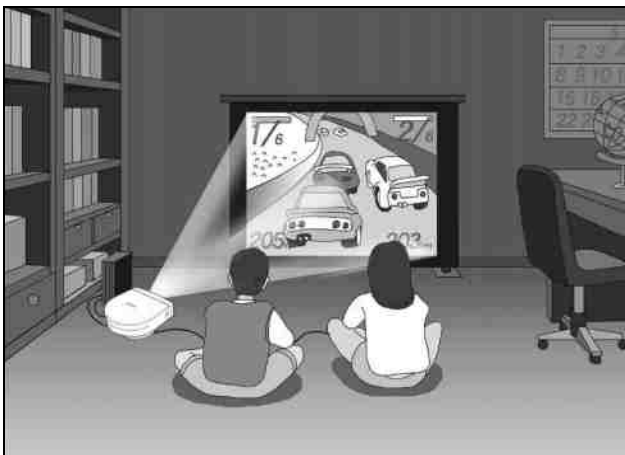
Step 1: Installing the Projector

You can obtain good picture quality even when you project the picture from the side of the screen (“Side Shot”) (☞ page 8). You can enjoy home entertainment with this projector in various situations.

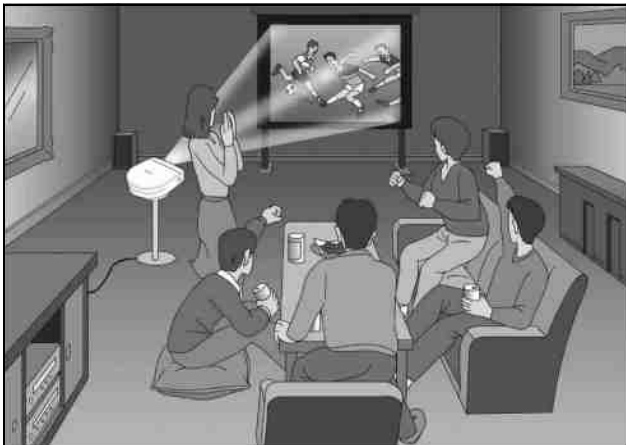
Enjoying home theater



Enjoying video games on a large screen



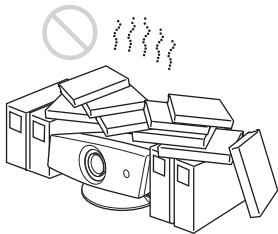
Watching sports, etc. with your company



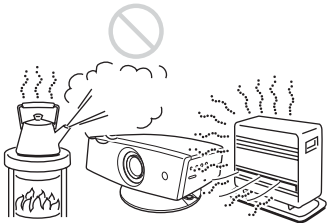
Before Setting Up the Projector

Do not place the projector in the following situations, which may cause malfunction or damage to the projector.

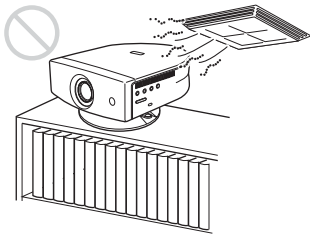
Poorly ventilated



Highly heated and humid

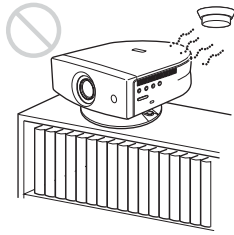


Subject to direct cool or warm air from an air-conditioner



Installing in such a location may cause malfunction of the unit due to moisture condensation or rise in temperature.

Near a heat or smoke sensor



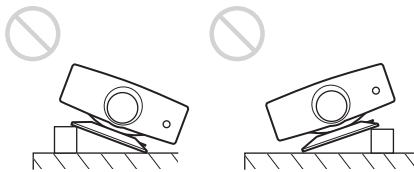
Malfunction of the sensor may be caused.

Very dusty and extremely smoky

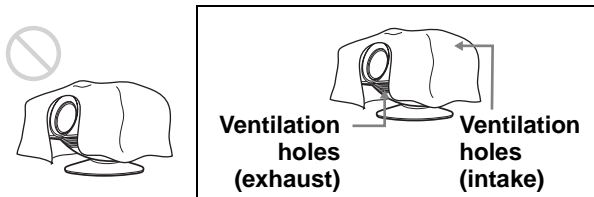


Do not use the projector under the following conditions:

Tilting the unit extremely



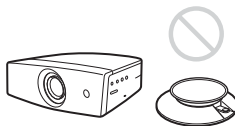
Blocking the ventilation holes



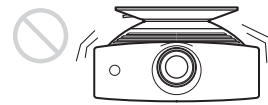
Tip

For further details on the location of the ventilation holes (intake or exhaust), see “Location of Controls” on pages 45 and 46.

Placing the projector without the adjuster



Placing the projector upside down



Do not place the projector upside down on the table etc. The projector will be unstable.

Note

Installing the unit at altitudes

When using the projector at an altitude of 1,500 m or higher, turn on high altitude mode in the INSTALL SETTING menu. Failing to set this mode when using the projector at high altitudes could have adverse effects, such as reducing the reliability of certain components.

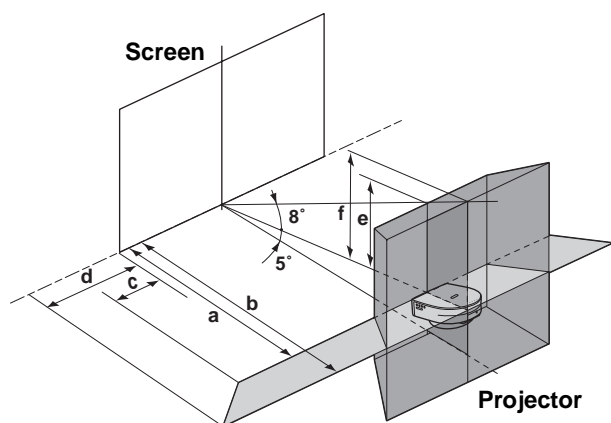
Installing the Projector and a Screen

The installation distance between the projector and screen varies depending on the size of the screen.

Note

When installing the projector and screen, be sure not to tilt them. If you tilt either or both of them, the adjustment cannot be correctly carried out.

1 Determine the installation position of the projector and screen.



- a:** Minimum projection distance between the screen and the center of the projector's lens when you place the projector on the side ("Side Shot"), or when you place the projector with the center of the screen and the center of the lens aligned.
- b:** Maximum projection distance between the screen and the center of the projector's lens when you place the projector on the side, or when you place the projector with the center of the screen and the center of the lens aligned.
- c:** Maximum horizontal distance between the right/left end of the screen and the center of the projector's lens when the projector is placed on the side (when you use projection distance **a**)
- d:** Maximum horizontal distance between the right/left end of the screen and the center of the lens when the projector is placed on the side (when you use projection distance **b**)

- e:** Maximum vertical distance from the bottom of the screen to the center of the projector's lens when you place the projector on the side (when you use projection distance **a**)
- f:** Maximum vertical distance from the bottom of the screen to the center of the projector's lens when you place the projector on the side (when you use projection distance **b**)

When projecting using "Side Shot" adjustment only (☞ page 17)

Position the projector with the lens end within the area in the illustration, by using the values **a**, **b**, **c** and **d** in the table below as a guide.

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1.1 (3.6)	1.7 (5.6)	2.2 (7.2)	2.8 (9.2)	3.3 (10.8)	4.2 (13.8)
b	1.2 (3.9)	1.8 (5.9)	2.4 (7.9)	3 (9.8)	3.6 (11.8)	4.5 (14.8)
c	-0.2 (-0.7)	-0.2 (-0.7)	-0.3 (-1)	-0.4 (-1.3)	-0.4 (-1.3)	-0.4 (-1.3)
d	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Tip

The table shows the distances when projecting the video signals. Distances used for projecting a 1080i/720p format signal and computer's signal are shown on page 40 .

Note

If you project the picture using "Side Shot" only, set "V Keystone" in the INSTALL SETTING menu to "Manual," and adjust the level to "0."

When projecting using both "Side Shot" and "V Keystone" adjustments (☞ page 18)

Position the projector with the lens end within the area in the illustration, by using the values **a** to **f** in the table below as a guide.

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1.2 (3.9)	1.7 (5.6)	2.2 (7.2)	2.8 (9.2)	3.4 (11.2)	4.2 (13.8)
b	1.3 (4.3)	1.9 (6.2)	2.5 (8.2)	3.1 (10.2)	3.7 (12.1)	4.6 (15.1)
c	-0.2 (-0.7)	-0.3 (-1)	-0.4 (-1.3)	-0.6 (-2)	-0.7 (-2.3)	-0.9 (-3)


Screen size (inches)	40	60	80	100	120	150
d	-0.1 (-0.3)	-0.1 (-0.3)	-0.1 (-0.3)	-0.1 (-0.3)	-0.2 (-0.7)	-0.3 (-1)
e	0.1 (0.3)	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)
f	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)	0.7 (2.3)

Tip

The table shows the distances when projecting the conventional video signals. Distances used for projecting a 1080i/720p format signal and computer's signal are shown on page 40.

When projecting from the center (☞ page 19)

You can change the projection angle using the adjuster. (☞ page 16)

Position the projector with the lens end within the area  in the illustration, by using the values **a** and **b** in the table below as a guide.

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1 (3.2)	1.5 (4.9)	2 (6.5)	2.5 (8.2)	3 (9.9)	3.8 (12.4)
b	1.2 (3.9)	1.8 (5.9)	2.4 (7.9)	3 (9.9)	3.6 (11.9)	4.5 (14.9)

For “Floor installation example”, see page 41.

2 Project an image on the screen and adjust the picture so that it fits the screen. (☞ page 14)


To project an image, connect video equipment to the projector. (☞ page 9)

Note

When using a screen with an uneven surface, stripes pattern may sometimes appear on the screen depending on the distance between the screen and the projector or the zooming magnifications. This is not a malfunction of the projector.

Step 2: Connecting the Projector

When making connections, be sure to do the following:

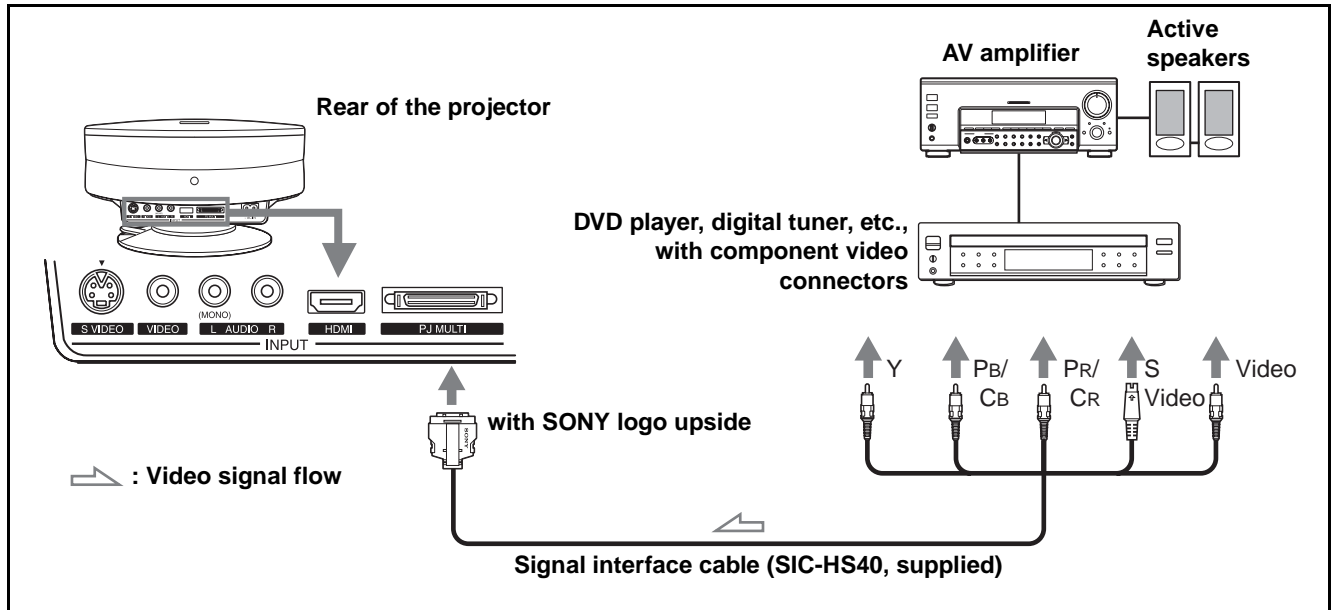
- Turn off all equipment before making any connections.
- Use the proper cables for each connection.
- Insert the cable plugs properly; plugs that are not fully inserted often generate noise. When pulling out a cable, be sure to pull it out from the plug, not the cable itself.
- Refer to the operating instructions of the connected equipment.
- When you connect your projector to PJ MULTI, select the input signal with the “Input-A Signal Sel.” setting in the SET SETTING  menu. (☞ page 31)

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Connecting to a DVD Player/Digital Tuner

To connect to a DVD player/digital tuner equipped with component video connectors

You can connect a DVD player/digital tuner equipped with component video connectors using the supplied signal interface cable.

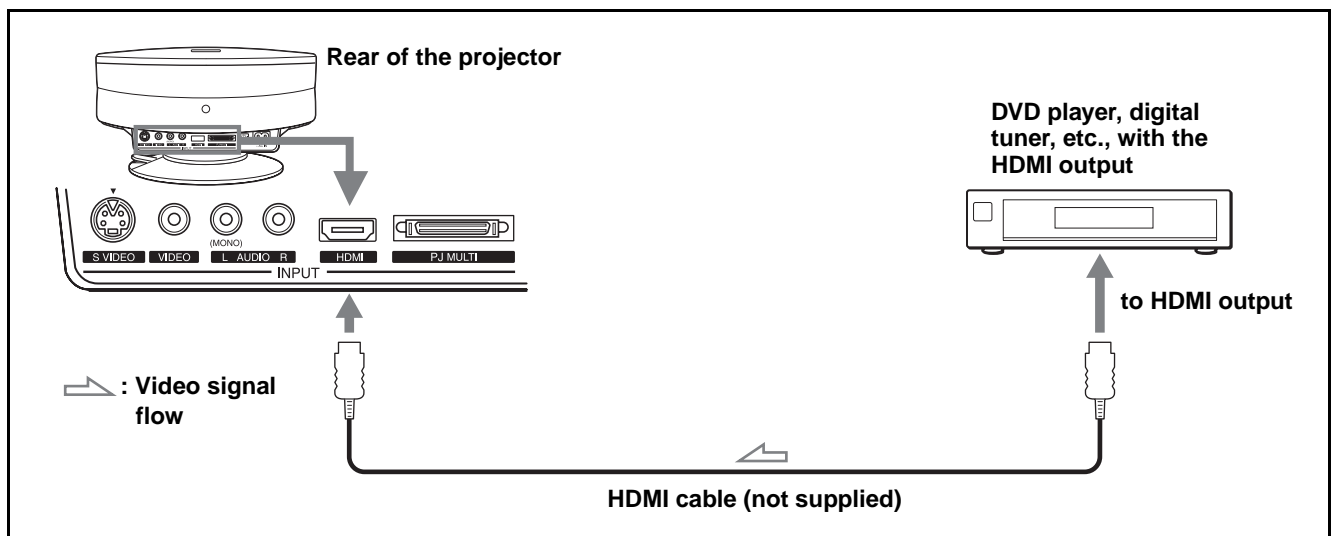


Tips

- To connect the projector to a DVD player/digital tuner which is not equipped with component video connectors, use the S video cable of the DVD player/digital tuner.
- To connect the projector to a DVD player/digital tuner which is not equipped with S video output, use the video cable instead of the S video cable.
- To connect the projector to a DVD player/digital tuner equipped with a D connector, use a commercially available conversion cable.

To connect to a DVD player/digital tuner equipped with HDMI output

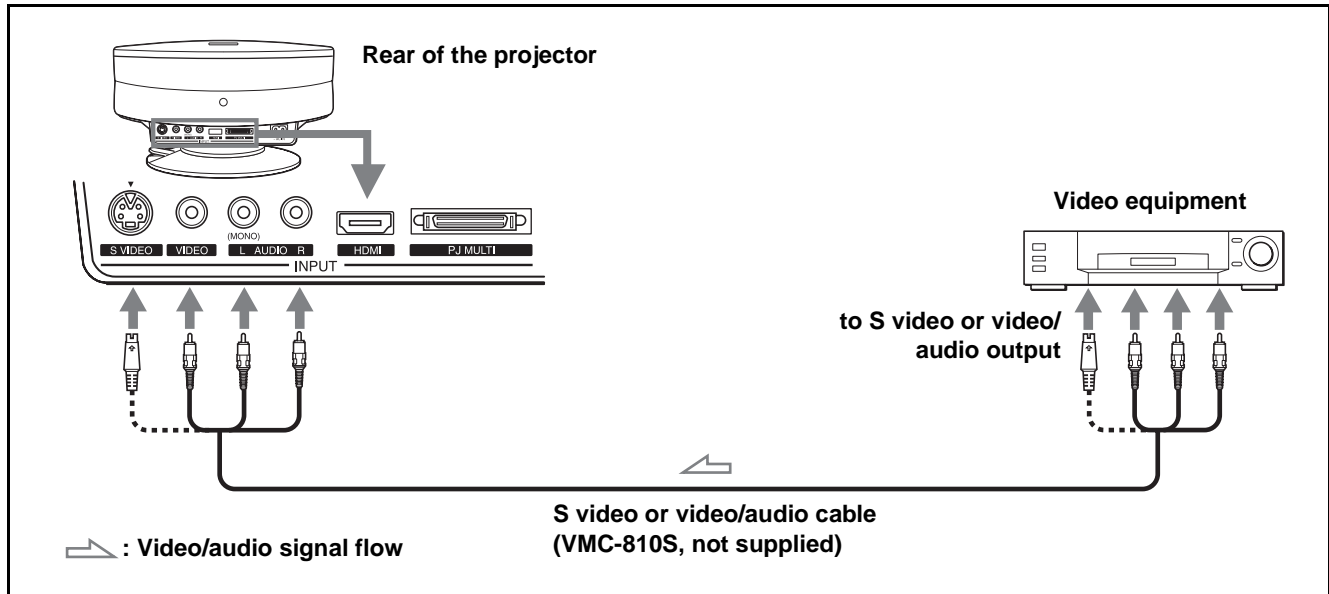
You can enjoy better picture by connecting a DVD player/digital tuner equipped with HDMI output to the HDMI input of the projector.



Connecting to Video Equipment

To connect to video equipment equipped with S video or video output

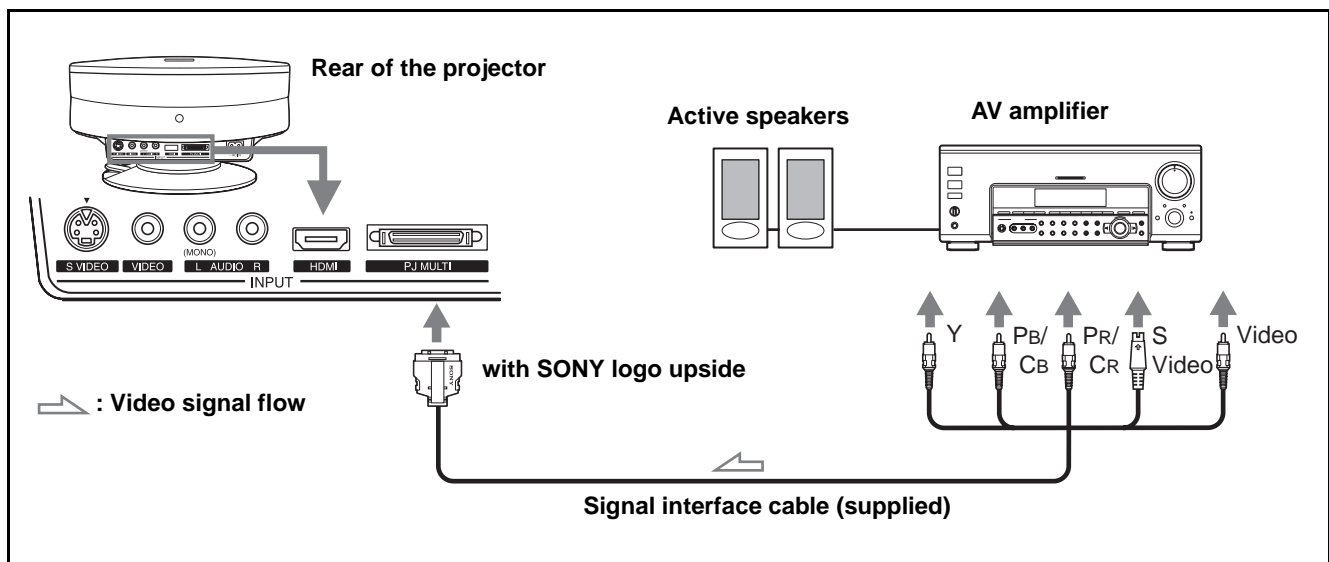
You can connect a VCR, Sony hard disk video recorder “Clip on” or a laser disk player. See also the instruction manual for each equipment.



Tip
 If you do not know to which connector you should connect the cable, S VIDEO (S video connector) or VIDEO (video connector), connect it to S VIDEO (S video connector) to enjoy better picture quality.
 If the equipment to be connected has no S VIDEO (S video connector), connect the cable to VIDEO (video connector).

Connecting to an AV Amplifier

You can enjoy better sound quality by connecting the projector to an AV amplifier using the supplied signal interface cable.

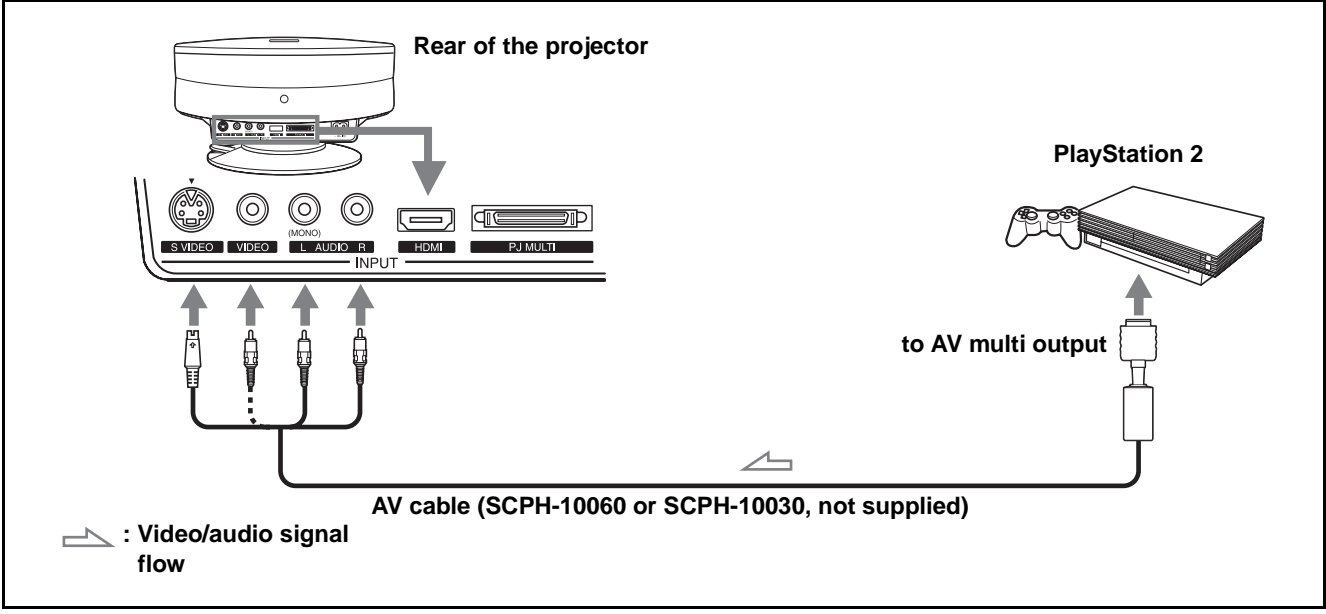


Connecting to “PlayStation 2,” etc.

To connect to the AV multi output of “PlayStation 2,” etc.

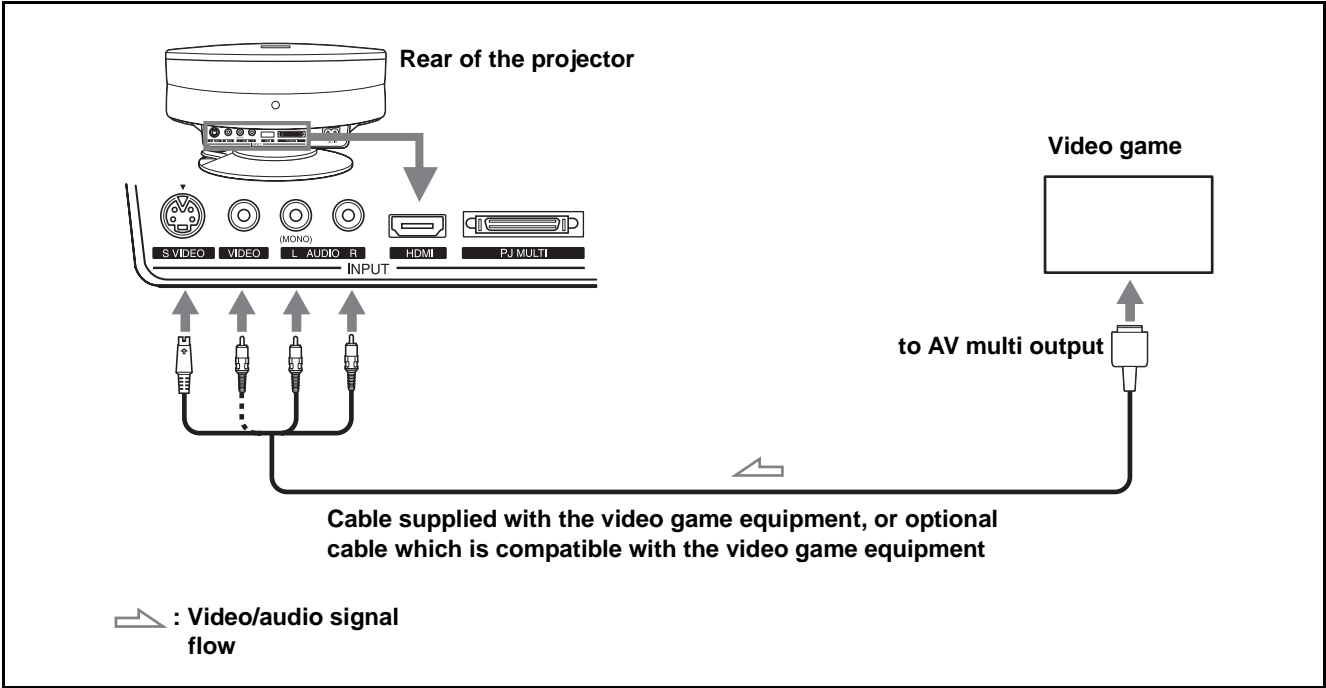
You can enjoy video games projected on the screen by connecting the projector to the “PlayStation 2,” “PlayStation” (PS one) or “PlayStation.”

See also the instruction manual of the connected “PlayStation 2,” etc.



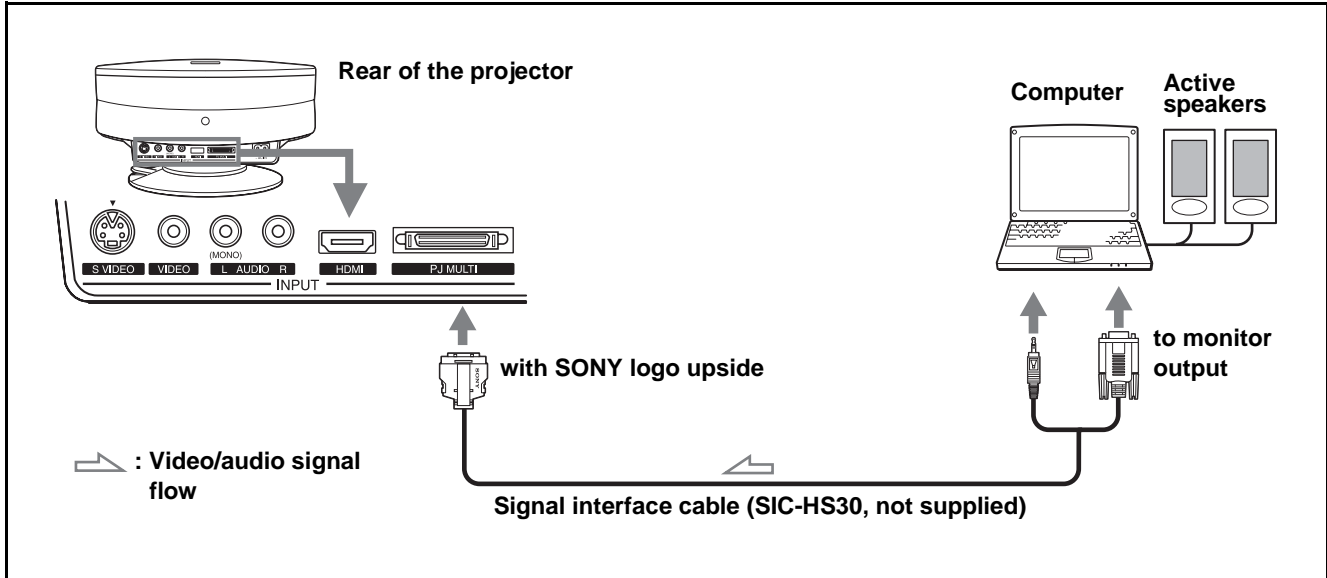
To connect to another video game equipment

To connect to another video game equipment, refer to the instruction manual of the video game equipment.



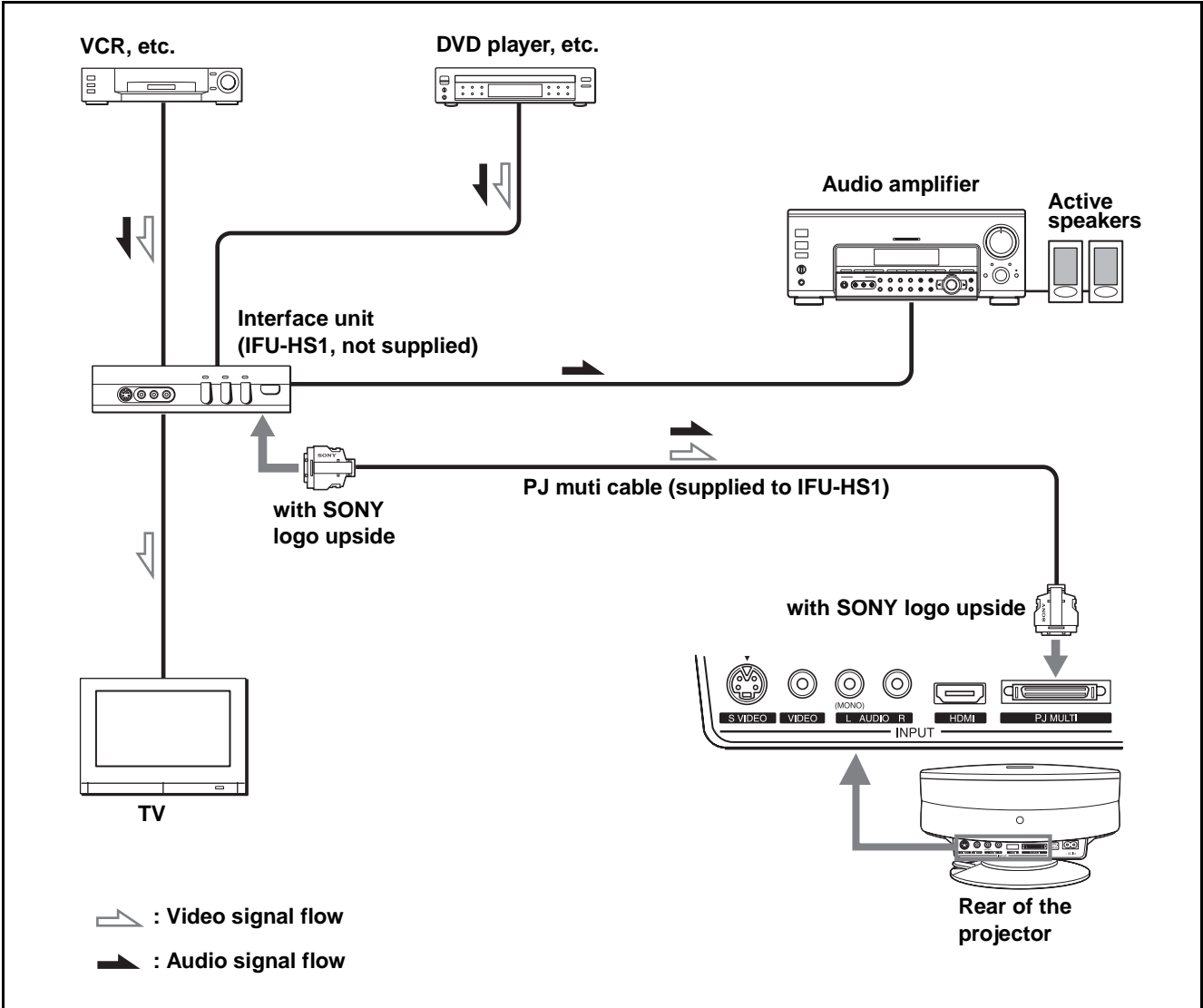
Connecting to a Computer

You can project a computer's picture on a large screen using the optional signal interface cable (SIC-HS30).

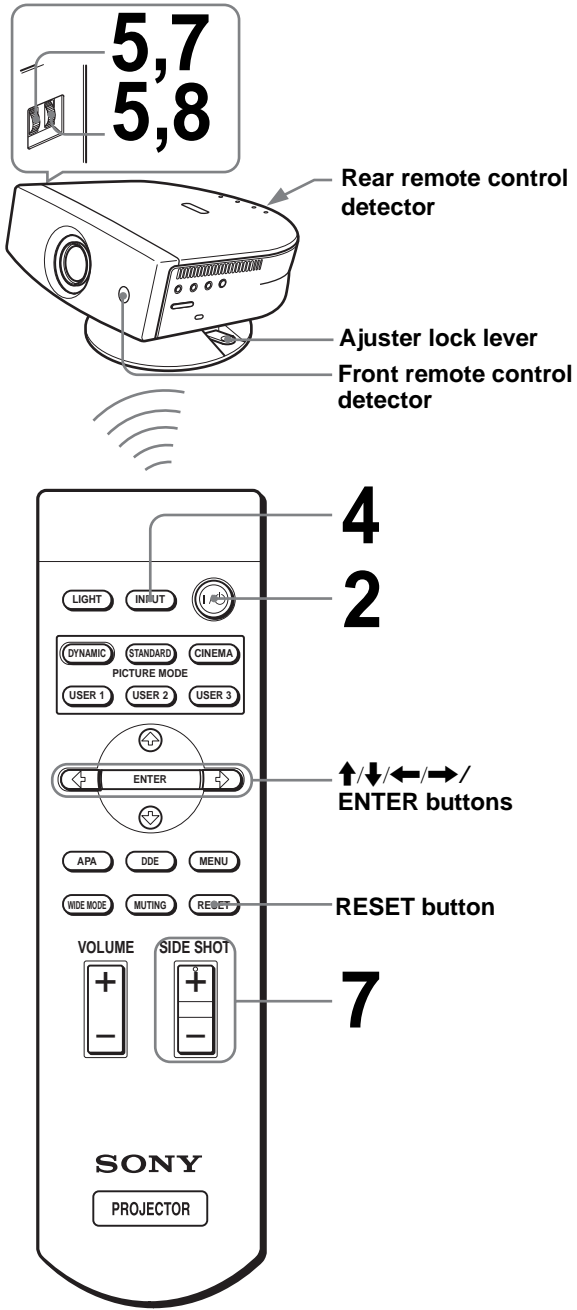


Connecting to Various Equipment using the Optional Interface Unit

You can connect other equipment using the optional interface unit. Additionally, you can select output to the projector or the TV by switching the selector of the interface unit.



Step 3: Adjusting the Picture Size and Position



1 Plug the AC power cord into a wall outlet.

The ON/STANDBY indicator lights in red and the projector goes into standby mode.



Lights in red.

2 Press the I/⏻ (on/standby) switch to turn on the projector.

The ON/STANDBY indicator lights in green.



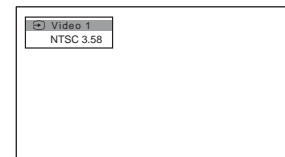
Lights in green.

3 Turn on the equipment connected to the projector.

Refer to the operating instructions of the connected equipment.

4 Press INPUT to project the picture on the screen.

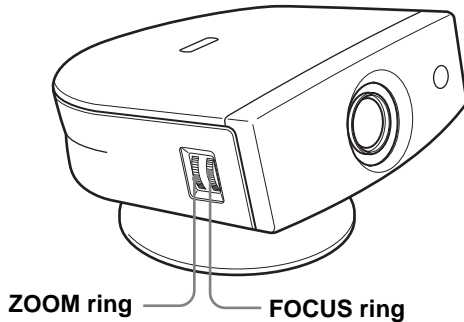
Each time you press the button, the input indication changes. (ⓘ page 23)



Tip

The I/⏻ (on/standby), INPUT, MENU, and ↑/↓/←/→/ENTER (joystick) buttons on the side panel of the projector have the same functions as those on the remote control.

5 Adjust the focus using the FOCUS ring, and adjust the picture size using the ZOOM ring.



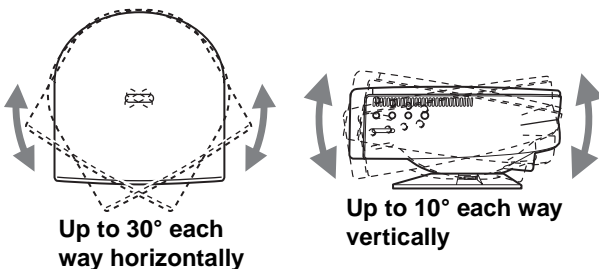
6 Adjust the position of the picture to fit the screen using the adjuster.

Adjusting the picture position using the adjuster

Hold down and slide the adjuster lock lever to the right, move the projector, then return the lock lever.



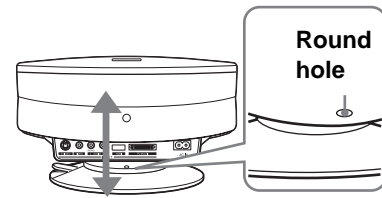
You can move the projector horizontally or vertically within the following ranges:



To reset the projector to the center position of the adjuster

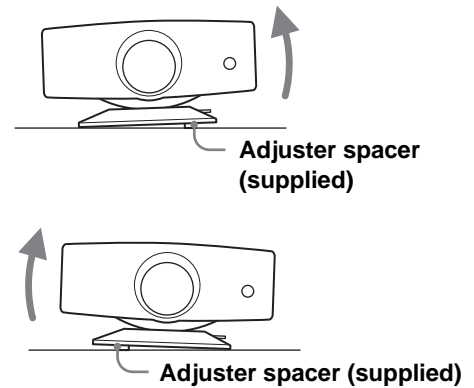
Hold down and slide the adjuster lock lever to the right, move the projector, then return the lock lever

until the adjuster clicks into the round hole in the lower side at the rear of the projector with a click.



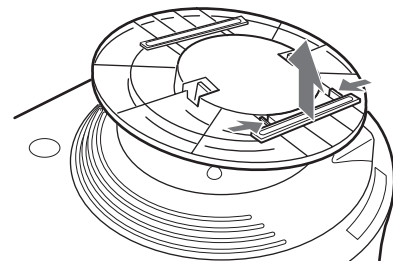
Adjusting the picture position using the supplied adjuster spacer

Attaching one of the supplied spacers for adjuster adjustment (spacers for 1° and 2°) allows you to tilt the projector to the right or left at a tilting angle up to 2°.



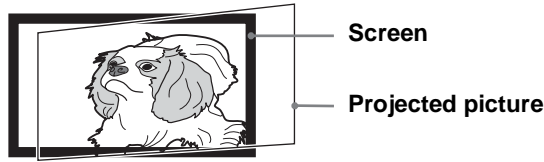
To attach the supplied adjuster spacer

- ① Place a thick cloth (e.g., a cushion) beneath the projector. Place the projector face down.
- ② While pressing the lock knobs inward, remove the adjuster bar at the bottom of the adjuster table to which you want to attach the supplied spacer.



- ③ Fit the spacer into the removed adjuster bar spot.

7 Adjust the picture size and position.



If “Side Shot” or “V Keystone” are adjusted manually (value adjustment), the built-in test pattern is projected on the screen. If you want to make adjustments using the current input signal, set “Test Pattern” in the INSTALL SETTING menu to “Off.” (☞ page 32)

When projecting using “Side Shot” adjustment only

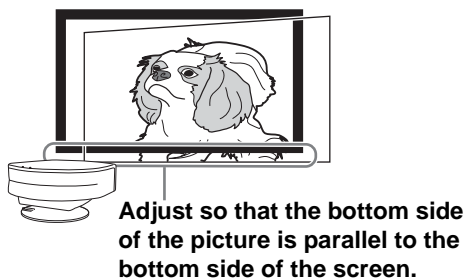
When projecting using “Side Shot” adjustment only, you can adjust to correct horizontal trapezoidal distortion using the “Side Shot” function to the maximum.

- ① Set “V Keystone” in the INSTALL SETTING menu to “Manual”, press ENTER and ↑, ↓ or RESET to set the level to “0”, then reset the position of the adjuster (☞ page 16).

Note

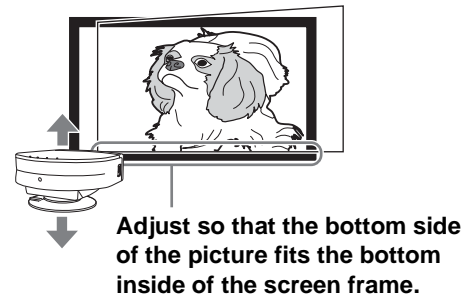
If “V Keystone” is set to “Auto,” the correction capacity of “Side Shot” is reduced.

- ② Position the projector so that the picture overlaps on the screen as shown below.



Check that the vertical sides of the picture are parallel to the vertical sides of the screen. If the picture does not overlap on the screen as shown above, confirm and adjust the installation position of the projector and screen referring to “Installing the Projector and a Screen” (☞ page 8).

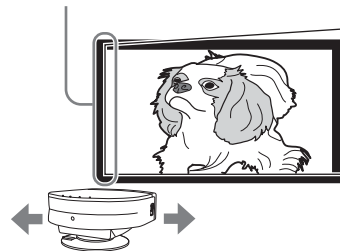
- ③ Move the projector vertically so that the bottom side of the picture fits the bottom inside of the screen frame.



When adjusting the picture height, do not use the adjuster (☞ page 16), but move the projector or the screen vertically to adjust so that the bottom side of the picture fits the bottom inside of the screen frame.

- ④ Move the projector horizontally to the left or right so that one side of the picture fits the inside end of the screen frame.

Adjust so that one side of the picture fits the inside end of the screen frame.

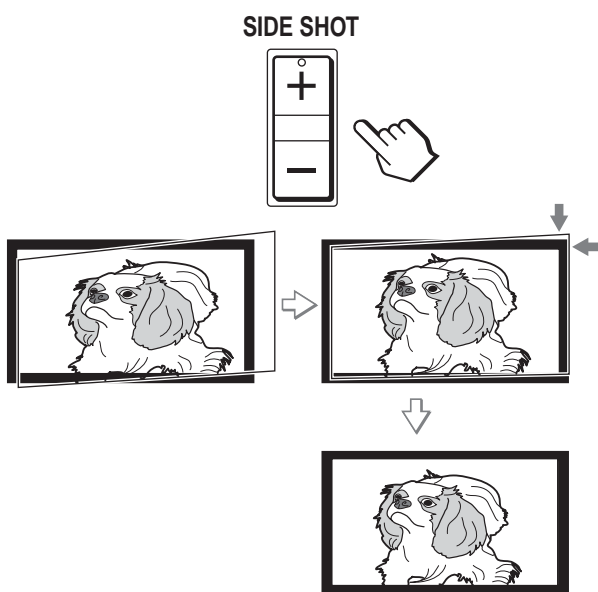


If you position the projector on the left side of the screen, adjust so that the left side of the picture fits the left inside end of the screen frame. With the projector positioned on the right side, adjust so that the right side of the picture fits the right inside end of the screen frame.

Note

When adjusting so that one side of the picture fits the inside end of the screen frame, make sure not to separate the bottom side of the picture from the bottom inside of the screen frame.

- ⑤ Adjust to correct horizontal trapezoidal distortion using **SIDE SHOT +** or **-**.



Press **SIDE SHOT +** or **-** so that the upper side of the picture becomes parallel to the bottom side. If the right side is longer than the left side, press **SIDE SHOT +**. If the left side is longer than the right side, press **SIDE SHOT -**. To fine-adjust the distortion, press **↑** or **↓**.

Note

Even when projecting using “Side Shot,” four sides of a picture may sometimes not be parallel to the sides of a screen frame.

When projecting using both “Side Shot” (🔧 page 32) and “V Keystone” (🔧 page 32) adjustments

When projecting using both “Side Shot” and “V Keystone” adjustments, vertical and horizontal distortions are corrected.

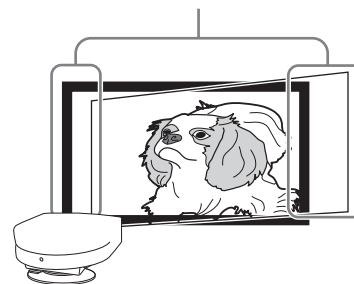
- ① Set the “V Keystone” in the **INSTALL SETTING** menu to “Auto.”

Note

“V Keystone” in the **INSTALL SETTING** menu is set to “Manual” in the default. If it is set to “Auto,” the vertical distortion of the picture will be automatically corrected. The “V Keystone” adjustment may not correct trapezoidal distortion perfectly, depending on the room temperature or the screen angle. In this case, set manually by value adjustment.

- ② Position the projector so that the picture overlaps on the screen as shown below.

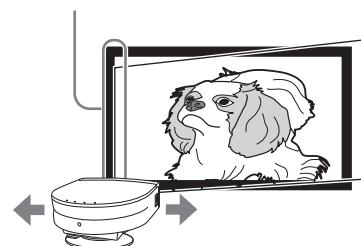
Adjust so that the vertical sides of the picture are parallel to the vertical sides of the screen.



Check that both vertical sides of the picture are parallel to the vertical sides of the screen. If they are not parallel, set “V Keystone” in the **INSTALL SETTING** menu to “Manual,” then press **ENTER** and adjust the distortion with **↑** or **↓** so that they become parallel.

- ③ Move the projector horizontally to the left or right so that one side of the picture fits the inside end of the screen frame.

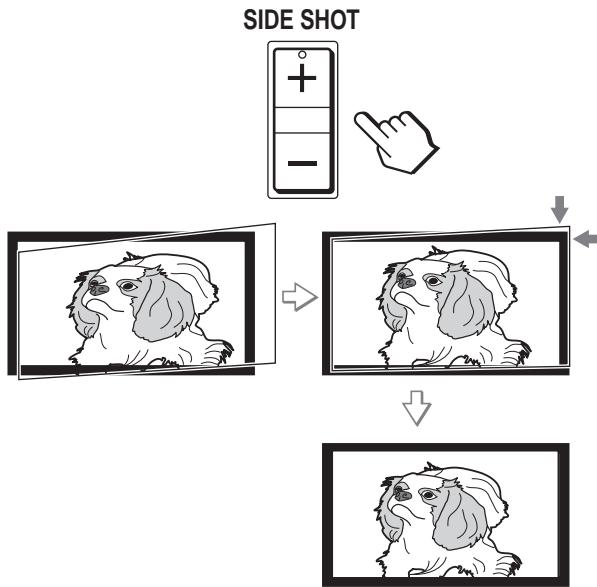
Adjust so that one side of the picture fits the inside end of the screen frame.



If you position the projector on the left side of the screen, adjust so that the left side of the picture fits the left inside end of the screen frame. With the projector positioned on the right side, adjust so that the right side of the picture fits the right inside end of the screen frame.

If the picture does not overlap on the screen, determine and adjust the installation position of the projector and screen referring to “Installing the Projector and a Screen” (🔧 page 8).

- ④ Adjust to correct horizontal trapezoidal distortion using **SIDE SHOT +** or **-**.



Press **SIDE SHOT +** or **-** so that the upper side of the picture becomes parallel to the bottom side. If the right side is longer than the left side, press **SIDE SHOT +**. If the left side is longer than the right side, press **SIDE SHOT -**. To fine-adjust the distortion, press **↑** or **↓**.

Note

Even when projecting using “Side Shot,” four sides of a picture may sometimes not be parallel to the sides of a screen frame.

When projecting from the center

- ① Set the “**V Keystone**” in the **INSTALL SETTING** menu to “**Auto.**”

Note

“V Keystone” in the **INSTALL SETTING** menu is set to “Manual” in the default. If it is set to “Auto,” the vertical distortion of the picture will be automatically corrected. The “V Keystone” adjustment may not correct trapezoidal distortion perfectly, depending on the room temperature or the screen angle. In this case, set manually by value adjustment.

- ② Position the projector so that the upper and bottom sides of the picture are parallel to the horizontal frame ends of the screen, and the left and right sides of the picture

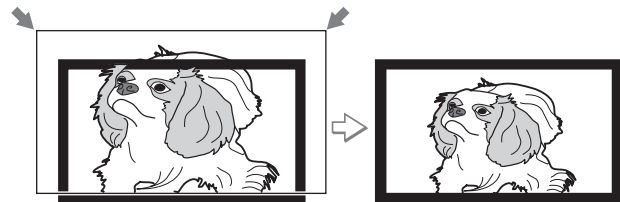
are parallel to the vertical frame ends of the screen, as shown below.



If the picture does not overlaps on the screen as shown above, confirm and adjust the installation position of the projector and screen referring to “Installing the Projector and a Screen” (☞ page 8).

If the left and right sides of the picture are not parallel to the left and right sides of the screen, set “V Keystone” in the **INSTALL SETTING** menu to “Manual,” press **ENTER**, then adjust with **↑** or **↓** so that they become parallel.

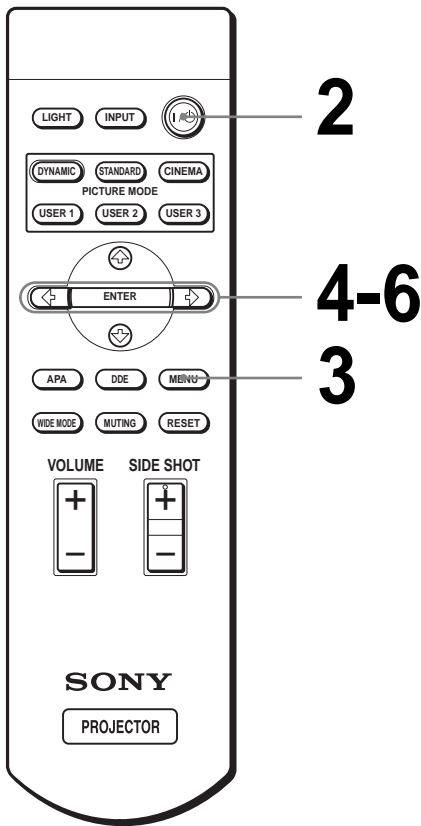
- ③ Adjust so that both ends of the bottom side of the picture fit those of the bottom side of the screen using the adjuster and the **ZOOM** ring.



- 8** Turn the **FOCUS** ring to adjust the focus again.

Step 4: Selecting the Menu Language

You can select one of thirteen languages for displaying the menu and other on-screen displays. The factory default setting is English.



Tip
You can operate the menu using the joystick on the side panel of the projector instead of the **↑/↓/←/→/ENTER** buttons on the remote control.

1 Plug the AC power cord into a wall outlet.

The ON/STANDBY indicator lights in red and the projector goes into standby mode.



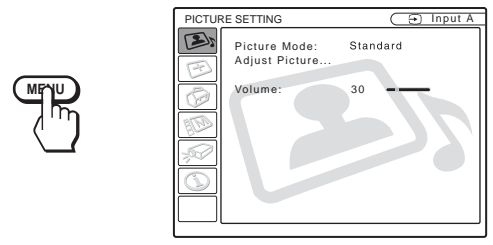
2 Press the I/O (on/standby) switch to turn on the projector.

The ON/STANDBY indicator lights in green.



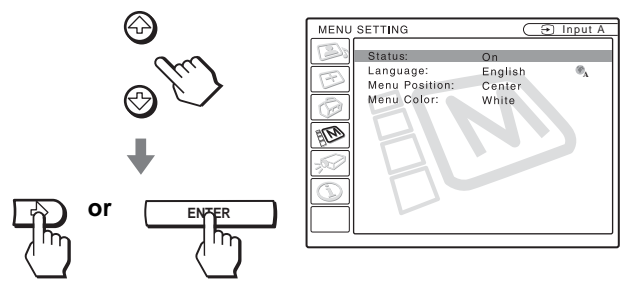
3 Press MENU.

The menu appears. The menu presently selected is shown as a yellow button.

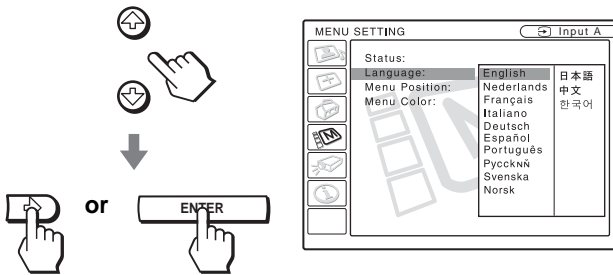


4 Press ↑ or ↓ to select the MENU SETTING menu, and press → or ENTER.

The selected menu appears.

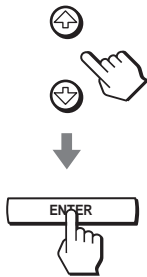


5 Press **↑** or **↓** to select “Language”, and press **→** or **ENTER**.



6 Press **↑** or **↓** to select a language, and press **ENTER**.

The menu changes to the selected language.



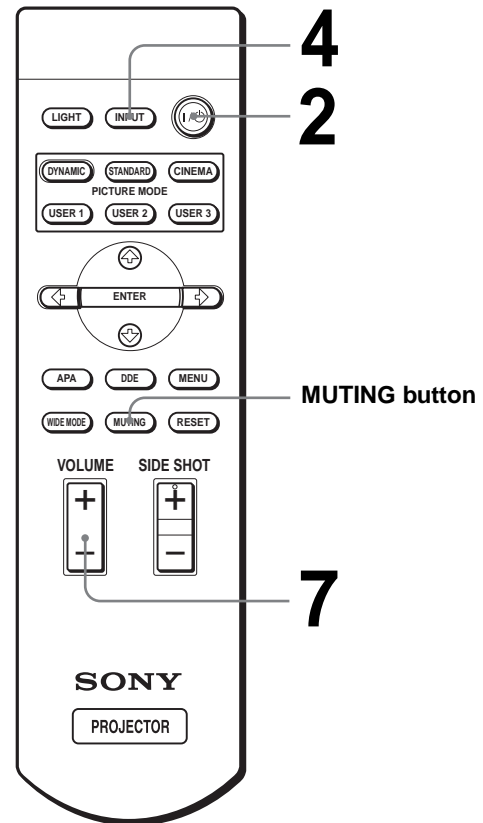
To clear the menu

Press MENU.

Projecting

This section describes how to operate the projector to view the picture from the equipment connected to the projector. It also describes how to select the wide screen mode or the quality of the picture to suit your taste.

Projecting the Picture on the Screen



1 Plug the AC power cord into a wall outlet.

The ON/STANDBY indicator lights in red and the projector goes into standby mode.



ON/STANDBY **Lights in red.**

2 Press the I/⏻ (on/standby) switch to turn on the projector.

The ON/STANDBY indicator lights in green.



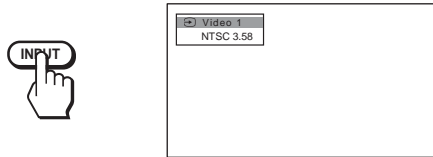
3 Turn on the equipment connected to the projector.

Refer to the operating instructions of the connected equipment.

4 Press INPUT repeatedly to select the input you want to project on the screen.

Display the indication of the input you want.

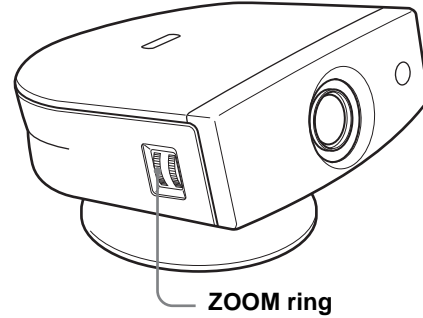
Example: To view the picture from the video equipment connected to the VIDEO INPUT jack.



To view the picture from	Press INPUT to display
Video equipment connected to VIDEO INPUT on the projector	Video 1
Video equipment connected to S VIDEO INPUT on the projector	S-Video 1
RGB/component equipment connected to PJ MULTI INPUT via the optional signal interface cable or the interface unit	Input-A*
Video equipment connected to PJ MULTI INPUT via the optional signal interface cable or the interface unit	Video 2
Video equipment equipped with S VIDEO connected to PJ MULTI INPUT via the optional signal interface cable or the interface unit	S-Video 2
Equipment connected to HDMI INPUT on the projector	HDMI

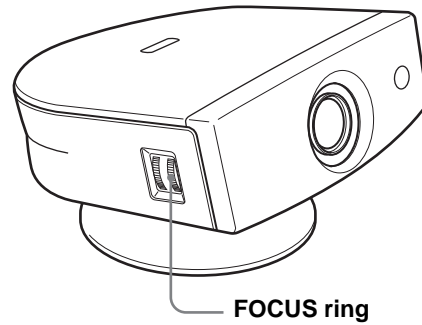
* Set the "Input-A Signal Sel." setting in the SET SETTING menu according to the input signal. (☞ page 31)

5 Turn the ZOOM ring to adjust the size of the picture.

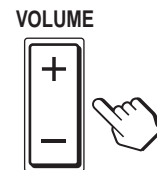


6 Turn the FOCUS ring to adjust the focus.

Adjust to obtain sharp focus.



7 Press VOLUME + or – to adjust the volume.



Cutting off the sound

Press MUTING on the remote control.

To restore the sound, press MUTING again.

To turn off the power

1 Press the I/⏻ (on/standby) switch.

A message “POWER OFF?” appears on the screen.

2 Press the I/⏻ switch again.

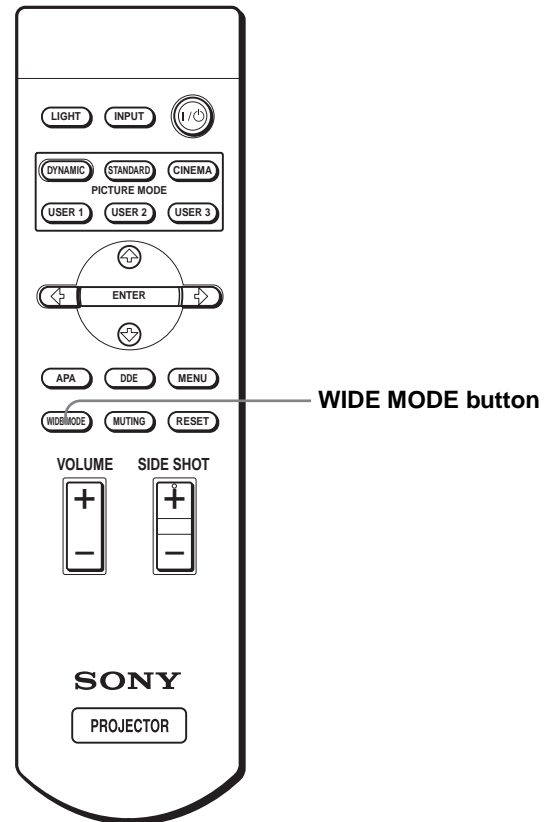
The ON/STANDBY indicator flashes in green and the fan continues to run to reduce the internal heat. Also, the ON/STANDBY indicator flashes quickly during which you will not be able to light up the ON/STANDBY indicator with the I/⏻ switch.

3 Unplug the AC power cord from the wall outlet after the fan stops running and the ON/STANDBY indicator lights in red.

You can turn off the projector by holding the I/⏻ (on/standby) switch for about one second, instead of performing the above steps.

Selecting the Wide Screen Mode

You can enjoy various wide screen mode according to the video signal received. You can also select it using the menu. (☞ page 30)



Press WIDE MODE.

Each time you press the button, you can select the “Wide Mode” setting.

Full

A 16:9 squeezed picture is displayed with the correct aspect ratio. A 4:3 picture is enlarged horizontally to fit the 16:9 screen.

**Tip**

Squeezed: An original 16:9 aspect ratio picture is recorded horizontally compressed to a 4:3 picture.

Normal

A picture with normal 4:3 aspect ratio is displayed in the center of the screen to fill the vertical screen size.

**Wide Zoom**

A 4:3 aspect ratio picture is enlarged and the upper and lower portions of the picture are compressed to fit the 16:9 screen. Use this mode to view news, variety shows, etc.

**Zoom**

A normal 4:3 aspect ratio picture is enlarged vertically and horizontally in the same ratio to fill the 16:9 screen. This mode is ideal for viewing a wide-format movie.

**Subtitle**

The subtitle area is compressed and displayed in the lower part of the screen. Use this mode to view a movie with subtitles.

**Full Through**

One-to-one mapping is done on a squeezed 16:9 picture. It is displayed in the center of the screen.

**Normal Through**

One-to-one mapping is done on a 4:3 normal aspect ratio picture. It is displayed in the center of the screen.

**Notes**

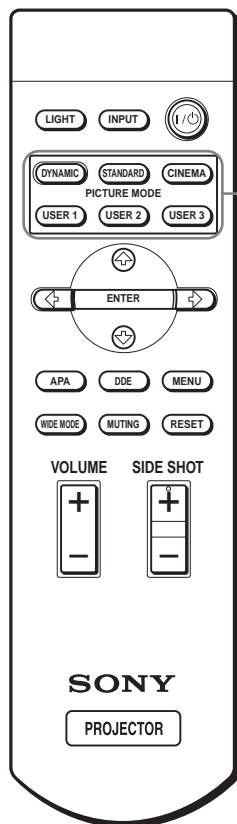
- You can adjust the vertical position of the picture with “V Position” in the INPUT SETTING menu when “Zoom” or “Subtitle” is selected, or when “Full Through” or “Normal Through” is selected for video (50Hz) or progressive component (50p) input signal.
- You can adjust the position of the subtitles with “Title Area” in the INPUT SETTING menu only when “Subtitle” is selected.
- If “Full Through” or “Normal Through” is selected when a video (50 Hz) or progressive video (50p) signal is input, the picture may not be completely displayed on the screen due to the number of dots of the LCD panel.

Notes on selecting the wide screen mode

- Select the wide screen mode taking into account that changing the aspect ratio of the original picture will provide a different look from that of the original image.
- Note that if the projector is used for profit or for public viewing, modifying the original picture by switching to the wide mode may constitute an infringement of the rights of authors or producers, which are legally protected.

Selecting the Picture Viewing Mode

You can select the picture viewing mode that best suits the type of program or room condition.



PICTURE MODE buttons
DYNAMIC
STANDARD
CINEMA
USER 1, 2 and 3

Press one of the PICTURE MODE buttons (DYNAMIC, STANDARD, CINEMA and USER 1, 2 and 3).

DYNAMIC

Select for enhanced picture contrast and sharpness.

STANDARD

Recommended for normal viewing condition in your home.

Also select to reduce roughness when viewing the picture with DYNAMIC.

CINEMA

Select for soft, film-like picture.

USER 1, 2 and 3

You can adjust the quality of the picture to suit your taste and store the settings into the selected memory of the projector. Press one of the USER 1, 2 and 3 buttons, then adjust the picture by using the menus. The settings are stored, and you can view the picture with the adjusted picture quality by pressing the button. (☞ page 29)

Using the Menu

This section describes how to make various adjustments and settings using the menus.

Operation through the Menu

The projector is equipped with an on-screen menu for making various adjustments and settings. The setting items are displayed in a pop-up menu or in a sub menu. If you select an item name followed by dots (...), a sub menu with setting items appear. You can change the tone of the menu display and the menu language displayed in the on-screen menu.

To change the menu language, see “Selecting the Menu Language” on page 20.

Display items

Input signal indicator



Input signal setting indicator

Picture adjustment menu



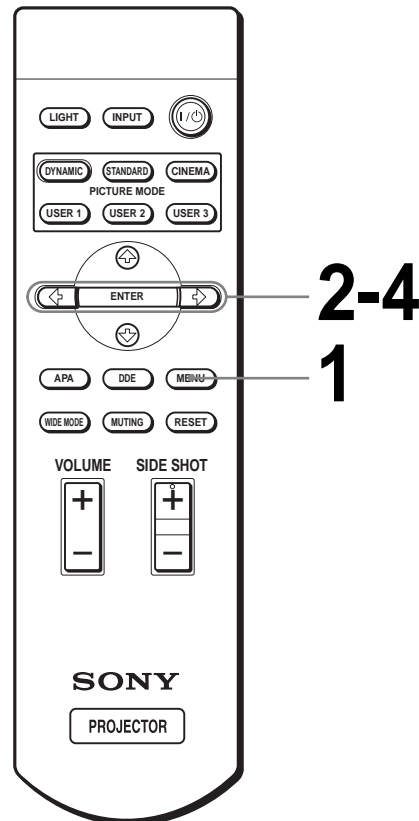
Input signal indicator

Shows the selected input channel. ×(→) is displayed when no signal is input. You can hide this indicator using “Status” in the MENU SETTING menu.

Input signal setting indicator

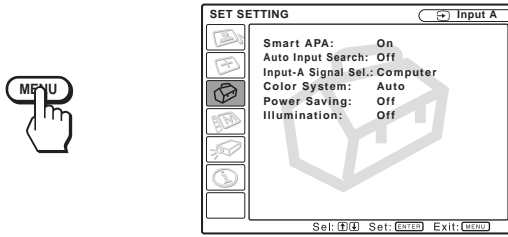
For Input-A: Shows “Computer,” “Component” or “Video GBR.”

For Video/S Video input: Shows “Auto” or the “Color System” setting in the SET SETTING menu.



1 Press MENU.

The menu appears.
The menu presently selected is shown as a yellow button.

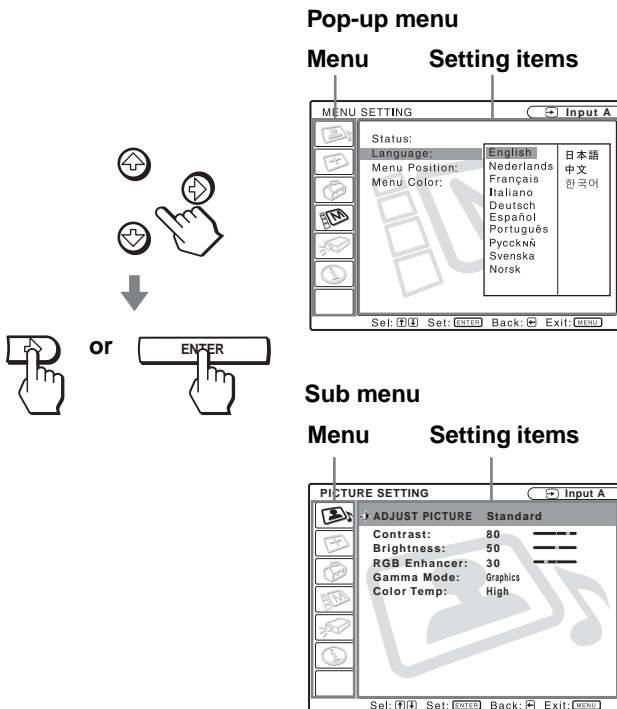


2 Press ↑ or ↓ to select a menu, and press → or ENTER.

The selected menu appears.

3 Press ↑ or ↓ to select an item you want to adjust and press → or ENTER.

The setting items are displayed in a pop-up menu or in a sub menu.



4 Make the setting or adjustment on an item.

When changing the adjustment level

To increase the value, press ↑ or →.

To decrease the value, press ↓ or ←.

Press ENTER to restore the original screen.

When changing the setting

Press ↑ or ↓ to change the setting.

Press ENTER to restore the original screen.

You can restore the original screen using ← depending on the selected item.

To clear the menu

Press MENU.

To reset items that have been adjusted

Select the item you want to reset, then press RESET. “Complete!” appears on the screen and the setting is reset to its factory preset value.

Items that can be reset are:

- “Contrast,” “Brightness,” “Color,” “Hue,” “Sharpness” and “RGB Enhancer” in “Adjust Picture...” of the PICTURE SETTING menu
- “Dot Phase,” “H Size” and “Shift” in “Adjust Signal...” of the INPUT SETTING menu
- “V Keystone” (when set to “Manual”) and “Side Shot” of the INASTALL SETTING menu

Menu Lists

Menu Configurations

The projector is equipped with six pages. The items that can be adjusted in each menu are described on page 29 to 32.

PICTURE SETTING menu

The PICTURE SETTING menu is used for adjusting the picture. You can also adjust the volume.

INPUT SETTING menu

The INPUT SETTING menu is used to adjust the input signal. You can adjust the size of the picture, and select wide screen mode, etc.

SET SETTING menu

The SET SETTING menu is used for changing the settings of the projector.

MENU SETTING menu

The MENU SETTING menu is used to change the on-screen language, display position of the menu screen, etc.

INSTALL SETTING menu

The INSTALL SETTING menu is used for correcting distortion of the picture.

INFORMATION menu

The INFORMATION menu is used to display the horizontal and vertical frequencies of the input signal and the used time of the lamp.

Menu Items

Adjustable items are limited according to the input signals. Items that cannot be adjusted are not displayed in the menu. (☞ page 43)

PICTURE SETTING

Item	Description
Picture Mode	<p>You can select picture viewing mode that best suits the type of picture or the environment.</p> <p>Dynamic: Select for enhanced picture contrast and sharpness.</p> <p>Standard: Recommended for normal viewing condition. Also select to reduce roughness when viewing the picture with Dynamic.</p> <p>Cinema: Select for soft, film-like picture.</p> <p>User 1, 2 and 3: You can adjust the quality of the picture to suit your taste and store the settings. Once the settings are stored, you can view the picture with the adjusted picture quality by pressing the PICTURE MODE.</p> <p>To store the settings</p> <ol style="list-style-type: none"> 1 Select “User 1”, “User 2” or “User 3”. 2 Adjust the items you want in the menus. <p>Items that can be stored are: “Adjust Picture...” items other than “Volume,” and “Wide Mode” setting</p> <p>Tip You can also adjust the picture quality in “Dynamic”, “Standard” or “Cinema” mode. To reset to the factory setting, press RESET.</p>
Volume	Adjusts the volume.
Adjust Picture...	
Contrast	The higher the setting, the greater the contrast. The lower the setting, the lower the contrast.
Brightness	The higher the setting, the brighter the picture. The lower the setting, the darker the picture.
Color	The higher the setting, the greater the intensity. The lower the setting, the lower the intensity.
Hue	The higher the setting, the more greenish the picture becomes. The lower the setting, the more purplish the picture becomes.
Sharpness	The higher the setting, the sharper the picture. The lower the setting, the softer the picture.
RGB Enhancer	Adjusts the picture sharpness when computer signals are input.

Item	Description
Black Level Adj (Adjust)	Emphasizes black color to produce a bolder “dynamic” picture. Set according to the input signal source. High: Gives higher emphasis to the black color. Low: Gives lower emphasis to the black color. Off: Cancels this feature.
Gamma Mode	Graphics: Reproduces the photos in natural tones. Text: Contrasts black and white. Suitable for images that contain lots of text.
Color Temp.	High: Gives the white colors a blue tint. Middle: Gives the white colors a neutral tint. Low: Gives the white colors a red tint.
DDE (Dynamic Detail Enhancer)	Off: Plays a video signal in an interlace format without converting. Progressive: Converts an interlace format video signal to a progressive format. Film: Normally, select this option. Reproduces the 2-3 Pull-Down film sources with smooth picture movement. When the video signal with a format other than the 2-3 Pull-Down is input, “Progressive” is automatically selected.
Cinema Black Pro	Iris Control Switches the iris function during projection. Off: Normal contrast. On: Enhances the black by emphasizing the contrast.
	Lamp Control Switches the lamp wattage during projection. High: Normal wattage. Low: Enhances the black by reducing the lamp wattage. Tip If “Lamp Control” is set to “Low,” the next time the power is turned on, the lamp will use the “High” setting initially, and then go to “Low.”

INPUT SETTING

Item	Description
Adjust Signal...	
Dot Phase	Adjusts the picture from a computer for clearer picture after it is adjusted by pressing the APA button.
H Size	Adjusts the horizontal size of the picture from a computer. The higher the setting, the wider the picture. The lower the setting, the narrower the picture.

Item	Description
Shift	As the setting for H (horizontal) increases, the picture moves to the right, and as the setting decreases, the picture moves to the left. Use ← or → to adjust the horizontal position. As the setting for V (vertical) increases, the picture moves up, and as the setting decreases, the picture moves down. Use ↑ or ↓ to adjust the vertical position.
Wide Mode	You can select the 4:3 aspect ratio picture mode, “Normal” and “Normal Through,” and 16:9 aspect ratio picture mode, “Full,” “Wide Zoom,” “Zoom,” “Subtitle” and “Full Through.” Full: The 16:9 squeezed* picture is displayed with the correct aspect. The 4:3 picture is enlarged horizontally to fit the 16:9 screen. * squeezed: An original 16:9 aspect ratio picture is recorded horizontally compressed to be a 4:3 picture. Normal: The picture with normal 4:3 aspect ratio is displayed to fill the vertical screen size. Wide Zoom: The picture with 4:3 aspect ratio is enlarged and the upper and lower portions of the picture are compressed to fit the 16:9 screen. Use this mode to view news, variety shows, etc. Zoom: The normal 4:3 aspect ratio picture is enlarged vertically and horizontally at the equal ratio to fill the 16:9 screen. The mode is ideal for viewing a wide-format movie. Subtitle: The subtitle area is compressed and displayed at the lower part of the screen. Use this mode to view a movie with the subtitle. Full Through: One-to-one mapping is done on a squeezed 16:9 picture. It is displayed in the center of the screen. Normal Through: One-to-one mapping is done on the picture with 4:3 aspect ratio. It is displayed in the center of the screen. Note If “Full Through” or “Normal Through” is selected when a video (50 Hz) or progressive video (50p) signal is input, the picture may not be completely displayed on the screen due to the number of dots of the LCD panel. For details, see “Selecting the Wide Screen Mode” on page 24.

Item	Description
V Position	Adjusts the vertical position of the picture in wide screen mode. As the setting increases, the picture moves up. As the setting decreases, the picture moves down. Note This item is adjustable only when “Zoom” or “Subtitle” is selected, or when “Full Through” or “Normal Through” is selected for video (50Hz) or progressive component (50p) input signal.
Title Area	Adjusts the subtitle area. As the setting increases, the subtitle area moves up. As the setting decreases, the subtitle area moves down. Note This item is adjustable only when “Subtitle” is selected.

Note

For input signals from the HDMI connector, “Dot Phase,” “H size” and “Shift” are not adjustable.

 **SET SETTING**





Item	Description
Smart APA	With this item set to On , the APA function works automatically for a signal input from a computer so that the picture can be seen clearly. You can also activate the APA function by pressing the APA button on the remote control. Tip The APA (Auto Pixel Alignment) automatically adjusts the input signal from a computer so that the picture can be seen clearly.
Auto Input Search	Set to On when an optional Interface Unit such as the IFU-HS1 is connected to the PJ MULTI connector on the projector.
Input-A Signal Sel.	Selects the signal input from the equipment by selecting “Input-A” with the INPUT button. Computer: Inputs the signal from a computer. Component: Inputs the component or progressive component signal from a DVD player, digital tuner, etc. Video GBR: Inputs the signal from a digital tuner.
Color System	Select the color system of the input signal. Auto: Selects the color system of the input signal automatically from among NTSC, PAL, SECAM, NTSC4.43, PAL-M or PAL-N. “NTSC3. 58”–“PAL-N”: Sets the color system to the selected system manually.

Item	Description
Power Saving	When set to On , the POWER SAVING indicator lights. The projector goes into power saving mode if no signal is input for 10 minutes, and the lamp goes out and the cooling fan keeps running. In power saving mode, no button functions for the first 60 seconds. It is cancelled when a signal is input or any button is pressed. If you do not set the projector to power saving mode, select Off .
Illumination	Turns on the illumination on the top panel of the projector when set to On . It turns off when set to Off .

 **MENU SETTING**

Item	Description
Status	Set to Off to turn off the on-screen displays except for the menus, message when turning off the power, and warning messages.
Language	Selects the language used in the menu and on-screen displays. Available languages are: English, Dutch, French, Italian, German, Spanish, Portuguese, Russian, Swedish, Norwegian, Japanese, Chinese, and Korean.
Menu Position	Selects the display position from Top Left, Bottom Left, Center, Top Right and Bottom Right .
Menu Color	Selects the tone of the menu display from White or Black .

INSTALL SETTING

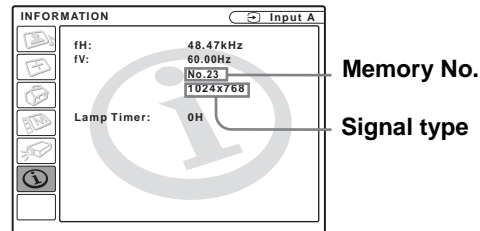
Item	Description
V Keystone	<p>Corrects the vertical trapezoidal distortion of the picture. ( )</p> <p>Auto: Normally set to this position.</p> <p>Manual: Sets a lower value (– direction) when the bottom of the trapezoid is longer than the top. Sets a higher value (+ direction) when the top of the trapezoid is longer than the bottom. If you project the picture using “Side Shot” only, set to “Manual,” and adjust the level to “0.”</p> <p>Note The “V Keystone” adjustment may not correct the trapezoidal distortion perfectly, depending on the room temperature or the screen angle. In this case, adjust the distortion manually.</p>
Side Shot	<p>Corrects the horizontal trapezoidal distortion of the picture. ( )</p> <p>Set the level to “0” when you adjust the picture using “V Keystone” only.</p> <p>Note Even when projecting using “Side Shot,” four sides of a picture may sometimes not be parallel to the sides of a screen frame.</p>
Image Flip	<p>Flips the picture on the screen horizontally and/or vertically.</p> <p>Off: The picture does not flip.</p> <p>HV: Flips the picture horizontally and vertically.</p> <p>H: Flips the picture horizontally.</p> <p>V: Flips the picture vertically.</p>
Background	<p>Selects the background color of the screen when no signal is input. You can select “Black” or “Blue.”</p>
Test Pattern	<p>When set to On, a test pattern is displayed on the screen when adjusting using “Side Shot” or “V Keystone.” If you do not want to display a test pattern, set to Off.</p>
High Altitude Mode	<p>Off: Use this setting when using the projector at normal altitudes.</p> <p>On: Use this setting when using the projector at an altitude of 1,500 m or higher.</p> <p>Note When using the projector at high altitudes with Off setting, the following message may appear. “Probably use in high altitude. Switch to high altitude mode on? Yes↑ No↓ If you select “Yes,” “High Altitude Mode” turns automatically to On.</p>

INFORMATION

Item	Description
fH	Displays the horizontal frequency of the input signal.
fV	Displays the vertical frequency of the input signal.
Lamp Timer	Indicates how long the lamp has been turned on.

About the Preset Memory No.

This projector has 34 types of preset data for input signals (the preset memory). When the preset signal is input, the projector automatically detects the signal type and recalls the data for the signal from the preset memory to adjust it to an optimum picture. The memory number and signal type of that signal are displayed in the INFORMATION menu.



You can also adjust the preset data through the INPUT SETTING menu.

This projector also has 20 types of user memories for Input-A into which you can save the setting of the adjusted data for an unpreset input signal.

When an unpreset signal is input for the first time, a memory number is displayed as 0. When you adjust the data of the signal in the INPUT SETTING menu, it will be registered to the projector. If more than 20 user memories are registered, the newest memory always overwrites the oldest one.

See the chart on page 44 to find if the signal is registered to the preset memory.

Since the data is recalled from the preset memory about the following signals, you can use these preset data by adjusting “H size.” Make fine adjustment by adjusting “Shift.”

Signal	Memory No.	H size
Super Mac-2	23	1312
SIG-1	23	1320
Macintosh 19”	25	1328

Note

When the aspect ratio of input signal does not match the screen size, a part of the screen is displayed in black.

Adjusting Picture Quality of a Signal from the Computer

You can automatically adjust to obtain the clearest picture when projecting a signal from the computer.

1 Project a still picture from the computer.

2 Press the APA (Auto Pixel Alignment) button.

When the picture is adjusted properly, “complete!” appears on the screen.

Notes







- When “Smart APA” is set to “On,” the APA function is automatically activated.
- Press the APA button when the image appears on the whole display area of the computer. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.
- If you switch the input signal or re-connect a computer, press the APA button again to get the suitable picture.
- To restore the original screen, press the APA button again during the adjustment.
- The picture may not be adjusted properly depending on the types of input signals.
- Adjust the items in the INPUT SETTING menu when you adjust the picture manually. (🔍 page 30)



Others

This section describes how to solve the problems, how to replace a lamp and air filter, etc.

Troubleshooting

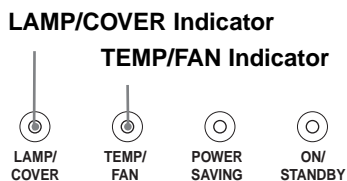
Power	
The power is not turned on.	<ul style="list-style-type: none"> → Wait for about one minute before turning on the power. (☞ page 24) → Close the lamp cover securely. (☞ page 36) → Close the air filter cover securely. (☞ page 38)

Picture	
No picture.	<ul style="list-style-type: none"> → Check that the proper connections have been made. (☞ page 9) → Select the input source correctly using the INPUT button. (☞ page 23) → Set the computer signal to output from an external monitor. → Set the computer signal to output only to an external monitor. → Select “Computer”, “Component” or “Video GBR” for “Input-A Signal Sel” in the SET SETTING  menu according to the input signal. (☞ page 31)
The picture from the PJ MULTI connector is colored strange.	<ul style="list-style-type: none"> → Select “Computer”, “Component” or “Video GBR” for “Input-A Signal Sel” in the SET SETTING  menu according to the input signal. (☞ page 31)
Color balance is incorrect.	<ul style="list-style-type: none"> → Adjust the picture in the “Adjust Picture ...” of the PICTURE SETTING  menu (☞ page 29). → Set “Color System” in the SET SETTING  menu to match the color system being input. (☞ page 31)
The picture is too dark.	<ul style="list-style-type: none"> → Adjust the contrast or brightness in the “Adjust Picture ...” of the PICTURE SETTING  menu properly. (☞ page 29)
The picture is not clear.	<ul style="list-style-type: none"> → Adjust the focus with the FOCUS ring. (☞ page 23) → Condensation has occurred on the lens. Leave the projector for about two hours with the power on.
The picture flickers.	<ul style="list-style-type: none"> → Adjust “Dot Phase” for “Adjust Signal...” in the INPUT SETTING  menu properly. (☞ page 30)

Sound	
No sound.	<ul style="list-style-type: none"> → Check that connecting cables are properly connected. (☞ page 9) → Adjust “Volume” in the PICTURE SETTING  menu (☞ page 29), or press VOLUME + on the remote control. → Press MUTING on the remote control.
On-screen display	
On-screen display does not appear.	<ul style="list-style-type: none"> → Set “Status” in the MENU SETTING  menu to “On.” (☞ page 31)
Remote control	
The remote control does not work.	<ul style="list-style-type: none"> → Batteries could be weak. Replace with new batteries. (☞ page 5) → Insert the batteries with correct polarities. (☞ page 5)

Indicators

The LAMP/COVER or TEMP/FAN indicator on the control panel lights up or flashes if there is any trouble with your projector.





LAMP/COVER flashes.	<ul style="list-style-type: none"> → Attach the lamp cover or the air filter cover securely. (☞ pages 36 and 38)
LAMP/COVER lights up.	<ul style="list-style-type: none"> → The lamp has reached the end of its life. Replace the lamp. (☞ page 36) → The lamp becomes a high temperature. Wait for one minute to cool down the lamp and turn on the power again. (☞ page 24)
TEMP/FAN flashes.	<ul style="list-style-type: none"> → The fan is broken. Consult with qualified Sony personnel.
TEMP/FAN lights up.	<ul style="list-style-type: none"> → The internal temperature is unusually high. Check to see if nothing is blocking the ventilation holes. → Check to see whether or not the projector is being used at high altitudes.

LAMP/COVER and TEMP/FAN light up.	<ul style="list-style-type: none"> → The electrical system breaks down. Consult with qualified Sony personnel.
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
Warning Messages

Use the list below to check the meaning of the messages displayed on the screen.

High temp.! Lamp off in 1 min.	<ul style="list-style-type: none"> → Turn off the power. → Check to see if nothing is blocking the ventilation holes.
Frequency is out of range!	<ul style="list-style-type: none"> → Input a signal that is within the acceptable range of the frequency. → Set the output signal on an external monitor of the connected computer to SVGA. → Set “Input-A Signal Sel.” in the SET SETTING  menu to “Computer.”
Please check Input-A Signal Sel.	<ul style="list-style-type: none"> → Set “Input-A Signal Sel.” in the SET SETTING  menu to “Computer” when RGB signal is input from the computer. (☞ page 31)
Please replace the LAMP.	<ul style="list-style-type: none"> → It is time to replace the lamp. Replace the lamp. (☞ page 36)
Please replace the filter.	<ul style="list-style-type: none"> → It is time to replace the air filter. Replace the air filter. (☞ page 38)
Iris unit doesn't work.	<ul style="list-style-type: none"> → The iris is damaged. → Consult with qualified Sony personnel.

Caution Messages

Use the list below to check the meaning of the messages displayed on the screen.

	<ul style="list-style-type: none"> → No signal is input in the selected input. Check connections.
Not applicable!	<ul style="list-style-type: none"> → Press the appropriate button.


Replacing the Lamp

The lamp used for the light source has a certain life. When the lamp dims, the color balance of the picture becomes strange, or “Please replace the LAMP.” appears on the screen, the lamp is exhausted. Replace the lamp with a new one (not supplied). Use LMP-H150 Projector Lamp as the replacement lamp.

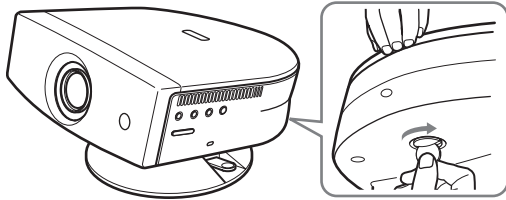
When replacing the lamp after using the projector

Turn off the projector, then unplug the power cord. Wait for at least an hour for the lamp to cool completely.

Caution

The lamp becomes a high temperature after turning off the projector with the  (on/standby) switch. If you touch the lamp, you may scald your finger. When removing the lamp unit, make sure it remains horizontal, then pull straight up. Do not tilt the lamp unit. If you pull out the lamp unit while tilted and if the lamp is broken, the pieces may scatter, causing injury.

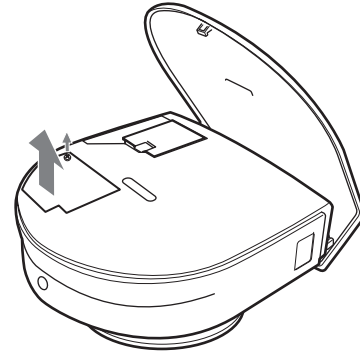
- 1 **Hold down the adjuster lock lever, slide it to the right, raise the rear of the projector, then return the adjuster lock lever. While keeping the screw on the bottom of the projector turned inward with a coin or a slotted screwdriver, open the projector cover with your hand.**



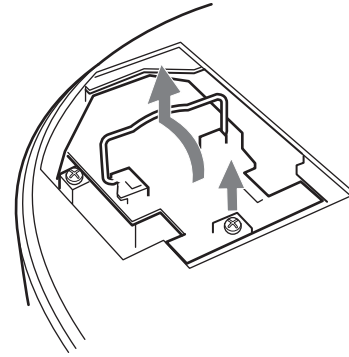
Note

Be sure that the projector is stable.

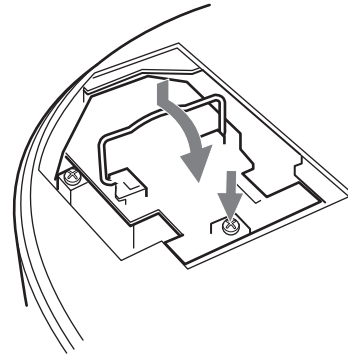
- 2 **Open the lamp cover by loosening the screw with a Philips screwdriver.**



- 3 **Loosen the screw on the lamp unit with a Philips screwdriver. Holding the handle, pull the lamp unit straight up.**

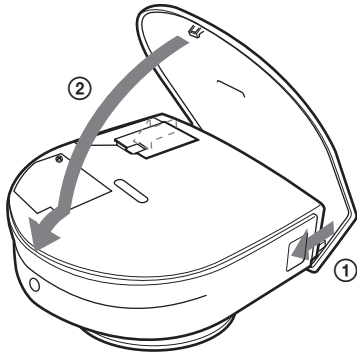


- 4 **Insert the new lamp all the way in until it is securely in place. Tighten the screw, and fold down the handle.**



- 5 **Close the lamp cover and tighten the screw.**

6 While pushing the projector cover toward you by holding both sides of the cover on the lens side, close the cover until it clicks.



7 Connect the power cord and set the projector to standby mode.

8 Press the following buttons on the remote control in the following order for less than five seconds each: RESET, ←, →, ENTER.

Notes

- Do not put your hands into the lamp replacement spot, and do not allow any liquid or object to fall into it to avoid electrical shock or fire.
- Be sure to use the LMP-H150 Projector Lamp for replacement. If you use lamps other than LMP-H150, a malfunction may occur.
- Be sure to turn off the projector and unplug the power cord before replacing the lamp.

Disposal the used lamp

The used lamp contains Mercury, dispose according to local, state or federal laws.

As the materials used in this lamp are similar to those of a fluorescent lamp, you should dispose of a used projector lamp in the same way as a fluorescent lamp.

Replacing the Air Filter

The air filter should be replaced periodically. When “Please replace the filter.” appears on the screen, replace the air filter immediately.

Notes

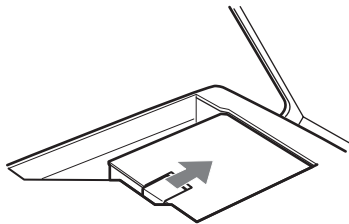
- Replacing the air filter is very important to maintain the high efficiency of the projector and to prevent a malfunction. When the replacement message appears on the screen, replace the air filter without delay.
- When removing the air filter from the projector, be careful that no dust or object gets into the inside of the projector.
- Before replacing the air filter, turn off the projector and unplug the power cord.

- 1 Hold down the adjuster lock lever, slide it to the right, raise the rear of the projector, then return the adjuster lock lever. While keeping the screw on the bottom of the projector turned inward with a coin or a slotted screwdriver, open the projector cover with your hand.**

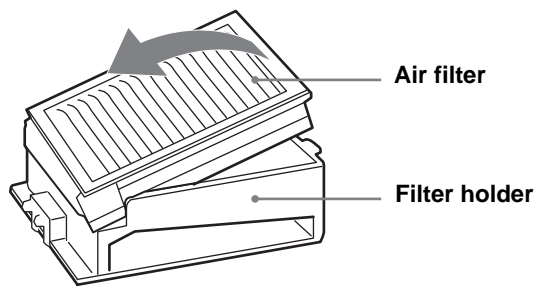
Note

Be sure that the projector is stable.

- 2 Push the filter lock knob to remove the filter cover.**



- 3 Remove the air filter from the filter holder by holding the tab on the air filter.**



- 4 Insert the new air filter into the filter holder with the white surface up, put the holder face down, then replace it into the projector.**
- 5 Replace the filter cover.**
- 6 While pushing the projector cover toward you by holding both sides of the cover on the lens side, close the cover until it clicks.**

Specifications

System

Projection system	3 LCD panels, 1 lens, projection system
LCD panel	0.62-inch TFT LCD panel, 1,245,816 pixels (415,272 pixels × 3)
Lens	1.2 times zoom lens (manual) f15.7–20mm/F.2.0–2.3
Lamp	150 W UHP type
Projection picture size	Range: 40 to 150 inches (measured diagonally)
Color system	NTSC ^{3.58} /PAL/SECAM/NTSC ^{4.43} /PAL-M/PAL-N system, switched automatically/manually
Acceptable video signals	15 kHz RGB/component 50/60 Hz, Progressive component 50/60 Hz, DTV (480/60i, 575/50i, 480/60p, 575/50p, 720/60p, 720/50p, 1080/60i, 1080/50i), 1080/24PsF, Composite video, Y/C video
Acceptable computer signals	fH: 19 to 72 kHz fV: 48 to 92 Hz Maximum resolution XGA 1024 × 768, fV: 85 Hz 1280 × 720, fV: 60 Hz
Speaker	Monaural speaker system, 33 mm (1 ⁵ / ₁₆ inches) diameter, max. 2 W × 1
Input	
Video input	VIDEO: phono type Composite video: 1 V _{p-p} ±2 dB sync negative (75 ohms terminated) S VIDEO: Y/C, mini DIN 4-pin type (male) Y (luminance): 1 V _{p-p} ±2 dB sync negative (75 ohms terminated) C (chrominance): burst 0.286 V _{p-p} ±2 dB (NTSC) (75 ohms terminated) burst 0.3 V _{p-p} ±2 dB (PAL) (75 ohms terminated)
Audio input	AUDIO: stereo phono type 500 mV _{rms} , impedance more than 47 kilohms
HDMI	Video: Digital RGB/YC _B (P _B) C _R (P _R) Audio: Digital
PJ MULTI INPUT	32-pin multi connector

Composite video: 1 V _{p-p} ±2 dB sync negative (75 ohms terminated)
S video: Y/C Y (luminance): 1 V _{p-p} ±2 dB sync negative (75 ohms terminated) C (chrominance): burst 0.286 V _{p-p} ±2 dB (NTSC) (75 ohms terminated) burst 0.3 V _{p-p} ±2 dB (PAL) (75 ohms terminated)
Analog RGB/component: R/CR (P _R): 0.7 V _{p-p} ±2 dB (75 ohms terminated) G: 0.7 V _{p-p} ±2 dB (75 ohms terminated) G with sync/Y: 1 V _{p-p} ±2 dB sync negative (75 ohms terminated) B/CB (P _B): 0.7 V _{p-p} ±2 dB (75 ohms terminated) SYNC/HD: Composite sync input: 1–5 V _{p-p} high impedance, positive/negative Horizontal sync input: 1–5 V _{p-p} high impedance, positive/negative VD: Vertical sync input: 1–5 V _{p-p} high impedance, positive/negative

General

Dimensions	304 × 168 × 321 mm (12 × 6 ⁵ / ₈ × 12 ³ / ₄ inches) (w/h/d)
Mass	Approx. 4.5 kg (9 lb 15 oz)
Power requirements	AC 100 to 240 V, 2.1–1.1 A, 50/60 Hz
Power consumption	Max. 200 W (Standby mode: 3 W)
Operating temperature	0°C to 35°C (32°F to 95°F)
Operating humidity	35% to 85% (no condensation)
Storage temperature	–20°C to 60°C (–4°F to 140°F)
Storage humidity	10% to 90%
Supplied accessories	Remote control RM-PJHS2 (1) Size AA (R6) batteries (2) Signal interface cable SIC-HS40 (5 m) (1) Adjuster spacers (2) AC power cord (1) Air filter (for replacement) (1) Operating Instructions (1)

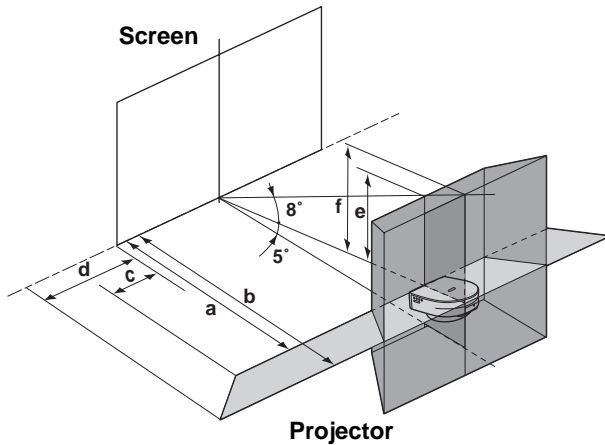
Design and specifications are subject to change without notice.

Optional accessories

Signal interface unit IFU-HS1
 Projector Lamp LMP-H150 (for replacement)
 Air filter PK-HS1FL (for replacement)
 Signal interface cables SIC-HS10/SIC-HS20/SIC-HS30
 Projector Stand SU-HS2

Safety regulations
 UL60950, CSA No. 950, FCC class B, IC class B,
 EN60950 (NEMCO), CE, C-Tick, CCC

Projection Distances for a 1080i/720p format signal and computer's signal



When projecting using "Side Shot" adjustment only

For a 1080i format signal

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1 (3.3)	1.6 (5.2)	2.1 (6.9)	2.7 (8.9)	3.2 (10.5)	4 (13.1)
b	1.2 (3.9)	1.8 (5.9)	2.4 (7.9)	3 (9.8)	3.6 (11.8)	4.5 (14.8)
c	-0.1 (-0.3)	-0.2 (-0.7)	-0.3 (-1)	-0.3 (-1)	-0.4 (-1.3)	-0.5 (-1.6)
d	-0.1 (-0.3)	0.1 (0.3)	0 (0)	0 (0)	0 (0)	0 (0)

For a 720p format signal and computer's signal

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1 (3.3)	1.6 (5.2)	2.1 (6.9)	2.6 (8.5)	3.2 (10.5)	4 (13.1)

Screen size (inches)	40	60	80	100	120	150
b	1.2 (3.9)	1.8 (5.9)	2.4 (7.9)	3 (9.8)	3.6 (11.8)	4.5 (14.8)
c	-0.2 (-0.7)	-0.3 (-1)	-0.5 (-1.6)	-0.6 (-2)	-0.8 (-2.6)	-1 (-3.3)
d	-0.2 (-0.7)	-0.3 (-1)	-0.3 (-1)	-0.3 (-1)	-0.4 (-1.3)	-0.4 (-1.3)

When projecting using both "Side Shot" and "V Keystone" adjustments

For a 1080i format signal

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1.2 (3.9)	1.7 (5.6)	2.2 (7.2)	2.8 (9.2)	3.4 (11.2)	4.2 (13.8)
b	1.3 (4.3)	1.9 (6.2)	2.5 (8.2)	3.1 (10.2)	3.7 (12.1)	4.6 (15.1)
c	-0.2 (-0.7)	-0.3 (-1)	-0.4 (-1.3)	-0.5 (-1.6)	-0.6 (-2)	-0.7 (-2.3)
d	-0.1 (-0.3)	-0.1 (-0.3)	-0.1 (-0.3)	-0.1 (-0.3)	-0.1 (-0.3)	-0.2 (-0.7)
e	0.1 (0.3)	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)
f	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)	0.7 (2.3)

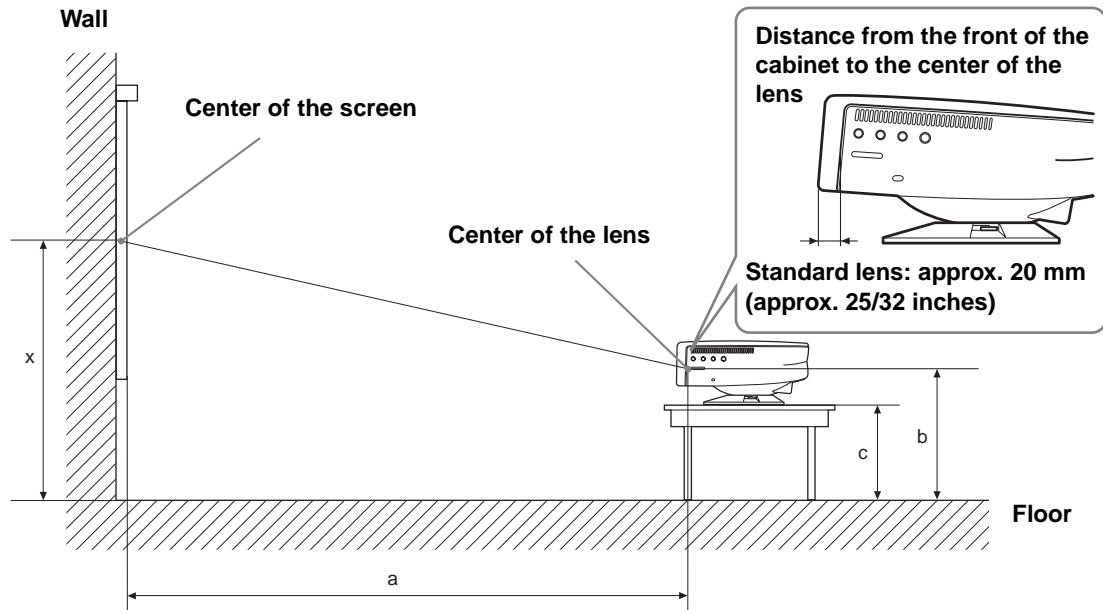
For a 720p format signal and computer's signal

Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
a	1.1 (3.6)	1.7 (5.6)	2.2 (7.2)	2.8 (9.2)	3.3 (10.8)	4.2 (13.8)
b	1.3 (4.3)	1.9 (6.2)	2.5 (8.2)	3.1 (10.2)	3.7 (12.1)	4.6 (15.1)
c	-0.3 (-1)	-0.4 (-1.3)	-0.6 (-2)	-0.7 (-2.3)	-0.8 (-2.6)	-1.1 (-3.6)
d	-0.2 (-0.7)	-0.3 (-1)	-0.4 (1.3)	-0.5 (-1.6)	-0.5 (-1.6)	-0.6 (-2)
e	0.1 (0.3)	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)
f	0.2 (0.7)	0.3 (1)	0.4 (1.3)	0.5 (1.6)	0.6 (2)	0.7 (2.3)

Floor installation example

- a: Distance between the screen and the center of the lens
- b: Distance from the floor to the center of the lens
- c: Distance from the floor to the bottom of the projector
- x: Free



For 16:9 aspect ratio screens

Unit: mm (inches)

SS (inches)		40	60	80	100	120	150
a	Minimum	970 (38 1/4)	1480 (58 3/8)	1990 (78 3/8)	2500 (98 1/2)	3010 (118 17/32)	3780 (148 7/8)
	Maximum	1180 (46 1/2)	1790 (70 1/2)	2400 (94 1/2)	3010 (118 17/32)	3620 (142 5/8)	4535 (178 5/8)
b		x-194 (x-7 5/8)	x-290 (x-11 1/2)	x-387 (x-15 1/4)	x-484 (x-19 1/8)	x-581 (x-22 7/8)	x-726 (x-28 5/8)
c		x-291 (x-11 1/2)	x-387 (x-15 1/4)	x-484 (x-19 1/8)	x-581 (x-22 7/8)	x-678 (x-26 3/4)	x-823 (x-32 1/2)

To calculate the installation measurements (SS: Screen size)

$$a \text{ (minimum)} = SS \times 25.5 - 50$$

$$a \text{ (maximum)} = SS \times 30.5 - 40$$

$$b = x - (SS \times 4.84)$$

$$c = x - (SS \times 4.84 + 97)$$

For 4:3 aspect ratio screens

Unit: mm (inches)

SS (inches)		40	60	80	100	120	150
a	Minimum	1200 (47 1/4)	1820 (71 3/4)	2450 (96 1/2)	3070 (121)	3690 (145 3/8)	4630 (182 3/8)
	Maximum	1450 (57 1/8)	2200 (86 5/8)	2950 (116 1/4)	3690 (145 3/8)	4440 (174 7/8)	5560 (219)
b		x-237 (x-9 3/8)	x-356 (x-14)	x-474 (x-18 3/4)	x-593 (x-23 3/8)	x-711 (x-28)	x-889 (x-35)
c		x-334 (x-13 1/4)	x-453 (x-17 7/8)	x-571 (x-22 1/2)	x-690 (x-27 1/4)	x-808 (x-31 7/8)	x-986 (x-38 7/8)

To calculate the installation measurements (SS: Screen size)

$$a \text{ (minimum)} = SS \times 31.2 - 50$$

$$a \text{ (maximum)} = SS \times 37.3 - 40$$

$$b = x - (SS \times 5.93)$$

$$c = x - (SS \times 5.93 + 97)$$

Warning on power connection

Use a proper power cord for your local power supply.

	The United States, Canada	Continental Europe	UK	Australia	Japan
Plug type	YP-11	YP-21	SP-61	B8	YP-13
Female end	YC-13L	YC-13L	YC-13L	C7-2	YC-13L
Cord type	SPT-2	H03VVH2-F	H03VVH2-F	H03VVH2-F	VCTFK
Rated Voltage & Current	10A/125V	2.5A/250V	2.5A/250V	2.5A/250V	7A/125V
Safety approval	UL/CSA	VDE	BS	SAA	DENANHO
Cord length (max.)	4.5 m	-	-	-	-

Input signals and adjustable/setting items

Some of the items in the menus cannot be adjusted depending on the input signal. The following tables indicate them.

The items that cannot be adjusted are not displayed in the menu.

Adjust Picture... menu

Item	Input signal			
	Video or S video (Y/C)	Component	Video GBR	Computer
Contrast	●	●	●	●
Brightness	●	●	●	●
Color	● (except for B & W)	●	●	–
Hue	● (NTSC3.58/4.43 only, except for B & W)	●	●	–
Sharpness	●	●	●	–
RGB Enhancer	–	–	–	●
Black Level Adj	●	●	●	–
Gamma Mode	–	–	–	●
Color Temp	●	●	●	●
DDE	●	● (preset memory numbers 1, 2, 3 and 4 only)	● (preset memory numbers 1, 2, 3 and 4 only)	–
Cinema Black Pro	Iris Control	●	●	●
	Lamp Control	●	●	●
Volume	●	●	●	●

● : Adjustable/can be set

– : Not adjustable/cannot be set

INPUT SETTING menu

Item	Input signal			
	Video or S video (Y/C)	Component	Video GBR	Computer
Dot Phase	–	–	–	●
H size	–	● (except for preset memory numbers 1, 2, 3 and 4)	● (except for preset memory numbers 1, 2, 3 and 4)	●
Shift	–	● (except for preset memory numbers 1, 2, 3 and 4)	● (except for preset memory numbers 1, 2, 3 and 4)	●
Wide Mode	●	● (except for preset memory numbers 5, 45, 47, 48, 49 and 50 of DTV)	● (except for preset memory numbers 5, 45, 47, 48, 49 and 50 of HDTV)	–

● : Adjustable/can be set

– : Not adjustable/cannot be set

Preset Signals

Memory No.	Preset signal		fH (kHz)	fV (Hz)	Sync	H size	HDMI input
1	Video/60	Video 60 Hz	15.734	59.940	—	—	×
2	Video/50	Video 50 Hz	15.625	50.000	—	—	×
3	480/60i	480/60i (DTV)	15.734	59.940	SonG/Y or Composite Sync	—	○
4	575/50i	575/50i (DTV)	15.625	50.000	SonG/Y or Composite sync/ Composite video	—	○
5	1080/60i	1080/60i (DTV), 1035/60i, 1080/60i	33.750	60.000	—	—	○
6	640 × 350	VGA mode 1	31.469	70.086	H-pos, V-neg	800	×
7		VGA VESA 85Hz	37.861	85.080	H-pos, V-neg	832	×
8	640 × 400	PC-9801 Normal	24.823	56.416	H-neg, V-neg	848	×
9		VGA mode 2	31.469	70.086	H-neg, V-pos	800	×
10		VGA VESA 85Hz	37.861	85.080	H-neg, V-pos	832	×
11	640 × 480	VGA mode 3	31.469	59.940	H-neg, V-neg	800	○
12		Macintosh 13"	35.000	66.667	H-neg, V-neg	864	×
13		VGA VESA 72Hz	37.861	72.809	H-neg, V-neg	832	×
14		VGA VESA 75Hz	37.500	75.000	H-neg, V-neg	840	×
15		VGA VESA 85Hz	43.269	85.008	H-neg, V-neg	832	×
16	800 × 600	SVGA VESA 56Hz	35.156	56.250	H-pos, V-pos	1024	×
17		SVGA VESA 60Hz	37.879	60.317	H-pos, V-pos	1056	×
18		SVGA VESA 72Hz	48.077	72.188	H-pos, V-pos	1040	×
19		SVGA VESA 75Hz	46.875	75.000	H-pos, V-pos	1056	×
20		SVGA VESA 85Hz	53.674	85.061	H-pos, V-pos	1048	×
21	832 × 624	Macintosh 16"	49.724	74.550	H-neg, V-neg	1152	×
22	1024 × 768	XGA VESA 43Hz	35.524	43.479	H-pos, V-pos	1264	×
23		XGA VESA 60Hz	48.363	60.004	H-neg, V-neg	1344	×
24		XGA VESA 70Hz	56.476	69.955	H-neg, V-neg	1328	×
25		XGA VESA 75Hz	60.023	75.029	H-pos, V-pos	1312	×
26		XGA VESA 85Hz	68.677	84.997	H-pos, V-pos	1376	×
43	480/60p	480/60p (Progressive component)	31.470	60.000	SonG/Y	—	○
44	575/50p	575/50p (Progressive component)	31.250	50.000		—	○
45	1080/50i	1080/50i (DTV)	28.130	50.000		—	○
47	720/60p	720/60p (DTV)	45.000	60.000		—	○
48	720/50p	720/50p (DTV)	37.500	50.000		—	○
49	1080/24PsF	DTV 1080/48i	27.000	48.000		—	×
50	540/60p	540/60p	33.750	60.000		—	×
73	1280 × 720	1280 × 720 60 Hz	44.772	59.855	H-neg, V-pos	1664	×

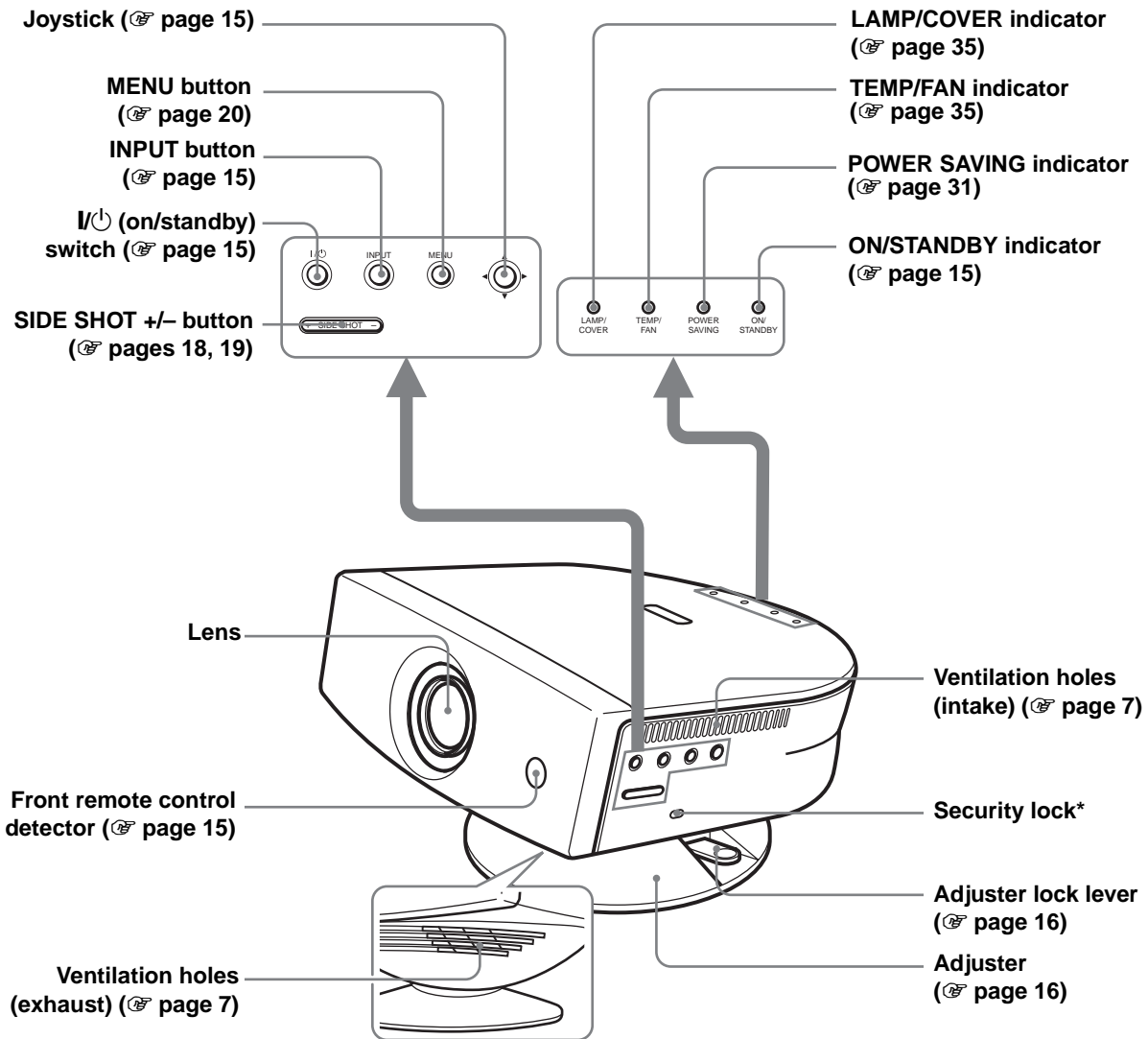
Notes

- When a signal other than the preset signals shown above is input, the picture may not appear properly.
- Memory No. 22 shows the interlace signal.

Location of Controls

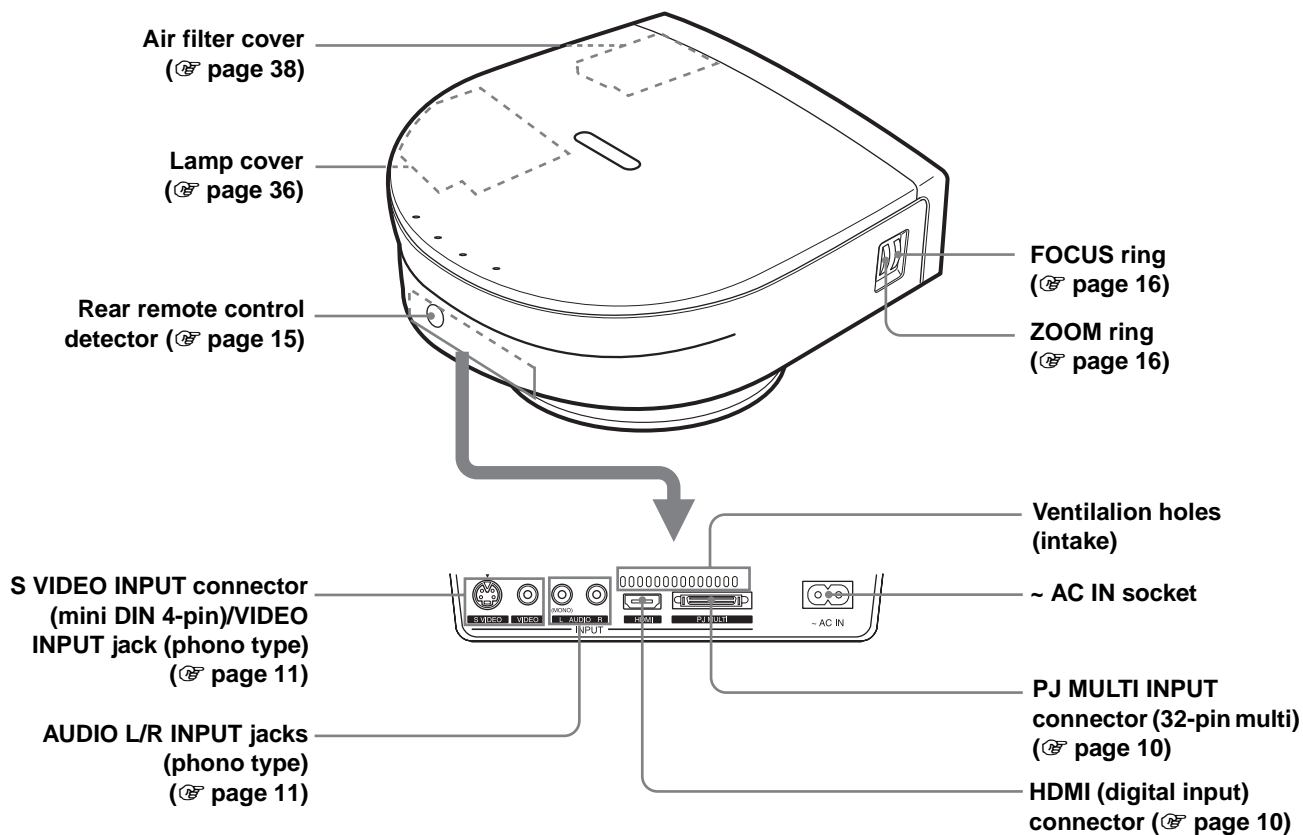
Front

You can use the buttons on the control panel with the same names as those on the remote control to operate the projector.

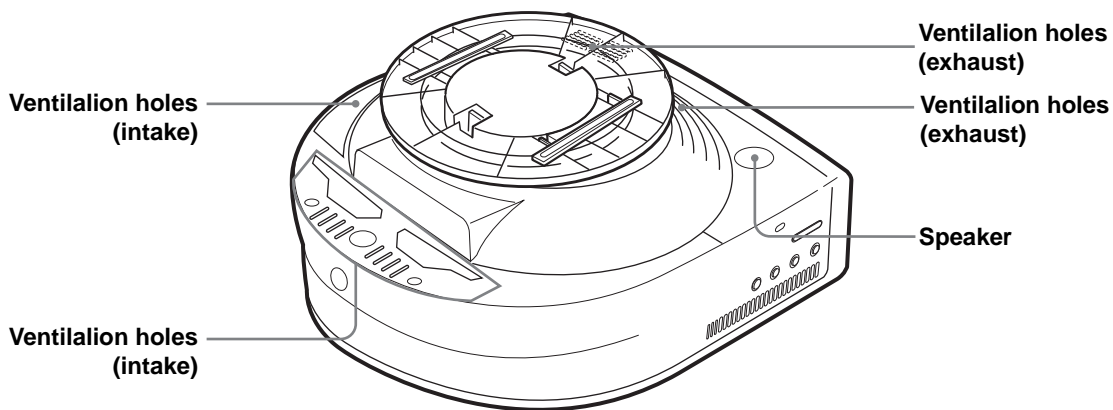


* Connects to an optional security cable (Kensington's).
 Web page address:
<http://www.kensington.com/>

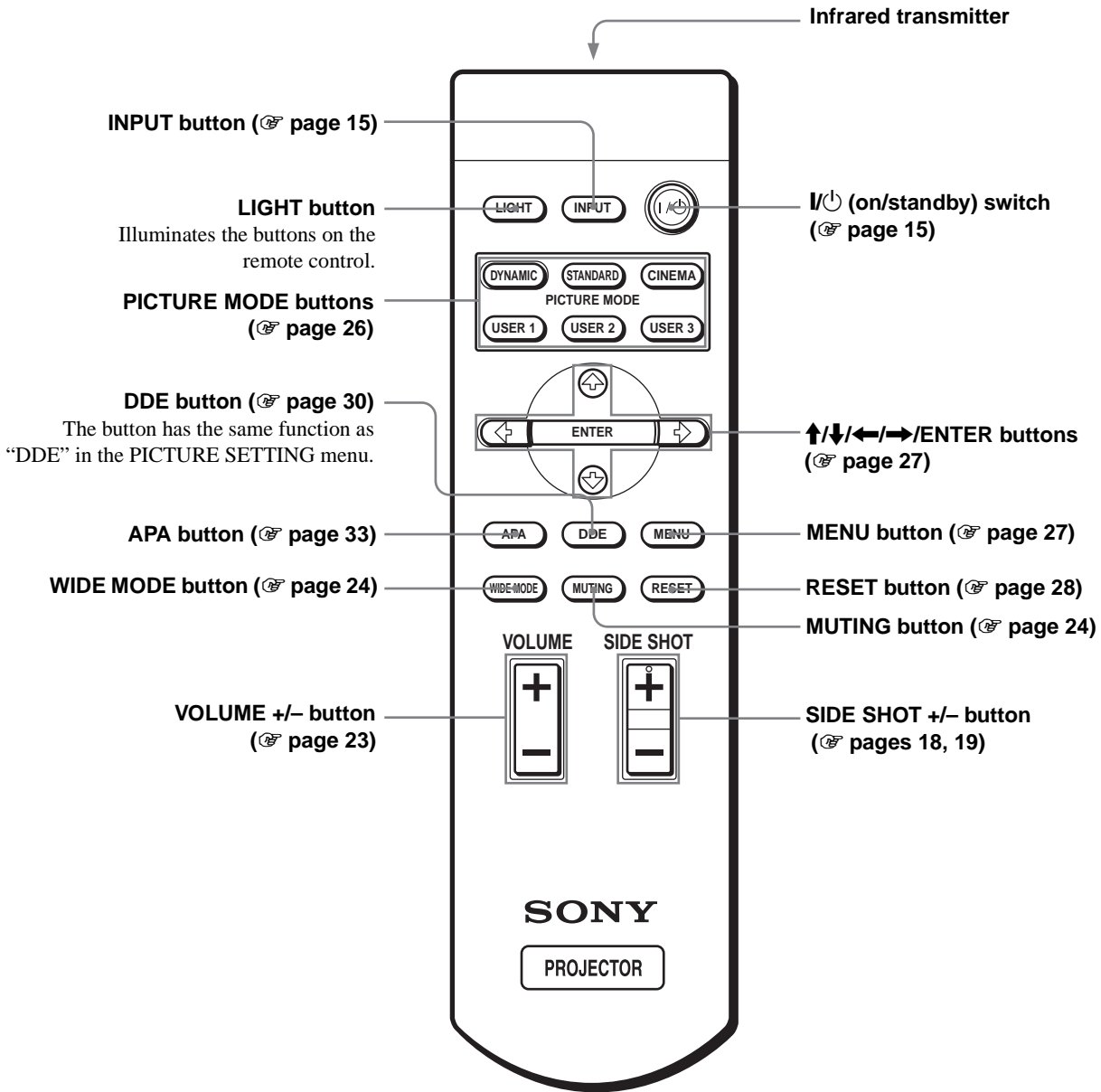
Rear



Bottom



Remote Control



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