

LAN Control Utility User Manual (for XD221U-ST)

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Preparation/SetUp

Preparation before using the network function

This projector is equipped with the network function to control and monitor the projector's operations using a Web browser and to send e-mail notification.

Before using the network function, perform the following three preparation steps.

- (1) Setup of the application software "Projector-Control Device Installer"
- (2) Setting of the IP address of the projector *1
- (3) Setting of password, display language, LAN control, and PJLink™ certification using telnet.
- When setting IP addresses for multiple projectors collectively or when setting an IP address for a ceilingmounted projector after installation, check and take a note of combination of the projectors and the hardware addresses (MAC addresses) in advance. To check the hardware addresses (MAC addresses), perform step 2 on the page 5.

[Major functions]

Setting of the projector's IP address

Setting of password, display language, and LAN control

PJLink™ certification setting (Telnet function)

Startup of the controlling / supervising tool (ProjectorView) using the Web browser

[System requirements]

Supported OS : Windows® 2000, Windows® XP, Windows Vista®

Microsoft® .NET Framework 2.0 *2 should be installed in Windows® 2000 or Windows® XP.

Microsoft® .NET Framework 3.0 *3 should be installed in Windows Vista®.

CPU : Pentium II 233 MHz or higher

Memory : 128 MB or more Free HDD space : 32 MB or more

Web browser : Internet Explorer Ver. 6.0

(Java Plug-in *4 should be installed and JavaScript should be enabled.)

How to install Microsoft® .NET Framework Version 2.0, 3.0

- *2 When using Windows® 2000 or Windows® XP;
 - (1) Download .NET Framework Version 2.0 (file named "dotnetfx.exe") from the download center on the Microsoft® Web site (http://www.microsoft.com/downloads/).

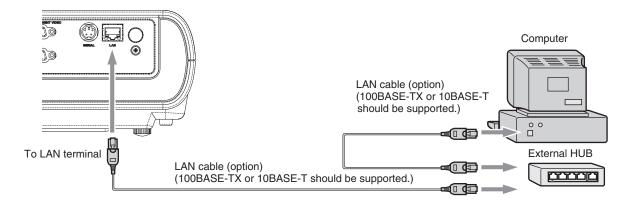
(When the file is unavailable from the above-mentioned URL, search for .NET Framework using Windows Update and access the download site found.)

- (2) Execute the downloaded file named dotnetfx.exe.
- *3 When using Windows Vista®;
 - (1) Download .NET Framework Version 3.0 (file named "dotnetfx3.exe") from the download center on the Microsoft® Web site (http://www.microsoft.com/downloads/).

(When the file is unavailable from the above-mentioned URL, search for .NET Framework using Windows Update and access the download site found.)

- (2) Execute the downloaded fi le named dotnetfx3.exe.
- How to install Java Plug-in
 - (1) Download JRE6 from the JAVA download center on the Sun Microsystems Web site (http://java.sun.com/javase/downloads/index.jsp).
 - (When the file is unavailable from the above-mentioned URL, search for "JRE6 download" using a search engine and access the download site found.)
 - (2) Execute the downloaded file.
 - (3) After the completion of the installation, select [Start] [Control Panel] [Java Plug-in] and disable the cache.
- Microsoft, Windows and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Pentium is trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.
- The trademark of PJLink is trademark applied for registration or registered trademark in Japan, the United States, and other countries and areas.
- Other brand or product names are trademarks or registered trademarks of their respective holders.

Connection

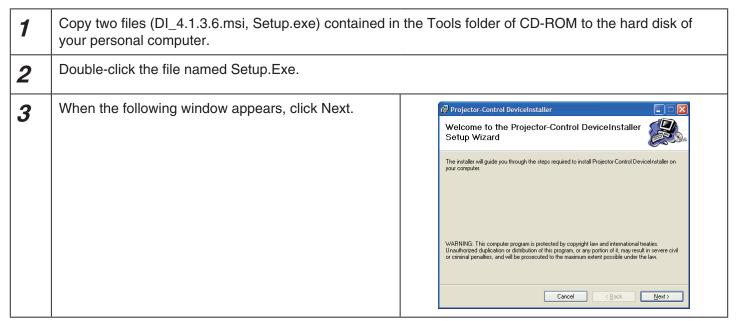


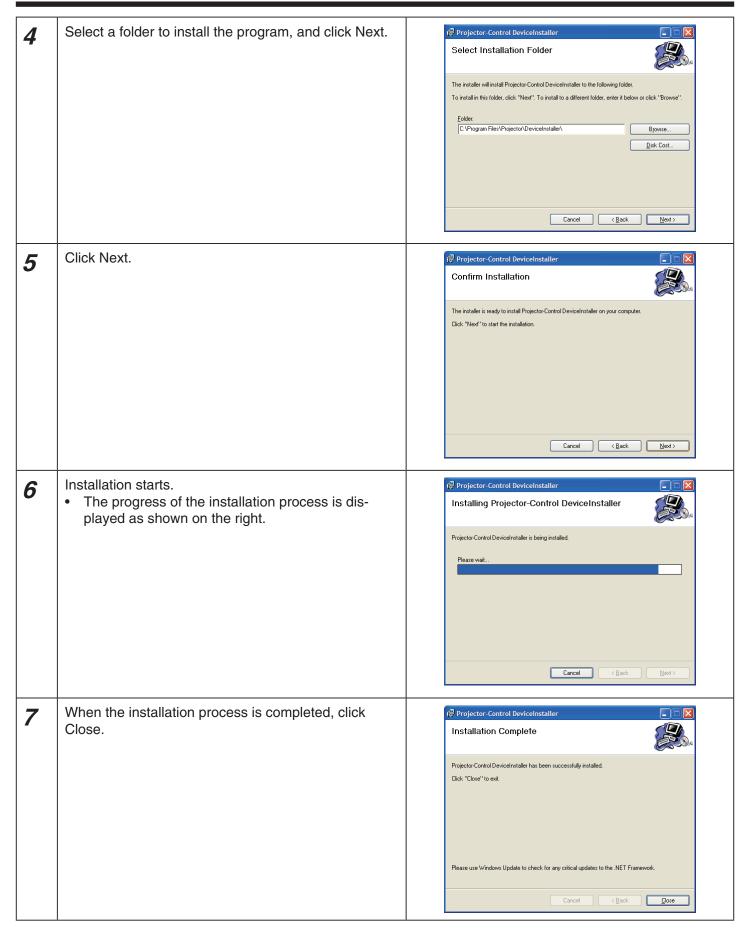
- Use a straight-through category-5 cable for LAN connection.
- Don't touch the metal parts of the LAN connector and LAN cable because static electricity may be discharged from your body, causing damage to the projector.

STANDBY MODE (See User Manual page 20.) in INSTALLATION MENU is set to LOW as a factory default. When STANDBY MODE is set to LOW, LAN connection is not available. To enable the LAN connection, set the STANDBY MODE to STANDARD.

Installation

Before starting installation, be sure to read "ReadMe.txt" contained in the CD-ROM.



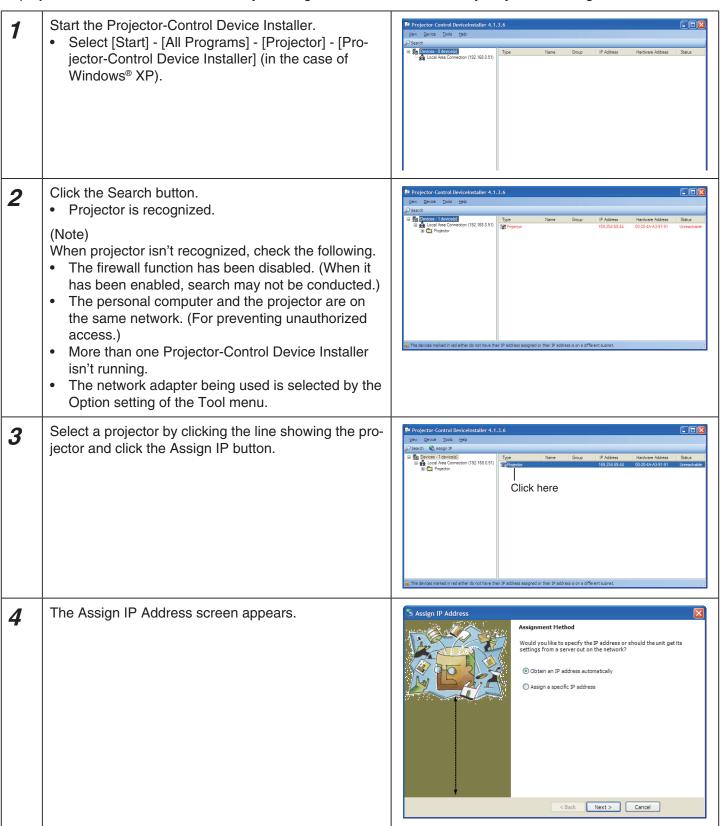


How to remove Projector-Control Device Installer Select [Start] - [Control Panel] - [Add or Remove Programs] - [Projector-Control Device Installer] and click [Remove] (in the case of Windows® XP).

Setting the IP address of the projector

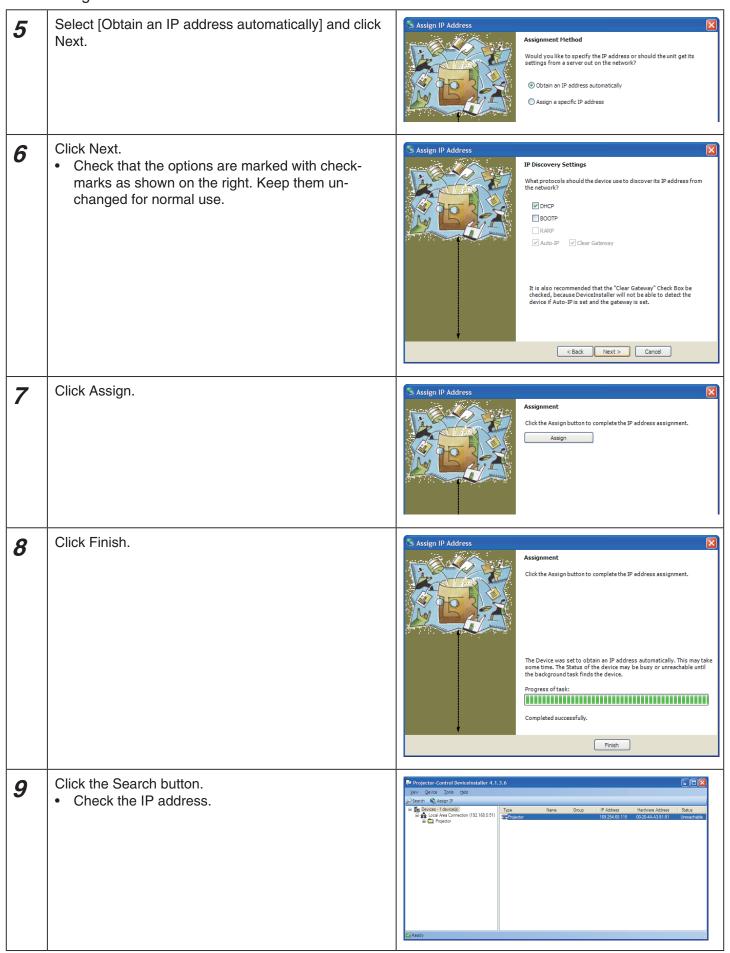
Before setting the IP address, check that the projector has been LAN-networked and turn on the main power of the projector.

When using multiple projectors, connect and configure them one by one. If you turn on the powers of the
projectors that are connected but not yet configured at the same time, they may not be recognized.

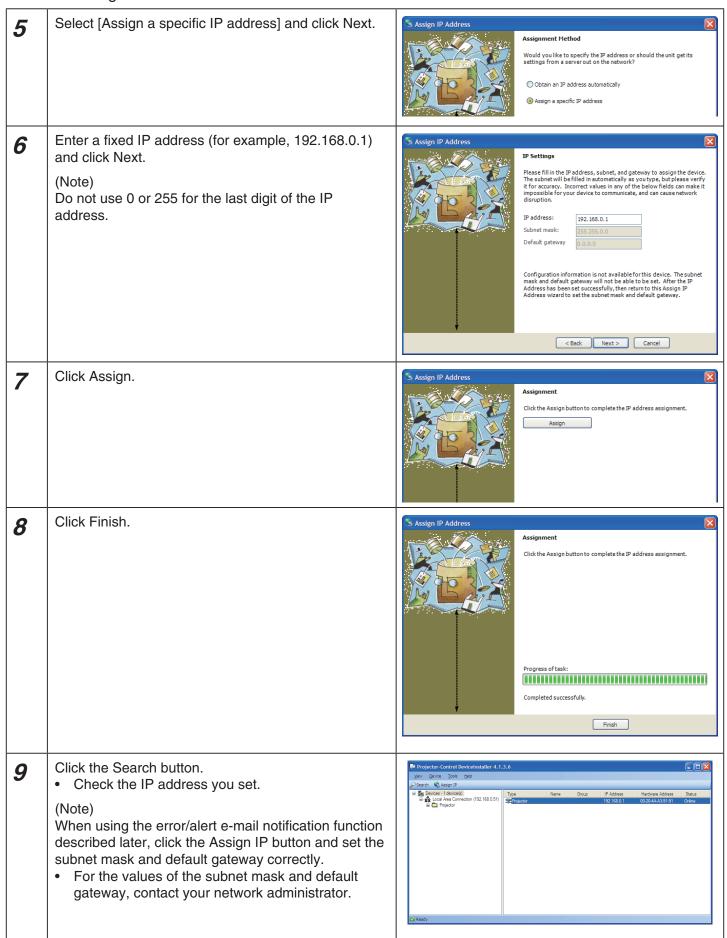


• For automatic IP address setting by the DHCP server, go to page 6. For IP address setting without using the DHCP server, go to page 7.

When using a DHCP server



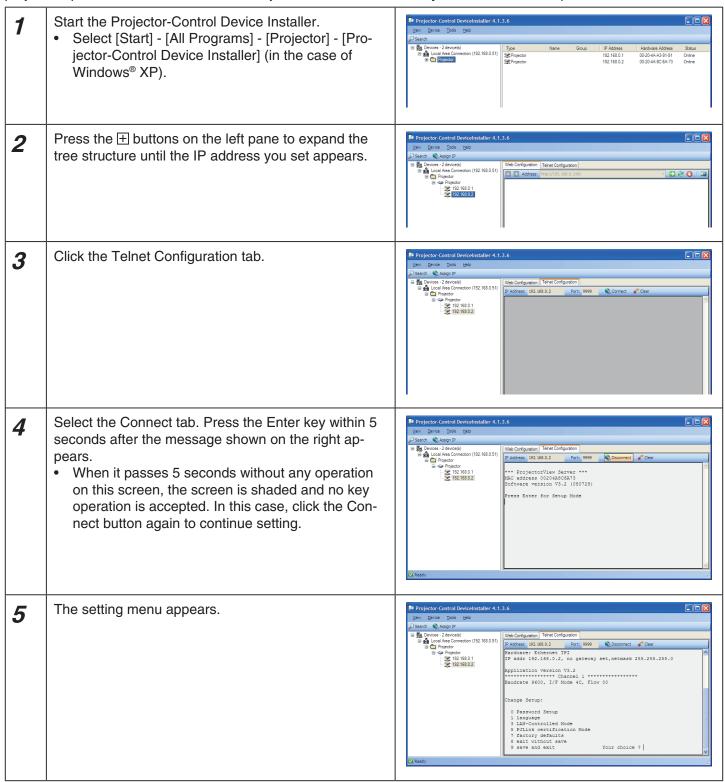
When not using a DHCP server



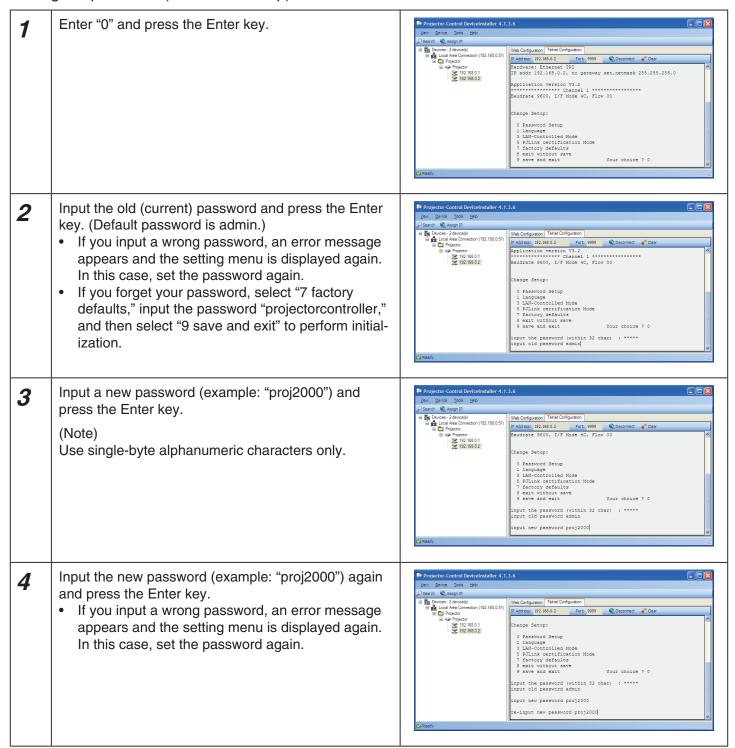
Telnet setting

Setting of password, display language, LAN control, and PJLink™ certification using telnet.

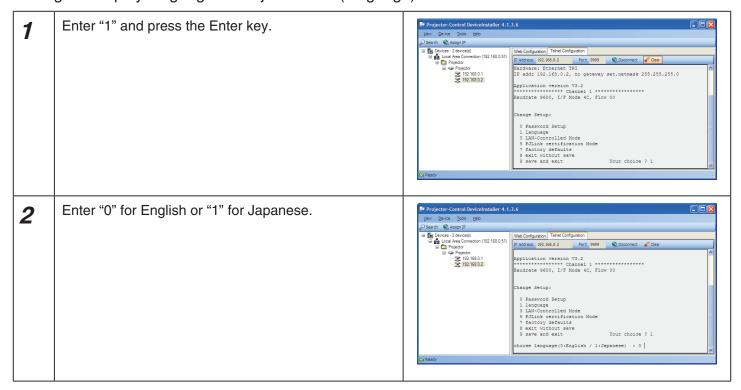
This section describes how to set the password, display language on the ProjectorView screen, LAN control, and PJLink™ certification that are necessary for the operation state control tool (commercially available) that uses the projector operation control/monitor tool ProjectorView and the industry standard PJLink™ protocol.



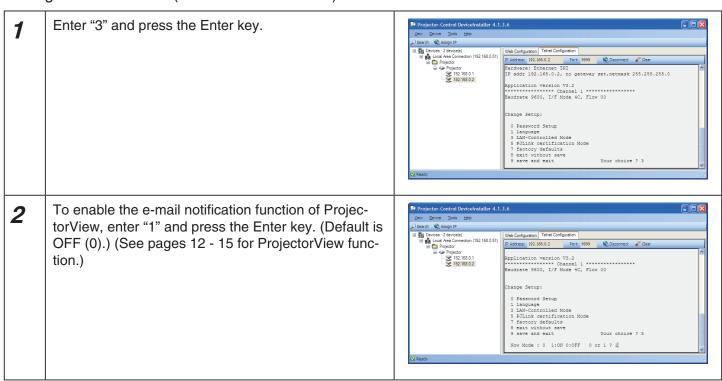
Setting the password (Password Setup)



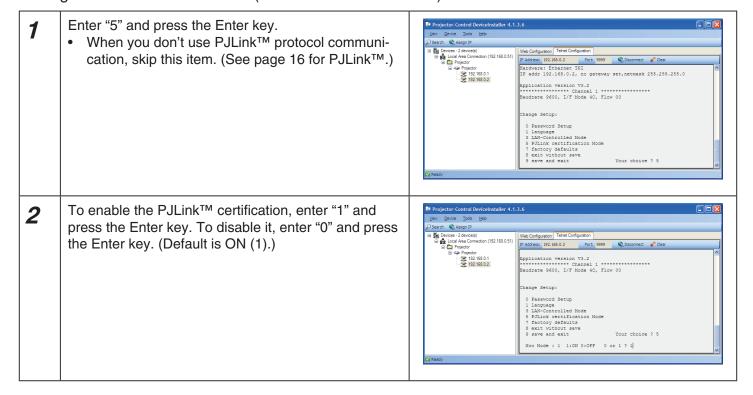
Setting the display language of ProjectorView (language)



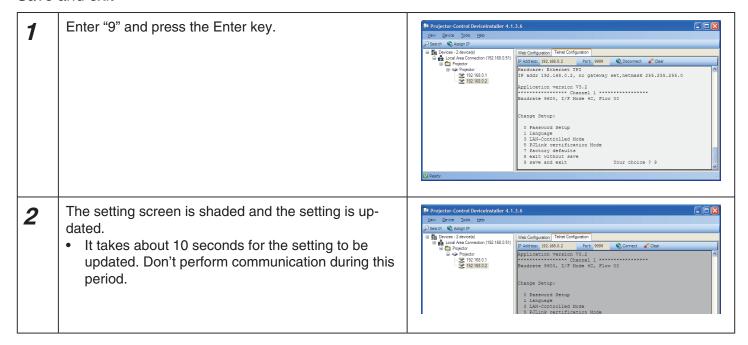
Setting the LAN control (LAN-Controlled Mode)



Setting the PJLink[™] certification (PJLink certification Mode)



Save and exit



- Because the password, display language, LAN control, and PJLink™ certification are set using the telnet function, you can also set them on the command prompt window of the personal computer. Enter the following command and press the Enter key.
 - > telnet [IP address you set] 9999 [">" shows a prompt.]

When setting menu appears, perform the setting procedure as described above.

(Note)

Check that the port number "9999" isn't blocked by the firewall.

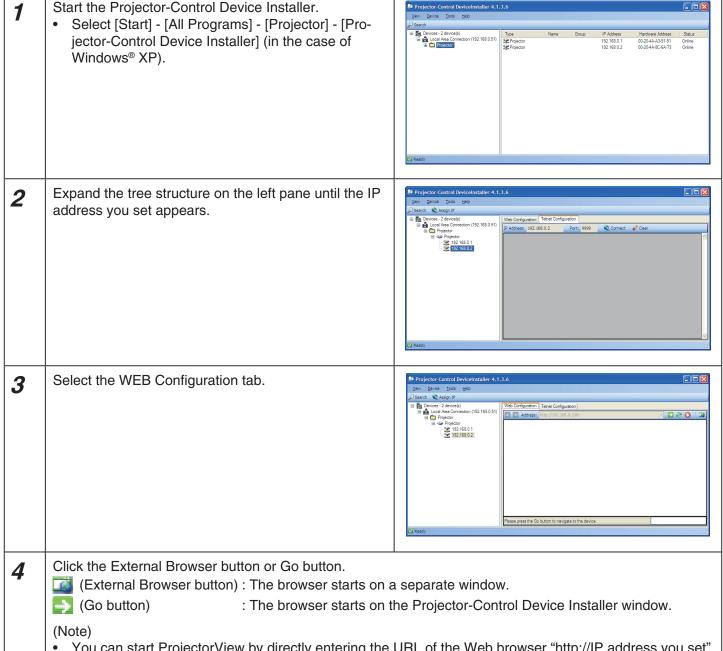
ProjectorView

Using the ProjectorView

This section describes ProjectorView, a tool to control and monitor the projector's operations by a Web browser. The major functions of ProjectorView are:

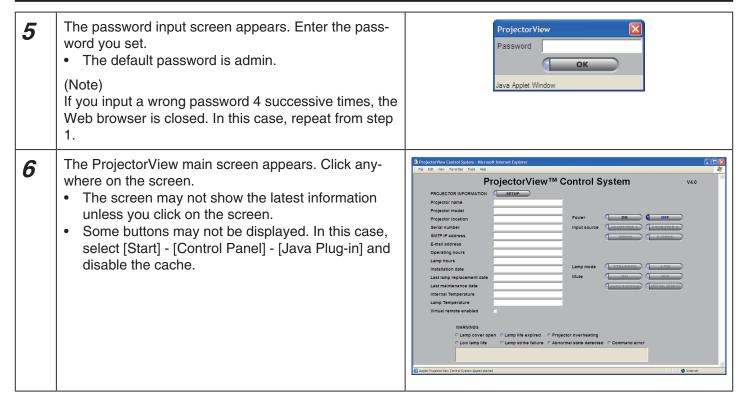
- Power on/off
- Input source switching
- State information indication (projector's name, temperature, lamp operation time, error/alert, etc.)
- · E-mail notification in case of error/alert

How to start up



- You can start ProjectorView by directly entering the URL of the Web browser "http://IP address you set" instead of by clicking the External Browser button.
- When you are using a proxy server, don't enable the proxy when accessing this IP address.
- You can open only 1 browser screen from the device installer.
- It is possible to control a projector using 2 computers running "ProjectorView". However, use only 1 computer for Telnet setting.

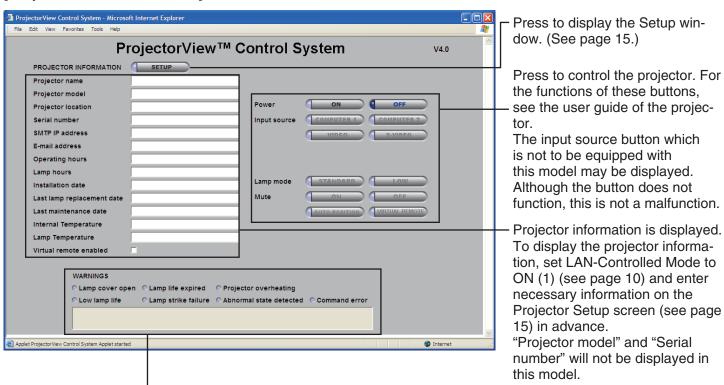
ProjectorView (continued)



(Note)

On Projector-Control DeviceInstaller window, when double-clicking the update button after starting Project View and then inputting password, the window indicating a script error may appear infrequently. However, this is not something that affects the operation. If the error window appears, close it by pressing "Yes" or "No" button.

[ProjectorView main screen]



Failures in the projector are indicated with dots. When you place the mouse cursor to a dot, the indicated failure is described in the box at the bottom.

(Note)

When mute is on, you cannot change the lamp mode. If you try to change the lamp mode, a dot appears next to "Command error" of WARNINGS.

VIRTUAL REMOTE controller

Put a checkmark in the box of the Virtual remote enabled on the ProjectorView main screen, and click the VIRTUAL REMOTE button. The following Virtual Remote window appears.



For the functional descriptions of each button, see the user manual of the projector.

E-mail notification function

In case of an error or abnormality in the projector, e-mail notification is automatically sent to the designated address to notify of the error or abnormality.

To use this function, perform the following steps.

- 1 Enable the LAN control function. (See page 10.)
- 2 Set the SMTP IP address, E-mail address, E-mail host, and E-mail from.

Once the above-mentioned items are set, the e-mail notification function remains enabled even when the browser (ProjectorView screen) is closed.

Example of notification: Alert on lamp life end

ProjectorView Alert:

The lamp has reached its maximum usage. Replace the lamp and reset lamp counter. See user guide for complete instructions.

Projector name: abc

Projector model: (This item will not be displayed in this model.)

Projector location: 10Factory-5F

Serial number: (This item will not be displayed in this model.)

Operating hours: 2146 hours and 43 minutes Lamp hours: 5000 hours and 0 minute

Installation date: 2008/01/01

Last lamp replacement date: 2008/01/01 Last maintenance date: 2008/01/01

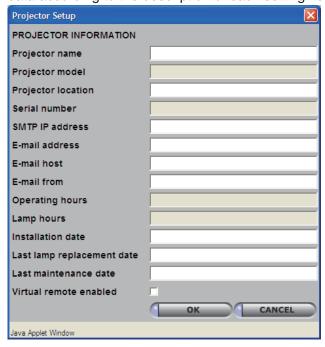
(Note)

- In case of a command error, e-mail notification isn't sent.
- When the LAN control is enabled, serial RS-232C commands may not be transmitted.
- You can't control the LAN/serial RS-232C commands for about 10 seconds after turning on the main power of the projector.
- When commands for LAN control and for RS-232C control are issued at the same time, the LAN control command overrides the RS-232C control command.
- While a test pattern is displayed or a password is entered, you can't change the lamp mode and enable and disable the MUTE function.
- Response may be delayed depending on the operating state of the projector.
- The DHCP mode may not operate with certain devices (routers etc.).
- When you turn on the projector by pressing the ON/OFF button on the ProjectorView main screen, other commands are not accepted for about 1 minute.
- E-mail notification is issued twice: at the time of occurrence of an alert/error and 2 hours after the occurrence.

To use the e-mail notification function, configure the initial settings in advance as described on the next page.

Initial setting

To load information on the projector such as model name and lamp operating time, set the projector data in advance. Click the SETUP button on the ProjectorView main screen. The Projector Setup screen appears. Enter data according to the description of each setting item.



(Note)

- You can't change the Operating hours and Lamp hours. They are loaded from the projector and displayed when the LAN controlled mode of Telnet setting is set to ON.
- The entry field of each setting item contains a blank character by default. When setting these items, delete the blank characters.
- "Projector model" and "Serial number" will not be displayed in this model.

Each setting item is described as follows:

Lacit setting item is described as follows.			
Projector name*	Name to identify the projector		
Projector model	(This item will not be displayed in this model.)		
Projector location*	Location of the projector		
Serial number	(This item will not be displayed in this model.)		
SMTP IP address*	IP address of the SMTP server used for e-mail transmission (Example: 192.168.0.1)		
E-mail address*	e-mail address to receive alert notification e-mail (Example: administrator@XXX.XXX.XXX) (up to 64 characters)		
E-mail host*	User-defined string displayed at the Internet header of e-mail message (Example: user)		
E-mail from*	Sender of alert notification e-mail (Example: PJView@XXX.XXX.XXX)		
Operating hours	Cumulative projector operating time		
Lamp hours	Cumulative lamp operating time calculated based on that LAMP MODE is LOW.		
Installation date*	Date when the projector was installed		
Last lamp replacement date*	Date when the lamp was last replaced		
Last maintenance date*	Date when the projector was last maintenanced		
Virtual remote enabled	Display or hide the virtual remote controller (Check the box to display.)		

^{*)} For data entry, use single-byte alphanumeric characters and symbols (+ - / = @ * _ ! ? . , ; : # \$ % & () | < > [] { } " ').

(Note)

When the "Standard" lamp mode is selected, the indicated lamp operating time may exceed the indicated operating time.

Support for the PJLink™ function

This projector supports standard protocol PJLink™ for projector control and you can control and monitor projector's operations using the same application among projectors of different models and different manufacturers.

To use this function, set the PJLink[™] certification properly according to the setting of the PJLink[™] application to be used. (See page 11.)

Supported commands

The table below shows commands to control the projector using the PJLink™ protocol.

Command	Description	Remark (Parameter)
POWR	Power control	0 = Standby
		1 = Power on
POWR?	Inquiry about the	0 = Standby
	power state	1 = Power on
		2 = Cooling down
		3 = Warming up
INPT	Input switching	11 = COMPUTER1
INPT?	Inquiry about input	12 = COMPUTER2
	switching	21 = VIDEO
		22 = S-VIDEO
AVMT	Mute control	30 = Video and audio mute disable
AVMT?	Inquiry about the	31 = Video and audio mute enable
	mute state	
ERST?	Inquiry about the error	1st byte: Fan error, 0 or 2
	state	2nd byte: Lamp error, 0 to 2
		3rd byte: Temperature error, 0 or 2
		4th byte: Cover open error, 0 or 2
		5th byte: Always 0
		6th byte: Other error, 0 or 2
		0 to 2 mean as follows:
		0 = No error detected, 1 = Warning, 2 = Error
LAMP?	Inquiry about the	1st value (1 to 5 digits): Cumulative lamp operating time (This item
	lamp state	shows a lamp operating time (hour) calculated based on that LAMP
		MODE is LOW.)
		2nd value: 0 = Lamp off, 1 = Lamp on
INST?	Inquiry about the	The following value is returned.
	available inputs	"11 12 21 22"
NAME?	Inquiry about the pro-	The projector name set on the ProjectorView Setup window is returned.
	jector name	
INF1?	Inquiry about the	"MITSUBISHI" is returned.
	manufacturer name	
INF0?	Inquiry about other	No other information is available. No parameter is returned.
	information	
CLSS?	Inquiry about the	"1" is returned.
	class information	

This projector is fully compliant to the specifications of JBMIA PJLink™ Class 1. It supports all the commands defined by PJLink™ Class 1, and the compliance has been verified with the PJLink™ standard specifications Version 1.0.

(Note)

- The above-mentioned control may not be performed correctly or the monitoring data may not be obtained correctly in the following conditions:
 - During standby

- During input source switching
- During auto position execution
- During AV mute During command processing Before the splash screen disappears after the power is turned on.
- During AV mute, etc., it may take approx. 5 seconds to receive a response to a command.

- Use 1 controller to control/monitor 1 projector. For how to control/monitor using PJLink™, see the operation manual of the PJLink™ application you use. When you monitor the projector's operating state using this function by issuing inquiry commands successively, issue an inquiry command after receiving the response to the previous inquiry command from the projector.
- For the specifications of PJLink™, access to the Web site of Japan Business Machine and Information System Industries Association (JBMIA). (http://pjlink.jbmia.or.jp/english)

Support for the PJLink™ function (continued)

[Notes on Instant Shut Down]

Instant shutdown of the projector during control using the network function may cause ProjectorView to fail to display data correctly.

- The operating time and temperature may not be displayed correctly. In this case, close the browser, recognize this projector using Projector-Control Device Installer, and then start the browser again. (Refer to "How to start up" of ProjectorView.)
- When you use the e-mail notification function only, no special action is required.

[Terms and definitions]

For detailed descriptions, see commercial books.

Term	Definition
DHCP	Abbreviation for Dynamic Host Configuration Protocol. This protocol automatically assigns IP addresses to networked devices.
Gateway	A server (or router) to communicate across networks (subnets) that are divided by subnet mask.
IP address	Numerical address to identify networked computers.
MAC address	Abbreviation for Media Access Control address. MAC address is a unique ID number assigned to each network adapter, based on which data are sent and received between network adapters.
Subnet mask	A value to define the number of bits used for a network address of a divided network (or subnet) in an IP address.
Telnet	A virtual terminal protocol to log in to and control a remote computer.
URL	Abbreviation for Uniform Resource Locator. URL is a unique Internet address of each Web page.