



This course explains how to service the Vega-PJ1 series of short-throw projectors.



Product Outline

No additional notes



Two Models

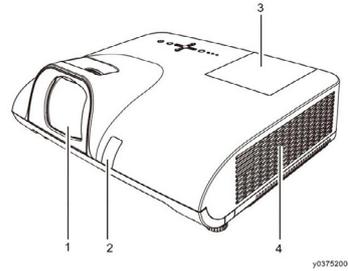
- Vega-PJ1a: PJ K310
 - Brightness: 2500lm
 - Contrast ratio: 400:1
- Vega-PJ1b: PJ K320
 - Brightness: 2750lm
 - Contrast ratio: 1600:1
- These are short-throw LCD projectors with no network function.
 - LCD type: 0.63" TFT, active matrix type, 3 panels
 - Projection distance: 0.60m~1.36m
 - Screen size: 81.5 inches at projection distance of 1 m
 - Resolution: XGA only
- The only differences are the brightness and the contrast ratio.

No additional notes



Appearance: Front and Top View

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1. Projector Lens
2. Infrared Remote Receiver (front)
3. Lamp Cover
4. Exhaust Vents

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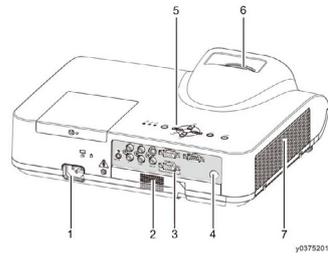
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No additional notes



Appearance: Rear View

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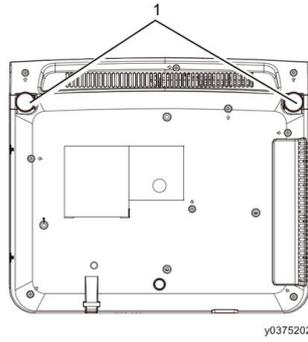


1. Power Cord Connector
2. Speaker
3. Terminals and Connectors
4. Infrared Remote Receiver (rear)
5. Top Control and Indicators
6. Focus Ring
7. Filters

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No additional notes

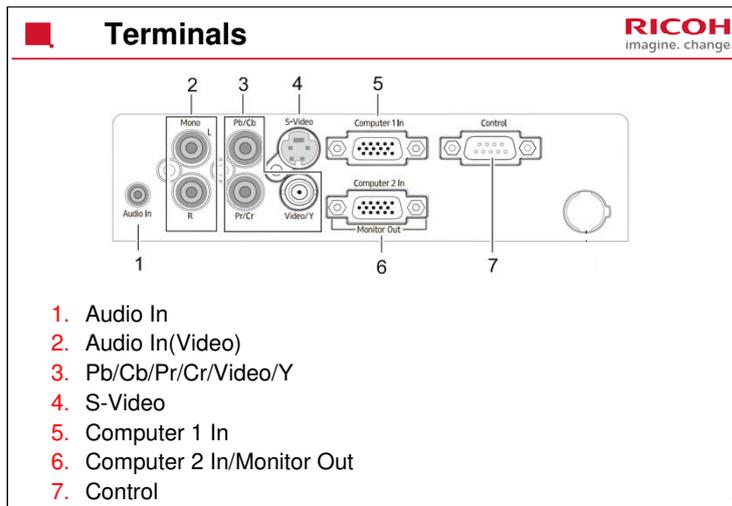
■ Appearance: Bottom View



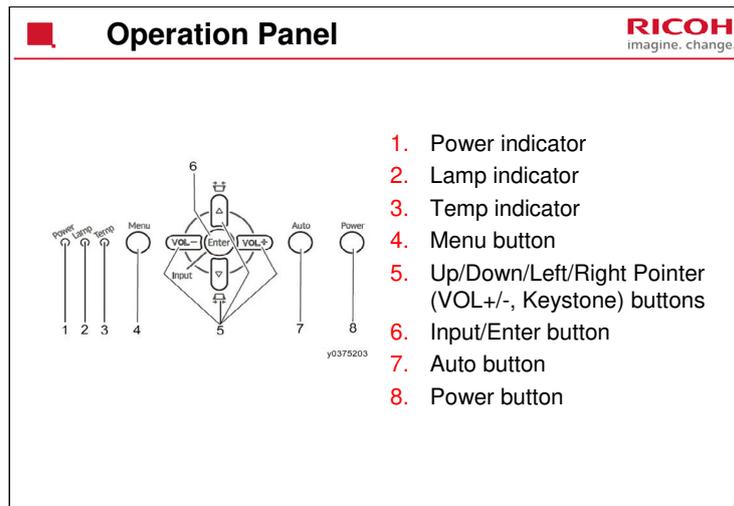
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1. Adjustable Feet

No additional notes



1. Audio In: Connect the audio output from the computer connected at 5 or 6 here.
2. Audio In (Video): Connect the audio output from the video equipment connected at 3 or 4 here.
 For a mono audio signal (a single audio jack), connect it to the L(MONO) jack.
3. Pb/Cb/Pr/Cr/Video/Y: Connect the video signal to the Video/Y jack; Connect the component video signal to the Pb/Cb/Pr/Cr/Y jacks.
4. S-Video: Connect the S-Video output from the video equipment to this terminal.
5. Computer 1 In: Connect the analog RGB output signal from a computer to this terminal.
6. Computer 2 In/Monitor Out: Connect the computer output to this terminal. Output the analog signal from 5 to another monitor.
7. Control: Connect the serial control cable to this terminal when using RS-232C to control the projector.



1. Power indicator

Lights red when the projector is in standby mode.

Lights green during operations.

Flashes green in the power management (standby) mode.

Flashes red in the cooling state.

2. Lamp indicator: Turns orange when the life of the projection lamp draws to an end.

3. Temp indicator: Flashes red when the internal temperature of the projector is abnormally high.

4. Menu button: Opens or closes the screen menu.

5. Pointer buttons

Select an item or adjust data in the screen menu.

Adjust the volume.

Correct the keystone distortion.

6. Input/Enter button

Switch the input source.

Enter screen menu operation.

Execute the selected items.

7. Auto button

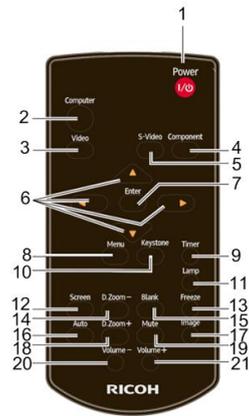
Automatically set the display parameters for the PC input signal.

Switch to search for an input source automatically when there is no signal input.

8. Power button: Turn the projector on or off.

Remote Control

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- For details, see the user's guide or the field service manual

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No additional notes



Specifications

No additional notes



General Specifications

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Development Name	Vega- PJ1 a	Vega- PJ1b
Model#	PJ K310	PJ K320
Product Image		
Display Panel	3 x 0.63"	3 x 0.63"
Display Technology	Liquid Crystal Display	Liquid Crystal Display
Resolution	XGA (1024 x 768)	XGA (1024 x 768)
Light Source	Lamp	Lamp
Brightness (lm)	2500	2750
Contrast Ratio	400:1	1600:1
Noise (dB)	Normal: 34dB@2m	Normal: 34dB@2m
Lamp Consumption (W)	230W	230W
Lamp Life time (H)	(Normal)2000H/(Eco)3000H	(Normal)2000H/(Eco)3000H
Power Consumption	280W	280W
Zoom/Focus	Manual	Manual
Zoom Ratio	N/A	N/A
Aspect Ratio	4:3 (Standard)/16:9 (Compatible)	4:3 (Standard)/16:9 (Compatible)
Keystone Correction	Manual Keystone: 15°_vertical	Manual Keystone: 15°_vertical
MAX Dimensions (WxHxD mm)	356 X 306 X 93	356 X 306 X 93
Net. Weight (KG)	3.7	3.7

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For more details, see the field service manual.

Options

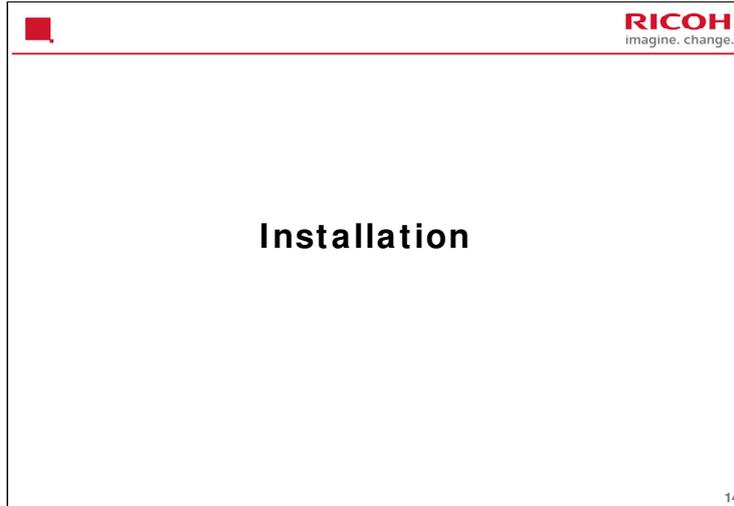
- There are no options.
- The replacement lamp is a service part.

No additional notes



- **Average monthly projection time: 44 hrs/month**
 - 2.00 hrs/day x 22 working days/month
- **Lamp Life**
 - Normal Mode: 2,000 hrs., Eco Mode: 3,000 hrs.
 - Life end is defined as a 50% decrease in the original brightness. The Lamp indicator on the operation panel flashes yellow when it is time to replace.

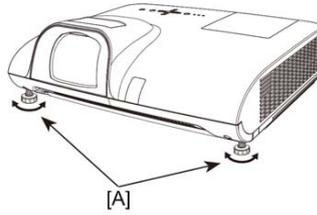
No additional notes



This projector is installed by the customer. However, please study the installation procedure in the user's guide to be familiar with the procedure, because some customers may need help.

Important Notes

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- Do not roll the projector over 20 degrees from side to side.
- Do not point the projector up or down to project an image.
 - The projection angle can be adjusted up to 10.0 degrees with the adjustable feet [A].
- Do not put the projector on either side to project an image.

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No additional notes



Turning Power On and Off

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- Connect all peripherals (computer, VCR) before turning on the power.
- To turn the power off:
 - Press the power button. “Power off?” appears on the screen.
 - Then, press the power button again within 4 seconds. The Power indicator starts to flash red, and the cooling fans keep running
 - You can unplug the AC power cord even if the fans are still running.
 - When the projector has cooled enough to be turned on again, the power indicator stops flashing.
- To maintain the lamp life, if you turn the projector on, wait at least 5 minutes before turning it off.
- Do not operate the projector continuously. Turn off the projector and let it stand for at least about an hour in every 24 hours.

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No additional notes



Maintenance

No additional notes



Tools Required

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- You need the following tools to update the main firmware.
 - RS-232C cable (cross)
 - Portable PC
- To replace the optical engine or main board, the machine must be returned to the vendor.
 - The service manual has replacement procedures, but do not do these in the field.

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No additional notes



- The service manual contains a flow chart that shows which parts must be removed in order to access the part that you want to remove.
 - 3. Replacement and Adjustment > Replaceable Part Hierarchy
- For example, to remove the lamp housing:
 - Find it on the flowchart.
 - To access it, remove all the parts above and to the left of the lamp housing on the flowchart (following the arrows: Lamp Cover, Top Cover, Main Board, Optical Engine, Exhaust Fan, lamp Blower, LCD Cooler)
 - Then find the removal procedure for the lamp housing in the service manual and follow the instructions.
- Removal procedures are in this section.
 - 3. Replacement and Adjustment > Parts Replacement

No additional notes



- After replacing the filter, you must replace the filter counter.
 - Procedure: Service Manual > 4. System Maintenance > Service Mode > Reset the Filter Counter

No additional notes



Replacing the Lamp - 1

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- When the lamp reaches its end of life, the Lamp replacement icon appears on the screen and the Lamp indicator lights yellow. Replace the lamp immediately.
 - The time that the Lamp indicator lights depends on the lamp mode that was used.
- Allow the projector to cool for at least 60 minutes before you open the lamp cover.
- Replace with a lamp of the same type.
- Remove the lamp cover carefully. Small pieces of glass may fall out when the lamp cover is opened.

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No additional notes

- Clean the filter after replacing the lamp.
- Finally, reset the lamp counter.
 - Procedure: Service Manual > 4. System Maintenance > Service Mode > Check the lamp used time (go to the end of the section for the procedure)
 - Do the procedure immediately after turning the power on.
 - Hold the power button for more than 20 seconds when turning on.
 - See the 'Check the lamp used time' procedure for more detail on the procedure.

No additional notes



- This projector has security functions such as "Key lock", "PIN code lock" and "Logo PIN code lock".
 - Key lock: Locks operation of the side control or the remote control. If the key lock is enabled with side control lock, the projector can no longer be started.
Initial setting: Key lock is disabled
 - PIN code lock: Prevents the projector from being operated by an unauthorized person. Initial code:"111"
- When these security functions are on, you must enter the correct PIN code to use the projector. If you do not know the PIN code, the projector cannot be operated or started.
 - In this case, you must reset the PIN code before you can turn on the projector.
 - Procedure: Service Manual > 4. System Maintenance > Service Mode > Security Notice

No additional notes

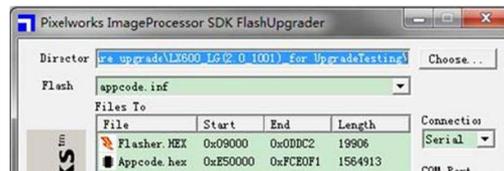


- The full procedure is in this section of the service manual. Here is a summary.
 - 4. System Maintenance > Firmware Update
 - Connect the projector to the portable PC with an RS-232C cross cable.
 - Use a USB-RS232C conversion adaptor if your computer does not have RS232C.
 - Use the Windows Device manager to check which USB port number you are using (see the example below).



No additional notes

- Summary of procedure, continued
 - Run FlashUpgrader.exe
 - Browse for the firmware file that you want to use.
 - Then follow the procedure in the service manual (input the port number, etc).



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No additional notes



The End