SONY

4-191-106-**11** (1)

Data Projector

Operating Instructions

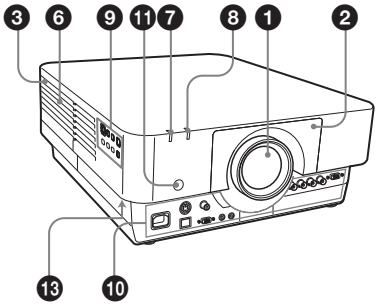
Before operating the unit, please read this manual and supplied Quick Reference Manual thoroughly and retain it for future reference.

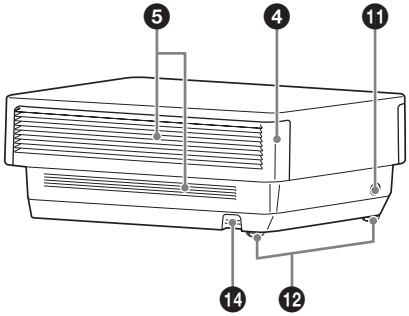
VPL-FX500L

Table of Contents

Location and Function of Controls

Main Unit





❶ **Lens (not supplied) (page 34)**

❷ **Front panel (page 34)**

❸ **Lamp cover (page 30)**

❹ **Air filter cover (page 32)**

❺ **Ventilation holes (intake)**

❻ **Ventilation holes (exhaust)**

Caution

Do not place anything near the ventilation holes as this may cause internal heat buildup. Do not place your hand near the ventilation holes and the circumference as this may cause injury.

❼ **ON/STANDBY indicator (page 26)**

❽ **LAMP/COVER indicator (page 26)**

❾ **Control panel (page 5)**

❿ **Connector panel (page 4)**

⓫ **Remote control detectors**

⓬ **Adjusters (page 12)**

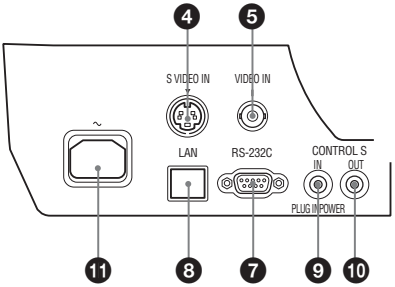
⓭ **Security lock**

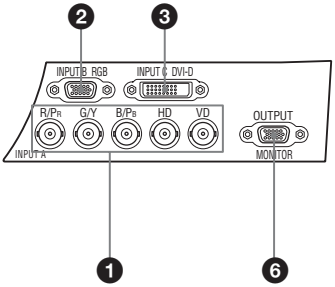
Connects to an optional security cable manufactured by Kensington.
For details, visit Kensington's web site.
http://www.kensington.com/

⓮ **Security bar**

Connects to a commercially available security chain or wire.

Connector Panel





Input (pages 8, 9)

❶ INPUT A
Video: RGB/YPBPR input connector (RGB HD VD/YPBPR)

❷ INPUT B
Video: RGB input connector (RGB)

❸ INPUT C
Video: DVI-D input connector (DVI-D)

❹ S VIDEO (S VIDEO IN)
Video: S video input connector

❺ VIDEO (VIDEO IN)
Video: Video input connector

Output (page 10)

❻ OUTPUT
Video: Monitor output connector (MONITOR)

Note

This connector outputs the image. Output as a computer signal input from the RGB input connector or a video signal input from the YPBPR input connector.

Others

❼ RS-232C connector
RS-232C compatible control connector

❽ LAN connector (page 23)

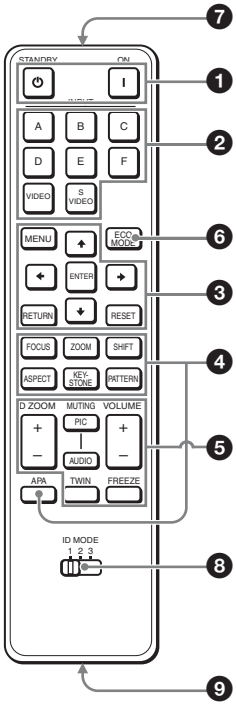
❾ CONTROL S input connector (DC power supply) (CONTROL S IN PLUG IN POWER)
Connects to the CONTROL S output connector on the supplied Remote Commander with a connecting cable (stereo mini plug (not supplied)) when using it as a wired Remote Commander. You do not need to install batteries in the Remote Commander, as the power is supplied from this connector.

❿ CONTROL S output connector (CONTROL S OUT)
For coupling control of multiple projectors with the wired Remote Commander.

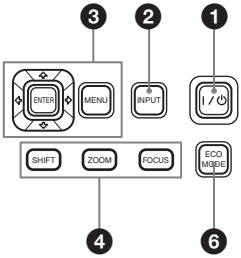
⓫ AC IN (~) socket
Connects the supplied AC power cord.

Remote Commander and Control Panel

Remote Commander



Control Panel



❶ Turning on the power/Going to standby mode

I (On) key
⏻ (Standby) key

❷ Selecting an input signal (page 11)

INPUT key (main unit)
Direct input select keys (Remote Commander)

❸ Operating a menu (page 14)

ENTER /↑/↓/←/→ (arrow) keys
MENU key
RETURN key
RESET key

❹ Adjusting the image (page 12)

FOCUS key
Use this key when attaching the power focus lens.

ZOOM key
Use this key when attaching the power zoom lens.

SHIFT key

ASPECT key (pages 16, 17)
Changes the aspect ratio of the projected image.

KEYSTONE key
Adjusts the vertical trapezoidal distortion of the image manually. When you press this key, the Keystone menu is displayed. Use the arrow keys (↑/↓/←/→) for adjustment.

PATTERN key

APA (Auto Pixel Alignment) key
Automatically adjusts a picture to its clearest while a signal is input from a computer. You can cancel the adjustment by pressing the APA key again while adjusting.

Note

* Use this key when inputing a computer signal via the RGB input connector.

❺ Using various functions during projecting

D ZOOM (Digital Zoom) +/– key*1

Enlarges a portion of the image while projecting.

1 Press the D ZOOM + key to display the digital zoom icon on the projected image.
2 Press the ↑/↓/←/→ keys to move the digital zoom icon to the point on the image you wish to enlarge.
3 Press the D ZOOM + key or the D ZOOM – key repeatedly to change the enlargement ratio. The image can be enlarged up to 4 times.

Press the RESET key to restore the previous image.

MUTING key

PIC: Cuts off the image. Press again to restore the image.

AUDIO: This function is not provided in this projector.

VOLUME +/– key

This function is not provided in this projector.

TWIN (double-window) key

This function is not provided in this projector.

FREEZE key*2

Pauses a projected image. Press again to restore the image.

Notes

*1: Use this key when inputting a computer signal. But it may not be enabled, depending on the resolution of the input signal.

*2: Use this key when inputting a computer signal.

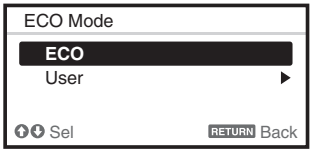
❻ Setting the energy–saving mode easily

ECO MODE key

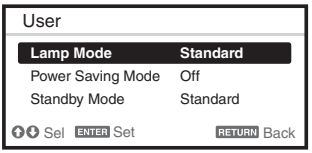
Energy-saving mode can be set easily, using a Remote Commander. Energy-saving mode consists of "Lamp Mode," "Power Saving Mode" and "Standby Mode."

1 Press the ECO MODE key to display the ECO Mode menu.

ECO Mode Menu



2 Press the ↑/↓ key or ECO MODE key to select ECO or User mode.
ECO: Sets each mode to the optimum energy-saving value.
Lamp Mode: Standard
Power Saving Mode: Standby
Standby Mode: Low
(go to step **6**)
User: Sets each item of the energy-saving mode menu as you desire (go to step **3**).
3 Select "User" then press the → key. The setting items appear.



4 Press the ↑/↓ key to select the ECO Mode item then press the → key or the ENTER key.
5 Press the ↑/↓ key to select the setting value.
6 Press the RETURN key to restore the previous image.

For details on ECO Mode settings, see "Lamp Mode" (page 18) on the Function menu and "Standby Mode" (page 20) and "Power Saving Mode" (page 20) on the Connection/Power menu.

Others

❼ Infrared transmitter

❽ ID MODE 1/2/3 switch (page 19)

Sets an ID mode of the Remote Commander. If you assign a different ID number to each projector when multiple projectors are used, you can control only the projector with the same ID mode as that of the Remote Commander.

❾ CONTROL S output connector

Connects to the CONTROL S input connector on the projector with a connecting cable (stereo mini plug (not supplied)) when using the Remote Commander as a wired one.
You do not need to install batteries in the Remote Commander, as the power is supplied from the projector.

About Remote Commander operation

- Make sure that nothing obstructs the infrared beam between the Remote Commander and the remote control detector on the projector. Direct the Remote Commander toward the remote control detector.
- The operation range is limited. The shorter the distance between the Remote Commander and the projector is, the wider the angle within which the Remote Commander can control the projector becomes.

Connecting the Projector

Notes

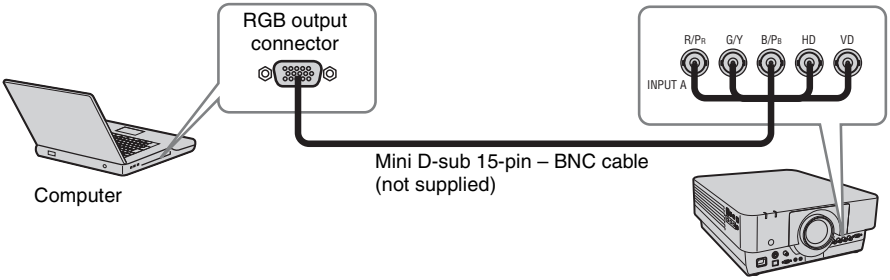
- Use the proper cables for each connection.
- Insert the cable plugs firmly; Loose connections may reduce performance of picture signals or cause a malfunction. When pulling out a cable, be sure to grip it by the plug, not the cable itself.
- For more information, refer also to the instruction manuals of the equipment you are connecting.

Connecting a Computer

Connection with a computer is explained for each input signal.

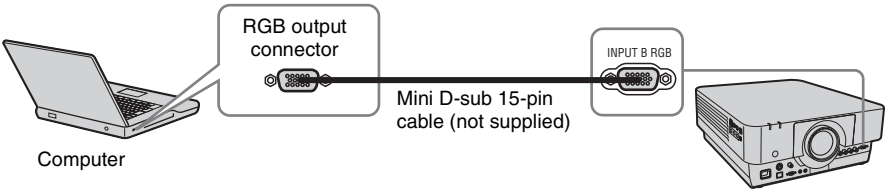
INPUT A

For connection when there is some distance between a computer and the projector.



INPUT B

For connecting a computer with an RGB output connector.

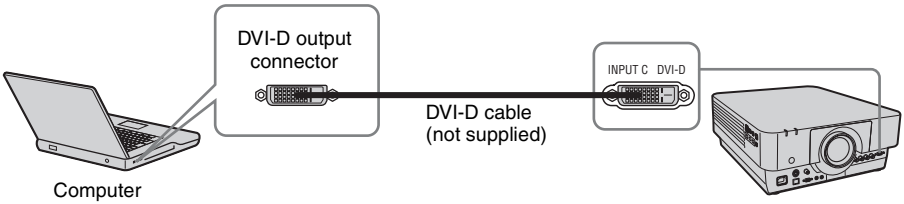


Notes

- It is recommended that you set the resolution of your computer to 1024 × 768 pixels for the external monitor.
- To connect a Macintosh computer equipped with a video output connector of a type having two rows of pins, use a commercially available plug adaptor.

INPUT C

For connecting a computer with a DVI-D output connector.

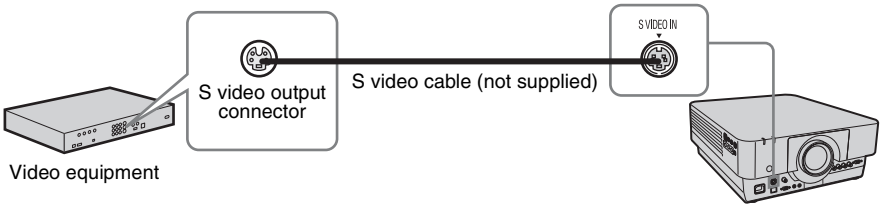


Connecting a Video Equipment

Connections with a VHS video deck, DVD player, or BD player are explained for each input signal.

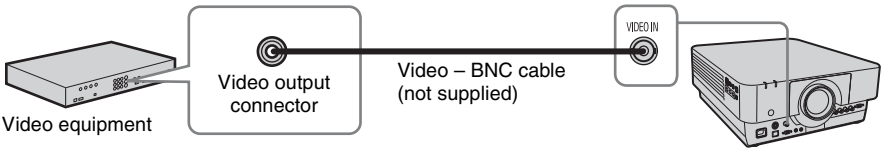
S VIDEO IN

For connecting video equipment with an S-video output connector.



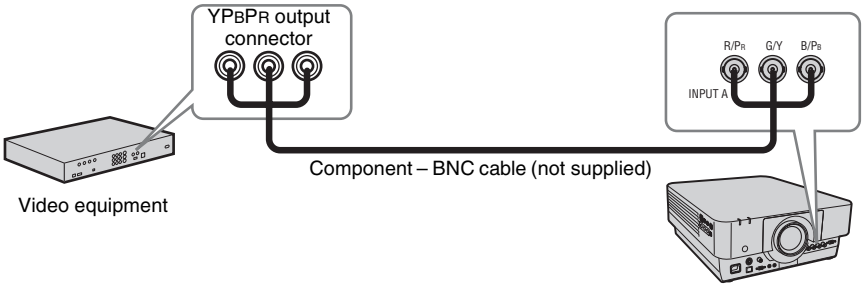
VIDEO IN

For connecting video equipment with a video output connector.



INPUT A

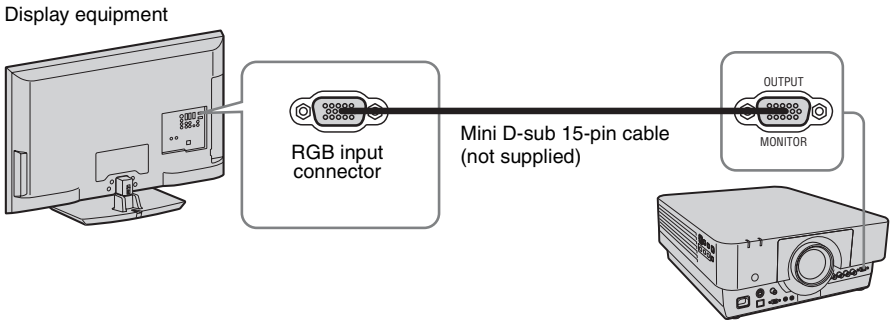
For connection when there is some long distance between the video equipment and projector.



Connecting an External Monitor

OUTPUT

Projected images can be output to display equipment such as a monitor.

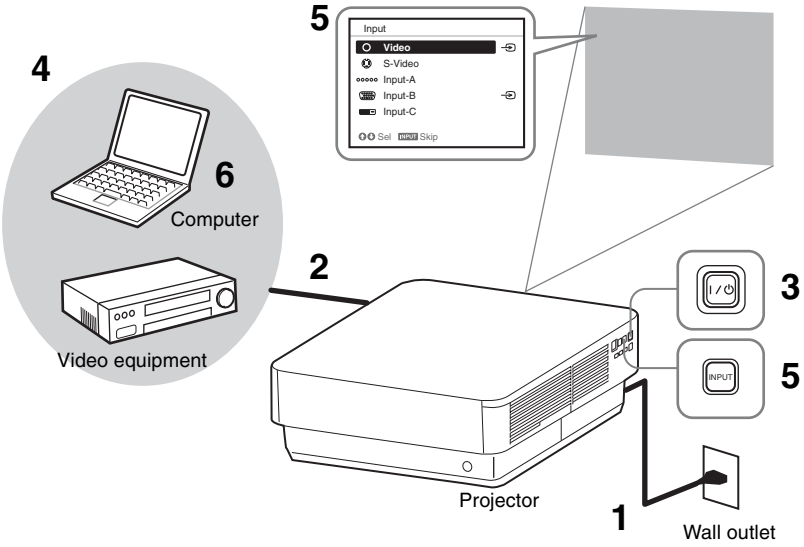


Note

Output only as a computer signal input from the RGB input connector or a video signal input from the YPBPR input connector.

Projecting an Image

The size of a projected image depends on the distance between the projector and screen. Install the projector so that the projected image fits the screen size. For details on projection distances and projected image sizes, see “Projection Distance and Lens Shift Range” (page 45).



1 Connect the AC power cord.

2 Connect all equipment to the projector (page 8).

3 Turn on the projector.
Press the **I**/⏻ key on the projector or the **I** key on the Remote Commander.

4 Turn on the connected equipment.

5 Select the input source.
Press the INPUT key on the projector to display the input select window. Press the INPUT key repeatedly or the ↑/↓ key to select an image to be projected. You can select the input source using Direct input select keys on the Remote Commander (page 5).

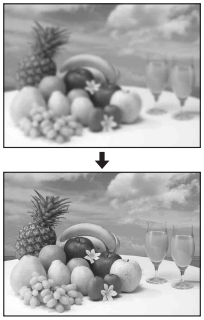
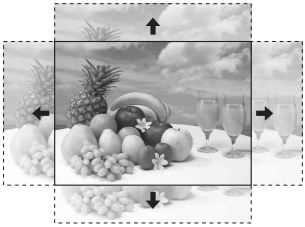
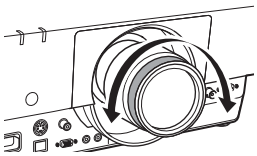
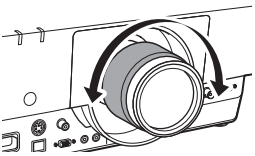
6 Switch your computer to output to external display by changing your computer’s setting.
How to switch the computer to output to the projector varies, depending on the type of computer.

(Example)

Fn + F7

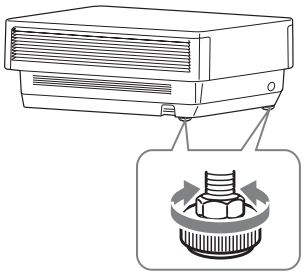
7 Adjust the focus, size, and position of the projected image (page 12).

Adjusting the Focus, Size, and Position of the Projected image

Focus	Size (Zoom)	Position (Lens shift)
		
When attaching the Electric focus lens Press the FOCUS key on the projector or the Remote Commander then press the ←/→key (or ↑/↓ key) to adjust the focus. **When attaching the Manual focus lens** Turn the Focus Ring to adjust the focus.	**When attaching the Electric zoom lens** Press the ZOOM key on the projector or the Remote Commander then press the ←/→key (or ↑/↓ key) to adjust the size. **When attaching the Manual zoom lens** Turn the Zoom Ring to adjust the size.	Press the SHIFT key on the projector or the Remote Commander then press the ↑/↓/←/→ key to adjust the position. **To return the lens to the center position of the projected image** Press the RESET key on the Remote Commander while adjusting.
		

Adjusting the tilt of the projector with the adjusters

When the projector is installed on an uneven surface, you can adjust using the adjusters. To correct any trapezoidal distortion of the projected image, use the Keystone feature (page 5, 21).
And you can also broaden the adjustment range by removing the nuts from the adjuster.



Notes

- Be careful not to let the projector down on your fingers.
- Do not push hard on the top of the projector with the adjuster extended. It may cause a malfunction.
- Since the Keystone adjustment is an electronic correction, the image may be deteriorated.

Displaying a pattern for adjusting an image

You can display a pattern for adjusting the projected image with the PATTERN key on the Remote Commander. Press the PATTERN key again to restore the previous image.

Turning Off the Power

1 Press the I/⏻ key on the main unit or ⏻ key on the Remote Commander.

The message appears if you press the I/⏻ key on the main unit. Press it again according to the message.

2 Unplug the AC power cord from the wall outlet.

After step **1**, the fan continues to run for a while to reduce internal heat. You may unplug the AC power cord before the fan stops.

Note

To move the projector just after turning it off, be sure to wait until the fan stops before unplugging the AC power cord. Unplugging the AC power cord before the fan stops may cause a malfunction.

To erase the confirmation message

The message disappears if you press any key other than the I/⏻ key on the main unit or ⏻ key on the Remote Commander, or if you do not press any key for a while.

To prevent the confirmation message from the being displayed with the key on the main unit

Hold the I/⏻ key on the main unit pressed for a few seconds.

Using a MENU

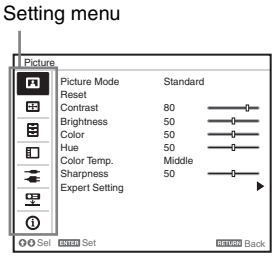
Note

The menu displays used for the explanation below may be different depending on the model you are using.

1 Press the MENU key to display the menu.

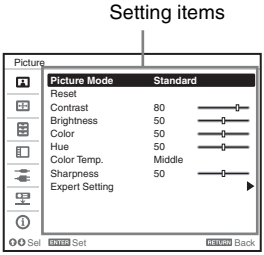
2 Select the setting menu.

Use the ↑ or ↓ key to select the setting menu then press → or ENTER key.



3 Select the setting item.

Use the ↑ or ↓ key to select the setting menu then press → or ENTER key.
To return to the selection screen of the setting menu, press the ← key or the RETURN key.



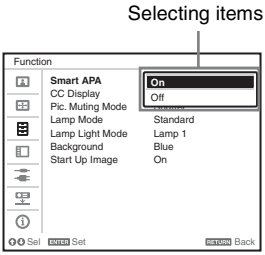
4 Make the setting or adjustment for the selected item.

Menu operation differs depending on the setting item. If the next menu window is displayed, select the item according to the operations in step **3**.

To return to the selection screen of the setting items, press the ← key or the RETURN key. Also, to reset the setting value of an item to its factory preset value, press the RESET key during setting or adjusting.

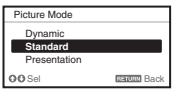
Using a pop-up menu

Press the ↑/↓/←/→ key to select an item. Press the ENTER key to restore the previous screen.



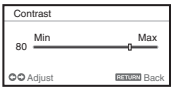
Using the setting menu

Press the ↑ or ↓ key to select the item. Press the ENTER key to restore the previous screen.



Using the adjustment menu

To increase the number, press the ↑ or → key and to decrease the number, press the ↓ or ← key. Press the ENTER key to register the setting. The previous screen is restored.



5 Press the MENU key to clear the menu.

The menu disappears automatically if no key is pressed for a while.

The Picture Menu

For adjusting the picture for each input signal.

Setting items	Functions
Picture Mode	**Dynamic:** Emphasizes the contrast to produce a "dynamic" picture. **Standard:** Makes the picture be natural and well balanced. **Presentation**[*1]**:** Makes the picture bright to suit for a presentation.
Reset	The picture settings are initialized to their factory preset values.
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[*2 *4]	The higher the setting, the greater the intensity. The lower the setting, the lower the intensity.
Hue[*2 *4 *5]	The higher the setting, the more greenish the picture becomes. The lower the setting, the more reddish the picture becomes.
Color Temp.[*3]	**High/Middle/Low:** The higher the temperature, the more bluish the picture. The lower the temperature, the more reddish the picture. **Custom1/ Custom2/ Custom3:** An adjusted color temperature setting can be stored for each item. The factory settings are Custom1: High, Custom2: Middle, Custom3: Low.
Sharpness[*2]	The higher the setting, the sharper the picture. The lower the setting, the softer the picture.
Expert Setting	
Film Mode[*2 *6]	**Auto:** Precisely reproduces the image from a film source to suit the original film source. Normally, select this option. **Off:** Select this option if the images are rough around the edges when "Auto" is selected.
Black Level Adj. (Adjust) [*2]	**High/Low/Off:** Emphasizes dark portions of the projected image to suit your taste.
Gamma Mode[*1]	**Graphics:** Improves the reproduction of halftones. Photos can be reproduced in natural tones. **Text:** Contrasts black and white. Suitable for images that contain lots of text.

Notes

*1: When a computer signal is input, this option is available.
*2: When a video signal is input, this option is available.
*3: When "Picture Mode" is set to the item other than "Presentation," this option is available.
*4: When a B & W signal is input, this option is not available.
*5: When an analog TV signal is input, this option may not available, depending on the color system.
*6: When a progressive signal is input, this option is not available.

The Screen Menu

For adjusting the size, position, and aspect ratio of the projected image for each input signal.

Setting items		Functions
Aspect[*1]		Switches the aspect (page 17).
	When the computer signal is input	**Normal:** Displays the image on the center point of the projected image without changing the resolution of the input signal or enlarging the image.
		Full1: Displays the image to fit the maximum projected image size without changing the aspect ratio of the input signal.
		Full2: Displays the image to fit the maximum projected image size.
	When the video signal is input	**4:3:** Displays the image to fit the maximum projected image size with an aspect ratio fixed to 4:3. **16:9:** Displays the image to fit the maximum projected image size with an aspect ratio fixed to 16:9. **Zoom:** Display the center point of the projected image to zoom.
Over Scan[*2]		**On/Off:** Hides the outline of the image when set to "On." Select "On" if noise appears along the edge of the image.
Adjust Signal		Adjusts the image of a computer signal. Use this item if the edge of the image is cut and reception is bad.
	APA[*3, *4]	Automatically adjusts the projected image to an optimum quality when you press the ENTER key.
	Phase[*3]	Adjusts the dot phase of the display pixel and the input signal. Set to the value where looks clearest.
	Pitch[*3]	The higher the setting, the wider the horizontal image elements (pitch). The lower the setting, the narrower the horizontal image elements (pitch).
	Shift[*5]	**H:** The higher the setting, the farther right the image is projected on the screen. The lower the setting, the image farther left. **V:** The higher the setting, the farther up the image is projected on the screen. The lower the setting, the image farther down.

Notes

*1: • Note that if the projector is used for profit or for public viewing, modifying the original picture by switching to the aspect mode may constitute an infringement of the rights of authors or producers, which are legally protected.
• Depending on the input signal, setting items for aspect ratio or some other setting items cannot be set in some cases, or changing the aspect ratio setting may have no effect.
• A part of the image may be displayed in black, depending on the setting item.

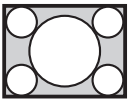
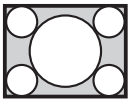
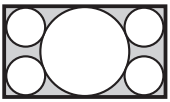
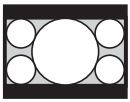
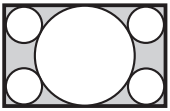
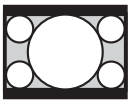
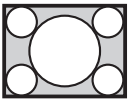
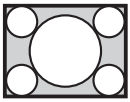
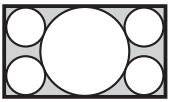
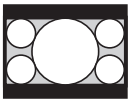
*2: Available when a video signal is input from the YPBPR input connector or the DVI-D input connector.

*3: Available when a computer signal is input from the RGB input connector.

*4: If the projected image includes large amount of black portion around it, the APA function will not work properly and a part of the image may not be displayed on the screen and also optimum image cannot be obtained, depending on the type of input signal. In this case, adjust the "Phase," "Pitch," and "Shift" items manually.

*5: Available when a computer signal is input from the RGB input connector or a video signal is input from the YPBPR input connector.

Aspect

	Input signal	Recommended setting value and projected image
Computer signal	(4:3) 	(Full1)*1 
	(16:9) 	(Full1)*1 *2 
	(16:10) 	(Full1)*1 *2 
Video signal	(4:3) 	(4:3)*3 
	(16:9) 	(16:9)*4 

*1: If you select “Normal,” the image is projected in the same resolution as the input signal without changing the aspect ratio of the original image.

*2: If you select “Full2,” the image is projected to fit the projected image size, regardless of the aspect ratio of the image.

*3: Depending on the input signal, the projected image may be projected as illustrated below. In this a case, select “16:9.”

*4: Depending on the input signal, the image may be projected as illustrated below. In this a case, select “Zoom.”

The Function Menu

The Function menu is used for setting various functions of the projector.

Setting items	Functions
Smart APA	**On/Off**; When set to "On," executes APA automatically when a signal is input.*1
CC Display	**CC1/CC2/CC3/CC4/Text1/Text2/Text3/Text4:** Select the closed caption service (Captions or Text). **Off:** Closed caption does not appear.
Pic.Muting Mode	**Image:** Cuts off the projected image when the PIC MUTING key is pressed. **Shutter:** Cuts off the projected image then close the shutter when the PIC MUTING key is pressed.
Lamp Mode	**High/Standard:** When set to "High," the image becomes brighter, and power consumption becomes higher.
Lamp Light Mode	The projector has a function for switching between the two lamps. When one lamp is turned off, the other is turned on automatically to avoid interrupt of operation. **Auto:** Lights the lamp that is set to be used for shorter duration than the other when starting up the projector. **Lamp 1/Lamp 2:** Lights the selected lamp. If the selected lamp is turn off, the other is turned on automatically. It is recommended to select this item when you cannot replace the lamp immediately.
Background	**Black/Blue:** Selects the background color of the projected image when no signal is input.
Start Up Image	**On/Off:** When set to "On," the Start Up Image is displayed on the screen upon startup of the projector.

Note

*1: Executes APA when a computer signal is input via the RGB input connector.

The Operation Menu

The Operation Menu is used for setting for the operations by using the menu or the Remote Commander.

Setting items	Functions
Language	Selects the language used in the menu and on-screen displays.
Status	**On:** All on-screen statuses are enabled. **Off:** Turn off the on-screen displays except for the menus, message when turning off the power, and warning messages.
IR Receiver	**Front & Rear/Front/Rear:** Selects the remote control detectors (IR Receiver) on the front and rear of the projector.
ID Mode	**All/1/2/3:** Assigns an ID number to the projector. When set to "All," you can control the projector with the Remote Commander independently of the assigned ID Mode. Refer also to "ID MODE 1/2/3 switch" of the Remote Commander on page 6.
Security Lock*1	**On/Off:** This function enables restriction of the projector to autherized users by password. The setting procedures for security locking are as follows: **1** Select "On" to display the setting menu. **2** Input the password with the MENU, ↑/↓/←/→, and ENTER keys. (The default password setting is "ENTER, ENTER, ENTER, ENTER.") **3** Input a new password with the MENU, ↑/↓/←/→, and ENTER keys. **4** Enter the password again to confirm. Enter the password when you turn on the projector after disconnecting and reconnecting the AC power cord. When it is set to "Off," you can cancel the security lock. You are required to input the password again. If you fail to enter the correct password after three consecutive times, the projector cannot be used. In this case, press the I/⏻ key to go Standby mode then turn on the power again.
Panel Key Lock	**On/Off:** When set to "On," locks all the control panel keys of the projector. However, you can operate the following: • Press and hold the I/⏻ key for approximately 10 seconds during Standby mode. → The projector turns on. • Press and hold the MENU key for approximately 10 seconds during power on. → "Panel Key Lock" is set to "Off" and enables operation of all control panel keys on the projector.
Lens Control	**On/Off:** When set to "On," you can adjusts the lens (Focus, Zoom, and Shift) from the Remote commander or the projector. To prevent unintentional operation, set it to "Off" after adjusting the lens.

Note

*1: You will not be able to use the projector if you forget your password. If you call qualified Sony personnel because you have forgotten the password, you will be asked to verify the projector's serial number and your identity. (This process may differ in other countries/regions.) Once your identity has been confirmed, we will provide you with the password.

The Connection/Power Menu

The Connection/Power menu is used for setting for the connections and power.

Setting items	Functions
Network Setting	
IP Address Setup	**Auto (DHCP):** The IP address is assigned automatically from the DHCP server such as a router. **Manual:** To specify the IP Address manually.
IP Address/ Subnet Mask/ Default Gateway/Primary DNS/Secondary DNS	When "Manual" is selected for "IP Address Setup," select the item with the → or ← key and input the value with ↓ or ↑ key. When all items are entered, select Apply then press the ENTER key. The entered settings will be registered.
Input-A Signal Sel.	**Auto/Computer/Video GBR/Component:** When set to "Auto," selects the type of video signal input automatically when "Input-A" is selected with the INPUT key.*1
Color System	**Auto/NTSC3.58/PAL/SECAM/NTSC4.43/PAL-M/PAL-N:** When set to "Auto," selects the color system automatically when "S Video" or "Video" is selected with the INPUT key.*1
Standby Mode*2	**Standard/Low:** When set to "Low," lowers power consumption in Standby mode.
Power Saving Mode	**Lamp Cutoff:** The lamp turns off automatically and power consumption is reduced if no signal is input for 10 minutes. The lamp lights again when a signal is input or any key is pressed. In Lamp Cutoff, the ON/STANDBY indicator lights in orange (page 26). **Standby:** The power will be turned off automatically and the projector goes to Standby mode if no signal is input for 10 minutes. **Off:** The Power Saving Mode is released.
Direct Power On	**On/Off:** When set to "On," you can turn the power on without going to Standby mode when the AC power cord is connected to a wall outlet.

Notes

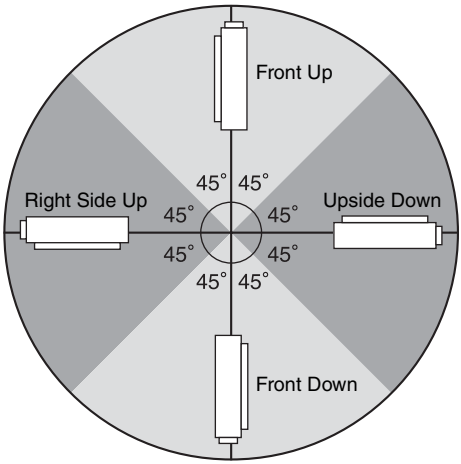
*1: The image may not be adjusted properly depending on the type of input signal. In such a case, adjust it manually to suit to the connected equipment.

*2: When "Standby Mode" is set to "Low," the network and network control function cannot be operated while the projector is in standby mode.

The Installation Menu

The Installation menu is used for installing the projector.

Setting items	Functions
Image Flip	**HV/H/V/Off:** Flips the projected image horizontally and/or vertically according to the installation method.
Installation Attitude	**Right Side UP/Upside Down/Front Up/Front Down:** Change the cooling setting to suit to the installation attitude. Continuing to use the wrong setting may affect component reliability.
High Altitude Mode*1	**On/Off:** Set to "On" when using the projector at an altitude of 1,500 m or higher. Continuing to use the wrong setting may affect component reliability.
V Keystone*2	The higher the setting, narrower the top of the projected image. The lower the setting, the narrower the bottom.



Notes

*1: When "High Altitude Mode" is set to "On," the speed of the fan increases, and the fan noise becomes slightly louder.

*2: Depending on the position adjusted with the lens shift feature, the aspect ratio of the image may change from the original or projected image may be distorted with Keystone adjustment.

ⓘ The Information Menu

The Information menu enables you to confirm various information on the projector, such as the total usage hours of a lamp.

Setting items	Functions
Model Name	Displays the model name.
Serial No.	Displays the serial number.
fH / fV (horizontal frequency/vertical frequency)*1	Displays the horizontal frequency/vertical frequency of the current input signal.
Signal type	Displays the type of the current input signal.
Lamp Timer	Indicates the usage time and status of a lamp. (❶: Lamp 1/ ❷: Lamp 2) ❶ ❷: The lamp is in lights. ❶ ❷: The lamp does not light. ❶ ❷: The lamp is in abnormal status.

Note

*1: These items may not be displayed depending on the input signal.

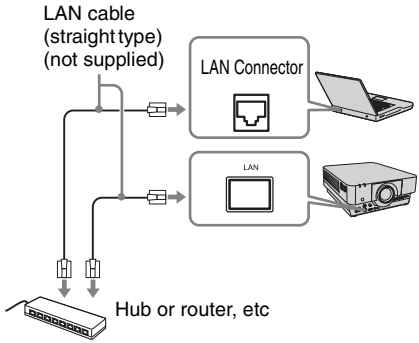
Using Network Features

Connection to the network allows you to operate the following features:
- Checking the current status of the projector via a Web browser.
- Remotely controlling the projector via a Web browser.
- Receiving the Mail Report for the projector.
- Making the network settings for the projector.
- Supports network monitoring, control protocol (Advertisement, PJ Link, SNMP, PJ Talk, AMX DDDP [Dynamic Device Discovery Protocol]).

Notes
- The menu displays used for the explanation below may be different depending on the model you are using.
- Supported Web browsers are Internet Explorer 6/7/8.
- The menu displays only English.
- If the browser of your computer is set to [Use a proxy server] when you have access to the projector from your computer, click the check mark to set accessing without using a proxy server.

Displaying the Control Window of the Projector with a Web Browser

1 Connect the LAN cable.



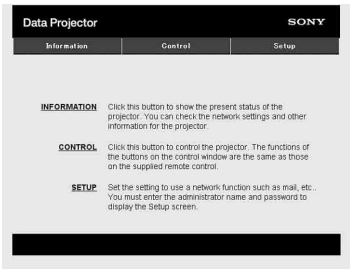
2 Set the network settings for the projector using “Network Setting” on the Connection/Power menu (page 20).

3 Start a web browser on the computer, enter the following in the address field, then press the Enter key on your computer.

http://xxx.xxx.xxx.xxx
(xxx.xxx.xxx.xxx: IP address for the projector)

You can confirm the IP address of the projector under “Network Setting” on the Connection/Power menu.

The following window appears in the Web browser:

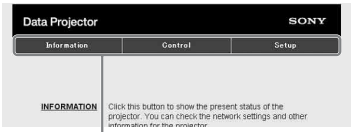


Once you make the network settings, you can open the Control window only by performing step **3** of this procedure.

How to operate the Control window

Switching the page

Click one of the Page Switching buttons to display the desired setting page.



Page Switching buttons

Setting the access limitation

You can limit a user for accessing any particular page.

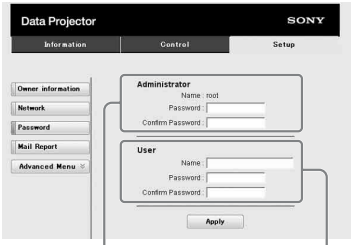
Administrator: Allowed access to all pages

User: Allowed access to all pages except the Setup page

Set under [Password] of the Setup page.

When you access the Setup page for the first time, enter "root" for user name and enter nothing for password.

The name of the administrator is preset to "root."



Entry area for [Administrator]

Entry area for [User]

When you change the password, input a new password after deleting the password (*****) that was set.

Note

If you forget your password, consult with qualified Sony personnel.

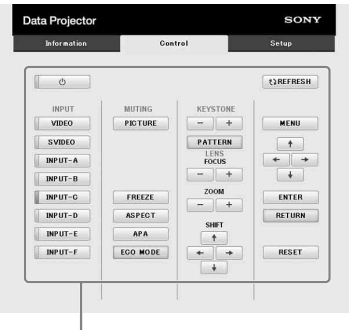
Confirming the Information regarding the Projector

You can confirm the current settings for the projector on the Information page.

Information area

Operating the Projector from a Computer

You can control the projector from the computer on the Control page.



Operation area

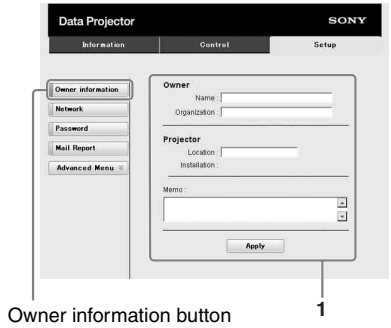
The functions of the keys shown in the operation area are the same as those of the keys on the supplied Remote Commander.

Using the Mail Report Function

Set the Mail Report function on the Setup page.

Entered values will not be applied unless you click on [Apply].

1 Click on [Owner information] to enter the owner information recorded in the Mail Report.



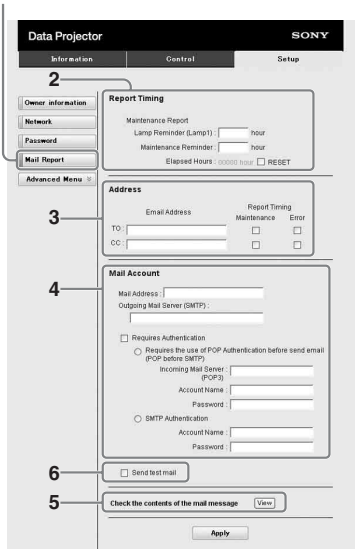
2 Set the timing of the Mail Report.

Click on [Mail Report] to open the Mail Report page.

Lamp Reminder (Lamp1): Set the timing for lamp replacement. To reset Lamp Reminder, replace the lamp on the projector (page 30).

Maintenance Reminder: Set the timing for maintenance. To reset Maintenance Reminder, check the RESET check box and then click on [Apply].

Mail Report button



3 Enter the outgoing e-mail address in the Email Address box then check the Report Timing check box of the Mail Report to be sent.

4 Set the mail account for sending mail reports.

Mail Address: Enter the e-mail address.

Outgoing Mail Server (SMTP): Enter the address of outgoing mail server (SMTP).

Required Authentication: Check this check box if authentication is required for sending e-mail.

Requires the use of POP Authentication before send email (POP before SMTP): Check this check box to arrange for POP authentication to be performed before sending e-mail.

Incoming Mail Server (POP3): Enter the address of the incoming-mail server (POP3) to be used for POP authentication.

Account Name: Enter the mail account.

Password: Enter the password.

SMTP Authentication: Check this check box to arrange for SMTP authentication to be performed before sending e-mail.

Account Name: Enter the mail account.

Password: Enter the password.

5 Confirm the contents of the Mail Report.

When you click on [View] is pressed, the contents of the Mail Report are displayed.

6 Send the test mail.

Check on the Send test mail check box then click on [Apply] to send your test mail to the e-mail address you set.

Notes

- The mail report function is not available because the network which Outbound Port25 Blocking is used cannot be connected to the SMTP server.
- You cannot use the following characters to enter the characters in the text box: “ ' ”, “ “ ”, “ \ ”, “ & ”, “ < ”, “ > ”

Indicators

The indicators allow checking the status and notify you of abnormal operation of the projector. If the projector exhibits abnormal status, address the problem in accordance with the table below.

ON/STANDBY indicator

Status		Meaning/Remedies
Lights in red		The projector is in Standby mode.
Flashes in green		• The projector is ready to operate after having been turned on. • The lamp cools after the projector is turned off.
Lights in green		The projector's power is on.
Lights in orange		The projector is in Power Saving Mode (lamp cut off).
Flashes in red		The projector is in abnormal status. Symptoms are indicated by number of flashes. Address the problem in accordance with the following. If the symptom is shown again, consult with qualified Sony personnel.
	Flashes twice	The internal temperature is unusually high. Check the items below. • Check to see if nothing is blocking the ventilation holes. • Check to see if the air filter is not clogged. • Check if "Installation Attitude" on the Installation menu is correctly selected.
	Flashes six times	Unplug the AC power cord from a wall outlet. After checking that the ON/STANDBY indicator goes out, plug the power cord to a wall outlet again then turn on the projector.
	Other number of flashes	Consult with qualified Sony personnel.

LAMP/COVER indicator

Status		Meaning/Remedies
Flashes in red		Symptoms are indicated by number of flashes. Address the problem in accordance with the following.
	Flashes twice	The lamp cover or air filter unit are not attached securely.
	Flashes three/four/ five times	The temperature of a lamp is high (Three times: only Lamp 1, Four times: only Lamp 2, Five times: Lamp 1 and Lamp 2). Turn off the power and wait for the lamp to cool then turn on the power again. If the symptom is shown again, the lamp may be burnt out. In such a case, replace the lamp with a new one (page 30).
	Flashes six times	The lens is not mounted on the projector (page 34).

Messages List

When any of the messages listed below appears on the projected image, address the problem in accordance with the table below.

Message	Meaning/Remedy	Page
High temp.! Lamp off in 1 min.	Check the items below. • Check to see if nothing is blocking the ventilation holes. • Check to see if the air filter is not clogged. • Check if “Installation Attitude” on the Installation menu is correctly selected.	3, 21, 32
Frequency is out of range!	Change the output setting of the connected equipment to one for signals supported by the projector.	44
Please check Input-A Signal Sel.	Set “Input-A Signal Sel.” to “Auto” or select the input signal type to suit to the input signal.	20
Please replace Lamp 1 and Filter.	Replace the lamp with a new one and replace the air filter. To cancel the message, press any key on the Remote Commander or the control panel of the projector. The message appears whenever you turn on the power until you replace the lamp.	30, 32
Please replace Lamp 2 and Filter.		
Please replace Lamp 1, Lamp 2 and Filter.		
Projector temperature is high. High Altitude Mode should be “On” if the projector is being used at high altitude.	At an altitude of 1,500 m or higher, if you are not using the projector, check the items below. • Check that nothing is blocking the ventilation holes. • Check that the air filter is not clogged. • Check if “Installation Attitude” on the Installation menu is correctly selected.	3, 21, 32
Not applicable!	Invalid key pressed.	5
The panel keys are locked!	“Panel Key Lock” is set to “On.”	19

Troubleshooting

Before asking to have the projector repaired, try to diagnose the problem, following the instructions below.

Symptom	Remedy	Page
The power is not turned on.	Check if the AC power cord is firmly connected.	–
	When the “Panel Key Lock” is set to “On,” you cannot turn on the projector using the I/⏻ key on the projector.	19
	If the lamp, lamp cover, or air filter unit is not attached securely, the projector cannot be turned on.	30, 32
No image.	Check if the connecting cable is connected to external equipment properly.	–
	Check if the computer signal is set for output to an external monitor. If you set your computer, such as a notebook computer, to output the signal to both your computer’s display and an external monitor, the picture of the external monitor may not appear properly. Set your computer to output the signal to only an external monitor.	11
	Check if the input source is correctly selected.	11
	Check if the picture is muted.	6
On-screen display does not appear.	The on-screen display does not appear when “Status” in the Operation menu is set to “Off.”	19
The aspect ratio of the display is not right/the image is displayed smaller /a portion of image does not appear.	The image may not be displayed correctly with an input signal the projector cannot interpret correctly. In such a case, set “Aspect” manually.	16, 17
The image is a trapezoid.	The images become trapezoidal because of the projection angle. In such a case, you can correct the trapezoidal distortion, using a Keystone feature.	5, 21
Edges of the image are cut off or dark.	If you use the Lens Shift function with a setting outside the recommended range, edges of the image may be cut off or appear dark. Use a setting within the normal range for the Lens Shift function.	45
The image is dark/too bright.	The settings for “Brightness,” “Contrast,” and “Lamp Mode” affect brightness of the image. Check if the value is appropriate.	15, 18
	The image will be dark when the lamp is burnt out. Check “Lamp Timer,” and replace the lamp with a new one if necessary.	22
The image is not clear.	Check if the projector is in focus.	12
	The picture will not be clear if condensation has accumulated on the lens. In such a case, let the projector sit for about two hours with the power on.	–
The image is noisy.	Check if the connecting cable is connected to external equipment properly.	–

Symptom	Remedy	Page
The Remote Commander does not work.	Check that the batteries are installed correctly.	–
	Check that the batteries are not exhausted.	–
	Check if the “ID Mode” of the projector corresponds to that of the Remote Commander.	6, 19
	Check the setting for “IR Receiver.”	19
The fan is noisy.	When “Lamp Mode” is set to “High,” or “High Altitude Mode” is set to “On,” the sound from the fan is often greater than normal to cool the lamp, etc.	18, 21
	If the ventilation holes are blocked, the internal temperature of the projector rises and the fan noise becomes larger.	3
	Temperature is very high.	–

Replacing the Lamp

Replace the lamp with a new one if a message displayed on the projected image or the LAMP/COVER indicator notifies you to replace the lamp and filter.
The projector incorporates two lamps. Before replacement, check which lamp is to be replaced (page 26).
Use an LMP-F330 projector lamp (not supplied) for replacement.

Caution

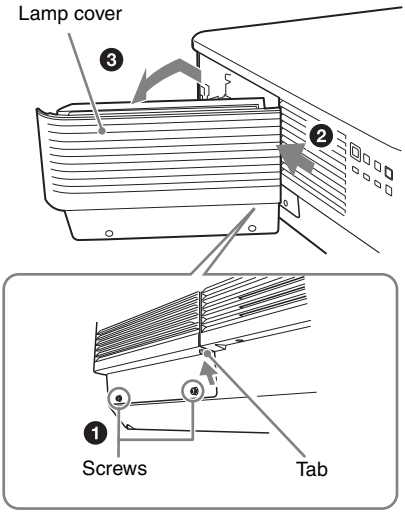
- The lamp remains hot after the projector is turned off. **If you touch the lamp, you may burn your finger. When you replace the lamp, wait for at least an hour after turning off the projector for the lamp to cool sufficiently.**
- Do not allow any metallic or inflammable objects into the lamp replacement slot after removing the lamp, otherwise it may cause electrical shock or fire. Do not put your hands into the slot.
- **If the lamp breaks, contact qualified Sony personnel. Do not replace the lamp yourself.**
- When removing the lamp, be sure to pull it out straight, by holding it by grab. If you touch a part of the lamp other than the grab, you may be burned or injured. If you pull out the lamp while the projector is tilted, the pieces may scatter if the lamp breaks any may cause injury.

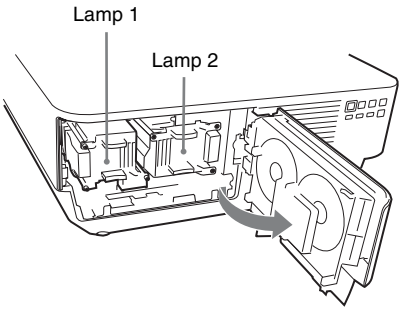
Before starting

The projector incorporates two lamps. Check the number of flashes of the LAMP/COVER indicator. This enables you to be informed of a lamp to be replaced.
Flashes three times: Replace Lamp 1.
Flashes four times: Replace Lamp 2.
Flashes five times: Replace both Lamp 1 and Lamp 2.

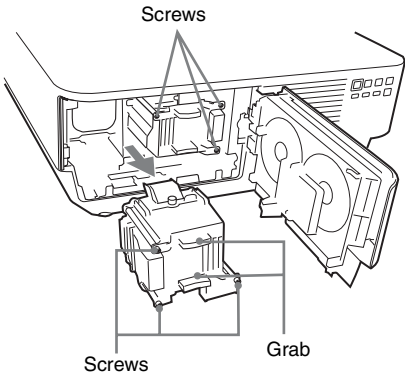
1 Turn off the projector, and disconnect the AC power cord from a wall outlet.

2 When the lamp has cooled sufficiently, loosen the two screws of the lamp cover on the side panel (❶), slide the lamp cover slightly to the rear by the tabs (❷), then open the lamp cover (❸).





3 Loosen the three screws on the lamp then pull out the lamp by its grab.



Note

Lamp 1 and Lamp 2 are of the same type. They are installed in opposite vertical orientation to each other. When removing, note the orientation of each lamp.

4 Insert the new lamp all the way in until it is securely in place. Tighten the three screws.

5 Close the lamp cover and tighten the two screws.

Notes

- The lamp cover cannot be closed if the screws that secure the lamps are loosened.
- Be sure to install the lamp and lamp cover securely as it was. If not, the projector cannot be turned on.

When lamp replacement is completed

Replace the air filter cartridge (page 32).

Replacing the Air Filter Cartridges

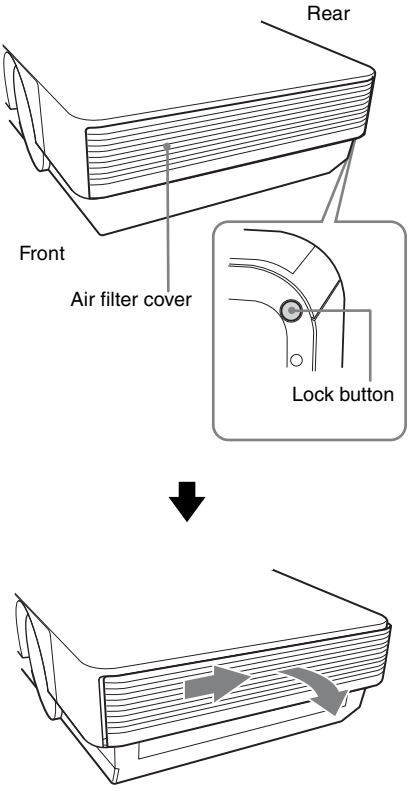
After replacing the lamp, replace the air filter cartridges.
When replacing the air filter cartridges, replace all 4 cartridges supplied with the replacement lamps.

Caution

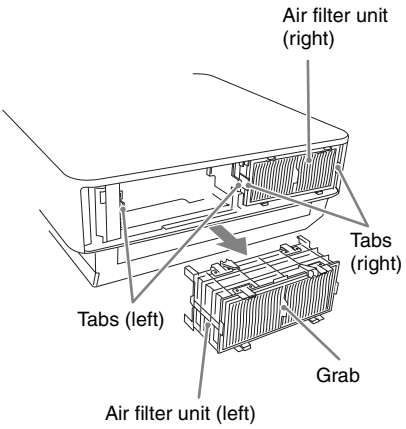
If you neglect to replace the air filter cartridges, dust may accumulate, clogging it. As a result, the temperature may rise inside the unit, leading to a possible malfunction or fire.

1 Make sure the AC power cord is disconnected.

2 Slide the air filter cover slightly to the rear while holding the lock button to remove the air filter cover.

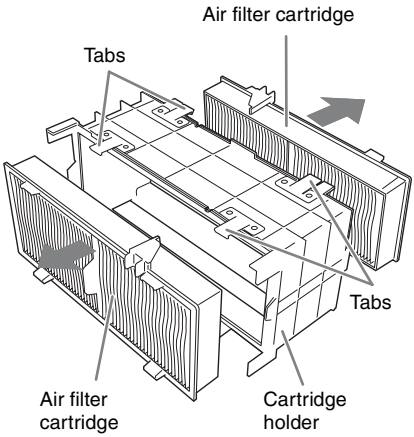


3 Pull out the air filter cartridge straight by the grab of the air filter unit while pushing out one tab at a time on both sides.



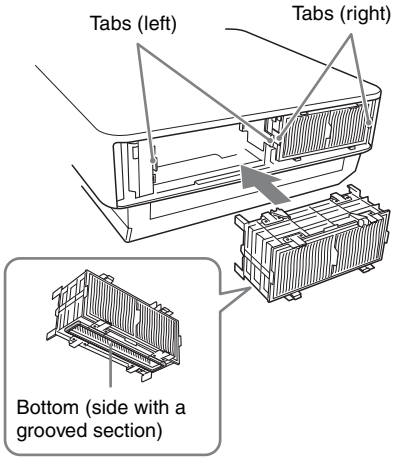
4 Remove the four air filter cartridges (two in each air filter unit) from the air filter units and attach new cartridges to the units.

When attaching the air filter cartridge to the cartridge holder, push the air filter cartridge in fully until the tabs of the cartridge holder click (4 points each air filter cartridge, a total of 8 points).
The two air filter units are installed in the right and left positions.



5 Return the air filter units to the projector.

The top and bottom of the air filter unit have different shapes, as illustrated below. Be careful of orientation when installing them.



Slide the air filter unit in fully until the tabs on the projector click to hold it in place (2 points each air filter unit, a total of 4 points).

6 Close the air filter cover.

Note

Be sure to attach the air filter unit firmly; the power cannot be turned on if it is not closed securely.

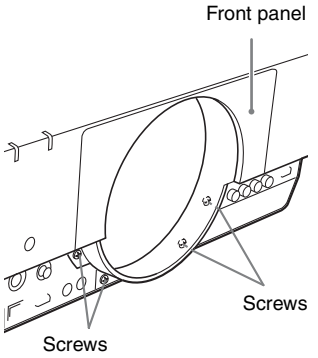
Attaching/Removing the Projection Lens

Notes

- Turn off the projector and disconnect the AC power cord from a wall outlet before you remove/attach the projection lens.
- Be careful not to drop the projection lens.
- Avoid removing/attaching the lens with the projector installed suspended from a ceiling.
- Avoid touching the lens surface.
- For usable projection lenses and a lens adapter, see “Specifications” (page 39).

Attaching

1 Loosen the four screws that secure the front panel to remove the front panel in the direction of the front.



2 Make the preparations required for the projection lens you are using.

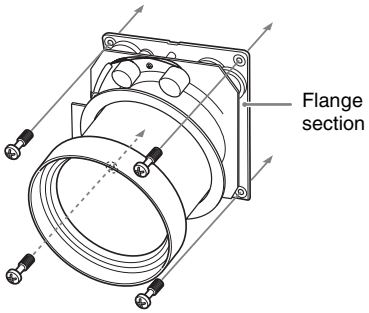
VPLL-FM22/ZM32/ZM42/ZM102:
A Removing the compensating glass (page 35)

VPLL-FM21/ZM31/ZP41/FM22/ZM32/ZM42/ZM102:
B Attaching the projection lens adapter (page 36)

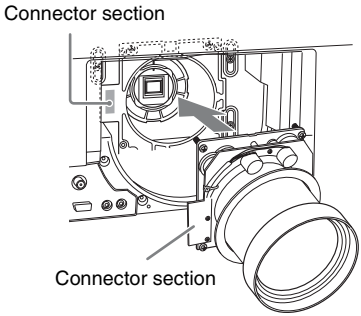
VPLL-ZM101:
B Attaching the projection lens adapter (page 36)
C Attaching the shading sheet (page 38)

VPLL-4008/Z4015/Z4019/Z4025/Z4045
There is no need to attach the projection lens adapter to the projector.

3 Insert the four screws (supplied with the projector) to the flange section of the projection lens.



4 Align the connectors on the projector with those on the projection lens then insert the lens all the way in until it is securely in place.



5 Tighten the four screws attached in step **3**.

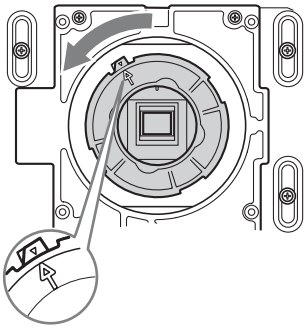
6 Replace the front panel and fasten it with the four screws.

A VPLL-FM22/ZM32/ZM42/ZM102: Removing the compensating glass

Before attaching the projection lens to the projector, it is required to remove the compensating glass from the lens mounting part of the projector.

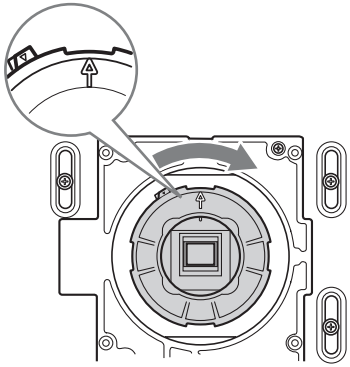
To remove the compensating glass

Turn the compensating glass counterclockwise as illustrated then pull it out towards you.



To attach the compensating glass

Insert the compensating glass with the arrow mark on the glass aligned with the mark (▽) on the lens mounting part of the projector, and turn the glass clockwise.



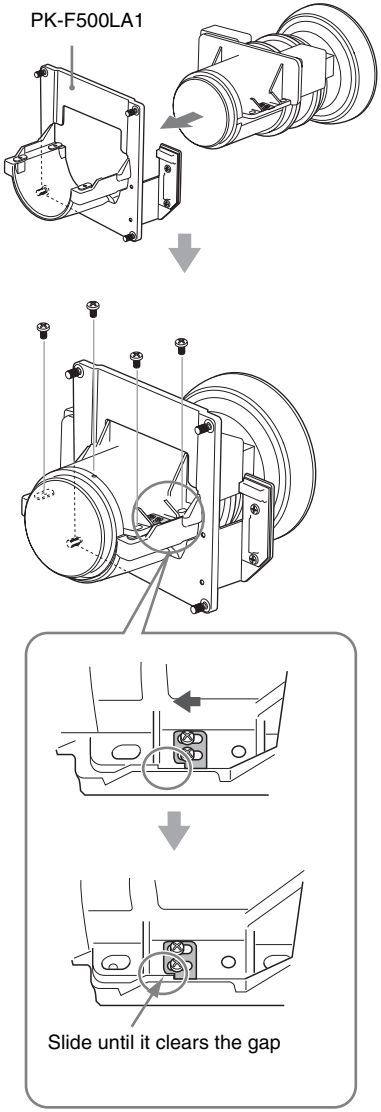
B VPLL-FM21/ZM31/ZP41/FM22/ZM32/ZM42/ZM101/ZM102: Attaching the projection lens adapter

Before attaching the projection lens to the projector, it is required to attach the lens adapter to the projection lens.

Insert the projection lens into the lens adapter as illustrated and fasten it with the four screws supplied with the lens adapter.

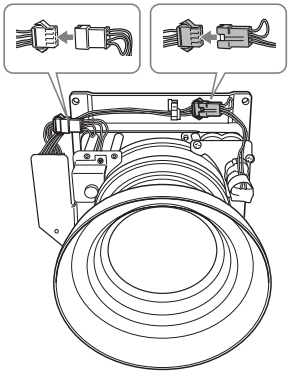
For the VPLL-FM21/ZM31/ZP41*/ZM101

Use the PK-F500LA1 lens adapter.



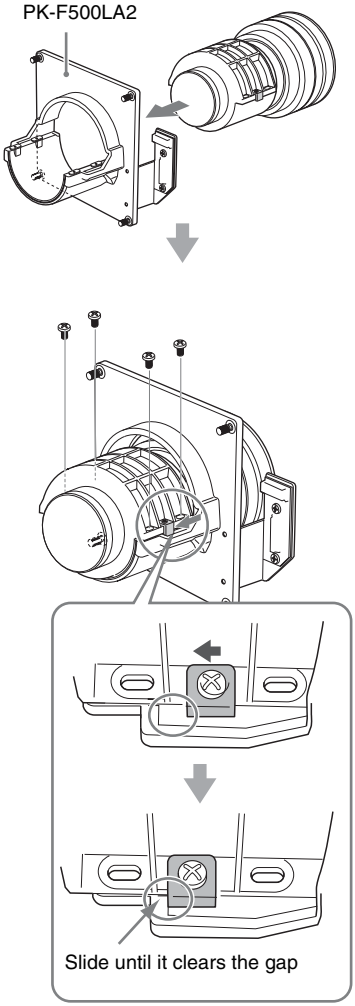
*** When mounting a VPLL-ZP41**

Engage the two connectors between the lens adapter and the projection lens, as illustrated.



For the VPLL-FM22/ZM32/ZM42/ZM102

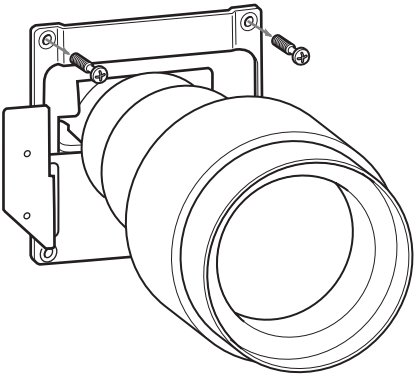
Use the PK-F500LA2 lens adapter.



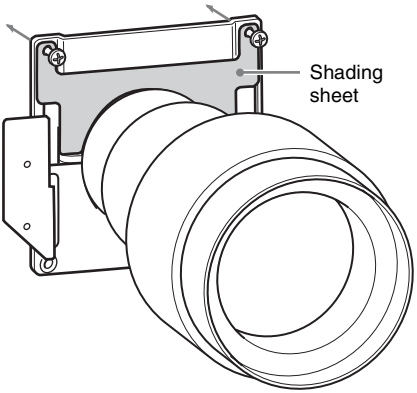
C VPLL-ZM101: Attaching the shading sheet

Before attaching the projection lens to the projector, it is required to attach the shading sheet supplied with the lens adapter after attaching the lens adapter.

1 Remove the two screws from the lens adapter.



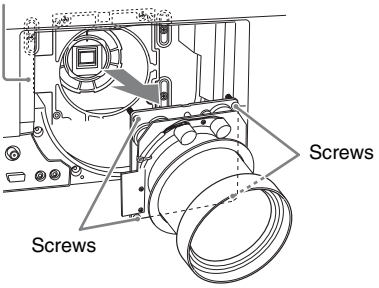
2 Fit the shading sheet to the projection lens as illustrated and fasten it to the lens with the two screws.



Removing

1 Loosen the four screws that secure the front panel (1), and remove the front panel, pulling it forward (2).

2 Loosen the four screws that secure the projection lens then pull it out straight. When loosening the screws, support the lens with your hands so that it will not fall.



Note

If the lens was shifted with lens shift adjustment, the screws may be too constricted to loosened. In such a case, adjust to shift the lens to the center position (page 12).

Specifications

Item		VPL-FX500L
Projection system		3 LCD system
Display device	Effective display size	0.99-inch (25.0 mm), 3 plate, Aspect ratio 4:3
	Effective picture elements	2,359,296 pixels (1024 × 768 pixels, 3 plate panels)
Light source		High-pressure mercury lamp, 330 W type
Luminous flux (Brightness)		7000 lm[*1] (when "Lamp Mode" is set to "High")
Applicable scanning frequency[*2]		Horizontal: 14 kHz to 93 kHz, Vertical: 47 Hz to 93 Hz
Resolution	When a computer signal is input	Maximum input signal resolution: 1920 × 1200 pixels (resize) Panel display resolution: 1024 × 768 pixels
	When a video signal is input	NTSC, PAL, SECAM, 480/60i, 576/50i, 480/60p, 576/50p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/60p, 1080/50p
Color system		NTSC3.58, PAL, SECAM, NTSC4.43, PAL-M, PAL-N, PAL60
Input/Output connector	INPUT A	**RGB/YPBPR input connector:** 5BNC female, G with sync/Y: 1 Vp-p ± 2 dB, sync negative, 75 ohms terminated, RGB/PBPR: 0.7 Vp-p ± 2 dB, 75 ohms terminated, Sync signal: TTL level high impedance, positive/negative
	INPUT B	**RGB input connector:** Mini D-sub 15-pin female, RGB: 0.7 Vp-p ± 2 dB, 75 ohms terminated, Sync signal: TTL level high impedance, positive/negative
	INPUT C	**DVI-D input connector:** DVI-D 24-pin (Single link), DVI 1.0 compliant, HDCP support
	S VIDEO (S VIDEO IN)	**S video input connector:** Mini DIN 4-pin, Y: 1 Vp-p ± 2 dB, sync negative, 75 ohms terminated, C: (burst signal) 0.286 (NTSC)/0.3 (PAL/SECAM) Vp-p ± 2 dB, 75 ohms terminated
	VIDEO (VIDEO IN)	**Video input connector:** BNC, 1 Vp-p ± 2 dB, sync negative, 75 ohms terminated
	OUTPUT	**MONITOR output connector:** Mini D-sub 15-pin female, G with sync/Y: 1 Vp-p ± 2 dB, sync negative, 75 ohms terminated, RGB/PBPR: 0.7 Vp-p ± 2 dB, 75 ohms terminated, Sync signal: HD, VD 4V (open), 1 Vp-p (75 ohms), positive/negative

Item	VPL-FX500L
Others connector	**RS-232C connector:** D-Sub 9 pin female
	LAN connector: RJ45, 10BASE-T/100BASE-TX
	CONTROL S input connector (DC power supply): Stereo mini jack, 5 Vp-p, Plug in power DC 5 V
	CONTROL S output connector: Stereo mini jack
Operating temperature/ Operating humidity	0 °C to 40 °C (32 °F to 104 °F)/35% to 85% (no condensation)
Storage temperature/ Storage humidity	–20 °C to +60 °C (–4 °F to +140 °F)/10 % to 90 %
Power requirements	100 V to 240 V AC, 4.8 A to 2.0 A, 50/60 Hz
Power consumption	**100 V AC:** 480 W **240 V AC:** 460 W
Power consumption (in standby)	**100 V AC:** 13 W (when "Standby Mode" is set to "Standard") / 0.1 W (when "Standby Mode" is set to "Low") **240 V AC:** 12 W (when "Standby Mode" is set to "Standard")/0.2 W (when "Standby Mode" is set to "Low")
Heat dissipation	**100 V AC:** 1638 BTU **240 V AC:** 1570 BTU
Dimensions (W/H/D)	Approx. 530 × 213 × 545 mm (20 $^{7}/_{8}$ × 8 $^{3}/_{8}$ × 21 $^{15}/_{32}$ inches) Approx. 530 × 204 × 545 mm (20 $^{7}/_{8}$ × 8 $^{1}/_{32}$ × 21 $^{15}/_{32}$ inches) (without projecting parts)
Mass	Approx. 20 kg (44 lb 1 oz)
Supplied accessories	See "Checking the Supplied Accessories" in the supplied Quick Reference Manual.
Optional accessories*3, *4	**Projector Lamp LMP-F330 (for replacement)**
	Projector Suspension Support PSS-630
	Projector Suspension Support Joint Pole PSS-630P
	Projection Lens VPLL-FM22*5: Manual focus, Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 88 × 88 × 169 mm (3 $^{15}/_{32}$ × 3 $^{15}/_{32}$ × 6 $^{21}/_{32}$ inches), Mass: approx. 950 g (2 lb 2 oz)
	Projection Lens VPLL-ZM32*5: Manual focus/zoom (approx. 1.1 times), Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 88 × 88 × 159 mm (3 $^{15}/_{32}$ × 3 $^{15}/_{32}$ × 6 $^{1}/_{4}$ inches), Mass: approx. 1,000 g (2 lb 3 oz)

Item	VPL-FX500L
Optional accessories[*3, *4]	**Projection Lens VPLL-ZM42[*5]:** Manual focus/zoom (approx. 1.3 times), Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 88 × 88 × 159 mm (3 15/32 × 3 15/32 × 6 1/4 inches), Mass: approx. 650 g (1 lb 7 oz)
	Projection Lens VPLL-ZP41[*6]: Electric focus/zoom (approx. 1.2 times), Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 117 × 110 × 198 mm (4 19/32 × 4 11/32 × 7 25/32 inches), Mass: approx. 1,460 g (3 lb 3 oz)
	Projection Lens VPLL-ZM102[*5]: Manual focus/zoom (approx. 1.5 times), Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 88 × 88 × 198 mm (3 15/32 × 3 15/32 × 7 25/32 inches), Mass: approx. 1,500 g (3 lb 5 oz)
	Projection Lens VPLL-ZM101[*6]: Manual focus/zoom (approx. 1.5 times), Projected image size: 40 inches to 300 inches (1.02 m to 7.62 m), Maximum external dimensions (W × H × D): approx. 100 × 100 × 222 mm (3 15/16 × 3 15/16 × 8 3/4 inches), Mass: approx. 1,810 g (3 lb 16 oz)
	Projection Lens VPLL-Z4015: Electric focus/zoom (approx. 1.3 times), Projected image size: 40 inches to 600 inches (1.02 m to 15.24 m), Maximum external dimensions (W × H × D): approx. 148 × 133 × 231 mm (5 13/16 × 5 1/4 × 9 3/32 inches), Mass: approx 3,000 g (6 lb 10 oz)
	Projection Lens VPLL-Z4019: Electric focus/zoom (approx. 1.3 times), Projected image size: 40 inches to 600 inches (1.02 m to 15.24 m), Maximum external dimensions (W × H × D): approx. 148 × 133 × 212 mm (5 13/16 × 5 1/4 × 8 11/32 inches), Mass: approx. 3,060 g (6 lb 12 oz)
	Projection Lens VPLL-Z4025: Electric focus/zoom (approx. 1.8 times), Projected image size: 40 inches to 600 inches (1.02 m to 15.24 m), Maximum external dimensions (W × H × D): approx. 148 × 133 × 243 mm (5 13/16 × 5 1/4 × 9 9/16 inches), Mass: approx. 2,800 g (6 lb 3 oz)
	Projection Lens VPLL-Z4045: Electric focus/zoom (approx. 1.7 times), Projected image size: 60 inches to 600 inches (1.52 m to 15.24 m), Maximum external dimensions (W × H × D): approx. 148 × 133 × 235 mm (5 13/16 × 5 1/4 × 9 1/4 inches), Mass: approx. 3,000 g (6 lb 10 oz)
	Projection Lens Adapter PK-F500LA1
	Projection Lens Adapter PK-F500LA2

Notes

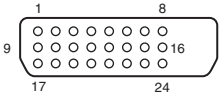
*1: When attaching the VPLL-ZP41.
*2: For details, refer to “Acceptable Input Signals” on page 44.
*3: Not all optional accessories are available in all countries and area. Please check with your local Sony Authorized Dealer.
*4: Information on accessories in this manual are current as of May 2010.
*5: To attach the projection lens to the projector, the PK-F500LA2 projection lens adapter is required.
*6: To attach the projection lens to the projector, the PK-F500LA1 projection lens adapter is required.

Design and specifications of the unit, including the optional accessories, are subject to change without notice.

Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

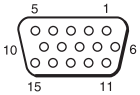
Pin assignment

DVI-D connector (DVI-D, female)



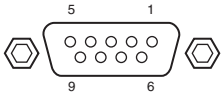
1	T.M.D.S. Data2–	14	+5 V Power
2	T.M.D.S. Data2+	15	Ground (return for +5 V)
3	T.M.D.S. Data2 Shield	16	Hot Plug Detect
4	NC	17	T.M.D.S Data0–
5	NC	18	T.M.D.S Data0+
6	DDC Clock	19	T.M.D.S Data0 Shield
7	DDC Data	20	NC
8	NC	21	NC
9	T.M.D.S. Data1–	22	T.M.D.S Clock Shield
10	T.M.D.S. Data1+	23	T.M.D.S Clock+
11	T.M.D.S. Data1 Shield	24	T.M.D.S Clock–
12	NC		
13	NC		

RGB input connector (Mini D-sub 15-pin, female)



1	Video input (red) R	9	Power supply input for DDC
2	Video input (green) G	10	GND
3	Video input (blue) B	11	GND
4	GND	12	DDC/SDA
5	RESERVE	13	Horizontal sync signal
6	GND (R)	14	Vertical sync signal
7	GND (G)	15	DDC/SCL
8	GND (B)		

RS-232C connector (D-Sub 9-pin, female)



1	NC	6	NC
2	RXDA	7	RTS
3	TXDA	8	CTS
4	DTR	9	NC
5	GND		

Acceptable Input Signals

Computer signal

Resolution	fH [kHz]/ fV [Hz]	Input connector	
		RGB	DVI-D
640 × 350	31.5/70	●	
	37.9/85	●	
640 × 400	31.5/70	●	
	37.9/85	●	
640 × 480	31.5/60	●	●
	35.0/67	●	
	37.9/73	●	
	37.5/75	●	
	43.3/85	●	
800 × 600	35.2/56	●	
	37.9/60	●	●
	48.1/72	●	
	46.9/75	●	
	53.7/85	●	
832 × 624	49.7/75	●	
1024 × 768	48.4/60	●	●
	56.5/70	●	
	60.0/75	●	
	68.7/85	●	
1152 × 864	64.0/70	●	
	67.5/75	●	
	77.5/85	●	
1152 × 900	61.8/66	●	
1280 × 960	60.0/60	●	●
	75.0/75	●	
1280 × 1024	64.0/60	●	●
	80.0/75	●	
	91.1/85	●	
1400 × 1050	65.3/60	●	●
1600 × 1200	75.0/60	●	●
1280 × 768	47.8/60	●	●
1280 × 720	45.0/60	●	●
1920 × 1080	67.5/60		●
1360 × 768	47.7/60	●	●
1440 × 900	55.9/60	●	●
1680 × 1050	65.3/60	●	●
1280 × 800	49.7/60	●	●
1920 × 1200	74.0/60	●*1	●*1

Digital TV signal

Signal	fV [Hz]	Input connector	
		RGB*2/ YP_BP_R	DVI-D
480i	60	●	●
576i	50	●	●
480p	60	●	●
576p	50	●	●
1080i	60	●	●
1080i	50	●	●
720p	60	●	●*3
720p	50	●	●
1080p	60		●*3
1080p	50		●

Analog TV signal

Signal	fV [Hz]	Input connector
		VIDEO/ S VIDEO
NTSC	60	●
PAL/SECAM	50	●

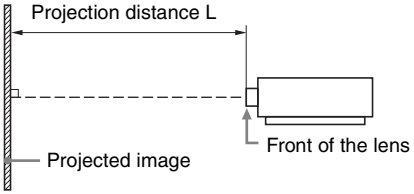
Notes

*1: Available for VESA Reduced Blanking signals only.
*2: With INPUT A only
*3: Determine as a computer signal.

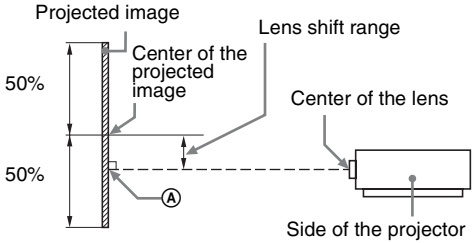
- When a signal other than the signals listed in table is input, the picture may not be displayed properly.
- An input signal meant for screen resolution different from that of the panel will not be displayed in its original resolution. Text and lines may be uneven.

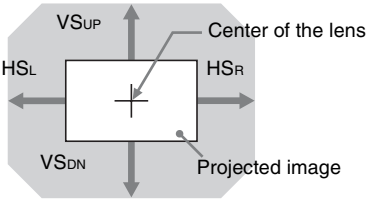
Projection Distance and Lens Shift Range

The projection distance refers to the distance between the front of the lens and the projected surface.

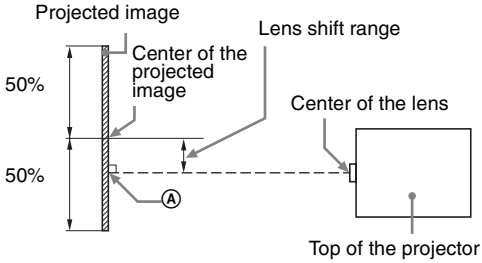


The lens shift range represents the distance in percent (%) by which the lens can be shifted from the center of the projected image. The lens shift range is regarded as 0% when the point (A) in the illustration (point where a line drawn from the center of the lens and the projected image cross at right angles) is aligned with the center of the projected image and full width or full height of the projected image is regarded as 100%.





Shaded region: Lens shift range



VSUP: Vertical shift range (up) [%]
VSDN: Vertical shift range (down) [%]
HSR: Horizontal shift range (right) [%]
HSL: Horizontal shift range (left) [%]

Projection distance

Unit: m (inches)

Projection image size		Projection distance L			
Diagonal	Width × Height	VPLL-FM22	VPLL-ZM32	VPLL-ZM42	VPLL-ZP41
80-inch (2.03 m)	1.63 × 1.22 (64 × 48)	1.42 (56)	2.39 – 2.64 (94 – 103)	3.05 – 3.82 (120 – 150)	4.11 – 5.01 (162 – 197)
100-inch (2.54 m)	2.03 × 1.52 (80 × 60)	1.79 (71)	3.00 – 3.31 (118 – 130)	3.82 – 4.79 (151 – 188)	5.16 – 6.29 (203 – 247)
120-inch (3.05 m)	2.44 × 1.83 (96 × 72)	2.16 (85)	3.61 – 3.98 (143 – 157)	4.60 – 5.76 (181 – 227)	6.20 – 7.57 (245 – 298)
150-inch (3.81 m)	3.05 × 2.29 (120 × 90)	2.72 (107)	4.53 – 4.99 (179 – 196)	5.76 – 7.22 (227 – 284)	7.77 – 9.49 (306 – 373)
200-inch (5.08 m)	4.06 × 3.05 (160 × 120)	3.64 (143)	6.06 – 6.68 (239 – 263)	7.70 – 9.64 (303 – 379)	10.39 – 12.69 (409 – 499)

Unit: m (inches)

Projection image size		Projection distance L	
Diagonal	Width × Height	VPLL-ZM102	VPLL-ZM101
80-inch (2.03 m)	1.63 × 1.22 (64 × 48)	5.40 – 8.01 (213 – 315)	7.29 – 10.71 (287 – 421)
100-inch (2.54 m)	2.03 × 1.52 (80 × 60)	6.79 – 10.05 (268 – 395)	9.16 – 13.44 (361 – 529)
120-inch (3.05 m)	2.44 × 1.83 (96 × 72)	8.18 – 12.09 (323 – 476)	11.03 – 16.17 (435 – 636)
150-inch (3.81 m)	3.05 × 2.29 (120 × 90)	10.27 – 15.16 (405 – 597)	13.84 – 20.26 (545 – 797)
200-inch (5.08 m)	4.06 × 3.05 (160 × 120)	13.75 – 20.27 (542 – 798)	18.53 – 27.09 (730 – 1,066)

Unit: m (inches)

Projection image size		Projection distance L			
Diagonal	Width × Height	VPLL-Z4015	VPLL-Z4019	VPLL-Z4025	VPLL-Z4045
80-inch (2.03 m)	1.63 × 1.22 (64 × 48)	3.22 – 4.24 (127 – 167)	4.19 – 5.35 (165 – 210)	5.26 – 9.74 (207 – 383)	9.69– 16.78 (382 – 660)
100-inch (2.54 m)	2.03 × 1.52 (80 × 60)	4.05 – 5.33 (160 – 210)	5.27 – 6.72 (208 – 264)	6.61 – 12.21 (261 – 481)	12.17 – 21.03 (479 – 828)
120-inch (3.05 m)	2.44 × 1.83 (96 × 72)	4.89 – 6.42 (193 – 252)	6.35 – 8.08 (250 – 318)	7.97 – 14.69 (314 – 578)	14.64 – 25.28 (577 – 995)
150-inch (3.81 m)	3.05 × 2.29 (120 × 90)	6.13 – 8.05 (242 – 317)	7.96 – 10.14 (314 – 399)	10.00 – 18.40 (394 – 724)	18.35 – 31.66 (723 – 1,246)
200-inch (5.08 m)	4.06 × 3.05 (160 × 120)	8.21 – 10.77 (324 – 424)	10.66 – 13.56 (420 – 533)	13.38 – 24.58 (527 – 968)	24.54 – 42.29 (967 – 1,665)

Projection distance formula

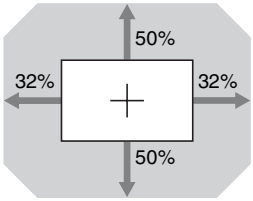
D: Projected image size (Diagonal)

Unit: m (inches)

Lens	Projection distance L (minimal length)	Projection distance L (maximal length)
VPLL-FM22	L = 0.0185 × D – 0.0524 (L = 0.7265 × D – 2.0633)	–
VPLL-ZM32	L = 0.0305 × D – 0.0581 (L = 1.2027 × D – 2.2890)	L = 0.0337 × D – 0.0549 (L = 1.3267 × D – 2.1606)
VPLL-ZM42	L = 0.0387 × D – 0.0558 (L = 1.5251 × D – 2.1962)	L = 0.0485 × D – 0.0524 (L = 1.9097 × D – 2.0625)
VPLL-ZP41	L = 0.0523 × D – 0.0757 (L = 2.0585 × D – 2.9822)	L = 0.0640 × D – 0.1052 (L = 2.5203 × D – 4.1418)
VPLL-ZM102	L = 0.0696 × D – 0.1755 (L = 2.7411 × D – 6.9075)	L = 0.1022 × D – 0.1635 (L = 4.0233 × D – 6.4371)
VPLL-ZM101	L = 0.0937 × D – 0.2145 (L = 3.6886 × D – 8.4462)	L = 0.1365 × D – 0.2063 (L = 5.3734 × D – 8.1224)
VPLL-Z4015	L = 0.0416 × D – 0.1100 (L = 1.6375 × D – 4.3315)	L = 0.0544 × D – 0.1029 (L = 2.1413 × D – 4.0525)
VPLL-Z4019	L = 0.0539 × D – 0.1260 (L = 2.1217 × D – 4.9594)	L = 0.0684 × D – 0.1200 (L = 2.6930 × D – 4.7225)
VPLL-Z4025	L = 0.0677 × D – 0.1610 (L = 2.6648 × D – 6.3404)	L = 0.1237 × D – 0.1510 (L = 4.8702 × D – 5.9456)
VPLL-Z4045	L = 0.1238 × D – 0.2159 (L = 4.8725 × D – 8.5019)	L = 0.2126 × D – 0.2269 (L = 8.3702 × D – 8.9328)

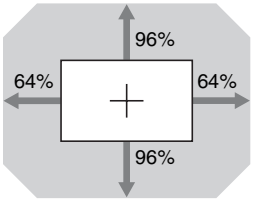
Lens shift range

■ VPLL-ZM32, VPLL-ZM42, VPLL-ZM102



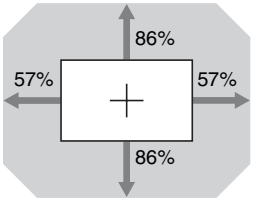
$V_{SUP} = V_{SDN} = 50 - 1.563 \times (H_{SR} \text{ or } H_{SL})$ [%]
$H_{SR} = H_{SL} = 32 - 0.640 \times (V_{SUP} \text{ or } V_{SDN})$ [%]

■ VPLL-ZP41, VPLL-ZM101, VPLL-Z4019, VPLL-Z4025, VPLL-Z4045



$V_{SUP} = V_{SDN} = 96 - 1.500 \times (H_{SR} \text{ or } H_{SL})$ [%]
$H_{SR} = H_{SL} = 64 - 0.667 \times (V_{SUP} \text{ or } V_{SDN})$ [%]

■ VPLL-Z4015

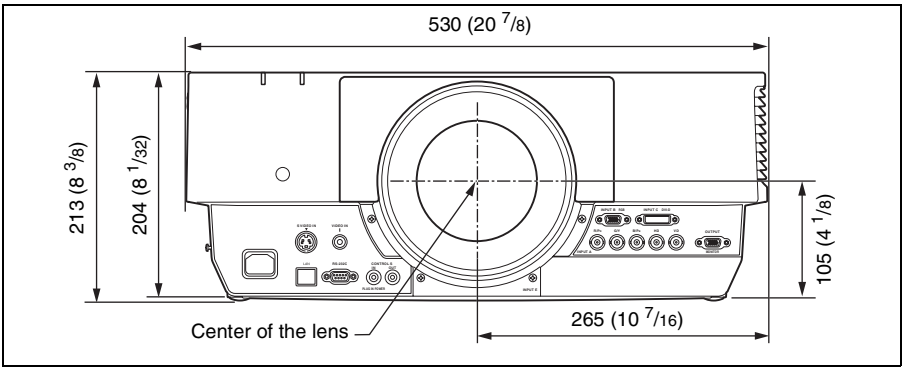


$V_{SUP} = V_{SDN} = 86 - 1.509 \times (H_{SR} \text{ or } H_{SL})$ [%]
$H_{SR} = H_{SL} = 57 - 0.663 \times (V_{SUP} \text{ or } V_{SDN})$ [%]

Dimensions

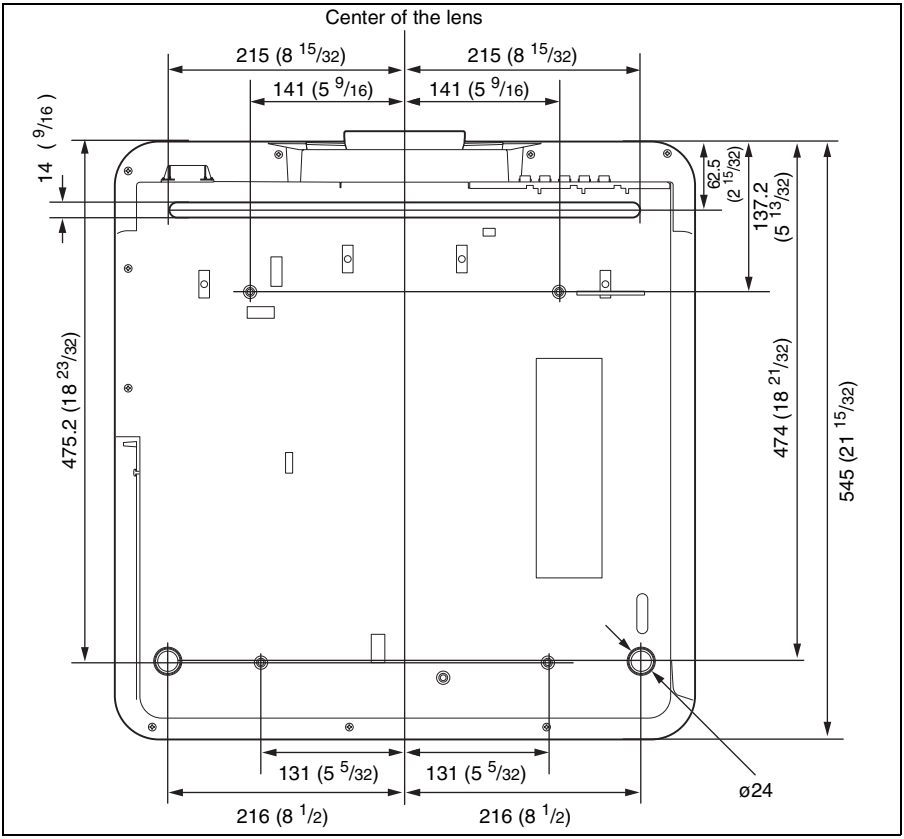
Front

Unit: mm (inches)



Bottom

Unit: mm (inches)

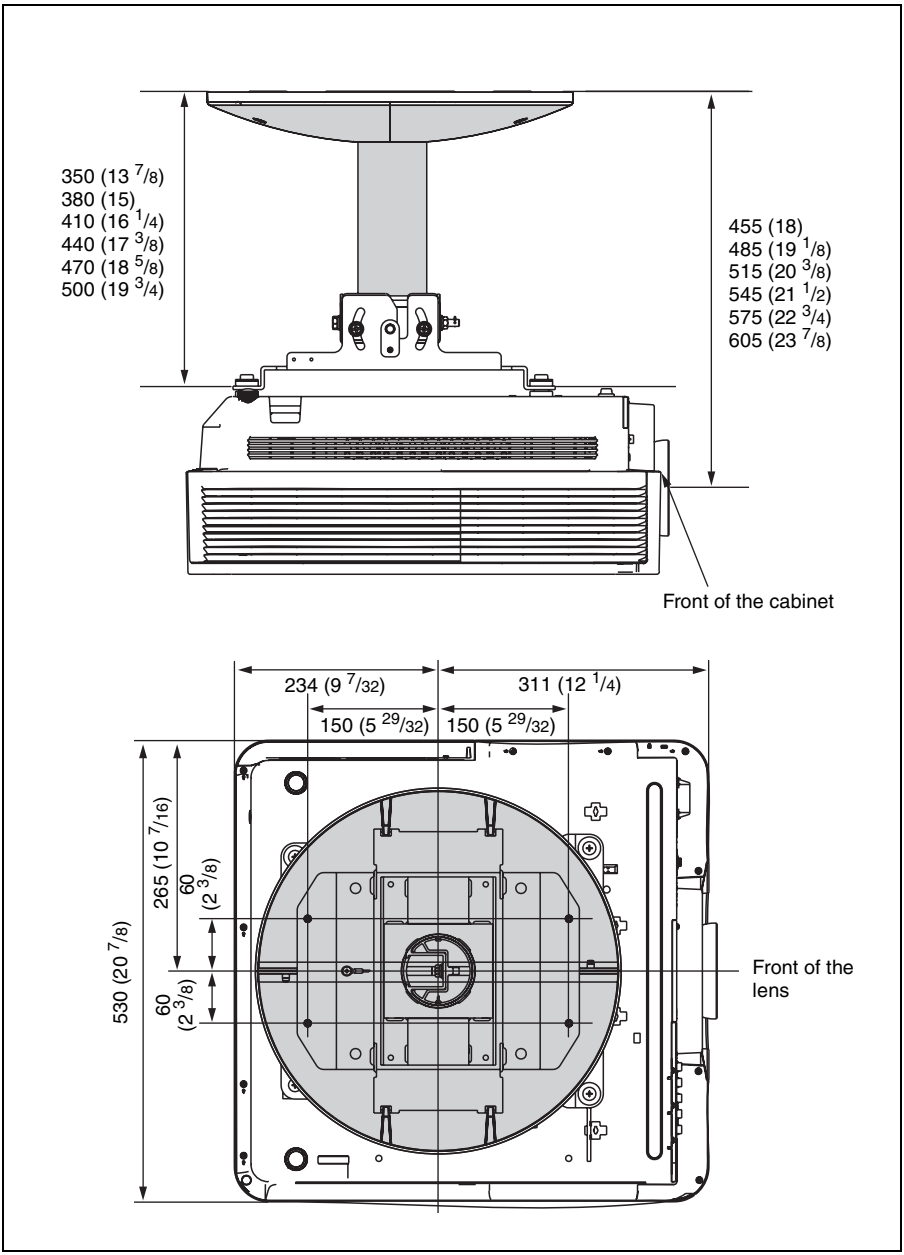


When using the PSS-630 projector suspension support

Caution

Never mount the projector on the ceiling or move it by yourself. Be sure to consult with a Sony dealer (charged).

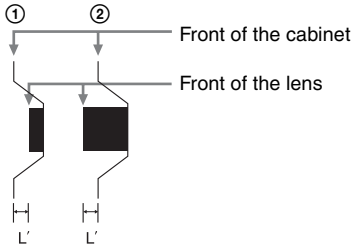
Unit: mm (inches)



The distance L' between the front of the lens (center) and the front of the cabinet

Unit: mm (inches)

Lens	L'	Type
VPLL-FM22	30.9 (1 7/32)	①
VPLL-ZM32	42.5 (1 11/16)	①
VPLL-ZM42	40.1 (1 19/32)	①
VPLL-ZP41	9.1 (1 1/32)	②
VPLL-ZM102	3.0 (1/8)	①
VPLL-ZM101	41.3 (1 5/8)	②
VPLL-Z4015	47.8 (1 7/8)	②
VPLL-Z4019	26.7 (1 1/16)	②
VPLL-Z4025	55.4 (2 3/16)	②
VPLL-Z4045	53.0 (2 3/32)	②



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