SONY®

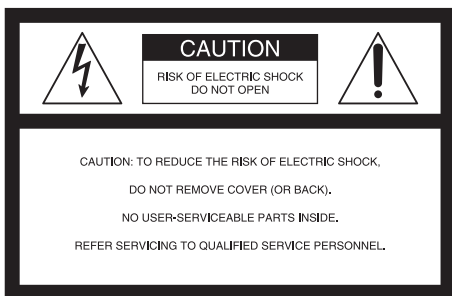# *Data Projector*

Operating Instructions ——————————— GB

VPL-CS5
VPL-CX5

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.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the USA

If you have any questions about this product, you may contact:
Sony Electronics Inc.
Attn: Business Information Center (BIC)
12451 Gateway Boulevard
Ft. Myers, Florida 33913
Telephone No.: 800-686-7669

The number below is for FCC related matters only.

Declaration of Conformity
Trade Name: SONY
Model No.: VPL-CS5/VPL-CX5
Responsible Party: Sony Electronics Inc.
Address: 680 Kinderkamack Road, Oradell, NJ 07649 U.S.A.
Telephone No.: 201-930-6972

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

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

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

Table of Contents

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.
- Be careful not to have your fingers caught by the adjuster. The powered tilt adjuster of this unit automatically extends when the power is turned on, and is put away automatically when the power is turned off. Do not touch the unit while the adjuster is in operation. Adjust the powered tilt adjuster carefully after its automatic operation is completed.
- Do not spread a cloth or paper under the unit.

On illumination

- To obtain the best picture, the front of the screen should not be exposed to direct lighting or sunlight.
- Ceiling-mounted spot lighting is recommended. Use a cover over fluorescent lamps to avoid lowering the contrast ratio.
- Cover any windows that face the screen with opaque draperies.
- It is desirable to install the projector in a room where floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it is recommended that the carpet and wall paper be changed to a dark color.

On preventing internal heat build-up

After you turn off the power with the I / ⏻ key, 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 cleaning

- To keep the cabinet looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner, benzene, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.
- Clean the filter at regular intervals.

On LCD data projector

- The LCD data projector is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD data projector. This is a normal result of the manufacturing process and does not indicate a malfunction.

Notes on Installation

Unsuitable Installation

Do not install the projector in the following situations. **These installations may cause malfunction or damage** to the projector.

Poorly ventilated
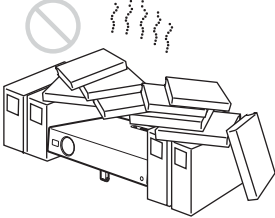
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes. When the internal heat builds up due to the block-up, the temperature sensor will function with the message "High temp.! Lamp off in 1 min." The power will be turned off automatically after one minute.
- Leave space of more than 30 cm (11 $^7/_8$ inches) around the unit.
- Be careful that the ventilation holes may inhale tininess such as a piece of paper.

Highly heated and humid
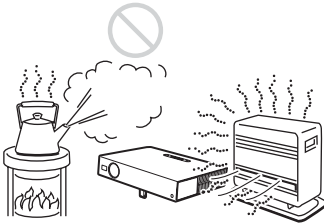
- Avoid installing the unit in a location where the temperature or humidity is very high, or temperature is very low.
- To avoid moisture condensation, do not install the unit in a location where the temperature may rise rapidly.

Very dusty

Avoid installing the unit in a location where there is a lot of dust; otherwise, the air filter will be obstructed. The dust blocking the air through the filter may cause raising the internal heat of the projector. Clean it up periodically.
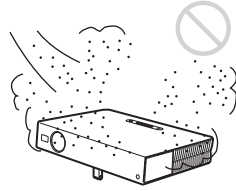
Unsuitable Conditions

Do not use the projector under the following conditions.

Toppling the unit

Avoid using as the unit topples over on its side. It may cause malfunction.
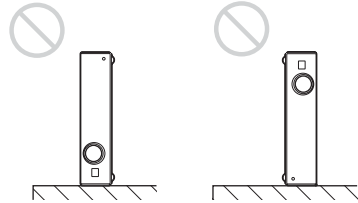
Tilting the unit out of the range of the adjuster setting
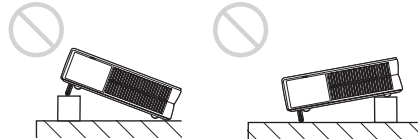
Avoid using when the unit is tilted out of the range of the adjuster setting. Such installation may cause malfunction.

Blocking the ventilation holes
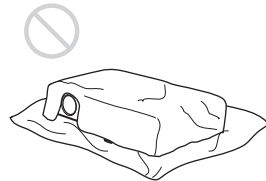
Avoid using something to cover over the ventilation holes (exhaust/intake); otherwise, the internal heat may build up.

For details on the ventilation holes (intake/ exhaust), see "Location and Function of Controls" on page 10.

Installing the unit at altitudes

Before installing the unit at altitudes higher than 1500 m (4921 feet), consult qualified Sony personel. Installation at such altitudes may affect the reliability of the projector.

Features

High operability

- **Intelligent Auto-setup function**
  Simply press the power key, and the projector automatically performs the setups required before use. The projector opens the lens protector, corrects the V Keystone, and sets optimum conditions for projection. This function is called Intelligent Auto-setup.
  For easier operations, the keys that will be used frequently are allocated on the top of the projector.

Accepts various input signals

- **Scan converter loaded**
  This projector has a build-in scan converter that converts the input signal within 1024×768 dots (VPL-CX5) or 800×600 dots (VPL-CS5) .
- **Compatible input signals**
  This projector accepts video signals of composite, S video, and component as well as VGA, SVGA, XGA, SXGA[1] and SXGA+[1] signals, which all can be displayed.
- **Compatible with six color systems**
  NTSC, PAL, SECAM, NTSC4.43[2], PAL-M, or PAL-N color system can be selected automatically or manually.

Easy presentation

- **Simple setup with external equipment**
  This projector is preset for 38 kinds[3] (VPL-CX5) of input signals. You can project images from an external signal source just by connecting the equipment with the supplied cable.
  You can use the supplied Remote Commander as the wireless mouse by connecting the projector to the computer with the USB cable. You can also control the projector by using the application software (Projector Station)[4] supplied with the projector from a computer operated with Windows 98, Windows 98 SE, Windows ME, Windows 2000 or Windows XP.

Easy-to-use Remote Commander

The Remote Commander is equipped with various convenient keys, including the D ZOOM key for zooming in on the image, the FREEZE key for keeping the image projected even if the equipment is disconnected, and the MUTING PIC key for muting the picture temporarily.

Memory Stick slot (VPL-CX5 only)

By inserting a **Memory Stick** into the built-in **Memory Stick** slot, you can make the presentation easily without connecting the computer.

High brightness, high picture quality

- **High brightness**
  Adopting Sony's unique new, high-efficiency optical system allows the 165 W UHP lamp a light output of 2000 ANSI lumen (VPL-CX5) or 1800 ANSI lumen (VPL-CS5).

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1) The SXGA and SXGA+ signals are available for the VPL-CX5 only.
2) NTSC4.43 is the color system used when playing back a video recorded on NTSC on a NTSC4.43 system VCR.
3) The VPL-CS5 is preset for 25 kinds of input signals.
4) The application software (Projector Station) can be used with the VPL-CX5 only.

- **High resolution**
  For VPL-CX5: Three superhigh-aperture 0.7-inch XGA panels with approximately 790,000 pixels, and with micro-lens array, provide a resolution of 1024 × 768 dots (horizontal/vertical) for RGB input, and 750 horizontal TV lines for video input.
  For VPL-CS5: Three superhigh-aperture 0.7-inch SVGA panels with approximately 480,000 pixels provide a resolution of 800 × 600 dots (horizontal/vertical) for RGB input, and 600 horizontal TV lines for video input.

Quiet operation

Because the projector uses Sony's unique cooling mechanism, it operates more quietly.

High portability

- **Light weight/small size/simple design**
  This projector has been miniaturized to approx. 2.7 kg (5 lb 15 oz) in weight and B5-file size.
  Its simple yet sophisticated design fits comfortably in your office.

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- Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.
- IBM PC/AT, VGA, SVGA, XGA and SXGA are registered trademarks of the International Business Machines Corporation, U.S.A.
- Kensington is a registered trademark of Kensington Technology Group.
- Macintosh is a registered trademark of Apple Computer, Inc.
- VESA is a registered trademark of Video Electronics Standard Association.
- Display Data Channel is a trademark of Video Electronics Standard Association.
- **Memory Stick** and ⬆️ are trademarks of Sony Corporation.

Location and Function of Controls

Top/Front/Left Side
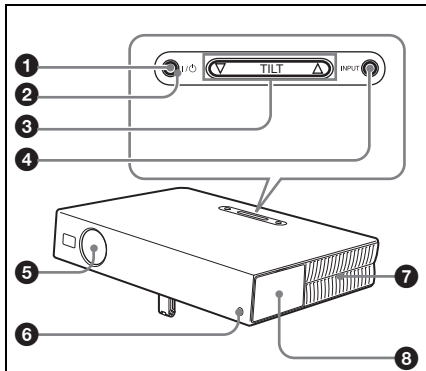
Rear/Right Side/Bottom
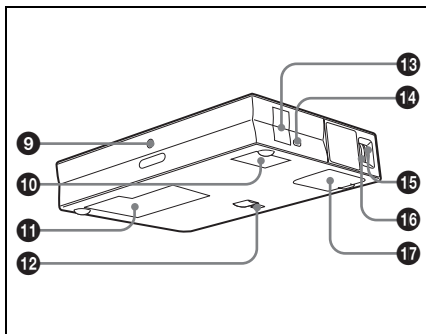
a l / ⏻ (on/standby) key

Turns on and off the projector when the projector is in standby mode. The ON/STANDBY indicator around the l / ⏻ key lights in green when the power is turned on.
When turning off the power, press the l / ⏻ key twice following the message on the screen, or press and hold the key for about two seconds.

For details on steps for turning off the power, see "To turn off the power" on page 26.

b ON/STANDBY indicator (located around the l / ⏻ key)

Lights up or flashes under the following conditions:
– Lights in red when a AC power cord is plugged into a wall outlet. Once in standby mode, you can turn on the projector with the l / ⏻ key.
– Lights in green when the power is turned on.
– Flashes in green while the cooling fan runs after the power is turned off with the l / ⏻ key. The fan runs for about 90 seconds after the power is turned off.
The ON/STANDBY indicator flashes quickly for the first 60 seconds. During this time, you cannot light up the ON/STANDBY indicator with the l / ⏻ key.
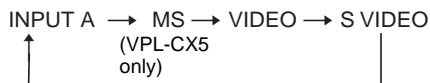
For details on the LAMP/COVER and the TEMP/FAN indicators, see on page 41.

c TILT adjustment key

For details, see "How to use the powered tilt adjuster" on page 11.

d INPUT key

Selects the input signal. Each time you press the key, the input signal switches as follows:

INPUT A ⟶ MS ⟶ VIDEO ⟶ S VIDEO
         (VPL-CX5
         only)

❺ Lens protector (lens cover)

The lens protector automatically opens when the power is turned on.

❻ Front remote control detector

❼ Ventilation holes (exhaust)

❽ Connector/Control panel

For details, see "Connector Panel" and "Control Panel" on page 12.

❾ Rear remote control detector

❿ Ventilation holes (intake)

⓫ Lamp cover

⓬ Powered tilt adjuster

⓭ Speaker

⓮ Security lock

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

⓯ Focus ring

Adjusts the picture focus.

⓰ Zoom ring

Adjusts the picture size.

⓱ Ventilation holes (intake)/air filter cover

Notes

- **Do not place anything near the ventilation holes as it may cause internal heat build-up.**
- **Do not place your hand or objects near the ventilation holes as it may cause the air coming out heat build-up.**
- To maintain optimal performance, **clean the air filter every 300 hours.**

For details, see "Cleaning the Air Filter" on page 37.

How to use the powered tilt adjuster

To adjust the height

Adjust the height of the projector as follows:

1 Press the I / ⏻ key

The lens protector opens, and the powered tilt adjuster rises automatically. The adjuster stops at its previously adjusted position.

Powered tilt adjuster
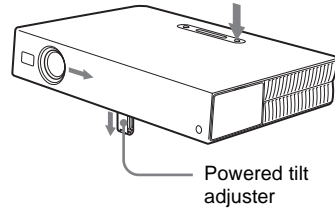
2 Press △ or ▽ of the TILT key to adjust the tilt of the projector.

You may press the KEYSTONE key on the Remote Commander to display the Tilt menu and adjust the tilt using the ↑/↓/←/→ keys.

to lower the projector | to raise the projector

TILT

TILT adjustment key
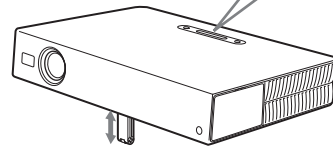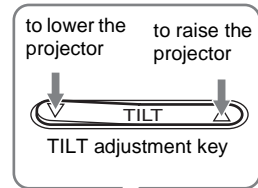
Notes

- Be careful not to let the projector down on your fingers.
- Do not push hard on the top of the projector with the powered tilt adjuster out.
  It may be occurred malfunction.

Control Panel
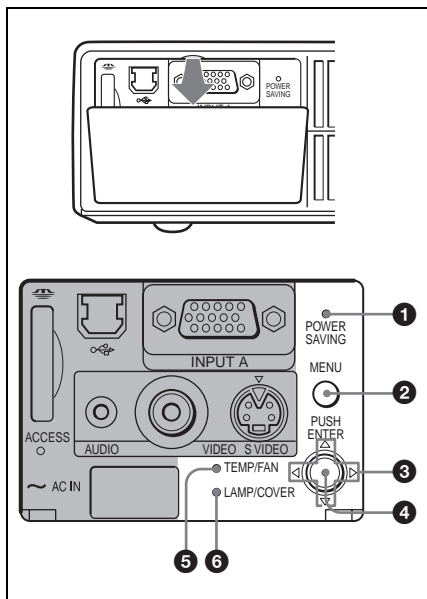
① POWER SAVING indicator

Lights up when the projector is in power saving mode. When "Power Saving" in the SET SETTING menu is set to "ON," the projector goes into power saving mode if no signal is input for 10 minutes. Although the lamp goes out, the cooling fan keeps running. The power saving mode is canceled when a signal is input or any key is pressed. In power saving mode, any key does not function for the first 60 seconds after the lamp goes out.

② MENU key

Displays the on-screen menu. Press again to clear the menu.

③ Arrow keys (△/▽/◁/▷)

Select the menu or to make various adjustments.

④ ENTER key

Enters the settings of items in the menu system.

⑤ TEMP (Temperature)/FAN indicator

Lights up or flashes under the following conditions:
– Lights up when temperature inside the projector becomes unusually high.
– Fashes when the fan is broken.

For details, see page 41.

⑥ LAMP/COVER indicator

Lights up or flashes under the following conditions:
– Lights up when the lamp has reached the end of its life or becomes a high temperature.
– Flashes when the lamp cover or air filter cover is not secured firmly.

For details, see page 41.

Connector Panel
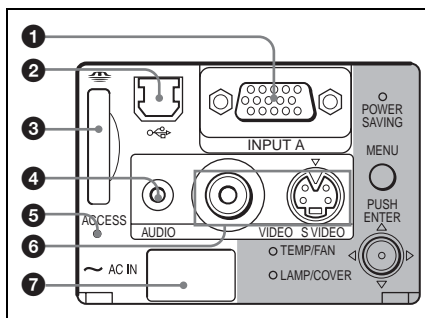
① INPUT A connector (HD D-sub 15-pin, female)

Connect to external equipment such as a computer.
Connects to the monitor output on a computer using the supplied cable.
When inputting a component or 15k RGB signal, use an optional cable.

For details, see "To connect a 15k RGB/ Component equipment" on page 20.

② USB connector (USB plug for upstream, 4-pin)

Connect to the USB connector on a computer. When you connect the projector to the computer, you can

control the mouse function with the supplied Remote Commander. The supplied application software (VPL-CX5 only) can be installed in the computer attached to this connector.

c Memory Stick slot (VPL-CX5 only)

The **Memory Stick** can be inserted. Never insert an object other than the **Memory Stick**.

For details, see the attached "Operating Instructions" for **Memory Stick***.*

d AUDIO (stereo minijack) connector

When listening to sound output from the computer, connect to the audio output of the computer.
When listening to sound output from the VCR, connect to the audio output of the VCR.

e Access lamp

Lights during having access to the **Memory Stick**.
Do not remove the **Memory Stick** while the access lamp is lit.

f Video input connector

Connect to external video equipment such as a VCR.
• **VIDEO (phono type):** Connects to the composite video output of video equipment.
• **S VIDEO (mini DIN 4-pin):** Connects to the S video output (Y/C video output) of video equipment.

g AC IN socket

Connects the supplied AC power cord.

Remote Commander

The keys that have the same names as those on the control panel function identically.
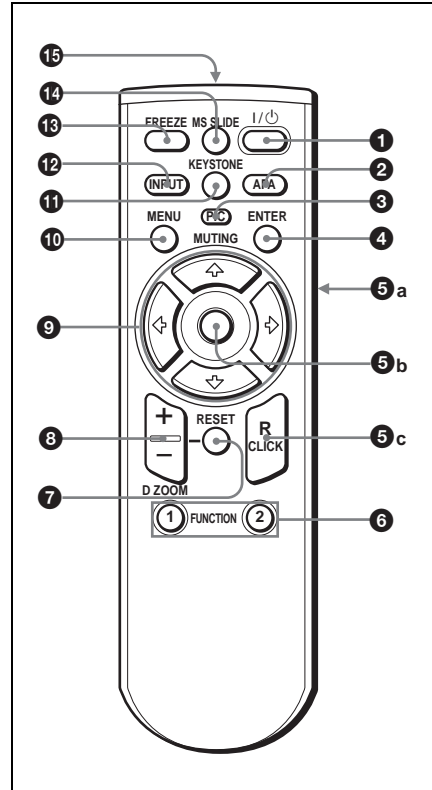
a I / ⏻ (on/standby) key

b APA (Auto Pixel Alignment) key

Adjusts a picture clearest automatically while a signal is input from a computer. Used when "Smart APA" in the SET SETTING menu is set to "Off." Normally set to "On."

Notes

• Press the APA key when the full image is displayed on the screen. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.

- You can cancel the adjustment by pressing the APA key again while "Adjusting" appears on the screen.
- The picture may not be adjusted properly depending on the kinds of input signals.
- Adjust the items "Dot Phase," "H Size" and "Shift" in the INPUT SETTING menu when you adjust the picture manually.

❸ PIC MUTING key

Used to mute the picture temporarily. Press again to restore the picture.

❹ ENTER key

❺ Keys emulate a mouse

Functions like a mouse of a computer connected via USB with the projector.
a) **L Click key (Rear):** Functions as the left button on a mouse.
b) **Joystick**
c) **R Click key:** Functions as the right button on a mouse.

Note

These keys function as mouse buttons of a computer only when the projector is connected to the computer using the USB cable.

For details, see "To control the computer using the supplied Remote Commander" on page 25.

❻ FUNCTION 1, 2 keys (VPL-CX5 only)

When you connect the projector with a computer, you can open a file on the screen by just pressing the FUNCTION key. This will enhance your presentation. To use this function, allocate a file to the FUNCTION key by using the supplied application software.

For details, see the README file and the HELP file supplied with the application software.

Note

Connect a computer to the projector using the USB cable to activate the FUNCTION keys.

For details, see "To connect an IBM PC/ AT compatible computer" on page 18".

❼ RESET key

Resets the value of an item back to its factory preset value or returns the enlarged image back to its original size. This key functions when the menu or a setting item is displayed on the screen.

❽ D ZOOM (Digital Zoom) +/– key

Enlarges the image at a desired location on the screen.
+: Pressing the + key once displays the icon. This icon indicates the point you want to enlarge. Use an arrow key (↑/ ↓/←/→) to move the icon to the point to be enlarged. Press the + key repeatedly until the image is enlarged to your requirements.
–: Pressing the – key reduces an image that has been enlarged with the D ZOOM + key.

❾ Arrow keys (↑/↓/←/→)

❿ MENU key

⓫ KEYSTONE key

Used to adjust the tilt of the projector, or the trapezoidal distortion of the image manually. Each time you press this key, the Tilt menu and the V Keystone menu is displayed alternately. Use the arrow keys (↑/↓/←/→) for the adjustment.

⓬ INPUT key

⓭ FREEZE key

Used to freeze the picture projected. To cancel the frozen picture, press the key again.
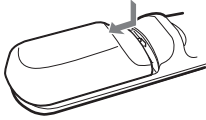
⓮ MS SLIDE key (VPL-CX5 only)

Used to execute the slide show. When the input signal is other than MS, it switches to MS. To begin the slide show, press the key again.

⓯ Infrared transmitter

To install batteries

1 Push and slide to open the lid, then install the two size AA (R6) batteries (supplied) with the correct polarity.

While pressing the lid, slide it.

Be sure to install the battery from the ⊖ side.
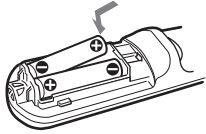
2 Replace the lid.

Notes on batteries
- Make sure that the battery orientation is correct when inserting batteries.
- Do not mix an old battery with a new one or different types of batteries.
- If you do not use the Remote Commander for a long time, remove the batteries to avoid damage from battery leakage. If batteries have leaked, remove them, wipe and dry the battery compartment, and replace the batteries with new ones.

Notes on 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 front or rear 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 commander can control the projector becomes.

Installing the Projector

This section describes how to install the projector.
The distance between the lens and the screen varies depending on the size of the screen. Use the following table as a guide.

Distance between the screen and the center of the lens
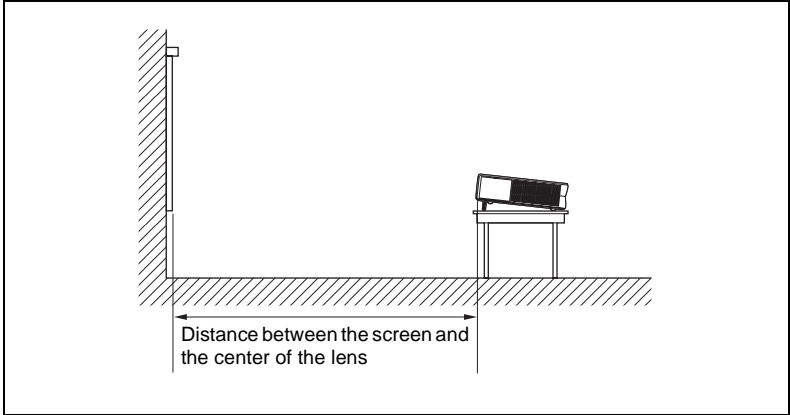
Unit: m (feet)

Screen size (inches)	40	60	80	100	120	150
Minimum Distance	1.5 (4.9)	2.3 (7.5)	3.1 (10.2)	3.9 (12.8)	4.7 (15.4)	5.9 (19.4)
Maximum Distance	1.9 (6.2)	2.9 (9.5)	3.8 (12.5)	4.8 (15.7)	5.7 (18.7)	7.2 (23.6)

There may be a slight difference between the actual value and the design value shown in the table above.

Connecting the Projector

When you connect the projector, make sure to:
- Turn off all equipment before making any connections.
- Use the proper cables for each connection.
- Insert the cable plugs firmly; loose connections may increase noise and reduce performance of picture signals. When pulling out a cable, be sure to pull it out from the plug, not the cable itself

To connect the projector, refer to the illustrations on the next and the following pages.

Connecting with a Computer

This section describes how to connect the projector to a computer.
For more information, refer to the computer's instruction manual.

Notes

- The projector accepts VGA, SVGA, XGA, SXGA (VPL-CX5 only) and SXGA+ (VPL-CX5 only) signals. However, we recommend that you set the output mode of your computer to XGA mode (VPL-CX5) or SVGA mode (VPL-CS5) for the external monitor.
- If you set your computer, such as a notebook type, to output the signal to both your computer's display and the external monitor, the picture of the external monitor may not appear properly. Set your computer to output the signal to only the external monitor.
  For details, refer to the computer's operating instructions supplied with your computer.
- This projector is compatible with a DDC2B (Digital Data Channel 2B). If your computer is compatible with a DDC, turn the projector on according to the following procedures.

  1 Connect the projector to the computer by using the supplied HD D-sub 15 pin cable.
  2 Turn the projector on.
  3 Start the computer.

To connect an IBM PC/AT compatible computer

Left side

Computer

to monitor output

HD D-sub 15-pin cable
(supplied)

Stereo audio connecting cable (not supplied)a)   to audio output

USB cable (supplied)

(Connect the USB cable to use a wireless
mouse or the Projector Station.)   to USB connector

a) Use a no-resistance cable.
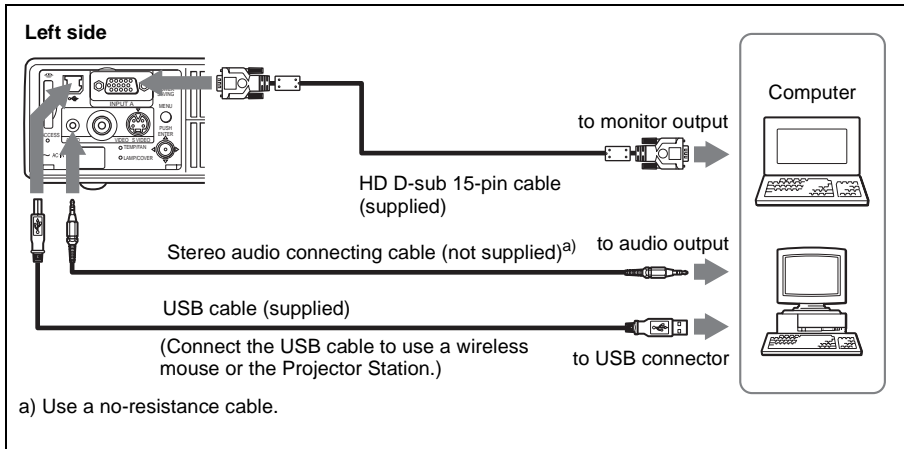
On the USB function

When connecting the projector to a computer by using the USB cable for the
first time, the computer recognizes the following devices automatically.
1 USB hub (general use) (VPL-CX5 only)
2 USB human interface device (wireless mouse function)
3 USB human interface device (projector control function) (VPL-CX5 only)

Recommended operating environment

When you use the USB function, connect the USB cable as illustrated above.
This application software and the USB function can be used on a computer
loaded with Windows 98, Windows 98 SE, Windows ME, Windows 2000 or
Windows XP preinstall models.

Notes

- Your computer may not start correctly when connected to the projector via the USB
  cable. In this case, disconnect the USB cable, restart the computer, then connect the
  computer to the projector using the USB cable.
- This projector is not guaranteed for suspend, standby mode. When you use the
  projector in suspend, standby mode, disconnect the projector from the USB port on
  the computer.
- Operations are not guaranteed for all the recommended computer environments.

To connect a Macintosh computer

To connect a Macintosh computer equipped with video output connector of a
type having two rows of pins, use a commercially available plug adaptor.
When you connect a USB capable Macintosh computer using the USB cable
to the projector, wireless mouse functions become available.

Note

The supplied software does not run on Macintosh computer.

Connecting with a VCR or 15k RGB/Component Equipment

This section describes how to connect the projector to a VCR and 15k RGB/component equipment.
For more information, refer to the instruction manuals of the equipment you are connecting.

To connect a VCR

Left side

Video cable (not supplied) or S-Video cable (not supplied)

Stereo audio connecting cable (not supplied)a)

to video output

to audio output

to S video output

a) Use a no-resistance cable.

VCR

To connect a 15k RGB/Component equipment

Left side

SMF-402 Signal Cable
(not supplied)
HD D-sub 15-pin (male) ↔ 3 × phono jack

Stereo audio connecting cable
(not supplied)a)
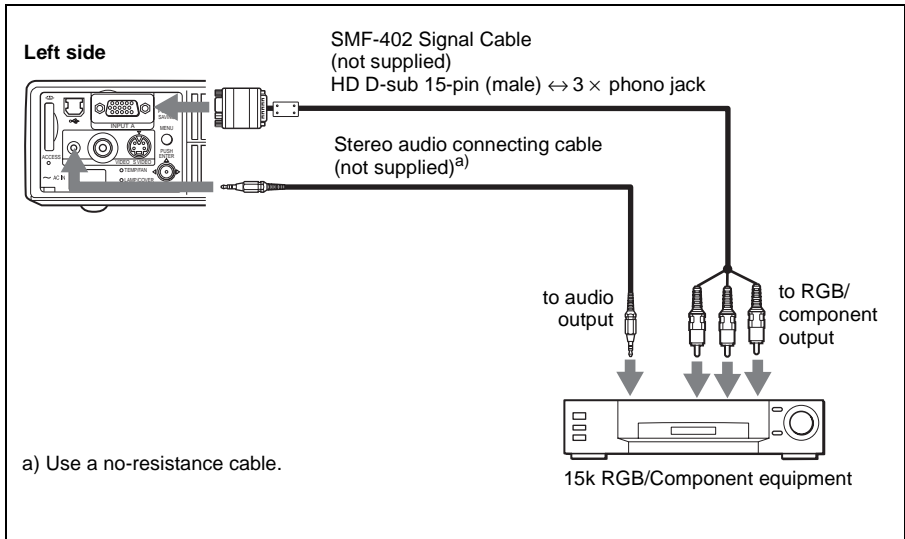
to audio
output

to RGB/
component
output

a) Use a no-resistance cable.

15k RGB/Component equipment

**Notes**

- Set the aspect ratio using "Wide Mode" in the INPUT SETTING menu according to the input signal.
- When you connect the unit to 15k RGB or component video equipment, select video GBR or component with the "Input-A Signal Sel." setting in the SET SETTING menu.
- Use the composite sync signal when you input the external sync signal from 15k RGB/component equipment.

Selecting the Menu Language

You can select one of nine languages for displaying the menu and other on-screen displays. The factory setting is English.
To change the menu language, proceed as follows:
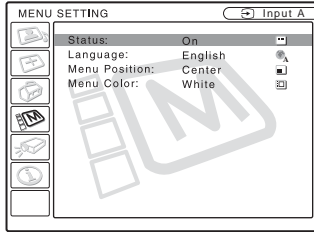
Front remote control detector
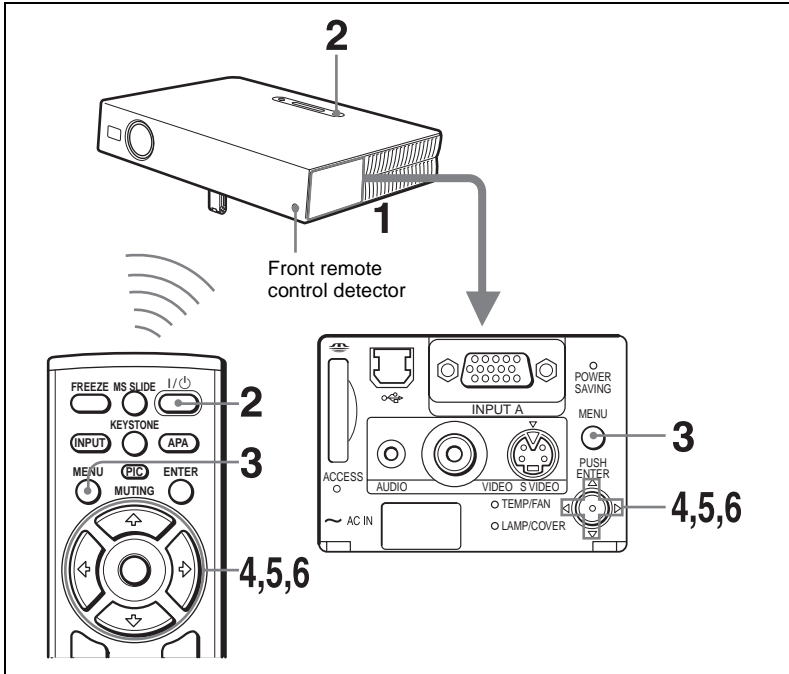
1 Open the connector panel, then plug the AC power cord into a wall outlet.

2 Press the I / ⏻ key to turn on the projector.

3 Press the MENU key.
The menu appears.
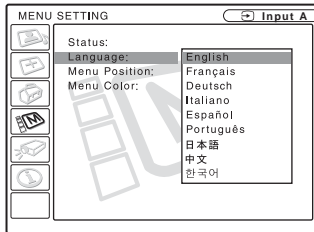The menu presently selected is shown as a yellow button.

PICTURE SETTING   Input A

Picture Mode: Standard
Adjust Picture...

Volume: 30
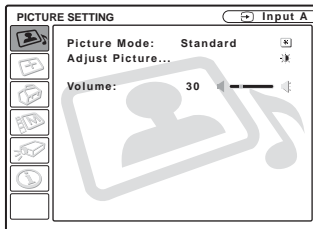
4 Press the ↑ or ↓ key to select the MENU SETTING menu, then press the ➡ or ENTER key.
The selected menu appears.

```
MENU SETTING                    ⊟ Input A

    Status:            On              ⋯
    Language:          English         🔤
    Menu Position:     Center          ▪◻
    Menu Color:        White           ▣
```

5 Press the ↑ or ↓ key to select "Language," then press the ➡ or ENTER key.

```
MENU SETTING                    ⊟ Input A

    Status:
    Language:          English
    Menu Position:     Français
    Menu Color:        Deutsch
                       Italiano
                       Español
                       Português
                       日本語
                       中文
                       한국어
```

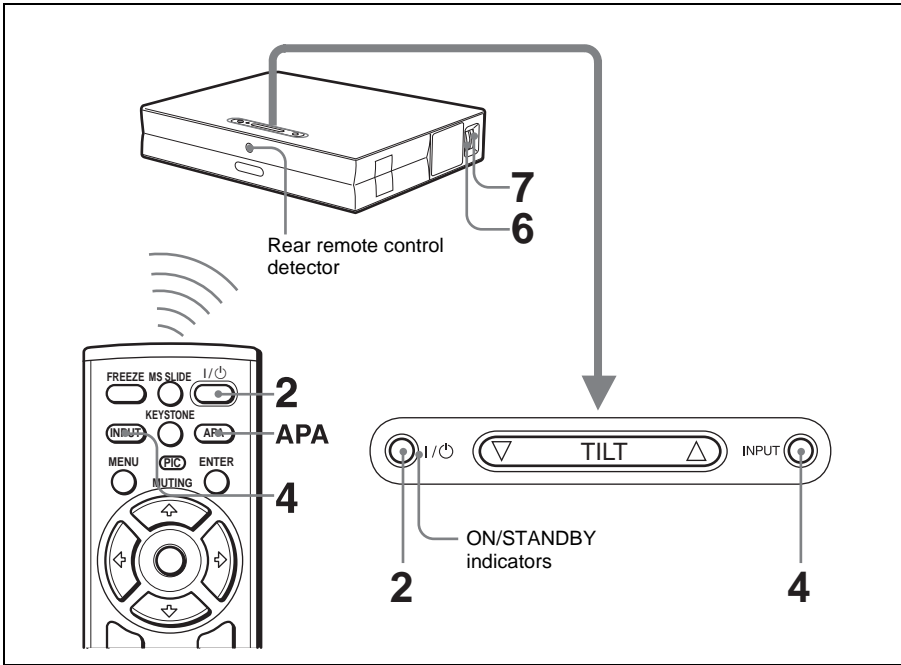**6** Press the ↑ or ↓ key to select a language, then press the ⬅ or ENTER key.
The menu changes to the selected language.

To clear the menu

Press the MENU key.
The menu disappears automatically if a key is not pressed for one minute.

Projecting

Rear remote control detector

FREEZE MS SLIDE

2

KEYSTONE

APA

MENU ENTER
MUTING

4

ON/STANDBY indicators

2

TILT

INPUT

4

7
6

1 Open the connector panel, plug the AC power cord into a wall outlet, then connect all equipment.

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

2 Press the I / ⏻ key.

The ON/STANDBY indicator lights in green and the Intelligent Auto-setup starts. The lens protector opens, and the powered tilt adjuster rises and stops at the previously adjusted position.

3 Turn on the equipment connected to the projector.

Depending on the type of your computer, for example a notebook, or an all-in-one LCD type, you may have to switch the computer to output to the projector by pressing certain keys (e.g., LCD/VGA, ◯/▣ , etc.), or by changing your computer's settings.
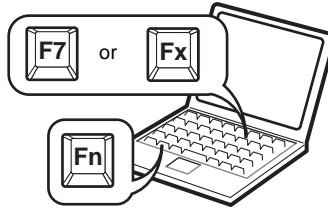
4 Press the INPUT key to select the input source.

To input from	Press INPUT to display
Computer connected to the INPUT A connector	INPUT A
Memory Stick inserted to the **Memory Stick** slot	MS
Video equipment connected to the VIDEO input connector	VIDEO
Video equipment connected to the S VIDEO input connector	S VIDEO

Smart APA (Auto Pixel Alignment) adjusts the picture of the connected equipment so that it is projected clearly.

Notes

- If "Auto Input Search" is set to "On," the projector searches for the signals from the connected equipment and displays the input channel where the input signals are found.

  For details, see "Auto Input Search" in the SET SETTING menu on page 32.

- The Smart APA is effective for the input signal from a computer only.

5 Adjust the position of the picture by pressing the TILT key.
To adjust the position of the picture using the Remote Commander, press the KEYSTONE key on the Remote Commander to display the Tilt menu and adjust the tilt using the ↑/↓/←/→ keys.

For details on the TILT adjustment key, see "How to use the powered tilt adjuster" on page 11.

Note

When you adjust the powered tilt adjuster with the TILT key, the automatic keystone adjustment is performed at the same time. If you do not want to perform the automatic keystone adjustment, set the V Keystone menu to "Manual." (See page 34.)

6 Turn the zoom ring to adjust the size of the picture.

7 Turn the focus ring to adjust the focus.

Note

The auto keystone adjustment may not correct the trapezoidal distortion perfectly, depending on the room temperature or the screen angle. In this case, adjust it manually. Press the KEYSTONE key on the Remote Commander until "V Keystone" appears on the screen, and adjust the value with the ↑/↓/←/→ key. The corrected value is effective until the power turn off.

Attention

Looking into the lens when projecting may cause injury to your eyes.

To switch from the Intelligent Auto-setup function to manual adjustments

You can switch the following functions of the Intelligent Auto-setup to manual adjustments using the menu.
- **V Keystone correction (correction of trapezoidal distortion)**
  Set "V Keystone" in the INSTALL SETTING menu to "Manual."
- **Smart APA (Auto Pixel Alignment)**
  Set "Smart APA" in the SET SETTING menu to "Off."
- **Auto Input Search**
  Set "Auto Input Search" in the SET SETTING menu to "Off."

For details on the menu operations, see "Using the MENU" on page 28.

To adjust the volume

The volume can be adjusted in the on-screen menu. See "Volume" in the PICTURE SETTING menu on page 29.

To mute the picture temporarily

Press the PIC MUTING key on the Remote Commander. Press it again to restore the picture.

To control the computer using the supplied Remote Commander

When you connect an IBM PC/AT compatible computer to the projector by using the USB cable, you can control the mouse of the computer using the Remote Commander.
The R/L CLICK keys and joystick function as follows.

Key and joystick	Function
R CLICK (front)	Right button
L CLICK (rear)	Left button
Joystick	Corresponds with the movements of the mouse

For details on USB connection, see "To connect an IBM PC/AT compatible computer" on page 18.

Note

Make sure that nothing obstructs the infrared beam between the Remote Commander and the remote control detector on the projector.

To turn off the power

1 Press the I / ⏻ key.

"POWER OFF? Please press I / ⏻ key again." appears to confirm that you want to turn off the power.

> **Note**
>
> A message disappears if you press any key except the I / ⏻ key, or if you do not press any key for five seconds.

2 Press the I / ⏻ key again.

The powered tilt adjuster is put away in the projector and the lens protector closes. The ON/STANDBY indicator flashes in green and the fan continues to run for about 90 seconds to reduce the internal heat. Also, the ON/STANDBY indicator flashes quickly for the first 60 seconds. During this time, you will not be able to light up again the ON/STANDBY indicator with the I / ⏻ key.

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

When you cannot confirm the on-screen message

When you cannot confirm the on-screen message in a certain condition, you can turn off the power by holding the I / ⏻ key for about two seconds.

> **Note**
>
> **Do not unplug the AC power cord while the fan is still running;** otherwise, the fan will stop even though the internal heat is still high, which could result in a breakdown of the projector.

On air filter

To maintain optimal performance, **clean the air filter every 300 hours**.

For details, see "Cleaning the Air Filter" on page 37.

Effective Tools for Your Presentation

### To enlarge the image (Digital Zoom function)

You can select a point in the image to enlarge. This function works when a signal from a computer is input, or when a still picture (except a movie picture) stored in a **Memory Stick** is projected (VPL-CX5 only).
This function does not work when a video signal is input.

1 Press the D ZOOM + key on the Remote Commander.
The digital zoom icon appears in the center of the image.

Digital zoom icon
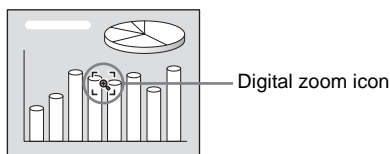
2 Move the icon to the point on the image you want to enlarge. Use the arrow key ($\uparrow$/$\downarrow$/$\leftarrow$/$\rightarrow$) to move the icon.

3 Press the D ZOOM + key again.
The image where the icon is located is enlarged. The enlargement ratio is displayed on the screen for a few seconds.
By pressing the + key repeatedly, the image size increases (ratio of enlargement: max. 4 times.)
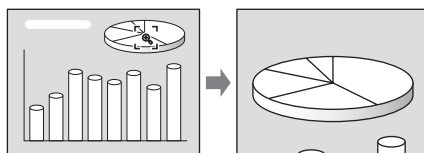
Use the arrow key ($\uparrow$/$\downarrow$/$\leftarrow$/$\rightarrow$) to scroll the enlarged image.
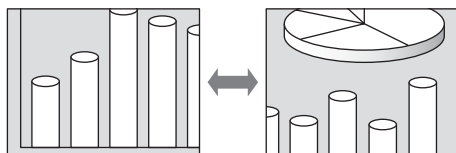
To return the image back to its original size

Press the D ZOOM – key.
Just pressing the RESET key returns the image back to its original size immediately.

To freeze the image projected (Freeze function)

Press the FREEZE key. "Freeze" appears when the key is pressed. This function works when a signal from a computer is input or when a still picture stored in a **Memory Stick** is projected (VPL-CX5 only).
To restore the original screen, press the FREEZE key again.

Using 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 21.

Display items

Input signal indicator
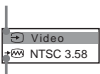
Input signal setting indicator

Picture adjustment menu

Contrast   0

Input signal indicator
Shows the selected input channel. x⏢ is displayed when no signal is input. You can hide this indicator using "Status" in the MENU SETTING menu.
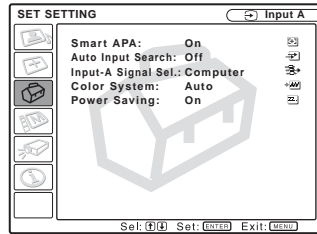
Input signal setting indicator
For Input A: Shows "Computer," "Component" or "Video GBR."
For Video/S Video input: Shows "Auto" or the "Color System" setting in the SET SETTING menu.

1 Press the MENU key.
The menu appears.
The menu presently selected is shown as a yellow button.

SET SETTING   Input A

Smart APA: On
Auto Input Search: Off
Input-A Signal Sel.: Computer
Color System: Auto
Power Saving: On

Sel: ↑↓   Set: ENTER   Exit: MENU

2 Use the ↑ or ↓ key to select a menu, then press the ➡ or ENTER key.
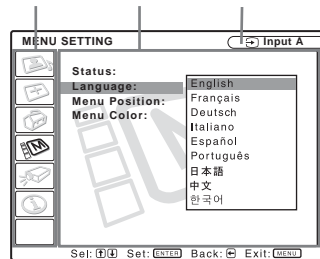The selected menu appears.

3 Select an item.
Use the ↑ or ↓ key to select the item, then press the ➡ or ENTER key.
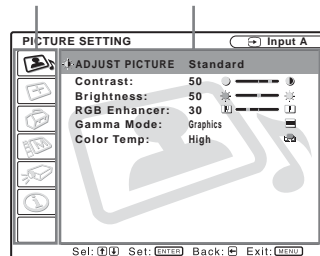The setting items are displayed in a pop-up menu or in a sub menu.

Pop-up menu

Menu   Setting items   Selected input signal

MENU SETTING   Input A

Status:
Language:
Menu Position:
Menu Color:

English
Français
Deutsch
Italiano
Español
Português
日本語
中文
한국어

Sel: ↑↓   Set: ENTER   Back: ←   Exit: MENU

Sub menu

Menu   Setting items

PICTURE SETTING   Input A

ADJUST PICTURE   Standard
Contrast: 50
Brightness: 50
RGB Enhancer: 30
Gamma Mode: Graphics
Color Temp: High

Sel: ↑↓   Set: ENTER   Back: ←   Exit: MENU

4 Make the setting or adjustment on an item.

- When changing the adjustment level:
  To increase the number, press the ↑ or
  ➡ key.
  To decrease the number, press the ↓
  or ← key.
  Press the ENTER key to restore the previous screen.
- When changing the setting:
  Press the ↑ or ↓ key to change the setting.
  Press the ENTER or ← key to restore the previous screen.

To clear the menu

Press the MENU key.
The menu disappears automatically if a key is not pressed for one minute.

To reset items that have been adjusted

Press the RESET key on the Remote Commander.
"Complete!" appears on the screen and **the settings appearing on the screen are reset to their factory preset values**.
Items that can be reset are:
- "Contrast," "Brightness," "Color," "Hue," "Sharpness" and "RGB Enhancer" in the Adjust Picture... menu.
- "Dot Phase," "H Size," and "Shift" in the Adjust Signal... menu

About the memory of the settings

The settings are automatically stored in the projector memory.

If no signal is input

If there is no input signal, "Cannot adjust this item." appears on the screen.

About the menu display

You can set the display position of the menu, intensity of the background picture and tone of the menu items as you like.
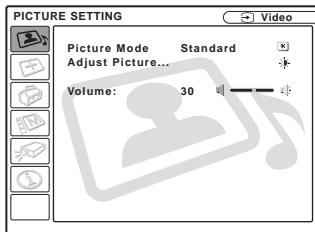
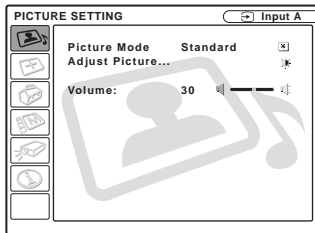*For details, see "The MENU SETTING Menu" on page 33.*

The PICTURE SETTING Menu

The PICTURE SETTING menu is used for adjusting the picture or volume.
Items that cannot be adjusted depending on the input signal are not displayed in the menu.

For details on the unadjustable items, see page 45.

When the video signal is input

When the RGB signal is input

Menu Items

Picture Mode

Selects the picture mode.

Dynamic: Emphasizes the contrast to produce a "dynamic" picture.

Standard: Normally select this setting. If the picture has roughness with the "Dynamic" setting, this setting reduces the roughness.

Volume

Adjusts the volume.

Adjust Picture... Menu Items

The unit can store the setting values of the following sub menu items for each "Dynamic" or "Standard" picture mode separately.

Contrast

Adjusts the picture contrast. The higher the setting, the greater the contrast between a dark portion and a bright portion of the picture. The lower the setting, the lower the contrast.

Brightness

Adjusts the picture brightness. The higher the setting, the brighter the picture. The lower the setting, the darker the picture.

Color

Adjusts color intensity. The higher the setting, the greater the intensity. The lower the setting, the lower the intensity.

Hue

Adjusts color tones. The higher the setting, the picture becomes greenish. The lower the setting, the picture becomes purplish.

Sharpness

Selects the picture sharpness from among "High," "Middle" and "Low." The "High" setting makes the picture sharp; the "Low" setting makes it soft.

RGB Enhancer

Adjusts the picture sharpness when RGB signals are input.
The higher the setting, the sharper the picture. The lower the setting, the softer the picture.

Gamma Mode

Selects a gamma correction curve.

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.

Color Temp.

Adjusts the color temperature.

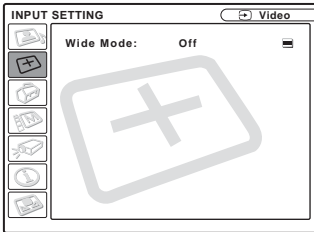**High:** Makes the white color bluish.

Low: Makes the white color reddish.
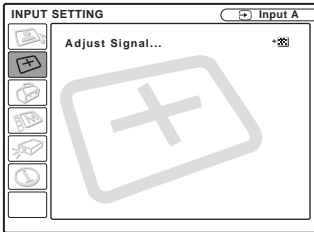
The INPUT SETTING Menu

The INPUT SETTING menu is used to adjust the input signal.
Items that cannot be adjusted depending on the input signal are not displayed in the menu.

For details on the unadjustable items, see page 45.

When the video signal is input

When the RGB signal is input

MENU Items

"Dot Phase," "H Size" and "Shift" are displayed in a sub menu under "Adjust Signal... ."

Dot Phase

Adjusts the dot phase of the LCD panel and the signal output from a computer.
Adjust the picture further for finer picture after the picture is adjusted by pressing the APA key.
Adjust the picture to where it looks clearest.

H Size

Adjusts the horizontal size of picture output from a connector. The higher the setting, the larger the horizontal size of the picture. The lower the setting, the smaller the horizontal size of the picture. Adjust the setting according to the dots of the input signal.

For details on the suitable value for the preset signals, see page 46.

Shift

Adjusts the position of the picture. H adjusts the horizontal position of the picture. V adjusts the vertical position of the picture.
As the setting for H increases, the picture moves to the right, and as the setting decreases, the picture moves to the left.
As the setting for V increases, the picture moves up, and as the setting decreases, the picture moves down. Use the ← or the → key to adjust the horizontal position and the ↑ and ↓ key for the vertical position.

Wide Mode

Sets the aspect ratio of the picture. When inputting 16:9 (squeezed) signal from equipment such as a DVD player, set to On.

Off: When the picture with ratio 4:3 is input.

On: When the picture with ratio 16:9 (squeezed) is input.

Scan Converter

Converts the signal to display the picture according to the screen size.

On: Displays the picture according to the screen size. The picture will lose some clarity.

Off: Displays the picture while matching one pixel of input picture element to that of the LCD. The picture will be clear but the picture size will be smaller.

Notes

- When XGA, SXGA or SXGA+ signal is input, this item will not be displayed (VPL-CX5).
- When SVGA or XGA signal is input, this item will not be displayed (VPL-CS5).

About the Preset Memory No.

This projector has 38 types of preset data for input signals (the preset memory). When a 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 (See page 35). You can also adjust the preset data through the INPUT SETTING menu.
This projector 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 46 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.	SIZE
Super Mac-2	23	1312
SGI-1	23	1320
Macintosh 19"	25	1328
The following are for the VPL-CX5 only.		
Macintosh 21"	27	1456
Sony News	36	1708
PC-9821 1280 × 1024	36	1600
WS Sunmicro	37	1664

Note

When the aspect ratio of input signal is other than 4:3, a part of the screen is displayed in black.

The SET SETTING Menu

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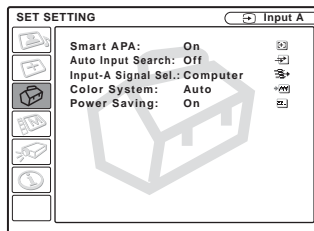
Menu Items

Smart APA

Activates or deactivates the Smart APA [1].

On: Normally select this setting. When a signal is input from a computer, the APA functions automatically so that the picture can be seen clearly. Once the specified input signal has been adjusted by the Smart APA, it will not be readjusted even when the cable is disconnected and connected again or the input channel is changed. You can adjust the picture by pressing APA key on the Remote Commander even if the Smart APA set to "On."

Off: The APA functions when you press the APA key on the Remote Commander.

1) The APA (Auto Pixel Alignment) automatically adjusts "Dot Phase," "H Size" and "Shift" in the INPUT SETTING menu for the input signal from a computer.

Auto Input Search

Normally set to "Off."
When set to "On," the projector detects input signals in the following order: Input-A/MS(VPL-CX5 only)/Video/S-Video. It

indicates the input channel when the power is turned on or the INPUT key is pressed.

Input-A Signal Sel.

Selects the computer, component or video GBR signal input from the INPUT A connector.

Note

If the setting is not correct, the color of the picture becomes strange or "Please check INPUT-A setting." appears on the screen and the picture is not displayed.

Color System

Selects the color system of the input signal. If you select "Auto," the projector detects the color system of the input signal automatically. If the picture is distorted or colorless, select the color system according to the input signal.
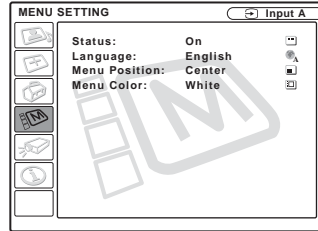
Power Saving

When set to "On," the projector goes into power saving mode if you do not operate the unit for 10 minutes with no signal input.

The MENU SETTING Menu

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

Menu Items

Status (on-screen display)

Sets up the on-screen display.

On: Shows all of the on-screen displays.

Off: Turns off the on-screen displays except for the menus, a 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, Français, Deutsch, Italiano, Español, Português, Japanese, Chinese and Korean.

Menu Position

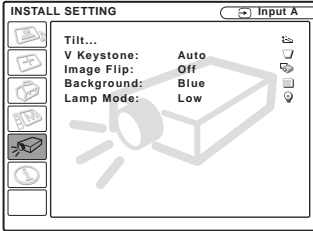Selects the display position of the menu from Top Left, Bottom Left, Center, Top Right and Bottom Right.

Menu Color

Selects the tone of the menu display from Black or White.

The INSTALL SETTING Menu

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


```
INSTALL SETTING              Input A

Tilt...
V Keystone:        Auto
Image Flip:        Off
Background:        Blue
Lamp Mode:         Low
```

Menu Items

Tilt...

Adjusts the position (height) of the projected picture. Pressing the Δ on the TILT adjustment key or ↑/➡ key on the Remote Commander, the more the projector tilts and the higher the position of the picture. Pressing the ∇ on the TILT adjustment key or ↓/⬅ key on the Remote Commander, the less the projector tilts and the lower the position of the picture.

V Keystone

Corrects the trapezoidal distortion caused by the projection angle. Select "Auto" for automatic correction, or "Manual" for manual correction using the ⬅ or ➡ key.

When the bottom of the trapezoid is longer than the top ⬜ **:** Sets a lower value.

When the top of the trapezoid is longer than the bottom ⬜ **:** Sets a higher value.

Note

The auto V Keystone adjustment may not correct the trapezoidal distortion perfectly, depending on the room temperature or the screen angle.

Image Flip

Flips the image on the screen horizontally and/or vertically.

Off: The image does not flip.

HV: Flips the image horizontally and vertically.

H: Flips the image horizontally.

V: Flips the image vertically.

Note

When the Image Flip is set to "HV" or "V", the Lamp Mode works with "Low" setting.

Background

Select the background color of the screen when no signal is input to the projector. Select black or blue. Normally set to "blue."
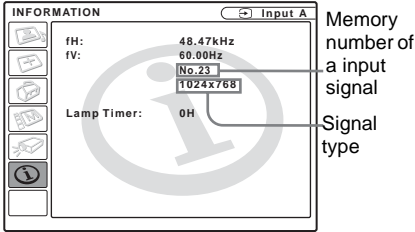
Lamp Mode

Sets the lamp brightness in the projection.

High: Illuminates the projected image brightly.

Low: Reduces fan noise and power consumption. The brightness of the projected image will be lower compared with the "High" setting.

The INFORMATION Menu

The INFORMATION menu displays the horizontal and vertical frequencies of the input signal and the used time of the lamp.

```
INFORMATION                    ⊡ Input A
     fH:              48.47kHz
     fV:              60.00Hz
                      No.23
                      1024x768

     Lamp Timer:      0H
     ⓘ
```

Memory number of a input signal

Signal type

Menu Items

fH

Displays the horizontal frequency of the input signal.
The displayed value is approximate.

fV

Displays the vertical frequency of the input signal.
The displayed value is approximate.

Lamp Timer

Indicates how long the lamp has been turned on.

Note

These only display on the screen. You cannot alter the display.

Adjustments and Settings Using the Menu

Maintenance

Replacing the Lamp

Replace the lamp with a new one in the following case.
• When the lamp has burnt out or dims
• "Please replace the LAMP." appears on the screen
• The LAMP/COVER indicator lights up
The lamp life varies depending on conditions of use. Use LMP-C150 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.

Caution

The lamp becomes a high temperature after turning off the projector with the I / ⏻ key. **If you touch the lamp, you may scald your finger. When you replace the lamp, wait for at least an hour for the lamp to cool.**

Notes

• **If the lamp breaks, consult with qualified Sony personnel.**
• Pull out the lamp by holding the handle. If you touch the lamp, you may be burned or injured.
• When removing the lamp, make sure it remains horizontal, then pull straight up. Do not tilt the lamp. If you pull out the lamp while tilted and if the lamp breaks, the pieces may scatter, causing injury.

1 Place a protective sheet (cloth) beneath the projector. Turn the projector over so you can see its underside.

Note

Be sure that the projector is stable after turning it over.

2 Open the lamp cover by loosening a screw with the Phillips screwdriver (supplied with the Projector Lamp).
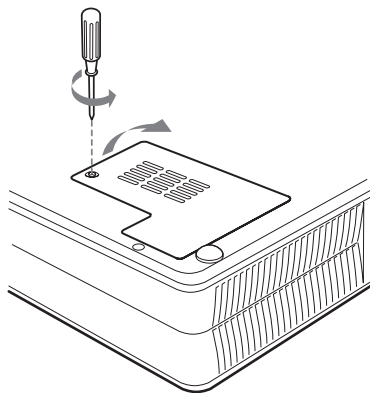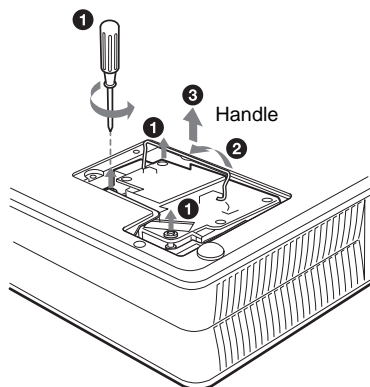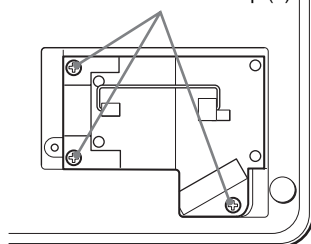

Note

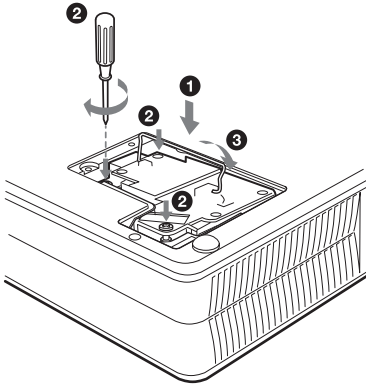For safety sake, do not loosen any other screws.

3 Loosen the three screws on the lamp unit with the Phillips screwdriver. Pull out the lamp unit by the handle.

Bottom
Screws on the lamp (3)
Handle

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

Notes

- Be careful not to touch the glass surface of the lamp.
- The power will not turn on if the lamp is not secured properly.

5 Close the lamp cover and tighten the screws.

6 Turn the projector back over.

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

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

Notes

- **Be sure to use the LMP-C150 Projector Lamp for replacement.** If you use lamps other than LMP-C150, the projector may cause a malfunction.
- Be sure to turn off the projector and unplug the power cord before replacing the lamp.
- Do not put your hands into the lamp replacement spot, or not fall any liquid or object into it **to avoid electrical shock or fire.**

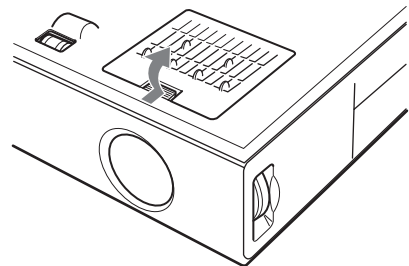## Cleaning the Air Filter

The air filter should be cleaned every 300 hours.
Remove dust from the outside of the ventilation holes with a vacuum cleaner.
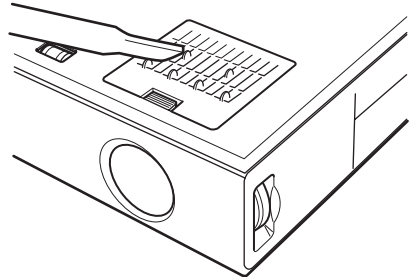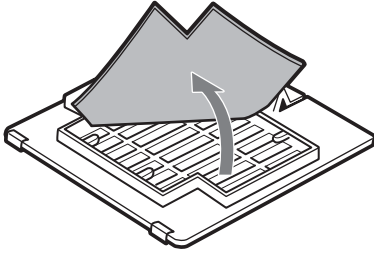

When it becomes difficult to remove the dust from the filter with a vacuum cleaner, remove the air filter and wash it.

1 Turn off the power and unplug the power cord.

2 Place a protective sheet (cloth) beneath the projector and turn the projector over.

3 Remove the air filter cover.

4 Remove the air filter.

5 Wash the air filter with a mild detergent solution and dry it in a shaded place.

6 Attach the air filter and replace the cover.

Notes

- **If you neglect to clean the air filter, dust may accumulate, clogging it. As a result, the temperature may rise inside the unit, leading to a possible malfunction or fire.**
- If the dust cannot be removed from the air filter, replace the air filter with the supplied new one.
- Be sure to attach the air filter cover firmly; the power will not be turned on if it is not closed securely.
- The air filter has a face and a reverse side. Place the air filter so that it fits in a notch on the air filter cover.

Troubleshooting

If the projector appears to be operating erratically, try to diagnose and correct the problem using the following instructions. If the problem persists, consult with qualified Sony personnel.

Power

Symptom	Cause and Remedy
The power is not turned on.	• The power has been turned off and on with the I / ⏻ key at a short interval. → Wait for about 90 seconds before turning on the power (see page 26). • The lamp cover is detached. → Close the lamp cover securely (see page 36). • The air filter cover is detached. → Close the air filter cover securely (see page 37).
Both the LAMP/COVER and TEMP/FAN indicators light up.	• The electrical system breaks down. → Consult with qualified Sony personnel.
The powered tilt adjuster and the lens protector do not close.	• The AC power cord is unplugged with the power of the projector turned on. → Connect the power cord plug to the AC outlet again, then turn off the power of the projector.

Picture

Symptom	Cause and Remedy
No picture.	• Cable is disconnected or the connections are wrong. → Check that the proper connections have been made (see page 17). • Input selection is incorrect. → Select the input source correctly using the INPUT key (see page 24). • The picture is muted. → Press the PIC MUTING key to release the picture muting (see page 25). • The computer signal is not set to output to an external monitor or set to output both to an external monitor and a LCD monitor of a computer. → Set the computer signal to output **only** to an external monitor (see page 17).
The picture is noisy.	• Noise may appear on the background depending on the combination of the numbers of dot input from the connector and numbers of pixel on the LCD panel. → Change the desktop pattern on the connected computer.
The picture from INPUT A connector is colored strange.	• Setting of "Input-A Signal Sel." in the SET SETTING menu is incorrect. → Select "Computer," "Video GBR" or "Component" correctly according to the input signal (see page 33).

Symptom	Cause and Remedy
"Please check INPUT-A setting." appears in spite of inputting the correct signal from INPUT A.	• Setting of "Input-A Signal Sel." in the SET SETTING menu is incorrect. ➔ Select "Computer," "Video GBR" or "Component" correctly according to the input signal (see page 33).
On-screen display does not appear.	• "Status" in the SET SETTING menu has been set to "Off." ➔ Set "Status" in the SET SETTING menu to "On" (see page 32).
Color balance is incorrect.	• Picture has not been adjusted properly. ➔ Adjust the picture (see page 30). • Projector is set to wrong color system. ➔ Set "Color System" in the SET SETTING menu to match the color system being input (see page 33).
The picture is too dark.	• Contrast or brightness has not been adjusted properly. ➔ Adjust the contrast or brightness in the "Adjust Picture..." menu properly (see page 29). • The lamp has burnt or dims. ➔ Replace the lamp with a new one (see page 36).
The picture is not clear.	• Picture is out of focus. ➔ Adjust the focus (see page 24). • Condensation has occurred on the lens. ➔ Leave the projector for about two hours with the power on .
The image extends beyond the screen.	• The APA key is pressed although there are black edges around the image. ➔ Display the full image on the screen and press the APA key. ➔ Adjust "Shift" in the INPUT SETTING menu properly (see page 31).
The picture flickers.	• "Dot Phase" in the INPUT SETTING menu has not been adjusted properly. ➔ Adjust "Dot Phase" in the INPUT SETTING menu properly (see page 31).

Sound

Symptom	Cause and Remedy
No sound.	• Cable is disconnected or the connections are wrong. ➔ Check that the proper connections have been made (see page 17). • The audio connecting cable is incorrect. ➔ Use a no-resistance stereo audio cable (see page 18). • The sound is not adjusted properly. ➔ Adjust the sound (see page 25).

Remote Commander

Symptom	Cause and Remedy
The Remote Commander does not work.	• The Remote Commander batteries are dead. ➔ Replace with a new battery (see page 15).

Others

Symptom	Cause and Remedy
The LAMP/COVER indicator flashes.	• The lamp cover or the air filter cover is detached. ➔ Attach the cover securely (see pages 36 and 37).
The LAMP/COVER indicator lights up.	• The lamp has reached the end of its life. ➔ Replace the lamp (see page 36). • The lamp becomes a high temperature. ➔ Wait for 90 seconds to cool down the lamp and turn on the power again (see page 26).
The TEMP/FAN indicator flashes.	• The fan is broken. ➔ Consult with qualified Sony personnel.
The TEMP/FAN indicator lights up.	• The internal temperature is unusually high. ➔ Check to see if nothing is blocking the ventilation holes.
Both the LAMP/COVER and TEMP/FAN indicators light up.	• The electrical system breaks down. ➔ Consult with qualified Sony personnel.

Warning Messages

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

Message	Meaning and Remedy
High temp.! Lamp off in 1 min.	• Internal temperature is too high. ➔ Turn off the power. ➔ Check to see if nothing is blocking the ventilation holes.
Frequency is out of range!	• This input signal cannot be projected as the frequency is out of the acceptable range of the projector. ➔ Input a signal that is within the range of the frequency. • The resolution setting of the output signal of a computer is too high. ➔ Set the setting of output to XGA (VPL-CX5) or SVGA (VPL-CS5) (see page 17).
Please check INPUT-A setting.	• You have input RGB signal from the computer when "Input-A Signal Sel." in the SET SETTING menu is set to "Component." ➔ Set "Input-A Signal Sel." correctly (see page 33).
Please replace the LAMP.	• It is time to replace the lamp. ➔ Replace the lamp.

Caution Messages

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

Message	Meaning and Remedy
Not applicable!	• You have pressed the wrong key. ➔ Press the appropriate key.

Specifications

Optical characteristics

Projection system
　　　　　　3 LCD panels, 1 lens, projection
　　　　　　system
LCD panel VPL-CS5: Superhigh-aperture
　　　　　　0.7-inch SVGA panel,
　　　　　　1,440,000 pixels (480,000
　　　　　　pixels × 3)
　　　　　　VPL-CX5: Superhigh-aperture
　　　　　　0.7-inch XGA panel with
　　　　　　micro-lens array, about
　　　　　　2,360,000 pixels (786,432
　　　　　　pixels × 3)
Lens　　　 1.2 times zoom lens (manual)
　　　　　　f 28.2 to 33.8 mm/F 1.8 to 2.15
Lamp　　　165 W UHP
Projection picture size
　　　　　　Range: 40 to 150 inches (diagonal
　　　　　　measure)
Light output VPL-CS5: ANSI lumen[1] 1800 lm
　　　　　　VPL-CX5: ANSI lumen[1] 2000 lm
　　　　　　(When the Lamp Mode is set to
　　　　　　"High")
Throwing distance
　　　　　　When the XGA signal is input
　　　　　　40-inch: 1.5 to 1.9 m
　　　　　　(4.9 to 6.2 feet)
　　　　　　60-inch: 2.3 to 2.9 m
　　　　　　(7.5 to 9.5 feet)
　　　　　　80-inch: 3.1 to 3.8 m
　　　　　　(10.2 to 12.5 feet)
　　　　　　100-inch: 3.9 to 4.8 m
　　　　　　(12.8 to 15.7 feet)
　　　　　　120-inch: 4.7 to 5.7 m
　　　　　　(15.4 to 18.7 feet)
　　　　　　150-inch: 5.9 to 7.2 m
　　　　　　(19.4 to 23.6 feet)

There may be a slight difference between the
actual value and the design value shown above.

1) ANSI lumen is a measuring method of
　American National Standard IT 7.228.

Electrical characteristics

Color system NTSC3.58/PAL/SECAM/
　　　　　　NTSC4.43/PAL-M/PAL-N
　　　　　　system, switched automatically/
　　　　　　manually
Resolution VPL-CS5: 600 horizontal TV lines
　　　　　　(Video input)
　　　　　　800 × 600 dots (RGB input)

VPL-CX5: 750 horizontal TV
　　　　　　lines (Video input)
　　　　　　1,024 × 768 dots (RGB input)
Acceptable computer signals
　　　　　　VPL-CS5: fH: 19 to 72 kHz
　　　　　　　fV: 48 to 92 Hz
　　　　　　VPL-CX5: fH: 19 to 92 kHz
　　　　　　　fV: 48 to 92 Hz
　　　　　　(Maximum input signal resolution:
　　　　　　　XGA 1024 × 768
　　　　　　　fV: 85 Hz (VPL-CS5),
　　　　　　　SXGA+ 1400 × 1050
　　　　　　　fV: 60 Hz (VPL-CX5))
1) Set the resolution and the frequency of the
　signal of the connected computer within the
　range of acceptable preset signals of the
　projector.

Applicable video signals
　　　　　　15 kHz RGB/component 50/60
　　　　　　Hz, composite video, S video
Speaker　　Monaural speaker system, 40 × 20
　　　　　　mm (1 5/8 × 13/16 inches), max.
　　　　　　1 W

Input/Output

Video input VIDEO: phono type
　　　　　　Composite video: 1 Vp-p ±2 dB
　　　　　　sync negative (75 ohms
　　　　　　terminated)
　　　　　　S VIDEO: Y/C mini DIN 4-pin
　　　　　　type (male)
　　　　　　Y (luminance): 1 Vp-p ±2 dB
　　　　　　sync negative (75 ohms
　　　　　　terminated)
　　　　　　C (chrominance): burst
　　　　　　0.286 Vp-p ±2 dB (NTSC)
　　　　　　(75 ohms terminated),
　　　　　　burst 0.3 Vp-p ±2 dB (PAL)
　　　　　　(75 ohms terminated)
INPUT A　 HD D-sub15-pin (female)
　　　　　　Analog RGB/component:
　　　　　　R/R-Y: 0.7 Vp-p ±2 dB
　　　　　　(75 ohms terminated)
　　　　　　G: 0.7 Vp-p ±2 dB
　　　　　　(75 ohms terminated)
　　　　　　G with sync/Y: 1 Vp-p ±2 dB
　　　　　　sync negative
　　　　　　(75 ohms terminated)
　　　　　　B/B-Y: 0.7 Vp-p ±2 dB
　　　　　　(75 ohms terminated)
　　　　　　SYNC/HD:
　　　　　　Composite sync input: 1-5 Vp-p
　　　　　　high impedance, positive/
　　　　　　negative
　　　　　　Horizontal sync input: 1-5 Vp-p
　　　　　　high impedance, positive/
　　　　　　negative

VD:
Vertical sync input: 1-5 Vp-p
high impedance, positive/
negative
AUDIO   Stereo minijack
            500 mVrms, impedance more
            than 47 kilohms
USB   Up (female) × 1
Memory Stick Slot
            × 1 (VPL-CX5 only)
Safety regulations
            UL60950, cUL (CSA No. 60950),
            FCC Class B, IC Class B,
            NEMKO (EN60950), CE
            (LVD, EMC), C-Tick

General

Dimensions $285 \times 68 \times 228$ mm (11 $^1/_4 \times$
             $2 \,^5/_8 \times 9$ inches) (w/h/d)
             (without the projection parts)
Mass   Approx. 2.7 kg (5 lb 15 oz)
Power requirements
             AC 100 to 240 V, 50/60 Hz
Power consumption
             Max. 240 W
             (Standby mode:
             VPL-CS5: 5 W
             VPL-CX5: 7 W)
Heat dissipation
             819 BTU
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 Commander (1)
             Size AA (R6) batteries (2)
             HD D-sub 15 pin cable (2 m) (1)
               (1-791-992-21)
             USB cable A type - B type (1)
               (1-790-081-31)
             CD-ROM (Application software)
               (VPL-CX5 only) (1)
             Carrying case (1)
             AC power cord (1)
             Air filter (for replacement) (1)
             Operating Instructions (1)
             Quick Reference Card (1)
             Ferrite core (1)
             Memory Stick (1) (VPL-CX5
               only)

Design and specifications are subject to change
without notice.

Optional accessories

Projector Lamp
             LMP-C150 (for replacement)
Signal Cable SMF-402 (HD D-sub 15-pin
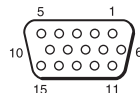   (male) ←→ 3 × phono type
               (male))
Screens   50-inch Portable Screen VPS-
               50C[1]
             100-inch Flat Screen
               VPS-100FH

*Some of the items may not be available in some
areas. For details, please consult your nearest
Sony office.*

1) VPS-50C may not be available in some areas.
   For details, please consult your nearest Sony
   office.

Pin assignment

INPUT A connector (HD D-sub 15-pin, female)

1	R/R-Y	9	N.C.
2	G/Y	10	GND
3	B/B-Y	11	GND
4	GND	12	DDC/SDA
5	GND	13	HD/C.Sync
6	GND (R)	14	VD
7	GND (G)	15	DDC/SCL
8	GND (B)		

Input signals and adjustable/setting items

Adjust Picture... menu

Item	Input signal				
	Video or S video (Y/C)	Com-ponent	Video GBR	Com-puter	B&W
Contrast	●	●	●	●	●
Brightness	●	●	●	●	●
Color	●	●	●	–	–
Hue	● (NTSC 3.58/ 4.43 only)	–	–	–	–
Sharpness	●	●	●	–	●
RGB Enhancer	–	–	–	●	–
Gamma Mode	–	–	●	●	–
Color Temp.	●	●	●	●	●
Volume	●	●	●	●	●

● : Adjustable/can be set

– : Not adjustable/cannot be set

INPUT SETTING menu

Item	Input signal				
	Video or S video (Y/C)	Com-ponent	Video GBR	Com-puter	B&W
Dot Phase	–	–	–	●	–
H Size	–	–	–	●	–
Shift	–	–	–	●	–
Scan Converter	–	–	–	● (VPL-CS5: lower than VGA, VPL-CX5: lower than SVGA)	–
Wide Mode	●	●	●	–	●

● : Adjustable/can be set

– : Not adjustable/cannot be set

Preset signals

Memory No.	Preset signal		fH (kHz)	fV (Hz)	Sync	SIZE
1	Video 60 Hz		15.734	59.940		
2	Video 50 Hz		15.625	50.000		
3	15k RGB/Component 60 Hz		15.734	59.940	S on G/Y or Composite Sync	
4	15k RGB/Component 50 Hz		15.625	50.000	S on G/Y or Composite Sync	
6	640 × 350	VGA mode 1	31.469	70.086	H-pos, V-neg	800
7		VGA VESA 85 Hz	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 85 Hz	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 72 Hz	37.861	72.809	H-neg, V-neg	832
14		VGA VESA 75 Hz	37.500	75.000	H-neg V-neg	840
15		VGA VESA 85 Hz	43.269	85.008	H-neg V-neg	832
16	800 × 600	SVGA VESA 56 Hz	35.156	56.250	H-pos, V-pos	1024
17		SVGA VESA 60 Hz	37.879	60.317	H-pos, V-pos	1056
18		SVGA VESA 72 Hz	48.077	72.188	H-pos, V-pos	1040
19		SVGA VESA 75 Hz	46.875	75.000	H-pos, V-pos	1056
20		SVGA VESA 85 Hz	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 43 Hz	35.524	86.958	H-pos, V-pos	1264
23		XGA VESA 60 Hz	48.363	60.004	H-neg V-neg	1344
24		XGA VESA 70 Hz	56.476	69.955	H-neg V-neg	1328
25		XGA VESA 75 Hz	60.023	75.029	H-pos, V-pos	1312
26		XGA VESA 85 Hz	68.677	84.997	H-pos, V-pos	1376
27	1152 × 864	SXGA VESA 70 Hz	63.995	70.019	H-pos, V-pos	1472
28		SXGA VESA 75 Hz	67.500	75.000	H-pos, V-pos	1600
29		SXGA VESA 85 Hz	77.487	85.057	H-pos, V-pos	1568
30	1152 × 900	Sunmicro LO	61.795	65.960	H-neg, V-neg	1504
31		Sunmicro HI	71.713	76.047	Composite Sync	1472
32	1280 × 960	SXGA VESA 60 Hz	60.000	60.000	H-pos, V-pos	1800
33		SXGA VESA 75 Hz	75.000	75.000	H-pos, V-pos	1728

Memory No.	Preset signal		fH (kHz)	fV (Hz)	Sync	SIZE
34*	1280 × 1024	SXGA VESA 43 Hz	46.433	86.872	H-pos, V-pos	1696
35		SGI-5	53.316	50.062	S on G	1680
36		SXGA VESA 60 Hz	63.974	60.013	H-pos, V-pos	1696
37		SXGA VESA 75 Hz	79.976	75.025	H-pos, V-pos	1688
38		SXGA VESA 85 Hz	91.146	85.024	H-pos, V-pos	1296
52	1400 × 1050	SXGA+ 60 Hz	63.981	60.020	H-pos, V-pos	1685

Memory No. 1 to No. 26 (VPL-CS5)
Memory No. 1 to No. 38, No. 52 (VPL-CX5)

Notes

- Whan a signal other than the preset signals shown above is input, the picture may not appear properly.
- Memory No. 22 and 34 show the interlace signal.
- When a SXGA+ signal is input, the image may extend beyond the screen. In this case, input a signal with no black edges around the image, and disconnect and reconnect the cable or select the input signal by pressing INPUT key.

Warning on power connection

Use the supplied power cord when you use the projector in your country.
Otherwise, use a proper power cord meeting the following specification.

	The United States, Canada	Continental Europe, Korrea	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	DENAN
Cord length (max.)	4.5 m	–	–	–	–

Other

Index