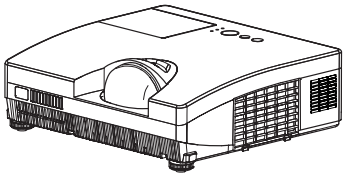
Projector

ED-D10N/ED-D11N

User's Manual (detailed)
Network Guide



Thank you for purchasing this projector.
This projector has the network function that brings you the following main features.

- ✓ **Web control**
  The projector can be controlled and monitored by a web browser software on your computer, which can help you to setup and maintain the projector.
- ✓ **MY IMAGE (Still Image Transfer) Display**
  The projector can display still images that are transferred via the network.
- ✓ **Messenger Function**
  The projector can display the text data transferred via the network on the screen.

This manual is only intended to explain Network function only.
For safety, operations or any other issues, refer to the Safety Guide and User's Manual (concise and detailed).

⚠**WARNING** ►Before using this product, be sure to read all manuals for this product.
After reading them, store them in a safe place for future reference.

NOTE • The information in this manual is subject to change without notice.
• The manufacturer assumes no responsibility for any errors that may appear in this manual.
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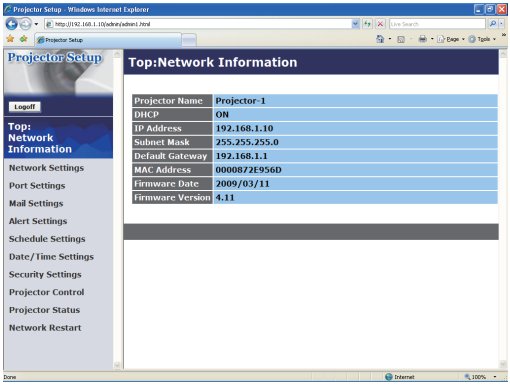
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1. Main functions

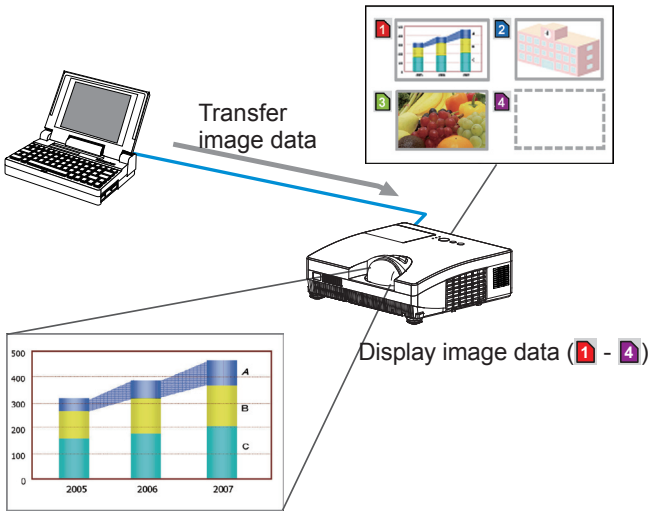
1.1 Configuring and controlling via a web browser

You can adjust or control the projector via a network from a web browser on a computer that is connected to the same network.
Logon the network from the web browser and it offers the menus to configure the network settings, monitor the projector and so on.



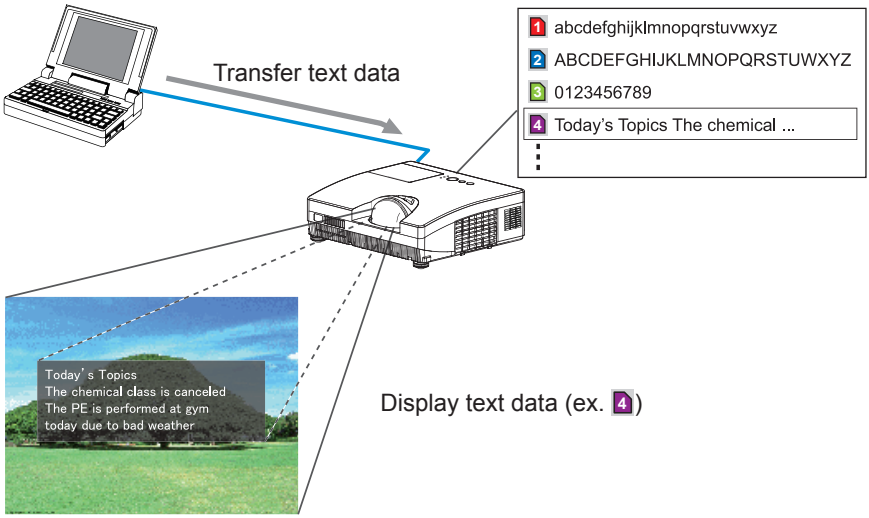
1.2 MY IMAGE (Still image Transfer) Display

Image files can be sent via the network, and up to 4 image data can be stored in the projector and displayed on screen one by one. (*40*)



1.3 Messenger Function

The text data can be sent via the network and displayed on the screen. You can display the transferred text on real time or choose one from ones once stored in the projector and display it. (📖42)



2. Equipment connection and network setting

2.1 Required equipment preparation

The following equipments are required to connect the projector to your computer through the network.

Computer : 1) equipped with the network feature
2) installed a web browser software (📖*12*)

LAN cable : CAT-5 or greater

NOTE • The system for using the network function of the projector requires communication environment conforming 100Base-TX or 10Base-T.
• The network communication control is disabled while the projector is in standby mode if the STANBY MODE item is set to SAVING. Please connect the network communication to the projector after setting the STANDBY MODE to NORMAL. (📖 ***SETUP menu in the User's Manual – Operating Guide***)

2.2 Manual network connection setting

2.2.1 Equipments connection

Connect the projector and computer with a LAN cable.
* Before connecting with an existing network, contact the network administrator.

Next, please check the computer setting as explained below.

2.2.2 Network settings

This is the explanation of network connection settings for Windows® XP and Internet Explorer®.
1) Log on to Windows® XP as administrator authority. (*)
2) Open “Control Panel” from “Start” menu.
3) Open “Network and Internet Connections” in “Control Panel”. (Fig. 2.2.2.a)
* Administrator authority is the account, which can access to all functions.

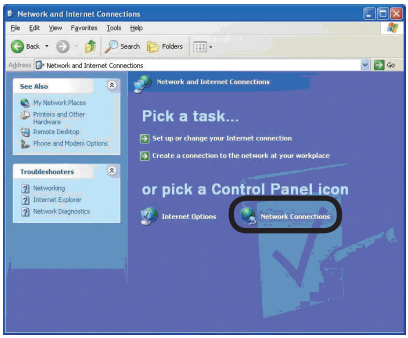


Fig. 2.2.2.a “Network and Internet Connections” window

4) Open “Network Connections”. (Fig.2.2.2.b)

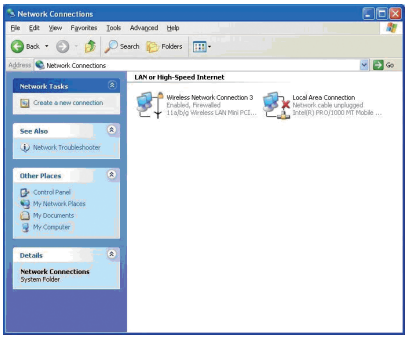


Fig. 2.2.2.b “Network Connections” window

2.2 Manual network connection setting (continued)

5) Open “Local Area Connection Properties” window you use for network device. (Fig. 2.2.2.c)

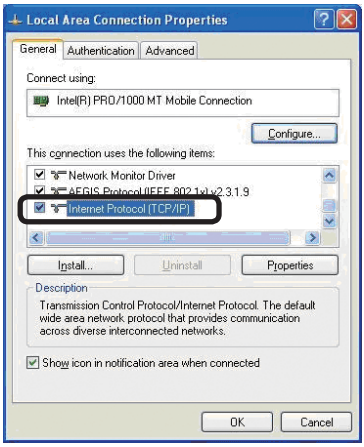


Fig. 2.2.2.c “Local Area Connection Properties” window

6) Set used protocol as “TCP/IP” and open “Internet Protocol (TCP/IP) Properties” window.

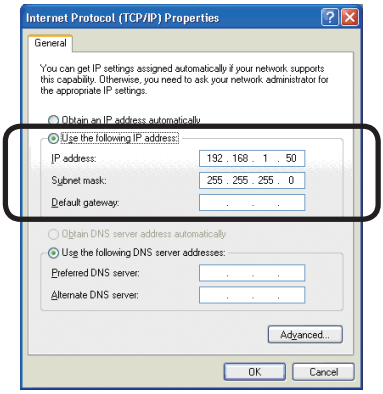


Fig. 2.2.2.d “Internet Protocol (TCP/IP) Properties” window

7) Set IP address, subnet mask and default gateway for computer.

2.2 Manual network connection setting (continued)

[About IP address]

■ Setting manually

The Network address portion included in the IP address set into your computer should be common with projector's one. And the entire IP address in the computer should not be overlapped with other equipments in the same network, including the projector.

For example

The projector's initial settings are as follows.

IP address: 192.168.1.10
Subnet mask: 255.255.255.0
(Network address: 192.168.1 in this case)

Therefore, specify computer's IP address as follows.

IP address: 192.168.1.xxx (xxx shows decimal number.)
Subnet mask: 255.255.255.0
(Network address: 192.168.1 in this case)

Select from 1 to 254 for "xxx" not duplicating with any other equipments.
In this case, projector has "192.168.1.10" IP address, specify from 1 to 254 except 10 for computer.

NOTE • "0.0.0.0" cannot be set to the IP address.
• The projector's IP address can be changed by using the configuration utility via a web browser. (📖*12*)
• If the projector and computer exist in the same network (i.e. network address is common), default gateway can be blank.
• When the projector and computer exist in different networks, default gateway setting is necessary. Contact the network administrator in detail.

■ Setting automatically

When DHCP server exists in network, it is possible to assign IP address to the projector and computer automatically.

* DHCP is abbreviation for "Dynamic Host Configuration Protocol" and has the function to provide necessary setting for network like IP address from server to client. A server that has DHCP function is called DHCP server.

2.2 Manual network connection setting (continued)

2.2.3 “Internet Option” setting

1) Click “Internet Options” in “Network and Internet Connections” window (Fig. 2.2.3.a) to open “Internet Properties” window. (Fig.2.2.3.b)

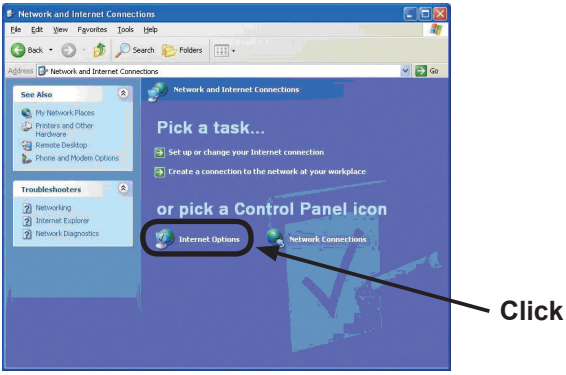


Fig. 2.2.3.a “Network and Internet Connections” window

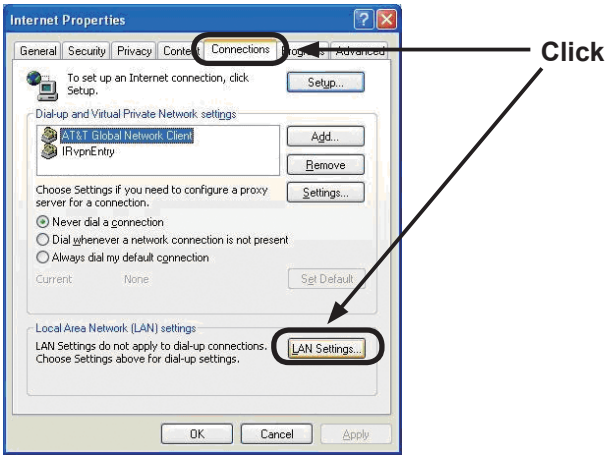


Fig. 2.2.3.b “Internet Properties” window

2) Click “Connections” tab and then click [LAN Settings] button to open “Local Area Network (LAN) settings”. (Fig. 2.2.3.c)

2.2 Manual network connection setting (continued)

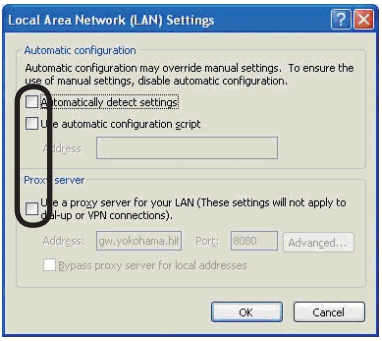


Fig. 2.2.3.c “Local Area Network (LAN) Settings” window

3) Uncheck all boxes in “Local Area Network (LAN) Settings” window. (Fig. 2.2.3.c)

2.2.4 Check connection

Check computer and projector are connected properly here. If it is not connected, check cable connections and settings are properly or not.

1) Start browser in computer and specify following URL, then click “→” button.

URL: http:///(Projector IP address)/

For example, if projector IP address is 192.168.1.10, specify

URL: http://192.168.1.10/

2) If Fig. 2.2.4 appears, it succeeds.

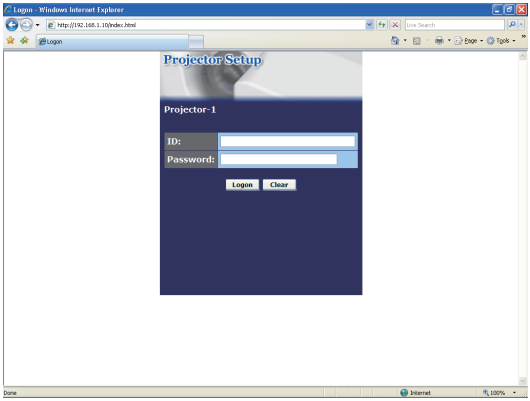


Fig. 2.2.4 “Logon Menu”

3. Network Functions

This projector is equipped with the following network functions by using a web browser software.

3.1 Configuring and Controlling the Projector via a Web Browser

You can change the settings of or control the projector via a network by using a web browser from a computer that is connected to the same network.
(📖12)

3.2 E-mail Alerts

The projector can automatically send an alert to specified e-mail addresses when the projector requires maintenance or has encountered an error.
(📖34)

3.3 Projector Management using SNMP

This projector is SNMP (Simple Network Management Protocol) compliant, allowing you to monitor it from a remote location using SNMP software. In addition, the projector is able to send failure & warning alerts to a specified computer.
(📖36)

3.4 Event Scheduling

You can schedule the projector to perform various functions according to the date and time.
(📖37)

3.5 MY IMAGE (Still Image Transfer) Display

The projector can display still images that are transferred via the network.
(📖40)

3.6 Messenger Function

The projector can display the text data transferred via the network on the screen.
(📖42)

3.7 Command Control via the Network

The projector can be controlled using RS-232C commands over a network.
(📖44)

3.8 Controlling the external device via the projector (using the NETWORK BRIDGE function)

Using the NETWORK BRIDGE function can control an external device as a network terminal, via this projector from the computer.
(📖49)

3.1 Configuring and controlling the projector via a web browser

You can adjust or control the projector via a network from a web browser on a computer that is connected to the same network.

NOTE • Internet Explorer® 5.5 or later is required.
• If JavaScript® is disabled in your web browser configuration, you must enable JavaScript® in order to use the projector web pages properly. See the Help files for your web browser for details on how to enable JavaScript®.
• It is recommended that all web browser updates are installed.

3.1 Configuring and controlling the projector via a web browser (continued)

When configuring or controlling the projector via a web browser, an ID and password are required. There are two types of IDs, Administrator ID and User ID. The following chart describes the differences between Administrator and User IDs.

Item	Description	Administrator	User
Network Information	Displays the projector's current network configuration settings.	√	√
Network Settings	Displays and configures network settings.	√	N/A
Port Settings	Displays and configures communication port settings.	√	N/A
Mail Settings	Displays and configures e-mail addressing settings.	√	N/A
Alert Settings	Displays and configures failure & warning alerts.	√	N/A
Schedule Settings	Displays and configures schedule settings.	√	N/A
Date/Time Settings	Displays and configures the date and time settings.	√	N/A
Security Settings	Displays and configures passwords and other security settings.	√	N/A
Projector Control	Controls the projector.	√	√
Projector Status	Displays the current projector status.	√	√
Network Restart	Restarts the projector's network connection.	√	N/A

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.1 Logon

Refer to the following for configuring or controlling the projector via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser and press "Enter" key or click "→" button. The screen in Fig. 3.1.1a will be displayed.

2) Enter your ID and password and click **[Logon]**.

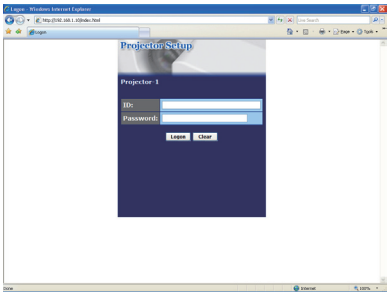


Fig. 3.1.1 a "Logon Menu"

Below are the factory default settings for Administrator ID, User ID and passwords.

Item	ID	Password
Administrator	Administrator	<blank>
User	User	<blank>

If the logon is successful, either the Fig. 3.1.1 b or Fig. 3.1.1 c screen will be displayed.

Main menu

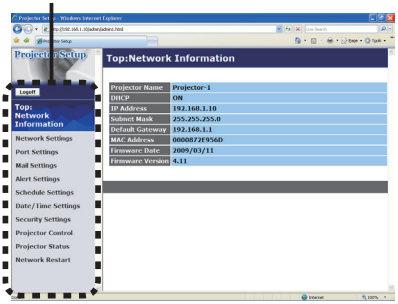


Fig. 3.1.1 b "Logon with Administrator ID"

Main menu

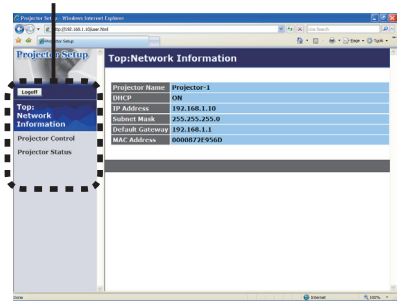
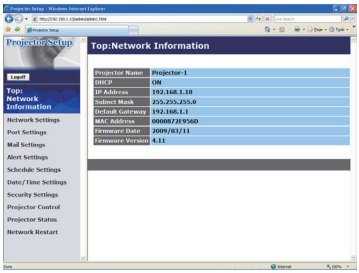


Fig. 3.1.1 c "Logon with User ID"

3) Click the desired operation or configuration item on the main menu located on the left-hand side of the screen.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.2 Network Information



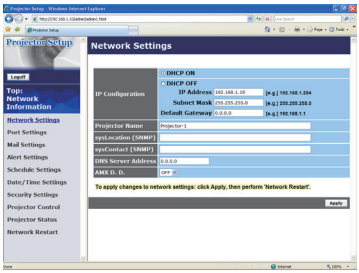
All screen drawings in this manual are shown when you logon with the Administrator ID. Any functions that are available only for the Administrator will not be shown when you logon with the User ID. Refer to the table. (*13, 14*)

Displays the projector's current network configuration settings.

Item	Description
Projector Name	Displays the projector name settings.
DHCP	Displays the DHCP configuration settings.
IP Address	Displays the current IP address.
Subnet Mask	Displays the subnet mask.
Default Gateway	Displays the default gateway.
MAC Address	Displays the ethernet MAC address.
Firmware Date	Displays the network firmware time stamp. This information is only displayed when logged on using an Administrator ID.
Firmware Version	Displays the network firmware version number. This information is only displayed when logged on using an Administrator ID.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.3 Network Settings



Displays and configures network settings.

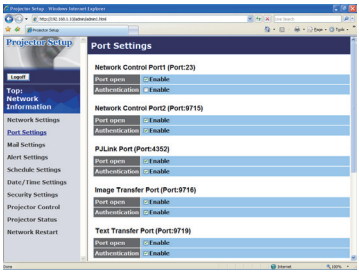
Item	Description
IP Configuration	Configures network settings.
DHCP ON	Enables DHCP.
DHCP OFF	Disables DHCP.
IP Address	Configures the IP address when DHCP is disabled.
Subnet Mask	Configures the subnet mask when DHCP is disabled.
Default Gateway	Configures the default gateway when DHCP is disabled.
Projector Name	Configures the name of the projector. The length of the Projector Name can be up to 64 alphanumeric characters. Only alphabets, numbers and following symbols can be used. !"#$%&'()*+,-./:;<=>?@[\]^_`{|}~ and space
sysLocation (SNMP)	Configures the location to be referred to when using SNMP. The length of the sysLocation can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
sysContact (SNMP)	Configures the contact information to be referred to when using SNMP. The length of the sysContact can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
DNS Server Address	Configures the DNS server address.
AMX D.D. **(AMX Device Discovery)**	Configures the AMX Device Discovery setting to detect the projector from the controllers of AMX connected to the same network. For the details of AMX Device Discovery, visit the AMX web site. URL: http://www.amx.com

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.4 Port Settings



Displays and configures communication port settings.

Item		Description
Network Control Port1 (Port:23)		Configures command control port 1 (Port:23).
	Port open	Click the **[Enable]** check box to use port 23.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
Network Control Port2 (Port:9715)		Configures command control port 2 (Port:9715).
	Port open	Click the **[Enable]** check box to use port 9715.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
PJLink ™ Port (Port:4352)		Configures the PJLink ™ port (Port:4352).
	Port open	Click the **[Enable]** check box to use port 4352.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
Image Transfer Port (Port:9716)		Configures the image transfer port (Port:9716).
	Port open	Click the **[Enable]** check box to use port 9716.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
Text Transfer Port (Port:9719)		Configures the text transfer port (Port:9719).
	Port open	Click the **[Enable]** check box to use port 9719.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.

3.1 Configuring and controlling the projector via a web browser (continued)

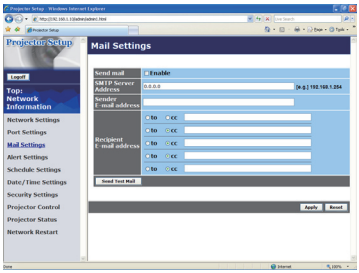
Item		Description
SNMP Port		Configures the SNMP port.
	Port open	Click the **[Enable]** check box to use SNMP.
	Trap address	Configures the destination of the SNMP Trap in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
SMTP Port		Configures the SMTP port.
	Port open	Click the **[Enable]** check box to use the e-mail function.
Network Bridge Port		Configures the Bridge port number.
	Port Number	Input the port number. Except for 9715, 9716, 9719, 4352 between 1024 and 65535 can be set up. It is set to 9717 as the default setting.

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.5 Mail Settings



Displays and configures e-mail addressing settings.

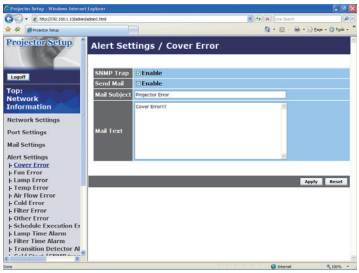
Item	Description
Send mail	Click **[Enable]** check box to use the e-mail function. Configure the conditions for sending e-mail under the Alert Settings.
SMTP Server Address	Configures the address of the mail server in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
Sender E-mail address	Configures the sender e-mail address. The length of the sender e-mail address can be up to 255 alphanumeric characters.
Recipient E-mail address	Configures the e-mail address of up to five recipients. You can also specify **[TO]** or **[CC]** for each address. The length of the recipient e-mail address can be up to 255 alphanumeric characters.

Click **[Apply]** button to save the settings.

NOTE • You can confirm whether the mail settings work correctly using **[Send Test Mail]** button. Please enable Send mail setting before clicking **[Send Test Mail]**.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.6 Alert Settings



Displays and configures failure & alert settings.

Alert Item	Description
Cover Error	The lamp cover has not been properly fixed.
Fan Error	The cooling fan is not operating.
Lamp Error	The lamp does not light, and there is a possibility that interior portion has become heated.
Temp Error	There is a possibility that the interior portion has become heated.
Air Flow Error	The internal temperature is rising.
Cold Error	There is a possibility that the interior portion has become overcooled.
Filter Error	Filter time over.
Other Error	Other error. If displaying this error, please contact your dealer.
Schedule Execution Error	Schedule Execution error. (📖**22**)
Lamp Time Alarm	Lamp time over Alarm Time setting.
Filter Time Alarm	Filter time over Alarm Time setting.
Transition Detector Alarm	Transition Detector Alarm. (📖***OPTION menu in the User's Manual – Operating Guide***)
Cold Start	• If STANDBY MODE is set to NORMAL, the projector's power status changes from off to standby state. • If STANDBY MODE is set to SAVING, the projector's power status changes from standby state to on (the lamp is turned on). (📖***SETUP menu in the User's Manual – Operating Guide***)
Authentication Failure	The SNMP access is detected from the invalid SNMP community.

Refer to 📖***"Troubleshooting" in the User's Manual – Operating Guide*** for further detailed explanation of Error except Other Error and Schedule Execution Error.

3.1 Configuring and controlling the projector via a web browser (continued)

The Alert Items are shown below.

Setting Item	Description
Alarm Time	Configures the time to alert. (Only **Lamp Time Alarm** and **Filter Time Alarm**.)
SNMP Trap	Click **[Enable]** check box to enable SNMP Trap alerts.
Send Mail	Click **[Enable]** check box to enable e-mail alerts. (Except **Cold Start** and **Authentication Failure**.)
Mail Subject	Configures the subject line of the e-mail to be sent. The length of the subject line can be up to 100 alphanumeric characters. (Except **Cold Start** and **Authentication Failure**.)
Mail Text	Configures the text of the e-mail to be sent. The length of the text can be up to 1024 alphanumeric characters. (Except **Cold Start** and **Authentication Failure**.)

Click **[Apply]** button to save the settings.

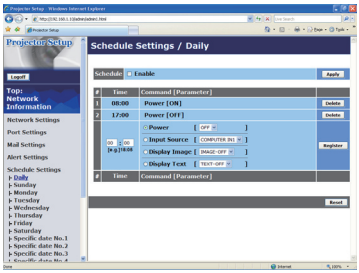
NOTE • The trigger of **Filter Error** e-mail is depending on the FILTER MESSAGE setting in the SERVICE item of the OPTION menu which defines the period until the filter message is displayed on the projector screen. The e-mail will be sent when the filter time exceeds 500, 1000, 2000, 3000, 4000 or 5000 hours based on the configuration. No notification e-mail will be sent if the FILTER MESSAGE is set to OFF. (📖***OPTION menu in the User's Manual – Operating Guide***)

• **Lamp Time Alarm** is defined as a threshold for e-mail notification (reminder) of the lamp time. When the lamp hour exceeds this threshold that is configured through the Web page, the e-mail will be sent out.

• **Filter Time Alarm** is defined as a threshold for e-mail notification (reminder) of the filter time. When the filter hour exceeds this threshold configured in the web page, e-mail will be sent out.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.7 Schedule Settings



Displays and configures schedule settings.

Item	Description
Daily	Configures the daily schedule.
Sunday	Configures the Sunday schedule.
Monday	Configures the Monday schedule.
Tuesday	Configures the Tuesday schedule.
Wednesday	Configures the Wednesday schedule.
Thursday	Configures the Thursday schedule.
Friday	Configures the Friday schedule.
Saturday	Configures the Saturday schedule.
Specific date No.1	Configures the specific date (No.1) schedule.
Specific date No.2	Configures the specific date (No.2) schedule.
Specific date No.3	Configures the specific date (No.3) schedule.
Specific date No.4	Configures the specific date (No.4) schedule.
Specific date No.5	Configures the specific date (No.5) schedule.

3.1 Configuring and controlling the projector via a web browser (continued)

The schedule settings are shown below.

Item	Description
Schedule	Click **[Enable]** check box to enable the schedule.
Date (Month/Day)	Configures the month and date. This item appears only when Specific date (No. 1-5) is selected.

Click **[Apply]** button to save the settings.

The current event settings are displayed on the schedule list. To add additional functions and events, set the following items.

Item		Description
Time		Configures the time to execute commands.
Command [Parameter]		Configures the commands to be executed.
	Power	Configures the parameters for power control.
	Input Source	Configures the parameters for input switching.
	Display Image	Configures the parameters for display of transfered image data. (📖*40*)
	Display Text	Configures the parameters for display of transferred text data. (📖*42*)

Click **[Register]** button to add new commands to the schedule list.

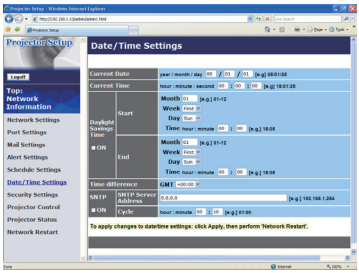
Click **[Delete]** button to delete commands from the schedule list.

Click **[Reset]** button to delete all commands and reset the schedule settings from the schedule list.

NOTE • After the projector is moved, check the date and time set for the projector before configuring the schedules. Strong shock may make the date and time settings (📖*24*) get out of tune.
• Events of “Display Image” and “Display Text” will not start appropriately and schedule execution error occurs if the lamp does not light and/or display data is not stored in the projector at the scheduled event execution time.
• Events of “Input Source” and “Display Image” will not start if the security feature is activated and limits the use of the projector.
• Certain errors of the projector (such as temperature error, lamp error) prevent the projector from appropriate execution of scheduled functions/events.
• Please refer to the Troubleshooting in the User’s Manual - Operating Guide in case scheduled functions/events are not executed appropriately as you've set.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.8 Date/Time Settings



Displays and configures the date and time settings.

Item			Description
Current Date			Configures the current date in **year/month/day** format.
Current Time			Configures the current time in **hour:minute:second** format.
Daylight Savings Time			Click **[ON]** check box to enable daylight savings time and set the following items.
	Start		Configures the date and time daylight savings time begins.
		Month	Configures the month daylight savings time begins (1~12).
		Week	Configures the week of the month daylight savings time begins (First, 2, 3, 4, Last).
		Day	Configures the day of the week daylight savings time begins (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time **hour**	Configures the hour daylight savings time begins (0 ~ 23).
		Time **minute**	Configures the minute daylight savings time begins (0 ~ 59).
	End		Configures the date and time daylight savings time ends.
		Month	Configures the month daylight savings time ends (1 ~ 12).
		Week	Configures the week of the month daylight savings time ends (First, 2, 3, 4, Last).
		Day	Configures the day of the week daylight savings time ends (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time **hour**	Configures the hour daylight savings time ends (0 ~ 23).
		Time **minute**	Configures the minute daylight savings time ends (0 ~ 59).

3.1 Configuring and controlling the projector via a web browser (continued)

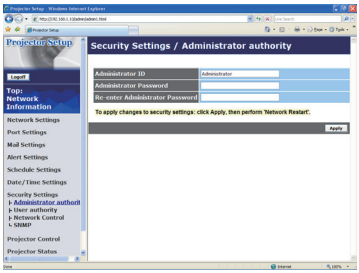
Item		Description
Time difference		Configures the time difference. Set the same time difference as the one set on your computer. If unsure, consult your IT manager.
SNTP		Click the **[ON]** check box to retrieve Date and Time information from the SNTP server and set the following items.
	SNTP Server Address	Configures the SNTP server address in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
	Cycle	Configures the interval at which to retrieve Date and Time information from the SNTP server (**hour:minute**).

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.
• To enable the SNTP function, the time difference must be set.
• The projector will retrieve Date and Time information from the time server and override time settings when SNTP is enabled.
• The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.9 Security Settings



Displays and configures passwords and other security settings.

Item		Description
Administrator authority		Configures the Administrator ID and password.
	Administrator ID	Configures the Administrator ID. The length of the text can be up to 32 alphanumeric characters.
	Administrator Password	Configures the Administrator password. The length of the text can be up to 255 alphanumeric characters.
	Re-enter Administrator Password	Reenter the above password for verification.
User authority		Configures the User ID and password.
	User ID	Configures the User ID. The length of the text can be up to 32 alphanumeric characters.
	User Password	Configures the User password. The length of the text can be up to 255 alphanumeric characters.
	Re-enter User Password	Reenter the above password for verification.

3.1 Configuring and controlling the projector via a web browser (continued)

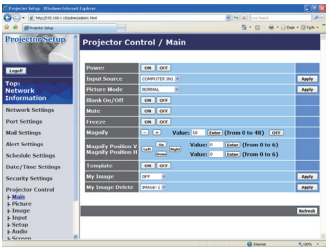
Item		Description
Network Control		Configures the Authentication password for the command control.
	Authentication Password	Configures the Authentication password. The length of the text can be up to 32 alphanumeric characters.
	Re-enter Authentication Password	Reenter the above password for verification.
SNMP		Configures the community name if SNMP is used.
	Community name	Configures the community name. The length of the text can be up to 64 alphanumeric characters.

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.10 Projector Control



The items shown in the table below can be performed using the Projector Control menu. Select an item using the up and down arrow keys on the computer.
Most of the items have a submenu. Refer to the table below for details.

NOTE • The setting value may not match with the actual value if the user changes the value manually. In that case, please refresh the page by clicking **[Refresh]** button.

Controls the projector.

Item		Description
Main		
	Power	Turns the power on/off.
	Input Source	Selects the input source.
	Picture Mode	Selects the picture mode setting.
	Blank On/Off	Turns Blank on/off.
	Mute	Turns Mute on/off.
	Freeze	Turns Freeze on/off.
	Magnify	Controls the magnify setting. In some input signal sources, it might stop “Magnify” even though it does not reach to maximum setting value.
	Magnify Position V	Adjusts the position of vertically magnifying startpoint.
	Magnify Position H	Adjusts the position of horizontally magnifying startpoint.
	Template	Turns template on/off.
	My Image	Select MY IMAGE data.
	My Image Delete	Delete MY IMAGE data.
Picture		
	Brightness	Adjusts the brightness setting.
	Contrast	Adjusts the contrast setting.
	Gamma	Selects the gamma setting.
	Color Temp	Selects the color temperature setting.
	Color	Adjusts the color setting.
	Tint	Adjusts the tint setting.
	Sharpness	Adjusts the sharpness setting.
	My Memory Save	Saves the My Memory data.
	My Memory Recall	Recalls the My Memory data.

3.1 Configuring and controlling the projector via a web browser (continued)

Item	Description
Image	
Aspect	Selects the aspect setting.
Over Scan	Adjusts the over scan setting.
V Position	Adjusts the vertical position.
H Position	Adjusts the horizontal position.
H Phase	Adjusts the horizontal phase.
H Size	Adjusts the horizontal size.
Auto Adjust Execute	Performs the automatic adjustment.
Input	
Progressive	Selects the progressive setting.
Video NR	Selects the video noise reduction setting.
Color Space	Selects the color space.
S-Video Format	Selects the s-video format setting.
C-Video Format	Selects the video format setting.
HDMI Format	Selects the HDMI format setting.
HDMI Range	Selects the HDMI range setting.
Computer in1	Selects the **COMPUTER IN1** input signal type.
Computer in2	Selects the **COMPUTER IN2** input signal type.
Frame Lock - Computer in1	Turns the FRAME LOCK-COMPUTER IN1 function on/off.
Frame Lock - Computer in2	Turns the FRAME LOCK-COMPUTER IN2 function on/off.
Frame Lock - HDMI	Turns the FRAME LOCK-HDMI function on/off.
Setup	
D-Zoom	Adjusts the zoom.
D-SHIFT V	Adjusts the vertical picture position.
D-SHIFT H	Adjusts the horizontal picture position.
Picture Position	Selects the vertical picture position.
Keystone V	Adjusts the vertical keystone distortion setting.
Eco Mode	Selects the eco mode.
Mirror	Selects the mirror status.
Standby Mode	Selects the Standby mode.
Monitor Out - Computer in1	Assigns the **MONITOR OUT** when the **COMPUTER IN1** input port is selected.
Monitor Out - Computer in2	Assigns the **MONITOR OUT** when the **COMPUTER IN2** input port is selected.
Monitor Out - HDMI	Assigns the **MONITOR OUT** when the **HDMI** input port is selected.
Monitor Out - S-Video	Assigns the **MONITOR OUT** when the **S-VIDEO** input port is selected.
Monitor Out - Video	Assigns the **MONITOR OUT** when the **VIDEO** input port is selected.
Monitor Out - Standby	Assigns the **MONITOR OUT** in the standby mode.

3.1 Configuring and controlling the projector via a web browser (continued)

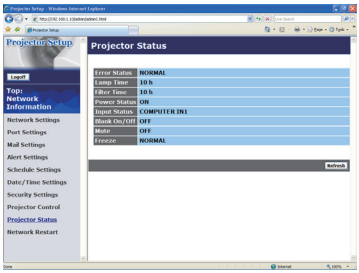
Item		Description
Audio		
	Volume	Adjusts the volume setting.
	Speaker	Turns the built-in speaker on/off.
	Audio Source - Computer in1	Assigns the AUDIO SOURCE-**COMPUTER IN1** input port.
	Audio Source - Computer in2	Assigns the AUDIO SOURCE-**COMPUTER IN2** input port.
	Audio Source - HDMI	Assigns the AUDIO SOURCE-**HDMI** input port.
	Audio Source - S-Video	Assigns the AUDIO SOURCE-**S-VIDEO** input port.
	Audio Source - Video	Assigns the AUDIO SOURCE-**VIDEO** input port.
	Audio Out Standby	Assigns the AUDIO OUT in the standby mode.
	HDMI Audio	Selects the HDMI audio setting.
Screen		
	Language	Selects the language for the OSD.
	Menu Position V	Adjusts the vertical Menu position.
	Menu Position H	Adjusts the horizontal Menu position.
	Blank	Selects the Blank mode.
	Startup	Selects the startup screen mode.
	MyScreen Lock	Turns MyScreen lock function on/off.
	Message	Turns the message function on/off.
	Template	Selects the template setting.
	C.C. - Display	Selects Closed Caption DISPLAY setting.
	C.C. - Mode	Selects Closed Caption MODE setting.
	C.C. - Channel	Selects Closed Caption CHANNEL setting.

3.1 Configuring and controlling the projector via a web browser (continued)

Item		Description
Option		
	Auto Search	Turns the automatic signal search function on/off.
	Direct Power On	Turns the direct power on function on/off.
	Auto Power Off	Configures the timer to shut off the projector when no signal is detected.
	My Button-1	Assigns the functions for the **MY BUTTON1** button on the included remote control.
	My Button-2	Assigns the functions for the **MY BUTTON2** button on the included remote control.
	My Source	Selects the My Source setting.
	Remote Freq. Normal	Turns the remote control signal frequency nomal function on/off.
	Remote Freq. High	Turns the remote control signal frequency high function on/off.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.11 Projector Status

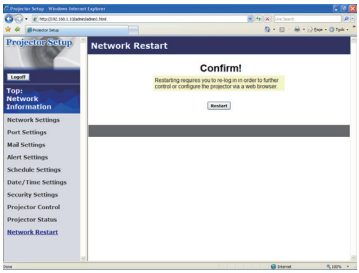


Displays the current projector status.

Item	Description
Error Status	Displays the current error status
Lamp Time	Displays the usage time for the current lamp.
Filter Time	Displays the usage time for the current filter.
Power Status	Displays the current power status.
Input Status	Displays the current input signal source.
Blank On/Off	Displays the current Blank on/off status.
Mute	Displays the current Mute on/off status.
Freeze	Displays the current Freeze status.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.12 Network Restart



Restarts the projector's network connection.

Item	Description
Restart	Restarts the projector's network connection in order to activate new configuration settings.

NOTE • Restarting requires you to re-log on in order to further control or configure the projector via a web browser. Wait 1 minute or more after clicking **[Restart]** button to log on again.

3.1.13 Logoff

When **[Logoff]** is clicked, the Logon menu is displayed. (📖*14*)

3.2 E-mail Alerts

The projector can automatically send an alert message to the specified e-mail addresses when the projector detects a certain condition that is requiring maintenance or detected an error.

NOTE • Up to five e-mail addresses can be specified.
• The projector may be not able to send e-mail if the projector suddenly loses power.

Mail Settings (📖19)

To use the projector's e-mail alert function, please configure the following items through a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click **[Enable]** check box to open the **SMTP Port**.
5) Click **[Apply]** button to save the settings.

NOTE • A Network Restart is required after the **SMTP Port** configuration settings have changed. Click **[Network Restart]** and configure the following items.

6) Click **[Mail Settings]** and configure each item. Refer to the item **3.1.5 Mail Settings** (📖19) for further information.
7) Click **[Apply]** button to save the settings.

NOTE • Click **[Send Test Mail]** button in **[Mail Settings]** to confirm that the e-mail settings are correct. The following mail will be delivered to the specified addresses.

Subject line	:Test Mail	<Projector name>
Text	:Send Test Mail	
	Date	<Testing date>
	Time	<Testing time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

3.2 E-mail Alerts (continued)

8) Click **[Alert Settings]** on the main menu to configure the E-mail Alerts settings.
9) Select and configure each alert item. Refer to the item **3.1.6 Alert Settings** (📖*20*) for further information.
10) Click **[Apply]** button to save the settings.

Failure/Warning e-mails are formatted as follows:

Subject line	: <Mail title>	<Projector name>
Text	: <Mail text>	
	Date	<Failure/Warning date>
	Time	<Failure/Warning time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

3.3 Projector Management using SNMP

The SNMP (Simple Network Management Protocol) enables to manage the projector information, which is a failure or warning status, from the computer on the network. The SNMP management software will be required on the computer to use this function.

NOTE • It is recommended that SNMP functions be carried out by a network administrator.
• SNMP management software must be installed on the computer to monitor the projector via SNMP.

SNMP Settings (📖17)

Configure the following items via a web browser to use SNMP.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and Password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click **[Enable]** check box to open the **SNMP Port**. Set the IP address to send the SNMP trap to when a Failure/Warning occurs.

NOTE • A Network Restart is required after the **SNMP Port** configuration settings have been changed. Click **[Network Restart]** and configure the following items.

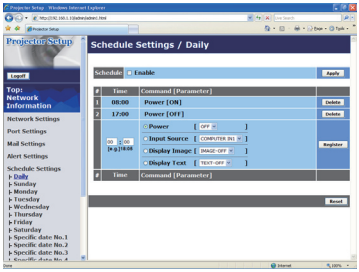
5) Click **[Security Settings]** on the main menu.
6) Click **[SNMP]** and set the community name on the screen that is displayed.

NOTE • A Network Restart is required after the **Community name** has been changed. Click **[Network Restart]** and configure the following items.

7) Configure the settings for Trap transmission of Failures/Warnings. Click **[Alert Settings]** on the main menu and select the Failure/Warning item to be configured.
8) Click **[Enable]** check box to send out the SNMP trap for Failures/Warnings. Clear **[Enable]** check box when SNMP trap transmission is not required.
9) Click **[Apply]** button to save the settings.

3.4 Event Scheduling

The scheduling function enables to setup scheduled events including power on / power off. It enables to be “self-management” projector.



NOTE • You can schedule the following control events: Power ON/OFF, Input Source, Transferred Image Display and Transferred Text Display.
• The power on/off event has the lowest priority among the all events that are defined at the same time.
• There are 3 types of Scheduling, 1) daily 2) weekly 3) specific date. (📖22)
• The priority for scheduled events is as follows 1) specific date 2) weekly 3) daily.
• Up to five specific dates are available for scheduled events. Priority is given to those with the lower numbers when more than one event has been scheduled for the same date and time (e.g., ‘Specific date No. 1’ has priority over ‘Specific date No. 2’ and so on.
• Be sure to set the date and time before enabling scheduled events. (📖24)

3.4 Event Scheduling (continued)

Schedule Settings (📖22)

Schedule settings can be configured from a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Schedule Settings]** on the main menu and select the required schedule item. For example, if you want to perform the command every Sunday, please select **[Sunday]**.
4) Click **[Enable]** check box to enable scheduling.
5) Enter the date (month/day) for specific date scheduling.
6) Click **[Apply]** button to save the settings.
7) After configure the time, command and parameters, click **[Register]** to add the new event.
8) Click **[Delete]** button when you want to delete a schedule.

There are three types of scheduling.
1) Daily: Perform the specified operation at a specified time every day.
2) Sunday ~ Saturday: Perform the specified operation at the specified time on a specified day of the week.
3) Specific date: Perform the specified operation on the specified date and time.

NOTE • In Standby mode the power indicator will flash green for approx. 3 seconds when at least 1 "Power ON" schedule is saved.
• When the schedule function is used, the power cord must be connected to the projector and the outlet. The schedule function does not work when the breaker in a room is tripped. The power indicator lights orange or green when the projector is receiving AC power.

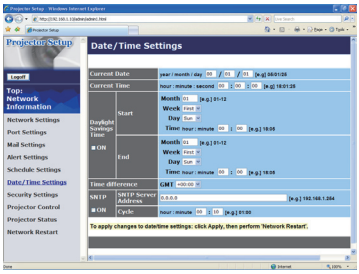
3.4 Event Scheduling (continued)

Date/Time Settings (📖24)

The Date/Time setting can be adjusted via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser. Enter the Administrator ID and Password and click **[Logon]**.
2) Click **[Date/Time Settings]** on the main menu and configure each item. Refer to the item **3.1.8 Data/Time Settings** for further information.
3) Click **[Apply]** button to save the settings.



NOTE • A Network Restart is required after the **Daylight Savings Time** or **SNTP** configuration settings have been changed.
• The battery for the built in clock may be dead if the clock loses time even when the date and time have been set correctly. Replace the battery by following ***"Replacing the internal clock battery" section of the User's Manual (concise)***.
• The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

3.5 MY IMAGE (Still Image Transfer) Display

The projector can display still images that are transferred via the network.

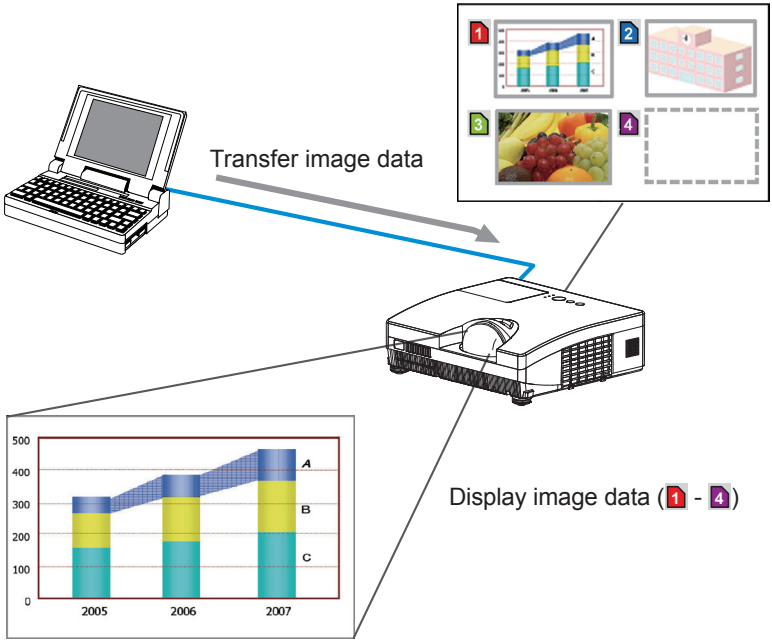


Fig. 3.5 Still Image Transfer

MY IMAGE transmission requires an exclusive application for your computer. You can download it from the Hitachi web site (http://hitachi.us/digitalmedia or http://www.hitachidigitalmedia.com). Refer to the manual for the detailes and the application for instructions.

To display the transferred image, select the MY IMAGE item in the NETWORK menu. For more information, please see the description of the MY IMAGE item of the NETWORK menu. (📖***NETWORK menu in the User's Manual – Operating Guide***)

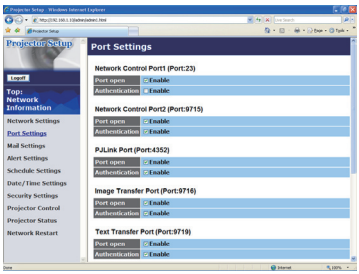
NOTE • It is possible to allocate the image file up to 4 in the maximum.
• Using **MY BUTTON** that registered MY IMAGE can display transferred image. (📖***OPTION menu in the User's Manual – Operating Guide***)
• The image file also can be displayed by using schedule function via the web browser. Refer to the item "***3.4 Event Scheduling*** (📖***37***)" for detail.

3.5 MY IMAGE (Still Image Transfer) Display (continued)

Configure the following items from a web browser when MY IMAGE is used.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click the **[Enable]** check box to open the **Image Transfer Port (Port: 9716)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Apply]** button to save the settings.



When the authentication setting is enabled, the following settings are required.

6) Click **[Security Settings]** on the main menu.
7) Select **[Network Control]** and enter the desired authentication password.
8) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **Image Transfer Port (Port: 9716)** and **Text Transfer Port (Port: 9719)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.6 Messenger Function

The projector can display the text data transferred via the network on the screen. The text data can be displayed on the screen in two ways that displays the text transferred from the computer on real time, and the other chooses and displays the text data from the ones once stored in the projector.

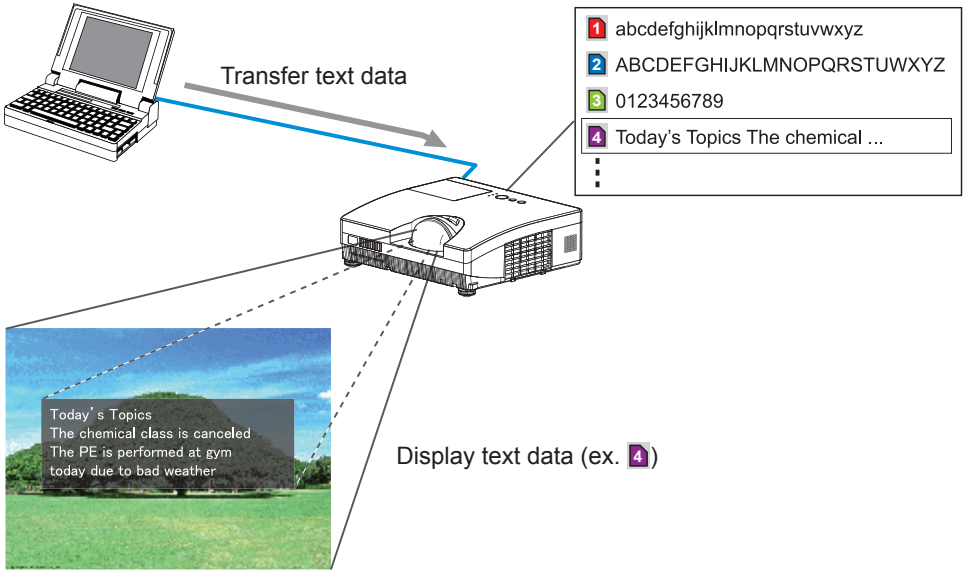


Fig. 3.6 Messenger function

Messenger function requires an exclusive application for your computer. To edit, transfer and display the text data, use the application. You can download it from the Hitachi web site (http://hitachi.us/digitalmedia or http://www.hitachidigitalmedia.com). Refer to the manual for the application for the details of Messenger function and instructions of the application.

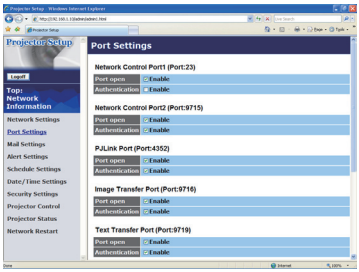
NOTE • It is possible to store the text data up to 12 in the maximum.
• Using **MY BUTTON** that registered MESSENGER can turn the displaying messenger text on/off. (📖***OPTION menu in the User's Manual – Operating Guide***)
• The text file also can be displayed by using schedule function via the web browser. Refer to the item "***3.4 Event Scheduling*** (📖*37*)" for detail.

3.6 Messenger Function (continued)

Configure the following items from a web browser when Messenger function is used.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click the **[Enable]** check box to open the **Text Transfer Port (Port: 9719)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Apply]** button to save the settings.



When the authentication setting is enabled, the following settings are required.

6) Click **[Security Settings]** on the main menu.
7) Select **[Network Control]** and enter the desired authentication password.
8) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **Image Transfer Port (Port: 9716)** and **Text Transfer Port (Port: 9719)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.7 Command Control via the Network

You can configure and control the projector via the network using RS-232C commands.

Communication Port

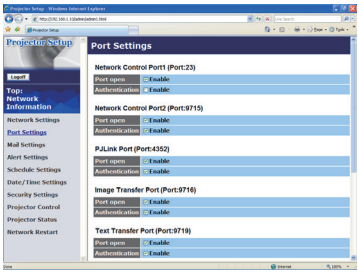
The following two ports are assigned for the command control.
TCP #23**(Network Control Port1 (Port: 23))**
TCP #9715**(Network Control Port2 (Port: 9715))**

NOTE • Command control is available only via the specified port above.

Command Control Settings (*17*)

Configure the following items from a web browser when command control is used.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.



4) Click **[Enable]** check box to open **Network Control Port1 (Port: 23)** to use TCP #23. Click **[Enable]** check box for **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click **[Enable]** check box to open **Network Control Port2 (Port: 9715)** to use TCP #9715. Click **[Enable]** check box for **[Authentication]** setting when authentication is required, otherwise clear the check box.
6) Click **[Apply]** button to save the settings.

3.7 Command Control via the Network (continued)

When the authentication setting is enabled, the following settings are required. (📖*26*)

7) Click **[Security Settings]** on the main menu.
8) Click **[Network Control]** and enter the desired authentication password.
   * See NOTE.
9) Click **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **Image Transfer Port (Port: 9716)** and **Text Transfer Port (Port: 9719)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.7 Command Control via the Network (continued)

Command Format

Command formats differ among the different communication ports.

- TCP #23
  You can use the RS-232C commands without any changes. The reply data format is the same as the RS-232C commands. (📖**"RS-232C Communication" in the User's Manual – Operating Guide (Technical)**)
  However, the following reply will be sent back in the event of authentication failure when authentication is enabled.

  <Reply in the event of an authentication error>

Reply	Error code	
0x1F	0x04	0x00

- TCP #9715

  Send Data format

  The following formatting is added to the header (0x02), Data length (0x0D), Checksum (1 byte) and Connection ID (1 byte) of the RS-232C commands. (📖**"RS-232C Communication" in the User's Manual – Operating Guide (Technical)**)

Header	Data length	RS-232C command	Check Sum	Connection ID
0x02	0x0D	13 bytes	1 byte	1 byte

Header → 0x02, Fixed
Data length → RS-232C commands byte length (0x0D, Fixed)
RS-232C commands → RS-232C commands that start with 0xBE 0xEF (13 bytes)
Check Sum → This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.
Connection ID → Random value from 0 to 255 (This value is attached to the reply data)

3.7 Command Control via the Network (continued)

Reply Data format

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the RS-232C commands reply data.

<ACK reply>

Reply	Connection ID
0x06	1 byte

<NAK reply>

Reply	Connection ID
0x15	1 byte

<Error reply>

Reply	Error code	Connection ID
0x1C	2 bytes	1 byte

<Data reply>

Reply	Data	Connection ID
0x1D	2 bytes	1 byte

<Projector busy reply>

Reply	Status code	Connection ID
0x1F	2 bytes	1 byte

<Authentication error reply>

Reply	Authentication Error code		Connection ID
0x1F	0x04	0x00	1 byte

3.7 Command Control via the Network (continued)

Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm.
When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the Authentication Password and digest this data with the MD5 algorithm and add this in front of the commands to send.

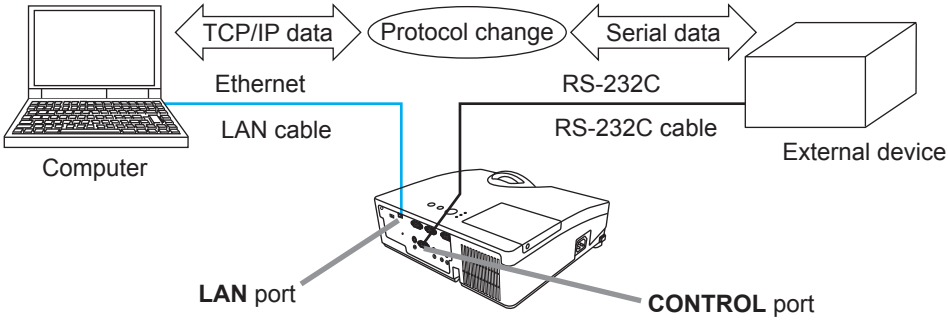
Following is a sample if the Authentication Password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the Authentication Password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

NOTE • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

3.8 Controlling the external device via the projector (using the NETWORK BRIDGE function)

This projector is equipped with the NETWORK BRIDGE function to perform mutual conversion of a network protocol and a serial interface.
Using the NETWORK BRIDGE function, a computer that is connected with this projector by Ethernet communication can control an external device that is connected with this projector by RS-232C communication as a network terminal.



3.8.1 Connecting devices

1) Connect the projector's **LAN** port and the computer's LAN port with a LAN cable, for Ethernet communication.
2) Connect the projector's **CONTROL** port and the device's RS-232C port with an RS-232C cable, for RS-232C communication.

NOTE • Before connecting the devices, read the manuals for the devices to ensure the connection.
For RS-232C connection, check the specifications of each port and use the suitable cable. (📖***"Connection to the ports" in the User's Manual - Operating Guide (Technical)***)

3.8.2 Communication setup

To configure the setup of the communication using NETWORK BRIDGE for the projector, use items in the COMMUNICATION menu. Open the menu of the projector and select the OPTION - SERVICE - COMMUNICATION menu. (🕮***OPTION menu - SERVICE – COMMUNICATION in the User's Manual - Operating Guide***)

1) Using the COMMUNICATION TYPE menu, select the NETWORK BRIDGE for the **CONTROL** port.
2) Using the SERIAL SETTINGS menu, select the proper baud rate and parity for the **CONTROL** port, according to the specification of the RS-232C port of the connected device.

Item	Condition
BAUD RATE	4800bps/9600bps/19200bps/38400bps
PARITY	NONE/ODD/EVEN
Data length	8 bit (fixed)
Start bit	1 bit (fixed)
Stop bit	1 bit (fixed)

3) Using the TRANSMISSION METHOD menu, set up the proper method for the **CONTROL** port according to your use.

NOTE • The OFF is selected for the COMMUNICATION TYPE as the default setting.
• Using the COMMUNICATION menu, set up the communication. Remember that an unsuitable setup could cause malfunction of communication.
• When COMMUNICATION TYPE is set to NETWORK BRIDGE, the **CONTROL** port doesn't accept RS-232C commands.

3.8.3 Communication port

For the NETWORK BRIDGE function, send the data from the computer to the projector with using the **Network Bridge Port** that is configured in the “Port Settings” of web browser. (🕮***18***)

NOTE • Except for 9715, 9716, 9719, 4352 between 1024 and 65535 can be set up as the **Network Bridge Port** number. It is set to 9717 as the default setting.

3.8.4 Transmission method

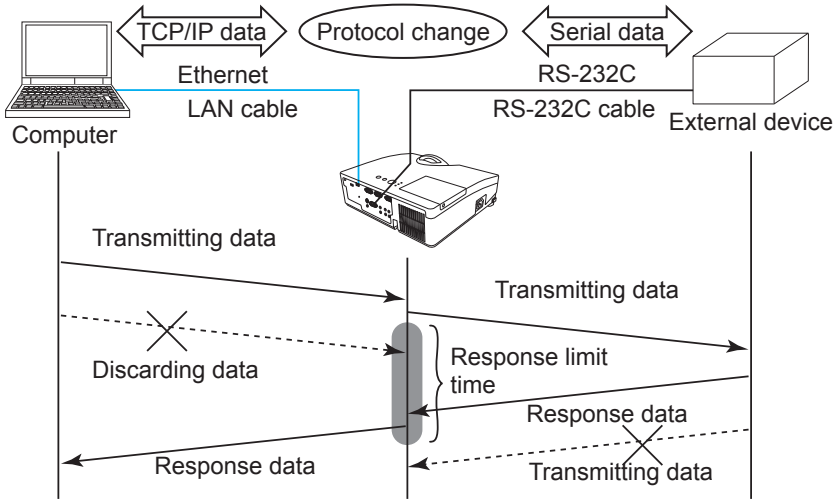
The transmission method can be selected from the menus, only when the NETWORK BRIDGE is selected for the COMMUNICATION TYPE.
(📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)

HALF-DUPLEX ↔ FULL-DUPLEX

3.8.4.1 HALF-DUPLEX

This method lets the projector make two way communication, but only one direction, either transmitting or receiving data, is allowed at a time.
The method does not allow the projector to receive the data from the computer while waiting for response data from an external device. After the projector receives the response data from an external device or the response limit time is past, the projector can receive the data from the computer.
That means that the projector controls transmitting and receiving the data to synchronize the communication.

To use the HALF-DUPLEX method, set up the RESPONSE LIMIT TIME and BYTES INTERVAL TIMEOUT, following the instruction below.

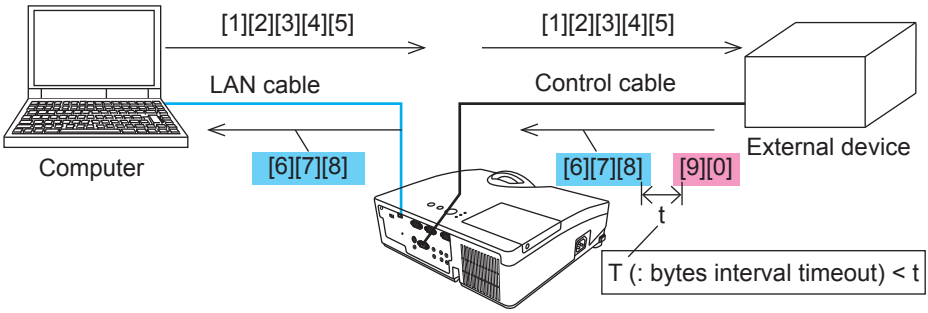


1) Using the RESPONSE LIMIT TIME menu, set the waiting time for response data from an external device. (📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)

OFF ↔ 1s ↔ 2s ↔ 3s (↔ OFF)

3.8.4.1 HALF-DUPLEX (continued)

2) If the response data from an external device is blank in a certain time period (BYTES INTERVAL TIMEOUT), the projector judges that the response data is finished, and starts to send data again.
If a blank time in the response data is longer than the BYTES INTERVAL TIMEOUT, the projector cannot receive all data, then the computer may not be able to control an external device well.
Using the BYTES INTERVAL TIMEOUT menu, set the waiting time for response data to match your system. (📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)
50ms ↔ 100ms ↔ 150ms ↔ 200ms (↔ 50ms)



NOTE • With using the HALF-DUPLEX method, the projector can send out 254 byte data as maximum at once.
• If it is not required to monitor the response data from an external device and the RESPONSE LIMIT TIME is set to OFF, the projector can receive the data from the computer and send it out to an external device continuously.
The OFF is selected as the default setting.

3.8.4.2 FULL-DUPLEX

This method lets the projector make two way communication, transmitting and receiving data at the same time, without monitoring response data from an external device.
With using this method, the computer and an external device will send the data out of synchronization. If it is requited to synchronize them, set the computer to make the synchronization.

NOTE • In case that the computer controls to synchronize transmitting and receiving the data, it may not be able to control an external device well depending on the processing status of the projector.